"The future is built from wood"

Sustainability Report 2017

MOELVEN

Sustainability – the recurring theme from vision to strategy

*"The **natural** choice for people building and living the Scandinavian way"*

- *Moelven's vision*

Moelven's operations are based on managing forestry resources and producing sustainable products and renewable energy. Moelven's basis is that all development, construction and operations must be sustainable, and that stringent requirements apply towards health, safety and the environment for all of our employees and those who are affected by our operations.

Moelven's vision, mission, values and human resource ideal are the foundation for all of our employees and the strategic choices that are taken. Sustainability permeates this from the top down. Sustainability is one of our values, and a new Group strategy established in 2017 further emphasizes that sustainability must permeate all strategic efforts.

Our vision –The natural choice for people building and living the Scandinavian way

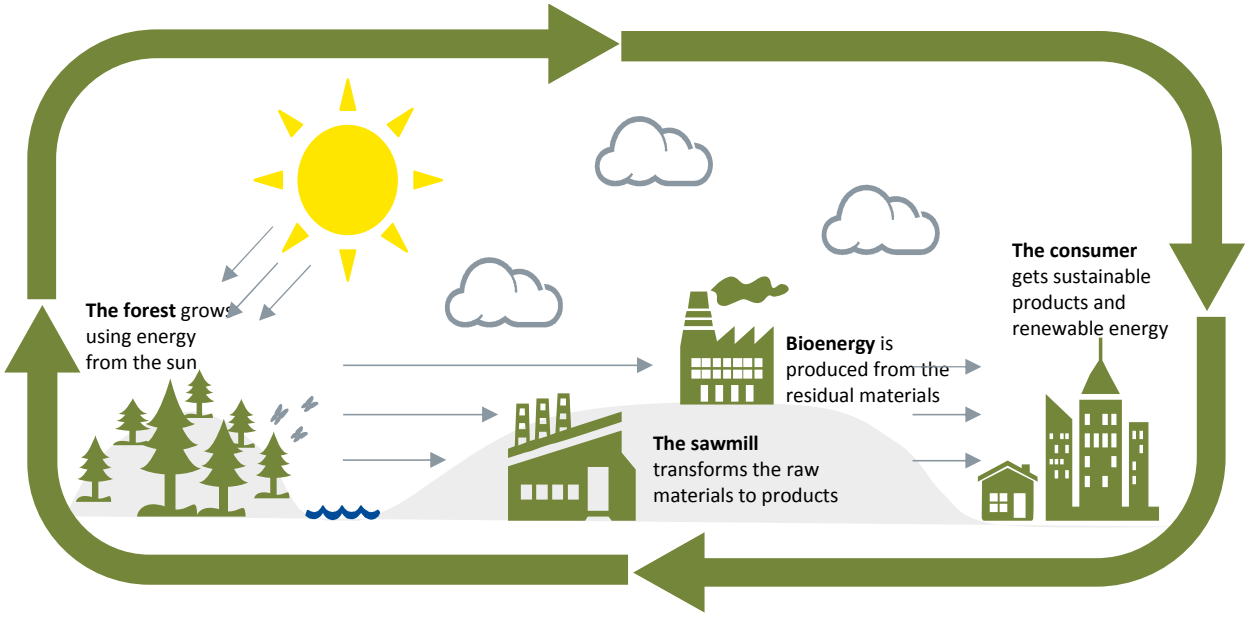
Our mission – Supplying quality rooms

Our values – Sustainable , reliable, uses opportunities

Our human resources ideal – Moelven provides opportunities for people with the drive to succeed

A growing global market which comes with constantly more stringent environmental requirements, gives Moelven's wood-based products excellent prospects for future growth. Moelven's main activities are based on managing forestry resources and producing sustainable products and renewable energy. Moelven has a presence in the entire value chain through harvesting, processing, energy production, product development, infrastructure development and construction and housing projects. The Group therefore has the possibility to ensure that the supplied products are manufactured in a sustainable manner throughout the value chain.

Sustainability throughout the value chain



Moelven's values

SUSTAINABLE

Moelven has respect for people and the environment. We base our activities on renewable resources and have turned sustainability and the long-term view into our competitive advantage. There is a strong desire to take responsibility for our environment.

RELIABLE

Moelven can be trusted. We deliver at the agreed time and with the right quality. There is a strong focus on openness and honesty – being able to admit to weaknesses and mistakes is the basis for progress and trust.

EXPLOITING OPPORTUNITIES

Moelven seeks solutions. The Group has the abilities and resources to be a leader in product development and creativity. We have always been a company at the forefront, exploiting opportunities that changing times afford.

Mission – Give people quality spaces

Since 1899 Moelven has successively produced cartwheels, barracks, ship cranes, agricultural appliances, homes, modules and a number of different input factors for both new buildings and renovation. Looking back, we see a wide range of products and services, but a recurring feature is the use of wood in combination with engineering expertise, innovation and sustainability. But what do we see when we look ahead? What will we produce next year – in 5 years – or in 10 years? There are some products we are fairly certain that we will be producing in 10 years too. Just as surely, there are some products that will be gone, and new products will arrive. Products that we currently are unaware of, but which will be important to us. In many ways, this is Moelven: We develop products ourselves and are driven by customers and partners who see new needs and new challenges. This is why we don't know what we'll be producing a few years ahead in time.

What we can say is this: We want to contribute to build good spaces – indoors and outdoors. Good spaces come into being through cooperation between customers, architects designers and not least end users. We shall supply quality products that contribute to creating these spaces. Our market is primarily Scandinavia – it is here we source our raw materials and here we meet our customers. Moelven is not only wood – but wood is a key component in our production, in the same way that it is a key component in Scandinavian tradition and Scandinavian building traditions. And – regardless of what we produce in 2017 or 2027; we will contribute to creating good spaces.

Moelven and the UN's sustainable development goals

The UN's sustainable development goals are a global plan to eradicate poverty, combat inequality and stop climate change by 2030.

Sustainable development is about taking care of the needs of people living today without harming future generations' opportunities to meet theirs. The sustainable development goals reflect the three dimensions in sustainable development: climate and environment, economy and social conditions.

Moelven wishes to contribute to a sustainable world, and therefore uses the UN's sustainable development goals as a starting point. Moelven has identified the four main sustainable development goals that are impacted both positively and potentially negatively by the Group's activities. These sustainable development goals help orient work on sustainability in Moelven, while also placing it in a global context.

Climate action
"Take urgent action to combat climate change and its impacts"

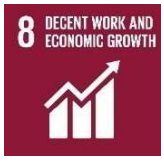
Moelven can contribute to stopping climate change by reducing its climate impact and contribute to renewable bioenergy production. Moelven's wood products also store carbon, and can also contribute to increase absorption of carbon from the atmosphere by forests.

Life on land
"Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss."

As a customer of the forestry industry, Moelven is responsible for to promoting sustainable forestry. Moelven achieves this through communication with the forest owners, as well as certification schemes such as PEFC and FSC.

Good health and well-being
"Ensure healthy lives and promote well-being for all at all ages."

Moelven has responsibility to contribute to a safe and secure workplace for its employees, suppliers and customers. Consumers are also affected by Moelven's products, and Moelven therefore focuses on creating good spaces by using non-harmful chemicals, among other things.



Decent work and economic growth
"Promote inclusive and sustainable economic growth, employment and decent work for all."

Moelven contributes to create economic growth and workplaces by way of its operations. Through tax, salary payments and purchases from suppliers, Moelven contributes in particular to local value creation.

Our focus areas for sustainability

Focus on long term value creation

For Moelven sustainability is not only about making the right choices for the outside world, but also making choices that contribute to create long-term value for the company. Sustainability is thus a natural part of the company strategy, through vision, values and policies.

The timber is as old as we are

The company A/S Moelven Brug was established in 1899, and has been involved in long-term value creation for almost 120 years. Depending on species, growth conditions and site quality, a forest is ready for harvest after approximately 60-120 years. This means that some of the timber Moelven currently uses as a raw material is as old as the company itself. This is a good example of why long-term value creation is a natural part of Moelven.

We need to think of value creation holistically

Raw material from the forest is Moelven's primary resource, but sustainability means far more than this to Moelven. It also concerns the climate, the people, the local communities, nature and the local environment. Sustainability is thus about creating long-term value through proper management of resources.

Moelven's four main focus areas and basic premise for sustainability.

Goal of continuous improvement

Moelven takes responsibility for the environment through sustainable and long-term exploitation of renewable resources. Our goal is continuous environmental improvement in our projects, products and services. We actively seek opportunities to reduce negative environmental impacts in a life cycle perspective. Moelven shall conduct its business in compliance with applicable statutes, regulations and rules. Moelven works towards a sustainable development of society and to constantly improve the business's impact on the internal and external environment.

Four focus areas, one basic premise

In 2017 analyses have been conducted to identify focus areas and long-term ambitions for sustainability that ensure that we meet our stakeholders' expectations, are prepared for future requirements and demand, and that may contribute to increased market shares and reduced costs. Moelven's strategy for sustainability is based on 4 key focus areas and a basic premise (also see illustration):

- We have climate-smart products and solutions
- We safeguard natural resources
- We focus on people
- We create local values

Ethical business practices are the foundation of our corporate strategy; we are a reliable partner.

Systematic prioritization

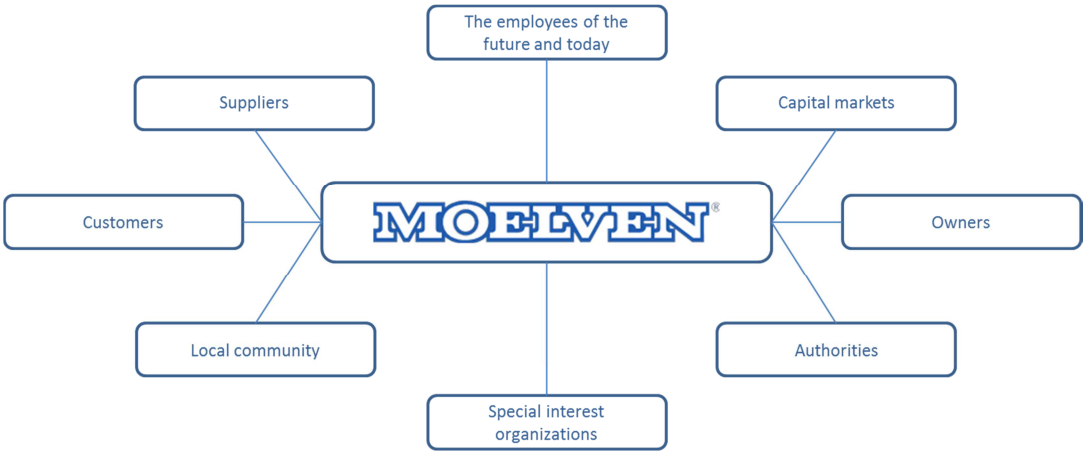
The analysis that forms the basis for choice of focus areas and important topics related to the focus areas, has been conducted in accordance with the Global Reporting Initiative's guidelines. It includes an assessment of environmental and social impact through the value chain, stakeholder expectations now and in the future, and market-related changes. The key focus areas have been chosen on the basis of what is important for long-term value creation in Moelven, and how the company affects and is affected by its stakeholders. This also constitutes the basis where Moelven has the greatest positive and negative impact on the outside world, while also emphasizing those areas where Moelven has the greatest possible impact.

Summary: Focus areas, ambitions, results and goals

	Climate-smart products and solutions	Safeguards natural resources	Focus on people	Local values	Code of Conduct
Ambition	We and our products shall be climate positive	We shall use renewable resources, and fully exploit them	We shall be an attractive and safe workplace	We shall create green workplaces	We are a reliable partner
Important issues	**1:** Energy consumption in own production. **2:** Transport of goods **3:** Production of bio-energy **4:** Climate benefits from the forest **5:** Climate smart design **6:** Waste management in administration	**1:** Sustainable materials **2:** Resource optimization **3:** Resource-efficient design and packaging **4:** Waste management in production	**1:** HSE **2:** Involved and competent employees **3:** Health-friendly use of chemicals **4:** Creating quality spaces	**1:** Economic value creation in the local community **2:** Local community	**1:** Anti-corruption and ethics
Sustainability goal	13 CLIMATE ACTION	15 LIFE ON LAND	3 GOOD HEALTH AND WELL-BEING	8 DECENT WORK AND ECONOMIC GROWTH	
Results in 2017	**133,558** tons emitted CO_2 equivalents (location-based) **1,551,601** tons CO_2 stored in produced goods **812,639,286** tkm roadtransport, **133,723,275** tkm railroadtransport and **121,337,790** tkm seatransport **64%** of Moelven Wood AB's (Sweden) products have an environmental assessment or product certification	**100 %** sawlog supply certified according to PEFC or FSC, or satisfying FSC Controlled Wood standard **>51 %** yield **400** tons plastic recycled **2,000** tons plastic used	LTI-rate: **12,4** Severity rate: **218** Risk reports: **2,147** Absence due to illness: **5,6 %** **3,546** employees **27** apprenticeships **100 %** of employees has completed internal HSE-training	**4,161,215,380** NOK total value creation in Norway and Sweden **3,546** direct workplaces No reported violations of environmental legislation that has resulted in fines in 2017	**No reported instances or fines** related to corruption or price fixing.
Goals 2020 and priorities for 2018	**8 % reduction in electricity consumption by 2020** Establish indicators to measure energy consumption for heating of premises and drying of wood Further increase the use of Euro 5 and Euro 6 trucks Optimize logistics Increase transparency and traceability of climate effect towards customers	**Waste sorting ratio of 90 % for all units by 2020** Identify possibilities to reduce waste and increase reuse Carry out a complete survey of the use of plastic in Moelven during 2018	**LTI-rate < 5** **Absence due to illness < 4 % Risk reports > 3,500** Continued rollout of HSE training programme Survey customer satisfaction throughout the whole group Standard routines for implementation execution and follow-up of employee surveys	**No violations of environmental legislation.** Survey economic value creation in Sweden.	**No reported instances or fines** related to corruption or price fixing.

