

SUSTAINABILITY AND CORPORATE RESPONSIBILITY



BORREGAARD'S PRODUCTS MEET LONG-TERM GLOBAL CHALLENGES



SUSTAINABILITY AND CORPORATE RESPONSIBILITY IN BORREGAARD¹

Borregaard's main objective is to provide sustainable solutions based on renewable raw materials and unique competence. Sustainability is therefore a core element in our business model and overall goals. The Board of Directors emphasises that sustainability is an integral part of operating and developing the company.

At the end of 2015, the leaders of a large number of nations reached a historic and ambitious agreement at the COP21 event in Paris to reduce climate-changing pollution. The agreement contains implementation programmes likely to drive increased demand for green alternatives to petrochemical products and thereby puts Borregaard in a favourable position for future market demand. The UN has recently adopted the 2030 Agenda for Sustainable Development with 17 goals which seek to balance the three dimensions of sustainable development: economic, social and environmental. In this document, Borregaard has defined the Group's contribution towards achieving these goals.

SUSTAINABLE SOLUTIONS

Borregaard's objective is to develop and deliver sustainable solutions using natural raw materials and its unique competence. Hence, both the company's aspirations and challenges are linked to our organisation's responsibility and Borregaard's sustainable development.

Borregaard executes its corporate responsibility by developing and running its operations profitably in a manner that conforms to fundamental ethical values and respect for individuals, the environment and society as a whole. This approach also involves maintaining a dialogue with the Group's key stakeholders and taking them into consideration when running the business and making decisions.

STAKEHOLDER AND MATERIALITY ANALYSIS

Borregaard has conducted a Stakeholder and Materiality Analysis based on the company's sustainability strategy. This analysis focuses on the areas of greatest importance for Borregaard as a company and our stakeholders. It identifies the economic, social and environmental impacts of our operations and aspects with the greatest effect on stakeholders assessment and decisions. The result of the Borregaard analysis is to be found on page 33.

STAKEHOLDER DIALOGUE

Maintaining good contact with the Group's various stakeholders is vital for creating trust in Borregaard and an understanding of what the company does in local communities and society at large. Every Borregaard unit has to consider issues relevant to the relationship between the company and the

¹ Borregaard ASA is subject to the reporting requirements of the Norwegian Accounting Act, Section 3-3c with regard to Corporate Social Responsibility. This requires Borregaard to account for "what the company is doing to integrate consideration of human rights, labour rights and social issues, the environment and anti-corruption in their business strategies, in daily operations and relationships with its stakeholders."

The consolidated figures in this Corporate and Sustainability Report does not include figures from the joint venture in South Africa. The site in Sarpsborg represents approximately three-quarters of the Group's activities, (revenues and employees) and hence has the biggest challenges in terms of EHS, climate and community issues.

wider community, facilitate good dialogue and ensure that complaints and other enquiries from external stakeholders are handled efficiently. Borregaard must also assess the need to implement improvement projects in areas where specific challenges exist.

MAIN AREAS

Corporate responsibility is a broad concept that covers many areas. Based on the Stakeholder and Materiality Analysis, Borregaard has defined the following main areas:

- A SUSTAINABLE BUSINESS MODEL
- B CLIMATE, ENVIRONMENT, HEALTH AND SAFETY
- EMPLOYEE AND COMPETENCE DEVELOPMENT
- SUPPLIERS AND BUSINESS PARTNERS
- CONTRIBUTION TO SOCIETY

ORGANISATION AND RESPONSIBILITIES

Borregaard has a number of guidelines and reporting procedures as part of its corporate responsibility policy. The main documents are approved by the Board of Directors. Corporate responsibility is a line management responsibility in Borregaard. This means that corporate responsibility must form an integral part of the activities of various management teams, units and departments. The Group Executive Management has the overall responsibility to monitor the company's aspirations, initiatives and results in this area.

REFERENCES

- Guidelines on corporate responsibility
- Ethical guidelines
- Anti-corruption manual
- Competition law manual
- Guidelines on responsible procurement
- Guidelines on human rights
- Guidelines on whistleblowing
- Guidelines on climate, environment, health and safety





A SUSTAINABLE BUSINESS MODEL



According to Borregaard's fundamental understanding of sustainability and corporate responsibility, the business model itself and the company's products are sustainable and meet global needs.

In the years ahead, the world will face numerous challenges associated with population growth and urbanisation. In the investment research report entitled "10 for 2016 – The Paris Agreement", the leading global provider of ESG and corporate governance research, Sustainalytics, profiles Borregaard as one of ten global companies taking unique steps to address climate change. Borregaard's bio-based products are alternatives to petrochemical-based products, thereby helping to resolve some of the long-term global challenges associated with access to resources and the impact of this on the environment and climate.

Cleantech is an industry term used to describe products or services that improve operational performance, productivity or

BORREGAARD'S BUSINESS MODEL

- Renewable raw materials
- High raw material utilisation
- Environmentally friendly substitutes for petrochemicals

efficiency while reducing costs, inputs, energy consumption, waste or environmental pollution. Borregaard is thus a good example of cleantech. The Group's bio-based products perform well from a climate perspective when compared with petrochemical alternatives. Borregaard has made efforts to reduce greenhouse gas emissions in its own processes, including elimination of heavy oil and increasing the share of energy from more eco-friendly sources.

LIFE CYCLE ANALYSIS

Borregaard has engaged an independent third party, Østfold Research, to conduct a life cycle analysis (LCA) in accordance with the ISO 14044/48 standard. This involves analysing all environmental and resource-related impacts of the products from cradle to gate. The study was first carried out in 2008 and has since been updated several times, most recently in 2015 (using 2014 figures). This analysis confirms that the environmental and climate footprint of Borregaard's products has decreased over time. In 2016, the environmental performance of Borregaard's products relative to competing products has been investigated by Østfold Research. All comparisons encompass a number of environmental impact categories. Borregaard's products show better environmental performance than the alternatives in almost all impact categories. The results should be seen as an indication of the potential environmental benefits that can be achieved by substituting the alternatives with Borregaard's products.

RESEARCH AND DEVELOPMENT (R&D)

Innovation, research and development are important for renewing and strengthening operations and are also necessary to maintain the company's financial and environmental sustainability. Borregaard's research and innovation efforts increased in 2016 with gross expenditures amounting to around NOK 250 million (220 million)², or 5.6% of the company's revenues. The increase compared to 2015 was mainly due to a significant ramp-up of activities within Cellulose Fibrils (Exilva and SenseFi). Borregaard has an R&D team of 97 employees, including 36 PhDs. Research is primarily carried out at the Group's corporate research centre in Norway, which at year-end 2016 had 68 employees from eight countries. R&D activities are also conducted in Spain, South Africa, India and the USA. Part of the research work is carried out via an extensive partnership with customers, universities and research institutions in a number of countries.

In 2016, Borregaard recognised NOK 66 million (30 million) in funding for ongoing research projects, mainly from EU's Horizon 2020, the Research Council of Norway and Innovation Norway. In addition, Borregaard has received other grants from both the Norwegian Government and the European Union.

SUSTAINABLE WOOD

Borregaard's biorefinery uses raw materials which also meet environmental and sustainability criteria. The Group attaches great importance to purchasing wood from forests managed in a sustainable and eco-friendly manner. Read more about certified wood on page 15.

