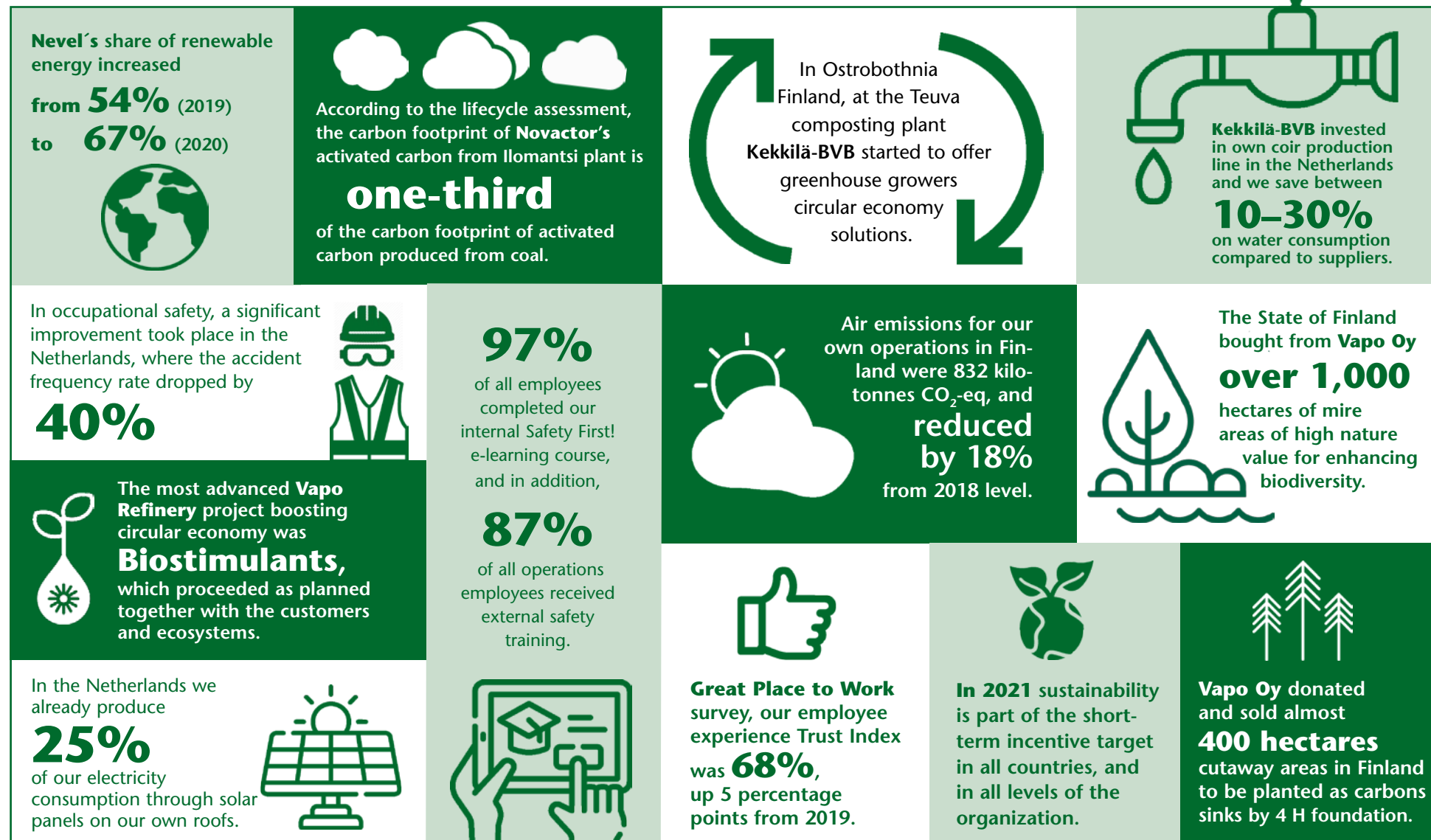


# Vapo Group's Sustainability Report 2020



## Sustainable Everyday Living

# Sustainability highlights 2020

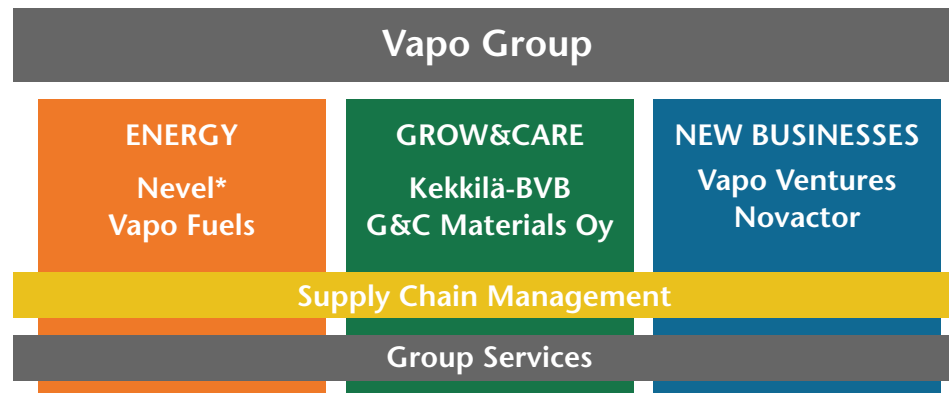




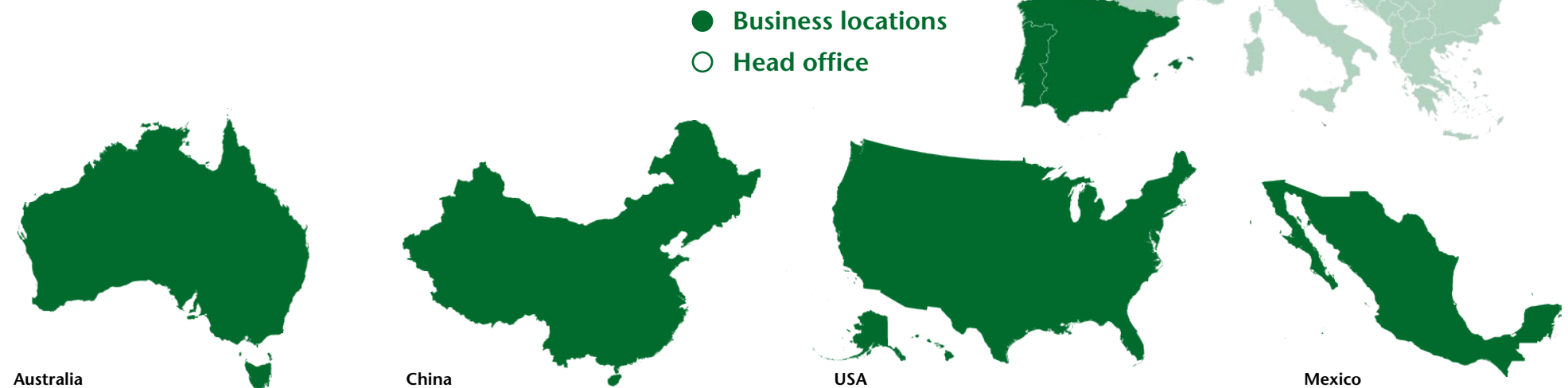
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# Vapo Group and business locations



\*Vapo Group has sold Nevel Oy to Ardian. The transaction was completed on January 28, 2021.



# CEO's review

## Challenging operating environment in 2020

Year 2020 was very unpredictable to everyone. The most significant happening in 2020 was by far the onset of the deadly pandemic COVID-19. It influenced everyone, including us.

Vapo Group immediately implemented the processes and controls to minimize the risks to our employees while maintaining security of supply to our customers. Since March 2020 our special focus has been on the health and safety of our employees.

## Strategy execution progressing and under continuous development

Vapo Group has successfully implemented its strategy in the global growing media market. Following an acquisition carried out in early 2019, **Kekkilä-BVB** is now the largest player in Europe in the substrates market targeted at professional growers. Kekkilä-BVB's turnover in 2020 was approximately EUR 300 million and we continue to have ambition for growth.

In-house product development of new, innovative products has progressed according to plan. At present, Vapo Group's first activated carbon production facility in Ilo-mantsi, Finland is starting commercial production in 2021, under our **Novactor** brand. It is capable of producing activated carbon from peat and other biomasses to be used for example in water and air purification. It is the most modern in its field in Europe.

## Change in the operating environment required a revision of strategy

The fivefold increase in the price of emission rights in three years, and the political decision to double the tax on energy peat in Finland resulted in an unparalleled decline in energy peat demand in 2020. Due to this rapid change in the operating environment, we decided to review our strategy, and as the result **Nevel Oy** was sold to **Ardian**. The arrangement strengthened our balance sheet and freed up resources for profitable growth in our other business areas.

## Satisfactory result in a difficult operating environment

Vapo Group turnover grew slightly year-on-year, totalling EUR 544.9 (533.7) million. The very positive business development of the Grow&Care division enabled the growth in turnover. In particular, Kekkilä-BVB's Retail business focusing on hobby gardeners saw intense growth. Early spring and the COVID-19 pandemic, boosted the growth of the gardening sector considerably.

Vapo Group's comparable EBITDA was almost equal to that of the previous year, despite the energy peat's over 25% decline in both turnover and EBITDA.

## Profitability enables us to be a responsible company

The primary responsibility of companies is to ensure profitability in the long-term. This was the reason for our strategic arrangement regarding Nevel. It enables us to make responsible investments in the future.

During 2019 and 2020 we have successfully executed a cost efficiency program by improving the efficiency of our operations over EUR 30 million. Because of the fast-declining energy peat demand, we launched a new cost saving program with target to reduce our fixed cost by appx EUR 25 million in the next 2–3 years. This unfortunately also led to the need to reduce our personnel cost with maximum 25 persons. However, owing to relocation, voluntary financial support packages and attrition, the final number of dismissals was five.

## Making progress in our sustainability focus areas at Vapo Group

Sustainability is at the heart of Vapo Group's strategy. We have shared values and a shared purpose, crystallised as Sustainable Everyday Living. The long-term sustainability target for Vapo Group is to be net positive in its operations and in the use of our product 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.

Vapo Group currently has two main focus areas for sustainability: to take care of the environment and to take care of the well-being of its employees.

Our environmental sustainability related targets are measured in terms of our progress towards carbon neutrality (CO<sub>2</sub> emissions), the way our operations support biodiversity and sustainable use of natural resources. Also, we continue to mitigate our impact 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.

In spring 2020, Vapo Group set an ambitious target of halving the carbon dioxide emissions of its Finnish operations by the year 2025. Our total emissions in 2018 were approximately 1.2 million tonnes, of which the Finnish operations produced approximately one million tonnes. In 2020 our CO<sub>2</sub> emissions in Finland reduced by 18% (vs. 2018) and we believe we can reach the CO<sub>2</sub> emissions reduction target before the year 2025.

The most significant goals related to employee well-being are the zero accidents target and the policy of zero tolerance for all discrimination and inappropriate conduct. During the year, we succeeded particularly well in improving our placement in the international **Great Place to Work** listing. Employees' trust index in the company improved from 63% in the previous year to 68%. This provides an excellent basis on our journey towards being one of the best places to work in Europe.

### **Sustainability guides investments**

Sustainable business is a competitive asset for companies. With this in mind, Vapo Group is focused on shifting also the emphasis of product development towards that goal. The aim is to make new use of our 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. In 2020 we made excellent progress in charting the opportunities for obtaining permits for wind farms on our real estate land in Finland. We have half a dozen projects that we now move forward with both on our own as well as with chosen partners.

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, whether this involves food production, creating more pleasant environments or conserving water.

In the New Business division, sustainability is also an essential element of all innovation activities. No idea or initiative can proceed to the project stage unless it meets strict responsibility and sustainability criteria. The aim is always to produce new higher value-added products as sustainably and energy-efficiently as possible, with low emissions, and for the products to make daily life easier for people. Vapo Group aims to continue investments in the development and production of activated carbon as well as other value-added products.

