

A man wearing a dark jacket and a beanie is crouching in a forest, interacting with a small black and white dog. The background is a dense forest of tall, thin trees with sunlight filtering through the canopy.

Vapo Group Corporate Responsibility Report 2018

Sustainable Everyday Living

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GRI - Global Reporting Initiative

Vapo Group's corporate responsibility reporting is based on the Global Reporting Initiative (GRI), which is the world's most widely used responsibility reporting framework. Vapo reports on the economic, environmental and social impacts of its operations in accordance with the GRI Standards core scope and the Electric Utilities Sector Supplement.

This is the second corporate responsibility report that covers Vapo Group in its entirety. The scope of the previous reports was limited to Vapo Oy's operations in Finland. Reporting is based on a materiality analysis that was used to determine the views of Vapo's stakeholders and the company itself regarding the most material corporate responsibility topics related to the company's operations.

GRI is the most widely used international corporate responsibility reporting framework. GRI reporting helps companies measure and understand their corporate responsibility impacts, communicate them, set targets and develop operations further. Reporting in accordance with the GRI framework also makes it possible to compare information between different companies.



Sustainable everyday living is now the guiding principle of all of our operations. We have a strong presence in the daily life of people and our customer companies. We strive systematically and continuously towards a future that is as responsible as possible.

Editor-in-chief Mia Nores, **Subeditor** Raija Rinttilä, **Economic responsibility** Jarmo Santala, **Environmental responsibility** Mia Nores, **Social responsibility** Jenni Nevasalo, **Team:** Marika Ryyppö, Leena Imppu, Teijo Liimatainen, Eija Tiura, Mia Suominen, Päivi Martikainen, Jani Mökönen, Ahti Martikainen, Esa Marttila, Marjo Lalli, Katja Oksala, Nina Kinnunen, Johan Nybergh. Many others from Vapo Group participated in the preparation of the report. Thank you! **Layout** Milton Oy

Vesa Tempakka
CEO

Highlights in 2018

The implementation of Vapo's new strategy is well underway. The monthly volumes of the Group's growing media business have doubled as a result of the BVB transaction carried out in October. While energy peat will still be needed well into the future, Vapo will grow as a provider of renewable energy and tailored energy solutions.

Peat Ensured Heating for Cities

Extra deliveries of peat ensured that the heating needs of cities were met during the cold winter. Peat was needed at levels exceeding the contractual volumes to ensure that combined heat and power plants could operate at full capacity in the latter part of the winter season.

Vapo's First Activated Carbon Facility

Vapo is building an activated carbon production facility in Ilomantsi, creating some 50 new jobs in the process. Activated carbon can be used in the purification of air and water, industrial processes and food production, among other things.

Energy from Oat Hulls

Vapo built a heating plant in Utajärvi that burns oat hulls to generate heat and steam for a Kinnusen Mylly oat mill and an animal feed factory. The excess heat is channelled into the district heating network.

Heat and Steam as a Service

To meet the needs of its confectionery factory in Lappeenranta, Vapo's customer Fazer buys heat and steam as a service from Vapo's new natural gas plant.

Renewable Moss as a Component in Growing Media

Moss improves the structure and wetting properties of the growing media in Kekkilä's new AirBoost products. Sphagnum moss is collected responsibly, without the need for ditching, primarily from very barren ditched peatlands.

Vapo and Netherlands-Based BVB Established a Joint Venture

The growing media company established by the transaction is Europe's leading and most versatile company in the market for professional growers and home gardeners.

Excellent Peat Production During the Hot Summer Season

The production volumes of high-quality peat exceeded targets. Buffer stocks ensure the supply of fuel in the years to come.

The Reutilisation of Ash from Vapo's Heat and Power Plants Has Increased

The reutilisation of ash in Finland has increased from 46% to 93%. At the same time, the landfill disposal of ash has been reduced from 14% to 4%.

Vapo Sold 20 Wetlands

Vapo sold 20 wetlands to nature enthusiasts and hunters. The total area of the sold wetlands is 760 hectares. Sales will continue in 2019.

The Areas in Which Our Performance Fell Short of Our Targets in 2018

The Number of Workplace Accidents

The Group's strategic target is zero workplace accidents in all operations. A total of 21 workplace accidents occurred in 2018, with nine of them resulting in sickness-related absence.

CEO's Review

Responsibility is at the core of the success of our strategy.

Vapo Group's business strategy today is very different from what it was only a few years ago. This does not, however, mean that the strategy has been drastically and quickly changed just for the sake of changing it. On the contrary. The starting point for the strategy, which has now been in use for a year, was to understand and analyse global megatrends, assess the Group's own resources and define areas for development.

Our strategy is ultimately quite simple. The urbanisation and digital transformation of our world are changing customer behaviour, consumer demand and our operating environment at a tremendous rate. In addition, climate warming has led to a nearly exponential increase in expectations regarding the sustainability of businesses and their products and services as well as the transparency of business operations, making responsibility the most important driver in business. Business must be based on responsibility. Otherwise, the business will end. The IPCC report published in autumn 2018 regarding the warming of the climate and the measures required in response has dramatically altered our operating environment. At the same time, it has provided support for our strategy. For a year now, we have operated under a new

organisational structure while acquiring a large number of new talents and putting our strategy into action. Our strategy works.

Urbanisation is increasing the demand for clean local food in particular. The digital transformation creates opportunities for developing our own operations and more accurately predicting customer behaviour, markets and the future in general. Climate warming, for its part, has a direct impact on consumer behaviour as well as the actions of regulators and legislators.

Vapo Group made the choice to move the growing media business – which is key to the production of local food – from the fringes to the very core of the Group's strategy. With its focus on operating transparently, responsibly and actively in a growing market, the strategy has a very good chance of being successfully executed, perhaps even faster than originally planned. One indication of this is the transaction announced in October 2018 that saw Vapo Group's subsidiary Kekkilä Oy and the Netherlands-based BVB-Substrates B.V. join forces to become the leading player in its field in Europe. The other cornerstones of the new strategy are to develop the energy business to increasingly shift from fuel sales to the provision of services and tailored energy solutions as well as producing

entirely new products from peat and other natural materials.

Perhaps the best example of the Energy division's new direction is the solution built around an oat mill in Utajärvi, which is a town located near Oulu. The energy plant used by the Kinnusen Mylly oat mill and animal feed factory needed to be modernised.

Instead of simply modernising the heating plant, the solution was sought using a more comprehensive sustainability perspective. Vapo built a new heating plant for the oat mill and animal feed factory, which produces the heat and industrial steam required by the production facility as a service. Another innovation is that the plant



uses oat hulls, a by-product of the mill, as its fuel. As the energy content of the oat hulls exceeds the mill's own needs, Vapo acquired the municipal district heating network and now produces district heating by burning oat hulls. The heating plant, the supply of heat and steam to the mill and production plant, fuel supply and the district heating network are now controlled from the remote operations centre located 600 kilometres away in Vantaa's Tikkurila district. This is a practical example of Vapo's sustainability-driven energy business, which is aimed at maximising the opportunities presented by the digital transformation, duplicating the economies of scale arising from the ownership of dozens of plants and also duplicating human skills and competencies. And, of course, the purpose of all this is to satisfy customer expectations regarding high quality, delivery reliability and cost-efficiency.

A third example of the implementation of Vapo's responsible strategy is the production plant currently under construction in Ilomantsi. The facility, which is largely based on Vapo's own product development and innovations, will produce activated carbons from peat and other natural materials. These are all examples of the implementation of the new strategy during the past 12 months.

Vapo Group's new strategy represents a major change, and putting it into practice throughout tens of organisational units and among all of the Group's personnel has been an extensive process. A large

tour was organised in May-June 2018 to communicate the changes. At the same time, various working groups continued to work on the values that support the implementation of the new strategy. Completed in the autumn, this process was followed by the second stage of implementation, during which all of the Group's employees received training and were engaged in the company's value process.

Vapo Group's values are:

- Focus on customer success
- Achieving together
- Courage to renew
- Trust through respect

The values emphasise collaboration, the need for change and keeping the customer at the centre of everything we do. They also underscore the view that trust is earned through our actions.

The company's strategy has proved to be effective. The values have also been embraced by the organisation and they support the implementation of the strategy. What, then, is our vision? We came up with a slightly different answer to this question than normal. We have three very different businesses, but they all share the same operating environment, strategy, values and responsibility requirements. With that in mind, we defined a Group-level Purpose Statement, which is an even higher-level statement than a vision. As we operate in eight countries and in at least as many



We strive systematically and continuously towards a future that is as responsible as possible.

languages, we decided to express our Purpose Statement in English.

Sustainable Everyday Living is now the guiding principle of all of our operations. We have a strong presence in the daily life of people and our customer companies. We strive systematically and continuously towards a future that is as responsible as possible.

We provide work and jobs not only to our own employees, but also to our subcontractors and partners. We want to be a company that takes good care of its personnel and subcontractors. A company, that looks after the safety and competence of its employees. We provide products

and services for safe food production, the construction of comfortable living environments and a wide range of energy needs. We strive to do all this while minimising our environmental impacts.

As part of the change in our strategy, we shifted from a structure built around country-specific companies to a single company model. This has caused – and will continue to cause – significant needs for changes in many areas, including the reorganisation of our reporting. This is our second Group-level corporate responsibility report in which we discuss our targets in the areas of social, economic and environmental responsibility. We have not yet reached our destination, but our target is clear. *Sustainable Everyday Living.*

Vesa Tempakka
CEO



Vapo in Brief

Vapo Group is an international company. Through our businesses, we promote clean, local and water-conserving food production, supply local fuels and provide heat and steam production solutions. We also develop new products for cleaning contaminated environments and create wellbeing by providing jobs, recycling and creating comfortable living environments.

Our business is divided into three divisions: Energy, Grow&Care and New Businesses. The Supply Chain Management function used by all three business divisions manages peat production in various countries, logistics services and strategic procurement, among other things. The Group's strategic target is zero workplace accidents in all operations. Group services are produced by the Group Services function.

Grow&Care division is Europe's leading producer of home gardening and professional growing media. Our product selection also includes products targeted at home gardeners and landscapers. Our other sectors are recycling and composting as well as bedding peat.

The Energy division is a partner for our customers in a changing energy market. We provide renewable energy and energy peat as well as tailored energy solutions for the development of industrial and municipal infrastructure.

New Businesses division uses its in-house product development activities to create new products and innovations based on refining peat and other natural materials into air and water purification products, for instance. Examples of product development include the fibre business that was transferred to the Grow&Care division and the Carbons business that is based on the production of activated carbon.

Vapo Group companies include Vapo Oy, Kekkilä-BVB Oy, Kekkilä Oy, BVB Substrates B.V., G&C Materials Oy, Hasselfors Garden AB, Kekkilä Iberia S.L., Oü Kekkilä Eesti, Neova AB, AS Tootsi Turvas and Salon Energiantuotanto Oy. Our head office is located in Jyväskylä, Finland. We employ a total of approximately 1,000 people in Finland, Sweden, Estonia, the Netherlands, Spain, Germany and Australia.



Vapo Group operating locations



Megatrends Create Future Markets

Recognising and monitoring global megatrends is an important part of anticipating future business opportunities and challenges.

Solutions for Sustainable Everyday Living

Vapo aims to respond to future needs by creating solutions for sustainable everyday living. Vapo defined Group-level strategic priorities for innovation activities for the first time in 2018. These priorities help focus idea generation and innovation on new products and services.

The priorities are as follows:

- Clean local food
- Responsible energy
- Healthy life and living environments

Megatrends indicate the direction the world is moving and what kinds of needs and markets are expected in the future. The most significant megatrends that influence Vapo's operations and the Group's strategy, which was renewed in 2018, include climate change, urbanisation, the digital transformation and the wellbeing of the environment and people.



Vapo aims to respond to future needs by creating solutions for sustainable everyday living.

Climate Change

According to a recent report published by the Intergovernmental Panel on Climate Change (IPCC), the Earth's temperature has risen by approximately one degree Celsius compared to the pre-industrial era. If warming continues at the current rate, the threshold of 1.5 degrees will be exceeded by the midpoint of the century. Exceeding this threshold would present significant risks to both people and nature. Mitigating climate change calls for, among other things, continuing to increase the share of renewable energy, reducing combustion-based energy production and developing new solutions for energy efficiency and energy storage.

Burning peat releases carbon dioxide into the atmosphere. The use of peat as a raw material for energy production has already decreased and it will continue to decline further over the coming years, reaching a technical minimum and assuming a role as a fuel that ensures the security

of supply. The energy use of peat will be replaced by other uses. Vapo already uses peat for growing media and animal litter, and the production of activated carbon will begin in late 2020. The Group is also exploring other new uses for peat.

Climate change also means, among other things, that drought and flooding will threaten crops, arable land will become nonarable and the availability of fresh water will be compromised in many places. Using solutions such as peat-based growing media makes it possible to grow many times more food or plants using the same amount of water than on open land or in growing media with weaker water retention attributes.

Our response:

- Using peat-based growing media helps conserve fresh water
- We develop new solutions for cleaning up polluted environments
- We invest in renewable energy sources, automation and resource efficiency in our energy business
- We quickly assign decommissioned peat production areas to new uses to sequester carbon
- We optimise logistics to reduce emissions

Urbanisation

It is estimated that the world population will reach 9.8 billion by 2050. Urbanisation means that two-thirds of these people will

live in cities. Urbanisation together with climate change will have a significant impact on energy production solutions, food production infrastructure, housing and people's living environments.

Urbanisation will increase the importance of energy-efficient construction as well as energy production based on local renewable fuels. Urbanisation and growing consumer awareness that favours clean and sustainably produced food will change the food industry by making it necessary to produce food efficiently, in close proximity to where it is consumed. This will present a challenge to current food production methods and value chains. Urban farming, such as vertical cultivation and advanced growing technologies, will become more common in the future. Public sector investments in circular economy solutions and green areas that promote the quality of life of urban residents will grow, as will consumer needs related to growing one's own food and landscaping.

Our response:

- We promote local and clean food production
- Our products contribute to the growth of urban farming
- Our products related to environmental construction help create wellbeing in urban environments
- We provide local heating and implement tailored energy solutions that meet urbanisation-related needs

- Our energy solutions and energy efficiency solutions enable reliable heat and energy production processes
- We develop products that can be used to clean water and air in large cities

The Digital Transformation

The digital transformation and smart technologies create tremendous opportunities in operations at the industrial scale. For example, robotics, the Internet of Things and artificial intelligence can be used to optimise energy production processes and enable precision horticulture. These, in turn, can increase the efficiency of energy solutions as well as food production solutions. The digital transformation also enables us to serve our customers faster and more efficiently. This makes it possible for us to optimise our transport operations to reduce their environmental impact, for example.

Our response:

- We promote local and clean food production
- Our products contribute to the growth of urban farming
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The Wellbeing of the Environment and People

Responsibility and the wellbeing of the environment and people are a theme that cuts through all three of the megatrends mentioned above. Responsibility means focusing on innovating new products that can improve contaminated environments or developing materials that can increase the comfort of buildings and living environments as well as promote construction safety. The purpose of Vapo Group's division focused on the innovation of new products is to develop new products from natural materials; for example, using peat as a raw material to produce activated carbons for the purification of water and air. We promote sustainable food production through Kekkilä-BVB's growing media products and solutions. We also promote wellbeing through green areas, gardening and plantscaping.

Future energy and food production solutions must be sustainable. It is also necessary to reduce the pollution of water, air and soil through the use of renewable, low-carbon, low-emission and water-conserving solutions, for example. During the past 40 years, some 30% of the world's arable land has been contaminated by various emissions and plant protection agents. Plastic ending up in the environment after use has posed problems of its own, which is why there is strong demand for solutions that replace plastic and clean plastic from the environment. The circular economy will grow in significance with respect to increasing the sustainability of various non-renewable materials and solutions. In general, the requirements concerning the safety and comfort of our living environment are growing.

Our response:

- We invest in our growing media business – which enables food production – in response to the demand for clean food
- Our environmental commitments ensure that we use natural resources responsibly and minimise the environmental impacts of our operations. We respond to customer needs in many ways, including product-specific lifecycle calculations
- We promote the circular economy; for example, by making use of composting and industrial by-products. We have also developed the Vapo Refinery 2030 vision, in which raw materials and by-products are comprehensively utilised in accordance with the circular economy principle



The digital transformation enables us to serve our customers faster and more efficiently.



Corporate responsibility at Vapo

- Targets and results 2018-2021
- Corporate Responsibility Programme
- Responsible Operating Principles
- Stakeholder Engagement is Vital
- Values and Code of Conduct

Responsible Operating Principles, Transparent and Active Communications

- Targets and Results 2018-2021

| ASPECT | TARGETS FOR 2018-2021 | RESULTS IN 2018 |
|-------------------------------------|---|--|
| Business ethics and anti-corruption | Organising training on anti-corruption activities | Included in Code of Conduct training. All of the Group's personnel receive regular training on the Code of Conduct |
| | All Vapo Group employees regularly complete a training course on the Code of Conduct | Three out of four of the personnel have completed training on the Code of Conduct. The online training is mandatory for all personnel. New employees are required to complete the training within three months. Supervisors receive monthly reports on course completions |
| | All of Vapo's strategically significant suppliers regularly complete a training course on the Code of Conduct | The Supplier Code of Conduct is currently being updated. An online training course for suppliers will be created based on the new guidelines. At a minimum, strategic suppliers should complete the course once every two years. The online course based on the previous Supplier Code of Conduct was not rolled out, but suppliers have been familiarised with ethical guidelines during contract negotiations and the Group also has separate application guidelines for this purpose |
| Business transparency | Reporting in compliance with the GRI CORE level | Vapo Group's corporate responsibility reporting is based on the GRI framework. In reporting on the economic, environmental and social impacts of its operations, Vapo applies the GRI Standards Core scope and the Electric Utilities Sector Supplement. This corporate responsibility report covers the entire Vapo Group except for BVB, which was acquired at the turn of the year 2018-2019. The reporting is based on a materiality analysis that was used to determine the views of Vapo's stakeholders and the company itself regarding the most material corporate responsibility topics related to the company's operations |

Corporate Responsibility Programme

“Sustainable growth and wellbeing from nature” is the first corporate responsibility programme that covers the entire Vapo Group, is based on a materiality analysis on responsibility carried out in autumn 2017.



We take care of nature

- Lifecycle impact of products and solutions
- Emissions into waterways from peat production
- Energy efficiency
- Airborne emissions
- Biodiversity



We develop continuously

- Delivery reliability and the security of supply by making use of digitality
- Customer satisfaction
- Innovations for sustainable development
- Development of competence



We guarantee quality and safety

- Quality and cost-efficiency of products and services
- Health and safety of personnel
- Health and safety of contractors
- Assessment of suppliers according to relevant criteria concerning environmental and social aspects



We create wellbeing

- Job satisfaction and wellbeing of personnel
- Equality and diversity
- Local employment effects
- Economic impact

Responsible operating principles, transparent and active communications

Our policies, commitments, reporting and stakeholder communications guide our operations.

Responsible Operating Principles

Vapo's new responsibility programme supports the company's new strategy, which was announced in spring 2018.

According to our strategy, we satisfy the basic needs of our customers:

- We promote healthy and local food production
- We are part of the solution to the world's freshwater problem
- We provide local heating production
- We offer new solutions for cleaning up polluted environments
- We create wellbeing

We Repeated Our Materiality Analysis

We conducted a new materiality analysis to assess our stakeholders' views regarding the themes of Vapo's corporate responsibility programme. The themes of the materiality analysis were selected based on Vapo's corporate responsibility programme. The perceived importance of ethical and legal compliance increased and the importance of environmental issues decreased compared to the previous materiality analysis, conducted in 2015 and limited in scope to Vapo's Finnish companies. The significant environmental investments made by Vapo Group in recent years and the Group's environmental management were widely praised by the interviewees, which was also reflected in environmental issues being assigned lower significance in their responses.

The significance of social responsibility increased. Products and services as well as customer satisfaction also grew in importance in the analysis.

The materiality analysis was based on an online survey and interviews. The Group Management Team also validated and assessed the material themes. The online survey was sent to 200 representatives of various stakeholders. Nearly 100 respondents completed the survey, representing employees, customers, Vapo Group's Board of Directors, partners and the authorities. The online survey was also complemented by interviews with the representatives of 13 different stakeholders.

In their responses, all of the stakeholders emphasised the importance of legal compliance and ethics in operations. The interviewees attributed the importance of legal and ethical compliance to the existence of contradicting views related to peat, although the stakeholders' default assumption and belief is that Vapo complies with all applicable legislation in its operations. The responses by customers and partners highlighted the importance of delivery reliability and the security of supply as well as the quality and reliability of products and services. Employees emphasised occupational health and

safety more than other stakeholders.

Customer satisfaction and the impact of peat production on waterways were also highlighted in the responses.

Defining the Themes, Vision and Targets

Vapo Group's work on the corporate responsibility programme is led by a steering group, working group and the project teams of five key projects along with their project managers. The key projects that are monitored on a monthly basis are as follows:

- Implementation and monitoring of the corporate responsibility programme
- The environment
- Safety
- Sustainable innovations
- Responsibility communications and stakeholder relations

Vapo has seen it necessary to update the current corporate responsibility programme because the operating environment is changing and the Group's strategy, which was revised in 2018, is now in the implementation phase. The corporate responsibility programme is currently being updated by the steering group and the aim is to have a proposal for the new programme completed within

summer 2019. The programme defines long-term targets and the goal is to engage in increasingly comprehensive reporting on responsibility from one year to the next and to actively communicate on responsibility with various stakeholders. A further aim is to more closely integrate Kekkilä-BVB's responsibility targets with the Group's responsibility targets as a whole.

