

SUSTAINABILITY REPORT

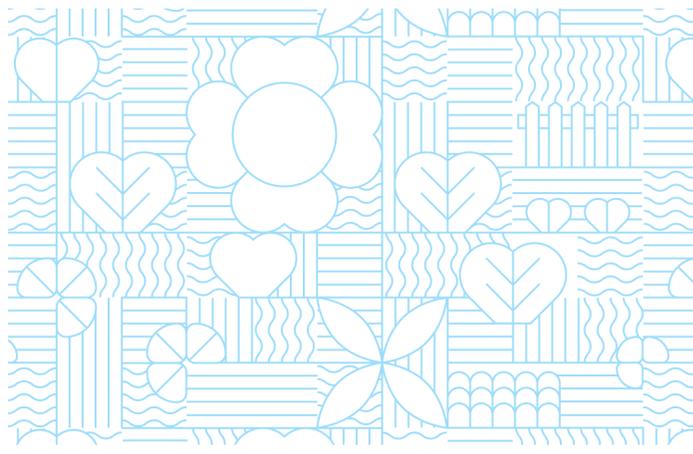


2022



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VALIO IN BRIEF

Valio is Finland's leading dairy and food company and Finland's biggest exporter of food products. We produce delicious, high-quality milk- and plant-based products, and we also operate in the wholesale sector. We employ 4,457 people in Finland, Sweden, Estonia, China and the United States.



Personnel 31 Dec 2022

FINLAND	BALTICS (ESTONIA)	SWEDEN	USA	CHINA
3,664	459	64	28	23

Valio sold its Russian operations 25.4.2022. With the transaction, Valio's operations in Russia have ended.

FOUNDED IN
1905

Market leader
in dairy products
in Finland

Nobel prize
in chemistry
IN 1945

2.2
bn
NET SALES

PLANT BASED PRODUCTS
ODDLY-GOOD
AND
GOLD&GREEN®
OF HELSINKI

3,700
DAIRY FARMERS OWN VALIO

25%
VALIO'S SHARE OF
FINNISH FOOD EXPORTS

Aimo VALIO
WHOLESALE

All profits
for the farmers



Valio's production plants in Finland and Estonia

VALIO HAS 12 PLANTS in Finland and two in Estonia. We export products from Finland to roughly 50 countries. The majority of our exports are milk powder and whey powder used as raw material for the food and baby food industries, as well as butter. We also export consumer products to global destinations.

-  CHEESES
-  POWDERS
-  FRESH PRODUCTS
-  JAMS
-  JUICES
-  BUTTER AND SPREADS



Valio sold its Russian operations 25.4.2022. With the transaction, Valio's operations in Russia have ended.



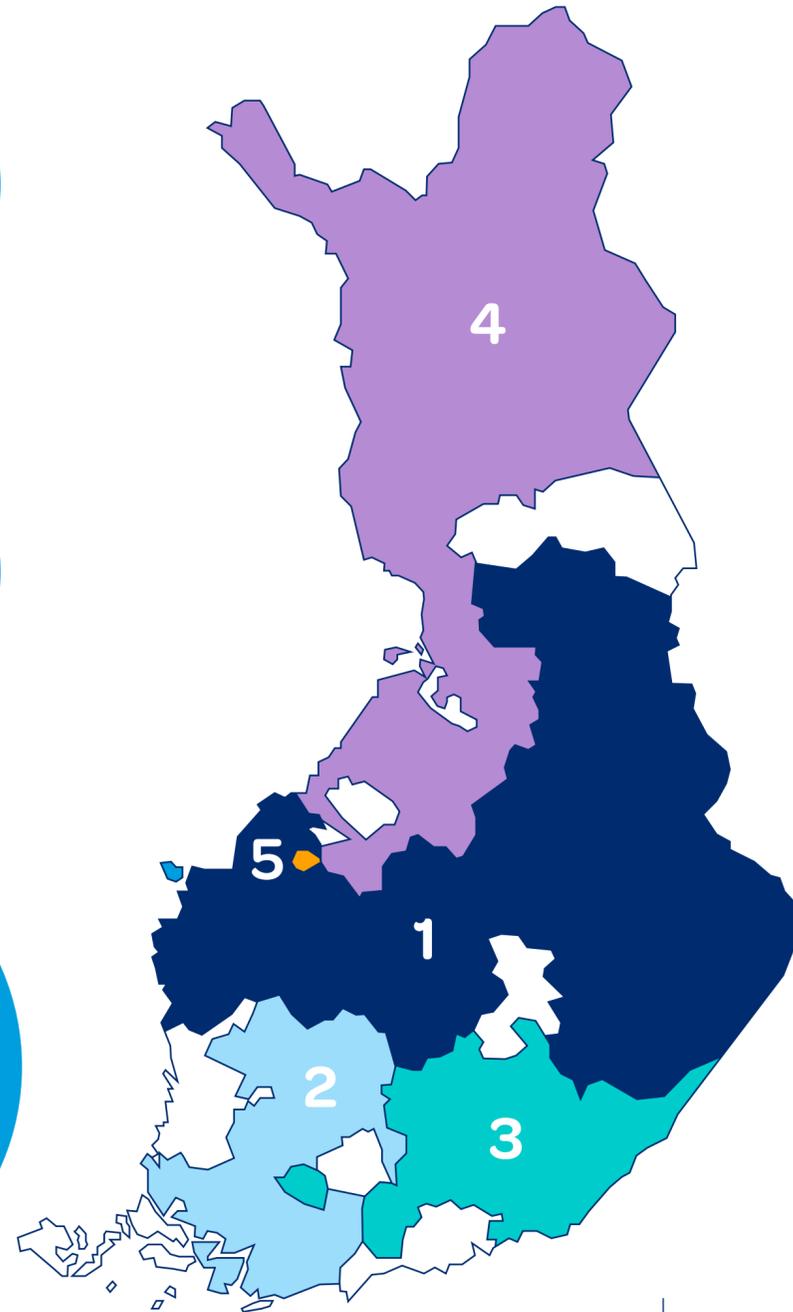
Together we make life better

VALIO'S TRADITIONS go way back in Finland's history. Finnish dairy farms established Valio in 1905 to export butter. Our operations have always been guided by the desire to develop functional and healthy food products for everyday life. A pioneering spirit, product development and research expertise, as well as innovative products have been the drivers behind our success ever since Nobel Laureate A. I. Virtanen headed Valio's laboratory. Innovativeness continues to be reflected in our milk- and plant-based products as well as in our new biogas business, among others. Innovativeness is part of everyday practices, not just products.





- Roughly 3,700** dairy farmers in the cooperatives
- The cooperatives pay out **PRODUCER PRICE TO THE FARMERS**
- VALIO'S BOARD OF DIRECTORS** 4 dairy farmers
- The Board decides **THE MILK PRICE FOR COOPERATIVES**
- 80%** of Finland's milk
- Valio Group procurement cooperatives
 1. Maitosuomi
 2. Länsi-Maito
 3. Tuottajain Maito
 4. Pohjolan Maito
 5. Evijärvi
- 1,700** million litres of milk per year
- Total 13 cooperatives as owners, including competitors



Valio is owned by Finnish dairy farms

ABOUT 3,700 Finnish dairy farmers own Valio through regional cooperatives. We pay our operating profits to the dairy farmers. All the products we make and sell in Finland are made from Finnish milk, which we source from these farms.

Dairy farmers belong to five cooperatives, which own Valio.