In this report we want to show that Sustainability is and will be at the heart of Vapo Group's strategy. Enjoy reading the progress in executing our sustainability strategy together with some exciting sustainability cases!



**Vesa Tempakka**  
CEO, Vapo Group

# Sustainability at Vapo Group

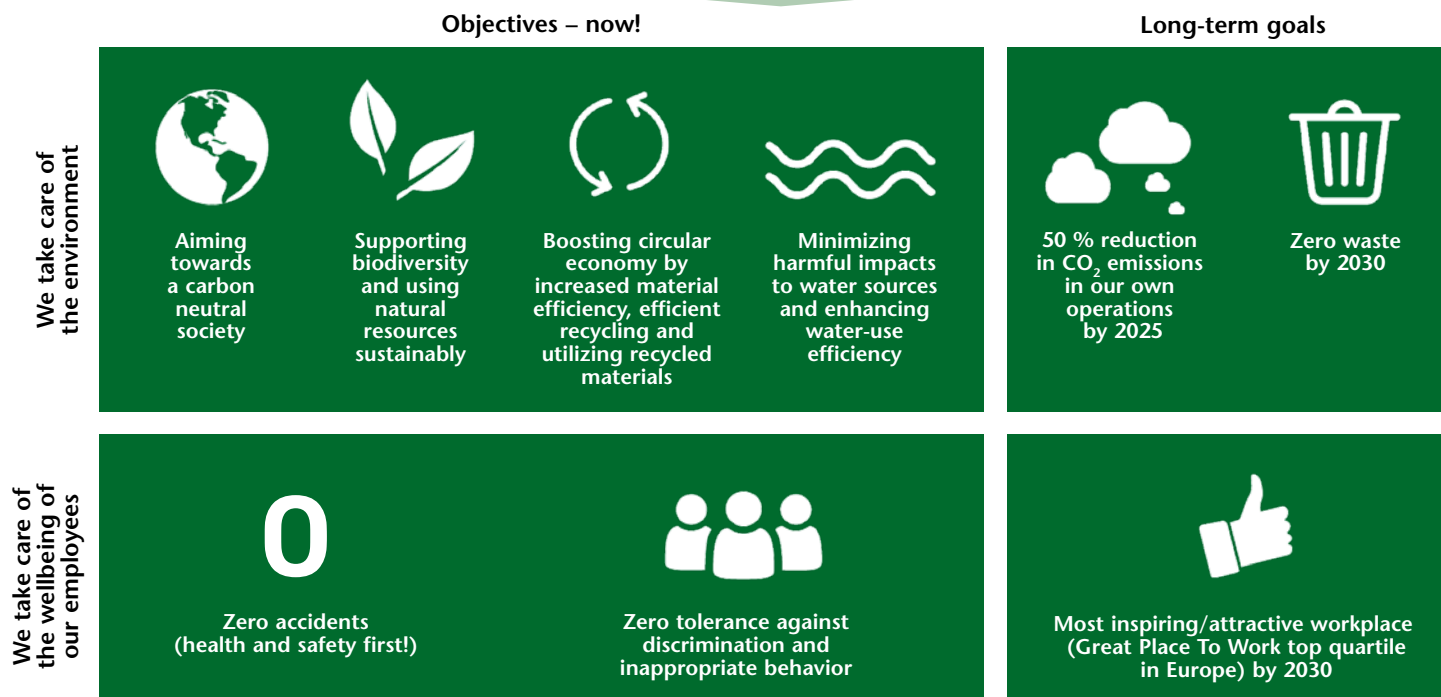
## Sustainability aim, objectives and long-term goals guiding the work in Vapo Group.

Sustainability is in the core of Vapo Group's strategy and purpose - Sustainable Everyday living. Work on sustainability has been under continuous development throughout 2020 and is integral part of the development of Vapo Group's businesses.

Vapo Group sustainability objectives and long-term goals focus on two areas: we take care of the environment and we take care of the wellbeing of our employees. Sustainability strategies and roadmaps are in place and systematically executed 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

Our sustainability objectives and focus areas are aligned with the materiality assessment that was conducted at the end of 2019. The insights from the materiality analysis strongly influ-

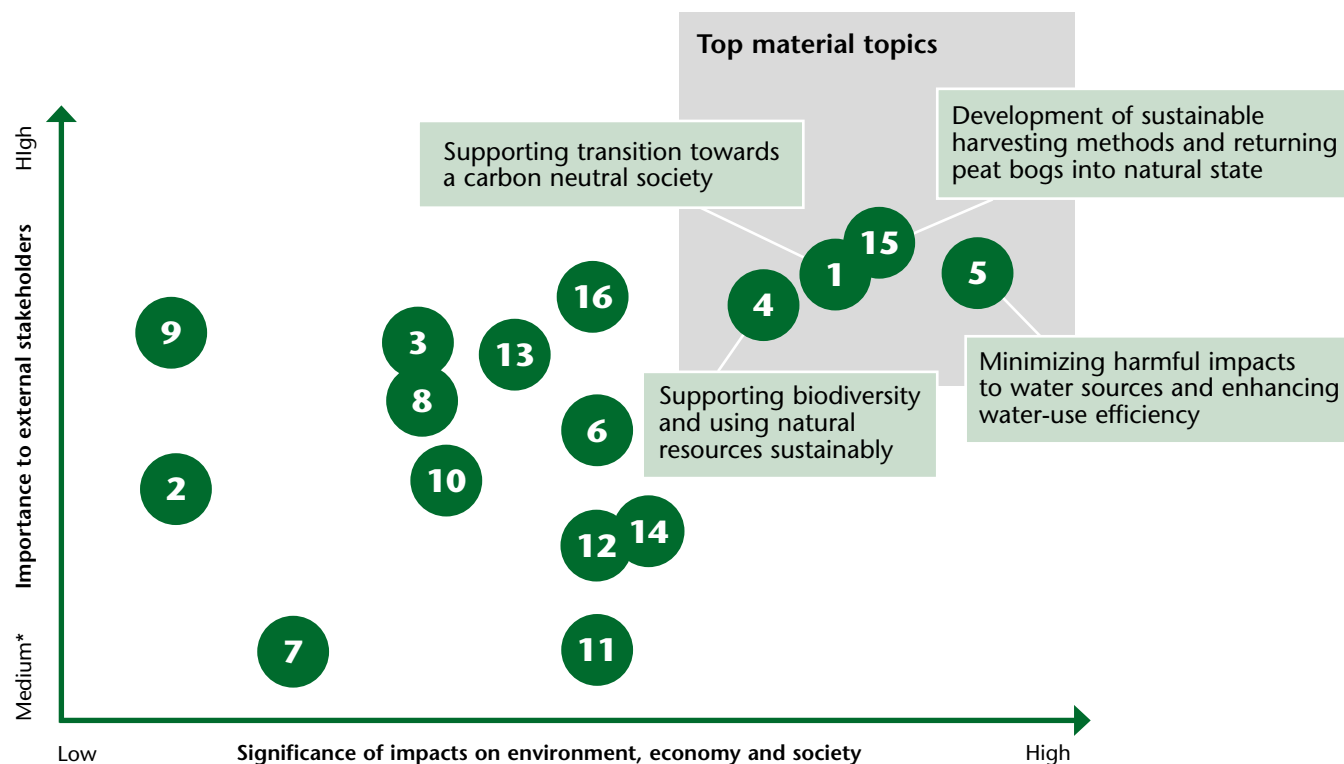
ence our approach to managing our impacts, our target setting and the content and structure of our reporting.

The environmental topics (especially low carbon transition and biodiversity) continue to be the main inter-

est of all our key stakeholders covering Group stakeholders (owners, parliamentarians, cities, NGOs, media, authorities and contractors) and business specific customers (Vapo Energy's clients, Kekkilä-BVB retail and professional customers and Novactor stakeholders).

In Finland an intensive discussion and debate on the future of energy peat has taken place throughout the year. In this discussion the importance of security of supply and financial and social impact on the peat industry have been emphasized.

## MATERIALITY MATRIX



### 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

Sustainability 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 coordinating the implementation. Business management is in charge of the implementation of the busi-

ness 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 imple-

mentation is regularly followed-up by the Audit Committee. Sustainability 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 2020 stakeholder engagement work has especially focused on the future of energy peat and alternative uses of peat.

## Key updates to our management approach during 2020

The foundation for our renewed sustainability work to fulfil our company purpose (Sustainable Everyday Living) was laid during 2019 by creating the new sustainability strategy with clear objectives and long term goals, updating our **corporate responsibility policy** (describes our operating principles in occupational health & safety, environment and quality matters) and creating new mandatory e-learning for all employees for Code of Conduct, Information Security Awareness and Safety First!

2020 has been a year of execution of our sustainability plans and communicating the progress in our sustainability activities extensively both internally and externally. Last year, we paid special focus in sustainability communication: over 100 external articles were published about us and we ourselves created over

200 sustainability posts in our social media channels as well as over 100 articles in our Vapo Group intranet site, and conducted several internal sustainability information sessions for our employees.

In the Great Place to Work survey conducted in October 2020 we got an excellent score of 4 (scale 1–5) on our sustainability work to the statement "Sustainability (corporate responsibility) is on good level in our company's operations." This is a recognition that our employees are engaged in sustainability work and that they are proud of the direction we have set for our sustainability work.

To further engage our personnel we decided to include sustainability in the short-term incentive target for all employees in 2021.

# 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. Each of our businesses has an environmental sustainability program which specifies

the most significant annual improvement targets for our operations.

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, we have carefully documented our sustainability concept for peat in Finland, Sweden, and Estonia, especially aimed for our customers and stakeholders relating to new businesses.

Our aim is to halve our air emissions for our own operations in Finland by end of 2025 from 2018. So far we have reduced them by **18%**



Our long-term target is to be net positive in our operations. We conducted a net impact assessment using [Upright Project](#) model for the Group's businesses and will use the model in the sustainability work carried out at Kekkilä-BVB, and when

developing our high value-added products further.

During 2020, the number of environmental observations decreased (year-on-year) due to COVID-19 travel restrictions, totalling to 753 (corresponding figure in 2019: 870) on Vapo Group level. In 2020, 408 people (38% of all employees) completed our internal, new online course on environmental sustainability.

## 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 in 2018 they accounted to over 80% of

Key indicator	2020	Target by 2025
CO <sub>2</sub> emissions from our own operations	<b>Finland:</b> reduction of 18% (from 2018) <ul style="list-style-type: none"> <li>• 2018: 1.02 Million tonnes CO<sub>2</sub>-eq.</li> <li>• 2020: 0.83 Million tonnes CO<sub>2</sub>-eq.</li> </ul>	<b>Finland:</b> reduction of 50% (from 2018)
Circularity of plastic packaging materials	<b>Kekkilä-BVB:</b> <ul style="list-style-type: none"> <li>• Use of recycled plastic in packaging: 17%</li> <li>• Recyclability of plastic packaging: 100%</li> </ul>	<b>Kekkilä-BVB:</b> <ul style="list-style-type: none"> <li>• Use of recycled packaging materials 80%</li> <li>• 100% of our packaging can be recycled</li> </ul>
Impact on watercourses from peat production	<b>Finland:</b> amount of water effluents from 2008 to 2020 <ul style="list-style-type: none"> <li>• Solid matter reduction by 68%</li> <li>• Nitrogen reduction by 53%</li> <li>• Phosphorus reduction by 63%</li> </ul>	<b>Finland:</b> 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>
Zero waste from our own operations	Vapo Group waste from our own operations: recovery rate 92%, recycling rate 77%	Vapo Group waste from our own operations: recovery rate 95%, recycling rate 90%

Vapo Group's total emissions. Our emissions reduction efforts will focus on:

**1) Increasing the use of renewable fuels in Nevel energy production:** In 2020 67% of the fuels used by Nevel were renewable and by end of 2021, the corresponding figure will be up to 75%.