We listen to our stakeholders

Moelven's strategy for sustainability, and the analysis of importance, is defined on the basis of an assessment of the stakeholders' opinions. The following groups are defined as Moelven's stakeholders:



Summary of stakeholder dialogue and expectations

Stakeholder group	What do they care about	How do we communicate with them
Customers	• Price and quality • Certification • Sustainable forestry • Climate • Waste	• Sales and marketing • Digital media • Customer surveys • Meetings and conversations • Quarterly and annual reporting
The employees of the future and today	• Working conditions • Vision • Corporate social responsibility • Environment • Personal development	• Meetings and conversations • Digital media • Trade fairs • Advertising
Authorities	• Innovation • Cooperation • Climate • Forestry • Reporting	• Meetings and conversations • Cluster collaborations • Quarterly and annual reporting
Local community	• Environment • Jobs • Local value creation • Transparency	• Marketing • Digital media • Meetings and conversations • Quarterly and annual reporting
Owners	• Long-term strategy • Resource optimization • Climate and environment	• Meetings and conversations • Quarterly and annual reporting
Suppliers (incl. forest owners)	• Sustainable financial operations • Resource optimization • Sustainable forestry	• Meetings and conversations • Cluster collaborations • Digital media
Special interest organizations	• Resource optimization • Biofuel • Certification • Biodiversity	• Meetings and conversations • Conferences • Cluster collaboration • Digital media
Capital markets	• Long-term strategy • Risk and opportunities • Transparency	• Meetings and conversations • Quarterly and annual reporting

Climate-smart products and solutions

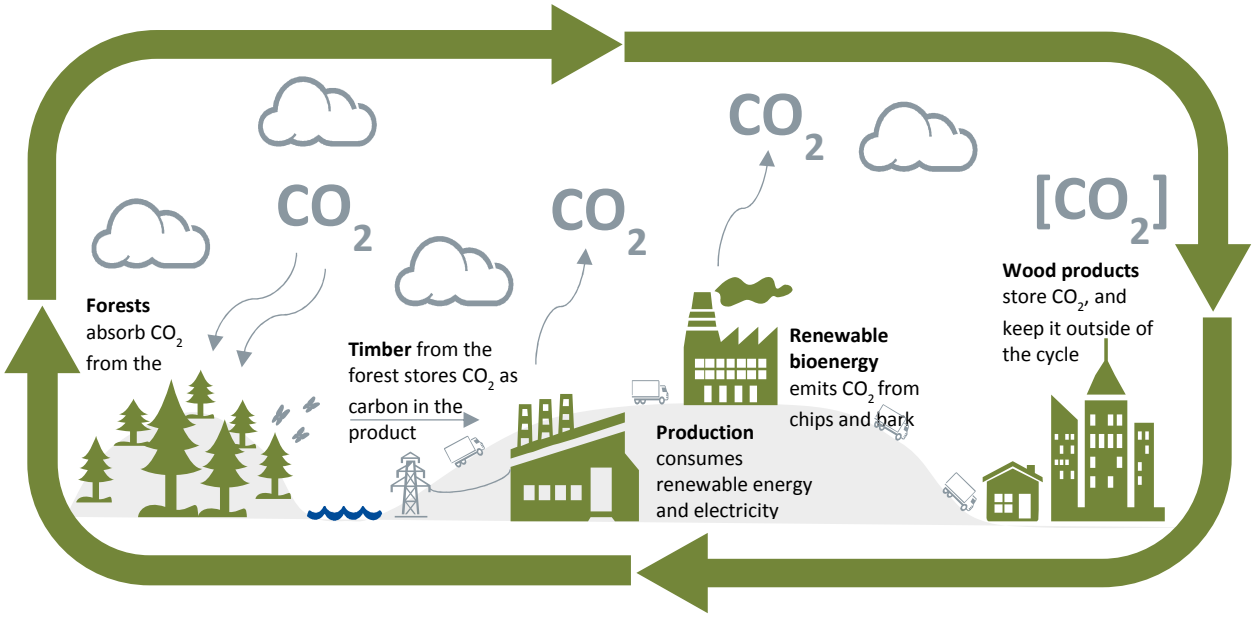
We have climate smart products and solutions

Moelven affects the climate through many of the company's operations. The forest absorbs CO_2 from the atmosphere through the photosynthesis process, and stores this as carbon in the tree. The timber log is processed into high-quality products and materials that last a long time, while the residual products such as bark and chips can be used to produce bioenergy.

At a sawmill more than half of the log is turned into sawn timber. Sawn timber is then processed into other products, and can in many cases replace competing materials with a greater climate impact than wood. At the same time, storage of carbon in wood products contributes to extending the storage capacity of the carbon cycle. Production and long-term use of wood products can thus have a positive climate impact.

The other half of the log ends up as chips and bark. This is used in industrial processes such as raw material for bioenergy or for paper and cardboard production. Bioenergy produced using biomass from forests is defined as renewable, as it is part of the natural carbon cycle. Moelven produces bioenergy that we ourselves use in production, or sell to external customers. Moelven also sells a large proportion of biomass, which is used for energy production, for example in district heating plants.

Moelven also has a negative impact in the climate through the use of energy based on fossil fuels. Sawmills and production consume electricity and fuel to power their operations. Moelven also contributes to greenhouse gas emissions at suppliers through its purchases. It is particularly transport that has a negative climate impact.



Norway's first energy-plus house

The kindergarten "Kistefossdammen" at Heggedal in Asker is Norway's first official energy-plus house. Moelven has delivered the facade in untreated Malm100. Malm 100 is very maintenance-friendly, and untreated it quickly gets a light gray or silver gray patina. In order to be regarded as a energy-plus house, the building must produce 2 kWh per m² per year. This is achieved through 320 m² solar panels, three wells for geothermal energy and use of climate-friendly building materials. Expected consumption versus expected production suggests an overproduction of energy of 7,600 kWh a year.

(Source and photo: Byggeindustrien)

Climate account results

For the first time, in 2017 Moelven is reporting its climate accounts in accordance with the GHG protocol. This is the most widely recognized method for greenhouse gas reporting that provides a transparent and clear result. In 2016 Moelven reported in accordance with ISO14064, where other system limits, emission factors and conversion values were used. The results for 2016 and 2017 are thus not directly comparable , and the 2016 figures are therefore not presented.

	2017 (tons CO_2 equivalents)
Scope 1 (Emissions in Moelven)	**10,741**
Fuel oil	532
Diesel	8,829
Petrol	18
Moelven-owned transport of products (to customer)	1,246
Moelven-owned transport of products (from supplier)	69
Direct bio-based emissions (beyond scope)	**409,859**
Bark	282,600
Sawdust	21,254
Chopping chips	79,556
Cutting chips	21,106
Cellulose chips	4,003
Pellets	739
Biodiesel	331
Scope 2 (Emissions related to electricity consumption)	
Location-based calculation	14,079
Market-based calculation	80,899
Scope 3 (Emissions outside of Moelven)	**108,737**
Transport of products to customers performed by third parties	63,208
Third party transport of products (from supplier)	44,639
Air travel	296
Work-related car transport	595
Total emissions (scope 1, scope 2 location-based, scope 3)	**133,558**
Total emissions (scope 1, scope 2 market-based, scope 3)	**200,377**

The climate accounts are based on emissions of CO_2, as no emissions of other greenhouse gases have been identified or quantified, such as CH_4, N_2O, HFC, PFC, SF_6 or NF_3. As 2017 is the first year of reporting in accordance with the GHG protocol, 2017 has been set as the base year for future comparisons. Emission factors are largely taken from Defra (Department for Environment, Food & Rural Affairs). Emission factors for electricity are based on NVE's factors in Norway, while Energimarknadsinspektionen and Reddis et al. 2015's factors have been used for Sweden. For calculations of bio-based emission, EN 16449 has been used, based on values from Tretekniskinstitutt and Erik Eid Hohle (Bioenergi). For system delimitation, the principle for ownership and where Moelven is the invoice recipient for the activity forms the basis.

The wooden Mjøsa bridge – a good climate choice

23,500 tons of CO_2 saved

25 years of CO_2 neutral operation

The Norwegian Public Roads Administration has conducted a research project where they have assessed the impacts of building a new Mjøsa bridge from wood, concrete or steel.

The report concludes that:

> **"It is technically, financially, aesthetically and architecturally fully justifiable to build the new Mjøsa bridge from wood"**

It has also been estimated that by building the Mjøsa bridge from wood, one may spare the environment of emissions of approx. 23,500 tons of CO_2, compared to the options. This means that with today's traffic, cars may cross the Mjøsa bridge "CO_2-neutrally" for 25 years if the bridge is built from wood rather than concrete (assumed emissions of CO_2 125 g/km per car).

A new wood Mjøsa bridge is thus a good example of Moelven's climate-smart products, which exploit all of the good characteristics of wood in interaction with other materials.

Source: The Norwegian Public Roads Administration

Energy use in own production

IMPORTANCE:
MOST IMPORTANT

Where and why is it important?
Moelven has significant energy consumption in production, which at the same time is one of the greatest drivers of greenhouse gas emissions. It is therefore a key component in the Group's ability to supply climate-smart products and services.
Energy consumption in own production is important both to Moelven and stakeholders as it represents an environmental challenge while also constituting a major expense. Moelven produces a large proportion of its own energy consumption through the incineration of biomass.

Policy and approach

Moelven's environmental policy states that the company must reduce energy consumption at its plants. This will be done by actively participating in technology and market developments in the bioenergy sector, and by investigating alternative energy use at those plants that use fossil fuel for heating.

To achieve this, Moelven has therefore set a target of covering at least 95 % of requirements toward heating premises and drying from self-produced bioenergy in the timber industry.

Moelven also actively works with innovation, and an example of this is the Moelven Valåsen AB sawmill in Karlskoga in Sweden. Here a major innovation project is being implemented where digital technology has been applied to increase efficiency and reduce the sawmill's energy consumption. Among other things, a detailed energy survey has been carried out. More details on the energy survey and Valåsen are available on the next page.

Evaluation of results

Approximately two thirds of the Moelven Group's overall energy consumption is self-produced from the incineration of biomass, but

there is also significant consumption of electricity. The bioenergy is used mainly for the heating of premises and drying of wood, and represents approximately 80 % on average of the combined energy consumption at a sawmill. Electricity is used to operate production lines, debarking, operating saws and lighting. Smaller amounts of fossil fuel are also used, mainly for vehicles, but also at certain locations and in certain operating circumstances such as heating.

Category	*Volume (GWh)*
Total fossil energy consumption (fuel)	*44*
Total bioenergy production (lower calorific value)	*622*
Total electricity consumption	*231*
Total sales of bioenergy	*66*
Purchase of district heating	*1,249*

Ambitions:
- Moelven shall be climate-positive
- Moelven shall reduce energy consumption
- 95 per cent of the requirements for heating premises and drying from self-produced bioenergy in the timber industry.

Results:
- 44 GWh fossil energy consumption
- 622 GWh bioenergy production
- 231 GWh electricity consumption
- 78 % of the energy survey in Sweden is completed

Measures:
- Reduce electricity consumption by 8% by 2020
- Establish indicators to measure energy consumption for the heating of premises and drying in the timber industry
- Extend existing targets

Energy survey

Moelven is in the process of conducting a comprehensive energy survey of operations in Sweden. The project is being conducted pursuant to the act relating to energy surveys in major enterprises, and is staggered across a four year period. As at March 2018 two steps have been completed, and 78 per cent of operations in Sweden are covered. The results from the survey so far form an important part of the basis for the measures that will be implemented to reach the target of reducing electricity consumption by 8 per cent by 2020.

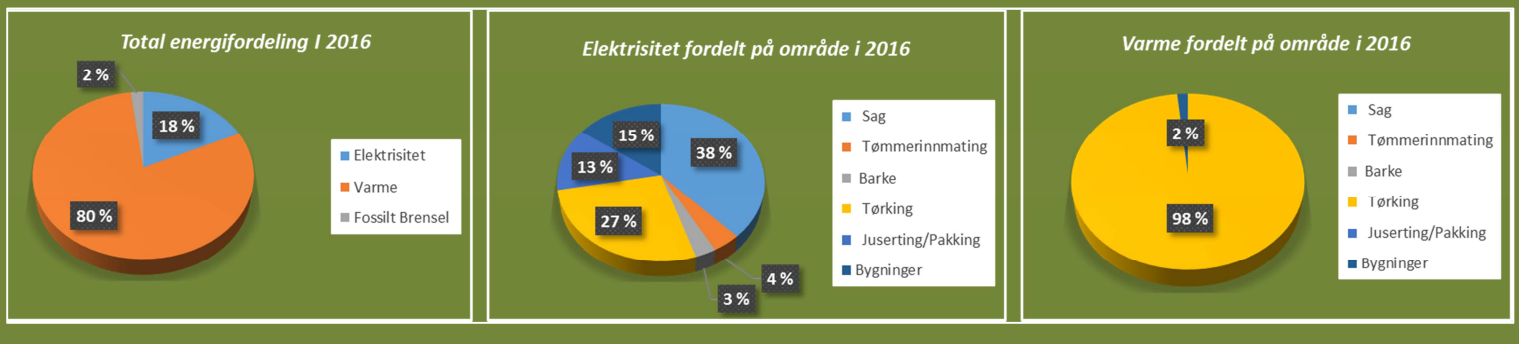
In addition to the energy survey, a project is being carried out at Moelven Valåsen AB in Karlskoga in Sweden to assess, identify and test new technologies in the development of "The digital sawmill". As early as two years ago, Moelven Valåsen installed an X-ray machine that takes pictures of each individual log before sawing. A number of sensors have also been installed to both increase the recovery factor for timber and provide increased traceability. A survey of energy consumption at the factory has been carried out since 2016, where one has taken a closer look at which type of energy that is used in different parts of operations. The division included buildings and processes, production and storage facilities, such as offices and workshop premises..

Since 2016 around 400 sensors have been installed, which continuously register energy data for heat, electricity and renewable fuel. With these data, the operation can maintain an overview of energy levels at all times. This provides a good basis for improvement and rationalization work.

In the project at Valåsen Moelven has actively focused on ensuring that infrastructure, systems, data and patterns that are developed and deployed are documented, centralized and owned by Moelven, such that these may be developed by ourselves and not least deployed at other units in Moelven Industrier. Along with experience from the energy survey, this is decisive to reach the target of an 8% reduction of electricity consumption by 2020.

The results from the survey show that energy consumption at the sawmill is distributed among heat (80%), electricity (18%) and fossil fuel (2%). Of the energy related to heating, it is the drying process that uses the majority of the energy with 98%. The remainder is used for heating premises, heat for ventilation and hot water.

It is the actual sawing process the uses the most electrical energy, with a share of 37% of the overall electricity consumption.



Transport of goods

IMPORTANCE:
MOST IMPORTANT

Where and why is it important?
The timber industry is a transport-intensive industry where large volumes of materials must be transported across great distances. This applies both to transport from suppliers to Moelven, internally at Moelven and from Moelven to the markets.

Transport is a considerable challenge for the Group, in terms of both the environment and economy. Both raw material procurement, intermediate transport and delivery of finished products is a major cost driver that affects the company's strategy and decisions. It can also be a burden for several stakeholders, as transport can have a negative impact on the climate and local community.

Policy and approach

Moelven is a co-owner and member of several transport cooperatives that carry out a large proportion of transport in Moelven. These transport cooperatives enable Moelven to have a strong impact with the transporters and allows us to set requirements. Examples of this are Transportfelleskapet Østlandet AS (TFØ) Transportselskapet Nord AS (TSN) and Woodtrans AS.

These transport cooperatives also enable rationalization through a reduction in empty loads by combining the transport of finished products and by-products.

Moelven also uses rail and sea transport to safeguard the supply of timber and market opportunities for wood chip and energy products in regions without local demand for pulp wood and wood chips. Rail in particular is used for the delivery of biomass in Norway and Sweden.

Moelven's environmental policy sets targets and guidelines for transport at Moelven:

- *Moelven shall minimize the negative effect on the environment (noise and dust from heavy transport by using environmentally classified trucks, minimum EURO-5 or EURO-6, and also by to the greatest possible degree using transporters who strive for an environmentally friendly driving pattern.*
- *The environmental impact of transport shall be minimized through coordination and optimization of the product flow.*

These targets and guidelines have been implemented in the partnership agreements with providers of truck transport services in both Norway and Sweden.

Moelven also actively works with the framework conditions for transport. An example of this is the initiative "Godspakke Innlandet", where Moelven has joined forces with other industry partners to quantify the costs and benefits of different initiatives from the authorities. Improved road standards, and thus the opportunity for increased axle load limits, are measures on the part of the authorities that will help to reduce the environmental impacts of road transport.