KEY INITIATIVES AND RESULTS IN 2016

Borregaard's sustainability profile has been strengthened during 2016 by reductions in most emissions and by further development of new biorefinery products.

In 2016, Borregaard finalised an investment in a facility for the production of Exilva microfibrillar cellulose at the site in Sarpsborg. The facility will produce sustainable biomaterials that can replace non-renewable products for industrial applications.

Borregaard has a large-scale pilot plant in Wisconsin, USA for the production of SenseFi, a cellulose-based advanced texture system for food products. This project is still in a demonstration phase and a decision on commercial operations will be taken during 2017. These two projects, Exilva and SenseFi, both entail a continuation and a further specialisation of the biorefinery concept.

Innovation plays an important role in maintaining sustainability and Borregaard measures its innovation effort as the percentage of sales coming from new products launched during the previous five years. In 2016, Borregaard's innovation rate was 17% (18%). The average innovation rate for the last five years increased to 14% (12%).

KEY TARGETS 2016	ACHIEVED
Commissioning of the Exilva® plant	(\mathbf{V})
An innovation rate of 15% (average last five years)	\bigcirc
Further improvement of sustainability in an LCA perspective	(\mathbf{V})

KEY TARGETS 2017

Continued development of the biorefinery concept An innovaton rate of 15% Further improvement of sustainability in an LCA perspective





B CLIMATE, ENVIRONMENT, HEALTH AND SAFETY

Climate, environment, health and safety are integral parts of Borregaard's business model. The Group makes active efforts in this area by adopting measures that can contribute to sound environmental and resource management. Borregaard's aspirations and recommendations concerning climate and EHS are set out in a separate policy document (see list on page 3).

Borregaard has established a risk assessment and management system which is part of the Group's management activities. This system is regularly reviewed (at least every year) by management groups and the Board of Directors. Risk management covers every aspect of Borregaard's activities, including self-assessments on environment, health and safety.

Climate and EHS factors are a management responsibility. Borregaard also has its own dedicated support functions for environment, health and safety and risk management.

CLIMATE CHANGE – GREENHOUSE GAS EMISSIONS

Borregaard's business model involves using renewable raw materials to produce climate-friendly products that can replace products from fossil raw materials. With regard to greenhouse gas emissions from a life cycle perspective, Borregaard's products more than compensate for the emissions from production (see page 4).

A particular focus in 2016 was to continue an ongoing energy efficiency programme which resulted in further reduced energy consumption at the site in Sarpsborg. Borregaard's direct emissions of the greenhouse gas CO₂ primarily come from fossil fuels used in production of energy for heating purposes.

During the past decade, the Sarpsborg site has implemented an energy strategy to replace the use of heavy fuel oil with more climate and eco-friendly energy sources. In this period, Borregaard has reduced its direct CO_2 emissions by 50%. At present, Borregaard meets its base load needs for energy for heating purposes through recovery of heat from production, bioenergy and incineration of waste. In 2013, use of heavy fuel oil in peak load steam production stopped, as Borregaard commissioned a new multi-fuel boiler which primarily uses liquefied natural gas (LNG). The peak load steam production is now based on a combination of LNG, light fuel oil and electricity. The CO_2 emissions associated with production of energy for heating purposes will vary from year to year depending on the energy sources used for steam generation.

Total direct CO_2 emissions generated by all of the Group's plants were 132,289 mt in 2016 (129,319 mt). In spite of reduced energy consumption, CO_2 emissions at Borregaard Sarpsborg increased by 5,343 mt compared with the previous year, and totalled 121,639 mt (92% of the total emissions). The increase was mainly due to a higher portion of LNG in the peak load steam production and an increase in lignin powder production compared with 2015.

Borregaard reports CO_2 emissions to CDP (formerly known as the Carbon Disclosure Project). This calculation of CO_2 emissions is according to the Greenhouse Gas Protocol (GHGP). Scope 1 emissions are almost the same as the direct emissions calculated, except that they include internal transportation. Scope 1 emissions for Borregaard in 2016 were 134,176 mt (130,939 mt), while scope 2 emissions were 60,785 mt (66,223 mt). Scope 2 emissions are mainly CO_2 from the production of electricity and the steam bought from the external waste incineration plant at the site in Sarpsborg.

Borregaard aims to reduce CO_2 emissions by planned investments in the energy efficiency programme. The most important project is an instalment of a heat pump during the 1st quarter of 2017, which will increase the temperature of feed water to the boiler house at the Sarpsborg site in Norway, and hence save energy.

Borregaard is investing NOK 63 million in a project which includes an upgrade of the bioethanol plant and a facility to capture and store biogas, and thus increase the internal use of green energy from 2018. The project has been awarded a grant of NOK 18.9 million from Enova³. The upgrade includes installing modern production technology which will reduce the specific use of energy in the bioethanol production process.

Targets to reduce greenhouse gas (GHG) emissions are considered "science-based" if they are in line with the level of decarbonisation required to keep the global temperature increase below two degrees Celsius compared with preindustrial temperatures, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR5). Borregaard has evaluated its future emission plans. The evaluation shows that it is possible to achieve a science-based target by continuing to reduce energy consumption and increase the use of renewable sources for energy. The plan was presented at the Capital Markets Day in 2016. In 2017, Borregaard will apply for approval of the Group's target to the Science Based Targets Initiative⁴.

ENVIRONMENT

Borregaard is making efforts to reduce its environmental impact in a number of areas. The most significant environmental challenges are associated with the main production site in Sarpsborg.

After a fire in the wood seasoning silos for reduction of extractives in wood chips in October 2015, the Sarpsborg site has experienced some operational problems due to more extractives in process flows. This has led to the need for more frequent washing of process equipment as well as compensating measures in some production steps. As a result, the emissions of copper increased in 2016, and the reduction in emission of organic compounds to water (COD) was lower than expected. However, the emissions will be normalised when the new silos are in operation during the first half of 2017.

In 2016, Borregaard submitted an assessment of the environmental technology in use at the site in Sarpsborg, according to the recently updated Best Available Techniques Reference Document (BREF) standards for the industry, to the Norwegian Environment Agency. This assessment will serve as input to the process of revising the emission permit effective from 1 January 2019.

Borregaard Deutschland has a renewed operating permit for the spray-drying process effective from 2016 with stricter limits. To meet the requirements of the new permit, Borregaard has implemented several actions including a rebuild of the spray driers, which has reduced dust emissions by 20%.

A. Energy production and consumption

The total amount of energy consumed by all Borregaard plants amounted to 1,617 GWh in 2016 (1,687 GWh): 1,093 GWh of energy for heating purposes (1,165 GWh) and 524 GWh of electricity-specific consumption (522 GWh).

The majority of the energy was consumed at Borregaard's site in Sarpsborg, where total consumption amounted to 1,538 GWh in 2016 (1,584 GWh): 1,038 GWh of energy for heating purposes (1,088 GWh) (66% are from energy recovery from sorted waste and renewable energy sources) and 499 GWh of electricity-specific consumption (495 GWh) (98% renewable electricity). Borregaard has an energy efficiency programme aimed at reducing the annual energy consumption at the Sarpsborg site by minimum 60 GWh within three years (starting from 2014). This programme delivered savings of 51 GWh in 2015 and an additional 10 GWh in 2016. The programme includes making better use of the surplus energy from heating and waste to be able to reduce the amount of natural gas and electricity used. The programme receives financial support from Enova³, representing 42% of the total investment of NOK 107 million.