**2) Implementing effective next land use for closed peat production areas:** Approximately 64% (2019: 57%) 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 so that our soil emissions will account for less than 50% of our total emissions in five years. Reduction of peat soil emissions from 2018 to 2020 is 51 kilotonnes, i.e. 9% less in years.

#### Other key actions:

- Conducting life cycle assessment (LCA) for growing media products as well as our new peat based activated carbons product.
- Increasing energy efficiency in our factories and production sites.
- Regular evaluation of options to increase carbons sinks utilizing our land assets.

- Pilot for an alternative horticultural peat harvesting technique using peat mass transfer method, target to reduce CO<sub>2</sub> emissions by 33% per m<sup>3</sup> of produced peat.
- Seeking for emission reductions in logistics.

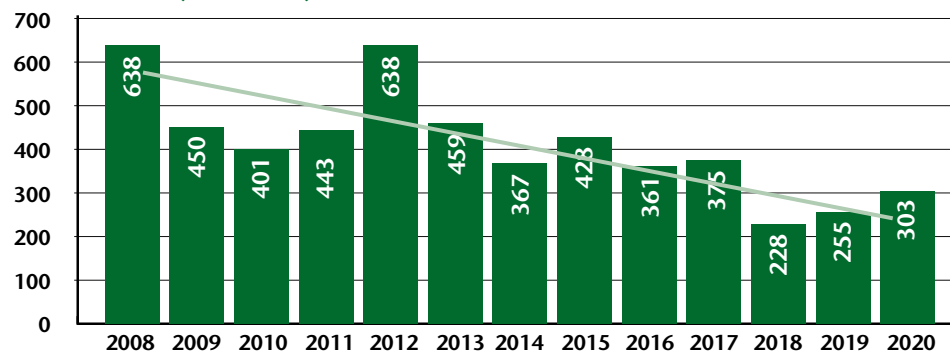
#### Minimizing impacts on water sources

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

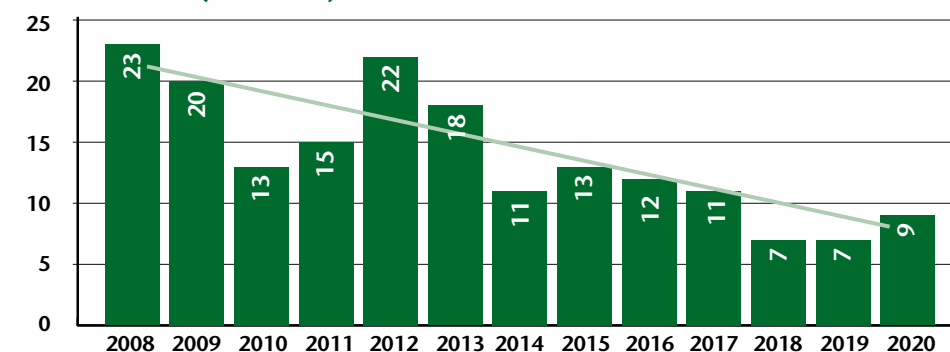
#### Other key actions:

- Improving water efficiency in all our production, with special focus in reducing water and chemical consumption in our coir production in the Netherlands.
- Improving water efficiency and water retention in our growing media products.
- Developing activated carbon from peat to purify air and water.

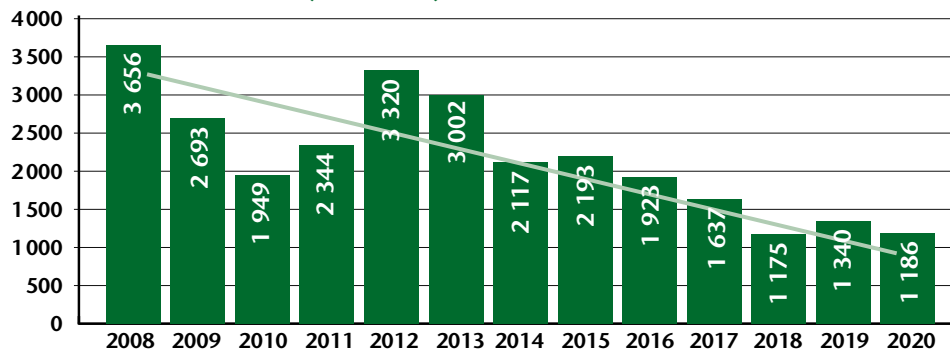
#### WATER EFFLUENT IN PEAT HARVESTING (FINLAND): NITROGEN (TONNES)



#### WATER EFFLUENT IN PEAT HARVESTING (FINLAND): PHOSPHORUS (TONNES)



#### WATER EFFLUENT IN PEAT HARVESTING (FINLAND): SUSPENDED SOLIDS (TONNES)



### Natural Resources Institute Finland (Luke) is carrying out a five-year survey (2020–2024) of the re-growth of Sphagnum moss and the re-colonization of other mire vegetation

In the survey requested by Vapo Group, the vegetation cover and composition were measured before Sphagnum moss biomass collecting. Vegetation succession and the height growth of Sphagnum moss is monitored after the collection.

Due to its characteristics, Sphagnum moss is an excellent renewable raw material for substrates. Sphagnum moss biomass is collected into the depth of 30 cm from the mire surface, at maximum. According to Luke's preliminary studies, the rotation period of Sphagnum moss biomass is predicted to be about 30 years, approximately a half of the rotation period of conventional silviculture in Finland.

According to the surveys done in 2020, sites where moss was collected 14 and 11 years ago were completely re-vegetated, thus there are no visible areas without vegetation. Also, the projection cover of Sphagnum moss generally was at the same level as before collection. On the nutrient-poorer site, also the species composition between the Sphagnum moss of drier (hummock species) and wetter growth optimum (lawn species) was almost similar to the situation before collecting. On the slightly nutrient-rich site, lawn species were still more abundant than before collecting.

According to the results of the survey, Sphagnum moss biomass is probably possible to re-collect after 30 years rotation period. The mean growth of Sphagnum moss has been clearly more than one cm per year, at least during the first 11–14 years after collecting. However, it is uncertain whether the growth of Sphagnum moss continues as fast as in the first years, and how does the humification of the deepest layers of the re-grown Sphagnum moss affect.

### Supporting biodiversity

We aim for responsible peat production. Since 2012 Vapo Group has released 5,140 hectares of mires with significant nature value to be managed by Metsähallitus, a Finnish state-owned enterprise (corresponding figure from 2019: 4,364). Regarding closed peat production land areas, the topography, hydrology, and rocks/stones influence what the best next land use option is.

During 2020, from the peat production areas owned by Vapo Group in Finland, we moved 1,153 hectares to next land use (corresponding figure in 2019: 453 hectares): 754 hectares to afforestation (2019: 356) and 402 hectares to wetlands (2019: 97). We returned 3,836 hectares of old peat production areas to landowners (2019: 1,449), in addition to selling significant areas for which the next land use is determined by the new landowner. To cover the costs of post-production obligations in old peat areas, a finan-

cial provision for environmental work is made during production.

Regarding sustainability certifications for our peat production areas, the RPP (responsibly produced peat) certifications coverage by end of 2020 has reached 548 hectares. The target coverage by end of 2021 in total 3,319 hectares: Finland 677 ha, Estonia 2,207 ha, and Sweden 475 ha. Certification applications for these peat areas have already been submitted to RPP during 2020.

#### Other key actions:

- Extending the RPP (Responsibly Produced Peat) certification for growing media: Kekkila-BVB target is to achieve 80% RPP certified peat volume by 2024.
- Enabling growing of food and plants in urban environments through Kekkila-BVB products.
- Increasing biodiversity in our peat production areas to reduce the impact of our operations to the nature by creating small wetlands, and building nesting or shelter areas.



In 2020, Vapo sold **1,063 hectares** of bogs of significant nature value to the government of Finland for conservation purposes.



## Boosting circular economy

Our target is to progress towards our zero-waste by 2030 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 pellet, power & heating plants as fertilizer or landscaping material as well as increasing the use of recycled packaging materials in Kekkilä-BVB to 80% by 2025. In peat operations, we continue to focus in recycling the plastics used to cover the peat stockpiles. During 2020 we disposed for reuse a total of 8,844 tons of old stockpile plastic in Finland, Sweden, and Estonia: 63% as recycled material and 37% as energy.

### Other key actions:

- Making growing media of composted waste streams (e.g. grass, leaves, vegetable stems).
- Piloting new ways to reduce plastic waste in peat production as well as packing materials.
- The Vapo Refinery R&D program (2020–2022) to speed up the development of high value-added products from organic wetland biomass and other bio-based raw-materials.

## RPP responsibly produced peat certification almost completed for two peat production areas in Estonia

More and more horticultural peat is constantly needed to satisfy the demand for food produced nearby. That is why we in Vapo Group want to support the use of RPP responsibly produced peat raw material as a growing media.

In Estonia we submitted RPP applications for peat production areas Lavassaare and Elbu, total area 2,290 hectares and Pööravere, 445 hectares, in the end of 2019. RPP organization carried out the production area assessment in summer 2020, site inspection in autumn 2020 and the final revision round in December 2020. The COVID-19 travel restrictions raised doubts to whether and in what way we could complete the process, but the RPP management found a good solution in the form of a "remote audit".

The monitoring plan for Lavassaare and Elbu area has been sent to RPP organization for final approval. Pööravere production area certification approval is postponed due to changes in area boundaries during a minor environmental permit change in 2020 summer. Boundaries have to be checked again when snow melts. We expect to get the RPP certification completed for these areas in 2021.

The national legislation of Estonia already requires all the same criteria as RPP, which made the process smoother.

Next two RPP areas in Estonia will be Leva and Sooniste production areas in Harju county, total area 481 hectares. Applications will be submitted during 2021.

## Already two or three correctly timed samples yearly can give a reliable estimate of the total water load

The Vapo Group has collected comprehensive temporal and regional data on the use of continuous measuring for water quality and load in peat production in Finland. Data was utilized in a collaborative study between the University of Tampere and Vapo to investigate the reliability of the current manual monitoring method and to develop a new method for estimating the concentration of suspended solids for peat areas. The study showed a strong correlation between manual and continuous measurement.

Therefore, the existing emission monitoring based on manual sampling is a very reliable way to determine the annual emissions from peat production. The results of continuous measurement show that 50% of annual peat

production water effluents are generated in an average of 40 days.

Another significant improvement in the study was the development of a method utilizing a genetic algorithm to optimally determine sampling times so that the estimation of annual emissions is as accurate as possible for a certain annual number of samples. The optimal measurement times determined based on the study focus on spring and autumn when the flows are at their highest.

When site-specific flow measurement is continuous, in most production areas, already 2–3 correctly timed samples can give a reliable estimate of the total water load.

# We take care of the wellbeing of our employees

**We are committed to zero accidents and we have zero tolerance to inappropriate behaviour 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 wellbeing 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 business divisions and functions. In 2020 Vapo Group accident frequency rate (lost time acci-

dents over million working hours) was 7.2, with 7% increase from last year (2019: 6.7).

A significant improvement took place in the Netherlands, where the accident frequency rate dropped by 40%. Most of our accidents, and especially serious accidents, occur in production operations. Looking at the past three years, 23% of the cases are defined as serious accident or serious near miss accident (19 out of 81).

To improve and harmonize our safety culture, we focused in safety training in 2020. On Group level, 97% of all operations employees completed our internal Safety First! e-learning module, and 87% operations employees received additional exter-

Trust Index, which measures our employee experience, is **68%**, and up 5 percentage points from 2019 – excellent result!



nal safety training. We are also tracking our contractors' accidents in our operations, conducting an accident investigation together with them. Due to traveling restrictions caused by COVID-19, the number of safety observations decreased by 15% (year-on-year), totalling to 3,986 (corresponding figure in 2019: 4,709).