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Year 2022



From the CEO

THE OPERATING ENVIRONMENT WAS TURBULENT

IN 2022: In February, after the most acute phase of the Covid-19 pandemic had subsided, Russia invaded Ukraine. In autumn, there was uncertainty regarding energy prices and availability. The year was marked by an unprecedented rise in production costs at farms and in the food industry, as well as general inflation.

Despite the challenges, we continued the resolute implementation of the strategy and sustainability work. Valio Group net sales were EUR 2,236 million, up by 15.6% on the previous year (1,934 million). Domestic net sales increased by 17.6% and international net sales by 12.4%. Some of the growth is attributed to the acquisition of Heinon Tukku in summer 2021.

VALIO IS OWNED BY 3,700 FINNISH DAIRY FARMS

through cooperatives, and Valio's main purpose is to pay the best possible return to the dairy farms through the cooperatives. Farms faced an extremely tough year with, in some cases, manifold increases in fertiliser, energy and animal feed prices.

The vitality of dairy farms and their ability to continue operating in different situations is important in securing domestic food production. Under these difficult circumstances, Valio managed to boost its operational efficiency, achieve cost savings and absorb the higher costs into its product pricing. The global market prices also were favourable. For these reasons, we generated a record milk

return and were able to raise the milk price paid to cooperatives by a total of about 36 per cent.

All plants operated normally throughout the year, and delivery reliability to customers remained at a good level. We launched numerous new product innovations from milk and plant-based ingredients. Investments in value added powders for export continued. Valio's exports accounted for about 25 per cent of Finland's total food exports.

Read more about operational development in the Financial Statements. →

As part of our strategy, we continuously assess new business opportunities. In summer 2021, Valio acquired Heinon Tukku. The new wholesale business was renamed Valio Aimo® in January 2022.

We established a joint venture with St1 Oy, Suomen Lantakaasu Ltd, as part of the implementation of our climate programme. In December, the Ministry of Economic Affairs and Employment granted EUR 19.2 million in funding for the construction of Finland's largest biogas plant complex in Kiuruvesi.

Mandatum Asset Management became a minority owner in Oddlygood Global Oy to accelerate internationalisation. We acquired the Gold&Green brand as well as the intellectual property and R&D function of Gold&Green Foods from Paulig to strengthen our position in plant protein markets.

Russia's invasion of Ukraine made it both ethically and operationally impossible to continue business in Russia. Our operations in Russia ceased at the end of April. Russian net sales accounted for about five per cent of Valio's annual net sales.

Our goal is to cut the carbon footprint of milk to zero by 2035. Our climate programme advanced in many areas during the year. By the end of the year, more than 1,900 dairy farms had reported their raw milk carbon footprint with the Carbo® Farm calculator and we had trained about 1,000 farms in carbon farming methods to reduce climate emissions.

The largest energy efficiency investment in Valio's history was completed at the Lapinlahti plant: the flue-gas condenser now recovers heat from the plant's chimney.

Valio has a target of zero work injuries as well as zero burnout. In recognition of our commitment to mental wellbeing, we were designated as a "Mental Health Friendly Workplace" for the second time by the MIELI Finnish Association for Mental Health.

IN 2023, our sustainability work will continue on many fronts.

Detailed planning of Suomen Lantakaasu Oy's biogas plant project is progressing. The goal is for the plant complex to start operations in 2026.

We will update the sustainability programme for dairy farms in May. In the future, farms can receive an additional



price for their milk by giving cows grazing and outdoor opportunities, for farming that supports biodiversity and for efforts to reduce the farm's carbon footprint.

Successes do not happen on their own. We are grateful for the good collaboration and forward-looking spirit of Valio employees, the dairy farms, and our customers and partners! We can be proud of the Finnish food chain.

Annikka Hurme
CEO



Sustainability highlights

PLAN TO START COMPREHENSIVE BIOGAS PRODUCTION IS PROGRESSING

Valio and energy company St1's joint venture, Suomen Lantakaasu Oy, is planning construction of the first hybrid biogas production plant complex in Upper Savo, Finland. In late 2022, the Ministry of Employment and the Economy granted EUR 19.2 million in investment support for the biogas project.



HALF OF VALIO DAIRY FARMS CALCULATED THE CARBON FOOTPRINT OF THEIR MILK

In 2022, 3,000 dairy farms took part in the more than 100 carbon footprint training events we held. Of these, more than 1,900 have reported their own raw milk carbon footprint to Valio. That covers about 60 per cent of our milk intake.

USE OF VALIO CARBO® FARM CALCULATOR EXPANDING TO THE ENTIRE FINNISH CATTLE SECTOR

A standard national model will improve the assessment of the environmental impacts of Finland's entire livestock sector and creates a common set of rules for the calculation.



NEW METHOD TO MEASURE ANIMAL WELFARE

We participated in the development of a completely new set of indicators to measure the welfare of dairy farm cattle. The method monitors the welfare of calves and cows through various indicators, such as behaviour, cleanliness, nutritional status, and the prevalence of lameness and skin lesions. The set of indicators was created by animal welfare researchers from Natural Resources Institute Finland and the University of Helsinki, in cooperation with herd health veterinarians from Valio and partner organisations.

1,000 FARMS TRAINED IN CARBON FARMING

Together with Finnish grass experts and the Baltic Sea Action Group (BSAG), we are training dairy farmers to reduce climate emissions through carbon farming. By the end of 2022, we had trained some 1,000 farms, i.e. more than 25 per cent of all Valio farms.

WE INVEST IN MENTAL HEALTH

In Finland, we added brief psychotherapy to our regular occupational health services, and we piloted the Auntie Solutions service, which provides personalised, low-threshold support in life's difficult moments. As recognition of our commitment to mental wellbeing, Valio was designated as a "Mental Health friendly Workplace" (Hyvän mielen työpaikka®) for the second time by the MIELI Finnish Association for Mental Health.



ENERGY EFFICIENCY IMPROVEMENT AT LAPINLAHTI PLANT

We are recovering heat from the Lapinlahti plant's chimney with a new flue-gas condenser. The heat recovery system renewal significantly improved the plant's energy efficiency. The heat recovery system received the "Energy Genius of the Year 2022" award.

NEW PACKAGING SUITABLE FOR CARDBOARD RECYCLING

We expanded the range of cardboard cups. The amount of plastic was reduced significantly in some of the Valio PROfeel® protein quark and Oddlygood® cup products. The new packaging makes it easier to recycle them as cardboard. We will continue expanding the range in 2023.



CLEAR DECREASE IN NUMBER OF INJURIES

Work injuries in 2022 were the lowest ever recorded both globally and at Valio Ltd in Finland. The number of workplace injuries decreased by 32 per cent in Finland and by 34 per cent globally compared to the previous year.



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Valio's direction



STRATEGY AND OPERATING ENVIRONMENT

In 2022, we continued the steady execution of our strategy. At the same time, the operating environment was turbulent: the Russian war of aggression in Ukraine and its impacts on the economy, global trade and supply chains challenged us throughout the year. We ended our operations in Russia. Despite the challenging operating environment, we managed to improve our profitability and were able to significantly increase the milk price we pay to our owners.

Our strategy

OUR VISION is to be the leader in innovative dairy and food solutions. Innovativeness and renewal are reflected in everything we do. Our values are Consumer and customer focus, Responsibility, Renewal, and Collaboration. We have the expertise to develop high-quality solutions for our customers' needs, and, in fact, our mission is "Together we make life better". Our most important asset is our committed and capable Valio people who turn innovations into solutions and execute our strategy.