B. Emissions to air

Total SO₂ emissions for the Borregaard Group amounted to 87 mt in 2016 (126 mt). The Sarpsborg site had SO₂ emissions of 79 mt in 2016, a reduction of 39 mt or 33% compared with 2015. This was mainly due to the installation of a new SO₂ scrubber in the cellulose bleaching plant.

Borregaard is continually working on measures to reduce the frequency of extraordinary emissions of SO_2 . These include additional facilities for monitoring and controlling SO_2 emissions from its plants. In 2016, Borregaard installed six additional SO_2 detectors to more easily detect elevated emissions. An ongoing programme aimed at replacing the pipework system by the end of 2017, as well as installing more scrubber capacity, will also reduce emissions, putting the aim of zero exceedances within reach.

Local air quality is to be taken into account in the municipality's land use planning. There are special regulatory requirements related to the localisation of activities around industry which may involve exposure to vulnerable venues

³ A Norwegian government agency which promotes environmentally friendly restructuring of energy end-use, renewable energy production and new energy and climate technology.

⁴ Partnership between CDP, UN Global Compact, WRI and WWF.

such as health institutions and nurseries. In cooperation with local authorities, Borregaard has prepared a dispersion map showing potential exposure of SO_2 in Sarpsborg, taking these requirements into consideration. Sarpsborg municipality measures local air quality also in terms of SO_2 content. The results of these measurements show a reduction in the concentrations of SO_2 in the local environment, but isolated incidents at Borregaard can lead to short-term elevation of values. In 2016, Sarpsborg municipality registered 8 hourly exceedances (17) and 2 daily exceedances (3) of the SO_2 level in the air around Borregaard's plant. Due to these exceedances, Borregaard was obligated to map potential SO_2 reducing activities to get emissions in line with the local air quality regulation. The mapping led to a plan that was approved by Sarpsborg municipality in December 2016.

The total amount of NOx emissions from the Borregaard Group was 189 mt in 2016, representing a reduction of 13% from 2015. In Borregaard Sarpsborg, the NOx emissions were reduced from 208 mt in 2015 to 183 mt in 2016, due to operational changes in the bioboiler.

In 2016, Borregaard made a survey of the malodourous emissions from the Sarpsborg site in Norway. The biological treatment plant, the new scrubber in the lignin plant as well as improved cleaning procedures of existing lignin spray driers, have all reduced the measured smell emission units and the levels are well below the recommended limits.

C. Emissions to water

In 2014, Borregaard Sarpsborg inaugurated a new biological purification plant. The permitted level for emissions of organic compounds (COD) was then reduced to 69 mt per day. In 2015, the degradation rate of the biological treatment plant was improved by investments in equipment to clean inlet streams and optimisation of the process. Better environmental parameters for some products also led to reduced emissions. In 2016, emissions to water were reduced due to increased recycling. On the other hand, the increased need for washing process equipment as well as other compensating measures while operating without wood seasoning silos led to increased emissions of both COD and copper. Overall the COD emissions were 63.4 mt per day, representing a 4% reduction compared with 2015. Borregaard's discharge of copper increased by 2.8 kg per day to a level of 11.5 kg per day.

The COD and copper figures only reflect emissions in Sarpsborg, since the Group's other operations do not have any significant emissions to water. The emission target for 2017 is 64 mt COD per day and 8.5 kg copper per day.

In the period 1949-1997, Borregaard used mercury-based technology for chlor-alkali production at the site in Sarpsborg. This process led to pollution of the soil in the area surrounding the plant. In 1994, a groundwater barrier was built and a water monitoring programme was established. In the winter of 2015, a higher level of mercury was detected by the monitoring. Borregaard has undertaken measures to strengthen the ground water barriers and the infrastructure of the emission pipeline, in order to prevent mercury leakage from discontinued operations. During 2016, the Norwegian Environment Agency ("Miljødirektoratet") agreed to planned actions and Borregaard made provision in the financial statements according to estimated costs. In 2016, Borregaard reached a normal emission rate of mercury, and ground water wells showed decreasing levels of mercury. In 2017, Borregaard will finalise the strengthening of the ground water barriers, and then implement a programme for cleaning or depositing polluted soil.

D. The ecological status of the river Glomma

Borregaard and the Norwegian Institute for Water Research (NIVA) monitor the river Glomma according to the require-

NOX AND SO₂ EMISSIONS BORREGAARD GROUP⁵



SO₂ EMISSIONS SARPSBORG SITE



CO₂ EMISSIONS BORREGAARD GROUP⁵



⁵ The figures have been recalculated from previous years due to a change of reporting. See Note 6 to the Consolidated Financial Statements.

ments of, and standards in, the EU Water Framework Directive. The monitoring programme shows that the emissions of easily degradable organic matter from Borregaard have caused a proliferation of bacteria covering bottom sediments downstream from the emissions. As a result, the ecological status varies between bad and poor in the immediate vicinity of the outlet. The first step of the plan to reduce emissions is to comply with BREF and the new permit regarding emissions to water from 2019. Borregaard has also initiated a pre-project aimed at reducing emissions after 2019. The target is to reduce emissions of organic material in the effluent in order to reach good ecological status by 2027.

Emissions from industrial operations and water level control have negative consequences for spawning and growth conditions of the wild salmon stock in the river Glomma, close to Borregaard's Sarpsborg plant. In 2012, in partnership with two other companies, Borregaard constructed and financed a salmon cultivation facility on Borregaard's premises. The goal was to reach the salmon stock target for the river Glomma within a period of four to five years. Investigations conducted by NIVA in 2015 showed that there was a substantial rise in the number of salmon fry in the river Glomma compared with 2014 and 2013. 24% of the salmon fry came from the cultivation facility at Borregaard, which shows that the natural cultivation of salmon in the river is increasing. In 2016, NIVA recommended prolonging the salmon cultivation due to the ecological status of the river, as the natural cultivation still need some assistance from the salmon cultivation facility.

E. Waste

Plants in the Borregaard Group practise waste sorting. At the site in Sarpsborg 97% of the waste was sorted in 2016. The waste is processed by certified waste operators. The Sarpsborg plant has developed waste plans for both the industrial plant and the company's quay facility. Total waste was 19,861 mt

in 2016 (19,939 mt), whereas the amount of hazardous waste was 3,105 mt (3,721 mt). The energy and material recovery rate of the waste is high (61% in 2016).

The Opsund landfill, a waste disposal site on Borregaard's premises in Sarpsborg, was discontinued in 2009. In late 2014, a plan for permanent closure of the landfill by the end of 2019 was submitted to the Norwegian Environment Agency. The plan was approved in March 2015, and the closure project is progressing according to plan.