## Engagement and wellbeing of our employees

Vapo Group participated in the [Great Place to Work](#) personnel survey for the second time in 2020. This made the comparison possible with the previous year's results. Our Trust index being 68%, went up 5 percentage points

Key indicator	2020	Target by 2025
Accident frequency (LTA1)	Group: 7.2 -> 7% increase (2019: 6.7)	Group: year-on-year reduction by 25%
Accident frequency (MTR)	Group: 16.1 -> 11% reduction (2019: 18)	Group: year-on-year reduction by 25%
Reported inappropriate behaviour cases	Group: 9 reported cases; all reported cases investigated and followed up	Group: zero tolerance; all reported cases investigated and followed up
Great Place to Work Trust Index	Group: 68% -> 5 percentage points increase (2019: 63%)	Group: year-on-year increase by 3 percentage points

from 2019 which is major leap forward on our journey to become one of Europe's best workplaces by 2030. The response rate remained at high level in 79%, showing strong personnel commitment to develop the company culture. The single statement 'Taking everything into account, I would say this is a great place to work' was positively rated by 75% of personnel compared to 69% previous year.

Survey has brought new perspectives and clear benchmarks for the development of our working culture, leadership, and shared ways of working. Results were based on previous planned actions to improve clarity of shared goals, two-way communication, and wellbeing, made on Vapo Group level, but also on team level and followed up during the year.

We continued to measure discrimination and inappropriate behaviour to pay attention to one of our core values, "Trust through respect". Line manager training was started in the Netherlands for how to recognize and handle possible situations. We will continue to strengthen the awareness of the Zero Tolerance principle in all countries during 2021. The Group Management Team follows up the number of reported cases on monthly

basis. COVID-19 most likely impacted the amount reported cases as they went down after moving to remote work.

The global pandemic prevention was the main common wellbeing action in 2020. Other country-specific actions focused in early phase support for wellbeing at work, e.g. shortening long sick leaves through increased individual support activities and in Finland also introducing availability of online services to the occupational health care.

### **Competence development**

License to Lead program providing a full view for people processes and principles was introduced in 2020 as a common basic leadership training program. Part of the content was tailored based on the interest of the participants. As part of continuing the harmonization of ways of working across countries, the program was, in addition to new line managers, also provided to all Dutch and German line managers. Establishing the practice of all teams defining their competence development plans was one of the shared actions based on the personnel survey for 2020.

### **Our wellbeing actions and COVID-19 coordination have been appreciated**

COVID-19 task force representing all countries and businesses worked on regular basis during the year sharing best preventive practices on sites. Local coordinators were named to support personnel with local COVID-19 related practical challenges. In 2020, the actual COVID-19 cases in the Vapo Group companies was very low, total of 20 in all countries.

In both April and September 2020 Pulse Surveys 73% of the respondents indicated that their wellbeing at work is good and the COVID-19 related communication has been good. COVID-19 has challenged everyone working in production with extra precautions or in the office meaning working mostly remotely. COVID-19 related restrictions have challenged also those working in operations

Wellbeing activities have been offered as online self-services available for everyone in the intranet to support both physical and psychosocial health in remote work. Lack of social network and work community is a challenge for line managers based on both Pulse Surveys and the **Great Place to Work** Survey 2020. Balancing work and private time with workload seemed to be the greatest challenge for our personnel who are working from the home office, and especially for line managers. Online wellbeing webinars have been offered for home office ergonomics and for keeping the spirit up.

Our value, "Trust through respect" has been put in practice; open comments in all surveys have shown that our personnel respects the trust and the flexibility that the employer has shown in different individual situations and the same can be said vice versa in this very unique and continuing period of work life.

## We contribute to the benefit of the society

### Vapo Group has locally a significant economic and employment impact.

Vapo Group companies pay all statutory taxes, based on their own business operations, to the country in which they operate. None of Vapo Group companies have unpaid taxes. Vapo Group administration is responsible for the implementation of the 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 Vapo Group's main operating countries of Finland, Sweden, Estonia, and the Netherlands. Vapo Group's total gross investments in 2020 were EUR 82.8 million (corresponding figure in 2019: EUR 79.8 million), or 175% of the amount of depreciation (corresponding figure in 2019: 156%).

Investments in the activated carbon production facility in Ilomantsi, Finland 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) totalled EUR 66.9 million in 2020 (corresponding figure in 2019: EUR 58.9 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. Considering this assessment, we decided in November 2020 to discontinue energy peat production at 123 production sites (40% out of total 307 sites in Finland). This also meant a write-down of approximately EUR 100 million on our peat assets.

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

#### Paid taxes 2020

Finland	<b>25.1 M€</b>
Sweden	<b>9.2 M€</b>
Estonia	<b>2.5 M€</b>
Spain	<b>0.2 M€</b>
The Netherlands	<b>6.6 M€</b>
Germany	<b>0.3 M€</b>



#### Investments in 2020

Gross **76.6 M€**

Net **59.1 M€**





## Sustainability with our suppliers and contractors

**Supplier Code of Conduct (CoC)** is an important part of our sustainability and we need to ensure that our suppliers share and respect our values. During 2020 we updated the Supplier CoC signature with 119 suppliers. Our target for CoC coverage includes those 137 suppliers with whom the annual business value exceeds EUR 300,000 and their CoC signature was from before 1.1.2018. During 2021 Supplier CoC is implemented to all new purchasing contracts.

In 2020, we extended the monitoring accidents and safety observations

also to our contractors. 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 2021 in Finland alone we have 100 main contractors with roughly 750 people including their employees or sub-contractors, and approximately 80 peat transportation contractors plus 150 contractors in other operations.

In 2020, all of our main peat production contractors in Estonia participated in half day standardized occupational safety training, and safety topics were included in peat contractor season kick-off meetings in Finland, Sweden and Estonia.

**New Supplier Code of Conduct implemented in**  
**87%**  
**of the contacted suppliers during 2020.**



## Securing supply of fuel to our Finnish customers during COVID-19 restrictions and lock-down

Even before the formal COVID-19 restrictions in Finland, Vapo Group started planning and instructing our staff and contractors to secure the fuel deliveries to customers. A small task group was established to gather information from authorities and from customers and to create instructions and procedures for the supply chain members to prevent COVID-19 infections and to ensure smooth customer deliveries.

The actions included purchasing of protective materials for the supply chain and e.g. creating procedures where one vehicle or a loader is driven by only one or few pre-defined persons. Many customers issued their own restrictions that were immediately distributed to the relevant delivery organization. During the Uusimaa region lockdown Vapo issued permissions to all customer delivery critical parties.

In the fall when the COVID-19 situation again got worse all the restrictions and preventive actions were already the new normal, so it didn't cause any additional actions. Naturally even in the fall the situation was carefully monitored to secure that the instructions were followed.

Despite the COVID-19 restrictions from both the authorities and the customers, the customer deliveries run smoothly and without any major issues. Also, the personnel involved in the supply chain was successfully kept safe.

# Kekkilä-BVB – Growing together for a better future

Our strategy has been to grow extensively outside of Europe and in our home markets through excellent leadership and best in business operational efficiency.

Kekkilä-BVB has a turnover of EUR 300 million, employing over 550 people in Finland, Sweden, the Netherlands, Germany, Estonia, and Spain. Our main markets today are in the Nordic countries and the Netherlands and our products are available globally in more than 100 countries. Our main customer segments are professional growers, retail and consumers, landscapers, and raw material customers.

We have an important role to play in mitigating the current food crisis caused by growing populations, degrading agricultural land, water scarcity and extreme weather patterns caused by climate change. We also play a significant role in bringing the joy of gardening to people to increase health, wellbeing, and the community feeling. On a larger scale we use

## KEY PERFORMANCE OVERVIEW

Focus area	KPI	2020 (2019)	Target 2030
<b>Flourishing people</b> <ul style="list-style-type: none"> <li>We enhance the health, safety and wellbeing of our employees, customers and partners in the value chain</li> <li>Kekkilä-BVB is an inclusive and inspiring workplace</li> </ul>	Great Place to Work Trust Index	68% (63%)	80%
	Lost time accidents frequency ( $\geq 1$ day)	6.7 (11.5)	0
	% signed Supplier Code of Conducts and/or suppliers audited*	81%	>99%
<b>Sustainable food &amp; living</b> <ul style="list-style-type: none"> <li>Through collaboration with suppliers and customers we aim for a carbon neutral society</li> <li>Our innovations contribute to sustainable solutions for growing, gardening and the built environment</li> </ul>	C2G CO <sub>2</sub> footprint**	Baseline t.b.d.	-30%
	# of new innovations supporting sustainability	3	30
<b>Green growth &amp; recycling</b> <ul style="list-style-type: none"> <li>Through collaboration we aim to create a more circular value chain and optimally use locally available raw materials.</li> <li>Our own operations create zero waste</li> </ul>	% of recycled plastic in packaging	17%	80%
<b>Biodiversity &amp; restoration</b> <ul style="list-style-type: none"> <li>We will enhance biodiversity in urban areas in a proven way</li> <li>We ensure that sourcing and processing of raw materials is done in an environmentally sustainable way</li> </ul>	% of certified responsibly produced peat	25% (22%)	95%

\*Our target for Code of Conduct coverage includes those suppliers with whom the annual business value exceeds EUR 300,000 and their CoC signature was from before 1.1.2018.

\*\*C2G stands for Cradle-to-Gate, meaning from sourcing of raw materials to the finalized product at our factory gate. In 2021 the C2G footprint is determined and the baseline set based on 2020 data. Targets are relative to the 2020 baseline and relative to production volume.

our expertise to ensure that urbanization leads to healthy, biodiverse and climate proof neighbourhoods.

We have focused on being the most transparent and collaborative company in the industry providing inno-

vative, helpful, and easy digital solutions to our customers. We are eager to invest in new opportunities to

# Growing together for a better future

## Flourishing people

- We enhance the health, safety and wellbeing of our employees, customers and partners in the value chain.
- Kekkilä-BVB is an inclusive and inspiring workplace.



## Biodiversity & restoration

- We will enhance biodiversity in urban areas in a proven way.
- We ensure that sourcing and processing of raw materials is done in an environmentally sustainable way.



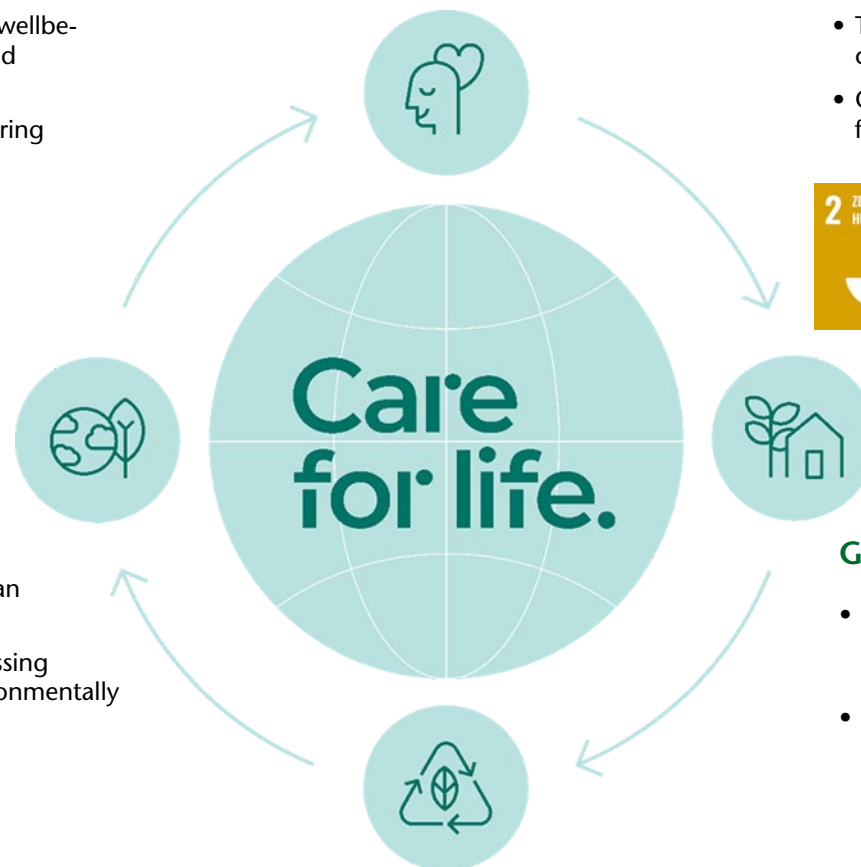
## Sustainable food & living

- Through collaboration with suppliers and customers we aim for a carbon neutral society.
- Our innovations contribute to sustainable solutions for growing, gardening and the built environment.