Work is also being done to open a greater road network in Norway for the use of 25.25 metre heavy goods vehicles with a total weight of 60 tons for finished products and by-products. In Sweden the permitted total weight for heavy goods vehicles has been increased from 60 to 64 tons in general, and in 2017 the Swedish parliament adopted a resolution to allow a total weight of 74 tons on roads that can sustain such loads from 1 July. In Norway trial schemes have started for permitting heavy goods vehicles with a corresponding total weight for timber transport. These changed framework conditions contribute to reduce the number of transport loads and thus to a positive environmental effect.

Evaluation of results

	Road transport (tkm)	Rail (tkm)	Sea transport (tkm)
Transport of products to customer (where Moelven is the invoice recipient)	408,897,874	129,770,775	121,337,790
Transport of timber to Moelven	275,738,298	3,952,500	-
Transport of other goods to Moelven	76,078,321	-	-
Total	812,639,286	133,723,275	121,337,790

Ambitions:

- Environmental impacts from transport must be minimised
- Use of Euro 5 and Euro 6 trucks only

Results:

- KPIs for transport are established at the company and division levels.

Measures:

- Assess the use of Euro 5 and Euro 6 trucks
- Improve reporting of transport, including the transport of products to customers

Moelven Virke AS, which is responsible for the raw material supply and fibre trade for the mechanised wood operations in Norway, uses rail transport extensively. The transport concerns both raw materials to Moelven's industry, and pulpwood and fibre products to customers. Depending on the contract with the customer, Moelven Virke is in some cases responsible for transport, while in other cases the customer is responsible for transport. The latter transport is beyond Moelven's climate accounts, but is included below to illustrate the extent. Total annual train transport linked to timber supply and fibre trade comprise 2,738,311,125 tkm in 515 train departures. Transporting all or parts of this volume by road would not be sustainable either in terms of environmental impact or economy. In addition there are the positive environmental effects of the products being transported. Substantial volumes of bioenergy raw materials are supplied, which has a positive climate impact in that bioenergy replaces oil heating. One of Moelven's customers, Stockholm Xergy (formerly Fortum Värme), has calculated that the heat production from the company's bioenergy plant outside Stockholm alone can contribute to reduce CO_2 emissions by 650,000 tons annually by phasing out fossil power.

Besides being a very important topic with regard to environmental impact and costs, the transport of goods is the single area that leads to most activity within the industry areas. This entails a significant risk of accidents and harm to personnel and equipment. Moelven therefore has clear safety procedures to ensure safety:

- High visibility clothing, protective goggles, helmets and protective footwear are mandatory. (Applies to occupation on industrial areas in general.)
- The driver is given the loading or unloading location from the office or forklift driver. Any passengers must not leave the vehicle.
- Before unloading, the load must always be checked for any displacement before straps are loosened, and if necessary loads must be secured using a forklift before straps are released.
- Handling of straps must only take place when forklift is stationary or at a safe distance.
- Forklifts always have right of way in the area. The driver must stay within sight of the forklift operator to achieve eye contact.
- It is strictly forbidden to occupy spaces next to or underneath loads during loading/unloading.
- Loads must be secured in accordance with regulations before leaving the loading area.

“Godspakke Innlandet” – a partnership for better framework conditions

Godspakke Innlandet is a part of input to the National Transport plan and a part of the Norwegian Railway Directorate’s drive within combination transport, industrial cargo, forestry and international goods flows. Among other things, the package proposes electrification of the section Kongsvinger – Elverum – Hamar, new connecting tracks in Kongsvinger, Elverum and Hamar, and new multi-purpose terminals.

Efficient transport systems are a precondition for exploiting forest resources, and in order for Norwegian businesses to be competitive in European markets. “Godspakke Innlandet” is a comprehensive package of measures for the rail network in the interior to strengthen freight transport by rail.

The initiative will make the railway far more competitive for north-south transport from Nordland, Trøndelag, Nord-Vestlandet and the region towards Sweden and the continent, and correspondingly in the opposite direction. Among other things, the package will reduce transport times for trains between Kvam in Gudbrandsdalen and Karlstad by 24 hours, reduce the forestry and wood industries’ transport costs by NOK 57 million a year, and give industry in Nordland improved competitive ability through the opportunity for faster deliveries.

Godspakken Innlandet will contribute to reduce greenhouse gas emissions through transporting timber by rail instead of road, replacing diesel locomotives with electric locomotives, and reduce CO_2 emissions on longer distances by using trains instead of trucks by 70%.

Climate benefits from the forest

Importance:
IMPORTANT

Where and why is it important?
A large proportion of Moelven's climate smart products use timber as a raw material. The forest is a part of the natural carbon cycle, and stores large amounts of CO_2 from the atmosphere through photosynthesis. By contributing to efficient and sustainable forestry, in addition to efficient utilization of the timber, Moelven can contribute to increase the forest's ability to absorb CO_2 from the atmosphere and store it in products. The climate impact is thus positive.

Policy and approach

Moelven Skog AB is responsible for purchasing timber in Sweden and is one of the companies that has the greatest opportunity to impact the climate benefits Moelven has in the forest. They work in accordance with the vision "Mer TIMMER i skogen". The vision concerns how the forest owners can maximize the potential of the forest. It gives Moelven more and better raw materials, while also providing forest owners with good returns. Through communication, seminars and one-on-one meetings with the forest owners, Moelven contributes to advise and guide forest owners to increase yields in the forest. Moelven Skog AB thus works directly with the forest owners to increase the climate benefits in the forest.

In Norway it is Moelven Virke AS, who is responsible for the purchasing of timber. Due to a different form of organization among forest owners in Norway, Moelven Virke AS is not directly involved in harvesting or managing forests in the same manner as Moelven Skog AB. As a corporation, Moelven nevertheless has a responsibility towards its suppliers to treat and process the products in a sustainable manner.

In Moelven's environmental policy it is stated that through energy recovery (incineration) after end of use, wood products must return at least 3 times as much energy than is consumed throughout the life cycle.

Raw materials from sustainable forestry

Sustainable and long-term forestry are keywords for Moelven Skog AB. The company is responsible for the supply of raw materials to the Group's timber consuming units in Sweden, and buys timber from more than 10,000 forest owners in Värmland, Västra Götaland and Örebro län. Moelven Skog AB continuously works to develop and improve work methods and procedures with an aim of ensuring that harvesting takes place at the right place in the right season, and of minimizing the environmental impact of heavy logging equipment. Among other things, this happens through the proprietary training programme P3 (planning, production and precision). Within the programme own personnel are trained in addition to those contractors who regularly use it.
However, every year incidents occur that cause alarm among the general public, for example logging close to waterways or damage to forest roads. This often leads to mention in newspapers, on the Internet, radio or TV. In some cases criticism is justified, but more often than not the reason is a lack of insight into modern forestry. In those cases media coverage does not necessarily provide sober and fair picture of the actual circumstances. In the case of larger logging operations Moelven Skog AB therefore greatly emphasizes training personnel and providing information to the general public on how logging will be carried out. The company also continuously works on certification of forest owners in order for them to be active and aware of rules, for example related to planting of new forest after logging. The goal is to operate long-term and sustainable forestry and that the general public should have an understanding of the framework conditions for forestry.


Photo: Johan Alp

Evaluation of results

Large amounts of CO_2 from the atmosphere are stored in Moelven's products as carbon. Through sustainable forestry and long use of the products, Moelven will contribute to increase the carbon cycle's absorption of CO_2, which may reduce the CO_2 concentration in the atmosphere when compared to leaving the forest untouched. It is important to be aware that there are several uncertainties that affect the overall picture, for example greenhouse gas emissions from the soil after deforestation.

By comparing Moelven's climate accounts with the overall amount of CO_2 stored in the products, it becomes clear that the amount of CO_2 stored in the products in 2017 is several times greater that Moelven's greenhouse gas emissions. This may indicate that Moelven, and the materials we produce, are climate positive. In order to conclude, it is necessary to have a better understanding of and insight into forestry operations after deforestation.

Moelven's sales of pulp wood to bioenergy industry and direct sales of district heating based on biomass can replace fossil energy sources and thus reduce society's climate impact.

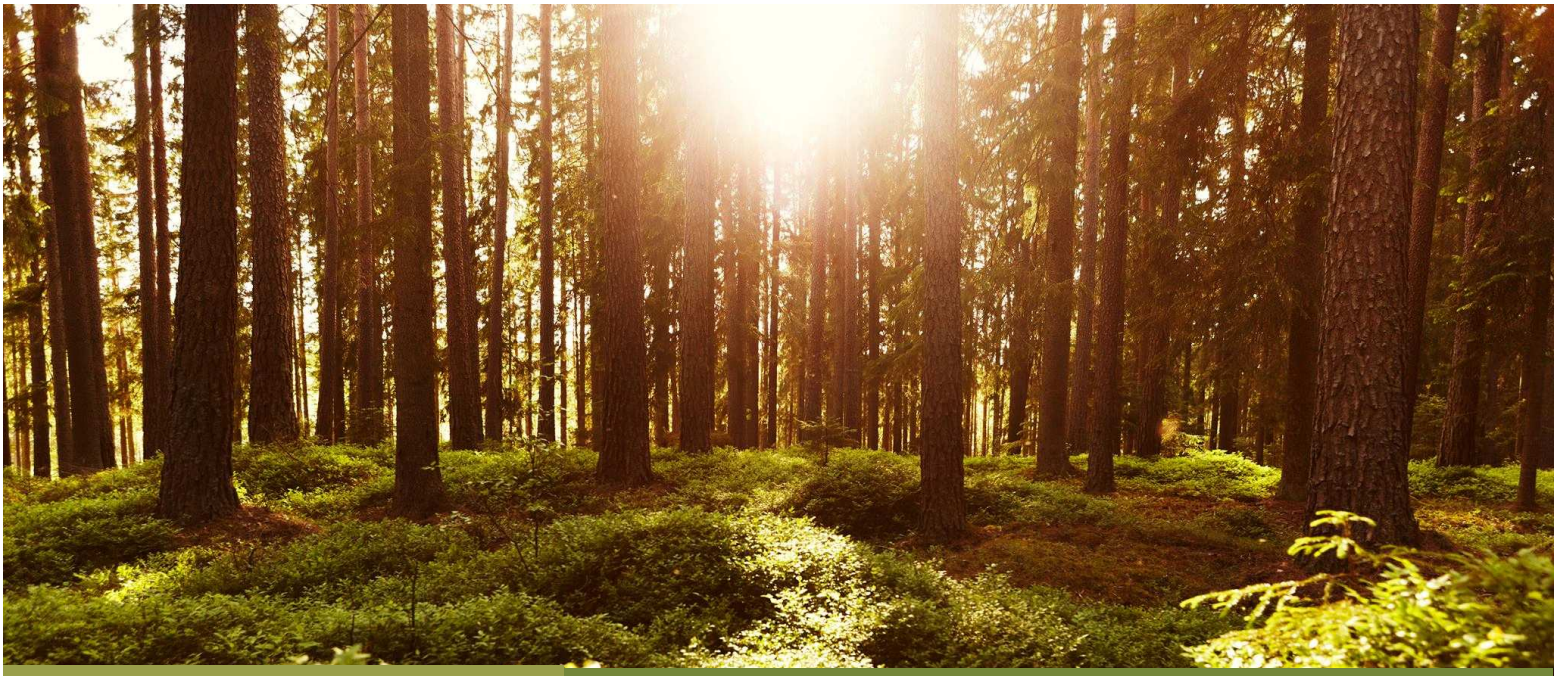
Description	Volume (m^3)	CO_2 stored (tons)	Emissions (tons CO_2)
Total purchased volume	4,915,000	3,518,730	
Produced sawn timber	2,160,000	1,551,601	
Chips for renewable energy production (incl. smelters)	325,700	NA	
Overall CO_2 emissions (location-based)			134,768
Overall CO_2 emissions (market-based)			198,538

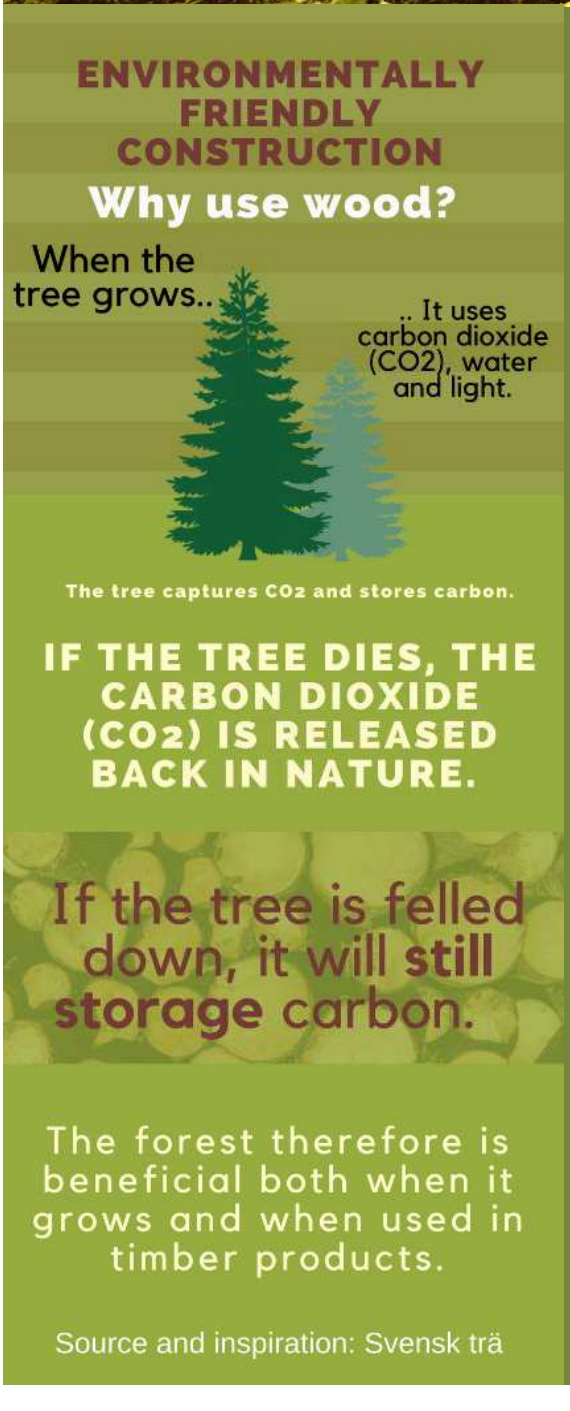
Calculation basis:
Source for calculation of CO_2 is EN16449. Source for density is Bramming et al. (2006). Physical and mechanical properties of Norwegian spruce and pine. An activity in the SSFF project. Treteknisk Rapport 65, 2006.
It is assumed that a cubic metre saw timber of spruce has a basic density of 363 kg/m^3, and pine has a basic density of 418 kg/m^3. Basic density is dry weight of wet volume (>30% wood humidity). The carbon content is assumed at 50% of the dry weight. Equal proportions of spruce and pine are assumed.
Spruce: *363*0.5*44/12= 665.5 kg CO_2 / m^3 saw timber* ***Pine:*** *418*0.5*44/12= 766.3 kg CO_2 / m^3 saw timber*

Ambitions:	**Results:**	**Measures:**
▸ We and the materials we produce shall be climate positive	▸ 3.5 million tons of CO_2 stored in purchased timber ▸ 1.5 million tons CO_2 stored in sawn timber	▸ Develop a better understanding of Moelven's role in the carbon cycle and prove that Moelven is climate positive

Waste management and recycling in Moelven Modus

Moelven also has operations that are primarily based on other raw materials than wood. Moelven Modus undertakes around 2,000 office projects every year. The office solutions are designed to be possible to dismantle and reconfigure according to the user's needs. Moelven Modus greatly emphasizes reducing its impact on the environment and strives to have a circular mindset to minimize environmental impact, CO_2 footprint and waste.
In partnership with GC Rieber Eiendom AS, Nordea Liv and Rasmussen Eiendom, Moelven Modus has established a recycling warehouse in Bergen. Calculations for a single project have shown that recycling could reduce CO_2 emission by eleven tons.
Moelven Modus is active in several government-funded development projects in Sweden. Several recycling projects are also ongoing in partnership with customers in Norway and Sweden, including SE Banken in Oslo and Uppsala municipality in Sweden.