F. Water consumption

Borregaard Sarpsborg is self-sufficient in terms of water, thanks to its access to the river Glomma and its own water purification facility. Water is used in processes such as cooling, steam generation and hot water production, as well as transportation of biomass through production and washing. Even though the consumption of water is relatively high at 23.2 million m³ of water in 2016 (22.8 million m³), it is sustainable and future reduction in water usage will be motivated by potential gains in energy saving.

The amount of water used at Borregaard's production facilities outside Norway is moderate and the water is sourced from public waterworks or adjoining industrial areas.

G. Transportation

Borregaard strives for effective and eco-friendly road, rail and maritime logistics solutions. This applies to both the transportation of raw materials to the plants and the transportation of products to customers around the world. Having production units for lignin on three continents reduces the need to transport both raw materials and finished products over very long distances.

Borregaard wants to transport more goods by sea and rail, but current capacity constraints due to Norway's port infra-



EMISSIONS TO WATER SARPSBORG SITE

ENERGY CONSUMPTION BORREGAARD GROUP⁵



structure and the railway network reduce the possibility of increased use of these forms of transportation. 35% of the logs from Norway was transported by rail in 2016.

Borregaard Sarpsborg joined the EU funded project "Marco Polo" in 2012, with the aim to reduce CO_2 emissions through increased sea transport while also relieving the growing levels of traffic on European roads. Borregaard received a pledge of NOK 6.5 million for moving 50,000 mt of its outgoing transport from road to sea per year by the end of 2016. Borregaard managed to move 25,000 mt of goods from road to sea during the project period, resulting in a grant of NOK 2.3 million (275,000 EUR), and savings of 2,600 tonnes of CO_2 . The Marco Polo project has led to significant focus on sustainable transportation in Borregaard and the Group has gained recognition for its CO_2 reductions connected to transport.

The total volume of goods shipped shortsea to Europe is approximately 40,000 mt. Overall, in 2016, Borregaard moved around 50% (45%) of its goods by sea, 35% by road (40%) and 15% (15%) by rail (outbound from Sarpsborg site).

In accordance with the European Commission's strategy to curb CO_2 emissions from heavy-duty vehicles over the coming years, Borregaard monitors emissions from the transportation of logs and wood chips. In 2016, Borregaard had a target of 90% Euro 5 and higher emission standards for vehicles supplying wood to the biorefinery in Sarpsborg. At the end of 2016 this figure was 89% (88%). Emissions from vehicles are considered in the approval process of transportation services. The target for 2017 is 100 % of transported goods by road powered by trucks with EURO 5 or better engines to/from the Sarpsborg site, and 40 % shall be EURO 6.

Heavy-duty vehicle traffic constitutes a large proportion of emissions from the transport sector and these are among the emissions that have increased the most globally. A shift towards greener transportation provides large reductions in emissions of greenhouse gases. In 2015 Borregaard committed itself to a green shift in goods transportation by signing the Zero Emission Resource Organisation (ZERO) declaration of a green shift in heavy-duty vehicle traffic.

HEALTH AND THE WORKING ENVIRONMENT

Borregaard strives to ensure that working conditions are conducive to good health for its employees. To meet this objective, preventative activities and initiatives have been introduced to reduce stressful aspects of working conditions. Employee health is regularly monitored through health and working environment surveys. The working environment is generally considered to be good, and improvement efforts are continually being implemented.

There is a close follow-up of employees on sick leave and on adapting tasks for individual employees. Temporary facilitation in the working environment by providing appropriate work tasks or shorter working hours for a period of time are examples of measures made to accommodate employees with different needs.

Results in 2016

The sick leave rate⁶ in the Borregaard Group was 4% in 2016 (3.5%).

The sick leave rate at Borregaard in Sarpsborg increased slightly to 4.4% (4.1%) after three years of historically low sick leave. Borregaard will continue its focus on and use of appropriate health promoting measures in close collaboration with employee representatives in 2017. Dialogue and physical and organisational facilitation of the workplace, flexible work hours as well as an available psychologist are all measures to reduce sick leave. Borregaard's units outside Norway are also focusing on facilitation of the workplace as well as measures such as physical exercise, health and lifestyle counselling, vaccinations and stress awareness.

SICK LEAVE BORREGAARD GROUP⁵



SICK LEAVE SARPSBORG SITE



INJURY RATE BORREGAARD GROUP⁵



⁵ The figures have been recalculated from previous years due to a change of reporting. See Note 6 to the Consolidated Financial Statements ⁶ Number of total hours sick leave/available working hours.

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WORKPLACE SAFETY

Safety is integrated into every aspect of Borregaard's operations. Borregaard has a worldwide safety programme called Zero Harm. Important measures aimed at achieving fewer injuries include: basic EHS training, focusing on personal responsibility for one's own safety, clearly defining safety management, reviewing rules for and the practical use of protective equipment, and observing rules on order and tidiness in the workplace. All injuries are investigated to identify root causes, implement corrective actions and document lessons that can be learned. Safety is also a permanent agenda item at the shift handover meeting for all workers in Sarpsborg who are starting a new shift period.

Results in 2016

The Group's lost-time injury rate, measured as H1 (LTI) value (number of injuries resulting in sick leave per million hours worked), decreased from 2.6 in 2015 to 1.6 in 2016. The total number of injuries, measured as H2 (TRI) value (number of injuries per million hours worked), was 7.7 in 2016 (6.9).

The Zero Harm process continued with Safety Leadership Team guidance and third party auditing ensuring compliance. In recent years, Borregaard has worked hard to reduce the number of injuries and the seriousness of these incidents.

The Sarpsborg plant had a total of nine injuries in 2016, one of which resulted in sick leave. The H1 value in Borregaard Sarpsborg decreased from 2.9 in 2015 to 0.8 in 2016. The H2 value was reduced from 8.1 in 2015 to an all-time low level of 6.8 in 2016. The main cause of injuries has historically been exposure to chemicals, but years of systematic work on reducing chemical exposure through training and safety management are starting to show results. Among the most serious injuries that occurred in 2016, two injuries were caused by chemical exposure, two were caused by burns from exposure to hot liquids and two were caused by crushing. In 2016, there were two lost-time injuries at Borregaard's plants outside Norway; one at the US plant due to a hot liquid burn and one at the Borregaard Deutschland plant where a worker fell from height and broke his arm. The plant in the UK marked 13 years since the last recorded lost-time injury.

In 2016, the focus on preventative safety work increased significantly through the project "The Safety Year 2016" at the Sarpsborg plant. The project divided the year into quarterly focus areas: safety management, preventative fire protection, environment (process safety) and personal safety. This way of concentrating on the different aspects of safety work is reflected by the H1 and H2 improvements in 2016 which show an increased safety and risk awareness at all organisation levels.

Borregaard Sarpsborg experienced two fires and 22 potential fires in 2016. The fires resulted in minimal damage and the potential for a severe fire was low. The root causes of the potential fires were investigated, and preventative measures are in progress. In 2016, a digital system to strengthen internal controls and routines for preventing fires was installed. Borregaard will continue to work systematically to reduce the number of fires based on a three-year plan (2017-2019) for improving and renewing the fire detection system.

In 2015, Borregaard installed a new and improved deviation system which provides even better monitoring of and focus on EHS incidents. From 2017, Borregaard will launch a new internal EHS report based on data from the deviation system that will give a better overview of the development of risk factors.