The short-term targets of the current corporate responsibility programme are still current. Vapo has an absolute zero tolerance policy regarding corruption, all types of discrimination and violations of the law, and these areas will continue to be monitored going forward. Vapo's Code of Conduct was updated in early 2019. The updated Code of Conduct will be put into practice by various methods, including training aimed at ensuring commitment to the Code of Conduct throughout the Group's personnel. The Supply Chain Code of Conduct will also be updated in 2019.

Management of Corporate Responsibility

Corporate responsibility at Vapo Group and the responsibility strategy are led at the Group Management Team level by the Chief Supply Chain Officer, with the

Director, Group Environment and Sustainability being in charge of implementation. Business-level management is in charge of the practical measures related to responsibility in each business area. The Vapo Group Chief Financial Officer is responsible for reporting on economic responsibility, The Vapo Group Environmental Director is responsible for areas related to environmental responsibility and The Vapo Group Chief HR Officer is responsible for areas related to social responsibility.

The corporate responsibility report is reviewed and approved by Vapo's Board of Directors and the Audit Committee. The Director, Group Environment and Sustainability is in charge of the planning, composition and production of the corporate responsibility report. The Group's corporate responsibility policy was approved in spring 2019. The corporate responsibility policy covers the Group's environmental, occupational health, occupational safety and quality policy. Training on the corporate responsibility policy will be arranged during 2019.

The UN Sustainable Development Goals and Vapo Group

Vapo Group is committed to supporting the UN Sustainable Development Goals (SDGs). The SDGs most relevant to Vapo are:

- Zero hunger
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Sustainable industry, innovation and infrastructure
- Climate action
- Life on land



Vapo Group's Materiality Matrix

We take care of nature

- (R) Lifecycle impact of products and solutions
- (N) Emissions into waterways from peat production
- (Q) Energy efficiency
- (P) Airborne emissions
- (Y) The biodiversity of nature

We develop continuously

- (F) Delivery reliability and the security of supply by making use of digitality
- (B) Customer satisfaction
- (D) Innovations for sustainable development
- (I) Development of competence

We Guarantee Quality and Safety

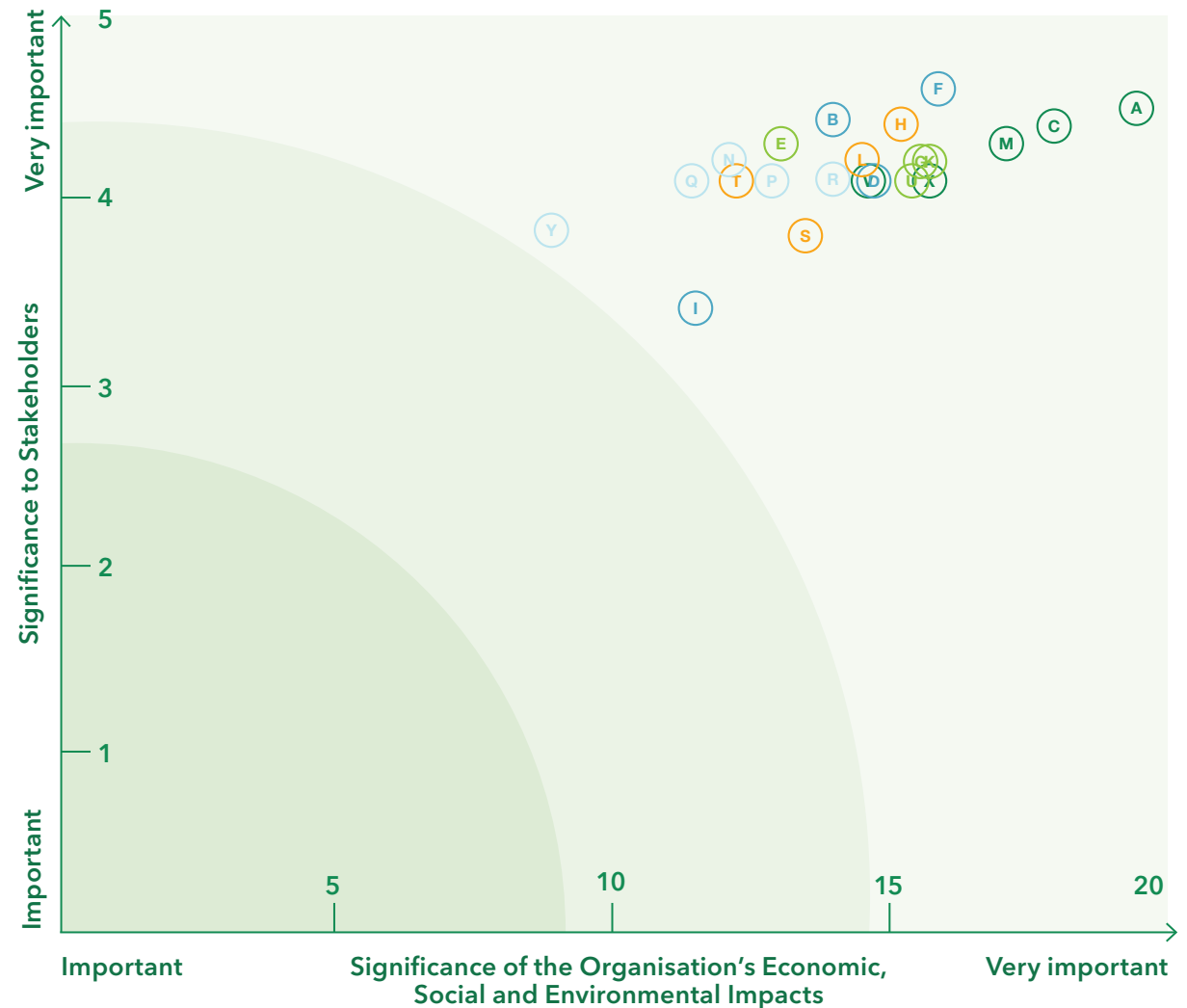
- (L) Quality and cost-efficiency of products and services
- (H) Health and safety of personnel
- (T) Health and safety of contractors
- (S) Assessment of suppliers according to relevant criteria concerning environmental and social aspects

We Create Wellbeing

- (G) Job satisfaction and wellbeing of personnel
- (K) Equality and diversity
- (E) Economic impact
- (U) Local employment effects

Responsible Operating Principles, Transparent and Open Communication

- (A) Compliance with laws and regulations related to social, economic and environmental issues
- (C) Business ethics and anti-corruption
- (M) Compliance with the rules of fair competition
- (V) Truthful marketing communications
- (X) Business transparency



Management Approach

| | We take care of nature | We develop continuously | We guarantee quality and safety | We create wellbeing |
|--|--|---|---|--|
| Management approach target | To develop and manage Vapo Group's business operations responsibly, taking stakeholder expectations into consideration | | | |
| Policies and commitments | Vapo's operating principles, Code of Conduct, internal control, financial policies and operating principles | | | |
| | Corporate responsibility policy, Procurement policy, Environmental strategy 2020 | Innovation and IPR policy, Procurement and sourcing policy | Corporate responsibility policy, Risk management policy, Data security policy, Procurement and sourcing policy | HR policy, Financial policies and operating principles |
| Targets | We take care of nature - targets for 2018-2021 | We develop continuously - targets for 2018-2021 | We guarantee quality and safety - targets for 2018-2021 | We guarantee quality and safety - targets for 2018-2021 |
| Responsibilities and resources | At Vapo Group, the CEO is in charge of corporate responsibility and its implementation. The Group Chief Supply Chain Officer is responsible for developing the corporate responsibility strategy. Business-level management is in charge of the practical measures related to responsibility in each business area | | | |
| | The Director, Group Environment and Sustainability is in charge of the coordination of the Group's environmental strategy and environmental affairs. Each of Vapo's businesses has a person responsible for environmental affairs who is in charge of environmental management and stakeholder cooperation with regard to environmental issues | Responsibility for customer satisfaction is assigned to business units across national boundaries. Vapo Ventures develops and commercialises Vapo's new businesses. Ventures is also responsible for the Group's innovation and IPR management. These activities are guided by the Group's Innovation and IPR policy (Vapo's Board of Directors 8/2016). The Ventures unit is led by a Business Area Director | The Director, Group Operational Excellence & Sustainability is in charge of the development of Vapo Group's quality management system, the coordination of quality-related issues as well as the development and coordination of safety. The Group's Chief Procurement Officer is responsible for Vapo Group's procurement and purchase policy | The Group's Chief HR Officer is responsible for human resource management and its development at Vapo Group. Each of Vapo's businesses has its own HR Officer, and there are local HR units responsible for country-specific legal obligations |
| Feedback mechanisms | Environmental feedback and irregularities are handled by the business area in question and reported to the Board of Directors | Customer satisfaction survey | Customer complaints and customer satisfaction surveys (NPS, Net Promoter Score) are processed by the business area in question. Workplace accidents are processed by all management teams and reported to the Board of Directors. Safety observations are processed by the safety network. Internal and external audits and quality observations are processed by the quality network | Personnel survey |
| Assessment of management approach | External and internal audits. Management reviews | | | |

Stakeholder Engagement Is Vital

Our strategy is based on satisfying the basic needs of people and communities. It is vital for us to engage in cooperation with our stakeholders.

Vapo Group's internationalisation, the growing significance of the gardening and landscaping sector and the global challenges and opportunities related to food production shape the Group's stakeholder engagement. Stakeholder engagement starts at the local level and extends all the way to international activities across national boundaries.

Dialogue, feedback and good cooperation are the key methods for promoting mutual understanding between stakeholders and Vapo Group. The Group aims to build networks with important parties as well as collect and share information that is relevant to the Group's business and customers. Feedback from stakeholders is one of the inputs considered in the development of products and services, and it also influences how the company operates. Vapo also monitors and evaluates public discussion.

Stakeholders are defined as those parties that are affected by Vapo Group's operations and who have an impact on Vapo Group. Vapo's most important stakeholders are customers, owners, peatland lessors and landowners, researchers, personnel and production and transport contractors along with their personnel.

Stakeholder expectations and Vapo's response to them are described in more detail in a separate table.

Stakeholders' interests and concerns were surveyed in questionnaires and interviews conducted in autumn 2017 in connection with Vapo Group's materiality

analysis on responsibility. The analysis was subsequently complemented by an internal survey within the Group.

Vapo organises open house events at its peat production areas in Finland and Sweden for members of the public, neighbours, the authorities and anyone else interested in peat production and related environmental issues. Visits to heat and power plants have also been organised in both countries.

Customer events are an important form of stakeholder engagement. Vapo organises an annual Energy Seminar for energy customers at the Group's office in Vantaa. Dozens of Vapo's energy customers attend the event each year.

The Group companies engage in research and development projects in collaboration with researchers and research institutes with regard to the environment and product development, for example. The subjects of research include, among others, the environmental impacts of production operations, the lifecycle impacts of products and the opportunities of producing new kinds of products from peat.

The significance of international cooperation is constantly growing in response to the internationalisation of the markets, research and regulation. Vapo Group companies in various countries are active members of the International Peatland Society (IPS), for example. International advocacy work related to the energy and growing media businesses is focused on EU bodies in Brussels.



The significance of international cooperation is constantly growing in response to the internationalisation of the markets, research and regulation.

Vapo Group's memberships in 2018

Social Media and Polte Magazine

Dialogue with various stakeholders increasingly takes place on social media. The Vapo blog – which is published on the Group's Finnish-language website as well as the online paper Uusi Suomi – and its open comment section also serve to increase dialogue and stakeholder engagement.

Kekkilä maintains the popular Facebook group Puutarha ja Piha (Garden and Yard). The group gives gardening enthusiasts of various ages the opportunity to share their experiences with their peers.

In Finland, Vapo publishes Polte, a stakeholder and customer magazine that features information on the Group's operations and business environment. The magazine is published quarterly, and it is also available online at www.poltelehti.fi.

Students

As in previous years, Vapo again participated in the Energy in Finland school cooperation campaign organised by Finnish Energy Industries. Vapo's experts also visited schools and universities to present information on local energy production.

Vapo provides summer jobs to students in related fields and also offers topics and opportunities for academic theses. Kekkilä also regularly hires trainees from educational institutions to work in various roles within the organisation and visits schools to deliver guest lectures on subjects such as marketing and the gardening industry. In 2018, Vapo had 54 seasonal workers and Kekkilä had eight. Kekkilä's production facilities in all of the operating countries also host visiting student groups.

One cooperation network that is significant from the perspective of corporate responsibility is the FIBS corporate responsibility network, of which Vapo is a member.

The Group also cooperates with advocacy groups related to its industries, including the following:

- The Bioenergy Association of Finland
- Finnish Forest Industries
- Finnish Energy Industries
- The Confederation of Finnish Industries
- EPE (Energy Peat Europe)
- AEBIOM (European Biomass Association)
- Growing Media Europe
- Swedish Peat Association
- Estonian Peat Association
- IPS (International Peat Society) and its Finnish branch, the Finnish Peatland Society
- Foundation for Responsibly Produced Peat
- International Blueberry Organisation IBO

Vapo is also a member of the following organisations:

- The Thousand Lakes Enterprise Agency
- The Carbon Neutral Municipalities (HINKU) forum
- The Finnish Quality Association
- Zero Accidents forum

Vapo is also represented on several permanent working groups and stakeholder bodies established by the public authorities, such as:

- The Joint Working Group for the National Coordination of Environmental Protection and Nature Conservation in Peat Production set by the Finnish Ministry of the Environment
- The regional joint working groups on water treatment coordinated by Centres for Economic Development, Transport and the Environment
- The Energy Supply Sector and the Domestic Fuels Department under the National Emergency Supply Agency

Stakeholder Engagement During the Reporting Period

| Key stakeholders | Contact channels | Stakeholder expectations | Examples of responding to expectations during the 2018 reporting period |
|---|---|---|---|
| Personnel | Skype meetings, daily communication, Yammer, Intra, workspaces, website, personnel satisfaction survey, development discussions, seminars, internal training, online training | Participation in shared affairs, the flow of information, deciding on shared issues, planning the future, occupational health and safety, sharing knowledge and expertise | Personnel magazine, Intra, monthly meetings, Vapo Group Studio, Skype meetings, safety observation tools such as Nappi and Obs, MMP training programme, online training |
| Customers | Meetings, phone calls, e-mail, customer magazine, events, customer satisfaction survey, website, digital service channels, customer seminar | High-quality, competitive and responsibly produced products and services. Key factors from the customers' perspective include delivery reliability and the security of supply as well as the quality and reliability of products and services | Annual customer satisfaction survey, customers addressed in the Annual Report and the Corporate Responsibility Report, mobile portal for district heating customers, online store for consumer customers |
| Owners | General Meeting, Board of Directors' meetings, Supervisory Board meetings, the annual owner seminar, regular meetings between the CEO, CFO and representatives of the owners, website, Annual Report, Corporate Responsibility Report | Stable dividend pay-out capacity, increase in shareholder value, ensuring responsibility in operations. Key aspects include the importance of legal and ethical compliance | The annual owners' seminar, reporting on responsibility commitments in the Board of Directors' meetings, the corporate responsibility programme |
| Public authorities | Annual meetings, supervision inspections, cooperation groups on the management of waterways, one-to-one meetings | Compliance with environmental permits and legislation, open and truthful communication | Annual reporting of the information stipulated by environmental permit decisions. Cooperation with the authorities; for example, in the form of various notifications, inspections and annual meetings. Active participation in cooperation groups on the management of waterways, among other things |
| Peatland lessors and landowners | Customer and stakeholder magazine "Polte", Annual Report, customer newsletters when necessary, personal correspondence, website | Obtaining information on the company's strategy and operating policies, ensuring responsibility in operations and future yield expectations | Providing information via the website and distributing the customer magazine Polte |
| Scientists, researchers, research institutes | Publications, meetings, joint projects, website | Mutually beneficial cooperation, establishing new research projects and taking advantage of them in business and within the scientific community | Vapo Fibers: Oulu University of Applied Sciences (OAMK)/PaiBiRa project: bio-based raw materials to serve the changing needs of the construction industry and the Business Finland Innovative Bioproducts growth programme. Vapo Ventures: Laboratory and research collaboration with the University of Jyväskylä |
| Schools and students | Organising student visits, Me & MyCity cooperation, Energy in Finland school project, partner classes, website | Obtaining information on peat production and the company's other operations | Student visits to production areas and other operating locations, visits to schools by Vapo's representatives |
| Non-governmental organisations | Open house events at peat production sites, website | Distributing up-to-date information on the company's environmental responsibility strategy and engaging in open dialogue with NGOs. The key aspect is legal and ethical compliance | Open house events at peat production sites as well as heat and power plants |

| Key stakeholders | Contact channels | Stakeholder expectations | Examples of responding to expectations during the 2018 reporting period |
|---|--|---|---|
| HR partners and external stakeholders | Agreed-upon forums and meetings, website | Understanding Vapo's business and knowing Vapo's targets, cooperation models | Regular meetings with HR partners, such as the occupational health service provider |
| Suppliers, service providers, contractors | Industry events and seminars, training and feedback events for entrepreneurs, cooperative development projects with suppliers | Developing a competitive and profitable operating environment in supply chains, creating business and investment opportunities for entrepreneurs, cooperation relationships that are mutually beneficial, flexible and responsive | Entrepreneur training and production feedback events in the autumn and spring, regional contractor events in Finland, customer service training on enhanced pellet services |
| Political decision-makers | Regular face-to-face meetings with Members of Parliament, their assistants and parliamentary groups and maintaining contact with the background influencers and officers of political parties, meetings with municipal decision-makers and having them visit production sites, annual seminar, stakeholder magazine, website | Access to up-to-date information on Vapo's business strategy and the progress of environmental responsibility projects | Stakeholder seminar in April 2018, met with Members of Parliament, representatives of youth organisations, assistants and party officers. Visits with municipal decision-makers were also organised |
| Citizens, media, labour market organisations | Cooperation days and meetings, joint projects, website | Exchanging information, establishing rules and trust, legal and regulatory compliance, open and truthful communication | Open house events, open stakeholder communication, reports and audits, website |

Values and Code of Conduct

In connection with the implementation of the new strategy, Vapo defined shared values for the entire Group.

Our Values

Vapo Group revised its strategy and adopted a new organisational structure to support the new strategy on 1 May 2018. In summer 2018, a process was started to define shared values for the Group as a whole. The process involved interviewing dozens of Vapo employees, analysing the results of the most recent personnel survey and organising multiple workshops to define and refine the values.

In connection with this process, the Group also defined its Purpose Statement, which summarises what we want to work towards.

We defined our strategic targets as part of the strategy process. The targets are as follows:

- We promote the production of healthy local food
- We contribute to solving the world's freshwater problem
- We provide local heating solutions
- We offer new solutions for cleaning up polluted environments
- We create wellbeing

Based on these values, Vapo Group's Purpose Statement was defined as "Sustainable Everyday Living". In other words, we want all of our actions to promote smooth everyday life for our customers – and their customers – through the provision of sustainable products and services.

No shared vision has been defined for the Group, but all of the divisions and Group companies have shared values.

The values are:

- Trust through respect
- Focus on customer success
- Courage to renew
- Achieving together

In 2018, we organised dozens of events that gave all members of the Group's personnel the opportunity to be involved in training and participatory workshops geared towards the implementation of our strategy and values.

Code of Conduct

The Vapo Group Code of Conduct was updated in spring 2019. It covers the entire Group and is used as an appendix in customer agreements. The requirements concerning the responsibility of operations apply not only to Vapo Group's own personnel, but also the entire supply chain, from subcontractors to customer deliveries. In the Grow&Care division, the Code of Conduct also governs the operations of distributors and retailers. Vapo's Code of Conduct covers the requirements applicable to the company itself and its subcontractors in the following contexts:

- Responsibility and compliance with laws and regulations
- Conflicts of interest
- Integrity – no corruption or bribery
- Promoting fair competition – no violations of competition law
- Know with whom you do business – prevention of money laundering
- Human rights and workers' rights
- Occupational health and safety



We want all of our actions to promote smooth everyday life for our customers – and their customers – through the provision of sustainable products and services

- Environmental impacts
- Transparency
- Vapo's assets
- Business secrets and intellectual property rights
- Data protection
- Cooperation with customers and suppliers
- Reporting obligations, supervision and corrective measures

The Code of Conduct is a fixed component of our processes, personnel training and the orientation of new employees. The personnel familiarise themselves with the company's Code of Conduct by means of online training. The training makes it clear that the Code of Conduct is not a recommendation. It is an unconditional and binding operating model.

To ensure that the Code of Conduct is put into practice in day-to-day operations, the company's intranet includes a whistleblowing channel. Anyone can use it to anonymously report conduct that violates the Code of Conduct.

The implementation of the Code of

Conduct is monitored as part of the internal and external audits of the company's quality system. The assurance of ethicality in operations is also emphasised in internal audits. The Code of Conduct is available at www.vapo.com/en/responsibility/the-way-we-operate/code-of-conduct

Highlights in 2018

The Group's personnel are required to complete an online course on the Code of Conduct and pass the test at the end of the course. In addition to personnel, Vapo also provides training to its subcontractors on the requirements stipulated by the Code of Conduct in entrepreneur training.

One anonymous report was received via the whistleblowing channel in 2018, and corrective action was taken in response.

There were no incidents of misconduct or violations of the Code of Conduct in 2018.

Targets for 2019

Online training on the revised Code of Conduct will be implemented throughout the Group's personnel during the next year.



