

# Sustainable Everyday Living



# Highlights 2019

The impact on watercourses from peat production has been significantly reduced. Vapo Group's water effluents concerning **solid matter, nitrogen and phosphorus** amount to

**less than 1 %**

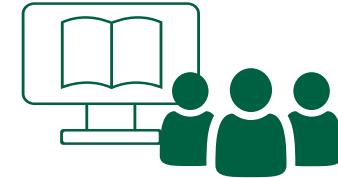
of those effluents in Finland.



Vapo Group participated in the international Great Place to Work survey for the first time. According to the survey, Vapo Group's Trust Index is at

**63 %**

which means that the employee experience is **good**.



During the year, Vapo Group invested in producing e-learning courses for employees. Six courses were produced in total, covering topics related to **safety, sustainability and ethics**, for example.

Number of safety observations increased year-on-year, totaling

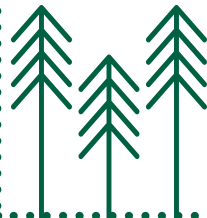
**4 709**

Group safety observation system was also introduced in the Netherlands.

Land use methods for areas released from peat production are focused on the promotion of biodiversity. In 2019,

**78 %**

of the areas owned by Vapo Group and released from peat production were assigned for reforestation, with the remaining 22 % assigned for use as wetlands.



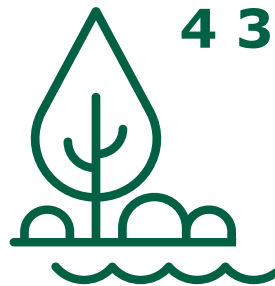
A combination at the start of the year created Europe's leading and most versatile player in professional growing media and hobby gardening:



Vapo Refinery concept was created to develop high value-added products from organic wetland biomass to global markets by using principles of circular economy.

**nevel**

The restructuring of Vapo Group's Energy division led to the creation of Nevel Oy, an international company that operates in Finland, Sweden and Estonia. The company responds to the demand for next-level utility infrastructure solutions in the municipal and industrial sectors.



**4 364 hectares**

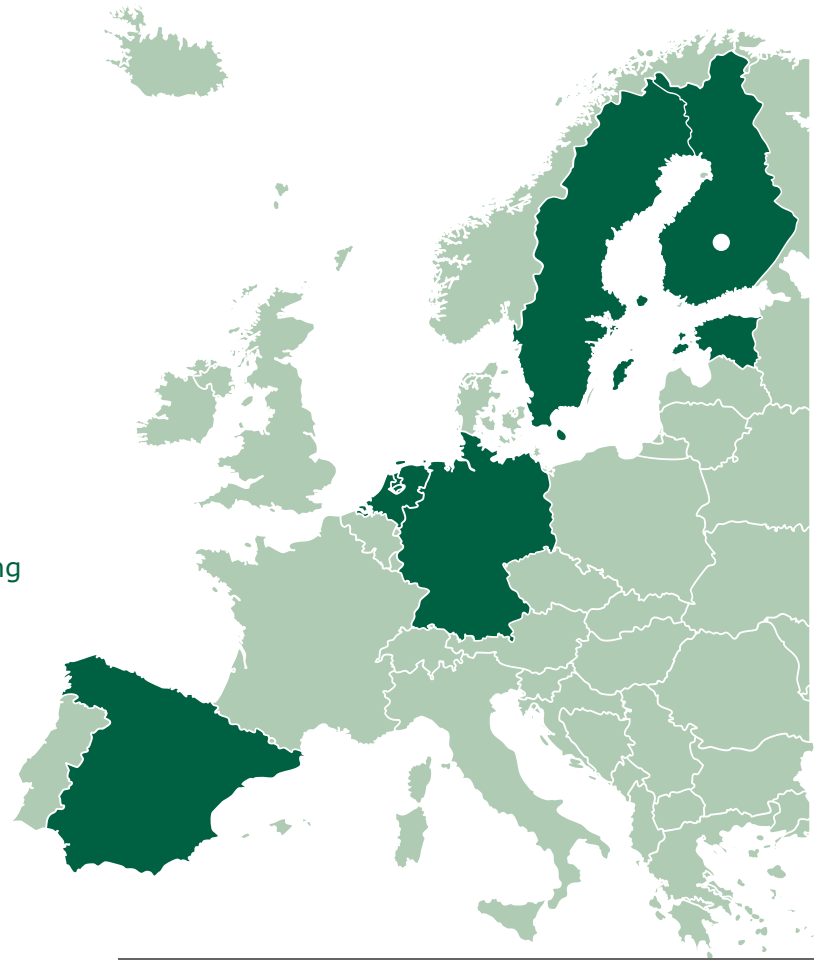
of mires with significant nature value has been released by Vapo Group to be managed by Metsähallitus, a Finnish state-owned enterprise.



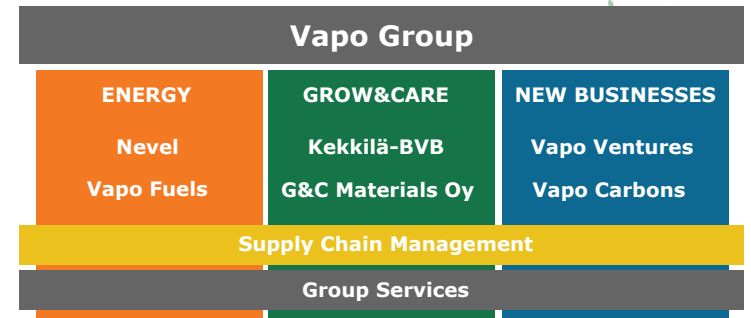
The foundation stone for Vapo Oy's **activated carbon** production facility in Ilomantsi was laid in September. The most modern activated carbon production facility is scheduled to be ready for trial use in 2020.

# Content

- 2 Highlights 2019
- 4 CEO's Review
- 6 Our Refinery concept drives the circular economy
- 7 Corporate responsibility and sustainability at Vapo Group
- 10 We take care of the environment
- 14 We take care of the wellbeing of our employees
- 16 We contribute to the benefit of the society
- 18 Kekkilä-BVB - Growing together for a better future
- 20 Nevel - Optimised energy production and investing in renewable energy
- 22 Fuels - Ensuring fuels availability and security of supply for customers
- 24 New Businesses - High value-added products for sustainable everyday living
- 27 Vapo Group's strategy picture
- 28 GRI Index
- 36 Appendices



- Business locations
- Head office



## CEO's Review

### **Corporate responsibility and sustainability are at the heart of Vapo Group's strategy.**

Vapo Group's strategy and structure was updated in 2018. The key change was that we defined growth areas to compensate for the decreasing sales of energy peat. These focus areas are: businesses related to substrates, both professional growing media as well as hobby gardening through retail channels. Further on we decided to increase our investments on developing entirely new high added-value products from organic wetland biomass mainly peat and sphagnum. We also reorganised our operations in divisions and functions operating across national boundaries. By the beginning of 2019, shared values were defined for all Vapo Group companies, as well as a shared purpose: *Sustainable Everyday Living*.

Vapo Group's strategy is to pursue growth in the global growing media market and in

the Energy Business transition our Heat & Power business increasingly towards renewable fuels. As part of the Energy Business strategy, we will continue the shift from the role of a pure fuel supplier towards a provider of comprehensive solutions that promote energy efficiency and circular economy while making use of digital tools to further improve the supply chain. The three most significant business events during 2019 were the integration of Kekkilä-BVB, the incorporation of the Heat and Power business as Nevel and the start of the construction of a manufacturing plant for producing activated carbon.

### **Increased turnover, weaker result for year 2019 (pro forma financial statements)**

The Group's turnover grew in 2019 by 28 % year-on-year to EUR 533.7 million (corresponding figure in 2018: EUR 416.8 million). The increase in turnover was mainly due to the acquisition

of the Dutch BVB Substrates, which became a part of the Grow&Care business from the beginning of 2019.

The Group's operating result in 2019 was EUR -11.2 million. The comparable operating result declined to EUR 28.2 million. The previous financial year's comparable operating result was EUR 31.3 million. The weaker comparable operating result was mainly attributable to the warm weather conditions in November-December, which reduced heating needs and fuel deliveries, and Kekkilä-BVB's peak sales season falling in the previous financial year in spring 2019.

The result for the year 2019 was weighed down by significant non-recurring items consisting mainly of write-downs related to the energy peat business (approx. EUR 30 million) and energy infrastructure (approx. EUR 10 million). The primary reasons for the write-downs were the anticipated declining demand for energy peat, related decisions to

discontinue production activities at certain peat bogs ahead of schedule and the changes in a couple of energy delivery agreements.

The measures taken to increase the rotation of working capital were reflected in a substantial improvement in operating cash flow (free cash flow before financial items and taxes), which amounted to EUR 14.3 million (EUR -15.7 million) for year 2019.

### **Two focus areas for sustainability**

The long-term target for Vapo Group is to be net positive in our operations and in the use of our products and services. This means that we evaluate our overall impact on environment, health, society and knowledge and, in this assessment, the positive impacts must exceed the negative impacts.

We currently have two focus areas for sustainability: to take

care of the environment and to take care of the well-being of our employees.

Our environmental responsibility related targets are measured in terms of our progress towards carbon neutrality (CO2 emissions), the way our operations support biodiversity and sustainable use of natural resources. Also, we continue to mitigate our impacts on waterways and to promote water-conserving solutions in products and services. Our ability to impact on circular economy is monitored through increasing material efficiency, recycling and the use of recycled materials.

The most significant targets related to social responsibility are about employee well-being: our zero accidents target and our policy of zero tolerance for all discrimination and inappropriate conduct.

## **Sustainability guides product development**

Corporate responsibility is the basis for sustainable business models. With this in mind, our product development focuses only on environmentally sustainable projects. In the Energy division, the target is to achieve growth in renewable fuels and digital services. Our aim is to make new use of land assets by investigating opportunities for obtaining permits that would allow areas released from peat production to be used for zero-emission energy production or carbon sequestration.

Kekkilä-BVB's operations and product development are guided by the principle of minimising environmental impacts and maximising the positive impacts from the use of its end products. Positive impacts range from producing food and creating more pleasant environments to conserving water.

In the New Business division sustainability is also an essential

guide for all activities from idea evaluation to project implementation. Our aim is to produce new higher added-value products as sustainably and energy-efficiently as possible, with low emissions, and ultimately for the products to make daily life easier for people.

## **Aiming to halve carbon dioxide emissions by 2025**

In spring 2020, we set an ambitious target of halving the carbon dioxide emissions of our Finnish operations by the year 2025. Vapo Group's total CO2 emissions in 2018 were approximately 1.2 million tonnes, of which the Finnish operations produced approximately one million tonnes. The most significant emission reductions are sought by reducing emissions from peat production areas and increasingly transitioning to the use of renewable fuels in energy production.