The priority of our owner strategy is to ensure the livelihoods of dairy farmers in different parts of Finland. Our target is to pay a producer price that is at the level of the best cooperative dairies in Europe. The producer price is influenced by the sales volumes and profitability of Valio products. The producer price is paid to dairy farmers through the cooperatives.

Valio's top management and different functions work together to execute the strategy and keep it up-to-date. Valio's Board of Directors approves the strategy.

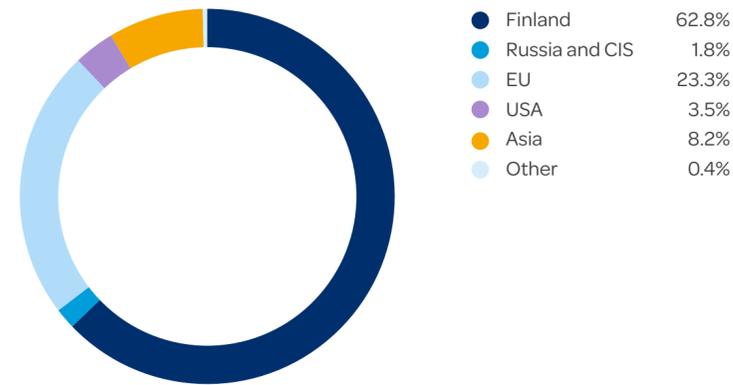
WE CONTINUED DETERMINED STRATEGY EXECUTION

In 2022, we continued to execute our strategy with determination in a very challenging environment. In January, we launched the new Valio Aimo® wholesale brand and continued the integration and development of the wholesale operations to offer an even better customer experience.

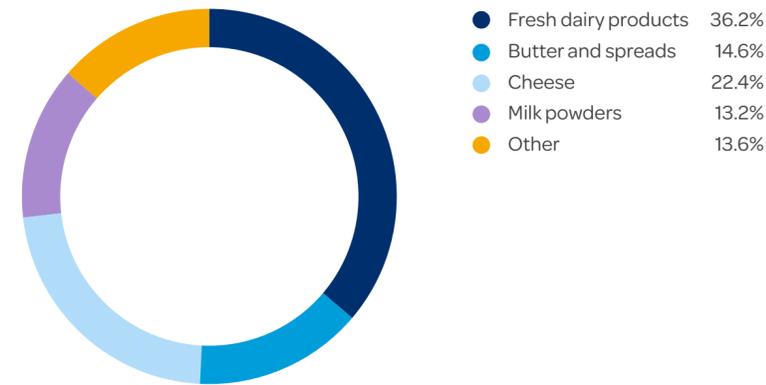
In February, Russia's invasion of Ukraine forced Valio to end its long history in Russia. We stopped exporting to Russia and Belarus. In April, we sold all our Russian operations. With the divestment, Valio's operations in Russia ended.



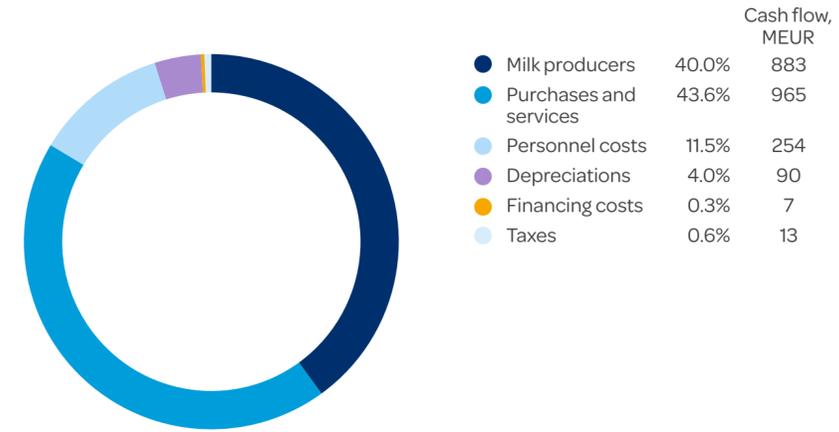
Valio group net sales by area, 2022



Valio group net sales by product group, 2022



Distribution of expenses in Valio group, 2022



During the year, we strengthened our expertise in plant-based solutions by acquiring the Gold & Green brand and related intangible assets, as well as the R&D operations from Paulig. We also continued the development and growth of the Oddlygood Global business, a producer of plant-based products, on new markets.

In our home markets in Finland, Sweden and Baltics, we strengthened our position in the dairy-centered business by offering consumers both new and familiar flavours for shared moments. In export markets, we continued developing value-added ingredient solutions together with our industrial customers. For example, we launched Valio Bittersweet™, a reduced sugar solution for the chocolate

industry. Additionally, we started a new, four-year #2025 performance improvement programme to boost our efficiency and competitiveness, and thus our milk return. The project focuses on developing Valio's operations across the entire supply chain.

In addition, we continued biogas production planning with the establishment of Suomen Lantakaasu Oy in March, a joint venture with energy company St1. In December, the Ministry of Economic Affairs and Employment granted EUR 19.2 million in funding for the construction of Finland's biggest biogas production plant complex in Upper Savo. The project will continue in the upcoming years, and the goal is to start operations in 2026.

Valio's strategy





CASE

Oddlygood Global aims for international growth

The ownership base of the plant-based product producer Oddlygood Global expanded at the end of 2021 when Mandatum Asset Management invested EUR 25 million in the Valio subsidiary. Valio remains the majority shareholder of the company.

Oddlygood Global's product portfolio contains plant-based alternatives in four product categories: beverages, spoonable snacks, cooking products, and cheese-like products. Oddlygood® products are sold in more than ten countries. The company has around 20 employees in five countries.

The majority of Oddlygood Global's products are made at Valio's production facilities in Finland. Valio's sourcing principles and processes apply to the raw materials and processing aids, as well as to packaging materials used in Oddlygood® products. Oddlygood Global's other contract manufacturing partners have been approved in accordance with Valio's sourcing principles and guidelines.

Our operating environment

VALIO IS AN INTERNATIONAL dairy and food company. Our business is impacted by the global operating environment and the milk market situation as well as by domestic demand and competition.

After the most acute phase of the Covid pandemic was passed, Russia attacked Ukraine. The war and its impacts on the economy, global trade and supply chains challenged Valio throughout the year. The rise in energy, feed and fertiliser costs made the situation more difficult for dairy farms, as their costs were already high. The variable costs at dairy farms increased by nearly 70 per cent compared to the beginning of 2021. There were also availability challenges with some production inputs.

The costs of raw and packaging materials, packaging, energy and logistics in the food industry increased significantly globally in line with general cost inflation. The higher energy prices raised concerns about the supply of energy in Europe. As a result food prices also increased significantly.

Despite the challenging situation, we improved our profitability and managed to significantly increase the milk price we pay to our owners.

WE FOLLOW CONSUMER TRENDS

Dairy products remain part of people's diets, although consumer interest in plant-based products is growing rapidly particularly in Western countries. Drinking milk has been on a downward trend for decades, but at the same time the consumption of other dairy products, such as cheese, has increased. The biggest increase in the use of plant-based drinks is among young people.

Globally, the overall consumption of dairy products is growing alongside population growth. In Asia, for instance, middle-class consumption patterns are changing and dairy products are being consumed more.

The sustainability trend remains strong. In addition to environmental issues, the social and ethical dimension is becoming increasingly important. Use of local raw materials, production and labour, and the impact of global companies on the local community are important issues to consumers. Despite inflation and price crises, the domestic nature of food is important to Finnish consumers. Finns trust familiar domestic brands, but are paying more attention to prices. In a tight economic climate, Finns are cutting back on eating out and are cooking at home.