We Take Care of Nature

- Targets and results 2018-2021
- Management and Organisation of Environmental Issues
- Lifecycle Impact of Products and Solutions
- Emissions into Waterways from Peat Production
- Energy Efficiency
- Airborne Emissions
- Biodiversity

We Take Care of Nature

- Targets and Results 2018-2021



| SECTION | TARGETS FOR 2018–2021 | RESULTS IN 2018 |
|---|---|--|
| Lifecycle impact of products and solutions | We will optimise material efficiency and reduce raw material losses | In 2018, we focused particularly on increasing the reutilisation of ash |
| | We will manage the origin chain in accordance with the PEFC certificate | The proportion of certified raw material was 87.39% in 2018 |
| | <p>We will increase recycling and reduce the amount of landfill waste:</p> <ul style="list-style-type: none"> • The proportion of ash from power and heating plants that ends up in landfills will decrease to 13% by 2020 • The recovery rate of stack plastic from peat production will reach 100% by 2021 • We will utilise ash generated in energy production as fertiliser and in soil construction | The landfill disposal rate of ash fell to a level as low as 4% in 2018, which can be considered a tremendous achievement. The majority of the ash was reutilised in soil construction or as forest fertiliser. The ash from all of Vapo's power plants was reutilised in 2018. The recycling rate of stack plastic from peat production was only 9%. Partners were sought in 2018 to develop the reutilisation of stack plastic. Finding partners has proved to be challenging thus far, and more focus will be placed on identifying alternative materials in the future |
| Emissions into waterways from peat production | We will monitor the load on waterways from our operations, exceeding the requirements stipulated by the authorities | Drone technology was introduced in the environmental inspections of peat production areas in 2018. In addition to environmental inspections, drones can be used in taking stock, for example. In addition to the monitoring of emissions and waterways by consultants, Vapo takes additional samples during periods of high flow and heavy rain as well as in problem situations. |
| | We will reduce the load on waterways from our operations | In 2018, emissions into waterways from Vapo's peat production operations in Finland were significantly reduced from the previous year with respect to solid matter, total phosphorus and total nitrogen. We also continued to enhance water treatment and pilot new treatment methods at our peat production sites |
| Energy efficiency | We will improve energy efficiency | <p>The development of energy efficiency is one of Vapo's key goals, taking into account both the Group's environmental impacts and offering energy efficiency as a service to our customers. With respect to energy production, Vapo has continued to implement an energy efficiency development programme for the 150 power and heating plants owned by the Group. In addition, Vapo helps develop its customers' energy efficiency by providing various energy solutions. A number of development initiatives were implemented last year at the power plants operated from Vapo's remote operations centre with the aim of improving their coefficient of efficiency. Vapo's plant operating service gives Vapo's customers access to extensive experience in operating plants at a high level of energy efficiency and cost efficiency. The energy efficiency of Vapo's heat and power plants has also been increased by the deployment of heat-capturing flue gas scrubbers, district heating batteries and heat pumps. Investments have also been made in optimising the district heating network and minimising heat loss</p> <p>Vapo has joined the Action Plan for Energy Production under Motiva's Energy Efficiency Agreement for the period 2017–2025. We have set a quantitative target for improving the efficiency of our energy consumption and we will take action to achieve the target. In 2018, we implemented several measures at our power plants in Finland to accomplish the target. The actions we have taken have been reported to Motiva</p> |

| SECTION | TARGETS FOR 2018–2021 | RESULTS IN 2018 |
|--------------|--|--|
| Emissions | We will replace fossil fuels, oil and coal, with local fuels and energy solutions | <p>The development of energy efficiency is one of Vapo's key goals, taking into account both the Group's environmental impacts and offering energy efficiency as a service to our customers. With respect to energy production, Vapo has continued to implement an energy efficiency development programme for the 150 power and heating plants owned by the Group. In addition, Vapo helps develop its customers' energy efficiency by providing various energy solutions. A number of development initiatives were implemented last year at the power plants operated from Vapo's remote operations centre with the aim of improving their coefficient of efficiency. Vapo's plant operating service gives Vapo's customers access to extensive experience in operating plants at a high level of energy efficiency and cost efficiency. The energy efficiency of Vapo's heat and power plants has also been increased by the deployment of heat-capturing flue gas scrubbers, district heating batteries and heat pumps. Investments have also been made in optimising the district heating network and minimising heat loss</p> <p>Vapo has joined the Action Plan for Energy Production under Motiva's Energy Efficiency Agreement for the period 2017–2025. We have set a quantitative target for improving the efficiency of our energy consumption and we will take action to achieve the target. In 2018, we implemented several measures at our power plants in Finland to accomplish the target. The actions we have taken have been reported to Motiva</p> |
| | We will reduce transport emissions | In 2018, Vapo Group continued to implement development projects focused on shifting to EU5 or newer vehicles and increasing the capacity of the transport vehicles. The Group also launched several new projects aimed at reducing the environmental impacts of transport operations, such as "From wheels to water" and "From wheels to rail" |
| Biodiversity | We will protect biodiversity through the active use of cutaway peatlands | <p>Mires released from peat production are subsequently used to grow carbon-sequestering forests, build wetlands that increase biodiversity as well as develop other types of areas that are suitable for versatile recreational use. A total of 339 hectares of cutaway peatlands were assigned for use in forestry and 195 hectares for building wetlands. In addition, a total of 406 hectares of peatlands were sold for protection purposes during the year</p> <p>A Master's Thesis written in cooperation with Vapo in 2018 sought to take stock of the current status of approximately 5,300 hectares of peatlands released from peat production by Vapo in 2013–2018 for the purpose of reforestation. The aim was to examine seedlings and evaluate factors that influence the success of their emergence. The findings were that the natural renewal of ash-fertilised cut-away peatlands usually achieves the desired density of seedlings and that successful drainage is the most important factor in the successful emergence of seedlings</p> |
| | We will participate in at least one voluntary watercourse restoration project annually | Vapo participated in an initiative aimed at increasing the value of the Iijoki watercourse. The aim of the Iijoki watercourse vision and action plan is to increase the value of the Iijoki watercourse through the restoration of migrating fish and the improvement of water quality as well as to build trust and increase interaction between the parties operating in the Iijoki area. The implementation of the Iijoki watercourse vision and action plan during the period 2019–2023 was ensured by the signing of the Iijoki Agreement in Oulu in early 2019. The parties to the agreement are PVO-Vesivoima Oy, Metsähallitus, the peat producers Vapo Oy and Turveruukki Oy, the North Ostrobothnia Centre for Economic Development, Transport and the Environment and the Iijoki watercourse area municipalities of Ii, Oulu, Pudasjärvi and Taivalkoski |

Management and Organisation of Environmental Issues

Vapo Group began drafting a Group-level environmental strategy in late 2018.

The management of environmental issues is guided by Vapo's own local environmental programmes and environmental policy. Vapo is committed to the continuous improvement of its operations and the development of the environment. In late 2018, Vapo Group began drafting a Group-wide environmental strategy. The strategy will be completed in spring 2019.

The environmental goals outlined in the Group's corporate responsibility programme include taking the lifecycle impacts of products into consideration, minimising emissions into waterways and

the air, improving energy efficiency and promoting biodiversity.

Each of Vapo's businesses has an environmental programme that specifies the most significant aspects of environmental responsibility along with annual environmental targets. Key environmental issues are regularly reported to Vapo's Board of Directors.

Each of Vapo's businesses has a person responsible for environmental issues who, together with the management of the business area, is responsible for environmental management and stakeholder cooperation with regard to environmental issues. The

practical responsibility for the effective management of environmental issues is borne by all Vapo employees and contractors. Environmental responsibility is part of our day-to-day operations and our aim is to be an organisation that is recognised for its responsibility.

Vapo maintains and develops its environmental expertise through training aimed at employees and entrepreneurs. For example, in Finland, new contractors used in peat production and their drivers receive introductory environmental training for peat production as part of their tractor operating permit training.

Achievements in 2018

Following the implementation of Vapo's new business strategy and organisational structure, the Group began updating its environmental strategy. The Group's new environmental strategy has four goals:

- Towards a carbon-neutral society Protecting biodiversity and making sustainable use of natural materials
- Reducing the load on waterways and improving water efficiency Promoting the circular economy through improved material efficiency, efficient recycling and the use of recycled raw materials

Our new environmental strategy and its goals were approved in spring 2019.

The Group's Swedish subsidiary Neova AB implemented an updated process-based ISO 14001 environmental management system. Training on the subject was also arranged for all employees.

A certified management system is a practical tool for the management of environmental issues. Vapo Group has a certified ISO 14001 environmental management system and ISO 9001 quality management system. AS Tootsi Turvas also holds the RHP certificate. The sustainability and traceability of Vapo Oy's wood raw materials is verified by means of PEFC certificates. The pellet business has also been awarded the Key Flag Symbol to certify the origin of the pellets. In 2017, Kekkilä Group started the process of obtaining Responsibly Produced Peat (RPP) certificates. The first certificate was awarded in 2018 to Hasselfors Garden's Ekebymossen site in Sweden.

Responsibility-related issues continue to grow in importance. Peatland biomass – like other raw materials – must be produced sustainably and responsibly. A preliminary survey was carried out at Vapo early in the year regarding the responsible production of peatland biomass. The scope of the RPP (Responsibility Produced Peat) certificates, which was also used, is largely limited to Europe and growing media. To facilitate the verification of responsibility for other products made from peatland biomass, criteria will be defined and a peatland biomass responsibility concept will be introduced within 2019.

Vapo's environmental policy, environmental strategy and existing certificates are available on the company website at www.vapo.fi/en/responsibility/the-way-we-operate

Vapo Group's certificates

| Finland | ISO 9001 | ISO 14001 | PEFC | FSC | RHP | RPP | OHSAS 18001 |
|-----------------------------|----------|-----------|------|-----|-----|-----|-------------|
| Vapo Oy | ✓ | ✓ | ✓ | | | | |
| Kekkilä Oy | ✓ | ✓ | | | | | |
| Sweden | | | | | | | |
| Neova AB | | ✓ | | | | | |
| Hasselfors Garden AB | ✓ | ✓ | | | | ✓ | |
| Estonia | | | | | | | |
| AS Tootsi Turvas | | | | ✓ | ✓ | | |
| Kekkilä Eesti OÜ | ✓ | ✓ | | | | | ✓ |

Statutory and Other Obligations Related to the Environment

The operations of Vapo's power plants, composting plants and peat production are regulated by environmental permits issued by the environmental authorities. In addition, some of Vapo's heating plants are subject to an environmental permit or registration procedure. The permit decisions include requirements related to topics such as emission limits and emission reduction as well as assessment and reporting.

The environmental authorities regularly inspect the production facilities. In 2018, the environmental authorities made 137 inspection visits to Vapo Group's peat production areas. The inspectors recorded a total of nine observations involving minor violations. The observed irregularities were rectified.

Feedback and Irregularities in 2018

In 2018, Vapo implemented a new observation tool for logging environmental observations. The system combines the reporting of various observations, inspections and audits as well as related management and documentation tasks. People outside the organisation can also be authorised to record observations on the system. Environmental feedback and irregularities are processed by the business area in question and reported to the Board of Directors.

A total of 253 environmental observations were made in Vapo Group in 2018. Many of the observations were related to general cleanliness and the storage of goods. A total of 20 observations were related to complaints regarding dust or noise from the company's operations. These mostly occurred during the summer season. There were two permit-related irreg-



Responsibility-related issues continue to grow in importance. With this in mind, a preliminary survey was carried out at Vapo early in the year regarding the responsible production of peatland biomass.

ularities and nine expressions of concern. The new observation tool makes it easier to record observations and the number of environmental observations grew significantly from the previous year.

Diversion incidents in peat production and their management are monitored. In 2018, drainage waters from peat production had to be rerouted to diversion culverts and dams on 67 occasions to prevent damage to water protection structures, for an average of seven days per incident. The number of diversion incidents increased by 31% from the previous year and their duration increased by 25%.

Diversion is allowed under the conditions of the environmental permits provided that the incidents are reported to the supervising environmental authority. The causes of diversion incidents are investigated, and the necessary measures are taken to rectify the situation.

Flue gas emission limits were exceeded on several occasions at the Haapavesi power plant in 2018. The causes of these incidents included the breaking of a fuel conveyor and a boiler air nozzle as well as

the sulphur content of the fuel. The incidents were measured using the plant's own continuously operating flue gas emission measurement equipment. The incidents had no environmental impacts.

Emissions monitoring samples required by the environmental permits for peat production were not taken at two peat production sites in 2018. The issue arose due to the actions of the consultant responsible for taking the samples. There were no related environmental impacts on downstream watercourses. It is regrettable that the samples were not taken.

The missing results were noted when a summary of all the results for 2018 was being prepared. An account of the issue was immediately drawn up for the ELY Centre officials along with a proposal on conducting an environmental impact calculation for the year in question. The ELY Centre approved the proposal and issued a statement saying "The operator's immediate reporting of the error and proposal for corrective action are evidence of a responsible and reliable approach to operations."

Vapo Oy's Environmental Targets 2014-2018

| Topic | Target | Results in 2018 |
|--|--|--|
| Sustainable use of natural resources | <ul style="list-style-type: none"> We will monitor the load on waterways from our operations We will reduce the load on waterways from our operations We will protect biodiversity through the active use of cutaway peatlands We will manage the origin chain in accordance with PEFC and FSC certification We will use certified wood raw material in pellet production Sustainable use of natural resources | <ul style="list-style-type: none"> In the emissions monitoring of peat production in Finland, 13,290 samples were collected and 106,341 analyses were performed Emissions into waterways from peat production in Finland decreased from the previous year. Solid matter load (t/a) decreased by 28%, phosphorus load (t/a) by 36% and nitrogen load (t/a) by 39% In Finland, some 271 hectares of land was reforested, and wetlands were built in an area totalling 152 hectares The wood business and the pellet business are PEFC certified The raw material used in pellet production was 87% certified. The wood raw materials used by the Fuels business were 47% certified Participating in wetlands restoration research in Sweden in cooperation with the local municipality and county council. The project has received funding from the Swedish Environmental Protection Agency (LONA grant) The material recovery of stack plastic used in the Group's operations in Finland fell short of the targets. Only 9% of stack plastic was reutilised At the Kekkilä production facility in Haukineva, all round baling pallets have been replaced by recycled pallets and the use of bioplastics has been increased. At the composting plants in Nurmijärvi, wastewater has been reduced, while at the composting plant in Teuva, the efficiency of water treatment processes has been improved |
| Reduction of greenhouse gas emissions | <ul style="list-style-type: none"> We will transform cutaway peat production areas into carbon sinks such as forests and fields We will replace fossil fuels, oil and coal, with local fuels and energy solutions We will improve energy efficiency The average coefficient of efficiency of power plants will exceed 87% We will reduce energy consumption We will reduce transport emissions | <ul style="list-style-type: none"> Some 271 hectares of land was reforested in Finland The use of fuel oil decreased from the previous year at Vapo Oy's power plants in Finland Neova did not achieve its oil consumption targets due to problems at the Valåsen plant. The rate of oil consumption was 2% (MWh/MWh of energy supplied) New biofuel boilers were installed at several locations in Sweden. They increase the efficiency of energy production and replace natural gas by bioenergy The target (86%) was not achieved for Neova's plants. The energy efficiency rate was 83% The coefficient of efficiency of the Group's power plants in Finland was 87% The electricity consumption of Vapo's Finnish operations increased by 15% compared to the previous year The CO2 emissions arising from fuel transport increased by 20% year-on-year due to an increase in transport volume. However, relative emissions decreased slightly compared to the previous years and amounted to approximately 43 grams of CO2 per 1,000 kilometres. In Sweden, the aim is to modernise the vehicle fleet used in peat production. The current replacement rate of 73% is close to the target of 75% |
| Improving material efficiency | <ul style="list-style-type: none"> We will optimise material efficiency and reduce raw material losses | <ul style="list-style-type: none"> At pellet factories, the raw material loss rate increased to 3.8% from the previous year's level of 3.5%. The use of recycled materials was increased in the Kekkilä Park business by increasing the proportion of compost and forest industry by-products without any adverse effects on product quality |
| Waste | <ul style="list-style-type: none"> We will reduce the amount of landfill waste | <ul style="list-style-type: none"> The amount of landfill waste from Vapo's Finnish operations decreased by 75% from the previous year |

Lifecycle Impact of Products and Solutions

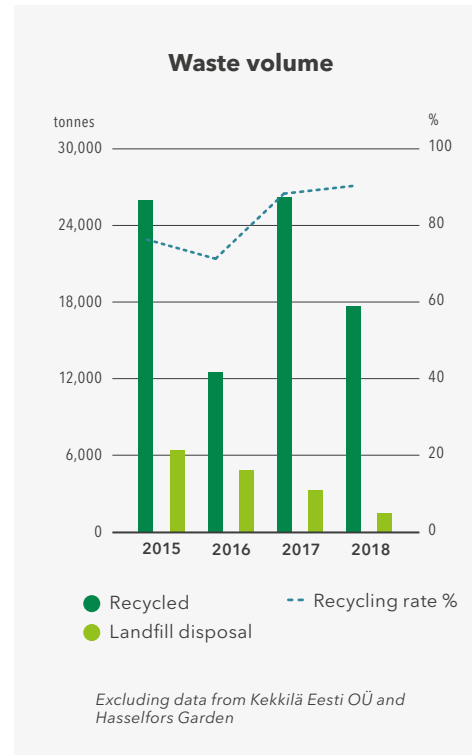
Vapo uses raw materials that are recyclable. Accordingly, the Group's products, such as growing media and animal litter, are fully recyclable.

Growth from Recycling

The circular economy refers to an economic model in which materials circulate and maintain their value as long as possible. Vapo's products, such as growing media and animal litter, are fully recyclable. Industrial by-products can be used in energy production. From the circular economy perspective, the key environmental aspect is the recycling of ash from power plants, stack plastic from peat production sites and the plastic used in packaging. For ash from power plants, the aim is to minimise the landfill disposal of ash. Ash can be used as a fertiliser in forest cultivation, for example. For stack plastic, the aim is to reduce the amount of plastic that ends up in landfills. In the first stage, the aim is to increase the energy recovery of plastic. Later, the focus will shift to the material recycling of stack plastic. The Group has long sought to find alternatives for the plastic used to protect stacks of peat. Potential alternatives include bio-based and biodegradable plastic or fully plastic-free covering materials. Feasible alternatives have not yet been found, but the exploration and testing of options continues.

Kekkilä Recycling

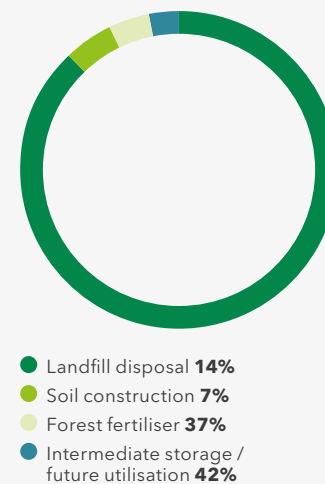
The aim of the Kekkilä Recycling business is to create new growth through recycling as well as reduce waste by enhancing the nutrient circulation of organic waste and by-products, which contributes to environmental conservation. In practice, this refers to the provision of recycling and waste



processing services for organic waste for municipal as well as industrial customers.

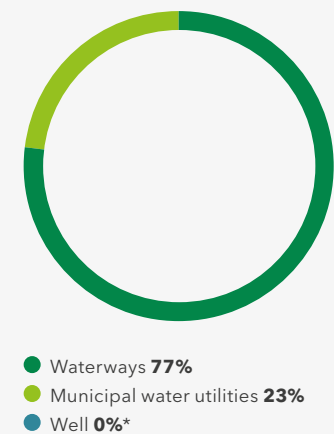
The four Kekkilä Recycling composting plants currently have the capacity to process an annual total of some 90,000 tonnes of various types of organic waste and industrial by-products. The end products of these processing activities are high-quality recycled fertilisers and soil-conditioning products.

Use of ash generated at Vapo's facilities in 2017, total 20,135 tonnes



One excellent example of the services provided by Kekkilä Recycling is a recycling service for growing media and plant waste from the Kekkilä Professional business. The service concept gives growers who buy growing media the opportunity to purchase a supplementary recycling service, which involves Kekkilä Recycling taking responsibility for picking up and composting growing media and

Total water withdrawal by source 1,197,745 m³



* Water withdrawal from Vapo's well 200m³

Vapo Group Finland's data reported. Water withdrawal and water consumption does not include offices, peat production nor the cooling water of the power plants. The data is based either on own measurements or invoicing.

greenhouse plant waste. The most recent business service introduced by Kekkilä Recycling facilitates the industrial utilisation of scrubber water generated as a by-product of the composting process at production sites. The plant waste recycling service and the utilisation of scrubber water are good examples of the business opportunities in this area.

Recycling and Reutilisation in 2018

Vapo is actively seeking to increase waste recycling and reutilisation throughout the Group. Some 90% of the waste generated in 2018 was recycled. The most significant waste fractions are ash and used stack plastic.

Recycling and Reutilisation of Ash and Used Stack Plastic

The material reutilisation of stack plastic fell short of targets, with only 9% of stack plastic reutilised as material. The main reasons for this were the high transport cost of used stack plastic due to the long distances involved as well as the fact that recycling requires a separate cleaning step.

Vapo continued its measures to increase the utilisation of ash originating from its heat and power plants and pellet factories. Vapo's ash primarily originates from the burning of wood and peat, and measures to promote the reutilisation of ash continued in 2018. The reutilisation of ash increased significantly. The majority (93%) of the ash generated in 2018 was reutilised in soil construction or as forest fertiliser. At soil construction sites, ash is used for purposes such as the construction of storage fields and the landscaping of rock extraction areas. Only 3% of the ash was placed in temporary storage to await utilisation. The landfill disposal of ash was reduced to 4% from 14% in the previous year.