Initiatives in 2017

The "Safety Year" project will continue with quarterly focus areas in 2017, but with a further emphasis on competence as well as risk awareness. The margins between hazardous conditions or near accidents and actual accidents are narrow. To reach the goal of zero injuries, Borregaard will continue to have a motivated and proactive safety organisation with high awareness of the responsibility to reduce risk. Work on reporting, analysing root causes and implementing measures in connection with near accidents and hazardous conditions as well as frequent inspections at the plants will continue in 2017. EHS training will continue to be a key focus area, starting with a safety training programme for external workers at the site in Sarpsborg.

PUBLIC SAFETY

Borregaard continuously assesses safety conditions in relation to the community outside the company. This applies in particular to Borregaard's Sarpsborg facility, which is regulated by the Council Directive 96/82/EC, an EU directive to prevent major accidents.

Risk assessments

Each member of the Group Executive Management is responsible for internal control and risk assessment within their respective areas. Risk management systems ensure that risks which are relevant to Borregaard's objectives are identified, analysed and dealt with at the earliest possible stage. The Board of Directors conducts a review of the Group's risk picture at least once a year. Borregaard is continuously working on risk assessment in order to ensure that safe operations are maintained. In collaboration with independent expertise, Borregaard has conducted extensive risk assessments in accordance with guidelines from the Norwegian Directorate for Civil Protection (DSB). Based on this, DSB has proposed a zone requiring special consideration around Borregaard's site in Sarpsborg. Borregaard expects that the municipal land-use plan and the long-term development of the surrounding area will be harmonised in line with the recommendations in the Council Directive 96/82/EC.

Sometimes risk can be removed by technical, organisational or business measures. Borregaard's elimination of chlorine gas risk through a technology change in the chlor-alkali plant in 2012 is an example of this. Borregaard handles sulphur dioxide (SO_2) at its plant in Sarpsborg. Risk analysis shows that a major SO_2 incident could have fatal consequences for a third party. SO_2 is an important raw material in Borregaard's production processes. This means that there will be an inherent risk associated with SO_2 in parts of the processes also in the future. In 2015, Borregaard invested in emergency tanks in the digester plant to reduce the potential impact of an SO_2 incident.

Chemical substitution

Borregaard has internal procedures to ensure that all new chemicals which are subject to labelling due to potential risk are assessed for possible substitution before they are introduced in the production processes. The existing portfolio of chemicals is subject to periodical assessment for possible substitution.

KEY EHS TARGETS 2016	ACHIEVED
Reduce direct emissions by 5000 mt CO ₂ (Sarpsborg site)	\bigcirc
Implement energy efficiency measurements equivalent to 10 GWh (Sarpsborg site)	
Zero lost time injury rate (H1)	\bigcirc
Group sick leave rate below/maximum 3%	\bigcirc
90% of transported goods by road with trucks powered by Euro 5 or better engines to/from the Sarpsborg site	\bigcirc
0 fires and below 7 potential fires (Sarpsborg site)	\bigcirc

KEY EHS TARGETS 2017

Establish science based target for long term CO ₂ emissions (Group)
Reduce specific energy consumption by 4% (Sarpsborg)
COD emissions below 64 mt/day (Sarpsborg)
Reduce emissions and risks related to SO ₂ (Sarpsborg)
TRI rate of 0 (Group)
Sickleave rate below 2016 level; 4.0% (Group)





C EMPLOYEE AND COMPETENCE DEVELOPMENT

The number of man-years in the Borregaard Group was 1,008 (1,027) by the end of 2016^7 . The turnover rate⁸ is generally low in the Group and 2.3% in Sarpsborg (2.9%).

STRONG CORPORATE CULTURE

Borregaard has, over many years and through changing times, developed a strong corporate culture which helps create a common mind-set, core values and an understanding of the business across functions, business areas and geographical boundaries. A sound corporate culture that supports Borregaard's objectives and strategies provides a vital basis for the development of the company and the employees.

Borregaard's corporate culture and core values, "The Borregaard Way", have subsequently been incorporated into various introductory and development programmes and included in internal discussions about how the company is described externally.

The corporate culture and core values also include standards and objectives for sound business ethics. Borregaard has a set of guiding documents for corporate responsibility and ethical guidelines, as well as manuals and more specific guidelines for different areas such as anti-corruption, competition legislation, responsible procurement, environment, health and safety and human rights. Borregaard's ambitions and guidelines in corporate responsibility are integrated in the Group's introduction programmes and management training.

DEVELOPING CORE COMPETENCE

Borregaard's core competence lies in the areas of sales and marketing, research and development, and production.

At present, the company's competence within these areas, and the interaction between them, is Borregaard's most important competitive advantage. Therefore, it is crucial that the company manages to maintain and strengthen this unique competence base, both through recruitment and employee development.

Borregaard has set up internal training programmes within its areas of core expertise. 15% of its employees work in sales, marketing and customer service. It is important to know the various customers' needs and the value of Borregaard's products and solutions. With a view to maintaining this knowledge, Borregaard runs an "Application School" and an international Sales Training Academy for its employees all over the world.

Since Borregaard's production processes are complex and involve a significant degree of integration, great importance is attached to knowledge and expertise in the areas of production and the biorefinery concept. Borregaard conducts extensive training programmes for its operators and apprentices (Norway and Germany). The Group has its own "Knowledge Plant" for training its employees, as well as participation in an external production academy.

In 2016, Borregaard Deutschland continued cross-over training between different parts of the organisation, increasing the competence of the employees even further. The company's apprentices who will finalise their education in the beginning of 2018 are already capable of operating all machinery and thus in a position to replace experienced retiring personnel.

⁷ Last year's report included 50% of employees at the joint venture LignoTech South Africa. These are not included in this year's report. See Note 6 to the Consolidated Financial Statements ⁸ The number of employees that left the company as a percentage of the total number of employees by year-end. Employees retired are not included in the numbers. Every second year, Borregaard arranges a two-day research and development conference. This is a forum to gain external inspiration and exchange ideas across internal research teams, facilities and business areas. The next Borregaard Innovation Conference will take place during spring 2018.

The Group invests significant resources in management training. Its objective is to recruit most of its managers internally by devising career development plans and having replacement candidates and management programmes that combine management training and corporate culture development. In order to help increase the number of female managers and strengthen the company's international competence, women and managers from operations outside Norway are over-represented in these programmes. Among the 23 participants enrolled in the Borregaard Management Programme in 2016, seven were women and 13 came from units outside Norway.

Borregaard believes it is important to create an internal job market and therefore favours a high degree of job rotation and internal recruitment to fill vacancies. This provides employees with new challenges, while the company retains, develops and spreads its competence around the Group.

In 2016, Borregaard started a new two-year trainee programme for graduates with a master's or doctoral degree to enhance long-term recruitment plans. During the first year the Group recruited three trainees who will work in innovation and business development within the various business areas, before taking up permanent positions at Borregaard.

RESTRUCTURING AND ORGANISATIONAL DEVELOPMENT

Borregaard strives to maintain its global competitiveness through innovation, technology, productivity and costefficiency. Thanks to continuous improvement, based on greater expertise and interaction at the common control centre, the site in Sarpsborg has achieved improvements through better production and quality, as well as through improved EHS conditions. An extensive training programme and the introduction of new technology are also important factors. The restructuring processes are demanding, partly because of the need to reduce the number of employees. Borregaard believes it is important to involve and maintain a dialogue with employees and trade unions during restructuring processes.