The forest in Norway captures approximately 70% of anthropogenic CO_2 emission in the country, according to Trefokus. How can it then be positive to chop down the forest to use the materials in wooden buildings and other wood products?
Photosynthesis is an important reason for this. The tree consumes the most carbon dioxide (CO_2) when it's growing, and absorbs less CO_2 when fully grown. When the tree dies in the forest and rots, the carbon dioxide is returned into the environment. However, if the tree is felled, the tree remains a carbon repository.

Why should we harvest forests?
For each tree that is felled in Scandinavia, two new trees are planted, which when growing consume more CO_2 than grown trees. A spruce is fully grown and ready for harvesting after 45- 130 years, depending on how fast the forest grows. This means that active forestry contributes to capture more CO_2 than if the forest gradually dies by itself.

According to Trefokus, increased forest production would make it fully possible to increase the amount of captured CO_2 from around 1.2 billion tons of CO_2 in 2013 to 1.5 billion tons in 60-70 years.

Which benefit does the forest have as a building material?
Wood as a building material is renewable and environmentally friendly. Little energy is required to fell and process wood. Energy from renewable sources is largely used when timber is processed, rather than energy from oil. This results in low emissions in the production phase.

Building with wood rather than other building materials reduces greenhouse gas emissions.

Climate smart design

Importance:
IMPORTANT

Where and why is it important?
Moelven produces climate smart products and materials, which have a lower climate impact then competing materials. The products may have a climate impact in both production and use, and it is therefore important to consider the product's entire life cycle.
Certification is important in order to communicate this to the market and to give customers the opportunity to make sustainable product and material choices. As many of the certification schemes cover more than just the climate, this chapter will also cover other environmental impacts

Buildings and the construction industry represent approximately 40% of the world's energy consumption and 33% of the world's greenhouse gas emissions. Moelven therefore plays an important role in producing and developing climate smart products and services. Customers and consumers are to an increasing extent concerned about the environmental impact. Particularly the climate impact of different products and services is of great significance, which makes this topic difficult

Policy and approach

Certification allows customers and consumers to make informed choices and compare different products and materials. Moelven's products therefore have a number of different certifications that cover the customers' various requirements and needs.

The raw material certification schemes PEFC and FSC are key certifications that guarantee that the wood material comes from sustainable forestry. See more about PEFC and FSC certification in the *Sustainable Materials* chapter.

Moelven is also subject to several regulatory requirements for certification. In particular, there are three different EU directives that apply for Moelven's products, "Construction Products Regulations" (CPR), "Registration, Evaluation, Authorisation and Restriction of Chemicals" (REACH) and "Biocidal Products Regulations" (BPR). These regulatory requirements are integrated in Moelven's procedures, and all products that Moelven produces must comply with the requirements that follow from these directives.

In Norway, BREEAM-NOR is the Norwegian adaptation of BREEAM, the biggest driver in the choice of climate-friendly products. This is the industry's own environmental certification tool for buildings. The purpose is to motivate sustainable design and construction throughout the entire construction project, from early phase to finished building. BREEAM-NOR is an effective tool for coordinating the various players in a construction project and integrating sustainable thinking at all stages. BREEAM-NOR sets the requirements for material selection, such as the delivery of certified products in PEFC-CoC / FSC-CoC, EPD (Environmental Declaration), Eco Product, Emission Testing on Interior Products (Hea2 with M1 Certificate or Agbb).

Beyond certifications and regulatory requirements, Moelven also works with the marketing of its products and materials, and is a key player in promoting wood as a climate smart product and building material. Here Moelven has a responsibility and an opportunity to influence the consumer to make climate smart choices by choosing Moelven's products. Among other things, Moelven has interior designers actively working on this issue.

Evaluation of results

A large proportion of Moelven's products and materials are certified under various certification schemes. The next page includes a summary of relevant environmental certifications and tools that are relevant for Moelven's products and materials.

Ambitions:
- Moelven's products and materials should be climate positive

Results:
- More than 64% of Moelven Wood AB's products have an environmental assessment or a product certification

Measures:
- Survey environmental assessments and product certifications in the Group

Environmental certifications and tools

There are a number of different players who have separate certification and documentation schemes related to environment and health. These tools and certification schemes can either cover a product alone, or an entire building or a project. A large proportion of Moelven's products and materials are covered by one or more tools and certification schemes, which give customers and users the opportunity to make informed choices based on sustainability criteria.

Environmental Product Declaration (EPD):
An EPD is a brief third party-verified and registered document with transparent and comparable information about products' environmental performance throughout the life cycle. Both the underlying LCA (Life-Cycle Assessment) and EPD are always based on international standards

Building Product Declaration (BPD)
Byggvaredeklarasjon is a standardized way of describing a product. Information concerning the material's origin, chemical content, environmental impact, certifications and a description of the product's installation, use and how to handle it after use.

BREEAM-NOR
BREEAM-NOR is an environmental certification system for buildings. The system is effective tool for coordinating the various actors in a construction project and integrating sustainable thinking in all aspects. See also the mention on the previous page.

Byggvarubedömning (BVB)
BVB is a Swedish association that has developed a system for assessing building materials based on sustainability. The assessments are based on the environmental impact throughout the life cycle and the chemical content in building materials. BVB is also working on establishing an assessment system for social conditions in the value chain.

BASTA Bedömningar
BASTA is a Swedish product certification scheme for chemical content in products. The EU requirements in the REACH directive are at the core of BASTA's product certification.

SundaHus
SundaHus Miljödata is a tool that assesses the environmental properties of different products in the construction industry. This tool provides Moelven's customers with the opportunity to compare different products based on a standardized assessment model.

Production of bioenergy

Importance:
MOST

Where and why is it important?
Bioenergy is energy that is produced from materials formed in continuous biological processes. Unlike fossil energy, bioenergy is considered to have climate neutral emissions as it is a part of the carbon cycle, and assumes net positive forest growth. Bioenergy can also replace fossil energy sources and therefore makes a positive contribution to the zero emission society.

At Moelven the energy is utilized as heat, and is sold externally as district heating. Biomass is also sold to external customers, who use this to produce bioenergy either in the form of heat for own industry, district heating or electricity

In order to ensure good financial operations, Moelven is dependent on exploiting the entire log, and bioenergy is thus an important resource to heating.

Policy and approach

The energy potential of the Group's chip and bark products, including cellulose chips, is approximately 2,7 TWh (60% humidity), which means that it has a considerable potential, both for increasing our own energy production and also for increasing the market for bioenergy in general.

In Moelven's environmental policy the following goals and guidelines are given:

- Moelven shall reduce energy consumption at its plants and obtain at least 95% of the need for heating of premises and drying from self-produced bioenergy (wood industry).
- Moelven shall actively participate in technology and market developments in the bioenergy sector, and by investigating alternative energy use at those plants who use fossil fuel for

Evaluation of results

Moelven has conducted a survey of bioenergy consumption internally, and the sale of bioenergy and the sale of chips to external bioenergy industry. The results show that Moelven has a consumption of 388 GWh bioenergy in the shape of heat. As described in the chapter *Energy us in own production,* this is mainly used for drying.

Moelven also purchases significant amounts of bioenergy from external companies. This is because there often are different relationships between owners, operators and supplier of biomass for combustion boilers.

Moelven Bioenergi AS and Langmoen Energisentral

Langmoen Energisentral with a 10MW bioenergy plant opened in 2011. Moelven Bioenergi AS owns and operates this plant, which uses energy raw materials supplied by Moelven and Mjøsen Skog. The plant's largest customer is the TINE SA's plant in Brumunddal, which receives approximately 40 GWh of process steam per year. At TINE the investment has led to the phasing out of old, polluting oil furnaces and the transition to renewable bio-based energy.
Moelven is thus contributing to TINE's goal of reducing greenhouse gas emissions by 30% by 2020.

Description	Energy GWh
Chips to external bioenergy industry	349 (lower calorific value)
Bioenergy produced in Moelven	*622 (lower calorific value)*
Consumed bioenergy	*388 (supplied energy)*
Bioenergy sold to companies outside the Group	*66 (supplied energy)*
Calculated average efficiency in combustion boiler	*72 %*

Transportation of chips from Moelven Soknabruket AS by train.
Read more about the extent of railroadtransport in the chapter «Transport of goods»

Ambitions:
- Moelven shall reduce energy its consumption

Results:
- 349 GWh (lower calorific value) of energy raw material sold to the bioenergy industry.
- 622 GWh (lower calorific value) energy raw material used in own production

Measures:
- Improve measurement and reporting of bioenergy consumption and production at the Group level

Safeguard natural resources

We safeguard natural resources

*Moelven **seeks solutions**. The Group has the abilities and resources to be a leader in product development and innovation. We have always been a company at the forefront, **exploiting opportunities** that changing times afford.*

- *"Exploiting opportunities" is one of Moelven's basic values*

Moelven does not own any forest, but buys all its timber from external suppliers. Moelven has thus no right to decide how the forest is managed, but can influence forest owners by imposing requirements, for example through certifications. Moelven also has an important task in seeking solutions and using the opportunities in processing raw materials by having efficient operations and exploiting the full potential of the raw material, in order to ensure that the customer buys a sustainable product.

** Only a selection of input factors are included*

Sustainable materials

Importance:
MOST

Where and why is it important?
Moelven's environmental policy describes how Moelven shall use, as far as possible, natural choices that come from the forest. To ensure that these raw materials come from sustainable forestry, Moelven buys certified timber

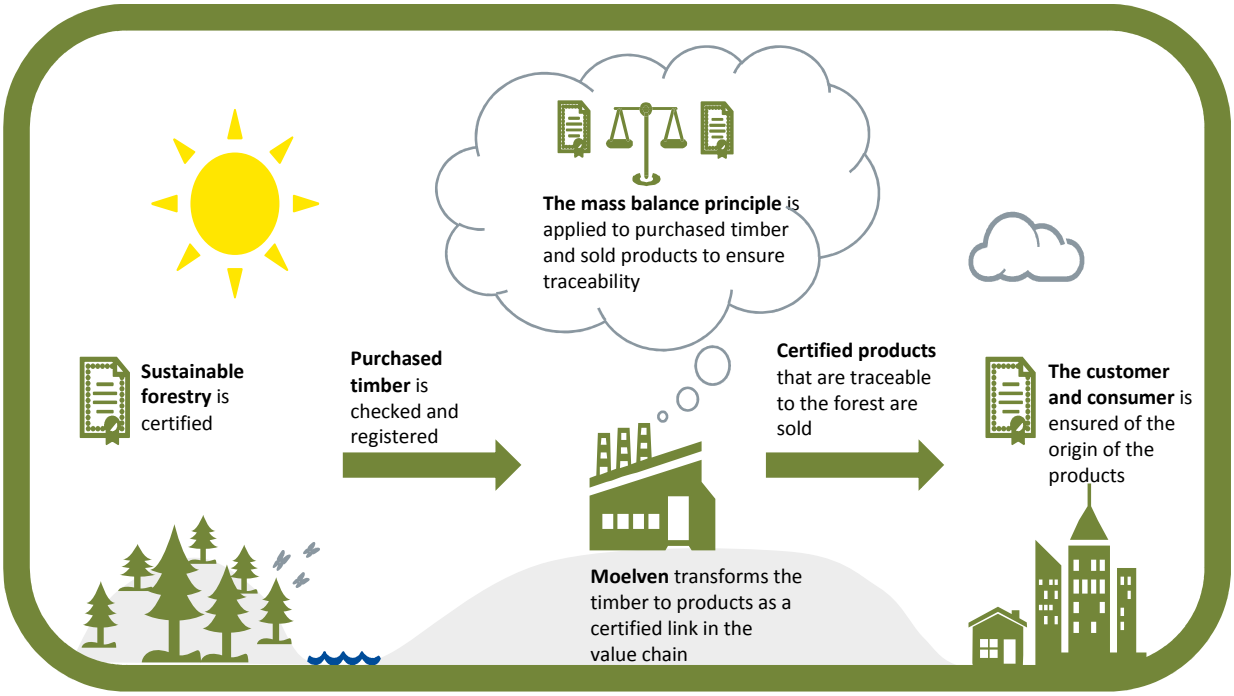
Moelven is a major purchaser of timber, and is thus responsible for contributing to sustainable forestry. Sustainable forestry is important to both Moelven and many of Moelven's stakeholders. It contributes to the forest being managed with consideration toward the basis for sustained use of the forest, including considerations to biological diversity in the forest and the conditions for engaging in outdoor activities.

Policy and approach

Moelven's environmental policy describes the following:

- Moelven must maintain and develop its systems for certified purchases, and maximise purchases and utilization of environmentally certified raw materials from certified forestry.
- Moelven must maximise the exploitation of raw materials through optimizing production and utilizing the residual products
- Moelven shall not buy raw materials from:
  - Illegal harvests
  - Forests with a high preservation value
  - Forests where time-honoured or social rights are violated
  - Forests with genetically manipulated trees.
  - Natural forests that have been harvested with the intention of using the area for plantations or non-forestry applications.

All of the companies in the Group's timber processing operations are organized for and work to meet applicable requirements for PEFC (Programme for the Endorsement of Forest Certification), FSC (Forest Stewardship Council) and FSC Controlled Wood's traceability standard.



PEFC is an international NGO that works for responsible forestry, and issues certificates to players who meet the criteria they have defined. The organization promotes sustainable forestry through third-party certification. Moelven is a link in the value chain through processing the timber, and is thus responsible to ensure traceability, in order to label its products as PEFC certified.

Like PEFC, FSC is also an international NGO that works for responsible forestry, and issues certificates to players who meet their requirements to sustainable forestry. The difference between these two certifications lies mainly in the story of how these were developed.

FSC issues two different certifications, FSC certification and FSC Controlled Wood. The difference between these two is that FSC certification applies to the actual forestry operations, while FSC Controlled Wood is a certification that merely verifies that the forest the timber comes from is not an unacceptable source.

In the certification Moelven operates as an intermediary in the value chain, and the company is thus responsible for securing traceability. As traceability at the unit level is not possible through the sawmill, Moelven practices the mass balance principle to ensure that all products that are sold are correctly certified. This means that Moelven cannot sell more products with certification than it buys. This is checked at the invoice level, where the reference to the certification in the sales invoice refers to certification in the purchasing invoice

Evaluation of results

100% of all timber Moelven purchases are certified in accordance with either PEFC, FSC or FSC Controlled Wood. In Norway there is a requirement that all harvesting of forests must take place in accordance with PEFC's rules. In Sweden rules are different, and most of the timber is certified in accordance with either FSC or FSC Controlled Wood.

The system Moelven currently has for purchasing timber is satisfactory in relation to ensuring that it comes from sustainable forestry.

Moelven also purchases processed wood products that are a part of Moelven's product range. These products are purchased by several different players who operate in different countries. Moelven's aims to determine where these products originate and define how it can contribute to ensure that the products are from sustainable forestry.