Survey of the Current Status and Future of the Circular Economy

A survey was conducted in autumn 2018 regarding the current status and future of the circular economy at Vapo. A total of 46 people were selected to participate in the survey, representing all of Vapo's business areas. The purpose of the survey was to get a comprehensive view of the current status and future of the circular economy at Vapo. Some of the

participants were interviewed, while others responded in writing. The survey provided a comprehensive assessment of the circular economy in the Group's various units. Vapo's strengths were seen as being related to raw materials that are recyclable and, to some extent, already recycled. The fertiliser use of ash generated at heating plants was also seen as a strength. Stack plastic was highlighted as a challenge related to the circular economy that remains to be solved. In order for the material recycling of stack plastic to be improved, new methods for cleaning used stack plastic need to be found. Following the completion of the survey, the development of circular economy solutions began under Vapo's innovation function.

Lifecycle Assessment

Strategic lifecycle assessments (SLCA) were conducted in 2018 for the main products of each business area. Lifecycle analysis is a qualitative assessment that provides a strategic review of the social and ecological sustainability impacts of a product over its entire lifecycle. The results of the assessment were used in establishing responsibility targets for Kekkilä's responsibility programme, which will be expanded in 2019 to cover the entire Kekkilä-BVB organisation and incorporate BVB's lifecycle calculations.

Vapo started an SLCA process in 2018 for sphagnum moss, which is one of the raw materials used in growing media products. The assessment was completed in early 2019. BVB is able to provide an LCA-based account of the product's footprint. To date, BVB has collected an estimated average of 75% of the data for two production plants.

Water Consumption

The total withdrawal of water associated with the Finnish production operations



Strategic lifecycle assessments (SLCA) were conducted in 2018 for the main products of each business area.

of Vapo and Kekkilä in 2018 was on a par with the previous years at 1,236,023 cubic metres. Of this total volume of water, 77% was drawn from waterways and 23% came from municipal water utilities.

Other Actions

Other actions taken include the utilisation of recycled raw materials in Kekkilä's operations as well as the reduction of material losses. Vapo also participated in a circular economy-themed public event held at the Heureka science centre in November. The message Vapo wanted to communicate to the public at the event was that the total number of plants growing in Vapo's growing media is equal to the global human population. At Vapo's stand at the event, visitors had the opportunity to plant parsley in growing media containing compost for soil improvement. Visitors were also given small bags of wood pellets that can be used as cat litter. The products presented at Vapo's stand at the event are examples of how Vapo promotes the circular economy.

Plans for 2019

Enhancing the recycling of stack plastic is one of the key projects for 2019. The stack plastic handling instructions for peat production sites will be updated to enhance plastic recycling. The aims are to make used stack plastic cleaner, reduce the tearing of plastic during handling and thereby enable the improved material recovery of

used plastic. We will also assess potential new recipients for used plastic. Our long-term target is to discontinue the use of stack plastic and replace it with alternative covering materials. Different options will be explored and tested for this purpose.

Also in 2019, we will define our concept for responsible biomass production and an action plan for its implementation. The inputs used in drafting the criteria include Vapo's existing certified systems.

A third key project is obtaining more information on our carbon footprint. The survey will start with an assessment of Vapo's potential for increasing carbon sinks and the Group's opportunities for compensating its own emissions or emissions by other parties.

With regard to climate impacts, one of our focus areas in 2019 is logistics. The key methods of reducing logistics-related CO₂ emissions include better optimisation of transport operations, modernising the transport fleet and providing training on economical driving.

The ways in which we will develop our own operations include creating incentives for low-emission company cars and taking the environmental perspective into account in our travel policy.

In 2019, we will also continue our research in the area of enhanced water treatment, including the testing of membrane filtration and the processing of water with high humus content.

Emissions into Waterways from Peat Production

Water quality in peat production is monitored in accordance with the conditions of environmental permits and inspection programmes approved by the authorities.

Impacts on Watercourses and Reducing the Load on Waterways

Leachates from peat production are mire-based natural waters generated in peat production. They contain solid matter washed off from peat and the soil, nutrients and humus, on average at slightly higher concentrations than the waters in a mire that is in its natural state. Leachates from peat production do not contain substances that are foreign to aquatic nature. In principle, it is the same water that would flow off the bog even without any peat production activity. Water protection structures in peat production can be an

effective solution for reducing the solid matter and nutrient load on waterways.

Water quality in peat production is monitored in accordance with the conditions of environmental permits and inspection programmes approved by the authorities. Vapo does not take measurements related to inspection programmes itself. Instead, the measurements are taken by specialised external service providers that are responsible for taking water samples, analysing the samples and compiling reports and submitting them to the authorities.

The results of the monitoring of emissions and waterways in Vapo's peat produc-

tion are available on Vapo's website at www.vapo.com/turvetuotantoavas-tuullisesti/tarkkailuraportit.

The Our Peatlands on the Web online service includes comprehensive data on Vapo's peat production areas in Finland, the water treatment methods used and the annual load on waterways.

Vapo has measured the load on peat production areas using continuously operating measuring equipment for three years. At the peak of the continuous monitoring programme, there were 33 measuring stations across Finland. The current number of measuring stations is 10. Produced by Valmet, the real-time water quality measurement service increases openness and transparency in the monitoring of the impact of peat production on waterways. The measurement results are available on the website of the service provider, Valmet Oyj, at www.valmet.com/ymparistodat-apalvelu.

Continuous load measurement has complemented the emissions monitoring activities required by environmental permits and produced transparent, independent and reliable information for the public regarding the environmental load arising from peat production. More accurate load measurement and monitoring has provided more detailed information on the impacts of peat production on waterways. The continuous measurement will be discontinued in 2019. The next step will be to analyse the collected data to better understand the impact of peat

production on waterways. Discontinuing continuous measurement activities will not compromise the level of environmental protection.

In Sweden, the quality of water flowing into and out of peat production areas is monitored. The environmental permits include emission limits based on qualitative comparisons of inflows and outflows. An annual summary is produced for the authorities on all peat production areas. At the Group's peat production areas in Estonia, the monitoring activities stipulated by environmental permits involve taking samples twice during the production season. The samples are taken by the company itself or by a consultant. The accuracy of sample collection is ensured by requiring that sample collectors are certified. The results are reported to the local environmental authorities.

Achievements in 2018

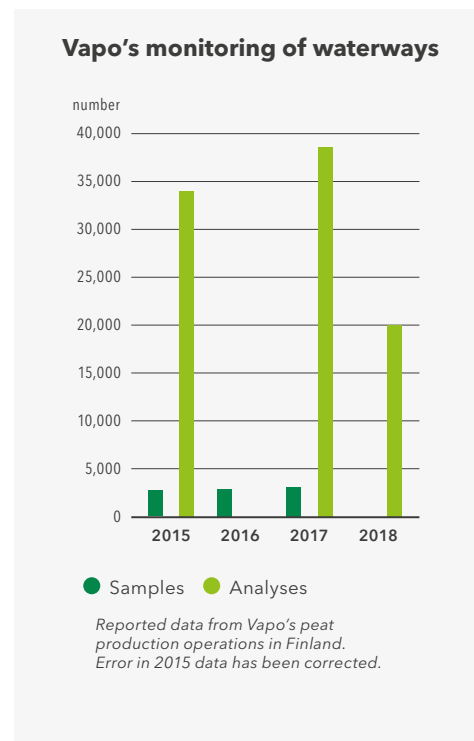
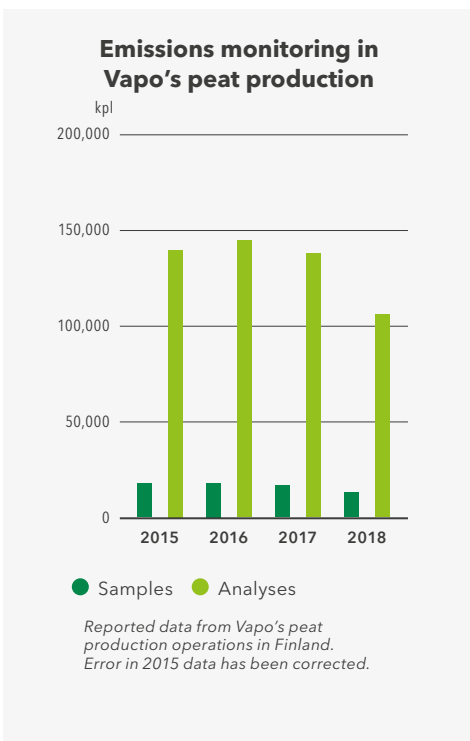
Drone technology was introduced in the environmental inspections of peat production areas. The aim of the project was to accumulate experiences and determine how drones could be used in the environmental inspections of peat production sites. The project was a success and we obtained plenty of practical knowledge regarding the use of drones. Vapo will put this knowledge to use in the future. In addition to environmental inspections, drones can be used in taking stock, for example.

In 2018, emissions into waterways from Vapo's peat production operations in Fin-

Emissions into waterways

| Specific load (kg/ha/a) | 2015 | 2016 | 2017 | 2018 |
|-------------------------|-------|-------|-------|-------|
| Solid matter | 40,1 | 37 | 30 | 22 |
| Nitrogen | 9,2 | 9,7 | 6,8 | 4,4 |
| Phosphorus | 0,33 | 0,35 | 0,21 | 0,13 |
| Total load (t/a) | | | | |
| Solid matter | 2 193 | 1 923 | 1 631 | 1 174 |
| Nitrogen | 428 | 362 | 374 | 228 |
| Phosphorus | 13 | 12 | 11 | 7 |

For emissions into waterways, report nitrogen, phosphorus and solid matter emissions for those Finnish operations whose environmental permits include the obligation to calculate the annual load. The calculations are based on samples. With regard to samples and analyses in the monitoring of emissions and waterways, information for Vapo Oy's peat production has been reported.



Water quality in peat production is monitored in accordance with the conditions of environmental permits and inspection programmes approved by the authorities.

potential were investigated and piloted in internal and external research projects. However, a new feasible water treatment method that would significantly reduce the environmental load originating from production activities compared to the existing technologies was not found. In natural conditions, hydrological fluctuations, geographical distances and the adequate availability of electricity from the grid pose substantial challenges to the use of new and more advanced methods. The environmental load of peat production arises from peatland drainage waters, which also includes the natural rate of background leaching. In the current situation of naturally increasing rates of leaching, reducing the environmental load to a level below the initial situation was not possible due to the aforementioned factors. For this reason, the decision was made to discontinue the commitment. Nevertheless, research geared towards further improving water treatment methods will continue.

In 2018, research on proven water treatment methods in peat production continued under the principle of continuous improvement. In chemical water treatment, new potential chemicals were sought to enhance the removal of solid matter and identify alternative chemicals for restoring the acidity (pH value) of treated water to an acceptable level. Water filtration using ultrafiltration membranes was piloted as a new application.

BAT Water Treatment Methods and Self-Monitoring

Best Available Techniques (BAT) in water treatment at peat production areas refers to modern and natural water purification methods, such as overland flow areas and wetlands, and in special cases, chemical treatment. These methods complement the purification effectiveness of basic methods such as drainage ditch structures and sedimentation basins.

Starting from summer 2016, Vapo has only used production areas in Finland where water treatment is in line with the best available techniques.

Since 2012, peat contractors have been required by Vapo to inspect water protection structures at two-week intervals during the production season. The enhanced monitoring of water treatment structures based on inspections carried out by contractors will continue in the 2019 production season in the form of monthly inspections. The reason for the reduced frequency is that the inspections have not been found to have environmental benefits. It is also worth noting that the inspections are also conducted in the form of continuous monitoring alongside production operations. In addition, environmental inspectors hired for the summer season have inspected the water treatment methods and environmental permit compliance at production areas since 2011. This practice will continue in 2019.

land were significantly reduced from the previous year with respect to solid matter, total phosphorus and total nitrogen.

The number of samples and analyses under Vapo Oy's emissions monitoring programme in 2018 decreased significantly compared to the previous year. In 2018, emissions into waterways from Vapo Oy's peat production decreased from the previous year. The lower emissions were partly due to the weather conditions during the summer and autumn, which were dry and featured low rainfall. In addition to the monitoring of emissions and waterways by consultants, Vapo takes additional samples during periods of high flow and heavy rain as well as in problem situations. A total of 77 such samples were taken in 2017.

In 2012, Vapo made a commitment to ensuring that, from the year 2016 onwards, the solid matter and humus load of new peat production areas would be lower than that of the same bog before peat production. To verify this commitment, Vapo has engaged in preliminary monitoring activities at areas assigned for peat production to determine their initial levels of solid matter and humus load. Over the years, preliminary monitoring has provided comprehensive information mainly on the water quality of ditched peatlands and differences in water quality across Finland. The commitment also accelerated the development of water treatment methods in peat production. Nearly all new methods that had even theoretical

Energy Efficiency

Energy efficiency is a key environmental target for the Group as a whole.

Energy Efficiency – A Key Environmental Target for the Group

Improving energy efficiency is one of the Group's environmental goals. With respect to energy production, Vapo has continued to implement an energy efficiency development programme for the 150 power and heating plants owned by the Group. In addition, Vapo helps develop its customers' energy efficiency by providing various energy solutions.

The most significant investment in 2018 was the joint fund established by Vapo and the OP Group. The fund will invest in heat and power plants owned by cities, municipalities and industrial operators. The fund is a domestic and responsible

investor with the advantage of being a local operator. Named Vapo Lämpövoima Ky, the fund aims to operate in the Swedish market in addition to Finland. Vapo has a strong and well-established position in the Finnish market as an energy partner for municipalities and industrial players. Vapo also has significant operations in the heating business in Sweden. Through these investments, we can play a role in expediting energy-efficient and environmentally friendly investments. These investments include the construction of new multi-fuel plants and the modernisation of old oil-powered plants. Several co-operation agreements were signed with customers with the aim of developing

energy efficiency. These included agreements to support Fazer's operations in Lappeenranta, Kinnusen Mylly in Utajärvi and Sotkamo Silver in Sotkamo.

The measures taken at Kekkilä's composting plants included optimising tunnel inlet blowers to reduce electricity consumption. At the agricultural peat production facility in Haukineva, surveys are currently underway regarding the recovery of heat from driers and selling it to gardens.

In peat production, the exploration of using solar power for pumping bog waters continued. The study analysed the operations of the solar power pump stations built by Vapo and the profitability

of the investments. Based on the results, it was concluded that a solar power system is not – at least for the time being – a cost-effective solution for pumping bog waters at peat production sites.

The total electricity consumption of Vapo's Finnish operations in 2018 amounted to 50,310 MWh (excluding the electricity consumption of power plants). Electricity consumption increased by 15% compared to the previous year. The entire Group's electricity consumption totalled 60,442 MWh.

Vapo's heating and electricity generation and the fuels used in these activities are reported on page 60.

Airborne Emissions

The minimisation of noise and dust impacts is taken into consideration in all of Vapo's operations.

Monitoring Dust and Noise

Vapo's operations, production methods and equipment are continuously developed to reduce dust levels. In addition, among other things, peat production contractors are provided with training on environmental working methods and driving style to minimise dust and noise impacts.

In 2018, controlling dust emissions caused by peat production was investigated

with the aim of reducing the dust-related impacts of peat production. Test runs were conducted at the Sompaneva peat production site using a mechanical harvester. The purpose of the test runs was to measure the effectiveness of a dust control system based on high-pressure misting during peat harvesting with a mechanical harvester. The measurements were taken in cooperation between Vapo, entrepreneurs in Sompaneva and Ramboll's air



Peat production contractors are provided with training on environmental working methods and driving style to minimise dust and noise impacts.

quality unit. The water consumption of high-pressure misting was also evaluated by taking separate measurements.

Based on the collected data, the average dust-binding effect of the system was approximately 70% ($\pm 10\%$). Based on the measurement results and observations, the practical effectiveness of the dust control system was assessed and suggestions were made on how the equipment could be improved. In 2018, Vapo also participated in "Dust emission study on a mechanical harvester", which was organised by the Bioenergy Association of Finland and conducted by Ramboll Finland Oy.

Environmental permit decisions include limits on airborne emissions and noise. Noise or dust was monitored at nine Vapo Group operating locations in 2018. At certain peat production areas, the monitoring of negative impacts from noise and dust is based on a letter distributed to local

residents asking them to report any negative impacts to the operator in question. In 2018, a total of 22 reports from local residents concerning negative impacts from dust or noise were recorded in the observation system. Taking the weather conditions into account, this number can be considered low.

Airborne Emissions

The fossil-based carbon dioxide emissions of Vapo's heat and power plants in Finland increased by 7% and particle emissions increased by 19%. NO_x emissions decreased by 7% and SO₂ emissions by 9% compared to the previous year.

The emissions from Vapo's transport operations are minor in significance compared with the emissions from heat and power plants. The majority of Vapo's transport operations involve transporting peat by road. Vehicles in emissions category 5 or 6

accounted for 83% of Vapo's peat transport in Finland. The emissions limits for these categories are more stringent than those of categories 1-4. In 2018, the carbon dioxide emissions from fuel transport operations increased by 20% year-on-year because the volume of transport increased. However, relative emissions decreased slightly compared to the previous years and amounted to approximately 43 grams of carbon dioxide (CO₂) per 1,000 kilometres. The CO₂ emissions arising from the domestic transport of Kekkilä's packaged products were on par with the previous year at approximately 1,100 tCO₂. Transports include fuel transport for Finnish operations (peat, wood chips and wood) and the domestic transport of Kekkilä's packaged products. For CO₂ emissions, the calculations are based on the emission factors specified in the fuel classification published by Statistics Finland.

Emissions from heat and power plants and pellet factories

| | 2016 * | 2017 * | 2018 |
|---|--------|--------|------|
| CO ₂ emissions, 1,000 tonnes | 344 | 365 | 403 |
| Particles, t | 138 | 131 | 168 |
| NO _x , t | 921 | 1 024 | 981 |
| SO ₂ , t | 626 | 446 | 428 |

For airborne emissions, SO₂, NO_x, particle and carbon dioxide emissions are reported for all of Vapo's own power and heating plants. For pellet factories, report the parameters subject to monitoring by the authorities. Airborne emissions from plants are monitored by emission measurements taken by an external expert or by continuous emission measuring devices. The total airborne SO₂, NO_x and particle emissions are calculated based on the emission factors applied to emission measurements and actual fuel consumption figures. The emission factors provided by Statistics Finland have been used in calculating carbon dioxide emissions.

Biodiversity

Vapo established a policy in 2012 to not apply for environmental permits for peat production for category 4 and 5 peatlands, which are mires in the most natural state.

In accordance with the national mire and peatland strategy, Vapo allocates its peat production in Finland to ditched peatlands that are no longer in their natural state. At peatlands ditched for use in forestry, basic drainage has already been carried out and water filtration routes have been altered. This means that starting peat production at ditched peatlands does not increase the overall load on waterways as much as it would in a mire in its natural state. This also helps prevent a decline in the number of mires in their natural state.

Vapo has classified the peatlands and mires it owns in Finland in accordance with the Finnish government's classification system, in which category 0 is the most altered state and category 5 is the most natural state. Some 98% of the peatlands owned by Vapo are in categories 0–3. Vapo established a policy in 2012 to not apply for environmental permits for peat production for category 4 and 5 peatlands, which are mires in the most natural state.

Each year, approximately 1,000 hectares of land is released from Vapo's peat production in Finland. A part of this total is returned to landowners, a part is sold, and the remainder is prepared for subsequent land use methods. The most common use of cutaway peatlands is forestation, agriculture or the construction of different types of wetlands. The process of ecological succession, which refers to natural changes in the species structure, means that wetlands change over time and the

process of paludification starts over. Vapo is committed to having areas owned by it and released from peat production in active after-use within two years of the end of production operations.

Achievements in 2018

In 2018, Vapo Oy continued to actively sell peatlands with significant nature value for conservation purposes. A total of 4,220 hectares of land were sold for conservation purposes during the period 2012–2018.

A list of peatlands sold for conservation purposes in 2012–2018 is available on Vapo's website:

www.vapo.com/turvetuotantoavas-tuullisesti/ymparistonsuojelu/luontoarvosoiden-suojelu

Vapo Helps Increase the Value of the Iijoki Watercourse

The aim of the Iijoki watercourse vision and action plan is to increase the value of the Iijoki watercourse through the restoration of migrating fish and the improvement of water quality as well as to build trust and increase interaction between the parties operating in the Iijoki area.

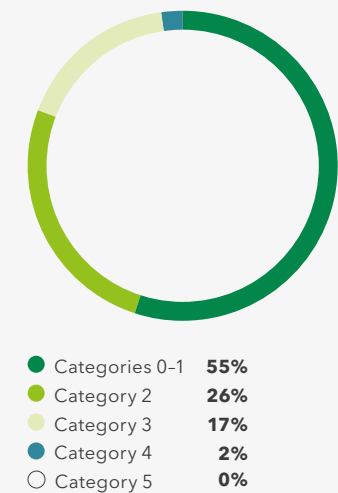
The implementation of the Iijoki watercourse vision and action plan is a joint project between stakeholders in the area. The project will take place from 2019 to 2023. The parties to the agreement are PVO-Vesivoima Oy, Metsähallitus, the peat producers Vapo Oy and Turveruukki

Oy, the North Ostrobothnia Centre for Economic Development, Transport and the Environment and the Iijoki watercourse area municipalities of Ii, Oulu, Pudasjärvi and Taivalkoski.

Biodiversity was also promoted in 2018 in conjunction with the after-use of peatlands following peat production by building 150 hectares of wetlands and reforesting more than 270 hectares of decommissioned production sites.

In 2019, Vapo Group will continue to take measures related to the after-use of peatlands as well as sell mires with significant nature value for use for conservation purposes.