## Green growth & recycling

- Through collaboration we aim to create a more circular value chain and optimally use locally available raw materials.
- Our own operations create zero waste.



grow and support our customers with the best knowledge of sustainable growing practices. Our aim is to have the most satisfied and loyal customers and employees in the industry.

## Our sustainability focus areas

We have four sustainability focus areas and have set concrete and measurable KPI's to steer our progress in improving our positive sustainability impact.

### Achievements in 2020

Our overall sustainability target is to improve our net positive impact every year. Being net positive means that we contribute more to the world than we take from it. We currently evaluate net positivity through the [Upright Project](#) net impact model. This tool uses over 200 million scientific publications to determine the positive and negative impact for 19 focus areas covering society, knowledge, health, and environmental topics. The final result showed that we are overall a net positive company, with a score of +4.4.

The main reasons for the positive impact of Kekkilä-BVB are explained by the Upright Project net impact model as follows: *"Soils as well as vegetable, fruit and herb substrates play a*

*part in the cultivation of healthy foods, and thus they positively impact both healthy diets as well as the prevention of diseases. In addition, green roof substrates, lawn soil and horticultural substrates contribute positively to biodiversity."*

Another great achievement in 2020 was the development of a sustainability checklist for investments in our site operations. The checklist takes all of our sustainability focus areas into account whenever an upgrade is made to the production processes. This means decisions take into consideration the impact on health and wellbeing, energy efficiency, waste prevention and other aspects of our sustainability focus areas.

### Focus area: Flourishing people

As Kekkilä-BVB we want to take care of the wellbeing of our employees and our partners. We ensure equal opportunities, good working conditions, safe working environments and engaged employees that are happy to work for and with us. We play a significant role in bringing the joy of gardening to people to increase health, wellbeing, and the community feeling. In whatever we do we aim for flourishing people.

This year has proved to be a good year regarding safety and wellbeing of our own employees despite the COVID-19. We were already used to distance working and were able to quickly take all the needed safety measures to prevent the spread of virus also at the factories. The increase in employee satisfaction from 63% to 68%, as measured by the [Great Place to Work](#) Trust Index, in this challenging year shows that we are focusing on the right issues. Our safety performance showed improvement as well, across all Kekkilä-BVB countries. The lost time accident frequency reduced by 41%, while the medical treatment accident frequency reduced by 34%. Getting to zero accidents will still require a lot of effort, but it will remain our ultimate goal.

We've also continued our collaboration with our suppliers to become more sustainable together. Over 80% of the contacted suppliers have already signed.

### Focus area: Sustainable food and living

One of the biggest challenges of our time is climate destabilization that impacts the way we can fulfil our basic needs like food, water shel-

ter and wellbeing. Through collaboration with suppliers and customers we can reduce the amount of carbon emissions in the value chain and aim for a carbon neutral society by 2050. Also, our efforts in innovations and partnerships aim to improve the sustainability of our solutions. Interesting developments from that perspective have for instance been the increased use of Sphagnum moss (also known as Accretio), a renewable growing media constituent, as well as further experimentation with smart growing to optimize irrigation effectiveness. The coir case shows that we are also active in improving the water consumption in the value chain.

We are working to understand the lifecycle CO<sub>2</sub> footprint of our portfolio. Together with Growing Media Europe, which presents the growing media producers at European level we are currently updating the calculation methodology and emission factors to be used. We expect to be able to communicate about our full carbon footprint during 2021.

Taking only our operations into account, on average 1.5 kg of CO<sub>2</sub> is emitted per cubic meter of produced growing media. We are work-



ing hard to reduce our carbon footprint further. In the Netherlands, for instance, we are already producing 25% of our electricity consumption through solar panels on our own roofs. For transporting raw materials to our production sites, we emit on

average 7.4 kg CO<sub>2</sub> per cubic meter. We aim to reduce this by optimizing routes, modal shifts and local sourcing where possible.

In our [Grow21 video lounge](#) you can find quite a few interesting presen-

tations on [the future of horticulture](#), smart growing and [climate change](#).

### Focus area: Green growth and recycling

There are several ways we can contribute to a more circular economy. First of all, in the choices we make regarding which raw materials we use and how we use them. And secondly by designing our packaging in a way that

enables reuse or recycling. Choosing local raw materials will help reduce logistical emissions as well, but first and foremost our products should fulfil the needs of our customers as well as possible. By sharing knowledge and experience in the value chain we hope to contribute to a more circular economy.

This year we've focused to further improve the circularity of our packag-

### Saving water in our coir production process

A lot of water is used within the coir production process to ensure safe use and top quality. Water is needed for both washing and buffering coir. When we receive the coir from producers in Asia (mostly India and Sri Lanka) it has been washed, dried, and compressed on site. In order to optimally prepare it for use in growing media we take it to our factory in the Netherlands for expanding, buffering and washing.

In the past our suppliers used to do all the buffering as well. We noticed that more water was used than necessary in these processes and decided to act on this. By moving part of the buffering to our own production sites, we increased water use efficiency. In general, we save about 10% on water consumption, but for some types of coir even up to 30%.

Another environmental benefit is that the water used for washing and buffering goes to water treatment facilities in the Netherlands. At the harvesting locations the wastewater from buffering would end up on the plantations. And although water is beneficial for the trees, the salts in the wastewater are not. These salts will negatively affect groundwater and plant growth and in the end will require even more water to be used for washing the next batch of coir. In addition, the fine coir particles left in that water form a solid top layer on the soil. This causes a lack of oxygen in the soil.

It is safe to say that moving part of this water-using process to the Netherlands lowers the environmental impact in India and Sri Lanka.

### Teuva composting plant closing the loop

In Finland, Kekkilä-BVB has four composting plants that process organic wastes from municipalities and industry including greenhouse wastes, like plant materials and our own used substrates. Thanks to these composting plants approximately 90,000 tonnes waste obtains a new purpose. The recycled fertilizers and compost generated as the end product get utilized in landscaping and local agriculture. At our [Teuva composting plant](#), we have almost completely closed the substrate loop together with our customers:

1. First, we provide our customers with substrate material that best fit the selected crop and intended growing conditions.
2. After the growing cycle has completed, we will pick up the used substrate materials and bring them to our composting plant.
3. After processing the resulting compost will be used for substrates for landscaping, the consumer market and as soil improvers for local agriculture.

We are especially proud that the quality of compost from our own used substrate materials is at such a level that it's suitable for the organic horticultural production and nutrients can produce new growth again. This way we can contribute to the circular ambitions of our growers as well.

ing. On average our packaging material contains about 17% of recycled plastic. We are already able to provide packaging with up to 80% recycled plastic material in Germany for the retail market. All of our plastic packaging is 100% recyclable; however, it depends on local infrastructure what the actual end of life destination of the packaging will be.

When it comes to the circularity of our raw materials, we are currently developing the baseline calculations, so we can report about our performance in 2021 and onwards. Estimations show that currently about 15% of the raw materials we purchase are reused, recycled or renewable materials, while almost all of the products we sell can be reused, recycled or composted. The Teuva composting case is one of the best examples on how to make our value chain more circular and optimize the value of growing media throughout the life-cycle.

### **Focus area: Biodiversity and restoration**

In the way we do things and how we serve our customers we are continuously looking for ways to regenerate the ecosystems around us.

Through our landscaping solutions we can contribute to green and bio-diverse urban areas by enabling the creation of green roofs, facades, and green areas. The City of Eindhoven case study is a clear example on how we positively influence biodiversity in urban areas. In the sourcing of our materials, whether coir, peat, wood fibre or something else, we make sure that production and harvesting is done in a responsible way. We expect the same from our partners and will follow that closely. When it comes to responsible peat production, almost 25% of the peat we have procured in 2020 was **RPP (Responsibly Produced Peat)** certified. We are looking into the possibilities of third-party certification of other raw materials as well, although actual responsible production and harvesting of raw materials comes first.

If you want to know more about how biodiversity plays a role in our business, we recommend to have a look at our **Grow21 videolounge** for presentations on **green urban developments**, **soil biodiversity** or **Responsibly Produced Peat**.

### **Creating a vertical forest in the City of Eindhoven**

Together with a great group of other companies we are creating **the Trudo Tower in Eindhoven**, the first vertical forest in the area. As Kekkila-BVB we are extremely proud to have contributed to this complex project, initiated by Sint-Trudo and intended for social housing. When finished, every balcony will have its own tree and other vegetation and will contribute to absorbing 50,000 kg of CO<sub>2</sub> annually. In total 70 different plant species will help create a healthy, biodiverse and climate proof building in the centre of Eindhoven. The basic needs of all trees consist of nutrients, space, air, water, and light. To fulfil this on a building of 70-meter-high can be quite challenging, especially when only four cubic meters of soil is available at each planting site on the tower.

To ensure that the four cubic meters of soil will not become too dry or too wet, sensors have been added as well as an irrigation and draining system. This way the vegetation can survive in any weather condition. The soil itself has to accommodate the vegetation from a physical, chemical and biological perspective as well. The closer the soil resembles the natural environment of the vegetation, the better it is. The substrate used for the soil in the Trudo Tower does exactly that. In addition, nutrition has been added to the substrate for the vegetation to survive the first years. A specific fertilization schedule has been made to ensure the vegetation will survive as long as the tower stands. Finally, the top of the substrate is covered with mulch to protect the substrate against heat and erosion.

When developing the planting sites, safety has been top priority. To prevent vegetation from being blow over or falling down the substrate has an important role to play as well. The substrate has a relatively high weight compared to the volume, has plenty of space for roots to grow and it is very 'sticky' from the roots' perspective so that the vegetation can hold on to the substrate when the wind is blowing hard. The water buffer at the bottom of the substrate ensures intensive root grow will take place at the bottom, adding to the stability of the planting site.

The building of this vertical forest will be finalized in 2021. And we can't wait to see the final result.

# Nevel – Taking utility infrastructure to the next level by optimising energy production and investing in renewable energy

## Nevel continues its focus on sustainability.

Nevel, established in 2019, answers the market need for advanced industrial and municipal infrastructure solutions for the benefit of customers and the surrounding societies. During 2020, Vapo Group announced its decision to map out strategic options for its heat and power business incorporated as Nevel. Based on the evaluation process, Nevel was sold to Ardian, a world leading private investment house. The transaction between Vapo and Ardian was completed in January 2021 and Nevel has transferred to new ownership.

Nevel operates more than 130 energy production sites and over 40 district heating networks with unique industry leading digital operations and maintenance platform.

## Achievements in 2020

Nevel works towards carbon neutral future by investing in renewa-

ble energy and by creating sustainable transition roadmaps together with customers.

Nevel's target is 75% renewable energy production by end of 2021.

During 2020, Nevel's share of renewable energy was increased to 67% (corresponding figure in 2019: 54%): Finland 61% (2019: 46%), Sweden 97% (2019: 94%) and Estonia 18% (2019: 7%).