Ambitions:
- Moelven shall contribute to sustainable forestry, and not purchase raw materials from illegal harvesting

Results:
- 100 % of the sawlog supply controlled in accordance with FSC Controlled Wood, and a high share of PEFC and FSC certifications.

Measures:
- Assess certification in "traded products"

BREEAM® NOR

Moelven – A natural partner in BREEAM projects

BREEAM is Europe's leading environmental certification tool for buildings. The purpose of the tool is to motivate sustainable design and building throughout the construction project, from the beginning to finished building. The tool may be used for new building or rehabilitation projects in the industry, retail, office, education and residential building categories. For other types of buildings one can develop an adapted set of criteria.

BREEAM is currently developed and tailored to fit in to markets in several countries. Through BREEAM-NOR, the Norwegian Green Building Council (NGBC) and the construction and property industry in Norway have adapted BREEAM for the Norwegian market. Here construction projects can achieve certification through an authorised BREEAM-NOR auditor based on environmental performance in nine categories – management, health and indoor environment, energy, transport, water, materials, waste, land use and ecology and pollution. Five levels of BREEAM-NOR certificates are issued; Pass, Good, Very Good, Excellent and Outstanding.

BREEAM has proven to be an effective tool to coordinate the various parties in a building project and integrate a sustainable mindset at all levels. International studies show that BREEAM buildings have a higher market value, lower operating costs and increased user satisfaction, among other benefits.

Today Moelven has contributed to the process of developing more buildings with BREEAM certification, and Moelven actively works on adapting its products and materials in order to simplify the process for customers in the development of BREEAM projects. This is done through focusing on continuous improvement in the production process, but also through Moelven's climate smart design.

An example of BREEAM certification is the outdoor kindergarten Haukåsen Barnehage (pictured), which has "Very good" certification. The building thus has a clear environmentally friendly profile, both with regard to materials, heating source, energy consumption and

Resource optimization

Importance:
MOST

Where and why is it important?
Moelven is a resource-intensive industrial company, with overall purchases of 4,915,000 m^3 sawn timber and pulpwood. There is thus a huge potential in resource rationalization and optimization through even small production changes.

In order to secure economic operations, Moelven is therefore dependent on exploiting resources optimally and using all by-products. This is an important issue for Moelven, as it affects the operating margin.

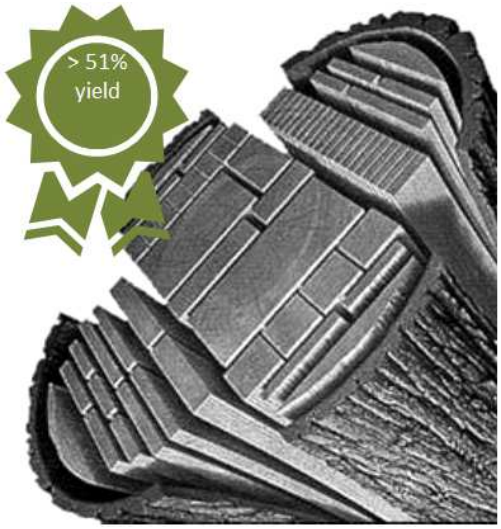
Policy and approach

Moelven focuses on resource optimization throughout the value chain. This applies not only to raw materials, but also in transport and among employees. See more about this in the chapters *Transport of goods* and *Involved and competent employees.*

At the sawmills all logs are analysed to perform an optimal extraction of material. This means that each individual log is analysed with regard to size, twisting and position of knots. The saw is then set based on this. Moelven Valåsen AB actively works with this issue and has installed an X-ray machine that analyses all logs prior to sawing. The technique used in the further process provides full traceability up to finished lumber. There are significant opportunities for improvement and development in advanced data analysis, which may improve selection on the basis of historical measurements and results. This is a part of the innovation project at Moelven Valåsen AB, in development of the digital sawmill.

The LEAN principles also form the basis for operations at several of Moelven's locations that aim to reduce waste and increase efficiency. One of the focus areas is to visualize real time production data for the operators involved, so that they have the opportunity to improve the work processes directly.

LEAN is also important with regard to safety at the plants. Experience shows that many workplace accidents happen outside of ordinary operations, and it has been proven that order and tidiness are important to reduce risk. More about this can be found in the *Health, safety and the environment* chapter.



Evaluation of results

Resource optimization through selection of logs is not only based on maximizing the recovery factor, but also for maximizing the product value. This is because the market value of certain selections can vary in relation to the volume of the selection.

An important principle for Moelven is to exploit the whole log. Regardless of how the selection is made, Moelven therefore ensures that all by-products, including chips and bark, are used internally or sold.

Ambitions:	Results:	Measures:
▸ We shall exploit the whole log	▸ Yield > 51%	▸ Survey LEAN projects in the Group

Resource-efficient design and packaging

Importance:
IMPORTANT

Where and why is it important?
Moelven not only impacts the environment through production, but also in the usage phase. In the usage phase two areas have been identified as particularly important; design and packaging.

Through resource-efficient design and industrial production, Moelven has the opportunity to reduce the need for processing materials at building sites. In industrial production there is greater control, and there is the opportunity to reduce waste and environmental impact through efficient production.

Moelven also uses plastic extensively for packaging, which may have and environmental impact. Plastic takes a long time to break down in nature, and unnecessary packaging can potentially impact a customer's certification

Policy and approach

Moelven's environmental policy provides the following guideline:

- The exploitation of raw materials must be maximized through product optimization and utilizing the residual products.

Moelven produces several types of products that are designed to provide and environmental benefit. Through resource-efficient design Moelven can produce more from less while also reducing production costs.

Packaging is also another cost driver, which is of limited visible value to the customer. Moelven has therefore set a goal to survey plastic consumption across the company to identify opportunities to reduce the company's environmental impact, while also reducing costs.

Evaluation of results

A survey of Moelven's use of plastic was carried out in 2017. This survey shows that Moelven had a consumption of 2,000 tons of plastic in 2017. 400 tons of plastic were delivered for recycling. These are significant volumes. Moelven will therefore conduct a more detailed survey in order to identify opportunities to reduce plastic consumption and replace this with more environmentally friendly options in the course of 2018.

Through its industrial production of composite building materials, Moelven can reduce waste and increase efficiency at the building site. An example of this is Moelven Byggmodul, which makes ready-made factory built modules with full sanitary, electrical and ventilation systems. Through efficient mass production with good planning, building modules will reduce time and waste at the building site, which results in good, resource efficient design.

Ambitions:
- We have climate-smart products and materials
- The exploitation of raw materials must be maximized through product optimization and utilizing the residual products.

Results:
- 2,000 tons of plastic consumed
- 407 tons of plastic recycled
- 9,000 building modules delivered

Measures:
- Identify resource efficient products in the Group
- Moelven shall identify opportunities to reduce waste and the use of packaging

Waste management

Importance:
IMPORTANT

Where and why is it important?
As a production business, Moelven produces significant waste volumes. A large proportion of this is waste that is either recyclable or may be used for energy recovery.

Waste management is an important matter to Moelven and its stakeholders. In addition to a negative environmental impact, the amount of waste is an indication of inefficient production that impacts the operating result and the price of the finished product.

Policy and approach

Moelven's environmental policy describes the following guidelines and targets for waste:

- Sort and recycle waste as far as technically possible and annually follow up waste volumes per ton of final product.
- Minimize the share of waste in approved landfills in accordance with results from registration and the action plan for the waste system.
- Ensure that any depositing of bark and other waste takes place at only approved disposal sites.
- Be able to document that any of the company's disposal sites comply with applicable statutes and regulations concerning covering, control programmes, handling of runoff, plans for termination and modification.

The various units in the Moelven Group are themselves responsible for waste management. This is carried out in cooperation with local waste management businesses, who have different opportunities for handling waste.

Several of Moelven's location apply LEAN production methods. These are based on continuous improvement and a reduction of wasting in the organization. Waste is a form of wasting that impacts the cost of production, and should therefore be reduced to a minimum.

Evaluation of results

In 2017 Moelven conducted a groupwide survey of waste for the first time. Waste statistics were retrieved from all waste handling companies and compiled. However, some uncertainty has been identified in the data presented as different methods are used by the different companies for compiling data.

In 2017 Moelven had a total waste volume of 11,532 tons. This includes 1,894 tons of hazardous waste, mainly ash from incinerators and chemicals such as paint. The remainder consists of wood, plastic and mixed waste.

The sorting ratio has been measured at 65%, but this figure is very uncertain as it has been calculated in arrears by the waste management companies. Different methods have also been used for calculating the sorting ratio by the different companies, and a weighted average has not been used for calculating the overall sorting ratio. The figure should therefore only be considered to be guiding. Several of Moelven's locations have a sorting ratio of more than 90%, which satisfies the most stringent BREEAM requirement.

Waste management at Moelven Byggmodul AB

At Moelven Byggmodul AB in Säffle one has strongly emphasized waste management when rebuilding assembly line 2. The goal has been to simplify sorting at the source in production. Several recycling stations have therefore been established that all offer good opportunities to sort waste directly. The stations are clearly indicated by signs both on and above each individual container, and the stations look the same regardless of where they are located in the business. This measure is one of several that led to the company being named "Årets Leanbyggare" (Lean builder of the year) at the Bygge-galan building fair in Stockholm on 27 March. The award is presented by Lean Forum Bygg and the Byggindustrin journal.

Category	Volume
Total waste volume (tons)	11,532
Total hazardous waste volume (tons)	1,894
Total volume other waste (tons)	9,733
Mixed waste (tons)	3,957
Wood (tons)	4,266
Plastic (tons)	407
Other recyclable waste (tons)	1,582
Sorting ratio (%)	65%

A sorting ratio of 65% is not consistent with Moelven's goal of sorting and recycling waste as far as technically possible. Because of this, throughout 2018 Moelven will actively cooperate with local waste handling companies to improve this statistic.

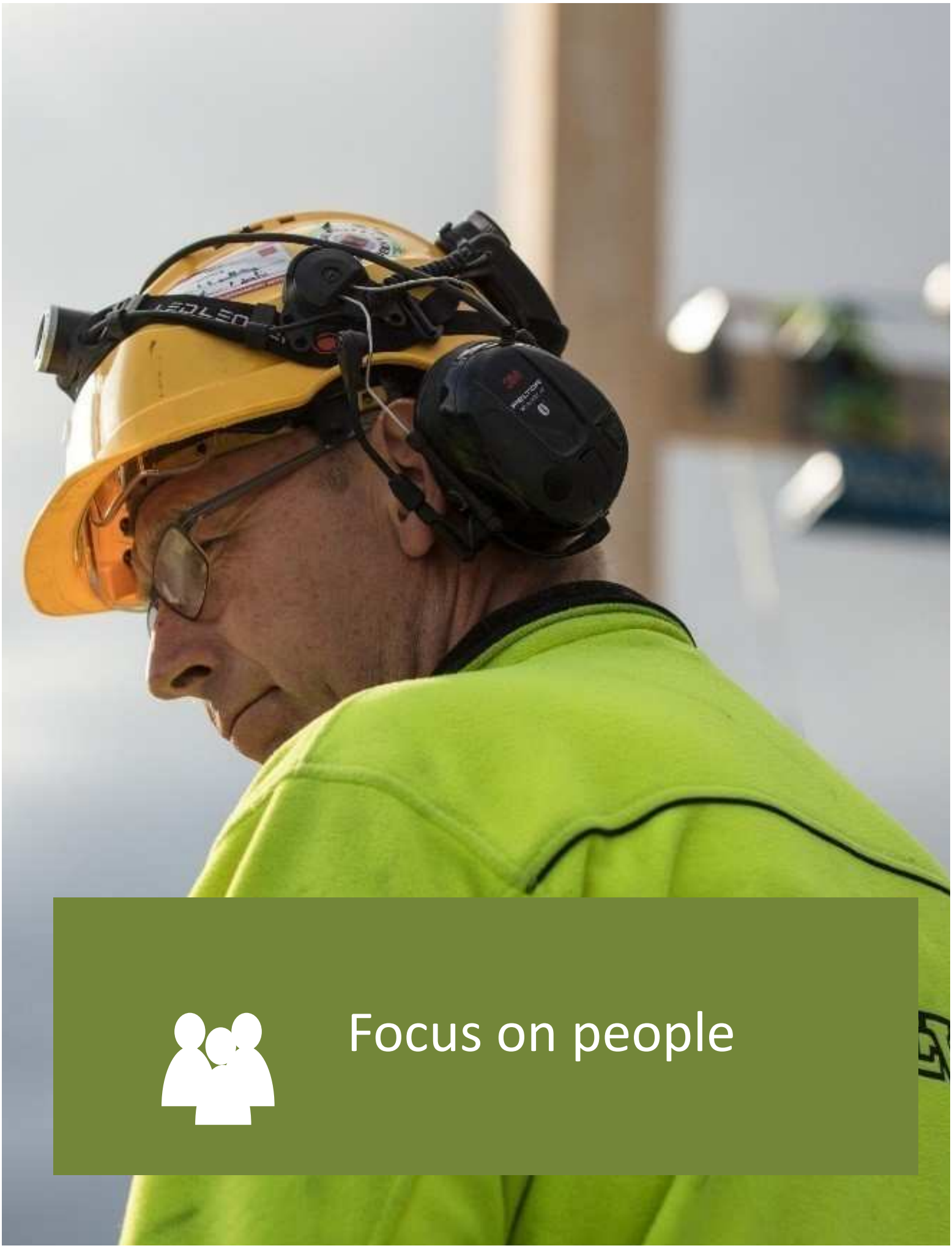
The company will also establish an overarching goal of 90% sorting, which meets the most stringent BREEAM requirement.

Moelven Modus is one of the Moelven companies which has a conscious attitude to waste and who has transformed this into a competitive advantage. It supplies modifiable office landscape solutions where the product they supply may be reused, as opposed to installation built in place. By applying principles from circular economy, Moelven Modus's products are designed for reuse. Moelven Modus therefore measures its remodelling projects based on both recycling and reuse. This gives the customer lower costs, and reduces environmental impact.

Ambitions:
- Sorting and recycling waste as far as technically possible

Results:
- 11,532 tons of waste
- 1,894 tons of hazardous waste
- 407 tons of plastic
- 65% sorting ratio.

Measures:
- Continue surveying waste
- Establish a new ambition of a 90% sorting ratio



Focus on people

Focus on people

Supplying quality rooms

- *Moelven's mission*

Moelven's mission is to focus on the customer and end-user of Moelven's products and services. The mission means that Moelven creates both indoor and outdoor spaces that are aesthetically pleasing, while also being functional and safe.

It is not only the customers and end-users Moelven is accountable to. Moelven is also accountable to employees, suppliers, partners and the local community.

Employees, suppliers and customers are entitled to a safe and secure workplace. Here, Moelven's code of conduct and HSE work are key. Involved and competent employees are important for Moelven's strategy for long-term value creation.

Moelven's products are largely based on renewable forests, but other products and chemicals are also used in the processing of the material. Added products and chemicals can potentially impact people, and this is covered in more detail in the chapter "Health friendly chemical use."

Moelven supports Save the Children

Moelven has extended its partnership with Save the Children and donated NOK 500,000 in 2017, as in 2016, to help children and young people with schooling and eduction in some of the world's poorest countries.

Health, safety and the environment

Importance:
MOST

Where and why is it important?
Health, safety and the environment (HSE) is a collective term for work with health protection, environmental protection, the working environment, safety and security for employees and users. This chapter mainly deals with those parts of HSE that concern people, while the environment is covered in the chapters "We have climate-smart products and services," "Health-friendly chemical use" and "Local community."