Vapo's peatlands in natural state categories 0–5





We Develop Continuously

- Targets and results 2018-2021
- Delivery Reliability and the Security of Supply by Making Use of Digitality
- Customer Satisfaction
- Innovations for Sustainable Development
- Development of Competence

We Develop Continuously - Targets and Results 2018-2021



| SECTION | TARGETS FOR 2018–2021 | RESULTS IN 2018 |
|--|---|--|
| Delivery reliability and the security of supply by making use of digitality | Better delivery punctuality | The existing development project aimed at further improving delivery punctuality will continue in 2019 |
| | Increasing order automation | Following the introduction of newly developed services, the share of electronic ordering channels has increased in fuel sales, retail sales (Vapo shop) and Grow&Care products |
| Delivery reliability and the security of supply by making use of digitality, Grow&Care | Digital delivery tracking based on chip technology, also linked to automatic customer communication and the extranet | In 2018, we launched an Extranet project for distributors in the professional growing business. The project started from understanding the distributors' needs and creating a suitable channel on top of the existing technical infrastructure. The first pilots were carried out late in the year, and the project will continue in 2019 as part of the development of Kekkilä-BVB's digital customer experience. The digital tracking of deliveries and enhanced use of chip technology are also being worked on |
| | Continuously developing the e-commerce offering to match B2B and B2C customer needs with respect to the product range, functionality and deliveries | The MVP version of the online store for consumers was completed in 2018. We have gained a lot of valuable information through the service, which will be used in the development of the e-commerce business to benefit all Kekkilä-BVB customers |
| Customer satisfaction | In 2021, the Net Promoter Scores per customer segment will be substantially higher than at present | In the customer satisfaction survey at the end of 2018, the NPS scores were 57 for Kekkilä Garden (previous year: 42), 19 for Hasselfors Garden (previous year: 21) and 49 for Kekkilä Professional in Finland |
| | We will be the most trusted partner in our industries (B2B and B2C) | In our customer surveys, we asked direct questions to assess how reliable we are perceived to be as a partner. We received a lot of valuable and mostly positive feedback. The improved NPS figures indicate that customers are satisfied, particularly in the case of Kekkilä Garden |
| Customer satisfaction, Grow&Care | In 2020, the turnover-weighted Net Promoter Score will be 47 | In the customer satisfaction survey at the end of 2018, the NPS scores were 57 for Kekkilä Garden (previous year: 42), 19 for Hasselfors Garden (previous year: 21) and 49 for Kekkilä Professional in Finland. The global response rate was too low to obtain reliable results |
| Innovations for sustainable development | Vapo's R&D expenses compared to the Finnish average (2.8% of GDP in 2016) | R&D expenses were 1.4% of turnover |
| | Number of new ideas per year | 66 |

| | | |
|---------------------------|--|---|
| Development of competence | In the personnel survey, the score reflecting the employees' perception of learning new things will remain at an excellent level (at 8.7 at a minimum) | The results of the personnel survey indicate a high level of interest in developing one's competence: 9.27 (on a scale of 4-10) |
| | Strategic competence areas will guide personnel development programmes and recruitment | The Group has engaged in active communication regarding the new strategy, values and targets. Change Skills training has been introduced for supervisors, to be followed by the supervisors implementing similar training at the team level throughout the Group's personnel. The recruitment of complementary skills and potential has been successful |
| | Increasing training hours per person | The Group is not yet able to report hours of training in a harmonised manner |
| | In the personnel survey, the score reflecting the perceived quality of managerial work will rise to an excellent level (at 8.7 at a minimum) | In the personnel survey conducted in autumn 2018, the score awarded to the quality of managerial work was 8.43 (on a scale of 4-10) |
| | Vapo Group will be perceived as an attractive employer that is popular among new talent. Target rankings for Universum Most Attractive Employer surveys: Top 50 in Finland and Top 100 in Sweden | The target set for 2018 regarding the Universum Most Attractive Employer Survey was to improve the ranking in the previous category of Engineering/Natural Science Students from 68 in 2017 to enter the Top 50 in Finland. The category has since been divided into two groups. In 2018, we achieved an excellent result in our target group in the Natural Science Students by being ranked in 36th place. Our ranking in the Engineering category was 98. We have not yet participated in the survey in Sweden |
| | Personal career development and target setting discussions included in the performance assessment system are held with every employee | The career development and target setting discussions included in the performance assessment system are held individually or at the team level; employees in production operations typically have team targets rather than individual targets. The discussions are held with every employee throughout the Group |

Deliver Reliability and the Security of Supply by Making Use of Digitality

Vapo leads the energy industry in terms of the speed of its digital transformation. In addition to heat and power plant operating services and digital solutions related to the fuel supply chain, new innovations improve customer service and offer an even higher level of delivery reliability for the customer.

The increasingly effective use of digitality and process development lead to increased customer benefits. Investments in service usability will continue. Customers gain access to extensive experience on the cost-efficient operation of various types of boilers used in heat and power plants. In the fuel supply chain, digital solutions ensure that the customer receives the right quality of fuel at the right time. Mobile and internet-based 24/7 solutions make the customer's daily life easier, which is reflected in higher customer satisfaction. The customer's heat or fuel needs are anticipated by combining historical data with weather forecasts, for example. A mobile application was designed to meet the needs of peat production operations. The application is used to manage the location, condition and utilisation rate of peat production equipment. The improved management, allocation and maintenance of the equipment ensured the success of production operations and the reliability of deliveries.

Continued Growth in the Use of Renewable Energy Sources

According to preliminary data from Statistics Finland, the total energy consumption of Finland in 2018 was 380 TWh, which is 2% higher than in the previous year. The

use of renewable energy sources continued to grow, reaching 37% of the total consumption of energy. The use of fossil fuels and peat increased by 2% and the CO₂ emissions arising from energy production increased by 3% in 2018.

Challenges related to the procurement of solid wood fuels during the cold period early in the year significantly increased the consumption of peat. As a result, the consumption of peat for the full year increased by 24% compared to the previous year. The consumption of wood fuels increased by 4% and they remained Finland's most significant source of energy with a share of 27%.

Vapo's Fuels Heat the Homes of More Than a Million People

The fuels and heat supplied by Vapo constitute approximately 3.5% of Finland's total energy consumption. Vapo is growing as a significant supplier of domestic fuel and energy solutions. Vapo supplies fuels – peat, wood and pellets – to 300 power and heating plants, heat and process steam energy to more than 100 industrial and building customers as well as district heating in Finland, Sweden and Estonia. Vapo plays a significant regional role in Finland, Sweden and Estonia as a



In the fuel supply chain, digital solutions ensure that the customer receives the right quality of fuel at the right time.

local fuel supplier and in heat and power production – the homes of more than a million people are heated by energy supplied by Vapo.

Fuel Deliveries

The Group's fuel sales volume increased from the previous year. Problems related to the availability of wood fuels increased the demand for peat. Nevertheless, the demand for peat has decreased during the past few years while the demand for wood fuels has grown. The weather in 2018 was warmer than the long-term average, which was reflected in the demand for district heating and the delivery volumes of fuels used to produce district heating. Peat taxation, the low price of electricity and price

competition in wood fuels and coal affected the demand for peat. The temperature conditions and market situation were also reflected in the deliveries of wood fuels and reduced growth. The domestic market demand and export demand for pellets remained good.

Fuels Supplied by Region

The demand for Vapo's fuels increased compared to the previous year. There were differences between regions and customer segments. The shift from peat to wood continues, although peat deliveries increased in 2018 due to availability issues with wood fuels.

Decisions made on energy taxes and subsidies increase the use of wood.

Combined with the low prices of coal and oil, this has a negative impact on peat's market position. The use of energy peat and wood fuels has also been affected by replacement investments and supplementary investments made in customers' power plant boilers. The investments have expanded the fuel range of power plant boilers. The demand for peat and wood for the production of condensing power has been low due to the low price of electricity.

The forest industry has seen closures of factories and production lines. Coal and wood are replacing peat in district heating production in coastal areas. Inland power plants have increased the share of wood and also used coal occasionally.

The sales of wood fuels comprise forest fuels supplied in the form of chips and stemwood as well as sawmill by-products, bark and sawdust. Forest fuels are acquired by purchasing and harvesting fuel wood, felling waste and stumps. Wood is processed into chips at roadside storage facilities and wood fuel terminals, but also on site at the customers' combustion plants. Changes in the supply of wood fuels with respect to forest fuels and by-products influence purchasing prices and quantities. Together with growing customer demand, these factors make the market a locally challenging one. The demand for wood fuels is expected to increase further in the coming years, and Vapo is well positioned to benefit from that growth.

Pellets can be used in place of both coal and natural gas at power plants. Customers have invested in pellet combustion instead of producing energy in gas, oil and coal boilers. The demand for pellets is growing steadily across all customer segments: industry, district heating production, large properties and among



The majority of the growth in the coming years will be seen in industrial steam, district heating and heating solutions for large properties.

consumer customers. The majority of the growth in the coming years will be seen in industrial steam, district heating and heating solutions for large properties. Demand growth among consumer customers will be lower than the other segments as heat pumps rise in popularity as a heating solution.

Production Targets and Stockpiles

The successful production season of summer 2018 in Finland increased peat inventories and buffer stocks. A total of 16 million cubic metres of peat was produced in Finland in summer 2018. Buffer stocks produced in accordance with Vapo's customer promise are sufficient to ensure peat deliveries in subsequent heating seasons in spite of potentially poor peat production summers. Due to the demand for peat and the status of stockpiles, the production target for summer 2019 has been set at a lower level than in the previous summer.

Heat and Power Production

Vapo's heat and power production in 2018 was lower than in the previous year. The year 2018 was warmer than average, which was reflected in the customer demand for district heating and pellet heating. The effect of the warm weather

on industrial steam production was not as substantial. Vapo has continued to invest in energy efficiency at heating plants as well as power plants.

The consumption of fuel for heat and power production was on par with the previous years. The use of the Group's own fuels continued to increase.

Future Outlook

The consumption of wood fuels and pellets is expected to see continued growth. Forest industry investment projects in Äänekoski, Kuopio, Kemijärvi, Kemi and other locations will significantly increase the demand for wood, which will also have an impact on the fuel market. The Finnish Government's energy and climate strategy relies heavily on biofuels in liquid transport fuels, energy production for industry and the production of district heating. Peat will remain as part of the energy palette during the transition period due to its local significance. The customer feedback regarding Vapo's fuel solutions, the power and heating plant operating service, the outsourcing of energy production and digital customer services provides a solid foundation for building customer cooperation and jointly developing new energy services tailored to customer needs as well as new business models.

Customer Satisfaction

Feedback and suggestions received from customers are at the heart of new service development.

Customer satisfaction has been measured at Vapo since 1998. Customer satisfaction surveys are part of the customer relationship management process. The aim is to ensure customer satisfaction and increase customer value. Feedback and suggestions received from customers are at the heart of new service development. The development of customer satisfaction is also one of Vapo's employee performance measures. The measurement of customer satisfaction is the responsibility of the business units.

Achievements in 2018 in the Energy Division

Vapo's customer satisfaction survey in 2018 revealed that the NPS (Net Promoter Score) among the customers of the Energy division is at an all-time high at 30, which represents a slight improvement on the score of 28 achieved in 2017. Among B2B customers, only 4% of the respondents awarded the Energy division a low NPS score (0-6), while the corresponding figure for B2C customers was 12%. The size of the consumer customer sample was smaller than in 2017 by more than 400 customers due to the reduced amount of telephone interviews. B2C customers indicated that the price-quality ratio is challenging. Satisfied customers place the highest value on delivery reliability, which is also a major factor in customer loyalty. Customer satisfaction surveys conducted over several years indicate that delivery reliability is a very significant factor in customer satisfaction, particularly when it comes to B2B

customers. Ensuring delivery reliability and developing it further were again the first priority in all of Vapo's day-to-day operations. In Sweden, Neova AB conducted a qualitative customer satisfaction survey of 200 district heating customers as planned. The customers are satisfied with the delivery reliability of heating, customer service and the company's general competence. Customer satisfaction can be further improved by developing the price-quality ratio, increasing customer awareness of the district heating portal and improving communication during delivery disruptions.

Targets for 2019 in the Energy Division

The main target in 2019 is the development of customer satisfaction and loyalty. NPS will remain the key performance indicator both at the customer group level and the country level. Based on the results obtained in 2018, the aim is particularly to increase customer satisfaction among district heating customers in each country. Customers will be offered more opportunities to influence their energy consumption by developing the service offering and pricing structure. Day-to-day customer service and district heating communications will be enhanced and the reserve capacity of district heating networks will be increased in Sweden. Delivery reliability and flexibility will again be ensured. The development of real-time customer satisfaction measurement for the consumer customers of

pellet products will start in 2019. The aim is to increase customer satisfaction.

Customer Satisfaction in the Grow&Care Division

In a customer satisfaction survey conducted at the end of the 2018 season, the Grow&Care division's units achieved the following NPS scores: Kekkilä Garden 57 (2017: 42), Hasselfors Garden 19 (21) and the Kekkilä Professional unit in Finland 49. The global response rate for Kekkilä Professional was too low to obtain reliable results. The reason for the low response rate was likely the anonymous address the survey was sent from. Going forward, the surveys will be sent from an address that is familiar to the respondents. Consumer preference for Kekkilä Garden decreased by three percentage points to 27%. In Sweden, Hasselfors Garden's preference score remained on par with the previous year at 12%.

Targets for 2019 in the Grow&Care Division

The creation of Kekkilä-BVB Oy at the beginning of 2019 meant that many processes are now being reassessed. The integration process is led through a number of different projects, the progress of which is monitored by a working group (PMO) that reports to the Group Management Team. The projects also entail a revision of the necessary processes. The project focused on customer insight, in particular, involves establishing harmonised processes between different businesses in order to

increase customer insight in Kekkilä-BVB. The project will be completed in autumn 2019. In the Finnish consumer and landscaping market, the aim is to maintain the good NPS score. In 2019, focus will be placed on keeping customer data as current as possible, which also enables a broader reach for NPS surveys. The corresponding level of quality is also sought in Sweden. The survey form will be amended in accordance with the objectives of the business to obtain the best possible data for the development of operations. An NPS survey will be conducted among animal litter customers in Finland after the customer data has been updated. In 2019, an NPS survey will be conducted among distributors in the Netherlands and Germany. The aim is to gain an understanding of the current level of customer satisfaction and areas that should be developed further. A further goal is to establish the previously mentioned harmonised customer insight process to ensure that all businesses receive relevant information on how operations should be developed with customers' future expectations in mind. This is very important particularly in Kekkilä-BVB's global professional grower market, where the company is seeking significant growth in many different segments and with multiple brands.

Innovations from Sustainable Development

New business opportunities are based on the Group's strengths, emerging customer needs, raw material resources, competencies and networks.

The Vapo Ventures unit under the New Businesses division is in charge of the Group's innovation and IPR activities that ensure the operating conditions for the future. The Group's shared innovation activities include the development of existing businesses as well as new businesses. The Ventures unit is in charge of studying, developing and commercialising new business opportunities. They are based on the Group's strengths, emerging customer needs, raw material resources, competencies and networks. Turning ideas into commercially successful products and services requires systematic and determined development efforts. The aim is to identify new businesses to replace the declining use of energy peat, in particular, in the long run. The new business solutions must be ecologically sustainable and financially viable. Customers are the focus of the innovation activities. The activities are guided by the Group's Innovation and IPR policy and the related strategy, which began to be updated during the year under review. The Ventures unit consists of nine people and its operations are led by a Business Area Director.

Achievements in 2018

The Group's Innovation Activities Reached a New Level

The Ventures unit led the development of the Group's first shared innovation model, which will accelerate the creation of future

business ideas and the process of refining these ideas into revenue-generating business activities. To promote progress in this area, an Innovation Network was established, consisting of members who are in charge of innovation in each business function. The network has 10 members, including representation from Sweden and Estonia. They devote part of their time to shared innovation activities and supporting the personnel in their respective business functions. Everyone has the right – and the obligation – to cultivate and refine ideas. Successful innovation benefits everyone.

To make innovation easier, a digital innovation tool was introduced to allow all of the Group's employees to post, comment on, develop and refine ideas on the intranet. The digital tool enables us to take a community-oriented and agile approach to promoting the creation of new business opportunities. New ideas will be developed into feasible and testable innovations together, faster than before, more openly and with improved coordination. One key aspect of innovation activities is using campaigns to focus idea generation on the areas in which new ideas are needed the most. The megatrends relevant to Vapo Group were used to define strategic focus areas for idea campaigns: clean and local food, sustainable energy, healthy life and healthy living environments. The members of the Innovation Network went out into the field in Finland, Sweden and



Our aim is to create new sustainable products and services based on our competencies, raw materials, networks and emerging customer needs. This will enable us to ensure the necessary conditions for our business in the future.

Estonia to communicate information on the new innovation model and tool. By the end of 2018, the system had 375 users, with five campaigns carried out and 66 ideas entered. An incentive model for rewarding the best ideas was developed to support a culture of innovation.

Ventures Lab is a Cornerstone for New Business Development

The Ventures Lab product development laboratory focused mainly on supporting Vapo Carbons, a new business aimed at entering the activated carbons market, for which the investment decision was made in December 2018. Connected to the University of Jyväskylä, the lab makes it possible to quickly carry out various tests and trial runs in response to customer needs as well as analyse product attributes and develop production processes.

Vapo Refinery 2030 Vision

During the year, the Ventures unit began a systematic effort to build competitive advantage based on the multipurpose use of peat biomass. The work is based on a survey of the multipurpose use of peat and moss, which identified key future opportunities and the related R&D needs. The survey was used to draft the Vapo Refinery 2030 vision, which is aimed at developing high added value products from peatland biomass and creating new business for the Group. The vision is based on the multipurpose use of peatland biomass, with raw materials and side streams comprehensively utilised in accordance with the circular economy principle. Peatland biomass is a unique raw material that has valuable attributes and functionalities that we can develop into new and innovative products. By making long-term investments in research and development we can be on the

leading edge of the multipurpose use of peatland biomass. Turning the vision into reality started with the launch of humics and moss projects as well as the planning of the Vapo Refinery R&D programme.

Humics Project

The humics project is focused on refining humic substances derived from dark peat to develop products for growing international markets. In the first phase of the project, the emphasis will be on the biostimulant use of humic substances. More information on the web:

www.vapohumics.com

Moss Project

The year-long moss project brought together the results of the extensive development efforts taken within the Vapo organisation and confirmed the business profitability and growth potential of growing media products with moss as an added ingredient. More information online: www.kekkilaprofessional.com/fi/viljelyvinkit-ja-neuvot/sammal-kasv-ualustojen-uusi-raaka-aine/

The Lessons Learned from Clean Waters Oy were Openly Shared

The achievements and challenges of Vapo's first start-up focused on the water business were reviewed as the Group marked the winding down of Clean Waters Oy. The lessons learned from the project were shared with all Vapo employees at an open house event and on the intranet. Clean Waters carried out more than 50 customer projects and received positive feedback. Nevertheless, the market for water protection developed so slowly that the business was not profitable.

Plans for 2019

The various components of the Vapo Refinery 2030 vision will be advanced through projects and focus will also be placed on creating a strategic cooperation and partner network. External funding will be sought for the Vapo Refinery R&D programme. The humics project will focus on clarifying customer value, producing customer samples and developing the manufacturing process. In addition to the use of moss in growing media, other potential uses for the valuable qualities of peat will be investigated. In accordance with the Group's new innovation and IPR strategy and policy, innovation activities will focus particularly on the development of competence and a culture of innovation as well as building ecosystems in collaboration with customers and strategic partners.

Development of Competence

Competence development is driven by business growth targets, the shared values that support renewal and the Group's learning-oriented and target-driven organisational culture.

As part of the renewal of strategy and organisational structure in autumn 2018, Vapo Group defined its desired organisational culture as a learning-oriented and target-driven culture in which work has meaning. The shared values support the courage to renew, creating added value for customers, trust through respect and achieving together. Our competence development is driven by business growth targets and the multipurpose use of peat, the long-term innovation of new applications and providing comprehensive energy solutions for customers.

To overcome the challenges involved in managing an expert organisation and developing supervisory work, the Group has started to train supervisors to engage their teams in initiating and implementing change. The Group Management Team has made a significant contribution to these training activities: each of the supervisor training days held in the latter part of the year featured a member of the Group Management Team to provide a personal example of how to communicate change. During the year, the Group also ensured that statutory training requirements, such as occupational safety card training, are satisfied internally.

A significant investment in learning was made by implementing an online course related to new data protection regulations that is mandatory for all employees. Course performance among the entire personnel is monitored on a monthly basis. At the end of the year, only a tenth

remained of the 100% target.

The Group language policy was defined in the autumn and the shared language is English. It is used in communicating common topics simultaneously in the Group. Supervisors are responsible for delivering key messages in the local language. English language proficiency is not required for all positions. The Group encourages the development of language skills and has started the process of purchasing an online course.

Achievements in 2018

The Group-level organisational changes were communicated to the entire personnel and the change was supported through supervisor training in Change Skills workshops. Supervisors were trained to build the organisation by incorporating the new strategy, values and targets into the daily life, plans and operational development of each team.

In 2018, the Grow&Care division implemented the Growing Together development programme, which covered all of the division's personnel and was focused on developing the division's operations openly through workshops and discussions. Workshops were held in various locations in Finland, Sweden and Estonia. The events were hosted by 20 Growth Ambassadors selected from within the organisation and trained in facilitation. Ideas were collected from the personnel regarding concrete measures for strengthening the values and values-driven behaviour within the organi-

sation. The ideas were refined into development projects, the progress of which the personnel can monitor on the intranet.

The feedback from the participants was almost invariably positive, especially with regard to the Growth Ambassadors. The community-driven aspect of the workshops was also singled out for praise: the personnel got the opportunity to know each other better and to exchange ideas across unit boundaries in the new operating environment.

Journey to Excellence, a two-year development programme focused on information management, was launched in 2018. The digital transformation challenges us to develop our common Group practices as our business environment changes. The challenges related to the development of professional competence have been identified as technology and the Group's business continues to develop in an increasingly international and diverse operating environment. The process is a challenging one and includes a book-based examination in its early stages. Nevertheless, the response to the programme has been favourable because it responds to the challenges associated with personal competence development.