As economic uncertainty, concerns and stress increase, the importance of wellbeing grows. Consumers in Finland and globally are focusing on things they can influence: sleep, food and overall wellbeing. Food is increasingly seen as a larger, more important part of wellbeing. People want to save time, and expect brands to make everyday life easier.

Digitalisation creates opportunities for the food industry. In addition to restaurant meals, groceries can be delivered to your front door even less than an hour. Consumers can use social media as a megaphone for their own voice and address issues such as corporate malpractice. Food is part of identity, especially for young people, and social media channels offer powerful means to express identity.



VALIO'S SUSTAINABILITY

Food consumption and food production have globally significant impacts on the environment, society, animals and people's lives. We want to do our part in solving these challenges. Responsibility for the environment, the economy, people and society is embedded in everything we do.

What does sustainability mean to Valio?

THE CORNERSTONE of Valio's sustainability is formed by the cooperative approach and good governance. This cornerstone is the foundation for Valio's sustainability focus areas: animal welfare and the wellbeing of people, promoting sustainable lifestyles, carbon-neutral milk chain, and nature positivity.

We produce healthy and tasty food to fuel everyday life and to enjoy, and we bring people together around food. We nurture the Finnish food culture, and we take responsibility for Finland's security of supply. We create jobs for thousands of people, and we ensure the preservation of profitable food production in Finland.

Food production is based on the resources nature gives us. We are aware of our environmental and climate impacts, and it is our responsibility to reduce them. Combating climate change is one of our focus areas. Our goal is to cut the carbon footprint of the milk chain to zero by 2035. We are reducing emissions, growing carbon sinks and creating circular economy solutions. We are improving animal welfare, and we are working to increase biodiversity.

Sustainability management

VALIO'S BUSINESS STRATEGY outlines the integration of sustainability in all operations and in all markets. Our business strategy is based on the owner strategy to develop sustainable milk production, climate efficiency and a circular economy, and to look after animal welfare.

Our daily global operations are guided by, e.g., sustainability-related policies, which are approved by Valio's Executive Board. They also define how we act in line with Valio's values, which are: Consumer and customer focus, Responsibility, Renewal, and Collaboration. **All public policies are available on Valio's website.** → Our operations are certified in accordance with global food safety, quality and environmental standards. **Our certificates can be downloaded on our website.** →

An Executive Vice President with responsibility for brand and marketing, as well as sustainability, communications and public affairs was appointed to Valio's Executive Board in early 2023. Sustainability topics are decided in decision forums in line with Valio's governance model. The Senior Vice President, Sustainability, coordinates and prepares the business focus areas, which are approved by Valio's Executive Board.

In the Sustainability Forum held two to three times a year, Valio's Executive Board addresses strategic sustainability topics in the medium and long term, and the progress of targets and measures are mirrored against the corporate strategy. Promoting sustainable business is also one of Valio's Group's strategic projects that is reported to Valio's Executive Board every three months. Additionally, various info and status briefings are held for the Executive Board. In 2022, we focused particularly on monitoring the EU Corporate Sustainability Reporting Directive, which was reported to the functions' and milk sourcing management teams.

Valio's management has delegated the daily management of sustainability to ESG teams. Operative ESG teams have been formed around the themes of environment, social sustainability and governance. The teams are composed of experts from different functions who lead and coordinate practical work in their respective areas and are responsible for the theme-related targets, actions and indicators.



ESG management at Valio

VALIO BOARD OF DIRECTORS

VALIO EXECUTIVE BOARD

ENVIRONMENTAL TEAM

- Climate
- Energy
- Logistics
- Water
- Circular economy
- Packaging
- Biodiversity
- Chemicals
- Waste and resource efficiency
- Permits

SOCIAL SUSTAINABILITY TEAM

- Human and labour rights in Value chain
- Occupational health and wellbeing
- Safety
- DEI (diversity, equality, inclusion)
- Food safety
- Food Security
- Nutrition

GOVERNANCE TEAM

- Ethics and compliance
- Corporate governance
- Code of Conducts
- Business Risks
- Internal control
- Accounting and taxes
- Data protection
- Data security

ENVIRONMENT TEAM

Valio's environment team experts represent environment, climate, nature, energy, logistics and packaging development. The Senior Vice President of the Climate Programme chairs the environment team. Strategic topics are taken to the Clima forum, which is comprised of sustainability, production, logistics and business leadership, a representative from Valio's Board of Directors, and three Valio Group Executive Board members. When necessary, the Clima forum takes matters to Valio Group's Executive Board or to the Board of Directors.

SOCIAL SUSTAINABILITY TEAM

Valio's social sustainability team experts work across the Valio organisation on occupational safety, work wellbeing, food safety, nutrition, human rights and equality. The team is chaired by the sustainability manager. Team members report on their own topics to Valio's Executive Board through their own organisation.

GOVERNANCE TEAM

Valio's governance team experts represent legal affairs, finances, governance development and the business operating environment, IT administration, and risk management. The head of legal affairs chairs the team. The team members report on their own topics to Valio's Executive Board through their own organisation.

The Senior Vice President, Sustainability is the facilitator of all the teams and, among other things, plans the topics to be reviewed in collaboration with the team chairs.



Material sustainability topics

VALIO'S VALUE CHAIN has many stages that impact the wellbeing of people, the environment and animals. Our sustainability work is based on topics we have identified in our value chain as being material to us.

We defined the material sustainability topics in the materiality assessment conducted in 2021. We carried out the assessment on the basis of the GRI guidelines in three phases:

1. We identified the material impacts and topics for us in our operating environment.
2. We assessed the material impacts and topics and took into account the expectations of stakeholders and expert opinions.
3. Valio's management validated the identified material topics.

In the assessment, we tapped into the knowledge of our experts, extensive materials regarding Valio's impacts on people, the environment, animals and society, as well as monitoring data about legal requirements and changes in the operating environment. The stakeholder perspective is based on Valio-wide research materials and discussions about the expectations of different stakeholders, the results of the Valio Voice employee survey, and a separate expert survey. [Read more about Valio's stakeholders.](#) →

BASED ON THE MATERIALITY ASSESSMENT, we drafted a materiality matrix that was approved by the Valio Executive Board in early 2022.

In 2022, the ESG teams reviewed the materiality assessment. Small changes to the matrix were proposed and then approved by the Executive Vice President of sustainability and stakeholder relations.

We made the following changes to the materiality matrix:

- From Valio's perspective, we highlighted the importance of dairy farm vitality because of the dramatic increase in costs.
- From the impact perspective, we highlighted the importance of food safety and product quality, as well as delivery reliability and food security. The reasons were driven by the pandemic and the war in Ukraine.
- From the impact perspective, we highlighted the importance of human rights. The reason was driven by the human trafficking suspicions in the berry-picking sector and the increased requirements for supply chain management.