A safe working environment for employees, hired staff, customers and suppliers is essential for sustainable added value. It is of course one of the areas of greatest importance to both Moelven and its stakeholders.

*We shall be an **attractive** and **safe** workplace*

- *Moelven's ambition*

Policy and approach

The overarching responsibility for HSE is with the management of the individual subsidiary. HSE is therefore on the agenda in all board meetings and executive management meetings. Moelven also has a dedicated safety committee comprising executive management, the HR director and employee representatives. In addition, the divisions' HSE resources and the HR department meet regularly during the year in the HSE forum. These forums process and discuss corporate HSE issues, exchange experience and develop proposals for new procedures and guidelines.

The Group has developed a HSE manual that is tailored for each individual unit and accessible to all employees. The manual describes relevant procedures and guidelines for the HSE area.

Moelven has a common system, fPortal, for recording accidents, near accidents and hazardous conditions. This system ensures that the Group has a central overview of all reported incidents, and is an important aid for each individual company in the work to identify, implement and follow up relevant improvement measures to reach the long-term goal of 0 injuries. Work to reduce absence due to illness is mainly related to three primary areas: close follow-up of the employee, including focus on and follow up of residual capacity for work, measures to promote well-being and health, as well as emphasis on HSE when investing in new production equipment. Follow-up of employees is done by each individual company in accordance with applicable rules in the countries in which they operate. There is much emphasis on maintaining dialogue with employees on sick leave with a view to making the absence period as short as possible.

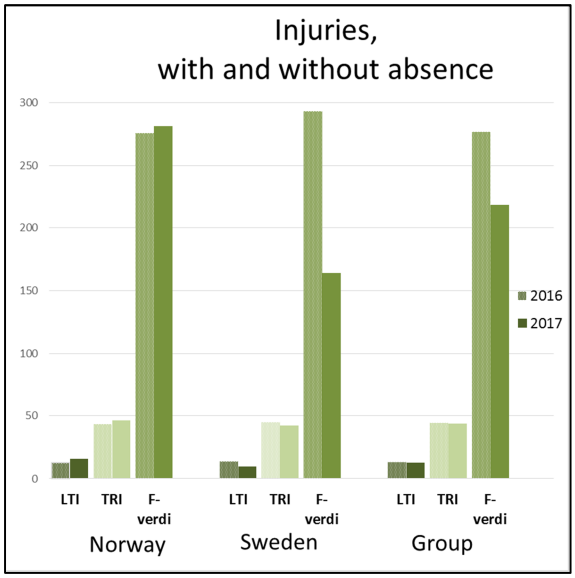
Moelven has health insurance for all employees, and this works as a good HSE measure to get those employees who need health services and treatment back to work faster. Health insurance was established in 2007 and has seen good effect, particularly for employees with musculoskeletal ailments.

Evaluation of results

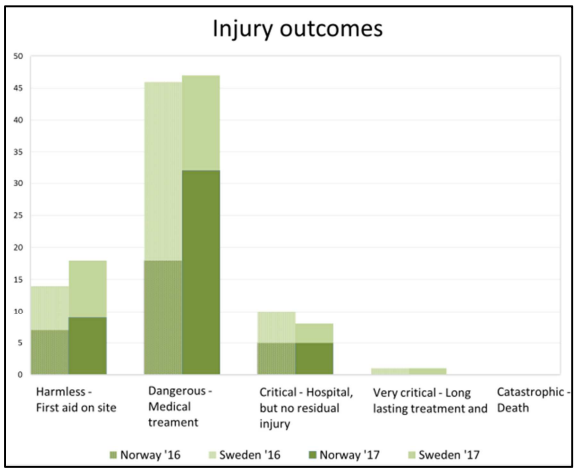
In order to reduce the number of accidents, Moelven has a strong focus on near accidents and hazardous conditions. Through high levels of reporting of near accidents and hazardous conditions, the company has the opportunity to identify HSE risks and implement risk-reducing measures before an eventual injury or incident occurs.

In 2017 a total of 360 (329) accidents, 813 (488) near accidents and 1 334 (920) hazardous

conditions related to persons were recorded. It is positive that the number of reported near accidents and hazardous conditions has increased, as this gives the Group a better basis for implementing good improvement measures.The number of injuries with absence per million hours worked (LTI rate) saw a small reduction in 2017. The number of days of absence due to injury per million hours worked (injury rate) was reduced by more than 20%.



There are still too many who are injured when working at Moelven, and work to reduce the number of injuries continues unabated in 2018. The most frequent injuries are falls, twisting/spraining and crushing injuries.



In 2017, overall absence due to illness remained stable, and was 5.55 per cent, which is higher than the Group's goal of 4.5%. A high rate of absence due to illness is not compatible with Moelven's values. A reduction in and stabilisation of absence at a low level is thus a priority.
For the Group as a whole both short and long term absence has remained stable at the same level as previous years, but with some variations between Norway and Sweden. In Norway long-term absence has dropped by 7.5%, while in Sweden it has increased by 10.2%. Short-term absence has been stable in Sweden, while in Norway it has increased by 10.8%.

Absence due to illness		2017	2016
Norway	Long-term absence	3,19 %	3,45 %
	Short-term absence	2,76 %	2,50 %
	Total sickleave	5,95 %	5,95 %
Sweden	Long-term absence	2,26 %	2,06 %
	Short-term absence	2,72 %	2,66 %
	Total sickleave	4,98 %	4,72 %
Total	Long-term absence	2,67 %	2,71 %
	Short-term absence	2,88 %	2,89 %
	Total sickleave	5,55 %	5,60 %

In 2017 a new e-learning programme was developed for HSE training. All employees must complete the course by the end of the first quarter of 2018. All new employees must complete the course shortly after employment.
Moelven organizes annual "Better working environment" courses as a part of continuous work on HSE. The courses provide basic training in handling health, safety and environment issues, and cover the requirements toward HSE training for both executives, safety representatives and members of working environment committees. Besides employees with mandatory requirements for such training, the course is open to anyone who works with and/or wants to know more about HSE work. In 2017 49 employees completed the course.

Number of employees		2017	2016
Norway	Men	1,510	1,480
	Women	152	145
	Women %	9,1 %	8,9 %
	Total	1,662	1,625
Sweden	Men	1,629	1,609
	Women	227	230
	Women %	12,2 %	12,5 %
	Total	1,856	1,839
Other	Men	17	18
	Women	11	10
	Women %	39,3 %	34,5 %
	Total	28	28

Ambitions:
- LTI < 5 in 2020
- Absence due to illness < 4 % i 2020
- 3,500 risk reports

Results:
- LTI = 12.4
- Absence due to illness = 5.6%
- 2,147 risk reports

Measures:
- Increased use of resources
- HSE training
- Consequences of violations

Involved and competent employees

Importance:
MOST

Where and why is it important?
Moelven is a large employer with 3,546 employees, and it is important that the employees have a workplace where they are happy and have the opportunity to challenge themselves. This is of course important to the employees, but it is also important to Moelven, as there is a clear link between employee satisfaction and Moelven's results.

Moelven is also dependent on attracting tomorrow's talent to ensure long term value creation in a sector that is undergoing continuous change through rationalization and the development of existing and new products and services. Involved and competent employees is therefore also an important factor that affects Moelven's attractiveness as an employer

*Provide **opportunities** to people with a drive to succeed*

- Moelven's human resources ideal

Policy and approach

The Group's human resources ideal is to provide opportunities to people with a drive to succeed. This ideal establishes guidelines for the Group's objectives in terms of which persons are recruited, what expertise is demanded, how new employees are introduced, and which development and career opportunities are offered.

Moelven focuses on long-term employment relationships and strives to offer its employees the opportunity to develop in their jobs. Motivated and competent employees are encouraged to take their personal development further, including through internal management programmes at several management levels.

Moelven will continue to focus on increased management expertise. Good managers are one of the most important factors for employees to enjoy work, and for the business to do well financially. This ideal establishes guidelines for the Group's objectives in terms of which persons are recruited, what expertise is demanded, how new employees are introduced, and which development and career opportunities are offered.

The two young, newly graduated construction engineers Karoline Røste Omdahl and Dennis Afonso Pettersen are a part of the construction team at Moelven Limtre AS, and are proud to work at the company many consider to be world leaders in large load-bearing wood structures.
"You feel privileged to come straight from school and being given opportunities like this. Rumour has it in the university college community that expertise is top-notch at Moelven Limtre. Being new in the game and having the opportunity to work with people who know so much is not only great, it's also reassuring and instructive," Karoline says.

Moelven will continue to focus on increased management expertise. In 2017 Moelven participated in two regional trainee schemes; Trainee Innlandet in Norway and the Higher ambition programme in Sweden. The purpose of both programmes is to attract and retain competent employees with master's degree educations in the Interior region in Norway and Värmland in Sweden. In 2018 Moelven will start its own trainee programme to effectively attract, develop and retain graduates with bachelor-level degrees or technical vocational school educations.

Good skilled worker expertise is essential for Moelven. In order to systematically recruit new employees, even more attention will be given to apprenticeships. At the same time there are efforts to improve the expertise of the existing workforce through several measures that are currently being planned. There is also focus on a good process to welcome new employees so that they have a good introduction both to their tasks and Moelven as an employer.

Employee surveys are regularly conducted in all of Moelven's businesses. These surveys take the 'temperature' of how the employees experience their work situation. The survey is an aid to develop a good and health-promoting work environment, and to create a good feedback and improvement culture. In short, the survey says something about employee satisfaction.

Evaluation of results

In 2017 Moelven had 27 apprentice contracts in Norway. The apprentice is a good scheme that provides value to both the employees and Moelven. The apprentices have the opportunity to train for a profession by working at the company, while Moelven has access to competent labour that develops successively throughout the period. No apprentices were hired in other countries than Norway in 2017, as this scheme is not established in the same way in Sweden.

In 2017 Moelven recruited a total of 4 trainee candidates; 3 in Norway and 1 in Sweden. All candidates have a master's degree and participate in regional trainee programmes.

In the course of 2017 39 employees took part in development programmes for supervisors. Supervisors play a very important role as first line managers, and a continued strengthening of this role is important.

Moelven has a dedicated management development programme for corporate executives, members of the companies' executive teams and key employees in the Group. In 2017 18 employees took part in this programme.

Ambitions:	Results:	Measures:
▸ Involved and competent employees	▸ Trainee scheme established in Norway ▸ 27 apprentices	▸ Start up of trainee scheme in Sweden

Health-friendly chemical use

Importance:
IMPORTANT

Where and why is it important?
Moelven uses chemical and products in its production to increase the life of the products and materials, and to create good spaces. Some of these products may have a potential impact on health and the environment, but correct use should not pose any risks.

This is an important topic for Moelven, as these products may entail a risk during production in the event of improper handling. It is also a topic many customers and consumers are concerned with, and it is therefore important to Moelven to be transparent in the use of these chemicals to establish peace of mind and confidence with the customer.

Policy and approach

The following is stated in Moelven's environmental policy and code of conduct:

- Moelven must minimize the effect on ground and water by using environmentally friendly chemical, oils and adhesives to the greatest possible extent.
- Moelven must only handle of chemicals, oils and adhesives at designated places with approved enclosure or similar installations to reduce the impact of eventual spills.

Moelven is also subject to several regulatory requirements related to chemical use. In particular, there are three different EU directives that apply for Moelven's products, "Construction Products Regulations" (CPR), "Registration, Evaluation, Authorisation and Restriction of Chemicals" (REACH) and "Biocidal Products Regulations" (BPR). These regulatory requirements are integrated in Moelven's procedures, and all products that Moelven produces must comply with the requirements that follow from these directives.

Evaluation of results

In 2017 Moelven conducted the first groupwide survey of selected chemicals and treatment products that are used in the wood industry. These chemicals and treatment products were chosen based on consumption, potential health impacts and stakeholder dialogue.

Moelven Limtre has for more than 20 years developed, produced and assembled large, load-bearing glulam structures. Glulam for bridges is largely produced using impregnated pine. In some cases the bridges are additionally impregnated with creosote after all processing is completed. This is done at the customer's request, and is carried out by subcontractors. Creosote is a distillation product of coaltar, and glulam impregnated with creosote will therefore smell of tar. The treatment provides excellent durability and satisfies the Norwegian Public Road Administration's requirement that bridges must have a 100-year lifespan with a minimum of maintenance.

Creosote can be harmful to health. The risk is mainly present during the actual application of the substance, as the risk increases by exposure through skin contact in combination with sunlight. Moelven therefore recommends that everyone who works with and near creosote uses sunscreen to reduce health risk. There are also other health and environmental risks linked to creosote, but at the volumes and with the applications the substance has in connection with glulam bridges, these risks are negligible.

Name	Description	Consumption
Impregnation fluid	**Area of application:** Provides resistance to moisture, rot and fungus attacks and increases the product's lifetime. **Potential health impacts:** Moelven's impregnation fluid does not contain heavy metals and consists of biodegradable antifungicides. No negative health impacts have been identified through proper use of the chemical or product.	**1,040,860 (litres)**
Paint, primer and stain	**Area of application:** Paint, primer and stain are both aesthetically pleasing and provide resistance to moisture, rot and fungus attacks and increase the product's lifetime. **Potential health impacts:** Moelven can paint, prime and stain products more efficiently and in a safer environment compared to treatment after installations. It is therefore considered that industrial application of pain, primer and stain reduces health impacts compared to treatment in place.	**2,357,627 (litres)**
Fire impregnation	**Area of application:** Moelven's unique Fireguard impregnation provides resistance and passive protection against fire. Used for both internal and external products. **Potential health impacts:** The product has been documented to be an environmentally friendly impregnation agent and meets the requirements of EUs Building Product directive, and waste is handled as ordinary timber. The Fireguard liquid does not contain bromine compounds or boric acid, which is on the priority list under Reach. No hazardous chemicals are emitted during use or in the event of fire.	**147,580 (litres)**
Adhesive	**Area of application:** Adhesives are used as a binding agent in many products, for example glulam. Moelven uses mainly MUF (melamine-urea-formaldehyde) and some PRF (phenol-resorcinol-formaldehyde) in glulam. All glulam is labeled in accordance with which type of adhesive that has been used. **Potential health impacts:** Moelven largely uses adhesives produced from oil that does not originate from fossil sources, and thus has a low environmental impact. Proper use of glulam has no health impacts for the user.	**6,801,258 (litres)**
Osmo	**Area of application:** Osmo is a wood treatment product based on natural oil and waxes. The oil penetrates the wood and protects it from within. The wax creates and elastic, microporous surface that protects the wood from external impacts, and the wood thus preserves its natural appearance and is protected. **Potential health impacts:** There are no known potential health impacts from using Osmo. It consists of sunflower, soya, lentil and thistle oil, and is approved for use in contact with foodstuffs.	**81,319 (litres)**

Ambitions:	Results:	Measures:
▸ Moelven must as far as possible use health-friendly and environmentally friendly	▸ The main categories of chemicals have been surveyed	▸ Continue survey of chemical use and explore alternatives

We create quality rooms

Importance:
IMPORTANT

Where and why is it important?
Quality rooms permeate all activities in Moelven, from care for the employees' working environment and encounters with customers and suppliers to the finished product: A building to live in or for commercial activity.