The improvement programme for Borregaard's operations in Sarpsborg continued in 2016. The number of consoles at the control centre was reduced from six to four during the first half of 2016, using such means as reducing the operators' workload and stabilising operations through training, alarm optimisation and technical improvements. The staff reductions were achieved without entailing redundancies, using internal job rotation and retirement.

The Borregaard plant in Sarpsborg is also assuming greater responsibility for training skilled workers through targeted contact with, and providing lessons in, schools, as well as by increasing the number of apprentices it accepts. The company has its own training centre and showroom, the "Knowledge Plant", available for this purpose.

Based on today's age composition of the workforce as well as planned commercialisation of innovation projects, Borregaard Sarpsborg will have a growing need for qualified employees in the years to come. To meet these challenges, Borregaard is accelerating its recruitment activities aimed at lower secondary school students who choose upper secondary school programme options that provide relevant qualifications. Borregaard Sarpsborg enrolled 20 new apprentices in 2016, increasing the total number to 46. In addition, Borregaard Deutschland has two apprentices.

DIVERSITY

Borregaard wants to contribute towards positive diversity among the company's employees and is committed to avoiding discrimination based on gender, ethnicity, religion or age. Borregaard has its own guidelines for this area.

Borregaard has initiatives aimed at promoting the recruitment of female managers and employees. It purposely has a high proportion of women in management and technical programmes and in the company's recruitment base. In 2016, 24% (24%) of Borregaard's employees were women. The lowest proportion of female employees is in production, while the female ratio is high in R&D and customer service. Three of the company's seven board members are women (ratio of women: 43%). A total of 30% (28%) of the managers at Borregaard are women, while the Executive Management Group includes one woman (ratio of women: 11%).

WHISTLEBLOWING PROCEDURES

Borregaard wants transparency and a strong corporate culture to help ensure that difficult or undesirable situations are discussed and resolved. However, situations may arise where reports from employees about adverse situations do not reach the right person or where they feel unfairly treated and cannot find a solution to their problems. In such circumstances, there are established procedures and guidelines for whistleblowing, in terms of contacting various specific functions in the organisation or by using a special telephone number and email address.

RET CONTETENCE AND LIVITEOTEE TANGETS 2010 ACTIEVED	KEY COMPETENCE	AND EMP	LOYEE TAI	RGETS 201	6 ACHIEVED
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Establish an internal production academy	\bigcirc
Increase the proportion of female employees and managers	$-\mathbf{V}$

KEY COMPETENCE AND EMPLOYEE TARGETS 2017

Establish an internal production academy Increase the proportion of female employees and managers

Establish internal senior leadership programme



D SUPPLIERS AND BUSINESS PARTNERS

Borregaard has several thousand business partners, such as customers, suppliers and others. This often involves wellestablished, long-term relationships that go back many years. Borregaard endeavours to ensure that this contact and cooperation is characterised by trust, integrity and mutual respect, and that transactions and business practices comply with laws, regulations and recognised ethical standards. A number of documents containing guidelines have been drawn up to regulate matters and help employees cultivate good relationships and sound business practices. The guidelines cover the general ethical framework (Code of Conduct) and there are more specific guidelines on competition law, anti-corruption and human rights.

Borregaard basically expects the same ethical standards from its suppliers and business partners as it does for its own business operations. These requirements and expectations are set out in separate guidelines for choosing suppliers and are also incorporated into major purchase contracts.

In 2016, the roll-out of guidelines and standards for responsible procurement throughout the Group was completed. The guidelines and standards aim to enable identification of risk of violations of human and workers' rights and environmental legislation or anti-corruption legislation in the company's supply chain. A pre-screening of existing suppliers was conducted and Sedex⁹ is assisting Borregaard in requiring high risk suppliers to register with Sedex, complete a self-assessment questionnaire and share the information with Borregaard.

ANTI-CORRUPTION MEASURES

Borregaard has its own guidelines for anti-corruption. During

the last three years, the Group has carried out training programmes on anti-corruption for selected employee groups.

In 2016, Borregaard finalised a corruption risk assessment to ensure that relevant measures against corruption are focused and implemented. The result of the risk assessment did not reveal any high corruption risk factors. In 2017, Borregaard will implement further measures to increase the organisation's awareness of corruption risks, including local audits and retraining procedures.

PURCHASE OF CERTIFIED WOOD

Borregaard's biorefinery uses raw materials which also meet environmental and sustainability criteria. Borregaard purchases approximately 1 million solid cubic metres of wood annually for its Sarpsborg site. The Group attaches great importance to purchasing wood from forests that are managed in a sustainable and eco-friendly manner. In 2016, 79% of the wood came from Norwegian forests, 19% came from Swedish forests and the remaining 2% came from German and Latvian sources. All the wood purchased is cut according to the country of origin's laws on felling. The Norwegian suppliers deliver wood in accordance with the PEFC standard for silviculture and biodiversity.

PURCHASE OF LIGNIN RAW MATERIAL

In general, Borregaard receives lignin raw material produced by adjacent pulp mills. The actual supply of lignin to Borregaard may depend upon or be affected by a range of factors such as the pulp mill's profitability and general market conditions, regulatory considerations, loss or closure of production, as well as a range of industry-specific factors, including the supply and cost of raw materials. All medium to long-term contracts, which in total represent above 90% of the total supply of lignin raw materials, are with partners whom we believe are sound businesses with sustainable business models. All of these suppliers purchase wood that comes from FSC certified sources.

There is only a limited number of pulp producers using the sulphite pulping process necessary to produce the lignin required by Borregaard for its lignin-based products. In the past, some of Borregaard's lignin raw material sources have been closed down. However, today's main suppliers of lignin raw material are considered sustainable in the long term, and Borregaard has plans for further expansion. The lignin capacity in South Africa is being expanded to utilise additional supply from the existing source (Sappi Saiccor). In addition, Borregaard and Rayonier Advanced Materials (RYAM) are building a new lignin plant adjacent to RYAM's pulp mill in Florida, USA. Borregaard has also developed the patented BALI concept as a long-term option for additional lignin raw material, allowing the extraction of lignin-based products from various biomasses. This new technology has not yet been put into commercial operation, but represents an alternative for the future.

LIGNOTECH SOUTH AFRICA

LignoTech South Africa (LTSA) is a 50:50 joint venture between Borregaard and Sappi (for more information, see Note 6 to the Consolidated Financial Statements). The company employed 96 man-years as of 31 December 2016. Borregaard is represented on the board of the company. LTSA is a supplier of lignin products based on raw material from Sappi Saiccor's adjacent pulp mill. The lignin products produced at LTSA represent sustainable alternatives to oil-based products.

The company has its own Social, Ethics and Transformation Committee tasked with monitoring social, ethical, transformation and sustainability issues. The Committee is composed of members of the company's management team and chaired by an LTSA director. LTSA subscribes to the OECD guidelines with respect to anti-corruption measures. During 2016, internal and external audits of LTSA and its suppliers did not expose any violations of the United Nations Global Compact Principles.