Measures to improve the level of renewable energy production included e.g.

- Improving the fuel mix and increasing efforts in ensuring availability of fuel via enhanced sourcing approach.
- Further tests were conducted at production sites e.g. Lieksa and Karkkila for transitioning from fossil fuel use to increasing level of renewable energy.
- Changes and updates in digital operations and maintenance practices.

Nevel's share of renewable energy increased from **54%** to **67%**  
(2019) (2020)



## 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.

### **Green Heat solution is an economical way to generate 100% renewable energy**

Nevel piloted its first Green Heat solution at a new school building operated by its long-term partner the City of Forssa, due to be finished in 2022. Nevel's Green Heat solution enables customers to develop their sustainability credentials and is an economical way to generate 100% renewable energy. The project represents the first pilot case for Nevel's Green Heat solution and delivers CO<sub>2</sub> -neutral district heating for the city.

In Forssa, Nevel has also piloted a combined heating and cooling solution that generates cooling for a new school building in the city. Rather than being pumped out of the building and going to waste, the excess heat generated from cooling is then fed to Nevel's district heating network.

### **"Food valley" is an example of sustainable food production**

"Food valley" in Bjuv, Sweden is a cluster of food industry companies striving towards industrial symbiosis, cooperation, and who utilise all potential side streams and material flows to enhance local circular economy. Target is sustainable food production, enhancing sustainable society and common infrastructure.

One of the projects focuses on utilisation of excess heat, which can be utilised in heat for local bus stops and bike routes. This minimises maintenance need during winter, and risk for hazards. Nevel's district heating network acts a platform where 100% renewable energy is utilised and provides a possibility for utilising excess heat from industrial processes.

During 2020 the global pandemic caused a need for extraordinary measures in regard to health and safety. Nevel ensured the availability of energy for customers and district heating networks based on its processes, as well as a contingency plan. We followed procedures for keeping operations and customer service operational.

The procedures concerned our personnel, fuel supply, as well as operations and maintenance. These covered e.g. measures for following health and safety guidelines, limiting exposure to any external contacts at the sites and remote operations centre, site specific contingency plans and co-operation with customers.



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

### The fuels 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 70,000 hectares in Finland.

### Achievements in 2020

According to the consumption forecasts of Vapo Group's fuel customers in Finland, the demand for energy peat will fall to half of the current level by 2025. The reasons for this are the fivefold increase in the price

of emission rights in three years, and the decision to double the tax on energy peat resulted in an unparalleled decline in energy peat sales in 2020 in Finland. Considering this, we decided to discontinue energy peat production at 123 production sites (40% out of total 307 sites in

Finland). This also meant a write-down of approximately EUR 100 million on our peat assets in November 2020.

Although the need for peat will increase for other businesses than in energy use, we believe we can reduce

### 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.

### 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 reliably, and at a competitive price, in order to enable sustainable district heating for households and real estate. It also supports the transformation towards a carbon neutral society.



significantly the land reserved for peat production over the next years. This will directly reduce our emissions to air.

During 2020, the suitability of Vapo Group's real estate properties for wind power development was investigated. Many preliminary potential sites were identified. These possible wind farm areas consist of both Vapo Group's own land areas and the surrounding properties of private landowners.

Five project areas were selected and prepared more actively. Each of these projects consist roughly 8-35 wind

turbines. In total, the projects cover about 100 wind turbines and have a total capacity of around 700–800 MW. Year 2021 will show how the projects will be moved forward. Successful land leasing and a positive zoning decision by the municipality are essential to proceed. Target is to have many projects in zoning phase during this year, supported by environmental impact assessment. However, it is important to notice that not all projects progressing to development phase will eventually be realized due to various risk factors. During 2021, more potential wind farm project locations will also be investigated.

The share of biofuels clearly increased from previous year and was almost **a third** of our fuel deliveries to customers in 2020



### Uusi Lähdeniitty residential area is heated with Vapo's pellets

The residential area Uusi Lähdeniitty in Nokia, in southwestern Finland, has its own district heating system that uses Vapo's pellets as fuel. From the very beginning, the design and construction of the residential area has aimed at producing heat for homes from one pellet heating plant. The solution is exceptional in Finland. Nokian Biolämpö Oy provides the heating services for the properties. It is a subsidiary of Halesa Oy, the main developer of the residential area.

The advantage of pellets as fuel is purity, security of supply and low price, and it is domestic. The home buyers wanted to find the most affordable form of heating in the area to impact the living cost. A pellet heating plant is a durable and clean solution.

Nokian Biolämpö Oy's heating center has two pellet boilers of different sizes with capacities of 300 and 700 kW. The more efficient boiler is

mainly intended for winter use, while the smaller boiler has enough power for summertime heating. The boilers also act as backup boilers for each other during maintenance operations.

Several different construction developments are underway in the area of Uusi Lähdeniitty. In the next few years, new terraced house properties and detached house properties will be built in the residential area. They will also warm up with pellets.

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

**We develop sustainable Vapo Refinery concepts, where all raw-materials and side-streams are utilized according to principles of circular economy.**

We want to develop net positive products having social, environmental, and financial benefits. In 2021 we will study more closely the sustainability of our new biostimulant products.

### Achievements in 2020

During 2020 we developed peat-based humic substances to be used as biostimulants in rapidly growing international agricultural and horticultural markets. Based on thorough growth response testing we have found out, that our humic substances are competitive against leonardite-based commercial product. This year, we continue development of products in order to start commercial production in 2024. We are also investigating plant-based biostimulants from Sphagnum moss and other natural

raw materials to create added value for our customers through strong biostimulant product portfolio in the future.

In 2020 we studied integration benefits of biostimulants and activated carbon processes and found out considerable refinery synergies. We are continuing to research and maximize synergies of different products and processes according to circular economy and sustainability principles also in the future.

In addition to biostimulants, we studied peat-based waxes and resins production possibilities and utilization of valuable compounds of Sphagnum moss. We started a new project aiming to develop novel feed components from organic wetland raw materials to improve animal well-being and feed efficiency.

In all our refinery projects, we develop products together with potential customers to ensure that products are compatible with market needs. We also collaborate with

**We refine new types of products for the international markets that can enhance clean food production, promote air, and water purification and create healthy living environments.**



research institutes and universities having external stakeholders involved in the projects.

### Boost to the circular economy through R&D program

The Group's research and development investments during the financial year 1 January–31 December 2020 amounted to EUR 27.2 million (EUR 10.7 million), which corresponds to 5.0 per cent of turnover (3.5%). Research and development activities were focused on supporting the company's strategic renewal in all of the Vapo Group companies.

Vapo Group started a new multi-year Refinery R&D program (2020–2022) with the support of Business Finland.

The Refinery program speeds up the development of high value-added products from organic wetland biomass and other bio-based raw materials. In the first place we are utilizing peat and Sphagnum moss selectively and sustainably by increasing their added value remarkably.

We have a strong collaboration especially with the University of Jyväskylä, where Vapo Ventures product development laboratory is located. In addition to that a new team was set up to the university for biomass research aiming high level scientific research, while also taking development needs of the industry in consideration. In-depth expertise is needed to understand better attributes and functionalities of the new products.

## Novactor: With modern technology to lowest emissions

**Novactor** Activated Carbon factory in Ilomantsi in Finland is the most modern and environmentally friendly production facility in the world. We will replace Chinese and north American coal-based import of activated carbon with our offering and thus cut the carbon footprint, when shipped to European customers, even down to one third. European manufacturing will also significantly re-

duce the cost and emissions of the activated carbon used in Europe.

Reducing the carbon footprint of manufacturing has been very high up in the agenda of Novactor Team. But environmental responsibility goes far beyond that in our Ilomantsi facility. As a side product of the factory, we produce vast majority of the

district heating energy needed in the municipality of Ilomantsi. This has been made possible with the good co-operation with the local municipality.

For the reduction of NO<sub>x</sub> -emissions we use Finnish leading-edge technology. With this technology we avoid using any unnecessary chemicals during the flue gas treatment.

## Novactor: Activated Carbon manufactured from renewable biomasses

Novactor target is to become a leading provider of activated carbon manufactured from renewable raw materials. Absorption characteristics of the end product are very strongly linked to the raw material used. Finnish natural biomasses offer Novactor a very good base for a wide portfolio of high-quality activated carbon products.

Hard and softwood side streams from Finnish wood industry have been tested in our R&D lab-

oratory and production process. Test results have been promising and we will introduce a portfolio of products soon after the start of the first production facility. This will also give us a larger variety of products for different end uses and applications.

Latest addition to our development pipeline has been willow. Willow as a fast-growing biomass has been extensively studied in Finland for energy use as well as for afforestation of waste land, such as

old peat production area.

As a raw material of activated carbon willow is an interesting addition that we are looking into with great interest. Our R&D tests have revealed great potential and unique characteristics in the end product, but also an opportunity to create a truly "green activated carbon" product with even a negative CO<sub>2</sub> footprint. There will be a market for such offering in future, we believe.





# New Businesses Sustainable Development Goals



## 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.



## Creating sustainable innovations with the ecosystem

- Collaboration ecosystem with customers, universities, research institutes and SMEs.
- Professorship established to University of Jyväskylä promoting circular economy ecosystem.
- Sharing ideas and fostering innovations.



## 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 including LCA. Product net impact evaluation will be done by an external body.
- New Sustainability concept for peat production in Finland, Estonia and Sweden.
- Sustainable land-use, creation of carbon sinks and improvement of biodiversity.

# GRI INDEX

	Page	Comments
<b>Organizational profile</b>		
102-1 Name of the organization	Front cover	
102-2 Activities, brands, products, and services	2, 4, 5, 18–29	
102-3 Location of headquarters	4	Jyväskylä, Finland
102-4 Location of operations	4	
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, 4, 5, 18–29, <a href="http://www.vapo.com/en/group">www.vapo.com/en/group</a>	
102-7 Scale of the organization	2, 4, 5, 42, <a href="#">Financial Statements and Board of Directors' Report</a>	
102-8 Information on employees and other workers	42	
102-9 Supply chain	17, Annual Report 2020	
102-10 Significant changes to the organization and its supply chain	2, 4, 5, 16, 18–29, Annual Report 2020, <a href="#">Financial Statements and Board of Directors' Report</a>	
102-11 Precautionary Principle or approach	5–6, 7–9, 16, <a href="https://www.vapo.com/en/group/corporate-governance">https://www.vapo.com/en/group/corporate-governance</a>	
102-12 External initiatives	41, <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/social-responsibility/stakeholders">https://www.vapo.com/en/responsibility/social-responsibility/stakeholders</a>	
<b>Strategy</b>		
102-14 Statement from senior decision-maker	5–6	
102-15 Key impacts, risks, and opportunities	2, 5–6, 7–9, 10–13, 6, 18–29, 38, Annual Report 2020, <a href="#">Financial Statements and Board of Directors' Report</a>	

	Page	Comments
<b>Ethics and integrity</b>		
102-16 Values, principles, standards, and norms of behavior	5–6, 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	5–6, 7, 9, 17, <a href="https://www.vapo.com/en/group/strategy/values">https://www.vapo.com/en/group/strategy/values</a>	
<b>Governance</b>		
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	5–6, 7–9, 38	
102-32 Highest governance body's role in sustainability reporting	9	
<b>Stakeholder engagement</b>		
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 48%, The 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	

	Page	Comments
<b>Reporting practice</b>		
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 Group'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, 38	
102-48 Restatements of information	GRI Index	No restatements of information.
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 2020.
102-51 Date of most recent report	GRI Index	Vapo Group's previous corporate responsibility report was published in June 2020.
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, 47	<b>Sustainability and the sustainability strategy and targets:</b> Petri Järvinen, Chief Supply Chain and Sustainability Officer <b>Environmental responsibility:</b> Päivi Martikainen, Director, Group Operational Excellence & Sustainability <b>Economic responsibility:</b> Jarmo Santala, CFO <b>Social responsibility:</b> 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.