Supplying quality rooms

- *Moelven's mission*

Policy and approach

Moelven shall supply solutions that are characterized by quality, efficiency and contemporary design. We shall also supply products and services that cover the purposes and needs of customers and end-users. These can be spaces for pleasure, playing, work or contemplation. These may be public spaces or private rooms, outdoors or indoors. Good spaces should also apply to actions and choices that concern suppliers and subcontractors. Moelven enables good collaboration with suppliers by acting in an honest and professional manner. At the same time there are requirements that partners also operate in a sustainable and ethically justifiable manner.

The people who work at Moelven are also subject to these requirements. Moelven creates good spaces for employees by providing well organized working conditions, contemporary and good premises, a clear code of conduct and procedures for health, safety and the environment.

By creating quality rooms for the employees, a good foundation is established to create value for customers and end-users. Moelven provides quality rooms for customers by being aware of what the customer seeks, focusing on how materials are extracted and the product is developed, and an approach to ensuring that customer experience a good buying process with Moelven. Moelven achieves this through a clearly established company strategy and brand strategy.

Evaluation of results

Whether Moelven manages to provide good spaces to its employees, customers and suppliers is reflected in the financial log-term results, customer surveys and employee surveys.

The financial results and description of future prospects are presented in the annual accounts and the report of the Board of Directors, while involvement and expertise are described in the chapter *Involved and competent employees.*

The different units at Moelven conduct customer surveys, but this is not centrally coordinated through the Group, and different methods are used. In the course of 2018 Moelven will therefore assess the customer survey results with an aim of reporting on this collectively in 2018.

Ambitions:
- Moelven shall contribute to create quality rooms

Results:
- Quality Rooms are established as a part of the company's marketing communication

Measures:
- Survey customer satisfaction across the company
- Document that the Group complies with the mission through sustainability work.

Safeguards local values

Economic value creating in the local community

Importance:
MOST

Where and why is it important?

Moelven operates in numerous small communities in Norway and Sweden where we often are a key employer and contributor in the local economy. How we choose to operate will have direct impacts on the local communities, and we are also dependent on having good relationships with our local communities to attract the right people and work with our surroundings. It is important that we have a conscious attitude to recruitment, financial contributions and local purchases and contracts.

This aspect is particularly important where we are a major contributor in the local community.

Policy and approach

Moelven consists of 37 production companies across 46 production locations in Norway and Sweden. Most of the production companies have in common that they are located in geographically rural areas in close proximity to the forest and historical ports for timber. This means that the companies are often large in a local context, and that they become a significant contributor to local businesses. Both directly and indirectly.

Several of Moelven's companies are important cornerstone businesses in their areas. Moelven's businesses create ripple effects for subcontractors and the rest of the economy in the shape of turnover and added value. Moelven pays company tax and an employer's contribution, and the employees pay income tax. Together this makes up the companies' and group's contribution to society.

Evaluation of results

If one uses the Federation of Norwegian Enterprises' calculation for social contribution one can find the companies' direct contribution of taxes and duties. The calculation shows that in 2017 Moelven's Norwegian businesses contributed NOK 1,931,538,000 in overall added value*.

The tax and duty accounts for the Norwegian companies amounted to NOK 376,658,000, after deduction of public grants. This corresponds to the cost of 3,570 pupils in Norwegian elementary school, 9,416 days of hospital stays or 3,964 metres of two-lane road. The tax and duty accounts for the Swedish companies amounted to 476,548,000, and the indirect local economic added value in the Swedish economy comes in addition to the Norwegian added value.

There are also several other ripple effects around a business, not least in the local community, that this estimate does not show. Among other things, we focus on local buying whenever possible, and on creating local job opportunities.

Country	Norway	Sweden	Others*	Total
Revenue	8,370,190	9,019,049	151,307	**17,540,545**
Corporate tax	24,637	42,998	60	**67,695**
Total paid AGA	124,790	236,505	9,542	**370,836**
Tax paid on wages	230,152	199,597	873	**430,622**
Public grants	2,921	2,551	0	**5,473**
Number of employees	1,662	1,856	28	**3,546**

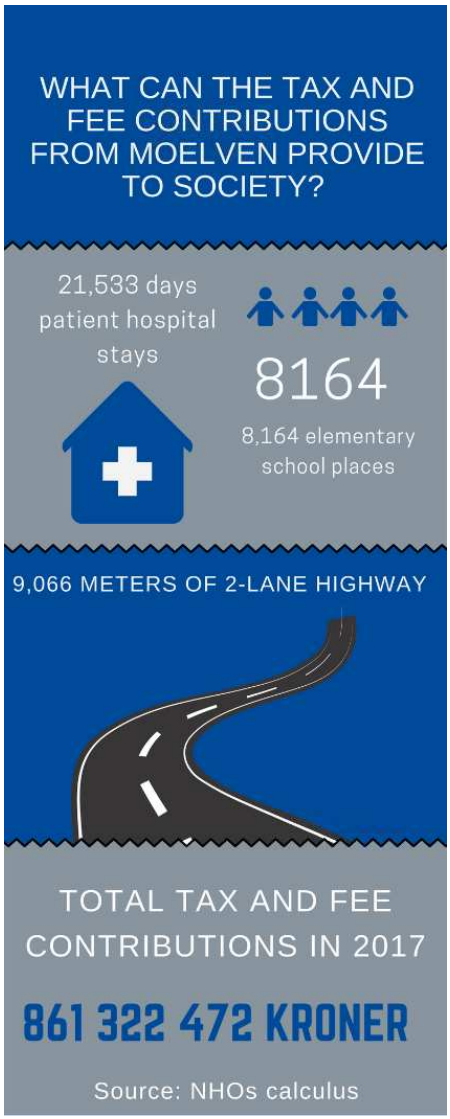
The calculations in the figure to the right have been performed using the Federation of Norwegian Enterprises' social contribution calculator. The calculation has been carried out by compiling Moelven's overall turnover, product inputs, tax on ordinary income, paid employer's contribution, overall paid income tax from employee salaries, and deducted government grants. The figures have been collected from Moelven's Norwegian and Swedish companies, and is in the Swedish companies converted to NOK (as at 31.12.17.) Because the two countries have different tax and duty systems, and access to different markets, there is some uncertainty regarding the figures.

The calculation shows only the direct taxes and duties the Group contributes.

The model does not include the secondary and tertiary effects (ripple effects) that Moelven contributes.

For Moelven the multiplicator effect is significant as the group's individual companies, particularly in the Timber and Wood division, mainly belong to smaller communities in rural areas.

Several of Moelven's companies are important "cornerstone companies" that make a significant contribution to jobs and business in these areas. Here the significance of the ripple effect is reinforced, as it is difficult to redistribute the added value locally.



Ambitions:	Results:	Measures:
▸ Create more local jobs	▸ Estimated tax and fee contributions of NOK 861,322,472 in 2017.	▸ Further develop assessments of economic value creation in local communities

Local communities

Importance:
MOST

Where and why is it important?
Moelven has more than 20 incinerator plants that produce energy for production and sale from biomass. This is defined as renewable energy, but nevertheless affects the local environment through emission of particulate matter, NOx and CO.

Moelven also impacts the local environment through transport and water consumption. Water is used to sprinkle timber to prevent it from drying out and becoming damaged during storage.

Policy and approach

Moelven also affects the local environment through several activities, such as energy production in incinerator plants, transport, waste handling and water consumption.

Moelven's environmental policy describes the following:

- Moelven's responsibility includes past influence from activities on the ground, water, air and/or surroundings from watering (runoff), heating, transport to and from the plants, the depositing of bark, handling of oils, adhesives, handling of chemicals for impregnation storage, use, waste), as well as activities producing noise and dust.
- Moelven must reduce emissions of substances such as NOx, SOx and CO to air from boilers at the plant in accordance with the results from registration and plans of action for the relevant plant.
- Moelven must implement measures to adapt noise levels and dust formation at plants in accordance with the targets at the respective plants.

Evaluation of results

Moelven has 24 of its own bioenergy plants that produce energy used in our own production, and sells surplus energy to external customers. The incineration plants vary in size from 1 MW to 15 MW, with an average of 5 MW installed capacity.

These plants are subject to national emission permits, and exhaust gases are regularly checked in accordance with local registration and action plans.

The table below shows an average of the measured concentrations of significant emissions from the incineration plants that may affect the local environment.

Emissions	Average concentration (PPM)
NOx	136
PM / Dust	99
CO	1,327

Moelven has had no violations of the pollution act or similar legislation in 2017 that have led to fines

Ambitions:
- Reduce emission of NOx, SOx and CO

Results:
- No violations of the pollution act or similar legislation in 2017 that have led to fines

Measures:
- Extend assessments of local environmental impacts.

A reliable partner

We are a reliable partner

Importance:
MOST IMPORTANT

Where and why is it important?
Moelven shall, as described in our values, be a company one can trust. Moelven being a reliable partner is therefore established as a basic assumption for the sustainability strategy and must form the basis of all activities.

Moelven is conscious of its attitude to anti-corruption. This applies both in dealings with suppliers and customers at the corporate level, and in the individual business.

Moelven considers anti-corruption work to be an important part of efforts to achieve long-term sustainable development. Anti-corruption work minimizes the risk of getting into situations that have a negative effect on reputation or finances.

Reliable

Moelven can be trusted. We deliver at the agreed time and with the right quality. There is a strong focus on openness and honesty - being able to admit to weaknesses and mistakes is the basis for progress and trust.

- *Reliability is one of Moelven's basic values*

Policy and approach

Anti-corruption and ethics are key components of Moelven's corporate strategy. A good and reliable reputation is decisive for our business activities and must ensure credibility towards our customers, suppliers and other stakeholders, and contributes to us being perceived as an attractive employer.

Moelven dissociates itself from all forms of corruption and improper actions that impede free competition and market balance. In the Group's business activities there must always be a sound, ethical and moral attitude towards employees, customers, suppliers and other business partners, which entails that employees must neither accept nor offer bribes or other benefits for business or personal gain.

In the work on underpinning a comprehensive approach to anti-corruption in Moelven, a code of conduct and a description of procedures that must be followed in the event of undesired incidents have been developed at the corporate level, which must be complied with. The code of conduct and Moelven's attitude towards competition law have been communicated to company executives, the sales and marketing organization and financial managers in physical meetings, and has also been communicated to other employees.

Within the activities of the Moelven group, there shall not be any differential treatment on account of gender, ethnic origin, language, sexual orientation, religion or philosophy. Job descriptions, areas of responsibility, expertise and work effort form the basis for determining pay, promotion and recruitment. It is only expertise that matters. Further,

Moelven shall adapt conditions for people with reduced functional abilities.

Nor does Moelven accept conditions at suppliers' or customers' operations that constitute breaches of the UN declaration of human rights or other unethical conditions such as child labour.

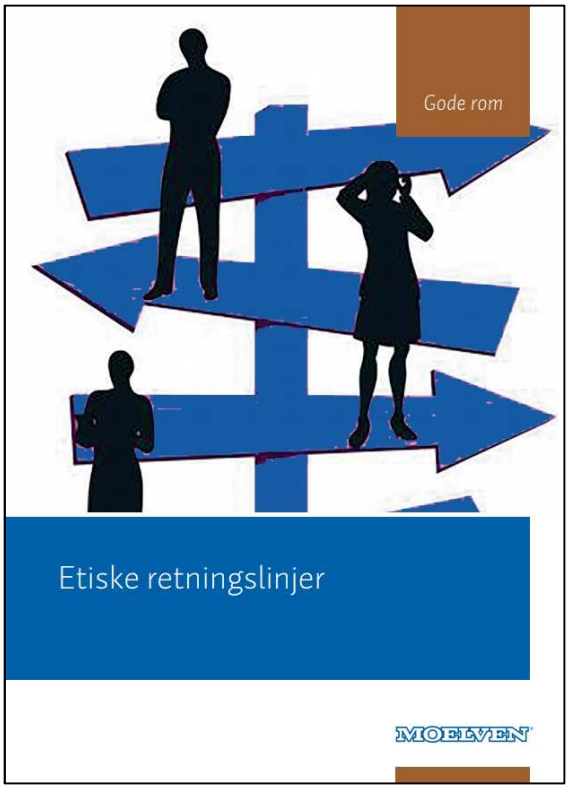
From 2016 the code of conduct was included as a part of the employment contract for new employees. This ensures that new employees familiarize themselves with the code of conduct from the first day. As a supplement to the work on establishing a common platform for ethics among the employees, some companies in the group have also established their own guidelines with local adjustments. Moelven Modus has for example developed its own e-learning programme with accompanying tests.

Moelven has also established guidelines and procedures for whistleblowing. Moelven wants to make clear to all employees that the Group wants a corporate culture based on transparency. It must be acceptable to raise concerns and blameworthy conditions, and they shall be discussed and resolved. The guidelines also provide for anonymity, and it is described.

Evaluation of results

In 2017 there were no reported instances of corruption or price fixing in the Moelven Group. These are of course satisfactory results, but continuous focus on the topic is necessary, and current work must continue.

One instance of sexual harassment recorded in the Group in 2017. The case was pursued locally in accordance with existing guidelines, and has been fully processed and clarified. In light of events in society at large, the board, before the aforementioned case became known, decided that the guidelines should be updated with particular emphasis on whistleblowing procedures and sexual harassment.
Beyond this, no need has been registered to implement special measures to ensure compliance with the code of conduct



Ambitions:
- No instances of corruption or price fixing

Results:
- No reported instances of corruption or price fixing in 2017

Measures:
- Pursue existing work on anti-corruption an ethics

Moelven GRI Index - 2017

Global Reporting Initiative (GRI) is a network-based organization, and is behind the development of the world's most widely used sustainability reporting framework. The GRI framework contains principles, themes and indicators that can be used by organizations to measure and report economic, environmental and social performance.

Moelven reports according to the framework GRI Standards: Core option.

The table below presents Moelven's reporting in relation to the guidelines of GRI Standards.