Vesa Tempakka  
CEO

# Our Refinery concept drives the circular economy

**The Vapo Refinery concept aims to produce new high value-added products from organic wetland biomass and other natural raw materials with minimal energy consumption and emissions.**

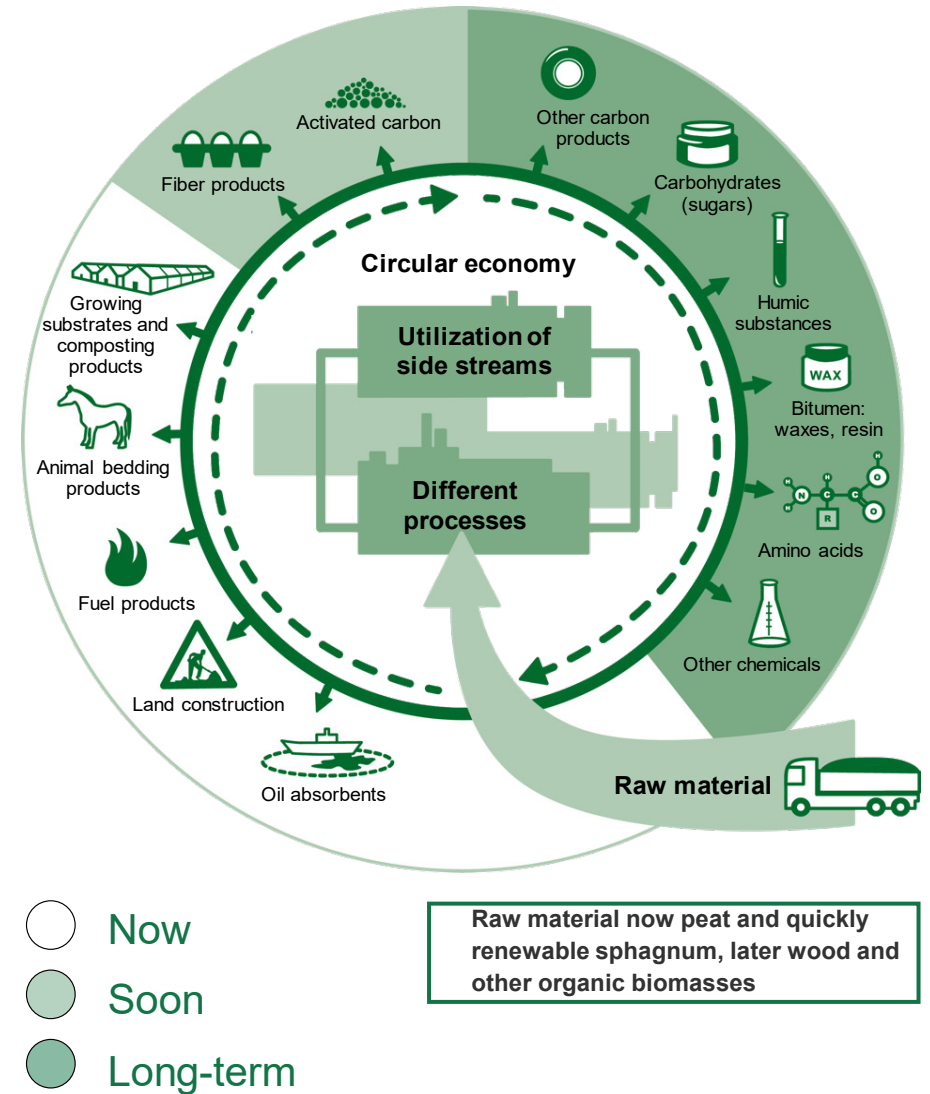
Raw materials and side streams are comprehensively utilised in accordance with the circular economy principle. In addition, significantly smaller production areas will generate many times higher value compared to the area required for energy peat production.

Peat has been used as animal bedding, an insulating material and an energy source for decades due to its favourable characteristics and good availability. During the past few years, we have focused our research and development activities on analysing other potential uses for other types of organic wetland biomass. Organic wetland biomass has diverse uses in promoting local food

production and healthy living environments.

The first new product is activated carbon refined from peat. Organic wetland biomass can also be processed into many other new products, such as various waxes, humic acids and sugars. How the new products are produced is just as important as what is produced.

Our target is to make organic wetland biomass-based high value-added products net positive: their positive social, environmental and economic impacts will outweigh their negative impacts.



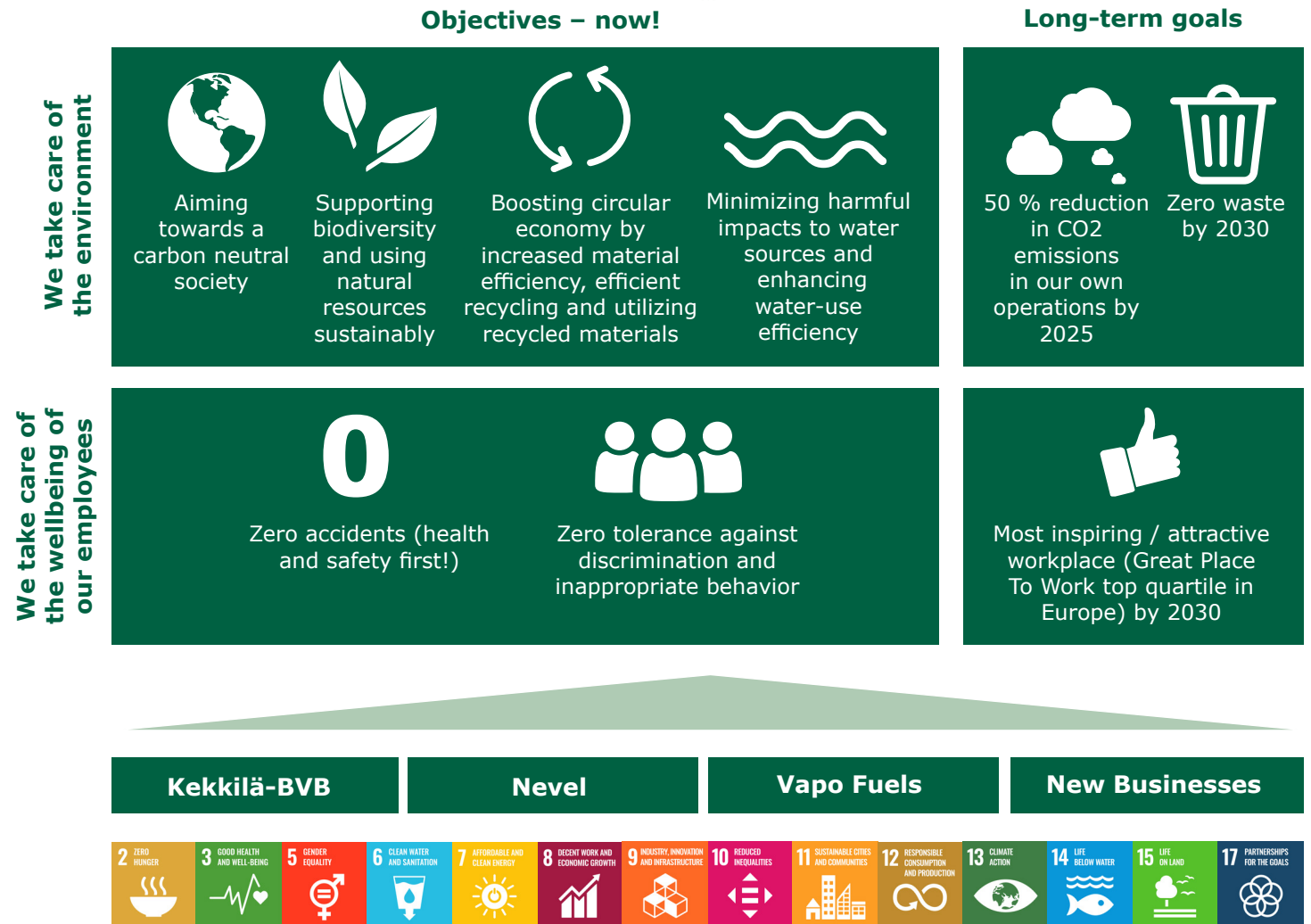
# Corporate responsibility and sustainability at Vapo Group

## Sustainability aim, objectives and long-term goals renewed for Vapo Group

Corporate responsibility and sustainability are in the core of Vapo Group's strategy and purpose. Work on sustainability has been under continuous development throughout 2019 and integral part of the development of Vapo Group's businesses.

Vapo Group sustainability objectives and long-term goals were renewed in summer 2019 and two focus areas were chosen: we take care of the environment and we take care of the wellbeing of our employees. Sustainability strategies and roadmaps have been defined for each business in line with customer needs and guided also by the UN Sustainable Development Goals. Our sustainability aim is to make us a net positive company by considering the impact of our operations, products and services on environment, health, society and knowledge.

## Sustainability aim: to make Vapo Group a net positive company



**Focus areas are in line with our stakeholder expectations**

We conducted a new materiality assessment to gather our stakeholders' views on Vapo Group's renewed sustainability objectives at the end of 2019. 50 stakeholders were interviewed covering Group stakeholders (owners, parliamentarians, cities, NGOs, media, authorities and contractors), Vapo Energy's Finnish clients, Kekkilä-BVB retail

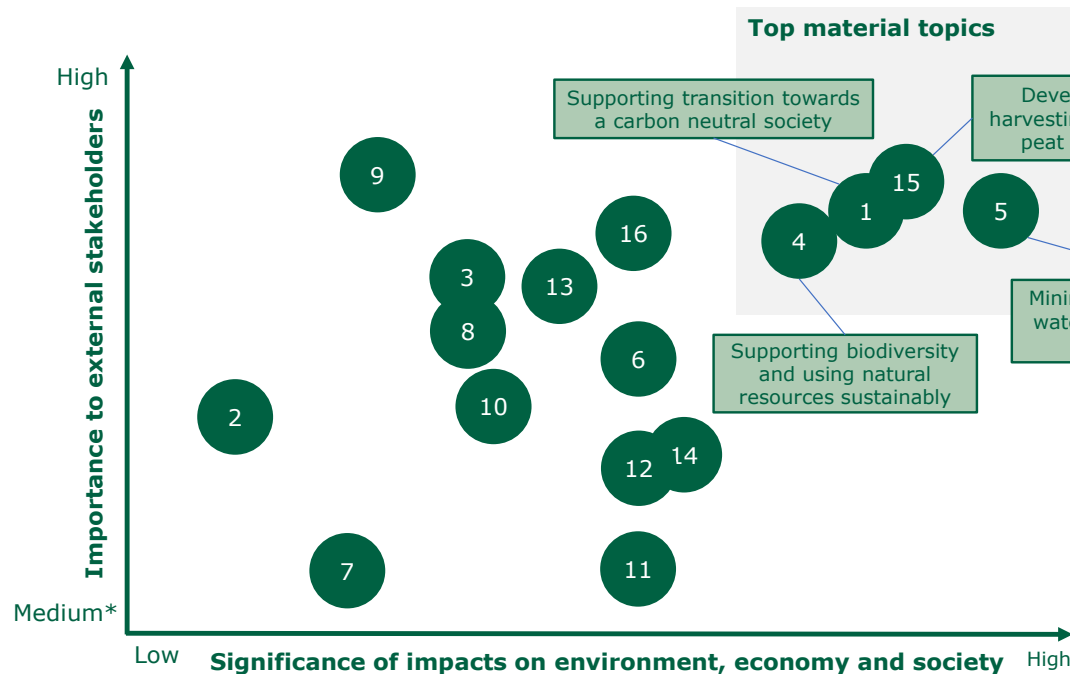
and professional customers and Carbons stakeholders.