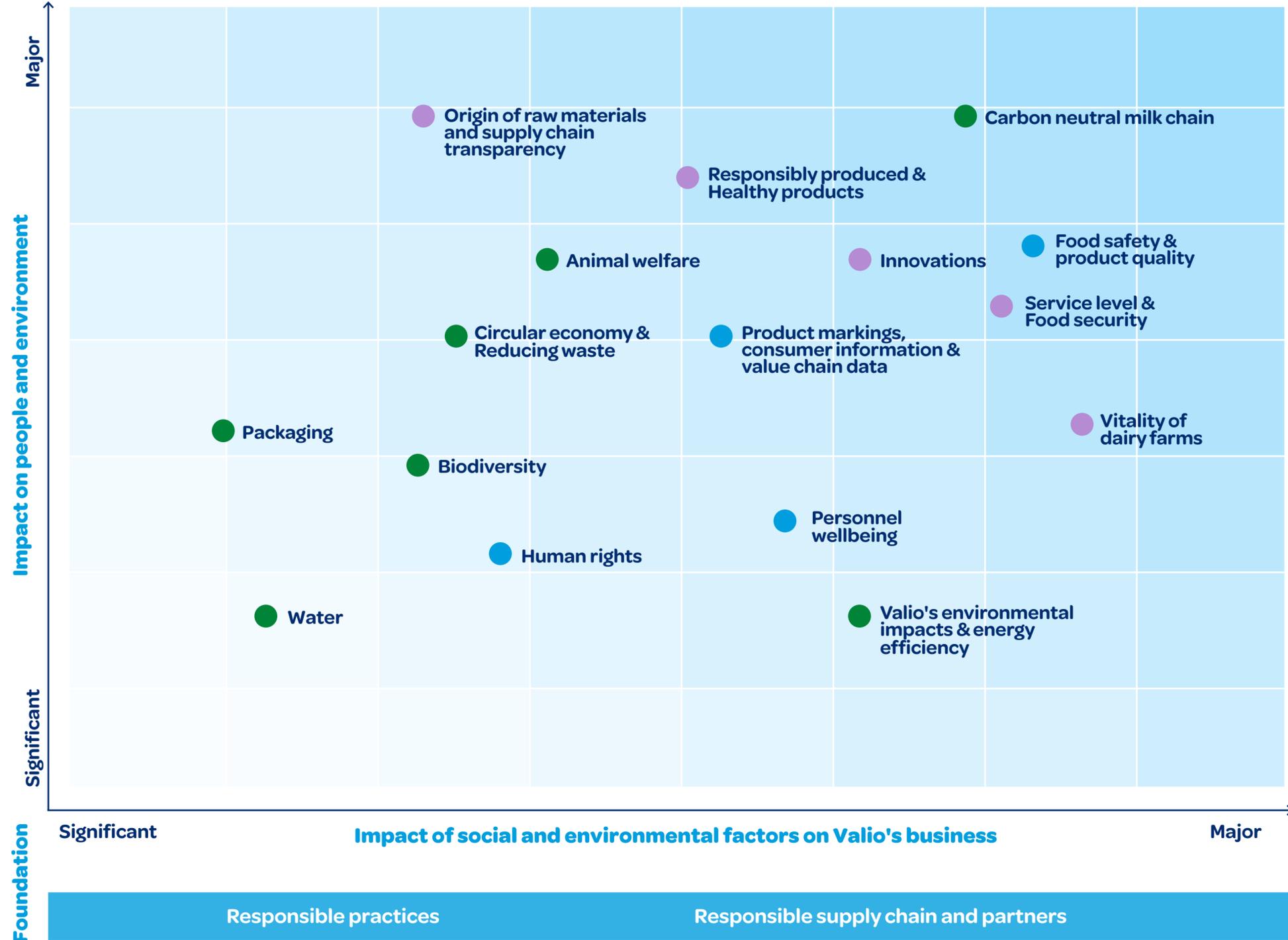
For the 2023 reporting, we will set a target to define the material topics that are in line with ESRS standards.





Materiality matrix

CREATING SUSTAINABLE BUSINESS VALUE

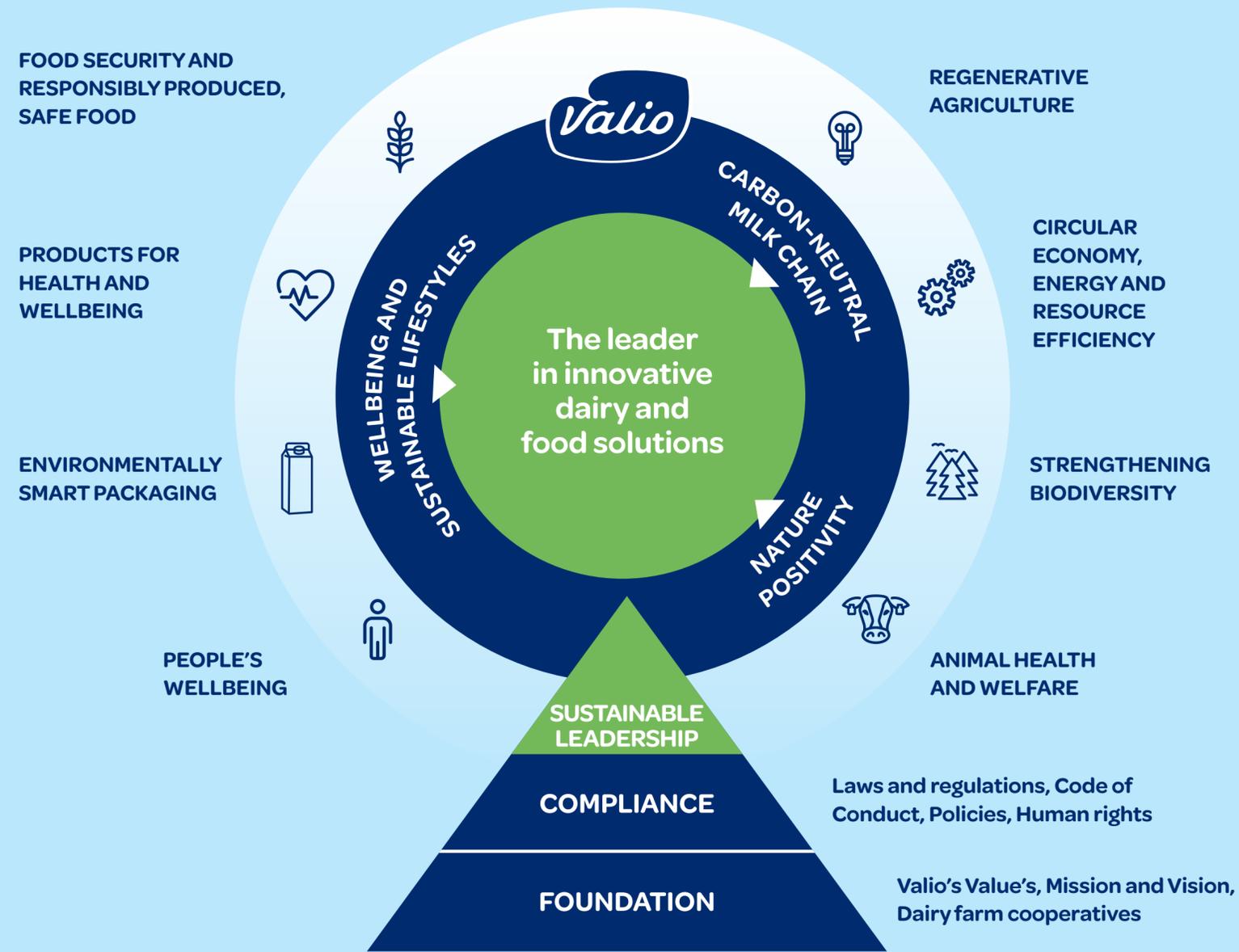


- Plants and animals
- People
- Profit





Focus areas of sustainable business



Based on the materiality assessment, we defined the sustainable business focus areas through which we create wellbeing for society and pursue business benefits. We have set targets for each focus area and we monitor the progress made.