	Page	Comments
<b>Management and economic performance</b>		
103-1 Explanation of the material topic and its Boundary	8, 10–17, 38	
103-2 The management approach and its components	8, 10–17, 38, <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	38, <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	5, 16–17, 46, <a href="#">Financial Statements and Board of Directors' Report</a>	
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	10, 18, 21–22	Reported partly.
<b>Energy</b>		
302-1 Energy consumption within the organization	39	
302-3 Energy intensity	GRI Index	Energy intensity is 0,2. 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.



	Page	Comments
<b>Water and effluents</b>		
303-1 Interactions with water as a shared resource	11, 21, 40	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	40, GRI Index, <a href="https://www.vapo.com/producing-peat-responsibly">https://www.vapo.com/producing-peat-responsibly</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.
<b>Biodiversity</b>		
304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	12, 41, 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	12, <a href="https://www.vapo.com/producing-peat-responsibly/sustainability-concept-for-peat/active-conservation-exchanges">https://www.vapo.com/producing-peat-responsibly/sustainability-concept-for-peat/active-conservation-exchanges</a>	
Own indicators – Reforestation and wetland development, number of restoration projects	12	

	Page	Comments
<b>Emissions</b>		
305-1 Direct (Scope 1) GHG emissions	2, 6, 10–11, 39	Vapo Group's total CO <sub>2</sub> emissions in 2018 were 1,2 million tonnes.
305-2 Energy indirect (Scope 2) GHG emissions	39, GRI Index	Reported partly. Scope 2 includes indirect greenhouse gas emissions in Finland, Estonia, Sweden and the Netherlands. Emissions have been calculated on a location basis based on the average specific CO <sub>2</sub> emission factors for electricity production in each country. Emissions are included in Vapo Group's total emissions (1 million tonnes of CO <sub>2</sub> ).
305-3 Other indirect (Scope 3) GHG emissions	39, GRI Index	Reported partly. Scope 3 includes logistics in Finland, Estonia, Sweden and Netherlands. Emissions are included in the total emissions of Vapo Group (1 million tonnes of CO <sub>2</sub> ).
305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	39	
<b>Effluents and waste</b>		
306-1 Water discharge by quality and destination	11, 40, <a href="https://www.vapo.com/turvetuotantoavastuullisesti/tarkkailuraportit">https://www.vapo.com/turvetuotantoavastuullisesti/tarkkailuraportit</a>	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	40	Reported for all Vapo Group operations.
306-3 Significant spills	GRI Index	Drainage waters from peat production had to be rerouted to diversion culverts and dams on 40 occasions to prevent damage to water protection structures, for an average of eleven days per incident. The number of diversion incidents increased by 14% compared to 2019. Exceptions in water management have been notified to the supervisory authority in accordance with the permit conditions. The reasons for the exceptional situations are investigated and the necessary measures are taken to rectify the situation.

	Page	Comments
<b>Environmental compliance</b>		
307-1 Non-compliance with environmental laws and regulations	GRI Index	No reported incidents of non-compliance.
<b>Supplier environmental assessment</b>		
308-1 New suppliers that were screened using environmental criteria	17, Supplier Code of Conduct	Reported partly.
<b>Employment</b>		
401-1 New employee hires and employee turnover	GRI Index	Reported partly. Employee turnover (outgoing): 96 cases of employment termination (10,2%). The number includes all causes of employment termination. Regional division: 52 FI, 5 EE, 14 SWE, 25 NL Gender division: 25 female (26%), 71 male (74%) Age division: 9 under 30 (9%), 48 30–50 years (50%), 9 over 50 (41%)
<b>Occupational Health and Safety</b>		
403-2 Hazard identification, risk assessment, and incident investigation	2, 14	
403-5 Worker training on occupational health and safety	2, 14, 17	
403-9 Work related injuries	2, 14	
G4-EU18 Health and safety training for suppliers	14, 17	
<b>Training and education</b>		
404-2 Programs for upgrading employee skills and transition assistance programs	2, 9, 14–15	Reported partly. Programmes pertaining to retirement and the termination of employment have not been reported.

	Page	Comments
<b>Diversity and equal opportunity</b>		
405-1 Diversity of governance bodies and employees	GRI Index	<b>Board of Directors:</b> 8 members total, 3 women (38%) and 5 men (62%), under 30 yrs: 0, 30–50 yrs: 4 (50%), over 50 yrs: 4 (50%). <b>Group Management Team:</b> 11 members, 2 women (18%) and 9 men (82%), under 30 yrs: 0, 30–50 yrs: 2 (18%), over 50 yrs: 9 (82%). <b>At Vapo Group</b> 27% of all employees are female, 73% male.
<b>Non-discrimination</b>		
406-1 Incidents of discrimination and corrective actions taken	14–15	9 reported cases and corrective actions taken (including follow up).
<b>Public Policy</b>		
415-1 Political contributions	Gri Index	Vapo does not support any political parties.
<b>Marketing and labeling</b>		
417-3 Incidents of non-compliance concerning marketing communications	GRI Index	No incidents of non-compliance.
<b>Socioeconomic Compliance</b>		
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 Group 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 6, 8, 11	Pages 6, 8, 11–12	Pages 6, 8, 12	Pages 6, 8, 13, 27, 29	Pages 6, 8, 14	Pages 6, 8, 14–15	Page 15	Pages 6, 8, 14–15	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 (“Sustainability at Vapo Group”) and in the indicator tables on pages 10, 14, 18, 19, 23, 25 and 29										
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, Whistle-blowing 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

### CO<sub>2</sub> emissions from Vapo Group's own operations 2020

	Finland	Sweden	Estonia	The Netherlands	Vapo Group
	kt CO <sub>2</sub> -eq	kt CO <sub>2</sub> -eq	kt CO <sub>2</sub> -eq	kt CO <sub>2</sub> -eq	kt CO <sub>2</sub> -eq
Peat operations	535	50	42		628
Nevel operations	253	4	11		268
Pellet operations	22	10*			22
Kekkilä-BVB operations	3	1	2	4	9
Logistics	19	2	6	32	59
<b>Total</b>	<b>832</b>	<b>66</b>	<b>61</b>	<b>36</b>	<b>995</b>

Vapo Group's emissions consists of direct and indirect energy consumption on production sites, fuel use of on-site vehicles, soil emissions of peat production areas and transportation. The emission factors used to calculate soil emissions of peat production are based on national greenhouse gas inventories. Emissions for direct energy consumption is calculated based on actual fuel consumption figures and fuel-specific emission factor. Direct energy consumption of pellet operations in Finland and in all Nevel operations includes only fossil fuels. For indirect energy consumption country and location-based emission factors are used. Emissions from on-site vehicles are calculated based on fuel use. Logistics emissions have been calculated on the basis of delivery volume, transport routes and emissions from the equipment used.

\*Scandbio AB's emissions (part of Vapo Group)

### Emissions to air from heat and power plants / produced MWh

	2018	2019	2020
CO <sub>2</sub> -emissions, 1 000 tonnes (t/produced MWh)	370 (0.27)	373 (0.20)	266 (0.15)
Particles, tonnes (kg/MWh)	136 (0.10)	187 (0.10)	870 (0.50)
NO <sub>x</sub> , tonnes (kg/MWh)	926 (0.68)	1 116 (0.61)	324 (0.19)
SO <sub>2</sub> , tonnes (kg/MWh)	383 (0.28)	503 (0.27)	183 (0.11)

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. 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 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 / produced tonnes

	2018	2019	2020
CO <sub>2</sub> -emissions, 1 000 tonnes (t/produced tonnes)	33 (0.18)	18 (0.10)	12 (0.08)
Particles, tonnes (kg/produced tonnes)	32 (0.17)	22 (0.12)	15 (0.10)
NO <sub>x</sub> , tonnes (kg/produced tonnes)	55 (0.30)	28 (0.15)	17 (0.32)
SO <sub>2</sub> , tonnes (kg/produced tonnes)	45 (0.24)	25 (0.14)	16 (0.30)

### Energy consumption 2020

Nevel	MWh
Fuels	2 026 022
Renewable	1 352 243
Non-renewable	673 779
Electricity	10 594
Heat	
Total energy sold	-1 733 274
<b>Total</b>	<b>303 342</b>
Pellet	MWh
Fuels	41 147
Renewable	8 010
Non-renewable	33 137
Electricity	17 777
Heat	32 215
Steam	14 624
Total energy sold	-16 061
<b>Total</b>	<b>89 702</b>
Kekkilä-BVB	MWh
Fuels	17 363
Renewable	
Non-renewable	17 363
Electricity	13 597
Solar energy (own production)	1 084
Heat	1 561
Total energy sold	-501
<b>Total</b>	<b>32 019</b>
SCM (FI)	MWh
<b>Electricity</b>	<b>30 515</b>

## Number of Vapo's monitoring of waterways

	2018*	2019	2020
Samples	2 297	2 066	2 146
Analyses	27 739	24 944	25 943

Samples taken to measure water quality in receiving watercourses related to peat production areas. 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

	2018*	2019	2020
Samples	14 796	14 626	12 913
Analyses	90 051	91 454	79 619

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.

## Water effluents of peat production, Finland

The water effluents of peat production for suspended solids and nutrients is found on page 11 of the report.

## Total water withdrawal by source

	2018		2019		2020	
	m <sup>3</sup>	%	m <sup>3</sup>	%	m <sup>3</sup>	%
Waterways	960 276	75	979 146	75	1 098 035	76
Municipal water utilities	314 510	25	324 938	25	355 112	24
<b>Total, m<sup>3</sup></b>	<b>1 274 986</b>		<b>1 304 284</b>		<b>1 453 255</b>	

Data reported for Vapo Group Finland and Kekkila-BVB for all countries.

Water withdrawal and water consumption does not include offices and peat production.

## Waste volume

	2018	2019	2020
<b>Recovery tonnes</b>	<b>17 787</b>	<b>19 861</b>	<b>26 344</b>
Energy tonnes	1 083	3 509	4 467
Recycling tonnes	16 703	16 352	21 877
<b>Disposal tonnes</b>	<b>1 727</b>	<b>2 688</b>	<b>2 178</b>
Landfill tonnes	1 175	1 270	1 976
Other disposal tonnes	552	1 419	202
Recycling rate %	86	73	77
Recovery rate %	91	88	92
<b>Total, tonnes</b>	<b>19 513</b>	<b>22 549</b>	<b>28 522</b>

2018: Excluding data from Kekkila Eesti OÜ

2019: Excluding data from Kekkila-BVB Netherlands

2020: All Vapo Group

## Use of ash generated in Vapo Group's facilities

	2018	2019	2020
Landfill disposal %	4	4	4
Soil construction %	88	71	66
Forest fertiliser %	5	12	4
Intermediate storage / Future utilisation %	3	13	26
<b>Total, tonnes</b>	<b>19 849</b>	<b>19 113</b>	<b>15 309</b>

## Use of ash generated in Nevel's facilities in Finland

	2018	2019	2020
Ash tonnes/year	16 365	16 874	13 875
Ash to landfills tonnes	655	470	284
Ash to landfills %	4	3	2

## Number of environmental observations 2020 (2019)

	Finland	Sweden	Estonia	The Netherlands
Nevel	90 (123)	68 (n/a)	3 (0)	
Fuels	38 (41)			
Kekkilä-BVB	75 (109)	46 (47)	5 (21)	21 (9)
New Businesses	3 (0)			
SCM	273 (408)	88 (88)	8 (4)	
Group Services	17 (19)	8 (0)	3 (1)	
<b>Total</b>	<b>496 (700)</b>	<b>210 (135)</b>	<b>19 (26)</b>	<b>21 (9)</b>

Observation tool for logging environmental observations 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.