Stakeholders valued environmental issues slightly more than social issues. The most important issues raised by stakeholders included contributing to the low-carbon transition, managing our water impact, managing our impact on peat bogs and supporting biodiversity. These topics were important across all stakeholder

groups interviewed and there was very little variation in responses overall. Stakeholders also emphasized the importance of our zero tolerance against discrimination and inappropriate behaviour. The speed of the transformation of Vapo Group's business was a concern to many, but there were also optimistic points-of-view on future opportunities. Peat continues to interest stakeholders broadly. Transparent and fact-based

communication and active participation in stakeholder dialogue was seen very important to the future success of the company.

The insights from the materiality analysis have strongly influenced our approach to managing our impacts, our target setting and the content and structure of our reporting.



**Content of other topics:**

2. 50 % reduction in CO2 emissions in own energy use
3. Net positive impact of new and growing media products
6. Boosting circular economy by increased material efficiency, efficient recycling and utilizing recycled materials
7. Zero waste (long-term)
8. Zero accidents
9. Zero tolerance against discrimination and inappropriate behavior
10. Most inspiring /attractive workplace
11. Smart service concepts for living and food production
12. Optimisation of water use
13. Decreasing use and recycling of plastics
14. Improving wellbeing of employees, clients and partners
16. Transparency and understanding of sustainability impacts

\*Note the scale on the vertical axis, importance for all presented topics is between medium to high



## **Sustainability tightly governed within Vapo Group**

Corporate responsibility at Vapo Group and the sustainability strategy are led at the Group Management Team level by the Chief Supply Chain and Sustainability Officer, with the Director, Group Operational Excellence and Sustainability in charge of co-ordinating the implementation. Business management is in charge of the implementation of the business specific sustainability roadmaps. The Group Chief Financial Officer is responsible for reporting on economic responsibility.

The Director, Group Operational Excellence and Sustainability is responsible for areas related to environmental sustainability and occupational safety and the Group Chief HR Officer is responsible for areas related to employee wellbeing and occupational health. Sustainability implementation is regularly followed-up by the Audit Committee. Corporate responsibility report is reviewed and approved by Vapo Group's Board of Directors and the Audit Committee.

## **Stakeholder engagement is vital**

Vapo Group's stakeholder engagement starts at the local level and extends all the way to international activities across national boundaries.

Continuous dialogue, feedback and on-going cooperation are the key methods for promoting mutual understanding between stakeholders and Vapo Group. We aim to build networks with important parties as well as regularly 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. We also monitor and evaluate public discussion.

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

During 2019 stakeholder engagement work has especially focused on the future of energy peat and alternative uses of peat.

### **Key updates to our management approach during 2019**

The Group's corporate responsibility policy was renewed and approved by Vapo Group's Board of Directors in spring 2019. The Corporate Responsibility policy describes our operating principles in occupational health & safety, environment and quality matters. The policy and its implementation are directed by our management system, values, code of conduct and strategic goals and help to fulfill our purpose – Sustainable Everyday Living. The policy was translated into the Group's five languages, communicated and discussed in all teams in all our Group companies and operations during autumn 2019. New mandatory e-learnings for all employees were created for Code of Conduct, Information Security Awareness and Safety First!

## We take care of the environment

**We are committed to minimize the harmful environmental impacts of our operations.**

In 2019 we updated a common Vapo Group environment strategy and long-term sustainability goals: we will reduce our emissions to waterways as well as our climate emissions, support biodiversity and use natural resources sustainably, and boost circular economy through improving material efficiency and reducing waste.

Overall, [management system certification](#), covering both ISO

9001 quality and ISO 14001 environment, helps coordinate and direct our activities to meet customer and regulatory requirements and focus on continuously improving our operations, effectiveness and efficiency. In addition, each of our businesses has an environmental sustainability program which

specifies the most significant aspects and annual improvement targets for our operations.

On Vapo Group level, the number of environmental observations increased year-on-year, totaling to 870 (corresponding figure in 2018: 336). Group environmental observation

system will be introduced in the Netherlands during 2020. In 2019 we created an online course on the management of environmental matters to all employees in five languages.

Our long-term target is to be net positive in our operations. This means that, in addition to the environmental impacts, the Group evaluates its overall impact, and, in this assessment, its positive impacts must exceed its negative impacts. We created [a net impact assessment model](#) for the Group's businesses and will use the results of the model in the sustainability work carried out at Kekkilä-BVB, Nevel and Carbons in 2020.

**Our aim is to halve the carbon dioxide emissions of our operations in Finland by the year 2025, without compensation.**

Key indicator	Today	Target by 2025
<b>CO2 emissions from our own operations</b>	Finland: Total 1.0 Million tonnes (2018 )	Finland: Reduction of 50 % (from 2018)
<b>Plastic: use of packaging materials with recycled plastic or alternative packaging methods</b>	Kekkilä-BVB: Use of recycled packaging materials 1 % (2019)	Kekkilä-BVB: <ul style="list-style-type: none"> <li>• Use of recycled packaging materials 80 %</li> <li>• 100 % of our packaging can be recyclable</li> </ul>
<b>Impact on watercourses from peat production</b>	Finland: amount of water effluents from 2008 to 2019 <ul style="list-style-type: none"> <li>• Solid matter reduction by 63 %</li> <li>• Nitrogen reduction by 70 %</li> <li>• Phosphorus reduction by 60 %</li> </ul>	Finland: amount of water effluents from 2008 to 2025 <ul style="list-style-type: none"> <li>• Solid matter reduction by 75 %</li> <li>• Nitrogen reduction by 75 %</li> <li>• Phosphorus reduction by 75 %</li> </ul>

## Aiming towards a carbon neutral society

Our ambitious target is to halve the carbon dioxide emissions of our operations in Finland by the year 2025, without compensation. We are focusing on our Finnish operations as they account for over 80 % of the Group's total emissions.

Our emissions reduction efforts will focus on:

1) Increasing the use of renewable fuels in Nevel energy production: In 2019 over half of the fuels used by Nevel were renewable (Finland 46 %, Sweden 94 %, Estonia 7 %). By end of 2021, the corresponding figure will be up to 75 % and will continue to rise annually. Furthermore, we will seek emission reductions in logistics and production as well as improve the energy efficiency of the facilities and plants.

2) Implementing next land use for peat production areas that will be closed in line with declining demand: Approximately 57 %

(2019) of Vapo Group's emissions in Finland are soil emissions. Although it is expected that the demand in other sectors than energy peat will increase, we can reduce the area used for peat production and supporting areas so that our soil emissions will account for less than 50 % of our total emissions in five years.

### Other key actions:

- Conducting life cycle assessment (LCA) calculations for growing media products
- Increasing energy efficiency in our factories, power & heating plants and district heating

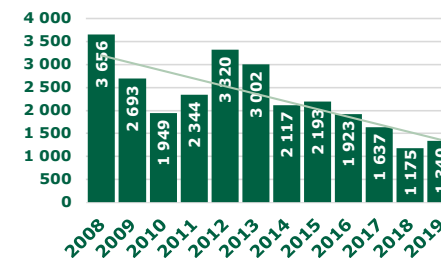
## Minimizing impacts on water sources

Our main target is to reduce solid matter, nitrogen and phosphorous emissions by 75 % in Finland by 2025 (from 2008 levels). We have already made significant progress in the last ten years, but we strive to continue to protect the water sources we and the society rely on. The water treatment systems in our peat production are well managed and based on best available techniques (BAT), which will help us to continuously improve our performance and meet our emissions reduction target.

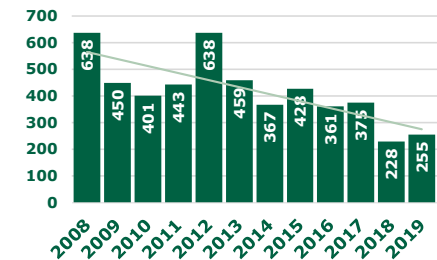
### Other key actions:

- Conducting continuous improvement projects for water protection and purification e.g. piloting new contact filtration techniques
- Improving water efficiency in all our production and water retention in our growing media products
- Developing activated carbon from peat to clean our living environment

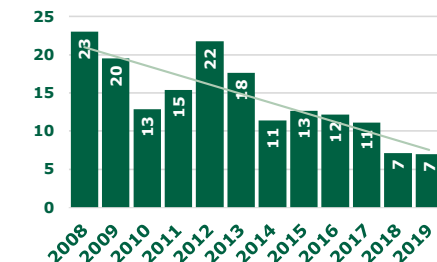
Water effluent: Suspended solids (tonnes)



Water effluent: Nitrogen (tonnes)



Water effluent: Phosphorus (tonnes)



## Supporting biodiversity

We aim for responsible peat production. Since 2012 Vapo Group has [released 4 364 hectares of mires](#) with significant nature value to be managed by Metsähallitus, a Finnish state-owned enterprise. Regarding closed peat production land areas, our key sustainability principle is transitioning closed areas to new uses within 2 years to increase biodiversity and carbon sinks. The topography, hydrology and rocks/stones influence what the best next land use option is.

During 2019, from our own peat production areas in Finland, we moved 453 hectares to next land use: 356 hectares to afforestation and 97 hectares to wetlands. We returned 1 449 hectares of old peat production areas to landowners, in addition to selling significant areas for which the next land use is determined by the new landowner.

Last year, we developed a [sustainability concept for peat](#) especially aimed at new

businesses, and agreed on a plan for the certification of [Responsibly Produced Peat](#) to meet the needs of Kekkilä-BVB.

### Other key actions:

- Following RPP (Responsibly Produced Peat) certification in peat production for growing media
- Enabling growing of food and plants in urban environments



During 2019, from our own peat production areas in Finland, we moved **356 hectares** to afforestation and **97 hectares** to wetlands.

## Boosting circular economy

Our target is to progress towards our zero-waste goal by increasing material efficiency, utilizing recycled materials in our operations and implementing efficient recycling of our waste streams. We are currently focusing on our main waste streams from our own operations including recycling ash from our power & heating plants as fertilizer or landscaping material as well as increasing the use of recycled plastics in Kekkilä-BVB packaging materials to 80 % by 2025. In peat operations, our focus is in recycling used stockpile plastics from the peat bogs.