The UN Sustainable Development Goals

Wellbeing and sustainable lifestyles

- Food security and responsibly produced, safe food
- Products for health and wellbeing
- People's wellbeing
- Environmentally smart packaging



Carbon-neutral milk chain

- Regenerative agriculture
- Circular economy, energy and resource efficiency



Nature positivity

- Strengthening biodiversity
- Animal health and welfare



Valio's material sustainability themes are strongly linked to the UN Sustainable Development Goals.



FOCUS AREA	VALIO TARGET	PROGRESS IN 2022	STATUS
Regenerative agriculture	2025 1. All Valio farms measure the carbon footprint of their milk using the Valio Carbo® Farm calculator (2021: 1,000 farms).	1. We are on track to meet the target schedule. Half of Valio farms (ca. 1,900) have calculated the carbon footprint of the raw milk they produce. This represents 60% of the Valio's raw milk intake.	ON TRACK
	2025 2. Train all Valio dairy farms to be carbon farmers (2021: total 300 farms).	2. We trained about 700 new farms in carbon farming. In all, some 1,000 farms have received the training.	ON TRACK
	2030 3. Carbon farming methods are used in all mineral soil fields at Valio farms by 2030 (2021: 700 farms).	3. In conjunction with the carbon footprint calculation, some 1,100 farms reported using carbon farming methods. This represents nearly 85,000 hectares.	ON TRACK
	2035 4. We reduce greenhouse gas emissions from organic arable land and develop the measuring of emissions at the farm level.	4. Six Valio farms are measuring peatland emissions and identifying factors impacting emissions. 11 farms are piloting practical peatfield emissions reduction measures.	ON TRACK
Circular economy, energy- and resource-efficiency	2035 1. Create an operating model for traffic biogas production that is easily accessible for farms and profitable for all parties involved. The operating model must improve the value of manure and increase farm participation in biogas production. The long-term target is that the majority of manure from Valio dairy farms is processed in biogas plants.	1. Valio and St1's joint venture Suomen Lantakaasu Oy is planning Finland's biggest biogas plant investment in Kiuruvesi, North Savo. In addition to the Kiuruvesi biogas plant, the company is planning three mid-size biogas plants in neighbouring municipalities. The aim is to build the first complex of biogas plants based on the hybrid production model launched by the joint venture.	ON TRACK
	2035 2. Develop an operating model to improve opportunities to recycle agricultural plastic so that 100% of agricultural plastic from Valio dairy farms is recycled by 2035.	2. We piloted recycling opportunities for agricultural plastics together with the Finnish recycling company L&T. The recycling pilot was carried out at eight Valio dairy farms, and the results of the pilot will be used in the future to plan the recycling of agricultural plastics.	ON TRACK

FOCUS AREA	VALIO TARGET	PROGRESS IN 2022	STATUS
Circular economy, energy- and resource-efficiency	2025 Reduce the climate impacts of Valio dairy farms by 30%.	1. Total emissions from milk production decreased by 8.5% between 2019 and 2021 (excludes new emissions from wholesale operations in 2022). Not all raw milk is included in the calculation, and the Valio Carbo® Farm calculator doesn't yet take into account all climate actions taken by farms.	ON TRACK
	2030 Reduce Valio production plant greenhouse gas emissions from electricity and heat energy (scope 1 and 2) by 47%. (Valio Science Based Targets).	2. Production plant emissions decreased between 2019 and 2022: heat energy and refrigerant leaks (scope 1) by 42%, and heat energy and electricity (scope 2) by 34%.	ON TRACK
	2025 In line with the Finnish food industry's Energy Efficiency Agreement, improve Valio's operational efficiency by 7.5% by 2025 (compared to 2015).	3. By the end of 2022, the total impact of all energy efficiency measures is about 10.2%, i.e. a total annual energy savings of 72.8 GWh. Thus, we have already exceeded our target, but we will continue with the measures.	COMPLETED
Strengthening biodiversity	We will reduce negative impacts caused by the value chain and increase positive impacts on biodiversity. Our goal is to set Science Based Targets for Nature in the same way we have set Science Based Targets for Climate.	In 2022, we participated in a pilot project organised by FIBS (Finnish Business & Society) and Sitra, the Finnish Innovation Fund, in which we prepared Science Based Targets for Nature. We participated in the EU's five-year CircHive project, which is developing methods for biodiversity footprinting and natural capital accounting.	ON TRACK



FOCUS AREA	VALIO TARGET	PROGRESS IN 2022	STATUS
Animal health and welfare	2022 1. Target is to develop a modern, transparent and clear measuring method for animal welfare, that is scientifically valid, reliable and reproducible. The target includes the recording of data in Naseva (ISO 9001-certified Centralised Health Care Register for Finnish cattle herds), which all Valio farms belong to.	1. Naseva Welfare Assessment of Cattle project, implemented by Natural Resources Institute Finland, Valio, Atria, HKScan, Snellman and Animal Health ETT. In 2023, the measurement tool developed for dairy farms will be tested and work will start on building a statistical model for overall welfare assessment.	ON TRACK
	2. In addition to the sustainability bonus, we will further develop the sustainability programme so that it encourages farms to take sustainability actions on a voluntary basis.	2. Renewal of the sustainability programme on May 1, 2023, when a maximum of 1 cent/milk litre (in addition to the previous 2 cents) can be earned for voluntary actions to improve animal welfare and biodiversity, as well as to reduce the climate impacts of milk production.	ON TRACK
Environmentally smart packaging	2025–2030 We have set challenging long-term targets for single-use packaging made and sold by Valio in Finland: 1. Protects the product (safety, quality, no waste).	1. We track consumer feedback related to packaging. Measured by microbiological feedback/1 million products sold. 2022: 2.1 ppm (2021: 2.8).	ON TRACK
	2. Towards a true circular economy.	2. Packaging is already 100% suitable for collection systems, but some is diverted to incineration. Our target is 100% circular economy-ready packaging. 2022: 88% (2021: 86).	ON TRACK
	3. 100% renewable and recyclable materials.	3. The 100% target means that our packages are made from renewable raw materials, i.e. fossil-free or recycled materials. 2022: 73% (2021: 73).	AT LAST YEAR'S LEVEL

FOCUS AREA	VALIO TARGET	PROGRESS IN 2022	STATUS
Food security and responsibly produced, safe food	Safe products: 0 public and customer recalls.	11 recalls were made in 2022 (2021: 8).	NOT ACHIEVED
	Our delivery reliability is over 99.3%.	Delivery reliability in 2022 was 98.7% (2021: 99.3%).	NEARLY ACHIEVED
Products promoting health and wellbeing	1. Heart Symbol products (no.).	1. At the end of 2022, there were 130 Heart Symbol products in the domestic portfolio. We developed 10 new Heart Symbol products.	PROGRESSING
	2. Nutrition commitments.	2. The 2022 nutrition commitment was achieved by increasing the number of Heart Symbol recipes. We published 10 new recipes for professional kitchens and catering.	COMPLETED
	3. Maintaining Valio Akatemia® activities (stipends, EUR and nutrition stipends, number).	3. We granted EUR 132,000 in support through the Valio Akatemia® programme. 40 were nutrition stipends.	PROGRESSING
People's wellbeing	1. Reduction in sickness absences (%).	1. Sickness absences increased in 2022 mainly due to Covid (2022: 4.9% vs. 2021: 4.1%).	NOT ACHIEVED
	2. Improving Valio Voice employee survey results.	2. Engagement result improved from 2021. The result average in 2022 was 8.0 (2021: 7.9). In the peer group, the result is among the top 25% in the industry.	PROGRESSING
	3. 0 injuries.	3. In 2022, the total recorded incident frequency (TRIF) decreased and was 14.7 per million hours worked (2021:21). Starting in 2023, we are tracking lost-time incident frequency (LTIF).	PROGRESSING



Rating systems relevant to Valio

Sustainable Brand Index™

Europe's largest sustainability-focused brand study is conducted by surveying consumer perceptions of the sustainability of brands.