For more details about GRI, see www.globalreporting.org

GRI 102 - Management Approach

GRI §	Description	Source
Organisational profile		
102-1	Name of the reporting organization	Annual report, Note 1 (p.88)
102-2	Activities, brands, products and services	Annual report, Directors' Report (p. 9-10)
102-3	Location of company headquarters	Annual report, Note 1 (p.88)
102-4	Countries where the organization operates	Annual report, Directors' Report (p. 9-10), Note 6.2 (p.106)
102-5	Ownership structure and legal form	Annual report, Directors' Report (p. 9-10)
102-6	Markets served	Annual report, Directors' Report (p. 9-10), Note 6.2 (p.106)
102-7	Scale of the organization	Annual report, Hovedtall (p.6)
102-8	Information on the workforce	Annual report , Directors' Report (p. 9-10), Mennesket i fokus (p.36-44)
102-9	Supply chain	Safeguards natural resources(p.27-35)
102-10	Significant changes in scale, structure, ownership or supply chain during the reporting period	Annual report,Directors' Report (p. 9-10)
102-11	Precautionary principle	*"Moelven applies the precautionary principle",* See also the group's Sustainability Report 2017
102-12	External initiatives	Annual report , Directors' Report - Innovation (p. 16), Sustainability Report 2017: Moelven and UN's sustainability goals (p.5), A reliable partner (p.49-51)
102-13	Membership of industry associations/advocacy organisations	Annual report, Directors' Report - Innovation (p. 16), Sustainability Report 2017
Strategi		
102-14	CEO's comments	Annual report: Positive development for Moelven (p.4.-5)
Ethics and integrity		
102-16	Core values, principles, standards and code of conduct	Sustainability – the recurring theme from vision to strategy (p.2), A reliable partner (p.49-51)
Governance		
102-18	Governance	Annual report: Corporate governance (p.20-24)
Stakeholder engagement		
102-40	Stakeholders	We listen to our stakeholders (p.9)
102-41	Collective agreements	Annual report: Note 3.25 (p.97)
102-42	Definition and selection of stakeholders	We listen to our stakeholders (p.9)
102-43	Stakeholder dialogue	We listen to our stakeholders (p.9)
102-44	Key topics	We listen to our stakeholders (p.9)
Report profile		
102-45	Entities included in the consolidated accounts	Annual report: Note 22 (p.116)
102-46	Definition of report content av aspect boundaries	Our focus areas for sustainability (p. 6)
102-47	List of material aspects	Summary: Focus areas, ambitions, results and goals (p.8)
102-48	Correction of previously disclosed information	*N/A*
102-49	Change of reporting	*"2017 is the first year reported according to GRI Standards"*
102-50	Reporting period	*01.01.17-31.12.17*
102-51	Date of most recent previous report	*2016*
102-52	Reporting cycle	*Calendar year*

102-53	Contact point for questions regarding report	*Rune F. Andersen - rune-f.andersen@moelven.com*
102-54	Claims of reporting in accordance with the GRI Standards	*Moelven GRI Index - 2017*
102-55	GRI Index	*Moelven GRI Index - 2017*

Material aspects

	Description	Source ref.	Exception	Reason	Description of exception
Climate smart products and solutions – Energy consumption in production					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 14-15	NA		
103-2	Description of methodology and results	p. 14-15	NA		
103-3	Evaluation of methodology and results	p. 14-15	NA		
GRI 302 – Energy					
302-1	Energy consumption in own production	p. 14, 26	NA		
302-4	Reduction of energy consumption	NA	Not reported	Information not available	Comparable figures for 2016 are not available.
GRI 305 – Emissions					
305-1	Direkte GHG emisions (scope 1)	p. 12	NA		
305-2	Indirect GHG emissions - energy (scope 2)	p. 12	NA		
305-3	Other indirect GHG emissions (scope 3)	p. 12	NA		
305-4	Reduction of GHG emissions	NA	Not reported	Information not available	Comparable figures for 2016 are not available.
Climate smart products and solutions – Transportation of goods					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 16-19	NA		
103-2	Description of methodology and results	p. 16-19	NA		
103-3	Evaluation of methodology and results	p. 16-19	NA		
Moelven indicator					
M1	Transport summary	p. 17	NA		
GRI 305 – Utslipp					
305-1	Direkte GHG emisions (scope 1)	p. 12	NA		
305-2	Indirect GHG emissions - energy (scope 2)	p. 12	NA		
305-3	Other indirect GHG emissions (scope 3)	p. 12	NA		
305-4	Reduction of GHG emissions	NA	Not reported	Information not available	Comparable figures for 2016 are not available.
Climate smart products and solutions – Climate benefits from the forest					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 20-22	NA		
103-2	Description of methodology and results	p. 20-22	NA		
103-3	Evaluation of methodology and results	p. 20-22	NA		
Moelven indicator					
M2	CO_2 in purchased timber	p. 21	NA		
Climate smart products and solutions – Climate smart design and marketing					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 23-24	NA		
103-2	Description of methodology and results	p. 23-24	NA		
103-3	Evaluation of methodology and results	p. 23-24	NA		
Moelven indicator					
M3	Textindicator – description of certification schemes	p. 24	NA		
M4	Certification of finished goods	p. 30	Data for Norway not reported	Information not available	Reporting routines will be implemented in 2018.
Climate smart products and solutions – Production of bioenergy					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 25-26	NA		
103-2	Description of methodology and results	p. 25-26	NA		
103-3	Evaluation of methodology and results	p. 25-26	NA		

GRI 302 - Energy					
302-1	Energy consumption	p. 14, 26	NA		
Safeguards natural resources- Sustainable materials					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 29-31	NA		
103-2	Description of methodology and results	p. 29-31	NA		
103-3	Evaluation of methodology and results	p. 29-31	NA		
Moelven indicator					
M5	PEFC and FSC certification	p. 29-31	Details on certification	Information not available	Reporting routines will be implemented in 2018.
Safeguards natural resources– Resource optimization					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 32	NA		
103-2	Description of methodology and results	p. 32	NA		
103-3	Evaluation of methodology and results	p. 32	NA		
GRI 301 – Materialer					
301-1	Materialforbruk	p. 28, 32	NA		
Moelven indicator					
M6	Skurgrad	p.32	NA		
Safeguards natural resources- Resource efficient design and packaging					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 33	NA		
103-2	Description of methodology and results	p. 33	NA		
103-3	Evaluation of methodology and results	p. 33	NA		
Moelven indicatorer					
M7	Interior projects including reuse	NA	Not reported	Information not available	Reporting routines will be implemented in 2018.
Safeguards natural resources– Waste management					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 34-35	NA		
103-2	Description of methodology and results	p. 34-35	NA		
103-3	Evaluation of methodology and results	p. 34-35	NA		
GRI 306 – Avfall					
306-2	Waste statistics	p. 35	Waste management methodology not reported	Information not available.	Waste management methodology varies. Standard reporting routines will be implemented during 2018.
Focus on people – HES					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 36-37	NA		
103-2	Description of methodology and results	p. 36-37	NA		
103-3	Evaluation of methodology and results	p. 36-37	NA		
GRI 403 – HMS					
403-2	HES-statistics	p. 38-39	Occupational diseases and statisticsper gender not reported	Information not available	Reporting routines will be implemented in 2018.
Focus on people – Involved and competent employees					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 40-41	NA		
103-2	Description of methodology and results	p. 40-41	NA		
103-3	Evaluation of methodology and results	p. 40-41	NA		
Moelven indicator					
M8	Webrecruiter-statistikk	p. 41	NA		

Focus on people – Health-friendly use of chemicals					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 42-43	NA		
103-2	Description of methodology and results	p. 42-43	NA		
103-3	Evaluation of methodology and results	p. 42-43	NA		
Moelven indicator					
M9	Consumption of chemicals	p. 43	NA		
Focus on people – Supplying quality rooms					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 44	NA		
103-2	Description of methodology and results	p. 44	NA		
103-3	Evaluation of methodology and results	p. 44	NA		
Moelven indicator					
M10	Customer satisfaction	NA	Not reported	Information not available	The information cannot be aggregated. An indicator for measuring customer satisfaction across units and divisions will be established.
Local values – Economic value creating in the local community					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 46-47	NA		
103-2	Description of methodology and results	p. 46-47	NA		
103-3	Evaluation of methodology and results	p. 46-47	NA		
Moelven indicator					
M11	Tax and fee contributions	p. 47	NA		
M12	Economic value creating in the local community	p. 47	NA		
Local values – Local environment					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 48	NA		
103-2	Description of methodology and results	p. 48	NA		
103-3	Evaluation of methodology and results	p. 48	NA		
GRI – Environmental compliance					
307-1	Deviations from environmental legislation	p. 48	NA		
Moelven indicator					
M13	Average concentration in emissions to air	p. 48	NA		
A reliable partner – Ethics and integrity					
GRI 103 – Management approach					
103-1	Description of aspect and boundaries	p. 49-51	NA		
103-2	Description of methodology and results	p. 49-51	NA		
103-3	Evaluation of methodology and results	p. 49-51	NA		
GRI 205 – Anti-corruption					
205-3	Confirmed corruption incidents	p. 51	NA		
205-4	Confirmed price fixing incidents	p. 51	NA		

Main figures

Amounts in NOK million	2017	2016	2015	2014	2013
THE GROUP					
Operating revenues	10,768.4	10,309.7	9,690.4	8,828.2	8,009.4
Gross operating profit (EBITDA)	716.1	601.6	553.9	490.0	226.9
Depreciation	278.1	290.1	289.6	286.5	271.6
Impairment	17.6	16.5	49.5	0.0	0.0
Operating profit	420.4	295.0	214.8	203.6	-44.7
Financial items	-46.8	-42.5	-56.3	-88.2	-72.4
Profit before tax	373.6	252.5	158.5	115.3	-117.1
Total assets	5,044.6	4,766.8	4,778.1	4,653.2	4,539.8
Equity in per cent	41.5	38.0	36.8	34.2	33.4
Operating margin in per cent	3.9	2.9	2.2	2.3	-0.6
Investments	357.0	275.2	215.8	195.1	351.2
Number of employees	3,546	3,492	3,426	3,326	3,276
TIMBER					
Operating revenues	3,118.2	3,020.6	3,010.1	2,872.3	2,543.9
Gross operating profit (EBITDA)	266.9	181.1	145.1	199.5	104.4
Depreciation	102.7	111.1	119.5	116.5	116.0
Impairment	17.6	16.5	49.5	0.0	0.0
Operating profit	146.7	53.5	-23.9	83.0	-11.6
Financial items	-17.4	-13.1	-9.0	-26.3	-29.3
Profit before tax	129.3	40.4	-32.9	56.7	-40.9
Total assets	1,545.5	1,567.1	1,664.5	1,754.5	1,684.3
Operating margin in per cent	4.7	1.8	-0.8	2.9	-0.5
Investments	99.2	64.2	75.9	67.6	119.5
Number of employees	650	674	679	703	677
WOOD					
Operating revenues	3,805.6	3,529.9	3,275.7	3,066.2	2,820.4
Gross operating profit (EBITDA)	265.7	274.5	237.4	225.3	128.4
Depreciation and impairment	110.9	113.8	113.7	114.4	104.9
Operating profit	154.8	160.6	123.7	110.9	23.4
Financial items	-24.8	-24.4	-27.1	-23.6	-30.7
Profit before tax	129.9	136.2	96.6	87.3	-7.3
Total assets	2,413.9	2,151.6	2,146.7	2,044.8	1,966.7
Operating margin in per cent	4.1	4.5	3.8	3.6	0.8
Investments	119.9	114.7	96.8	82.1	174.7
Number of employees	1,079	1,039	1,009	993	1,011
BUILDING SYSTEMS					
Operating revenues	3,856.4	3,616.8	3,375.2	2,836.7	2,514.1
Gross operating profit (EBITDA)	206.7	166.3	185.2	98.8	18.9
Depreciation and impairment	52.8	51.2	44.4	41.6	38.0
Operating profit	153.9	115.1	140.8	57.2	-19.1
Financial items	-1.6	-1.7	-0.1	6.4	0.1
Profit before taxes	152.3	113.4	140.7	63.5	-19.0
Total assets	1,808.9	1,653.2	1,616.8	1,256.4	1,189.9
Operating margin in per cent	4.0	3.2	4.2	2.0	-0.8
Investments	118.9	84.5	40.2	37.9	43.4
Number of employees	1,687	1,647	1,607	1,498	1,460
OTHER OPERATIONS					
Operating revenues	3,414.6	3,388.9	3,003.8	3,204.4	2,623.7
Gross operating profit (EBITDA)	-23.2	-20.3	-13.9	-33.6	-24.7
Depreciation and impairment	11.7	13.9	12.0	13.9	12.8
Operating profit	-34.9	-34.2	-25.9	-47.5	-37.5
Financial items	-2.9	-3.4	-20.1	-44.7	-12.4
Profit before tax	-37.8	-37.6	-45.9	-92.2	-49.9
Investments	19.1	11.8	3.0	7.5	13.6
Number of employees	130	132	131	132	128

Financial calendar 2018

2. February 2018
Fourth Quarter report 2017

25. April 2018
General meeting – Annual Auccounts 2017

Publishing Quarterly

27. April 2018
First Quarter Report 2018

29. August 2018
Second Quarter Report 2018

26. October 2018
Third Quarter Report 2018

31. Jauary 2019
Fourth Quarter Report 2018

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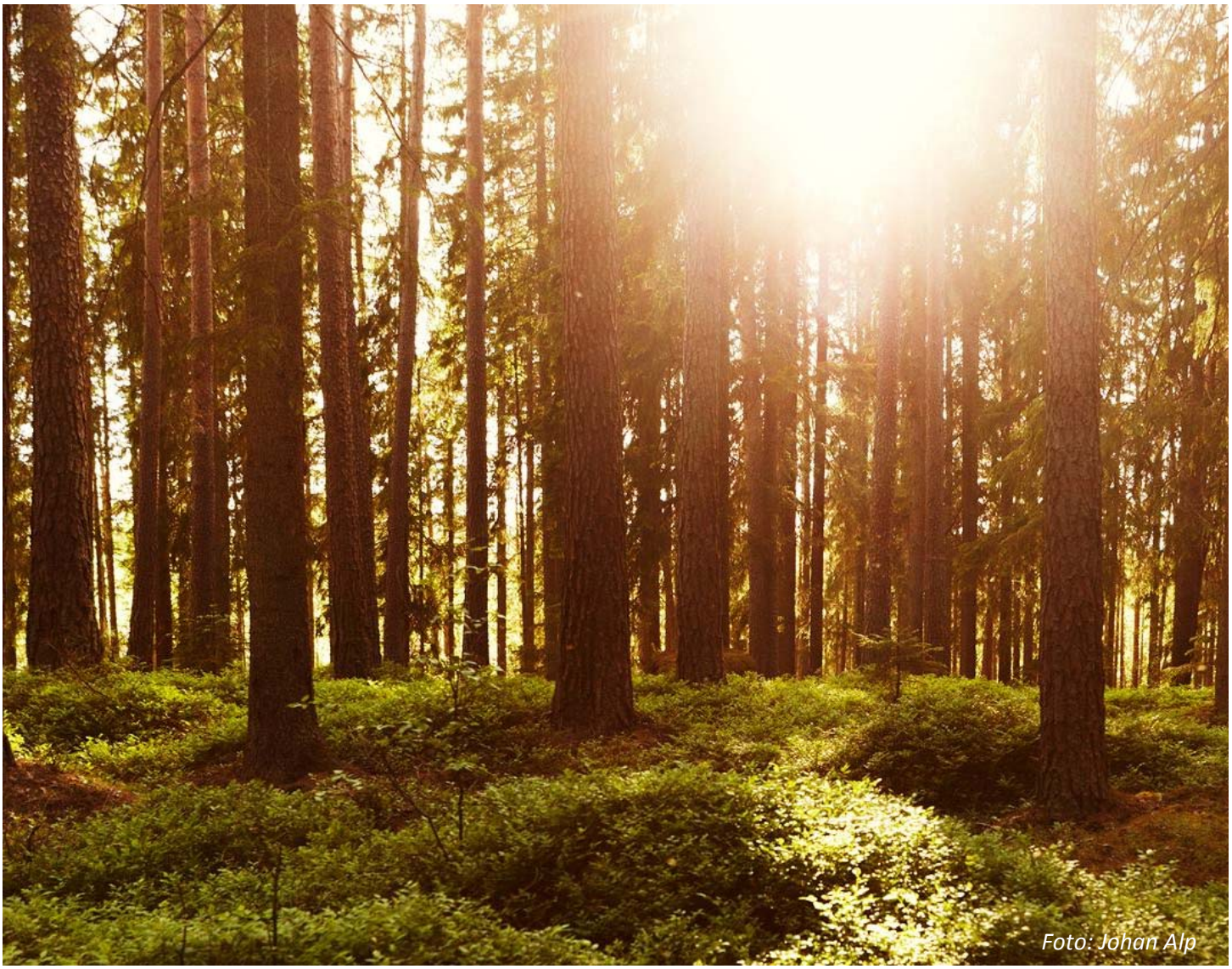

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