### Other key actions:

- Making growing media of composted waste streams (e.g. grass, leaves, vegetable stems)
- Producing energy and heat from oat shells generated as by-product at oat mill
- Piloting new ways to reduce plastic waste in peat production and packing materials

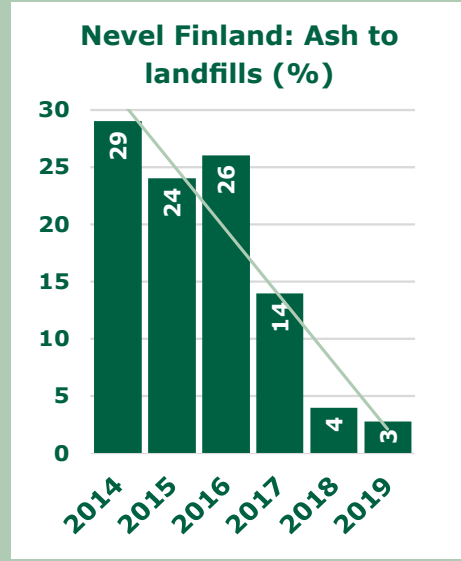
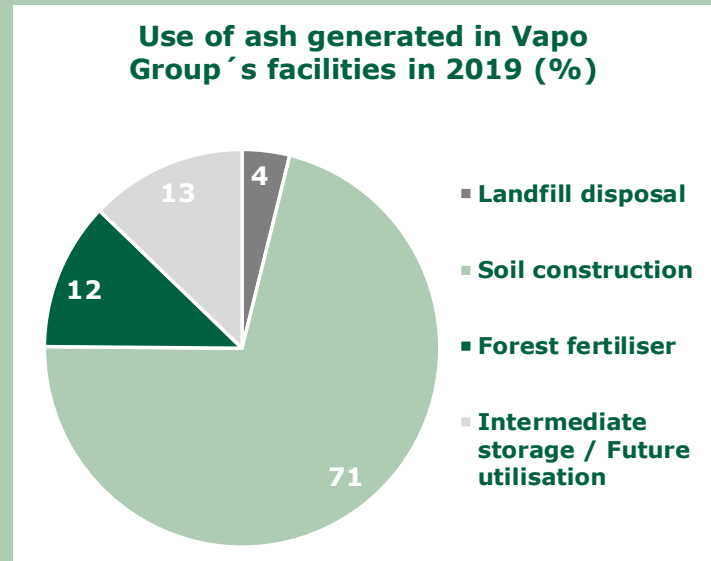
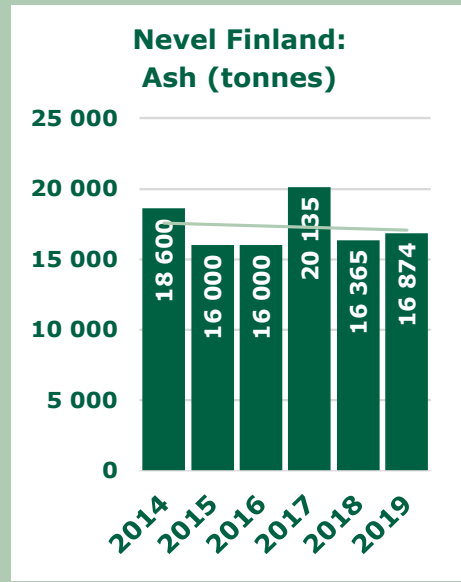
**Circular economy: Estonia recycles all peat stockpile plastic in 2020**

In partnership with Orkos Estonia OÜ, we are recycling 100 % of our peat stockpile plastic in Estonia. During 2019 the process was piloted, and all old plastic is going to be recycled during 2020. The plastic is first cleaned from excess peat with help of bucket grips, then broken into smaller pieces in a powerful wood and plastic crusher, screened and slung in a drum to remove some more excess peat. Next it is torn into even smaller pieces melting and compressing plastic into pellet form.

Dark pellets are used as raw material for garbage bags or plastic used in the wood industry and agriculture. Clear pellets are used to produce shopping bags, construction plastic and packaging materials.

**Circular economy: Finland minimizes delivery of ash to landfill (waste)**

Ash is a side product of all power plants, heating plants and pellet heating plants. The quantity and quality of the ash depends mainly on incineration process and fuels used. Nevel continuously looks for new utilization possibilities for ash and the amount ending up to landfills has decreased notably in five years. Currently ash from our energy operations is mainly used in earthworks and for fertilization.



# We take care of the wellbeing of our employees

**We are committed to zero accidents and we have zero tolerance to inappropriate behavior and discrimination.**

Our goal is to offer our employees, partners and visitors a safe, healthy working environment by using methods that prevent injuries and accidents and promote well-being at work. We aim to influence people's mindset so that they consider health and safety first in everything they do. We utilize our working instructions and the competence of our personnel to identify and mitigate risks and hazards.

## Safety First!

Group Safety team leads and develops Safety First! culture to prevent safety incidents and accidents through effective risk mitigation, training and supporting group divisions and functions. In 2019 Vapo Group accident frequency rate (lost time accidents over million working hours) improved slightly 6.7 (corresponding figure in 2018: 6.9). A significant improvement took place in Finland, where the

number of accidents reduced from eight in 2018 to just one in 2019. In 2019, most of the accidents took place in the Netherlands' units of Kekkilä-BVB, 9 (2018 statistics not available). Accidents that did not lead to lost time from work are spread out more evenly. During 2019, we launched a new Safety First! e-learning course, compulsory for all old and new employees. On the Group level, the number of safety observations increased year-on-year, totaling to 4 709

(corresponding figure in 2018: 4 058). The Group safety observation system was also introduced in the Netherlands.

## Satisfaction and wellbeing of our employees

Vapo Group participated in the Great Place to Work personnel survey for the first time in 2019 (including the BVB Substrates). While missing the comparison data from previous years, the new survey has brought new perspectives and clear benchmarks for the development of the working culture, leadership and shared ways of working. Our result, Trust index being 63 %, challenges us to improve our shared culture to reach the best companies in Europe going forward. The response rate was

**Year 2019 was in many ways the year of building foundation for the future development of wellbeing, competence development and leadership, this is a good starting point for 2020.**

Key indicator	Today	Target by 2025
<b>Accident frequency (LTA1)</b>	Group: 6.7	Group: year-on-year reduction by 25 %
<b>Reported inappropriate behavior cases</b>	Group: 5 reported cases; all reported cases investigated and followed up. (Statistics start from May 2019.)	Group: Zero tolerance; all reported cases investigated and followed up.
<b>Great Place to Work Trust Index</b>	Group: 63 % (2019)	Group: year-on-year increase by 5 %

high 78.8 % showing personnel commitment to develop the company culture. Action plans to improve satisfaction and wellbeing were made on Group level, but also on team level and were followed up during the year.

We continued to measure discrimination and inappropriate behavior to pay attention to the importance of one of our core values, Trust through respect. Line managers have been trained for how to handle reported situations and all reported cases have been investigated without delay. The Group Management team is following-up the number of reported cases on a monthly basis. Other country-specific actions were taken on early phase support for wellbeing at work, e.g. shortening long sick leaves through increased individual support activities.

### Competence development

Group strategic competences were defined during 2019 together with leadership principles. Divisions and functions selected 4-6 key competences for the focus of 2020 competence development. Line managers were trained to utilize strategic competences and to create competence development plans to support implementation in their teams. Six new e-learning courses (Code of Conduct, Safety, IT Security, Environment, Innovation and Sustainability) were created, three of them mandatory for all employees.



Accident frequency (LTA1) in Group:

**6.7**



**Trust Index**  
**63 %**

Reported inappropriate behavior cases in Group:

**5 reported cases**

all reported cases investigated and followed up.

## We contribute to the benefit of the society

### Economic and local employment impact

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

Vapo Group's local impact as an employer, taxpayer and buyer of products and services is significant, particularly in the Group's main operating countries of Finland, Sweden, Estonia and the Netherlands. Vapo Group's total gross investments in 2019 were EUR 79.8 million (corresponding figure in 2018: EUR 35.3 million), or 156 % of the amount of depreciation (corresponding figure in 2018: 93 %).

**In Finland, we have 200 peat production contractors with roughly 1 500 people including their employees or sub-contractors, and approximately 100 peat transportation contractors plus 300 contractors in other operations.**

Investments in the activated carbon production facility in Ilomantsi began to a significant degree during the financial year. Investments were also allocated to capacity expansion, energy efficiency investments and reducing the use of fossil fuels in the heat and power business as well as environmental protection and field maintenance in the peat production business. Net investments (gross investments – asset sales) totaled EUR 58.9 million in 2019 (corresponding figure in 2018: EUR 24.3 million).

### Financial implications and climate risks related to peat

According to the consumption forecasts of Vapo Group's fuel customers, the demand for energy peat will fall to half of

the current level by 2025. The reasons for this are the price of emissions allowances and the current energy tax of EUR 3/MWh applied to peat (in heating), due to climate change risks. In light of this assessment, we decided in December 2019 to discontinue energy peat production at 92 production sites (23 % out of total 398 sites in Finland). This also meant a write-down of approximately EUR 30 million on our peat assets.

Although the need for peat will increase for other businesses than in energy use, we believe we can reduce the land reserved for peat production over the next five years. This will directly reduce our emissions to air.



### Investments in 2019

Gross **79.8 M€**  
Net **58.9 M€**



## Sustainability with our suppliers and contractors

Vapo Group [Supplier Code of Conduct](#) was updated in 2019. The Supplier Code of Conduct (CoC) is an important part of our sustainability and we need to ensure that our suppliers share our values in this. During 2020 we aim to update the Supplier CoC signature with approximately 150 suppliers. This includes those suppliers with whom the business value exceeds 300 000 €/year (total 300 suppliers) and their current CoC signature is from before 1.1.2018.

In 2019, we extended the scope of monitoring of accidents and safety observations also to our contractors. The number of safety observations made by contractors was 727 (corresponding figure from 2018: 370). We will continue to learn from contractor accidents and are committed to conducting an accident investigation of each reported accident. Overall, in peat production peak season in Finland alone we have 200 main contractors with roughly

1 500 people including their employees or sub-contractors, and approximately 100 peat transportation contractors plus 300 contractors in other operations.

In 2019, most of our main peat production contractors in Finland participated in full day standardized Environment Safety Card training, and occupational safety topics were included in seasonal peat contractor workshops in Finland, Sweden and Estonia. In addition, we have provided a 12-month management and leadership training for 12 selected peat and wood supply chain contractors in Finland, together with Finnish Workforce Safety (TTS).

*"Environmental responsibility is a significant factor and competitive advantage to companies."*

- our peat production contractor



### Paid taxes 2019

Finland	<b>29,2 M€</b>
Sweden	<b>8,4 M€</b>
The Netherlands	<b>5,1 M€</b>
Estonia	<b>2,7 M€</b>
Spain	<b>0,6 M€</b>

## Kekkilä-BVB - Growing together for a better future

### **Kekkilä and BVB Substrates joined forces at the beginning of 2019 to become Europe's leading growing media company.**

Customers include professional growers, landscapers, retailers and consumers in the Nordic and Central Europe. Growing media for professional growing is sold to over a hundred countries globally.

Kekkilä-BVB combines Dutch entrepreneurial spirit and global horticultural networks with Nordic expertise and efficiency. It has production facilities and offices in seven countries, and it employs 500 people.

Kekkilä-BVB's business objective is to further strengthen its position as Europe's leading growing media company while

growing in selected global markets. The sales growth target is EUR 320 million by 2022.