FINLAND'S MOST SUSTAINABLE BRAND

Consumers considered Valio as Finland's most sustainable brand in the 2023 Sustainable Brand Index™ study.

Reputation&Trust Survey

In T-Media's Reputation&Trust survey, consumers name the most reputable Finnish companies.

VALIO'S REPUTATION AT A GOOD LEVEL

In the 2022 survey, Valio was Finland's seventh most reputable company, and our score was 3.77 (3.88 in 2021).

CDP

The international CDP system collects environmental data and assesses a company's environmental performance.

VERIFYABLY STRONG CLIMATE WORK

In 2022, Valio received a score of B (programme content and effectiveness), and A- (stakeholder work), on a scale of A-F.

EcoVadis

EcoVadis assesses company sustainability aspects on the basis of documented material.

TOWARDS THE TOP

Valio improved its result in the 2022 assessment and achieved a silver medal.





RESPONSIBLE CUSTOMER AND STAKEHOLDER COLLABORATION

Valio's key stakeholders are dairy farmers (Valio's owners), personnel, customers, consumers, goods and services providers, as well as societal decision-makers and influencers. Identifying and taking into account the different expectations of our stakeholders are the cornerstones of our work. We interact with local, national and international stakeholders and learn more about their expectations.

Broad and active dialogue

WE WANT TO BE TRANSPARENT, and we engage in a broad dialogue with various stakeholders through in-person meetings and events, Valio's online service and social media channels, consumer service, customer and owner magazines, and newsletters. Additionally, we participate in various research and cooperation projects with universities, research institutes, associations and other companies.

We are a valued partner for customers

OUR CUSTOMERS include grocery store chains, restaurants, service stations, the food industry, food service providers and bakeries. Valio serves professional kitchens and the food industry in Finland and around the world.

It is important for us to be a reliable partner for our customers. Our customers gave us excellent ratings in surveys:

- **Grocery store business:** In 2022, we were number one in Factum's Grocery Central Buying survey in our peer group of 10 suppliers. Security of supply, reliability, expertise and responsibility are aspects valued by our customers.
- **Professional kitchens and food industry:** Valio Aimo® wholesale customers are especially satisfied with the expertise and product knowledge of the account contacts. This correlates with the general trend in which customers increasingly value a more personal service experience. Additionally, Valio Aimo® stands out in particular for its reliability and excellent order-delivery lead time compared to its competitors. Satisfaction with overall cooperation was 4.3 on a scale of 1–5 in the December 2022 customer satisfaction survey.

- **International Food Solutions sales for industrial kitchens:** Our customers value the smooth cooperation and open communication with Valio employees. Valio is also often perceived as a strategic partner whose core competencies are understanding and supporting the customer's business. Valio Food Solutions' Net Promoter Score in the 2022 customer satisfaction survey was 35.

WE OFFER CUSTOMERS INFORMATION ON SUPPLY CHAIN RESPONSIBILITY

Our aim is to support our customers in ensuring a responsible supply chain. Our team specialising in the information needs of corporate customers provides customers with information about Valio's products and operations. In addition to information needs, the team coordinates customers' auditing and traceability exercise requests. In 2022, the team handled a total of about 800 information need requests. In addition to information need requests, we engage in regular cooperation with several of our customers to advance sustainability issues, discussing and sharing information with each other.



Millions of encounters with consumers every year

Valio.fi is one of Finland's most popular food sites. It sees hundreds of thousands of unique visitors every week. We answer questions about our products and our company via the contact form and by phone. We also engage with consumers through social media.

In a continuous quality survey, Valio's consumer service was rated 9/10 in 2022. Respondents appreciated the speed, friendliness and expertise of the service. We responded to more than 20,000 consumer contacts. These contacts were almost evenly split among product remarks and questions, wishes and ideas. Consumers were especially interested in product-related matters.

We work with national and international decision-makers

WE ACTIVELY PARTICIPATE in the social debate on issues related to, e.g., food policy, the food industry and agriculture. We engage in an open dialogue with policy-makers and decision-makers on issues related to Valio's operating environment and the food sector more broadly both in Finland and at the EU level.

Valio participates in advocacy work related to business, the food industry and the dairy sector through national, European and international organisations. The aim is to ensure that decision-makers are well informed about industry-specific aspects and have the necessary facts to support their decision-making. [Read more about advocacy work on our website.](#) →

Through our membership in FIBS Pro, the largest corporate responsibility network in the Nordics, we promote sustainability expertise and collaboration.

Valio support for children suffering from war in Ukraine



CASE

Valio and Save the Children Finland launched long-term collaboration to help war-affected families with children in Ukraine. Valio is donating a total of EUR 250,000 over three years to Save the Children Finland.

Valio's support will help to provide food, clean water and basic necessities to children in need. The financial assistance has enabled families to secure

their basic needs. Children are also supported to continue their education, e.g. by establishing temporary learning centres. Additionally, psychosocial support is provided to children and their families. The Valio support is also being used to operate child-friendly spaces. In addition to Ukraine, Save the Children has helped children and families fleeing war across Europe.



Valio akatemia® supports youth sports

Valio Akatemia® supports youth physical activities and wellbeing by awarding stipends and by promoting healthy lifestyles. Since 2013, stipends totalling some EUR 1.3 million have been awarded to 2,880 recipients. In 2022, we awarded 320 recipients with stipends totalling about EUR 132,000.

- Cash stipends are intended to pay for things like participation fees.
- Product stipends provide snacks for training or sports travel.
- Event stipends can be used for a sports tournament, e.g.
- Nutritional stipends can be used for nutritional coaching, lectures or cooking classes for individuals or teams. In 2022, we awarded 40 nutritional stipends.



VALIO'S KEY STAKEHOLDERS	STAKEHOLDER EXPECTATIONS AND TARGETS	RESPONDING TO STAKEHOLDER EXPECTATIONS	STAKEHOLDER INVOLVEMENT AND INTERACTION
Owners (cooperatives and dairy farmers)	Milk price Securing economic viability Carbon-neutral milk chain Animal welfare Local production and employment impacts	Cooperative owner strategy Good governance Sustainable financial operation and maximum profit for producers Primary production services Carbon farming training, carbon-neutral milk chain	Cooperative meeting, Board of Directors and Supervisory Board work Meetings, cooperation forums, events and webinars Valma intranet "Maito ja me" magazine
Suppliers of goods and services	Supplier relationship, long-term and fair partnership Clear supplier requirements, contract and payment terms Quality of products and services Fluent and developing collaboration	Sourcing Policy and principles Valio's Supplier and Distributor Code of Conduct Clear supplier requirements Contract and payment terms	Tendering and contracts Meetings and collaboration Supplier management procedures Supplier assessments and audits
Personnel (current and future)	Personnel wellbeing, occupational health and safety Diversity, non-discrimination and equal opportunities Competence development Good management Meaningful work Fair remuneration	Code of Conduct (Our ways of working - One Valio) Personnel strategy, supervisory work and management Equality and non-discrimination plan Recruitment process Responsible corporate culture	Employee satisfaction survey (Valio Voice) Employee info briefings Elected representatives Target and development discussions Recruitment meetings Employer image surveys Valio Whistle reporting channel
Financiers	Responsible economic activity, performance and balance sheet Future outlook Managing sustainability risks Reducing greenhouse gases (climate risks) Reducing food waste	Responsible financing Sustainability programme Science Based Targets for emissions reductions (SBTi)	Meetings with financiers CDP responses Sustainability reporting
Customers	Food safety Carbon footprint of milk value chain Delivery reliability Traceability of origin of raw materials Habitats and biodiversity Reducing food waste Packaging materials and circular economy Wellbeing and nutrition Occupational safety and wellbeing	Sustainability programme Carbon-neutral milk chain Packaging commitments Biodiversity roadmap	Continuous interaction and meetings Customer feedback and customer surveys Sustainability reporting Customer portals Website