Plans for 2019

The measures related to the implementation of Vapo's new strategy will continue in 2019. Competence development is related to the development of the operating culture, management, the identification of key competencies, the harmonisation of

operating methods and the deployment of common systems.

Joint discussions regarding the strategy, the Must Win programmes that support the implementation of the strategy, the target culture and operating methods will continue in the context of supervisor training. Once they have completed two training modules, the supervisors will continue the discussions in their teams. The leadership principles and key competencies that support the strategy, targets and target culture at the organisational, divisional and functional levels will be defined in 2019. This will create a foundation for the continued development of leadership and competence.

The harmonisation of operating policies, processes and instructions will continue in all of the Group's countries of operation.

Kekkilä-BVB will engage in the development of leadership and teams and, in selected areas, the harmonisation of operating methods as part of the broader integration effort. The aim is to establish a shared understanding of values, culture, leadership and competence development as well as the first development measures related to these areas. A further aim is to continue to make extensive use of the internal Growth Ambassador model throughout the Group.



We Guarantee Quality and Safety

- Targets and results 2018-2021
- Quality and Cost-Efficiency of Products and Services
- Health and Safety of Personnel
- Safety in the Subcontracting Chain
- Assessment of Suppliers According to Relevant Criteria Concerning Environmental and Social Aspects

We Guarantee Quality and Safety - Targets and Results 2018-2021



| SECTION | TARGETS FOR 2018–2021 | RESULTS IN 2018 |
|--|---|--|
| Quality and cost-efficiency of products and services | New products launched in the market will promote sustainable development | The activated carbon products of the Carbons business are used to clean the air and water. The fibre products of the Fibers business can replace plastic. The humic acid products of the Humics business replace harmful chemicals |
| | Reducing complaints pertaining to the quality of products and services | Complaints related to Vapo Oy's pellet business have been reduced by 50% over the past five years. Kekkilä Group's complaint costs have been reduced by more than half compared to 2015 and 2016, and there have been no major complaint incidents after 2016. The development of feedback management continued at the Group level in 2018 |
| | We are a competitive alternative in relation to other comparable operators | The Group's new shared innovation model puts the customer at the centre of innovation activities and ideas are evaluated with a particular emphasis on sustainable development and the markets. The competitive edge of Kekkilä Group's products for professional growers will be maintained by analysing the products available in the market and building insight into the customers' various needs, starting from different cultivation techniques and plants. The businesses also have a strong foundation in sustainable development, which will become an increasingly significant selection criterion for customers in the coming years. For example, new fertiliser packaging for consumers is made entirely from recycled plastic. In landscaping, we are involved right from the start of construction projects. For example, our expertise enables us to make use of the on-site raw materials as efficiently as possible. This ensures more robust outcomes and the observance of the principles of sustainable development while also creating cost savings for our customers |
| Occupational health and safety of personnel | 100% safety by 2021 | At the Group level, the number of accidents leading to lost time increased to 9 (2017: 3). However, none of the accidents were serious and the resulting absences were not long |
| | Safety observations per employee: 10 in 2021 | Following the deployment of a mobile application, the number of safety observations increased substantially in 2018. The average number of observations made in 2018 was 5.4 |
| Health and safety of contractors | Contractors are 100% committed to the safety commitment and operate accordingly | Positive development in safety-related attitudes is clearly evident in the subcontracting chain, but the development of safety culture requires an uncompromising long-term effort. In 2018, there were no serious workplace accidents among subcontractors who were in a direct contractual relationship with Vapo |
| | Contractor health and safety training is organised annually as part of other training organised for contractors | |
| Assessment of suppliers according to relevant criteria concerning environmental and social aspects | The number of audits of strategic contractual suppliers will be increased to 40 from the current level of 35 | Vapo Group audited a total of 50 suppliers by means of on-site audits or supplier self-assessments. Of this total, 20 were on-site audits and 30 were self-assessment forms sent to suppliers |
| | The Code of Conduct is incorporated into all contracting agreements (100%) | The Code of Conduct is incorporated into all new contracting agreements. In Vapo Oy, the Code of Conduct covered approximately 90% of all agreements at the end of 2018 |

Quality and Cost-efficiency of Products and Services

Focus on customer success.

Vapo Group produces cost-efficient products and services, taking into account the needs and expectations of customers, owners and society. The cornerstones of operations are business profitability, developing the professional competence and job satisfaction of employees and continuously improving customer satisfaction at all levels, taking environmental issues and occupational safety into consideration. Our customer-driven approach and ISO 9001 and ISO 14001 compliant management system ensure that our products and operations meet stakeholder needs.

Quality control is an integral aspect of management and the day-to-day operating culture of our company. It is guided by a Quality Policy approved by Vapo's Board of Directors. Amongst other things, we monitor the achievement of our quality targets by using customer feedback and quality indicators, including the Net Promoter Score (NPS) as a measure of customer satisfaction and loyalty. A key role in our quality management is also played by internal and external audits focused on evaluating the effectiveness of our certified management system.

Achievements in 2018

Vapo Group revised its structure in 2018 to accelerate the growth opportunities presented by its new business strategy. Vapo aims to be the European market leader in the professional and consumer growing media businesses. The Energy business will invest heavily in advanced energy and service solutions as well as growing the

business based on renewable biofuels.

Vapo will accelerate the development of new innovations in peat and other natural materials by consolidating all of the projects geared towards new business development in the New Businesses division. As part of the implementation of the new strategy, the Group changed the previous holding company model based on subsidiaries in different countries so that each division is now responsible for its operations as a whole in the areas of Finland, Sweden and Estonia. The new international operating model presents an excellent opportunity for cost-efficient and high-quality operations and the increasingly comprehensive adoption of best practices throughout the Group.

The renewal of the business structure also involves the centralisation of Group services with the aim of improving the customer experience by means of harmonised operating models and processes as well as achieving synergies across business units by eliminating overlaps. The aim is that the changes are only evident to customers in the form of more efficient operations and improved service. Development opportunities were also identified in the areas of a harmonised management system, process descriptions, annual planning and complaint handling.

Targets for 2019

Vapo Group will continue to implement measures related to the renewal of its business structure in 2019. We will also

continue to develop our feedback management. We will enhance the collection of internal observations related to quality, environmental issues and occupational safety as well as customer feedback. We will utilise feedback in the development of our operations. Quality is created through the competent, responsible and ethical performance of us and our partners in all of our business functions.



Quality control is an integral aspect of management and the day-to-day operating culture of our company. It is guided by a Quality Policy approved by Vapo's Board of Directors.

Health and Safety of Personnel

Safety is one of our highest priorities. Our starting point is that every Vapo Group employee and partner should go home healthy at the end of the day.

Safety is included in Vapo Group's responsibility targets, the development of which is regularly monitored by the Board of Directors and Group Management Team. Safety targets are also incorporated into the annual targets of the Group's businesses to ensure effective support for operating activities. For many supervisors and production teams, safety is incorporated into individual targets to promote the development of occupational safety.

We continuously develop occupational safety and health in order to ensure a safe and healthy work environment under all circumstances. We train our own personnel and subcontractors to apply a safe, caring and proactive approach as well as look after their own safety and the safety of their colleagues. Our target is to have zero workplace accidents, and a few of our units achieved this in 2018.

The development of our safety culture has led to a continued increase in the number of recorded safety observations and more communication about safety. Safety management and a genuine commitment to safety are also reflected in our day-to-day work.

In spite of the positive development of safety culture, there was a slight turn for the worse in the number of workplace accidents during the year. The relative increase in the number of workplace accidents leading to lost time was higher than the relative increase in the total number of workplace accidents. The workplace accidents that

led to lost time did not, however, include any serious accidents, and the absences resulting from the accidents were not long. All workplace accidents are investigated in accordance with the Group's internal process description. The investigations did not reveal an unequivocal reason for the increased number of workplace accidents. The most common individual factor involved in the workplace accidents was wintery and slippery conditions. Accordingly, the Group has highlighted the significance of weather and working conditions, anti-slip solutions and safety equipment in its safety-related communications.

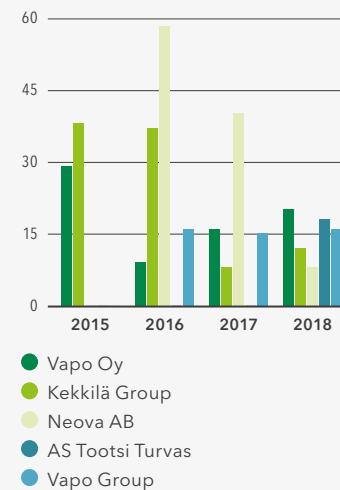
Occupational Safety in 2018

Vapo Group reports all workplace accidents that require a visit to occupational health services (MTR) and, separately, all workplace accidents that cause an absence of at least one day (LTA1). Accidents during commutes (between the home and workplace) are also included in the calculations. The accident frequency figures are calculated per one million working hours.

In 2018, Vapo Group's accident frequency (MTR), measured in terms of workplace accidents requiring a visit to occupational health services, was 16 (15). Workplace accidents were logged in all Group companies, but Neova AB was the only one that didn't have any accidents leading to lost time.

In 2018, Vapo Group's accident frequency, measured in terms of workplace

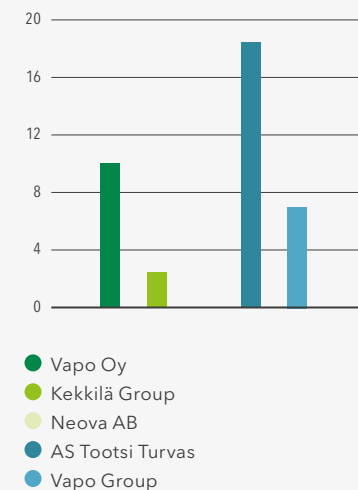
Accident frequency (MTR)*



*Accident frequency MTR reflects the number of accidents per one million working hours. The calculation includes all accidents, including those that did NOT lead to sickness absences.

Does not include the sub-contractors.

Accident frequency (LTA1)*, 2018



*LTA1 frequency includes all incidents that lead to at least 1 day sickness absence. Includes also accidents during commutes; between the home and workplace.

Does not include the sub-contractors.

accidents causing an absence of at least one day (LTA1), was 6.9 (2.3). There was a slight increase in the number of workplace accidents leading to lost time, but the absences were not long and there were no serious workplace accidents.

Safety Observations

The logging and appropriate processing of safety observations is proven to reduce damage incidents and prevent accidents. In 2018, Vapo Group recorded a total of 4,116 (3,375) safety observations. Vapo Oy had the highest number of observations with 2,700 (2,090), followed by Kekkilä Group with 1,350 (1,210). The number of

safety observations also increased in Tootsi Turvas and Neova AB.

Plans for 2019

The main target for 2019 is to reduce the total number of workplace accidents, particularly with respect to accidents leading to lost time. In 2019, Vapo Group's focus areas related to safety are as follows:

- Safety on the agenda of every meeting,
- Conducting management safety walks according to plan, and
- Improving the safety of contractors and the subcontracting chain.

Safety in the Subcontracting Chain

The subcontracting chain is subject to the same safety requirements as the Group's own operations.

As a responsible client, Vapo uses safety evaluations to ensure that the subcontracting chain satisfies the same safety requirements as the Group's own operations. This enables us to ensure a safe working environment for everyone and increase transparency with regard to quality throughout our service chain. Going forward, we will be able to report even more reliably on the safety of our subcontractors.

Vapo Group has focused heavily on improving safety in the subcontracting chain. In 2018, some 80% of all contractors in Finland participated in training that included content related to occupational safety and health. Similar training is also arranged in Sweden and Estonia. Each year, we provide training to our contractors on the employer's key obligations pertaining to safety.

Positive development in safety-related attitudes is clearly evident in the subcontracting chain. Nevertheless, the development of safety culture requires an uncompromising long-term effort. The continuity of safety communications is important throughout the supply chain to ensure that the employees of subcontracting companies are aware of their safety-related responsibilities and act accordingly. The unequivocal message is that safety is the highest priority in all operations.

In 2018, there were no serious workplace accidents among subcontractors who were in a direct contractual relationship with Vapo.

The number of logged safety observations increased in the subcontracting chain

in 2018. Some 15% (10%) of all observations were made by contractors or other stakeholders. There is still a lot of potential in the subcontracting chain to substantially increase the number of safety observations.

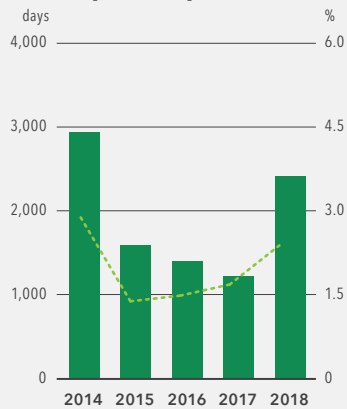
Two serious accidents occurred in operations indirectly related to Vapo's operations. In the supply chain, an employee of a subcontractor used by a large logistics company suffered a fatal accident involving a forklift. The accident occurred during unloading on a customer's premises. The investigation conducted by the authorities did not indicate any safety deficiencies in the packaging of the product manufactured by Vapo. The other incident involved a supplier suffering a fatal accident when delivering a riddle bucket purchased by Vapo to a worksite. The investigation carried out by the authorities did not indicate any deficiencies in the work site's safety-related responsibilities, instructions or practices.

Plans for 2019

The main target for 2019 is zero accidents leading to lost time, both in the Group's own operations and in the subcontracting chain. The plans pertaining to improving safety among subcontractors are focused on the following areas:

- Regular reporting to Vapo regarding safety
- Immediately notifying Vapo of accidents and serious near misses
- Increasing the number of safety observations
- Introducing identity cards

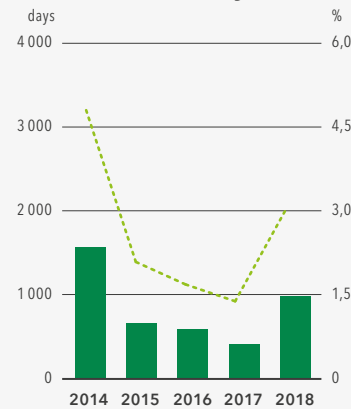
Sickness absences Vapo Group Finland



Sickness absence (days) and cumulative sick leave (%) 2014–2018

- Sickness absence days
- Cumulative sick leave (%)

Sick absences Kekkilä Oy



Sickness absence (days) and cumulative sick leave (%) 2014–2018

- Sickness absence days
- Cumulative sick leave (%)

Assessment of Suppliers According to Relevant Criteria Concerning Environmental and Social Aspects

Vapo's suppliers must be committed to compliance with Vapo's Code of Conduct and the requirements specified therein.

Each year, Vapo Group purchases products and services worth approximately EUR 300 million from its suppliers. The Group's most significant procurement-related expense items are peat, wood and logistics services. Vapo's network of suppliers currently includes approximately 1,000 contract suppliers and another 10,000 invoicing suppliers. Vapo's contractors are largely local and their operations are based in Finland close to where their services are required. The Group also has many international suppliers that manufacture products in different parts of the world. Vapo Group's procurement policy sets out the main principles governing procurement. Vapo's procurement policy and Code of Conduct include requirements pertaining to supplier responsibility and ethics. The Chief Procurement Officer is responsible for Vapo Group's procurement policy.

Vapo requires its suppliers of goods and services to have certified responsible operations, transparency and certainty that the goods and services are produced and implemented in an ethically sustainable manner. The supplier requirements concerning environmental and social perspectives have been incorporated into Vapo's Code of Conduct. Vapo's suppliers must be committed to compliance with Vapo's Code of Conduct and the requirements specified therein. An unconditional

requirement in the selection of new suppliers is that they must satisfy the standards set out in the Code of Conduct. The Code of Conduct is incorporated into all new contracting agreements.

Vapo assesses its suppliers of goods and services on a regular basis in accordance with an annual assessment plan. Each year, before the assessment plan is made, strategic suppliers are identified. From this group of identified strategic suppliers, some are selected for supplier audits to be conducted in the following year based on their criticality and other relevant reasons. The preparation of the assessment plan and the implementation of the assessments themselves are the responsibility of Vapo's procurement function, quality officers and operating organisations together. The supplier assessment criteria include criteria related to the environment, responsible business, personnel, safety and social perspectives. The criteria are in line with Vapo's Code of Conduct. Vapo assesses its suppliers in accordance with a documented assessment process and based on assessment criteria defined for different supplier groups. Requirements related to environmental and social aspects are used as assessment criteria in all supplier groups.

The practical implementation of the assessment programme is monitored by Vapo Group's procurement function, which also conducts assessments in the

procurement categories it is responsible for. For Vapo's peat and wood contractors, the implementation of assessments is the responsibility of the persons in charge of quality for each customer region. For other suppliers, the responsibility lies with the organisation in charge of the procurement category in question. The same resources are also responsible for monitoring the implementation of measures that are initiated in response to the assessments. The results of the assessments are recorded in Vapo's procurement system, which is also used to monitor and report on the implementation of the practical measures arising from them.

The supplier assessments are aimed at preventing and identifying risks related to strategic suppliers, ensuring contractually compliant operations and supporting the supplier's capacity to produce quality, developing supplier cooperation and ensuring supplier compliance with the Code of Conduct. If any deficiencies are observed in the operations of a supplier, Vapo helps the supplier remedy the situation. Vapo only works with suppliers that comply with the Code of Conduct. Non-compliance may lead to the agreement being terminated.

Vapo Group has identified about 100 strategic suppliers. Of these, some 50 were assessed in 2018 in accordance with the assessment plan, using on-site audits and supplier self-assessments. Corrective

measures were identified based on the assessments. No serious deficiencies or actual violations were observed, and no partnerships were terminated based on the assessments. Recommendations were issued based on the assessments concerning the management and orientation of contractors' employees and improving documentation.

Plans for 2019

The target and requirement for 2019 is to incorporate the Code of Conduct into all procurement contracts, ensure that contractual partners are familiar with the Code of Conduct and take the Code of Conduct into account in the criteria applied in the selection of all new suppliers. A further aim is to create a separate Supplier Code of Conduct to clarify the Group's requirements concerning suppliers.

Based on the assessment plan, the target for Vapo Group is to assess 25 strategic suppliers by means of audits and another 25 by means of self-assessments.

The target is that Vapo Group's suppliers will have no serious irregularities related to compliance with the Code of Conduct in 2019.



We Create Wellbeing

- Targets and results 2018-2021
- Satisfaction and Wellbeing of Personnel
- Non-Discrimination
- Local Employment Effects
- Economic Impact

We Create Wellbeing - Targets and Results 2018-2021



| SECTION | TARGETS FOR 2018–2021 | RESULTS IN 2018 |
|---|---|--|
| Job satisfaction and wellbeing of personnel | Excellent results in the personnel survey (minimum score 8.7) | The Group-level score achieved in the 2018 personnel survey was 8.30. The team-level score was excellent (8.72), while the most significant challenges were identified in Group-level and division-level responses. Following the Group's adoption of a new organisational structure effective from 1 May 2018, the Group began to monitor the implementation of the new operating model and strategy by means of a monthly survey |
| | The employees' perception of being treated as a valuable resource will be at least at a good level in the personnel survey (minimum score 8.5) | The employees' perception of being treated as a valuable resource was still at a very modest level (7.58) in the most recent survey |
| Equality and diversity | Men and women receive the same basic pay for equally demanding jobs | According to the research results we have obtained, there are no significant differences in basic pay between men and women for equally demanding jobs |
| | We will increase the number of women among our personnel | If a recruitment situation makes it possible to choose between equally qualified candidates and the gender distribution is male-dominated, the female candidate will be selected |
| Local employment effects | Contracting and transport agreements are always signed with domestic and local entrepreneurs when possible | Contracting and transport agreements have been primarily signed with local contractors in the various countries the Group operates in. The agreements are mostly signed with small enterprises that operate locally and employ local workers |
| Economic impact | Equity ratio above 40% | The equity ratio target was achieved by a clear margin in 2018 |
| | Vapo Group's long-term success is assessed in terms of its operational profitability and the following performance indicators: return on invested capital, ratio of net debt to operating margin and equity ratio | All of the Group's strategic financial performance indicators developed favourably in 2018 |

Satisfaction and Wellbeing of Personnel

Everyone can keep up with change.

Vapo Group’s target is to create a corporate culture characterised by respect and inspiration. The job satisfaction and wellbeing of the personnel is measured twice a year by a Group-wide survey. The results are reviewed at multiple levels, from the Group Management Team to the team level. Supervisors play an important role in communicating the results within

their teams and the development of operations. Development areas and corrective measures are determined based on the survey results. The results and Group-level development measures are communicated via the Group intranet. Employees also have the opportunity to highlight areas requiring development at any time through the Group’s shared

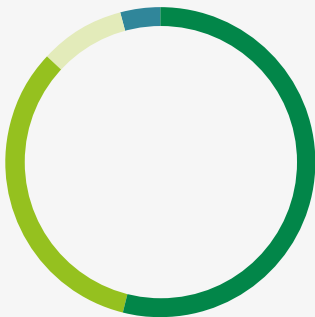
digital channel, which also allows users to post comments anonymously.

Achievements in 2018

The new strategy and organisational renewal further increased the significance of the personnel survey. The survey was implemented as an anonymous online questionnaire in January and August.

The effects of the renewal were reflected in the results as a slight decline in the overall score, from 8.40 to 8.30 (on a scale of 0-10). The score indicating whether the company has a culture of working together fell from 7.70 to 7.32. At the same time, the score for working to reach common targets improved from 7.40 to 7.64.