Sustainable growth is at the core of the business. Opportunities and challenges related to sustainability such as reducing greenhouse gas emissions, saving water, enabling plant-based food production, green homes and green spaces are areas where

Kekkilä-BVB's business brings solutions.

### **The most important achievements in 2019**

Successful integration between Kekkilä and BVB Substrates in the Netherlands was the main goal for 2019. Integration involved building a new company from common processes to a corporate

### **Rooftop substrate Dubai building**

A green living environment in cities is as fundamental as food to ensure long-term liveability. Roof gardens help purify the air, reduce the concentration of fine particles, reduce the heat build-up and create water buffers in the city. Our urban roof substrates and BVB Greenroll contribute to the greening and cooling of growing cities. The new substrates we develop for consumers can also improve the quality of life in urbanised regions.

Dubai has grown incredibly fast over the past decades. In excess of two million people are estimated to live in this glittering global city on the Persian Gulf. Kekkilä-BVB worked on the greening of the metropolis. Positioned adjacent to the famous Dubai Opera and the world's tallest skyscraper Burj Khalifa is an artificial lake, where residents gather every evening to admire a spectacular fountain show. The building that houses the technical installations for the show used to be a bare, grey lump of concrete. Together with architects in the city and Knauf Insulation we looked for a way to make the roof greener. The solution had to be as light as possible, water saving and look green.

BVB Greenroll was the answer. This woven, thin stone wool mat formed the perfect under layer. This layer was covered by a smart irrigation system and then a vegetation layer comprising native grasses and sesuvium plants. These species have good drought tolerance. Anyone taking a photo from the Burj Khalifa looks out over this green oasis. The green roof has contributed to improving the living environment. It absorbs CO2 and fine particles, creates more nature and has an insulating effect. That is very welcome in the heat of Dubai.

identity, creating new ways of working and embracing shared values. At the same time, it was important to focus on our customers.

In 2019 Kekkilä-BVB 22 % of total peat used in 2019 was RPP certified. Besides peat, we sourced 17 % of other, complementing raw materials. We

also finished shifting transport of block peat from Sweden to the Netherlands from truck (900 trucks annually) to rail. This results in 40 % annual reduction of CO2 emissions (approx. 250 tonnes per year).

### Care for life

As a part of the integration year 2019, Kekkilä-BVB created a joint sustainability roadmap. The main sustainability goal of the company is to be net positive by 2030, meaning that we contribute more to the world than we take from it in the form of different resources.

The sustainability roadmap has eight sustainability targets under four initiatives. These are areas where Kekkilä-BVB can significantly contribute to creating a more sustainable world through its business:

1. Flourishing people
2. Green growth & recycling
3. Sustainable food & living
4. Biodiversity & restoration.



#### Flourishing people

We enhance the wellbeing of our employees, customers and partners in the value chain.

In 2020 our sustainability impact is understood and transparent, and we have set up measurement to ensure that we reach our main goal - netpositivity.



#### Green growth & recycling

From 2020 all of our innovations promote sustainability.

By 2024 we replace 80 % of virgin plastics in our packing with recycled plastic or alternative packing methods. 100 % of our packing can be recyclable.



#### Sustainable food & living

We will co-create and pilot three new smart service concepts per year related to food and living, which significantly increase our and our partners positive sustainability impacts.

By 2022 we have innovative new products and services that optimize the water management.



#### Biodiversity & restoration

Together with stakeholders we develop sustainable harvesting and after life concept for peat bogs.

Our actions significantly increase biodiversity in urban areas in a proven way.

## Nevel - Optimised energy production and investing in renewable energy

**In 2019 Vapo restructured its Energy division and established a new international company, Nevel.**

Operating in Finland, Sweden and Estonia to answer the market need for advanced industrial and municipal infrastructure solutions. We operate more than 150 energy production sites and over 40 district heating networks with unique industry leading digital operations and maintenance

platform. We are building on our position as a trusted partner for our customers and seeking profitable growth.

We build advanced industrial and municipal infrastructure solutions, for the benefit of our customers and the surrounding societies. We are passionate about driving the digital transformation so that our customers can be winners in the fourth industrial revolution we are now living. Our industry-

leading digital operating platform is available for all large-scale energy-asset owners as a service.

# 75 %

Target of renewable energy production by end of 2021 by creating transition roadmaps together with customers.

### Nevel Forssa production plant fully digitalized

The Forssa energy production plant in Finland – one of over 150 such sites owned and operated by Nevel – generates 70MW of energy a year using solid bioenergy as its main fuel. In 2017 Nevel began a project to fully digitalise operations at the plant in order to optimise efficiency, reduce emissions, cut OPEX and increase the share of renewable fuel sources. Utilising the Nevel Remote operations and maintenance platform has enabled all these goals to be fully realised.

Antti Salmi, Manager, Automation and Analytics at Nevel: "I manage the entire Nevel Digital operations and maintenance platform, covering dozens of sites. We have centralised the traditional on-site operations and maintenance functions and are able to operate several plants and projects simultaneously by taking advantage of machine learning and using data streams from various plants. We are able to demonstrate tangible savings through reduced fuel consumption and improved production predictability. In practice, our customers benefit from economies of scale since the system learns continuously; tasks can be automated, and the solutions become more intelligent. We are also able to predict production and support production planning – it's like looking through a door instead of a keyhole."

## The most important achievements in 2019

We developed our digital operations including Nevel Remote operation service. Concrete benefits are achieved by optimising operations and generating efficiencies. This is done by automating operations and using machine learning, generating benchmark data for better intelligence in operating the sites.

In 2019 various production sites were being prepared for increased levels of renewable energy. For example, heat plant tests were conducted for transitioning from fossil fuel use to increasing levels of renewables.

An example towards sustainability is a long-term cooperation with Sandvik Coromant, a Swedish supplier of cutting tools and services to the metal cutting industry. Sandvik Coromant has reduced the use of heating oil at its factory in Gimo by almost 70 % and reduced carbon dioxide emissions to

almost zero in partnership with Nevel.

## Towards a carbon neutral future

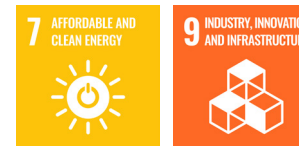
We work relentlessly towards carbon neutral future by investing in renewable energy and by creating sustainable transition roadmaps together with our customers. We aim at decreasing the CO2 emissions of energy production by optimising efficiency and increasing use of renewable energy sources. Our target is 75 % of renewable energy production by end of 2021. We help reuse everything and create local ecosystems by managing industrial by-products for the benefit of customers and the surrounding society.

Increasing the share of renewable energy production requires a variety of actions, the most essential of which is to increase energy efficiency and the share of biofuels in energy production. Creating local ecosystems and energy and material efficiency are an integral part of the way we operate.

Producing energy as a service for industry is a significant part of our business, enabling us to build transformation roadmaps for a carbon-neutral future together with our customers. Digital transformation helps us develop energy efficiency through optimising our processes. We already use biofuels at our production sites and plan to increase their share significantly in the coming years.

We create local circular economies, which in practice means steps like using industrial by-products such as sawdust and oat hulls in heat production. We also recover excess heat from industrial processes and use it for district heating, reducing the need to produce heat with biofuels.

## Driving local ecosystems and resource efficiency



### Nevel sustainability targets

Decreasing CO2 emissions of our energy production.

75 % of renewable energy production by end of 2021.

### We do this by

Optimising energy use and minimizing use of fuel and residual oxygen level.

Creating sustainable transition roadmaps together with our customers.

Helping reuse everything and creating local ecosystems.

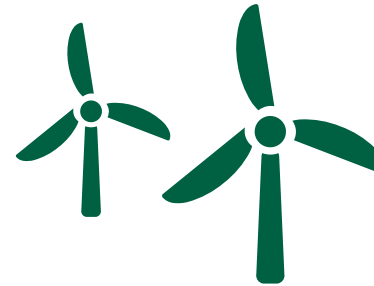
## Fuels - Ensuring fuels availability and security of supply for customers

**The restructuring of Vapo Group's Energy division in 2019 also defined the Fuels business. The Fuels business is about ensuring fuels availability and security of supply for customers in Finland, Estonia and Sweden. The business focuses on biofuels and energy peat.**

The target is to grow in biofuels, such as wood chips and pellets, as well as maintain energy peat as a transition fuel. Growth in the biofuels business is supported by changes in operating model, as well as focus on building long-term partnerships with customers. An essential part

of the new operating model is growing our own wood sourcing and creating close cooperation with contractors and suppliers.

As part of the renewable energy development, we are investigating opportunities in wind power. This is linked with Vapo Group's current land ownership of 80 000 hectares.



As part of the renewable energy development, we are investigating opportunities in **wind power.**

This is linked with Vapo Group's current land ownership of 80 000 hectares.

### Employee satisfaction on good level despite big business transformation

In 2019, Vapo Group participated in Great place to work employee survey with the ambition to put increasing focus on its employee satisfaction. The survey measures a Trust index, indicating employee satisfaction in six selected dimensions. In the survey, the Fuels business scored well in comparison to Vapo Group and even fairly in comparison to top benchmark companies on an international level. The best scores were for dimensions Pride and Camaraderie. Relative strengths based on the survey were the sense of having been given a lot of responsibility and the management trust towards people. Development areas were communications about important issues, as well as clear management view of the future. Open discussions continue in the organisation to ensure understanding of the business situation and maintain clarity.

## The most important achievements in 2019

In the past year, a new operating model has been taken into use, to enforce the focus on biofuels. As part of the business transformation was triggered by the decreasing demand for energy peat, a decision was taken in December 2019 to discontinue energy peat production at 92 production sites in Finland. This also meant a write-down of approximately EUR 30 million on our peat assets. Although the need for peat will increase for other businesses than energy, we believe land reserved for peat production can be reduced over the next five years. This will directly reduce our emissions to air.

## Supporting customers in transformation from fossil fuels to biofuels with a controlled change

The Fuels business supports customers' transformation from fossil fuels towards biofuels, while ensuring availability and security of supply, when energy peat use is in strong decline. Thus, the Fuels business has a social impact by providing fuels at a competitive price, in order to enable sustainable district heating for households and real estate. It also supports transformation towards a carbon neutral society.



In 2019 we decided to discontinue peat production at

# 92 production sites

in Finland.

**Ensuring fuels availability and security of supply**



**The Future energy market will be a circular economy that brings all players together**

The Fuels business supports customers' transformation from fossil fuels towards biofuels, while ensuring availability and security of supply.

## New Businesses - High value-added products for sustainable everyday living

**Global challenges are driving us to find new means and products for purification of air and water and efficient food production.**

Natural and safe products are needed to replace harmful chemical compounds and plastics. Global food production needs new means to feed growing population.

### **The first Vapo Refinery**

The Vapo Refinery concept adheres to the principles of circular economy and sustainability by producing multiple products and utilizing side streams. Organic wetland biomass, including peat and sphagnum moss, contain valuable properties and functionalities, which can offer solutions to replace synthetic plastics, oil-based products and chemicals.