## Vapo Group's certificates

	ISO 9001	ISO 14001	ISO 45001	PEFC	FSC	RHP	RPP	Good Soil	BRL9335 -4/9341
<b>Finland</b>									
Vapo Oy	X	X		X		X			
Kekkilä Oy	X	X				X	X		
Nevel Oy	X	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 <sup>1</sup>		X	
Landscaping (Nijmegen)	X <sup>2</sup>					X <sup>3</sup>			X <sup>4</sup>

1. RHP consumer certification ended in 12/2020
2. ISO 9001 certification audit done in 12/2020, awaiting for certification
3. RHP cocos certified
4. Landscaping certified

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

### Share of personnel, 31.12.2020

	Finland	Sweden	Estonia	The Netherlands	Spain	Germany
Nevel	95	30	5	0	0	0
Fuels	94	4	9	0	0	0
Kekkila-BVB	137	84	21	296	5	9
New Businesses	24	0	0	0	0	0
SCM	125	24	14	1	0	0
Group Services	52	18	8	5	0	0
<b>Total</b>	<b>527</b>	<b>160</b>	<b>57</b>	<b>302</b>	<b>5</b>	<b>9</b>

### Personnel covered by collective bargaining agreements

	Number of personnel		Personnel covered by CBAs, %		Number of CBAs	
	2019	2020	2019	2020	2019	2020
Finland	524	527	45	48	7	6
Estonia	56	57	0	0	0	0
Sweden	142	160	100	100	2	2
Spain	4	5	100	100	1	1
The Netherlands	291	302	8	8	1	1
Germany	15	9	0	0	0	0

### Gender distribution

	2018	2019	2020
Women	236	277	291
Men	501	755	769
<b>Total</b>	<b>737</b>	<b>1 032</b>	<b>1 060</b>

### Duration of employment

	2018*	2019	2020
Under 5 years	37%	41%	45%
5–10 years	24%	20%	17%
10–20 years	19%	22%	21%
over 20 years	20%	17%	17%

\* 2018 figures not including Neova.

### Type of employment

	2018	2019	2020
Permanent	686	914	939*
Female		246 (27%)	253 (27%)
Male		668 (73%)	686 (73%)
Fixed term	51	118	121**
Female		31 (26%)	31 (27%)
Male		87 (74%)	87 (74%)

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

\*\*Region: EST 1, FI 32, GER 1, SWE 13, NL 71

### Type of employment

	2019	2020
Full time	946	955*
Female	253 (27%)	233 (24%)
Male	639 (73%)	722 (76%)
Part time	86	105**
Female	24 (28%)	58 (55%)
Male	62 (72%)	47 (45%)

\*Region: EST 57, FI 520, GER 5, SPAIN 4, SWE 149, NL 230

\*\*Region: FI 17, GER 4, SPAIN 1, SWE 11, NL 72

### Employee turnover

	2019	2020**
Employee turnover (outgoing)*	11.6% (106)	10.2% (96)

\* Includes all causes of employment termination.

\*\* 25 female (26%), 71 male (74%); Under 30: 9 (9%), 30-50 years 48 (50%), over 50: 39 (41%); region/country: FI 52, EE 5, SWE 14, NL 25

## Number of all accidents 2018\*\*–2020 (MTR\*)

	Finland			Sweden			Estonia			The Netherlands			Spain			Germany			Total		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Nevel	5	7	6	1	0	0	0	1	0										6	8	6
Fuels	1	2	3				0	0	0										1	2	3
Kekkilä-BVB	5	4	2	1***	2	2	0	0	0	**	12	8	**	0	0	**	0	0	6**	18	12
New Businesses	2	0	0																1	0	0
SCM	5	4	5	0	0	0	1	0	0	**	0	0							6	4	5
Group Services	1	0	3	0	0	0	0	0	0	**	0	0							2	0	3
																			22***	32	29

\* 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 2018-2020.

## Number of accidents that lead to absence from work 2018\*\*–2020 (LTA1\*)

	Finland			Sweden			Estonia			The Netherlands			Spain			Germany			Total		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Nevel	3	0	3	0	0	0	0	1	0										3	1	3
Fuels	1	0	1				0	0	0										1	0	1
Kekkilä-BVB	1	0	0	0	1	1	0	0	0	**	9	5	**	0	0	**	0	0	1**	10	6
New Businesses	2	0	0																1	0	0
SCM	0	1	2	0	0	0	1	0	0	**	0	0							1	1	2
Group Services	1	0	1	0	0	0	0	0	0	**	0	0							2	0	1
																			9	12	13

\* 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.



## Accident frequency over 1 million working hours 2018–2020 (MTRf\*)

	Finland			Sweden			Estonia			The Netherlands			Spain			Germany			Total		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Nevel	28.6	46.2	36.8	13.7	0	0	0	122.1	0										23.4	35	25.2
Fuels	13.4	17.0	20.2				0	0	0										11.8	15.7	18.8
Kekkilä-BVB	23.0	18.6	8.7	8.1***	16.3	15.1	0	0	0	**	24.5	16.5	**	0	0	**	0	0	15.5**	20.6	13.4
New Businesses	85.5	0	0																85.5	0	0
SCM	14.3	12.3	19.2	0	0	0	44.8	0	0	**	0	0							14.5	10.3	15.3
Group Services	10.1	0	30.4	0	0	0	0	0	0	**	0	0							7.3	0	21.9
																			16.9***	18	16.1

\* 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 2018\*\*–2020 (LTA1f\*)

	Finland			Sweden			Estonia			The Netherlands			Spain			Germany			Total		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Nevel	17.2	0	18.4	0	0	0	0	122.1	0										11.7	4.4	12.6
Fuels	13.4	0	6.7				0	0	0										11.8	0	6.3
Kekkilä-BVB	4.6	0	0	0	8.2	7.5	0	0	0	**	18.4	10.3	**	0	0	**	0	0	2.6**	11.5	6.7
New Businesses	85.5	3.1	0																85.5	0	0.0
SCM	0	3.1	7.7	0	0	0	44.8	0	0	**	0	0							2.4	2.6	6.1
Group Services	10.1	0	10.1	0	0	0	0	0	0	**	0	0							7.3	0	7.3
																			6.9	6.7	7.2

\* 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.

## Main types of workplace injuries 2018–2020

	2018	2019	2020
Fall, slip, trip (impact with fixed object)	45%	33%	43%
Collision, hit, pressure (impact with moving object)	23%	26%	18%
Crush, compression, contusion (caused by object)	18%	19%	18%
Cut, stab, sting (caused by object)	0%	13%	7%
Shock, burn, poisoning, pressure (impact of electrical voltage, temperature, noise, hazardous substances)	14%	3%	3%
Other	0%	6%	11%

## Number of recorded safety observations 2018\*–2020

	Finland			Sweden			Estonia			The Netherlands			Spain			Germany			Total		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Nevel	581	649	610	60	62	163	3	9	11										644	720	784
Fuels	541	514	386				0	2	2										541	516	388
Kekkilä-BVB	566	756	516	337	262	343	116	170	75	*	196	407							1 019*	1 385	1 341
New Businesses	0	7	34																0	7	34
SCM Sites	1 307	1 447	969	44	97	134	18	22	19										1 369	1 566	1 122
Group Services	382	404	248	78	53	24	10	1	9	*	0	1							470	458	282
Office sites	15	57	35																15	57	35
<b>Total</b>																			<b>4 058*</b>	<b>4 709</b>	<b>3 986</b>

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.

## Contractors – Number of all accidents 2020 (MTR\*)

	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel							0
Fuels	2						2
Kekkilä-BVB	1			2			3
New Businesses							0
SCM	5	3					8
Group Services							0
<b>Total</b>							<b>13</b>

All the accidents that have been reported to us sites.

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

## Contractors – Number of accidents that lead to absence from work 2020 (LTA1\*)

	Finland	Sweden	Estonia	The Netherlands	Spain	Germany	Total
Nevel							0
Fuels	2						2
Kekkilä-BVB	1			1			2
New Businesses							0
SCM	4	1					5
Group Services							0
<b>Total</b>							<b>9</b>

All the accidents that have been reported to us sites.

\* LTA1 count includes those workplace accidents that lead to a minimum of one day of absence from work.

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

### Vapo Group's investments k€

	Gross investments		Asset sales		Net investments	
	2019	2020	2019	2020	2019	2020
The Netherlands	9 463	5 053	31	2061	9 432	2 992
Finland	59 123	46 446	19 796	14 976	39 327	31 470
Sweden	5 635	12 059	153	128	5 483	11 931
Estonia	3 831	12 019	998	334	2 833	11 685
Denmark						0
Spain						0
Germany	44	1 011			44	1 011
<b>Total</b>	<b>78 096</b>	<b>76 588</b>	<b>20 977</b>	<b>17 499</b>	<b>57 119</b>	<b>59 089</b>

### Wages paid by Vapo Group €

	2018*	2019*	2020
Finland	29 121 139	31 474 800	31 795 056
Sweden	7 869 121*	7 525 431*	7 954 408**
Estonia	1 409 450	1 401 817	1 437 818
The Netherlands***		14 948 391	18 880 905
<b>Total</b>	<b>38 399 710</b>	<b>55 350 439</b>	<b>60 088 188</b>

\*1 SEK=0.09 € (26.5.2020)

\*\*1 SEK= 0.10 (8.3.2021)

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

### Vapo Group's tax footprint figures for the financial year 1.1.2020–31.12.2020, total EUR 43.87 million

	Finland	Sweden	Estonia	The Netherlands	Spain	Germany
<b>Direct taxes payable for the financial year. eur million</b>						
Income taxes	3.30	0.29		1.48	0.07	0.26
Employer contributions	0.55	2.24	0.41	2.20	0.06	
Property taxes	0.31	0.01	0.05			
Other taxes		0.19	0.07			
<b>Indirect taxes payable for the financial year. eur million</b>						
Excise taxes	1.85		0.44			
<b>Taxes remitted for the financial year. eur million</b>						
Payroll taxes	11.26	2.50	0.04		0.07	
Value added tax. sales	79.68	25.18	7.29	26.61		
Value added tax. purchases	-71.90	-21.18	-5.81	-23.66	-0.02	
Other taxes						
<b>Total</b>	<b>25.06</b>	<b>9.24</b>	<b>2.49</b>	<b>6.63</b>	<b>0.19</b>	<b>0.26</b>

## Contacts

### **Sustainability and the sustainability strategy and targets:**

Petri Järvinen, Chief Supply Chain and Sustainability Officer  
petri.jarvinen@vapo.fi

### **Environmental responsibility:**

Päivi Martikainen, Director, Group Operational Excellence & Sustainability  
paivi.martikainen@vapo.fi

### **Economic responsibility:**

Jarmo Santala, CFO  
jarmo.santala@vapo.fi

### **Social responsibility:**

Jenni Nevasalo, Chief HR Officer  
jenni.nevasalo@vapo.fi

### **Communication:**

Ahti Martikainen, Director, Communications and Public Affairs  
ahti.martikainen@vapo.fi



## In the pictures on the cover



1. A landscaping project in Sweden in which Hasselfors Garden has supplied landscaping material. In Sweden Kekkilä-BVB operates under Hasselfors Garden brand.
2. New Businesses staff at Vapo's 80th anniversary celebration for the personnel. More about New Businesses on the page 27.
3. Vapo's Sompaneva old peat production area, turned into wetland in Parkano, Finland.
4. Vapo donated and sold almost 400 hectares cutaway areas to be planted by 4 H foundation. See page 2.
5. As part of the renewable energy development, we are investigating opportunities in wind power in Finland. See page 26.
6. Due to its characteristics, Sphagnum moss is an excellent renewable raw material for substrates. See page 12.
7. Novactor Activated Carbon factory in Ilomantsi in Finland is the most modern and environmentally friendly production facility in the world. See page 28.