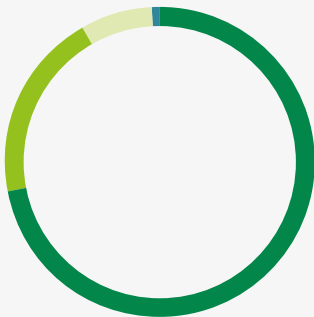
Share of personnel by company, total 737, 31 December 2018



- Vapo Oy* **54%**
- Kekkila Group **33%**
- Neova AB **9%**
- AS Tootsi Turvas **4%**

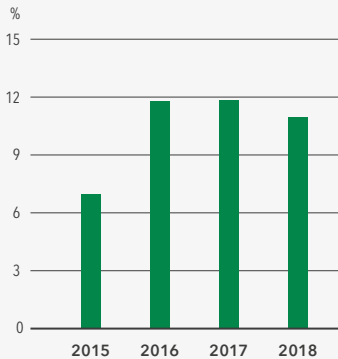
*incl. Salon Energiateollisuus Oy and Vapo Clean Waters Oy

Share of personnel by country, total 737, 31 December 2018



- Finland **72.0%**
- Sweden **19.7%**
- Estonia **7.6%**
- Spain **0.7%**

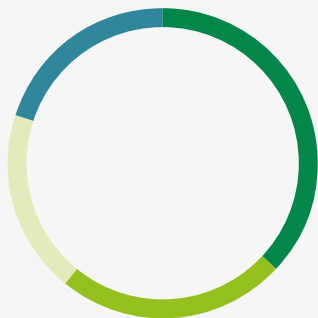
Employee turnover



● Employee turnover (outgoing)*

*Includes all the causes of the termination of employment.

Duration of employment*



- Under 5 years **37%**
- 5-10 years **24%**
- 10-20 years **19%**
- Over 20 years **20%**

*not including Neova



Employee perceptions regarding the progress of the changes will be assessed by means of a monthly Pulse survey.

The target is for every employee to be familiar with the Group's new strategy, the methods of implementation and how they can influence the organisation's operations themselves. One target set by the Group with regard to the personnel survey is for the employees to feel that they are treated as a valuable resource. This score decreased somewhat between the two surveys conducted last year, from 7.71 in January to 7.58 in August. The current level is well short of the target of 8.50.

In connection with the renewal of the Group's strategy, a monthly Pulse survey was introduced. Implemented in the form of an online survey with three questions, it is intended to gauge the atmosphere of the company. The results have remained at a fairly good level throughout the period during which the survey has been in use. The results are reported monthly at each level of the Group. The results are reported on the intranet and they are used to focus communication efforts on topics that the personnel want to know more about.

Number of personnel Preliminary measures related to the start-up of the Kekkilä-BVB joint venture were planned in the latter part of the year to prepare for the joint venture that subsequently became operational on 4 January 2019. The number

of personnel in Vapo Group increased by approximately 280 and amounted to about 1,000 employees in January 2019.

Plans for 2019

The Must Win programmes aimed at facilitating the implementation of the Group's strategy will be refined further. Within the framework of the programme focused on values, culture, leadership development, competence development and harmonised HR practices, a shared understanding will be established at all levels of the organisation regarding that the changes mean and what practical measures support the incorporation of the changes into day-to-day operations.

Employee perceptions regarding the progress of the changes will continue to be assessed by means of a monthly Pulse survey.

Kekkilä-BVB, a joint venture between Kekkilä and the Netherlands-based growing media company BVB, will start operating under the Grow&Care division. Integration projects related to various business functions will be implemented in 2019. To support Vapo Group's change management, Kekkilä-BVB will introduce a recurring Pulse survey related to the progress of the organisation's integration.

Two extensive personnel surveys will be conducted in 2019, in April and October–November. The second of these two will be the first survey to include BVB's personnel.

Non-discrimination

Zero tolerance for discrimination and improper conduct.

The two personnel surveys conducted in 2018 were the first to include Group-level questions on phenomena related to improper conduct and discrimination. Teams in various businesses and support functions have incorporated this theme into their development plans, which will be monitored until the next survey results are available. The next survey results will be available to supervisors and teams in May 2019.

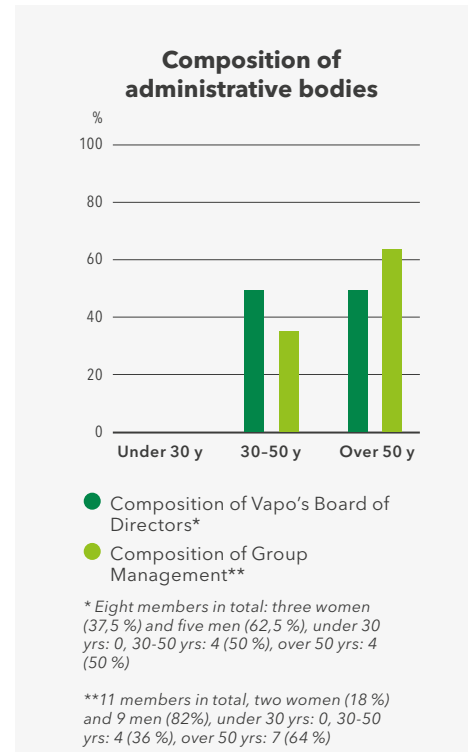
Based on the results, the decision was made to update and harmonise the existing non-discrimination policies throughout the Group and its various operating countries, taking the local legislative requirements of each country into account. A separate targeted survey on discrimination and improper conduct was carried out late in the year in the units that had the highest frequency of related observations. The research results in question are one significant source of information used in drafting the updated Group-level equality and non-discrimination policy. The aim of the survey was to understand what the phenomenon is about and what are the perceptions among personnel regarding intervention in, and prevention of, discrimination and improper conduct. An open and transparent approach to operations, appropriate intervention and prevention are key to strengthening a non-discriminatory operating culture.

Plans for 2019

The target of the project as a whole is to increase the personnel's general awareness of the Group's zero tolerance policy towards improper conduct and discrimination. In the future, the Group's expansion and internationalisation will increasingly highlight issues of linguistic, cultural and ethnic diversity in addition to the traditional themes pertaining to age and gender.

Clearer operating models, corrective action and monitoring practices prove that the Group is serious about all of its obligations related to non-discrimination. Accepting and capitalising on diversity and building a culture based on respect and trust is a long-term proactive effort that each of the Group's employees must contribute towards. For its part, the Group will promote this process by continuing to highlight this topic in various channels and through supervisory work; for example, through reviewing the results of personnel surveys and following up on the actions taken.

The Code of Conduct will be updated at the beginning of the year and turned into a new e-learning course, which will again be mandatory for all of the Group's employees.



Local Employment Effects

Vapo is a significant employer outside cities and urban areas.

Vapo's local impacts as an employer, taxpayer and buyer of products and services are significant, particularly in the Group's main operating countries of Finland, Sweden and Estonia. Vapo's total investments in Finland amounted to EUR 30.1 million in 2018. The corresponding figure for the previous year was EUR 23.4 million. The largest investment was the start of the activated carbon production facility in Ilomantsi.

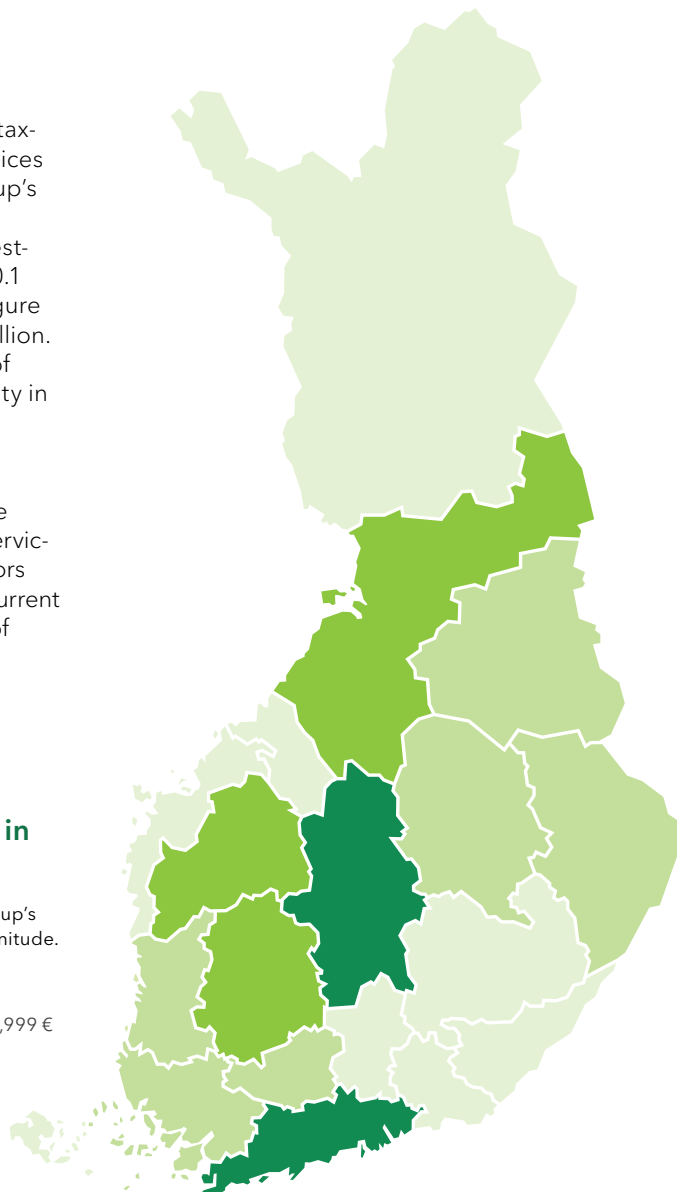
Plans for 2019

Vapo Group's business is very local. The company aims to continue to use the services of local businesses and subcontractors where possible. The company has no current plans to reduce the size of its network of operating locations.

Wages Paid by Vapo Group's Finnish Companies by Region in 2018

The map indicates the wages paid by Vapo Group's Finnish companies by region and order of magnitude.

0-499,999 € 2,000,000-4,999,999 €
500,000-1,999,999 € 5,000,000- €



Wages paid by Vapo Group's Finnish companies in 2018, top 20 municipalities, EUR

| Municipality | Taxable income |
|--------------|-------------------|
| Jyväskylä | 4,817,382 |
| Espoo | 2,302,417 |
| Helsinki | 2,134,349 |
| Vantaa | 1,771,769 |
| Seinäjoki | 1,356,852 |
| Oulu | 1,128,711 |
| Parkano | 866,254 |
| Kuopio | 743,358 |
| Siikalatva | 518,699 |
| Salo | 465,668 |
| Forssa | 452,790 |
| Lieksa | 385,407 |
| Kinhiö | 359,446 |
| Eura | 352,395 |
| Mikkeli | 350,443 |
| Eurajoki | 348,933 |
| Sotkamo | 327,951 |
| Hämeenlinna | 287,146 |
| Janakkala | 284,063 |
| Ilomantsi | 269,911 |
| Total | 19,523,944 |

Economic Impact

Vapo returned to the path of growth.

Profitable business is the foundation for economic responsibility. During the past few years, Vapo has made significant investments in improving profitability and developing new businesses to ensure the company's continued existence and the livelihood of its employees and partners far into the future.

The financial year from 1 May 2018 to 30 April 2019 was fairly good in financial terms. The Group's turnover grew by nearly 10% and profitability improved substantially. The Group's operating profit was EUR 33.3 million (EUR 26.3 million), up by more than 26% year-on-year. Profitability improved across all of the Group's businesses.

The Group's investments were significantly higher than in the previous year due to the BVB acquisition and an increase in working capital, with cash flow for the financial year being EUR -23.5 million (EUR 73 million). Nevertheless, profitable growth meant that the Group was able to maintain its strong equity ratio, which stood at 51% (51%) at the end of the year.

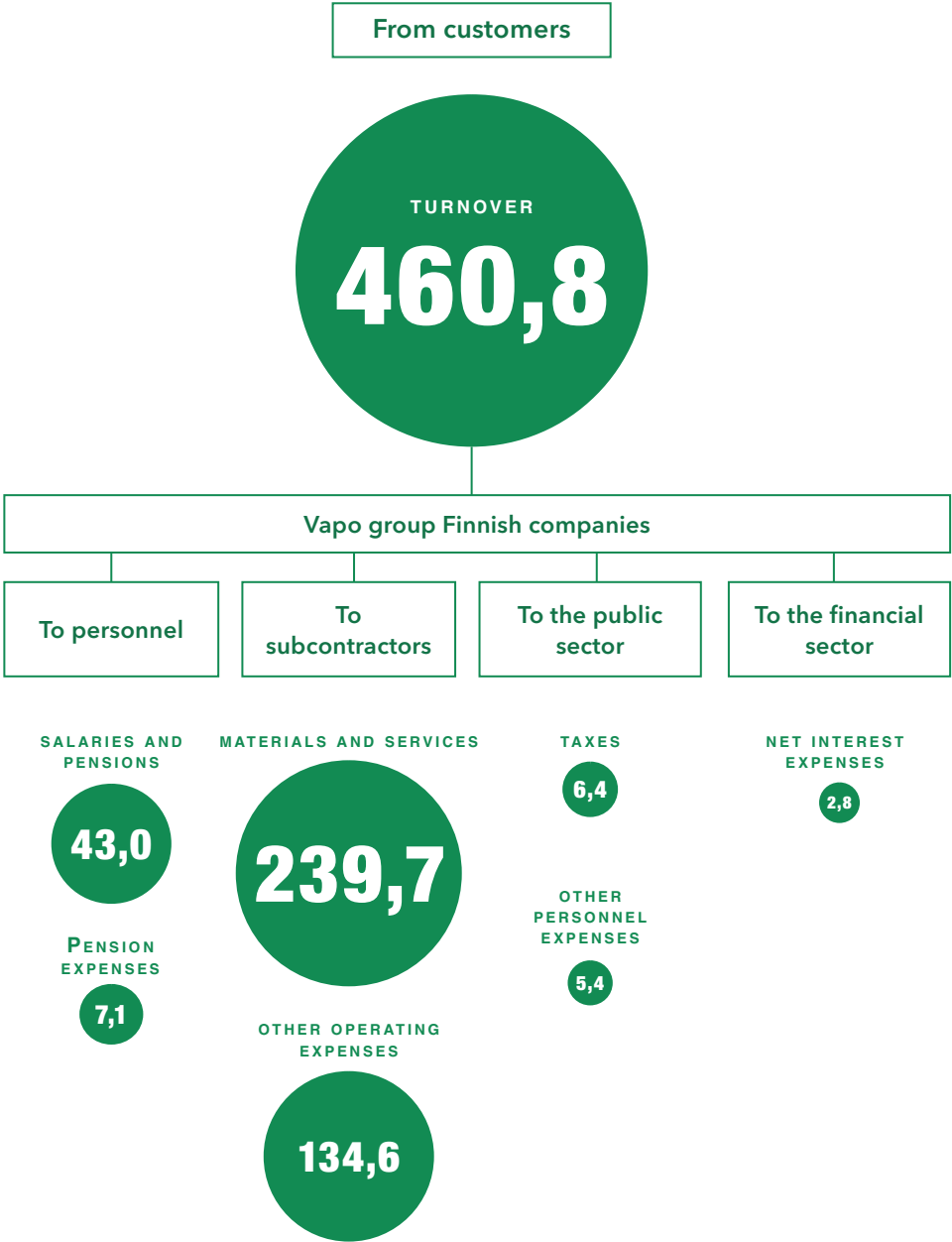
Investments also began in the Vapo Carbons business announced in December 2018, with the development of an activated carbon production facility in Ilomantsi starting in the spring.

Vapo Group companies pay all of their statutory taxes, based on their own business operations, to the country in which they operate. None of the Group companies have unpaid taxes or significant pending appeal processes. Group administration is responsible for the implementation of Vapo's tax strategy and compliance with country-specific tax regulations.

Plans for 2019

The Group expects its turnover to grow and profitability to be almost on par with the previous year.

New businesses will significantly increase the Group's investments in the coming years due to the building of new production capacity.



Economic impacts during the financial year 1 May 2018–30 April 2019 (EUR million)



Data

- We take care of nature
- We develop continuously
- We guarantee quality and safety
- We create wellbeing
- Reporting principles
- GRI index

We Take Care of Nature

Emissions into waterways

| Specific load (kg/ha/a) | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------------|-------|-------|-------|-------|-------|
| Solid matter | 38,2 | 40,1 | 37 | 30 | 22 |
| Nitrogen | 6,6 | 9,2 | 9,7 | 6,8 | 4,4 |
| Phosphorus | 0,2 | 0,33 | 0,35 | 0,21 | 0,13 |
| Total load (t/a) | | | | | |
| Solid matter | 2,116 | 2,193 | 1,923 | 1,631 | 1,174 |
| Nitrogen | 367 | 428 | 362 | 374 | 228 |
| Phosphorus | 11 | 13 | 12 | 11 | 7 |

For emissions into waterways, report nitrogen, phosphorus and solid matter emissions for those Finnish operations whose environmental permits include the obligation to calculate the annual load. The calculations are based on samples. With regard to samples and analyses in the monitoring of emissions and waterways, information for Vapo Oy's peat production has been reported.

Waste volume, tonnes

| | 2015 | 2016 | 2017 | 2018 |
|-------------------|--------|--------|--------|--------|
| Landfill disposal | 6,327 | 4,758 | 3,164 | 1,390 |
| Recycled | 25,799 | 12,374 | 26,075 | 17,551 |
| Total | 33,313 | 17,132 | 29,237 | 19,492 |
| Recycling rate % | 77 | 72 | 89 | 90 |

For waste volume and recycling rate, the reporting covers all of the Group's operations except Kekkilä Eesti OÜ.

Emissions from heat and power plants and pellet factories

| | 2016 * | 2017 * | 2018 |
|---|--------|--------|------|
| CO ₂ emissions, 1,000 tonnes | 344 | 365 | 403 |
| Particles, t | 138 | 131 | 168 |
| NO _x , t | 921 | 1024 | 981 |
| SO ₂ , t | 626 | 446 | 428 |

For airborne emissions, SO₂, NO_x, particle and carbon dioxide emissions are reported for all of Vapo's own power and heating plants. For pellet factories, report the parameters subject to monitoring by the authorities. Airborne emissions from plants are monitored by emission measurements taken by an external expert or by continuous emission measuring devices. The total airborne SO₂, NO_x and particle emissions are calculated based on the emission factors applied to emission measurements and actual fuel consumption figures. The emission factors provided by Statistics Finland have been used in calculating carbon dioxide emissions.

We Develop Continuously

Fuels used in the production of electricity and heating - Vapo Oy

| GWh | 2014 | 2015 | 2016 | 2017 | 2018 |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Wood fuels | 446 | 433 | 522 | 508 | 514 |
| Pellets | 194 | 173 | 171 | 172 | 162 |
| Fuel peat | 740 | 821 | 798 | 837 | 888 |
| Oil | 72 | 74 | 68 | 57 | 51 |
| Coal | 42 | 25 | 38 | 25 | 39 |
| Recycled fuel | 2 | 2 | 1 | 1 | 2 |
| Fuels total | 1,496 | 1,529 | 1,598 | 1,599 | 1,655 |
| Energy production total | 1,320 | 1,305 | 1,321 | 1,405 | 1,357 |

Fuels used in the production of electricity and heating - AS Tootsi Turvas

| GWh | 2014 | 2015 | 2016 | 2017 | 2018 |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|
| Wood fuels | | | 3 | | 2 |
| Pellets | 3 | 2 | 2 | 1 | 1 |
| Fuel peat | 29 | 27 | 35 | 40 | 39 |
| Oil | 0.2 | 0.1 | 0.1 | 0.3 | 0.4 |
| Coal | | | | | |
| Recycled fuel | | | | | |
| Fuels total | 32 | 29 | 40 | 41 | 42 |
| Energy production total | 28 | 27 | 35 | 39 | 39 |

Fuels used in the production of electricity and heating - Neova AB

| GWh | 2014 | 2015 | 2016 | 2017 | 2018 |
|--------------------------------|------------|------------|------------|------------|------------|
| Wood fuels | 354 | 382 | 397 | 378 | 325 |
| Pellets | 65 | 65 | 80 | 81 | 87 |
| Fuel peat | 10 | 10 | 14 | 11 | 20 |
| Oil | 8 | 8 | 7 | 6 | 15 |
| Gas | 20 | 17 | 20 | 18 | 21 |
| Recycled fuel | 11 | 9 | 9 | 4 | 5 |
| Fuels total | 468 | 491 | 527 | 498 | 473 |
| Energy production total | 421 | 443 | 483 | 454 | 403 |

Fuels used in the production of electricity and heating - Vapo Group

| GWh | 2014 | 2015 | 2016 | 2017 | 2018 |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Wood fuels | 800 | 815 | 922 | 886 | 841 |
| Pellets | 262 | 241 | 253 | 254 | 250 |
| Fuel peat | 779 | 858 | 847 | 888 | 947 |
| Oil | 80 | 82 | 75 | 63 | 66 |
| Coal | 62 | 42 | 58 | 43 | 60 |
| Recycled fuel | 13 | 11 | 10 | 5 | 7 |
| Fuels total | 1,996 | 2,049 | 2,165 | 2,139 | 2,170 |
| Energy production total | 1,769 | 1,775 | 1,839 | 1,898 | 1,799 |