The vision created around these high value-added products is called Vapo Refinery. Its' first

**The first Vapo Refinery aims to develop new and sustainable high value-added products for global markets.**

concrete outcome is activated carbon business starting in 2020 targeting to air and water purification. We are also investigating humic acids to be used as biostimulants in horticulture and agriculture, lipids for waxes and resins and valuable compounds of sphagnum moss.

### **Developing net positive products**

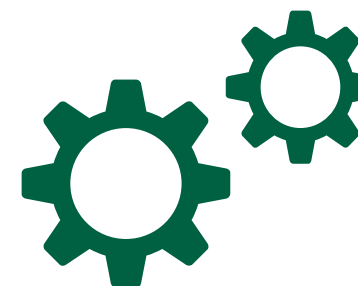
All raw materials and side streams are comprehensively utilized according to circular economy. Less raw material is needed for high value products compared to traditional uses. We want to develop net positive products generating more social, environmental and financial benefits than disbenefits. Net impact evaluation of the products will be done by an external body.

### **Refinery R&D program speeds up development**

To accelerate the development of new products we started a multi-year Refinery R&D program, which is enabled by funding from Business Finland. The collaboration ecosystem includes Finnish universities, research institutes and SMEs as well as domestic and international customers. We need in-depth expertise on the attributes and functionalities of organic wetland biomass in order to develop new and innovative products.

A new professorship is established to University of Jyväskylä to promote the circular economy ecosystem to refine organic wetland biomass and other natural materials into high value added products. Our development efforts will be

carried out in collaboration with customers to ensure that the products are compatible with market needs.



Effective use of raw materials and side streams



# Vapo Refinery



## Creating sustainable innovations with the ecosystem

Collaboration ecosystem with customers, universities, research institutes and SMEs.

A new professorship will be established to University of Jyväskylä to promote the circular economy ecosystem.

Sharing ideas and fostering innovations.



## Promoting local food production and healthy living environments

Use of natural raw materials to replace synthetic plastics, oil-based products and chemicals.

Solutions for air, water and living environment purification.

New products for efficient food production.



## Building Refinery concepts based on circular economy

Using modern production technologies targeting low energy usage and emissions, recycling and reducing waste.

Effective use of raw material and side streams.

Less raw material needed for high value-added products.



## Developing net positive products

Development of net positive products supported by life cycle assessments (LCA). Product net impact evaluation will be done by an external body.

New Sustainability concept for Finnish peat production.

Sustainable land-use, creation of carbon sinks and improvement of biodiversity.

### **Vapo Activated Carbon – for Cleaner Everyday Living**

Activated Carbon is a part of everyday life for all of us. It is used to filter the water we drink and the air that we breathe. Industries as well as communities use it to purify different kinds of waste waters as well as flue gases. Also, many critical nutrients as well as medicines require activated carbon treatment to be safe for human use.

Vapo has developed a modern and environment friendly manufacturing process for producing Activated Carbon from biomasses available in Finland. For us, the sustainable use of natural resources has always been the cornerstone of our operations and we are proud to show leadership in introducing an environmentally friendly production technology to the activated carbon market.

We will start a new industry and generate employment opportunities in in Finland. Most of the Activated Carbon produced in Finland will find its way to export markets. Majority of the jobs created are outside the main growth areas in Finland, helping us to support the vitality of the country.

**[www.vapocarbons.com](http://www.vapocarbons.com)**

### **Spirit of peat for efficient food production**

We are dedicated to solving global challenges related to efficient food production and the welfare of humans and animals with high-performance humic products.

We aim at producing humic substances from peat raw material sourced from the Nordics using modern production technologies. We aim at bringing high-quality humic products on the market by 2024. One step towards this target realized in 2019 when Humics-projects first results proved customer value for biostimulant use and Humics laboratory was established. This year we target to specify commercial products together with our customers.

Humic substances are powerful biostimulants in horticulture and agriculture, enhancing nutrient uptake, nutrient efficiency, tolerance to abiotic stress and crop quality. As animal feed additives they show efficacy of stress management, immune system, anti-inflammatory and anti-viral activity in animals. Humic products can also be used as human dietary supplements or in environmental remediation. Being part of the Vapo Refinery concept, the upcoming humic production unit will benefit from synergies of different processes targeting high value-added end products.

**[www.vapohumics.com](http://www.vapohumics.com)**

# Sustainable Everyday Living



## GRI Index

		Page	Comments
<b>Organizational profile</b>			
102-1	Name of the organization	front cover	
102-2	Activities, brands, products, and services	2, 3, 4, 18-26	
102-3	Location of headquarters	3	Jyväskylä, Finland
102-4	Location of operations	3	
102-5	Ownership and legal form	GRI index	The state of Finland has a holding of 50.1 % in the parent company Vapo, while Suomen Energiavarat Oy holds 49.9 %.
102-6	Markets served	2, 3, 4, 18-26, <a href="http://www.vapo.com/en/group">www.vapo.com/en/group</a>	
102-7	Scale of the organization	2, 4, 39, Financial Statements and Board of Directors' Report	
102-8	Information on employees and other workers	39	
102-9	Supply chain	17, Annual Report 2019	
102-10	Significant changes to the organization and its supply chain	2, 3, 4, 16, 18-26, Financial Statements and Board of Directors' Report	
102-11	Precautionary Principle or approach	4-5, 7, 16, <a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
102-12	External initiatives	37, <a href="https://www.vapo.com/en/responsibility/the-way-we-operate/group-s-certificates">https://www.vapo.com/en/responsibility/the-way-we-operate/group-s-certificates</a>	Sustainable Development Goals, certificates on quality, environmental and corporate responsibility management
102-13	Membership of associations	<a href="https://www.vapo.com/en/responsibility/people-and-well-being/stakeholders">https://www.vapo.com/en/responsibility/people-and-well-being/stakeholders</a>	
<b>Strategy</b>			
102-14	Statement from senior decision-maker	4-5	
102-15	Key impacts, risks, and opportunities	2, 4-5, 7-9, 10-13, 16, 18-26, 36, Annual report, Financial Statements and Board of Directors' Report	

Ethics and integrity			
102-16	Values, principles, standards, and norms of behavior	4-5, 7, 9, 17, <a href="https://www.vapo.com/en/group/strategy/values">https://www.vapo.com/en/group/strategy/values</a>	
102-17	Mechanisms for advice and concerns about ethics	2, 9, 14 - 15, 36, <a href="https://www.vapo.com/en/group/strategy/values">https://www.vapo.com/en/group/strategy/values</a>	
Governance			
102-18	Governance structure	9, <a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
102-20	Executive-level responsibility for economic, environmental, and social topics	9	
102-21	Consulting stakeholders on economic, environmental and social topics	8	
102-23	Chair of the highest governance body	<a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
102-26	Role of highest governance body in setting purpose, values, and strategy	<a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
102-29	Identifying and managing economic, environmental, and social impacts	4-5, 7-9, 36	
102-32	Highest governance body's role in sustainability reporting	9	
Stakeholder engagement			
102-40	List of stakeholder groups	GRI index, 8	Personnel, customers, owners, public authorities, peatland lessors and landowners, scientists, researchers, research institutes, schools and students, non-governmental organisations, HR partners and external stakeholders, suppliers, service providers, contractors, political decision-makers, citizens, media, labour market organisations.
102-41	Collective bargaining agreements	GRI index	Percentage of personnel covered by collective bargaining agreements: Spain 100 %, Sweden 100 %, Finland 45 %, Netherlands 8 %, Estonia 0 %, Germany 0 %
102-42	Identifying and selecting stakeholders	8-9	
102-43	Approach to stakeholder engagement	8-9	
102-44	Key topics and concerns raised	8-9	

Reporting practice			
102-45	Entities included in the consolidated financial statements	Financial Statements and Board of Directors' Report	
102-46	Defining report content and topic boundaries	8, GRI index	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. The corporate responsibility report covers the entire Vapo Group. The calculation principles and boundaries of environmental figures are primarily reported in the context of the relevant charts and tables.
102-47	List of material topics	8, 36	
102-48	Restatements of information	GRI index	Tables on page 38: Number of Vapo's monitoring of waterways, Number of emissions monitoring in Vapo's peat production: There was an error in report when identifying emission monitoring point from water quality monitoring point. The calculation in the report was corrected. Error had no impact on monitoring or emissions calculation. Table on page 40: Modification to 2018 data: count of MTR accidents changed from 21 to 22.
102-49	Changes in reporting	GRI index	The figures presented in the corporate responsibility report represent the entire Vapo Group to the extent that the data was available.
102-50	Reporting period	GRI index	The reporting period is 1 January – 31 December 2019.
102-51	Date of most recent report	GRI index	Vapo Group's previous corporate responsibility report was published in July 2019.
102-52	Reporting cycle	GRI index	Vapo Group reports on its corporate responsibility annually since 2018.
102-53	Contact point for questions regarding the report	GRI index	Corporate responsibility and sustainability strategy and targets: Petri Järvinen, Chief Supply Chain and Sustainability Officer, Environmental responsibility: Päivi Martikainen, Director, Group Operational Excellence & Sustainability Economic responsibility: Jarmo Santala, CFO Social responsibility: Jenni Nevasalo, Chief HR Officer
102-54	Claims of reporting in accordance with the GRI Standards	GRI index	Vapo Group reports on the economic, environmental and social impacts of its operations in accordance with the GRI Standards core scope.
102-55	GRI content index	GRI index	

102-56	External assurance	GRI index	The report has not been externally assured.
<b>Management approach</b>			
103-1	Explanation of the material topic and its Boundary	8, 10-17, 36	
103-2	The management approach and its components	8, 10-17, 36, <a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
103-3	Evaluation of the management approach	36, <a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
<b>Economic Performance</b>			
201-1	Direct economic value generated and distributed	4, 16-17, 41, Financial Statements and Board of Directors' Report	
201-2	Financial implications and other risks and opportunities due to climate change	16	
<b>Anti-Corruption</b>			
205-3	Confirmed incidents of corruption and actions taken.	GRI index	No reported incidents
<b>Anti-competitive behavior</b>			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices.	GRI index	No reported incidents
<b>Materials</b>			
301-2	Recycled input materials used	GRI index	29 % of input raw materials (measured in tons) at Kekkilä BVB Landscaping & Recycling Finland are recycled. 6 % of input fuels (measured in GWh) at Nevel are recycled.