In 2016, LignoTech South Africa maintained its OHSAS 18001:2007 certification, an international occupational health and safety management system, and celebrated 1 million man-hours without a lost-time injury. The company organised its annual "Safety Day", raising awareness about safety risks in the workplace. In LignoTech South Africa all new employees undergo hazard awareness training and testing, and sign a safety pledge when joining the company as preparation for being absorbed into the Zero Harm systems.

The company is involved in reducing the effects of the social and financial consequences of HIV/AIDS. One important area has been to prevent discrimination based on the disease, to disseminate information about the disease and its treatment, and to carry out testing for those employees who want it. The company also offers medicines to those who are affected. In addition, the company supports a local school and selected charitable causes.

LignoTech South Africa is consciously striving to ensure that the profile of its labour force reflects the country's demographics, with a particular focus on representation in management. The company is B-BBEE (Broad-Based Black Economic Empowerment) certified, with the common goal to distribute wealth across as broad a spectrum of previously disadvantaged South African society as possible. As part of the B-BBEE engagement, LignoTech South Africa has partnered with The Hope Factory initiative to support small and medium-sized enterprises and informal businesses to grow and develop. In addition the company donated 1,350,000 rand (EUR 95,200) towards funding the next generation of specialists, including students from the "missing middle"10, in the fields of chemical engineering, chemistry and organic chemistry and accountancy at the University of KwaZulu-Natal.

LignoTech South Africa paid income taxes totalling NOK 29 million (NOK 28 million) in 2016.

Certifications in LignoTech South Africa:

- ISO 9001 (Quality Management)
- ISO 14001 (Environmental Management)
- GMP+ Production of Feed Additives and Premixes
- OHSAS 18001:2007 Health and Safety Management
- B-BBEE Broad-Based Black Economic Empowerment

SUPPLIERS AND BUSINESS PARTNERS TARGETS 2016 ACHIEVED

Conduct a corruption risk assessment as a tool for continuous improvement of anti-corruption efforts	\checkmark
Ensure use of guidelines and standards for responsible procurement throughout the Group	\bigotimes

SUPPLIERS AND BUSINESS PARTNERS TARGETS 2017

Implement additional measures based on risk assessment of suppliers Implement new anti-corruption measures based on risk assessment



E CONTRIBUTION TO SOCIETY

Profitable companies and sustainable jobs are a prerequisite for welfare and social security. This manifests itself through income and meaningful activity for individuals, as well as through financial contributions such as taxes and duties, which companies and their employees provide to the countries and local communities in which they operate. Those countries where Borregaard has manufacturing operations see significant ripple effects from suppliers and other activities around the plants.

As of 31 December 2016, Borregaard employed 1,008 manyears in 16 countries. The Group has production plants in Norway, the UK, Germany, Spain, the Czech Republic, South Africa and the USA.

NOK 90 MILLION IN INCOME TAX PAYMENTS

Borregaard paid income taxes totalling NOK 90 million in 2016 (NOK 92 million). The income taxes paid for operations in Norway amounted to NOK 47 million, while income taxes paid in the other locations were NOK 17 million in the rest of Europe, NOK 18 million in the Americas, NOK 5 million in Asia and NOK 3 million in Africa.

Borregaard's tax planning is consistent with a responsible approach. The company seeks to comply with the spirit as well as the letter of the tax law in countries where Borregaard has commercial activity. The company will not enter into arrangements which could be considered artificial or which have tax avoidance as their sole or main objective. Borregaard uses the OECD guidelines for internal pricing, which is an important factor in ensuring that profits and taxes are distributed fairly among different countries.

SHARED INTERESTS WITH THE LOCAL COMMUNITY

Borregaard's companies impact and interact with the local communities where they are located. The Group's plants



outside Norway are relatively small, while Borregaard has been a cornerstone company in Sarpsborg for generations. Borregaard plays an important role in the town and region as an employer, an important customer of many suppliers, and a socio-economic contributor through taxes and duties from its operations. A social audit report produced by the Confederation of Norwegian Enterprise (NHO) in 2015 shows that, overall, Borregaard's operations in Sarpsborg create and finance 5028 man-years in the company itself, as well as for suppliers and the public sector. Borregaard and its suppliers (companies and employees) contributed a total of about NOK 1.2 billion in taxes and duties to Norwegian society in 2014.



SUPPORT FOR SOCIAL DEVELOPMENT

Borregaard has a broad stakeholder base in Sarpsborg and Østfold county. The company participates in various forums and organisations involved in urban and regional development, and has also provided venues for socially beneficial activities.

In 2016, the company also contributed around NOK 4 million to support measures that mutually benefit both the company and the region, with an overall aim to strengthen the company's employer branding. Borregaard's sponsorship strategy has two main pillars. One covers cultural and sports activities that help make the town and region a more attractive place to live and work. This is important to Borregaard in terms of creating a long-term recruitment base. The other area involves measures that stimulate young people's interest in and understanding of disciplines that are important to Borregaard and society as a whole. This is illustrated by Borregaard's support for and cooperation with the Inspiria Science Centre, the Young Entrepreneurship scheme and Borregaard's Knowledge Plant.

Borregaard and Sarpsborg share a common history and are in many respects highly interconnected. In that sense it was natural for Borregaard to actively participate in the city's 1000-year anniversary in 2016. Among other contributions, Borregaard funded a new hiking trail and outdoor exercise equipment for the town's population.

COLLABORATION WITH EDUCATIONAL INSTITUTIONS

Borregaard in Sarpsborg works closely with schools and educational institutions in the area. The Group has created its own academy, The Knowledge Plant, which functions as both an in-house training centre and as a showroom and venue for school visits. It offers educational programmes that tie in with schools' curricula, using examples taken from the company. In 2016, 1,740 students visited the centre, coming from schools that took part in educational programmes that combined technical training, career advice and a company presentation. Borregaard employees also contribute to a scheme for the teaching of chemistry in upper secondary schools in Østfold county, where researchers from Borregaard have created a company-related teaching plan for chemistry. Every year, students from a number of colleges and universities perform practical tasks and conduct projects or get internships in the company.

Borregaard has programmes and instructors for apprenticeship schemes involving cooperation with vocational schools in the region. These provide apprentices with relevant experience to supplement their theoretical training. In 2016, Borregaard had a total of 46 apprentices at the biorefinery in Sarpsborg.

AWARDS AND RECOGNITIONS

Over the years Borregaard has received several awards and recognitions from external bodies. In 2016, the Group received "The Norwegian Industry Climate Award" ("Næringslivets klimapris"), an award given out by NHO¹¹, NTNU¹² and Zero¹³ for promoting the green shift. The Norwegian Paper and Fibre Research Institute awarded the Borregaard employees Kristin Misund, Gisle L. Johansen and Gudbrand Rødsrud "The Norwegian Pulp and Paper Industry Prize" for their ground-breaking biorefinery work. In addition Borregaard was named "Company of the year" by Sarpsborg Industry Association and Sarpsborg Arbeiderblad (local newspaper) for its good business practices, innovativeness, social engagement and demonstration of growth and employment.

Borregaard conducts an annual reputation survey among the people of Østfold County regarding their views on matters

¹¹ The main representative organisation for Norwegian employers.