Vapo Group, fuels supplied by region (TWh)

| | TWh | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------|--------------|------------|------------|------------|------------|------------|
| CA Kaakko | Pellets | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 |
| | Wood | 0.3 | 0.3 | 0.2 | 0.2 | 0.4 |
| | Fuel Peat | 1.0 | 1.1 | 1.2 | 1.1 | 1.2 |
| | Total | 1.3 | 1.5 | 1.6 | 1.6 | 1.9 |
| CA Lounas | Pellets | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 |
| | Wood | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 |
| | Fuel Peat | 2.1 | 2.1 | 2.0 | 1.9 | 2.1 |
| | Total | 2.7 | 2.8 | 2.8 | 2.6 | 2.9 |
| CA Itä | Pellets | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Wood | 0.3 | 0.2 | 0.3 | 0.3 | 0.4 |
| | Fuel Peat | 1.2 | 1.3 | 1.4 | 1.2 | 1.3 |
| | Total | 1.6 | 1.6 | 1.8 | 1.6 | 1.7 |
| CA Länsi | Pellets | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |
| | Wood | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | Fuel Peat | 2.3 | 2.4 | 2.7 | 2.5 | 3.1 |
| | Total | 2.7 | 2.7 | 3.0 | 2.9 | 3.4 |
| CA Pohjoinen | Pellets | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| | Wood | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 |
| | Fuel Peat | 2.9 | 2.5 | 2.2 | 2.4 | 2.2 |
| | Total | 3.6 | 3.0 | 2.8 | 3.0 | 2.8 |

| | | | | | | |
|-------------------------|------------------|-------------|-------------|-------------|-------------|-------------|
| Vapo Oy | Pellets | 0.7 | 0.6 | 0.8 | 0.7 | 0.7 |
| | Wood | 1.6 | 1.5 | 1.6 | 1.8 | 2.2 |
| | Fuel Peat | 9.6 | 9.4 | 9.5 | 9.2 | 9.9 |
| | Total | 11.8 | 11.6 | 11.9 | 11.7 | 12.8 |
| AS Tootsi Turvas | Wood | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 |
| | Fuel Peat | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| | Total | 0.4 | 0.4 | 0.5 | 0.7 | 0.6 |
| Neova AB | Pellets | 0.5 | 0.0 | 0.0 | 0.0 | 0 |
| | Wood | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| | Fuel Peat | 0.8 | 0.8 | 0.8 | 0.7 | 0.8 |
| | Total | 1.3 | 0.8 | 0.8 | 0.8 | 0.9 |
| | | | | | | |
| VAPO GROUP TOTAL | Pellets | 1.2 | 0.6 | 0.8 | 0.7 | 0.7 |
| | Wood | 1.9 | 1.8 | 2.0 | 2.3 | 2.6 |
| | Fuel Peat | 10.6 | 10.4 | 10.4 | 10.2 | 11 |
| | Total | 13.6 | 12.8 | 13.2 | 13.2 | 14.3 |

Vapo Group's peat production by country

| Country | 1000 m ³ | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------------|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Finland | Milled fuel peat | 13,945.9 | 7,376.3 | 6,148.2 | 5,685.6 | 13,028.4 |
| | Sod peat | 876.8 | 611.0 | 464.1 | 483.2 | 907.8 |
| | Environmental peat | 1,440.8 | 1,070.7 | 1,213.3 | 1,248.3 | 2279.2 |
| | Total | 16,263.5 | 9,058.0 | 7,825.6 | 7,417.2 | 16,215.4 |
| Sweden | Milled fuel peat | 613.1 | 253.3 | 379.0 | 392.3 | 538.9 |
| | Sod peat | 647.4 | 326.9 | 269.1 | 215.4 | 455.1 |
| | Environmental peat | 815.2 | 718.4 | 887.3 | 1,036.0 | 736.0 |
| | Total | 2,075.7 | 1,298.7 | 1,535.4 | 1,643.7 | 1,729.9 |
| Estonia | Milled fuel peat | 225.9 | 11.8 | 0.0 | 0.0 | 84.4 |
| | Sod peat | 263.8 | 116.4 | 0.8 | 33.3 | 173.4 |
| | Environmental peat | 937.7 | 1,009.7 | 842.7 | 1,154.6 | 1136.8 |
| | Total | 1,427.4 | 1,137.9 | 843.6 | 1,187.9 | 1,394.6 |
| Norway | Milled fuel peat | | | | | |
| | Sod peat | | | | | |
| | Environmental peat | 70.5 | 122.2 | 46.0 | 26.4 | |
| | Total | 70.5 | 122.2 | 46.0 | 26.4 | |
| | | | | | | |
| VAPO GROUP TOTAL | Milled fuel peat | 14,784.9 | 7,641.4 | 6,527.2 | 6,078.0 | 13,651.7 |
| | Sod peat | 1,788.1 | 1,054.3 | 734.1 | 732.0 | 1,536.3 |
| | Environmental peat | 3,264.2 | 2,921.1 | 2,989.2 | 3,465.3 | 4,152.0 |
| | Total | 19,837.2 | 11,616.7 | 10,250.5 | 10,275.3 | 19,339.9 |

We Guarantee Quality and Safety

Amount of accidents 2014-2018 (MTR*)

| | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------|-----------|-----------|-----------|-----------|-----------|
| Vapo Oy | 21 | 24 | 7 | 11 | 14 |
| Kekkilä Group | 8 | 8 | 8 | 3 | 5 |
| Neova AB | | | 7 | 5 | 1 |
| AS Tootsi Turvas | | | 0 | 0 | 1 |
| Total | 29 | 32 | 22 | 19 | 21 |

* MTR includes all workplace accidents, including those that did NOT lead to sickness absences. Also includes accidents during commutes (between the home and workplace). ** 2014-2015 figures for Neova AB and AS Tootsi Turvas are not available.

Amount of accidents 2018 (LTA1**)

| | 2018 |
|------------------|----------|
| Vapo Oy | 7 |
| Kekkilä Group | 1 |
| Neova AB | 0 |
| AS Tootsi Turvas | 1 |
| Total | 9 |

** LTA1 includes workplace accidents that led to a sickness-related absence of at least one (1) day.

Recorded safety observations 2014-2018

| | 2015 | 2016 | 2017 | 2018 |
|------------------|------------|--------------|--------------|--------------|
| Vapo Oy | 555 | 2,628 | 2,090 | 2,700 |
| Kekkilä Group | 104 | 365 | 1,210 | 1,352 |
| Neova AB | | 4 | 13 | 25 |
| AS Tootsi Turvas | | 54 | 62 | 39 |
| Total | 659 | 2,041 | 3,375 | 4,116 |

Sickness absences caused by workplace accidents, days

| | 2016 | 2017 | 2018 |
|---------------------|------|------|------|
| Vapo Group, Finland | 19 | 142 | 101 |

We Create Wellbeing

Purchases and investments by region in 2018, EUR

| Region | Purchases | Change % | Investments | Change % | Total |
|-----------------------|----------------------|------------|----------------------|-------------|----------------------|
| South Carelia | 8,370,170.47 | 16% | 1,113,357.58 | 21% | 9,483,528.05 |
| Southern Ostrobothnia | 21,225,587.84 | 48% | 1,725,952.67 | 37% | 22,951,540.51 |
| Southern Savonia | 3,514,918.92 | 50% | 707,995.78 | 48% | 4,222,914.7 |
| Kainuu | 7,246,238.47 | 83% | 941,649.14 | -41% | 8,187,887.61 |
| Kanta-Häme | 9,821,794.18 | 19% | 439,002.73 | -54% | 10,260,796.91 |
| Central Ostrobothnia | 1,711,646.78 | 85% | 318,098.78 | 483% | 2,029,745.56 |
| Central Finland | 10,699,240.05 | 24% | 1,870,904.29 | -77% | 12,570,144.34 |
| Kymenlaakso | 1,832,409.84 | 16% | -117,852.01 | -104% | 1,714,557.83 |
| Lapland | 5,925,320.65 | 0% | 368,974.65 | 97% | 6,294,295.3 |
| Pirkanmaa | 22,348,725.47 | 5% | 2,453,493.47 | 41% | 24,802,218.94 |
| Southern Ostrobothnia | 444,211.52 | 14% | 61,200.13 | -94% | 505,411.65 |
| Pohjois-Karjala | 12,989,356.32 | 31% | 1,169,040.73 | 37% | 14,158,397.05 |
| Pohjois-Pohjanmaa | 16,231,618.05 | 25% | 6,632,675.08 | 670% | 22,864,293.13 |
| Pohjois-Savo | 5,925,997.73 | 30% | 834,734.01 | 52% | 6,760,731.74 |
| Päijät-Häme | 847,552.41 | -2% | 25,069.06 | 1% | 872,621.47 |
| Satakunta | 13,825,650.52 | 43% | 626,479.32 | -6% | 14,452,129.84 |
| Uusimaa | 6,451,660.55 | 7% | 1,015,288.95 | 354% | 7,466,949.5 |
| Varsinais-Suomi | 7,111,836.56 | 92% | 278,439.93 | -54% | 7,390,276.49 |
| Total | 156,523,936.3 | 28% | 20,464,504.29 | -12% | 176,988,440.6 |

Personnel covered by collective bargaining agreements on 31 December 2018

| | Number of personnel | Personnel covered by CBAs, % | Number of CBAs |
|----------------------|---------------------|------------------------------|----------------|
| Vapo Oy | 398 | 44 | 7 |
| Kekkilä Oy | 133 | 43 | 2 |
| Hasselfors Garden AB | 79 | 100 | 2 |
| Neova AB | 66 | 100 | 2 |
| AS Tootsi Turvas | 31 | 0 | 0 |
| Kekkilä Eesti OÜ | 26 | 0 | 0 |
| Kekkilä Iberia S.L. | 5 | 100 | 1 |

Number of personnel on 31 December

| | 2016 | 2017 | 2018 |
|----------------------|------------|------------|------------|
| Vapo Oy | 372 | 380 | 398 |
| Kekkilä Oy | 109 | 115 | 133 |
| Hasselfors Garden Ab | 88 | 91 | 79 |
| Neova AB | 83 | 88 | 66 |
| AS Tootsi Turvas | 33 | 32 | 31 |
| Kekkilä Eesti | 24 | 26 | 25 |
| Kekkilä Iberia | 4 | 5 | 5 |
| Total | 713 | 737 | 737 |

Type of employment

| | 2018 |
|--------------|------------|
| Permanent | 686 |
| Fixed term | 51 |
| Total | 737 |

Gender distribution

| | 2018 |
|--------------|------------|
| Women | 236 |
| Men | 501 |
| Total | 737 |

Vapo Group's tax footprint, figures for the financial year 1 May, 2017–30 April 2018, EUR million

| | Finland | Sweden | Estonia | Spain | Netherlands |
|---|---------------|--------------|--------------|--------------|--------------|
| DIRECT TAXES PAYABLE FOR THE FINANCIAL YEAR, EUR MILLION | | | | | |
| Income taxes | 9,741 | 0,258 | 0,050 | 0,033 | 0,912 |
| Employer contributions | 0,245 | 2,477 | 0,466 | 0,061 | 0,609 |
| Property taxes | 0,442 | 0,011 | 0,322 | | |
| Other taxes | 1,277 | 0,107 | 0,173 | | |
| INDIRECT TAXES PAYABLE FOR THE FINANCIAL YEAR, EUR MILLION | | | | | |
| Excise taxes | 9,594 | 0,065 | 0,181 | | |
| TAXES REMITTED FOR THE FINANCIAL YEAR, EUR MILLION | | | | | |
| Withholding taxes | 6,750 | 2,532 | 0,214 | 0,057 | |
| Value added tax, sales | 75,281 | 20,512 | 4,955 | 0,000 | 7,097 |
| Value added tax, purchases | -65,819 | -18,415 | -6,051 | 0,017 | -5,179 |
| Other taxes | 0,307 | 0,000 | 0,000 | 0,001 | 0,384 |
| Total | 37,818 | 7,549 | 0,309 | 0,170 | 3,823 |

Reporting Principles

This is the second corporate responsibility report that covers Vapo Group as a whole. The previous reports were limited to Vapo Oy's operations in Finland. Vapo Group's corporate responsibility reporting is based on the Global Reporting Initiative (GRI), which is the world's most widely used responsibility reporting framework. Vapo reports on the economic, environmental

and social impacts of its operations in accordance with the GRI Standards core scope and the Electric Utilities Sector Supplement.

The reporting period is 1 January–31 December 2018. The reporting period for financial information is Vapo Group's financial year, 1 May 2018–30 April 2019. Vapo Oy's previous corporate responsibil-

ity report was published in July 2018. The report has not been externally assured. Vapo Group will report on its responsibility annually.

This corporate responsibility report covers the entire Vapo Group. Due to the BVB acquisition being completed at the turn of 2018–2019, BVB is not yet included in this report. The reporting is based on a materiality analysis that was used to determine the views of Vapo's stakeholders and the company itself regarding the most material corporate responsibility topics related to the company's operations.

Vapo's corporate responsibility policy, related activities and the corporate responsibility report are published on the company website in Finnish and English. The figures presented in the corporate responsibility report represent the entire Vapo Group to the extent that the data was available.

Calculation Principles and Boundaries

The calculation principles and boundaries of environmental figures are primarily reported in the context of the relevant charts and tables.

Diversions

Diversions measures involving water treatment structures in Vapo's peat production operations in Finland are reported under spills.

Habitats Protected or Restored

For protected or restored habitats, report voluntary participation in waterway restoration projects related to peat production operations in Finland. Report in terms of the number of projects. Also report the

sale of Vapo Oy-owned peatlands with significant nature value for conservation purposes. The information is reported in hectares. For Vapo Oy, the peatlands owned by the company according to the government's peatland classification (0–5) are reported, along with wetlands and reforested areas (in hectares) built on cutaway peatlands.

Contact information

For more information on the data presented in this report, please contact (firstname.lastname@vapo.fi) the following persons:

Environmental responsibility

Petri Järvinen,
Chief Supply Chain Management Officer

Economic responsibility

Jarmo Santala, CFO

Social responsibility

Jenni Nevasalo, Chief HR Officer

| Material aspect | Boundary |
|--|---|
| Lifecycle impact of products and solutions | Vapo Group's operations |
| Emissions into waterways from peat production | Vapo Group's peat production areas |
| Energy efficiency | Vapo Group's operations |
| Airborne emissions | Vapo Group's power and heating plants, pellet factories |
| Biodiversity | Vapo Group's current and decommissioned peat production areas |
| Delivery reliability and the security of supply by making use of digitality | Vapo Group's operations |
| Customer satisfaction | Vapo Group's operations |
| Innovations for sustainable development | Vapo Group's operations |
| Development of competence | Vapo Group's operations |
| Quality and cost-efficiency of products and services | Vapo Group's operations |
| Health and safety of personnel | Vapo Group's operations |
| Health and safety of contractors | Contractors |
| Assessment of suppliers according to relevant criteria concerning environmental and social aspects | Vapo Group's operations |
| Job satisfaction and wellbeing of the personnel | Vapo Group's operations |
| Equality and diversity | Vapo Group's operations |
| Local employment effects | Vapo Group's operations |
| Economic impact | Vapo Group's operations |

GRI index

| | | Page | Comments |
|-----------------------------|--|--|--|
| ORGANISATION | | | |
| 102-1 | Name of the organisation | Front cover | |
| 102-2 | Activities, brands, products and services | 5 | |
| 102-3 | Location of headquarters | Back cover | |
| 102-4 | Operating countries | 7 | |
| 102-5 | Ownership and legal form | GRI index | The state of Finland has a holding of 50.1% in the parent company Vapo Oy, while Suomen Energiavarat Oy holds 49.9%. |
| 102-6 | Markets served | 6-7, www.vapo.com/en/group | |
| 102-7 | Scale of the organisation | | |
| 102-8 | Information on employees and other workers | 6, Financial statements | |
| 102-9 | Supply chain | 6, 53 | |
| 102-10 | Significant changes to the organisation and its supply chain | 36-37, 47 | |
| 102-11 | Precautionary Principle or approach | 4-5, 47 | |
| 102-12 | External initiatives | Corporate Governance | |
| 102-13 | Memberships of associations and national or international advocacy organisations | GRI index | No external initiatives. |
| STRATEGY | | | |
| 102-14 | Statement from senior decision-maker | 4-5 | |
| 102-15 | Key impacts, risks and opportunities | 8-9, 12, Financial statements and the Report of the Board of Directors | |
| ETHICS AND INTEGRITY | | | |
| 102-16 | Values, principles, standards and norms of behaviour | 5, 13, 20 | |
| 102-17 | Mechanisms for advice and concerns about ethics | 20 | |
| GOVERNANCE | | | |
| 102-18 | Governance structure | 13. Corporate Governance Statement | |
| 102-23 | Chair of the highest governance body | Corporate Governance Statement | |
| 102-26 | Role of highest governance body in setting purpose, values and strategy | Corporate Governance Statement | |
| 102-32 | Highest governance body's role in sustainability reporting | 13 | |

| | | | Page | Comments |
|-----------------------------------|---|---|---------------|---------------|
| STAKEHOLDER ENGAGEMENT | | | | |
| 102-40 | List of stakeholder groups | | 18-19 | |
| 102-41 | Collective bargaining agreements | | 63 | |
| 102-42 | Identifying and selecting stakeholders | | 16-17 | |
| 102-43 | Approach to stakeholder engagement | | 16-17 | |
| 102-44 | Key topics and concerns raised | | 18-19 | |
| REPORTING PRACTICE | | | | |
| 102-45 | Entities included in the consolidated financial statements | Financial statements and the Report of the Board of Directors | | |
| 102-46 | Defining report content and topic Boundaries | | 13, 65 | |
| 102-47 | List of material topics | | 12-14 | |
| 102-48 | Restatements of information | | 65 | |
| 102-49 | Changes in reporting | | 65 | |
| 102-50 | Reporting period | | 65 | |
| 102-51 | Date of most recent report | | 65 | |
| 102-52 | Reporting cycle | | 65 | |
| 102-53 | Contact point for questions regarding the report | | 65 | |
| 102-54 | Claims of reporting in accordance with the GRI Standards | | 2, 65 | |
| 102-55 | GRI content index | | 66 | |
| 102-56 | External assurance | | 65 | |
| MANAGEMENT APPROACH | | | | |
| 103-1 | Explanation of material topics and their Boundaries | | 13, 65 | |
| 103-2 | The management approach and its components | | 15 | |
| 103-3 | Evaluation of the management approach | | 15 | |
| ECONOMIC PERFORMANCE | | | | |
| 201-1 | Direct economic value generated and distributed | | 53, 54 | |
| ANTI-CORRUPTION | | | | |
| 205-3 | Confirmed incidents of corruption and actions taken | | 18, GRI index | No incidents. |
| ANTI-COMPETITIVE BEHAVIOUR | | | | |
| 206-1 | Legal actions for anti-competitive behaviour, anti-trust and monopoly practices | | 18, GRI index | No incidents. |
| ENERGY | | | | |
| 302-1 | Energy consumption within the organisation | | 26, 31-32 | |
| 302-4 | Reduction of energy consumption | | 26, 31-32 | |
| G4-EU2 | Net energy output broken down by primary energy source | | 57, 26, 31-32 | |

| | | | Page | Comments |
|--|--|--|---------------|--|
| WATER | | | | |
| 303-1 | Water consumption | | 27 | Information reported for Finnish operations. |
| BIODIVERSITY | | | | |
| Own indicators | Reforestation and wetland development, number of restoration projects | | 33 | |
| EMISSIONS | | | | |
| 305-1 | Direct (Scope 1) GHG emissions | | 23, 26 32, 56 | |
| 305-3 | Other indirect (Scope 3) GHG emissions | | 32 | Reported partly. |
| 305-7 | Nitrogen oxides (NO _x), sulphur oxides (SO _x) and other significant air emissions | | 26, 32, 56 | |
| EFFLUENTS AND WASTE | | | | |
| 306-1 | Water discharge by quality and destination | 56, www.vapo.com/turvetuotantoavastuullisesti/tarkkailuraportit | | Information reported for Finnish operations. |
| 306-2 | Waste by type and disposal method | | 56 | |
| 306-3 | Significant spills | | 29-30 | |
| ENVIRONMENTAL COMPLIANCE | | | | |
| 307-1 | Non-compliance with environmental laws and regulations | | 18, GRI index | No incidents of non-compliance. |
| SUPPLIER ENVIRONMENTAL ASSESSMENT | | | | |
| Own indicator | Assessment of strategic/critical suppliers | | 47 | |
| EMPLOYMENT | | | | |
| 401-1 | New employee hires and employee turnover | | 50 | |
| OCCUPATIONAL HEALTH AND SAFETY | | | | |
| 403-2 | Accident frequency, occupational illnesses, lost time, absence, work-related fatalities | | 45-46 | |
| G4-EU18 | Percentage of contractor and subcontractor employees that have undergone relevant health and safety training | | 46 | |
| TRAINING AND EDUCATION | | | | |
| 404-2 | Programmes for upgrading employee skills and transition assistance programmes | | 41 | Reported partly. Programmes pertaining to retirement and the termination of employment have not been reported. |
| 404-3 | Percentage of employees receiving regular performance and career development reviews | | 35, 41 | Reported partly. |

| | | Page | Comments |
|--|--|-----------|---|
| DIVERSITY AND EQUAL OPPORTUNITY | | | |
| 405-1 | Diversity of governance bodies and employees | 52, 63 | Reported partly. |
| NON-DISCRIMINATION | | | |
| 406-1 | Incidents of discrimination and corrective actions taken | 20 | The management is not aware of any incidents of discrimination. |
| SUPPLIER SOCIAL RESPONSIBILITY ASSESSMENT | | | |
| Own indicator | Assessment of strategic/critical suppliers | 47 | |
| PUBLIC POLICY | | | |
| 415-1 | Political contributions | GRI index | Vapo does not support any political parties. |
| MARKETING AND LABELLING | | | |
| 417-3 | Incidents of non-compliance concerning marketing communications | 20 | No incidents of non-compliance. |
| SOCIOECONOMIC COMPLIANCE | | | |
| 419-1 | Non-compliance with laws and regulations in the social and economic area | 20 | No incidents of non-compliance. |

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