Energy			
302-1	Energy consumption within the organization	37	
302-3	Energy intensity	GRI index	Energy intensity is 0,6. The figure is based on Nevel's energy production: all energy consumed per unit of electricity produced in MWh. It does not include all energy consumption within Vapo Group.
Water and effluents			
303-1	Interactions with water as a shared resource	10-11, 36, 38	Reported partly. For emissions into waterways, report nitrogen, phosphorus and solid matter emissions for Finnish operations where environmental permits include the obligation to calculate the annual load. The calculations are based on samples
303-2	Management of water discharge-related impacts	GRI index, 36, <a href="https://www.vapo.com/producing-peat-responsibly/environmental-protection/environmental-load">https://www.vapo.com/producing-peat-responsibly/environmental-protection/environmental-load</a> , <a href="https://www.vapo.com/producing-peat-responsibly/environmental-protection/water-protection-structures">https://www.vapo.com/producing-peat-responsibly/environmental-protection/water-protection-structures</a>	Environmental permit is required for peat production. At peat production areas, the best available techniques (BAT) are defined on a case-by-case basis taking into account the particular conditions at each production area and the remaining operational time. The profile of the receiving waterbody is considered in permit processes.
Biodiversity			
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	12, 36, GRI index, <a href="https://www.vapo.com/en/responsibility/the-way-we-operate/group-s-certificates">https://www.vapo.com/en/responsibility/the-way-we-operate/group-s-certificates</a>	Reported partly. All peat production areas in Vapo Group operate under environmental permits. Risks of peat production to nature are always assessed beforehand and the permits are not applied for areas classified in high natural state. More detailed information from Finnish production areas is available from local contact persons specified at <a href="https://www.vapo.com/turvesuot">https://www.vapo.com/turvesuot</a> .
304-3	Habitats protected or restored	2, 12, 36, <a href="https://www.vapo.com/producing-peat-responsibly/environmental-protection/active-conservation-exchanges">https://www.vapo.com/producing-peat-responsibly/environmental-protection/active-conservation-exchanges</a>	
Own indicator	Reforestation and wetland development, number of restoration projects	12	



Emissions			
305-1	Direct (Scope 1) GHG emissions	5, 10, 38	Reported partly. Vapo Group's total CO2 emissions are 1.2 million tons.
305-2	Energy indirect (Scope 2) GHG emissions	GRI index	Gross location-based energy indirect (Scope 2) GHG emissions: 12 466 tons of CO2 equivalent. Calculated for Finland, because Finland represents the majority of Vapo Group's Scope 2 emissions and it includes electricity and district heat. Emission factors used: Electricity 158 kg CO2/MWh, District heat 164 kg CO2/MWh. (Source: Motiva)
305-3	Other indirect (Scope 3) GHG emissions	GRI Index	Reported partly. Scope 3 includes logistics in Finland, Estonia and Sweden, and emissions are included in the total emissions of Vapo Group (1.2 million tons of CO2).
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	38	
Effluents and waste			
306-1	Water discharge by quality and destination	Tarkkailuraportit	Reported partly. For peat production the volume of planned and unplanned water discharges are reported in emission and water monitoring reports, together with standards, methodologies, and assumptions used. Information is reported for Finnish operations.
306-2	Waste by type and disposal method	37	Reported partly.
306-3	Significant spills	GRI index	Drainage waters from peat production had to be rerouted to diversion culverts and dams on 35 occasions to prevent damage to water protection structures, for an average of eight days per incident. The number of diversion incidents decreased by 48 % compared to 2018.
Environmental compliance			
307-1	Non-compliance with environmental laws and regulations	GRI index	No reported incidents of non-compliance.

Supplier environmental assessment			
308-1	New suppliers that were screened using environmental criteria	17, GRI index, Supplier Code of Conduct	Reported partly.
Employment			
401-1	New employee hires and employee turnover	GRI index	Reported partly. Employee turnover (outgoing): 106 cases of employment termination (11,6 %). The number includes all causes of employment termination. Regional division: 46 FI, 1 ESP, 6 EE, 15 SWE, 38 NL Gender division: 35 female (33 %), 71 male (67 %) Age division: 15 under 30 (14 %), 52 30-50 years (49 %), 39 over 50 (37 %)
Occupational Health and Safety			
403-2	Hazard identification, risk assessment, and incident investigation	2, 14	Reported partly. Vapo Group reports the numbers for all own employees.
403-5	Worker training on occupational health and safety	2, 14	Reported partly. Vapo Group reports the numbers for all own employees.
403-9	Work related injuries	14-15, 40	Reported partly. Vapo Group reports the numbers for all own employees.
G4-EU18	Health and safety training for suppliers	17	Reported partly. Vapo Group reports the numbers for all own employees.
Training and education			
404-2	Programs for upgrading employee skills and transition assistance programs	4, 9, 14-15	Reported partly. Programmes pertaining to retirement and the termination of employment have not been reported.
Diversity and equal opportunity			
405-1	Diversity of governance bodies and employees	39, GRI index	Reported partly. Board of Directors (8 members) Breakdown by gender: 3 women (37,5 %), 5 men (62,5 %). Breakdown by age: 0 under 30 years, 4 30-50 years (50 %), 4 over 50 years (50 %) Group Management Team (11 members) Brakedown by gender: 2 women (18 %), 9 men (82 %) Brakedown by age: 0 under 30 years, 2 30-50 years (18 %), 9 over 50 years (82 %) At Vapo Group 27 % of all employees are female, 73 % male.
Non-discrimination			
406-1	Incidents of discrimination and corrective actions taken	15	Five reported cases and corrective actions taken (including follow up) reporting starting at May 2019.

Public Policy			
415-1	Political contributions	GRI index	Vapo does not support any political parties.
Marketing and labeling			
417-3	Incidents of non-compliance concerning marketing communications	GRI index	No incidents of non-compliance
Socioeconomic Compliance			
419-1	Non-compliance with laws and regulations in the social and economic area	GRI index	No incidents of non-compliance

## Appendix 1. Disclosures on Management Approach

Disclosures on Management Approach											
	We take care of the environment				We take care of the wellbeing of our employees				We contribute to the benefit of the society		
Vapo Material Topics	Supporting transition to carbon neutral society	Minimizing impacts on water resources	Supporting biodiversity	Boosting circular economy	Safety first	Satisfaction and wellbeing of our personnel	Competence development	Discrimination and inappropriate behaviour	Economic and local employment impact	Financial implications and climate risks related to peat	Sustainability with our suppliers and contractors
Our management approach and purpose	Pages 5, 8, 11	Pages 5, 8, 11	Pages 5, 8, 12	Pages 5, 6, 8, 12-13	Pages 5, 8, 14	Pages 5, 8, 14-15	Page 15	Pages 5, 8	Page 16	Pages 8, 16	Pages 8, 17
Policies and Commitments	Overall we apply the following policies to manage our approach for the material topics: Group corporate governance statement, Code of Conduct, Corporate responsibility policy incl. SEQ, Internal audit charter, Sourcing and procurement policy. Topic specific policies are mentioned below. In addition, we communicate our approach to the United Nations Sustainable Development Goals throughout this report.										
	Environmental strategy 2019-2021 (partly until 2025)				Information security policy, Data privacy policy, Personnel policy, Compensation policy, Language policy				Disclosure policy, Innovation and IPR policy, Risk management policy, Financial policies, Supplier Code of Conduct		
Goals and targets	These are presented on page 7 ("Corporate responsibility and sustainability at Vapo Group") and in the indicator tables on pages 10, 14, 19, 20, 21, 22, and 25.										
Responsibilities and resources	These are presented on page 9 ("Sustainability tightly governed within Vapo Group")										
Grievance mechanisms	Environment observation recording tool. Environmental feedback and irregularities are handled by the business area in question and reported to the Board of Directors. Environmental permitting process is public and includes open grievance mechanisms.				Safety observation recording tool, accident investigations, mandatory safety trainings	Annual employee satisfaction survey Great Place to Work, pulse surveys	Development discussions, training programme	Reporting and follow-up of incidents, Whistleblowing channel			
Assessment of management approach	We measure our impacts and our progress towards targets annually and evaluate our management approach based on our performance, including stakeholder and customer feedback. For example, increasing levels of reporting safety, environmental, quality and success observations give us a positive signal, that awareness is increasing and there is a proactive management of issues. We carry out regular internal and external audits as well as conduct management reviews to assess our progress and the effectiveness of our management approach.										

## Appendix 2. We take care of the environment, tables

Vapo Group's certificates									
	ISO 9001	ISO 14001	PEFC	FSC	RHP	RPP	OHSAS 18001	Good Soil	BRL9335-4/9341
<b>Finland</b>									
Vapo Oy	x	x	x		x				
Kekkilä Oy	x	x			x	x			
Nevel Oy	x	x							
<b>Sweden</b>									
Neova AB		x			x				
Hasselfors Garden AB	x	x				x			
Nevel AB		x							
<b>Estonia</b>									
AS Tootsi Turvas				x	x				
Kekkilä Eesti OÜ	x	x				x	x		
<b>The Netherlands</b>									
Bas van Buuren (de Lier)	x				x			x	
Euroveen (Grubbenvorst)	x				x			x	
Veenbaas (Drachten)								x	
Bogro (Hardenberg)					x			x	
Landscaping (Nijmegen)					x*				x**

\* (cocos RHP certified since 2019) \*\*(landscaping)

Waste volumes, tonnes			
	2017	2018	2019
Total	29 239	19 493	22 567
Recycled	26 075	18 103	21 298
Landfill disposal	3 164	1 390	1 270
Recycling rate %	89	90	94

2018: Excluding data from Kekkilä Eesti OÜ

2019: Excluding data from Kekkilä BVB Netherlands

Energy consumption	
Nevel	MWh
Fuels	2 096 304
Renewable	1 146 715
Non-renewable	949 589
Electricity	6 372
Heat	59
Total energy sold	-1 329 647
Total	773 088
Pellet	MWh
Fuels	64 553
Renewable	16 009
Non-renewable	48 544
Electricity	23 195
Heat	23 892
Steam	29 133
Total energy sold	-20 138
Total	120 635
Kekkilä-BVB excluding BVB's the Netherlands and Sweden operations that were merged in 2019.	MWh
Fuels	3 401
Renewable	
Non-renewable	3 401
Electricity	8 946
Heat	922
Total	13 269
SCM (FI)	MWh
Electricity	18 453

Emissions to air from heat and power plants			
	2017	2018	2019
CO2 emissions, 1,000 tonnes (t/produced MWh)	344 (0,24)	370 (0,27)	373 (0,20)
Particles, t (kg/MWh)	114 (0,08)	136 (0,10)	187 (0,10)
NOX, t (kg/MWh)	999 (0,71)	926 (0,68)	1116 (0,61)
SO2, t (kg/MWh)	421 (0,30)	383 (0,28)	503 (0,27)

For airborne emissions, SO<sub>2</sub>, NO<sub>x</sub>, particle and carbon dioxide emissions are reported for all of Vapo's own power and heating plants. Airborne emissions from plants are monitored by emission measurements taken by an external expert or by continuous emission measuring devices. The total airborne SO<sub>2</sub>, NO<sub>x</sub> 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.

Emissions to air from pellet factories			
	2017	2018	2019
CO2 emissions, 1,000 tonnes (t/produced ton)	21 (0,09)	33 (0,18)	18 (0,10)
Particles, t (kg/produced ton)	17 (0,07)	32 (0,17)	22 (0,12)
NOX, t (kg/produced ton)	25 (0,11)	55 (0,30)	28 (0,15)
SO2, t (kg/produced ton)	25 (0,11)	45 (0,24)	25 (0,14)

For Vapo's Finnish pellets plants report the parameters subject to monitoring by the authorities. The total airborne SO<sub>2</sub>, NO<sub>x</sub> and particle emissions are calculated based on the emission factors and actual fuel consumption figures. The emission factors provided by Statistics Finland have been used in calculating carbon dioxide emissions.