¹² The Norwegian University of Science and Technology.

¹³ Zero Emission Resource Organisation.

including Borregaard as a workplace, environmental matters, contribution to the local community and people's general impression of the company. In 2016, the survey showed all-time high results on all factors confirming the company's strong position in the local communities near our largest plant.

CERTIFICATION AND AFFILIATION

Borregaard cooperates with various external schemes that lead to tighter control and improvements, and provide inspiration for a more systematic way of working. This also applies to issues and topics relating to corporate responsibility and sustainable development and operation.

The company has committed itself to the Responsible Care guidelines and objectives, which are the European chemical industry's environmental responsibility initiative.

Borregaard is certified in accordance with several standards:

- ISO 9001 (Quality Management) (Norway, USA, Germany, Spain, UK and Austria)
- ISO 14001 (Environmental Management) (Norway, Germany, Spain and Austria)
- ISO 50001 (Energy Management) (Norway and Germany)
- FSSC 22000 Management Systems for Food Safety
- GMP+ Production of Feed Additives and Premixes (Norway, Germany and Spain)
- SMETA Ethical Trading Initiative Base Code

- OHSAS 18001:2007 Health and Safety Management (Austria)
- Kosher certified (vanillin products, Norway)
- Halal certified (vanillin products, Norway)

Borregaard is a participant in the UN Global Compact initiative, thus lending support to universal principles on human rights, labour relations, the environment and anticorruption. Borregaard also reports on progress according to the Global Compact scheme.

ENVIRONMENTAL REPORTING

Borregaard reports climate change data annually to the Norwegian authorities and to CDP (formerly the Carbon Disclosure Project). CDP is an international, not-for-profit organisation providing a global system to measure, disclose, manage and share vital environmental information. CDP's climate change programme aims to reduce companies' greenhouse gas emissions and mitigate climate change risk.





THE TEN PRINCIPLES OF THE UN GLOBAL COMPACT

Borregaard complies with the UN Global Compact's ten principles of doing business in the areas of human rights, labour, environment and anti-corruption. The ten principles are derived from: the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption.

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure that they are not complicit in human rights abuses.

Labou

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruptior

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Per A. Sørlie, President and CEO, Borregaard



THE BORREGAARD MATERIALITY ANALYSIS

Borregaard has conducted a Stakeholder and Materiality Analysis based on the company's sustainability strategy. The analysis was conducted by an internal interdisciplinary group and the Borregaard management team, in light of relevant government regulations and international standards for corporate social responsibility.

The analysis focuses on the most important areas for us as a company and our stakeholders. The stakeholder groups considered to be the most important for Borregaard are investors, employees, the government, customers (including potential customers), suppliers, the local community and business partners. These have therefore been emphasised most strongly in our analysis of the interests and concerns of our stakeholders.

Our analysis identifies the economic, social and environmental impacts of our operations and aspects with the greatest effect on stakeholders assessments and decisions. The focus areas identified as most important are described in the Borregaard Sustainability Report, Chapters A to E, and reflect the company's five main areas: A sustainable business model, Climate, environment, health and safety, Employee and competence development, Suppliers and business partners and Contribution to society.

The Stakeholder and Materiality Analysis below indicates the degree of importance for our stakeholders and what is important and relevant to Borregaard.







END POVERTY IN ALL ITS FORMS EVERYWHERE

- Borregaard and the industry in general give high added value. Through the purchase of goods and services and tax contributions, the industry creates positive social effects in the form of direct and indirect jobs.
- Significant tax payments. In 2016, the Borregaard Group's tax payments totalled 90 million.
- Jobs are the way out of poverty. Borregaard employs 1,008 man-years in 16 countries



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

- Sustainable agriculture and feed products
- Products enhance agricultural plants
- Products for increased milk production (SoyPass)
- Raw materials do not compete with food production

3 GOOD HEALTH AND WELL-BEING



ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

- Several Borregaard products replace more hazardous chemicals
- Products that contribute to fat reduction
- Diagnostics (fine chemicals)
- Health focus for employees

4 QUALITY EDUCATION



ENSURE INCLUSIVE AND QUALITY EDUCATION FOR ALL AND PROMOTE LIFELONG LEARNING

- Prioritise training of employees many training programmes within the group
- Collaboration with schools (education, visitor programmes, equipment)
- Supports science centre



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

- Policy on equal treatment. Active recruitment of women for all levels and positions
- Over-representation of women in management development programmes
- 24% of Borregaard employees were women in 2016

6 CLEAN WATER AND SANITATION



ENSURE ACCESS TO WATER AND SANITATION FOR ALL

- Focus on reducing water consumption
- Work on and invest in emission reductions

7 AFFORDABLE AND CLEAN ENERGY



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

- Increased energy recycling and use of renewable energy
- Borregaard produces bioethanol for fuel and invests to further increase the proportion of clean bioethanol
- Provides process heat for local district's heating system

B DECENT WORK AND ECONOMIC GROWTH



PROMOTE INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, EMPLOYMENT AND DECENT WORK FOR ALL

- Borregaard and the industry in general give high added value. Borregaard has 1,008 man-years in 16 countries
- Significant tax payments
- Jobs are the way out of poverty
- Good conditions of employment and training programmes
- Over-recruitment of apprentices (more than internal needs)





ANDINFRASTRUCTURE BUILD RESILIENT INFRASTRUCTURE, **PROMOTE SUSTAINABLE INDUSTRIALISATION AND FOSTER INNOVATION**

- Significant innovation initiatives with internal resources and assignments for institutes and universities
- Sustainability is key to innovations
- Develops new sustainable bio-based industry through the innovation projects Exilva and BALI
- Produces green chemicals used in construction

REDUCED **INEOUALITIES**



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

- A high degree of collective welfare benefits
- High degree of mobility across the organisation possibilities for all

SUSTAINABLE CITIES AND COMMUNITIES



MAKE CITIES INCLUSIVE, SAFE, **RESILIENT AND SUSTAINABLE**

- Social commitment in local areas
- Support to schools, leisure activities, social measures and urban development





ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

- Sustainable business model with green products
- Investment in renewable energy (sustainability)
- Energy strategy for increased use of green and renewable energy and energy efficiency
- Environmental investments to reduce emissions and waste





TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

- The biorefinery concept is an integral part of the business model - an important climate measure
- EHS/climate and energy strategy established
- Greenhouse gas emissions are considered when choosing transportation
- Investments to reduce emissions



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE **RESOURCES**

- Reduced emissions to water
- Utilisation of lignin from pulp mills has led to lower emissions to sea/water



SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, HALT AND **REVERSE LAND DEGRADATION, HALT BIODIVERSITY LOSS**

- Sustainability criteria when purchasing timber/forest raw materials
- Active cooperation with stakeholders in the supply chain for forests





PROMOTE JUST, PEACEFUL AND **INCLUSIVE SOCIETIES**

- Guidelines for ethics and corporate responsibility
- Respect for the law and active contribution to good dialogue processes with authorities





REVITALISE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

- Member of Global Compact and Responsible Care
- Environmental reporting: CDP, Global Compact and the company's annual report
- Represented in various environmental forums, nationally and internationally





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