Total water withdrawal by source (m <sup>3</sup> , %)				
	2018		2019	
	m <sup>3</sup>	%	m <sup>3</sup>	%
Waterways	960 276	75	979 146	75
Municipal water utilities	314 510	25	324 938	25
Total, m <sup>3</sup>	1 274 986		1 304 284	

Water withdrawal from Vapo's well 200m<sup>3</sup>.

Data reported for Vapo Group Finland and Kekkilä BVB for all countries. Water withdrawal and water consumption does not include offices, peat production nor the cooling water of power plants.

Number of Vapo's monitoring of waterways			
	2017	2018*	2019
Samples	3 103	2 297	2 066
Analyses	38 728	27 739	24 944

Samples taken to measure water quality in watercourses. Reported data from Vapo's peat production operations in Finland. \*Error in 2018 data has been corrected.

Number of emissions monitoring in Vapo's peat production			
	2017	2018*	2019
Samples	16 914	14 796	14 626
Analyses	138 248	90 051	91 454

Emissions monitoring samples are taken to calculate the water load from peat production areas. Reported data from Vapo's peat production operations in Finland. \*Error in 2018 data has been corrected.

Number of environmental observations 2019 (2018*)				
	Finland	Sweden	Estonia	The Netherlands
Nevel	123 (42)	n/a	0	
Fuels	41 (28)			
Kekkilä-BVB	109 (48)	47 (24)	21 (9)	9 (n/a)
New Businesses	0 (n/a)			
SCM	408 (162)	88 (15)	4 (3)	
Group Services	19 (4)	0 (0)	1 (1)	0 (n/a)
Total	700 (284)	135 (39)	26 (13)	9 (n/a)

\*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. Deviations to environmental permits are always reported to environmental authority in accordance with the environmental permits, but also in the observation system. The causes of deviations are investigated, and the necessary measures are taken to rectify the situation. Environmental feedback and irregularities are processed by the business area in question and reported to the Board of Directors.

## Appendix 3. We take care of the wellbeing of our employees, tables

Share of personnel, 31.12.2019, total 1032						
	Finland	Sweden	Estonia	The Netherlands	Spain	Germany
Nevel	96	36	5	0	0	0
Fuels	74	0	5	0	0	0
Kekkilä-BVB	125	66	23	287	4	15
New Businesses	20	0	0	0	0	0
SCM	147	25	15	0	0	0
Group Services	62	15	8	4	0	0

Personnel covered by CBAs 2019			
	Number of personnel	Personnel covered by CBAs, %	Number of CBAs
Finland	524	45	7
Estonia	56	0	0
Sweden	142	100	2
Spain	4	100	1
The Netherlands	291	8	1
Germany	15	0	0

Gender distribution		
	2019 (2018)	2019 %
Women	277 (236)	27
Men	755 (501)	73
Total	1 032 (737)	

Duration of employment, %	
	2019 (2018*)
Under 5 years	41 (37)
5–10 years	20 (24)
10–20 years	22 (19)
Over 20 years	17 (20)

\* 2018 figures not including Neova.

Type of employment			
	2019 (2018)	%	% of female employees
Permanent	914 (686)*	89	29
Fixed term	118 (51) **	11	26

\*Region: 55 EST, 492 FI, 14 GER, 4 SPAIN, 129 SWE, 220 NL  
 \*\*Region: 1 EST, 32 FI, 1 GER, 13 SWE, 71 NL

Type of employment			
	2019 (2018)	%	% of female employees
Full time	946*	92	27
Part time	86**	8	28

\*Region: EST 54, FI 492, GER 13, SPAIN 3, SWE 134, NL 250  
 \*\*Region: EST 2, FI 32, GER 2, SPAIN 1, SWE 8, NL 41

Number of recorded safety observations 2019* (2018*)							
	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel sites	649 (581)	62 (60)	9 (3)	n/a	n/a	n/a	720 (644)
Fuels sites	514 (541)	n/a	2 (0)	n/a	n/a	n/a	516 (541)
Kekkilä-BVB	756 (566)	263 (337)	170 (116)	196* (*)	n/a	n/a	1 385* (1 019*)
New Businesses sites	7 (1)	n/a	n/a	n/a	n/a	n/a	7 (0)
SCM sites	1 447 (1 307)	97 (44)	22 (18)	n/a	n/a	n/a	1 566 (1 369)
Office sites	404 (382)	53 (78)	1 (10)	0 (*)	n/a	n/a	458 (470)
Other	57 (15)	0	0	n/a	n/a	n/a	57 (15)
							4 709* (4 058)

Safety observations are done by all own personnel as well as by our contractors working in our production/ operations sites.

\*Statistics includes BVB Substrates safety observations from June 2019 onwards.

Number of all accidents 2019 (2018**) (MTR*)							
	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel	7 (5)	0 (1)	1 (0)	n/a	n/a	n/a	8 (6)
Fuels	2 (1)	n/a	0 (0)	n/a	n/a	n/a	2 (1)
Kekkilä-BVB	4 (5)	2 (1)	0 (0)	12 (**)	0 (**)	0 (**)	18 (6**)
New Businesses	0 (1)	n/a	n/a	n/a	n/a	n/a	0 (1)
SCM	4 (5)	0 (0)	0 (1)	n/a	n/a	n/a	4 (6)
Group Services	0 (2)	0 (0)	0 (0)	0 (0)	n/a	n/a	0 (2)
							32 (22***)

\* MTR count includes all workplace accidents, including those that did not lead to absence from work.

It also includes accidents during commutes (between the home and workplace).

\*\* Statistics does not include BVB Substrates workplace accidents for 2018.

\*\*\* Modification to 2018 data: Count of MTR accidents changed from 21 to 22.

Note: No fatalities during 2018-2019.

Number of accidents that lead to absence from work 2019 (2018**) (LTA1*)							
	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel	0 (3)	0 (0)	1 (0)	n/a	n/a	n/a	1 (3)
Fuels	0 (1)	n/a	0 (0)	n/a	n/a	n/a	0 (1)
Kekkilä-BVB	0 (1)	1 (0)	0 (0)	9 (**)	0 (**)	0 (**)	10 (1**)
New Businesses	0 (1)	n/a	n/a	n/a	n/a	n/a	0 (1)
SCM	1 (0)	0 (0)	0 (1)	n/a	n/a	n/a	1 (1)
Group Services	0 (2)	0 (0)	0 (0)	0 (0)	n/a	n/a	0 (2)
							12 (9**)

\* LTA1 count includes those workplace accidents that lead to a minimum of one day of absence from work. It also includes accidents during commutes (between the home and workplace).

\*\* Statistics does not include BVB Substrates workplace accidents for 2018.

Main types of workplace injuries 2019 (2018)		%
Fall, slip, trip (impact with fixed object)		33 (45)
Collision, hit, pressure (impact with moving object)		26 (23)
Crush, compression, contusion (caused by object)		19 (18)
Cut, stab, sting (caused by object)		13 (0)
Shock, burn, poisoning, pressure (impact of electrical voltage, temperature, noise, hazardous substances.		3 (14)
Other		6 (0)

Accident frequency over 1 million working hours 2019 (2018**) (MTRf*)							
	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel	46.2 (28.6)	0 (13.7)	122.1 (0)	n/a	n/a	n/a	35 (23.4)
Fuels	17.0 (13.4)	n/a	0 (0)	n/a	n/a	n/a	15.7 (11.8)
Kekkilä-BVB	18.6 (23.0)	16.3 (8.1)	0 (0)	24.5 (**)	0 (**)	0 (**)	20.6 (15.5**)
New Businesses	0 (85.5)	n/a	n/a	n/a	n/a	n/a	0 (85.5)
SCM	12.3 (14.3)	0 (0)	0 (44.8)	n/a	n/a	n/a	10.3 (14.5)
Group Services	0 (10.1)	0 (0)	0 (0)	n/a	n/a	n/a	0 (7.3)
							18.0 (16.9***)

\* MTRf accident frequency reflects count of workplace accidents over million working hours. It includes all workplace accidents including those that did not lead to absence from work.

\*\* Statistics does not include BVB Substrates workplace accidents for 2018.

\*\*\*Modification to 2018 data: Count of MTR accidents changed from 21 to 22.

Accident frequency over 1 million working hours 2019 (2018**) (LTA1f*)							
	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel	0 (17.2)	0 (0)	122.1 (0)	n/a	n/a	n/a	4.4 (11.7)
Fuels	0 (13.4)	n/a	0 (0)	n/a	n/a	n/a	0 (11.8)
Kekkilä-BVB	0 (4.6)	8.2 (0)	0 (0)	18.4 (**)	0 (**)	0 (**)	11.5 (2.6**)
New Businesses	0 (85.5)	n/a	n/a	n/a	n/a	n/a	0 (85.5)
SCM	3.1 (0)	0 (0)	0 (44.8)	n/a	n/a	n/a	2.6 (2.4)
Group Services	0 (10.1)	0 (0)	0 (0)	n/a	n/a	n/a	0 (7.3)
							6.7 (6.9**)

\* LTA1f accident frequency reflects count of workplace accidents over million working hours. It includes those workplace accidents that lead to a minimum of one day of absence from work.

\*\* Statistics does not include BVB Substrates workplace accidents for 2018.



## Appendix 4. We contribute to the benefit of the society, tables

<b>Vapo Group´s investments 2019, k€</b>			
	Gross investments	Asset sales	Net investments
The Netherlands	9 463	31	9 432
Finland	59 123	19 796	39 327
Sweden	5 635	153	5 483
Estonia	3 831	998	2 833
Denmark			
Spain			
Germany	44		44
Total	78 096	20 977	57 119

<b>Wages paid by Vapo Group 2019, €</b>		
	2018	2019
Finland	29 121 139	31 474 800
Sweden*	7 869 121	7 525 431
Estonia	1 409 450	1 401 817
The Netherlands**		14 948 391
Total	38 399 710	55 350 439

\*1 SEK=0,09 € (26.5.2020)

\*\*The operations in the Netherlands became part of the Vapo Group in 2019.

<b>Vapo Group´s peat production by country, 1 000 m3</b>					
	2015	2016	2017	2018	2019
<b>Finland</b>					
Milled fuel peat	7 376	6 148	5 686	13 028	7 524
Sod peat	611	464	483	908	859
Environmental peat	1 071	1 213	1 248	2 279	1 570
Total	9 058	7 826	7 417	16 215	9 953
<b>Sweden</b>					
Milled fuel peat	253	379	392	539	547
Sod peat	327	269	215	455	420
Environmental peat	718	887	1 036	736	1 190
Total	1 299	1 535	1 644	1 730	2 156
<b>Estonia</b>					
Milled fuel peat	12	0	0	84	36
Sod peat	116	1	33	173	210
Environmental peat	1 010	843	1 155	1 137	1 328
Total	1 138	844	1 188	1 395	1 574
<b>Norway</b>					
Milled fuel peat					
Sod peat					
Environmental peat	122	46	26		
Total	122	46	26		