VALIO'S KEY STAKEHOLDERS	STAKEHOLDER EXPECTATIONS AND TARGETS	RESPONDING TO STAKEHOLDER EXPECTATIONS	STAKEHOLDER INVOLVEMENT AND INTERACTION
Consumers	Food quality and taste Food safety Food security Animal welfare, ethicalness of animal-based raw materials Reducing food waste Affordability and domestic origin of food Production and origin of raw materials Climate impact of products Packaging and recycling Health, wellbeing and nutrition	Sustainable brand Innovations and product development Nutrition commitments Product labels and consumer information Sustainability programme Packaging commitments	Consumer service, consumer feedback and surveys, consumer information Responsible Marketing Policy Sustainability reporting Website, social media channels
Organisations (trade union, NGOs)	Climate impacts and biodiversity Animal welfare Respecting human rights Working conditions, occupational health and safety Responsible practices	Sustainability programme work Environmental management system Due diligence process Valio Supplier and Distributor Code of Conduct Human rights assessments and audits	Meetings Sustainability assessments and audits
Trade associations	Economic conditions Domestic production Development of the operating environment Animal welfare Carbon-neutral milk chain	Advocacy and cooperation processes	Meetings, active participation Memberships
Societal decision-makers	Nutrition information Climate change mitigation, advancing circular economy Animal welfare Safeguarding and developing national production Food security Employment through local production Security of supply and food sufficiency	Nutrition commitments Carbon-neutral milk chain Biogas from manure Sustainability work Active, informed communication	Information and meetings Public affairs newsletter Regional meetings
Media	Social influence and solutions Perspectives on the industry and the future Open interaction	Consistent, regular and honest communication Expert availability	Releases, media events, interviews On-call mediadesk
Authorities	Food safety Nutrition Animal diseases Environmental impacts Marketing practices	Compliance with permits and anticipation	Meetings Permit process Oversight
Research facilities, universities and scientific community	Nutrition information Environmental impacts of food products Environmental impacts of grass farming Animal welfare Information sharing Internships and job opportunities	Research collaboration and use of scientific data in product development, innovative work and operational development	Collaboration and participation in projects Visits to Valio Speaking engagements Theses



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Focus areas



CLIMATE, NATURE AND ENVIRONMENT

We are aware of Valio's environmental impacts and we are working to decrease our environmental footprint. We also aim to have a positive impact – a positive handprint. Key themes of our environmental work include reducing climate emissions, strengthening biodiversity, and resource wisdom and circular economy in food production, packaging and logistics.

Our Climate Programme takes us towards carbon-neutral milk

THROUGH OUR CLIMATE PROGRAMME we are aiming for a carbon-neutral milk chain by 2035. We will expand our sustainability bonus programme for dairy farms in 2023 so that farms can receive an additional amount per milk litre for biodiversity-friendly farming and for work to reduce the farm's carbon footprint. We are striving for a circular economy through eco-friendly packaging, and we are developing biogas production from manure in partnership with dairy farms and the energy company St1.

Carbon-neutral milk chain means reducing and sequestering at least as much greenhouse gas emissions from the atmosphere as are generated on dairy farms, during transports, at production plants, in the manufacturing of packaging, and elsewhere along milk's journey from the farm to the grocery store.

Emissions reductions at production plants and in logistics are reflected as a reduction of the carbon footprint of all Valio products. Our work focuses on reducing emissions and strengthening the carbon sinks within the value chain, not on offsetting emissions.

The carbon footprint of milk, from field to table



PRIMARY PRODUCTION AT FARM

94 %

- 4% Fertiliser production
- 6% Manure handling: methane and nitrous oxide
- 4% Energy use at farm: fuels and electricity
- 27% Feed cultivation: nitrous oxide
- 50% Cows rumination: methane
- 3% Other inputs

LOGISTICS AND FACTORIES

4.5 %

- 1% Logistics
- 3.5% Energy use at factories

About 94% of the carbon footprint of one litre of semi-skimmed milk is generated in primary production, i.e. on farms. About half of this is methane (CH₄) released from the digestive process of cows and from manure handling. The remaining emissions consist of nitrous oxide (N₂O, 25–35%) from nitrogen fertilisation of fields and carbon dioxide from liming fields, energy consumption at farms and fertiliser production (CO₂, 15–25%). We are constantly improving the accuracy of our farm-level carbon footprint calculation for milk, and, for example, our sampling has increased twentyfold in two years. The emissions calculation has also become more accurate.

PACKAGING

1.5 %

Our goal is ambitious, but it is reachable through research and collaboration between Valio and its dairy farms, a large number of agricultural and energy sector companies, and research institutes. For example, we engage in research collaboration with the Finnish Meteorological Institute, VTT Technical Research Centre of Finland, Natural Resources Institute Finland, University of Helsinki, University of Eastern Finland, Häme University of Applied Sciences, Yara and Atria Tuottajat.

Three extensive, consortium-driven, EU-funded research projects were launched in 2022. The projects focus on breaking down methane in barn air using various technologies and on biodiversity. We are also participating in some 25 projects that are studying the climate impacts of agriculture and emissions reduction schemes at a very detailed level.

Valio is a research and science company that has conducted high-quality life cycle analysis work for many years. The calculation allows us to measure emissions and the progress of the Climate Programme along the entire value chain – from dairy farms to consumers. The ultimate goal is a common set of national calculation principles for the cattle sector and a common farm tool for measuring environmental impacts.

WE ARE MOVING TOWARDS OUR 2035 GOAL PRIMARILY ALONG FOUR PATHS:

1. We are sequestering more atmospheric carbon into grass fields.
2. We are using manure to produce biogas, which is a replacement for fossil fuels in transportation.
3. We are reducing emissions from agricultural peatlands.
4. We are continuing good work on animal welfare, feeding and breeding.

Additionally, we are exploring new emission reduction technologies and implementing them when possible.

The climate impacts in our production are being reduced through:

- energy-efficiency improvements at plants
- increased share of renewable energy
- optimised transport routes
- eco-friendly packaging
- reduced waste in production, at the grocery store and in the consumer's home

[Read more about the Climate Programme on our website. →](#)

We report on the Climate Programme's content, progress, management and stakeholder cooperation in the international CDP system. In 2022, Valio received a score of B (programme content and effectiveness) and A- (stakeholder work), on a scale of A-F.



OUR CLIMATE IMPACTS IN 2022

Greenhouse gas emissions from our operations in Finland in 2022 were about 2.48 million carbon dioxide equivalent tonnes (Mt CO₂e). For the first time, the calculation also includes all the wholesale functions acquired into Valio's value chain in 2021; these functions generated about 6.5 per cent (162,000 tonnes CO₂e) of new emissions in Valio's value chain. Of the total emissions, the raw milk received accounted for 77 per cent, energy use at production plants four per cent, and logistics two per cent. The rest of the emissions were related to the raw materials used in the production of Valio's products, packaging, wholesale products, waste processing, energy in primary production, personnel travel, and product storage and handling at the grocery store and in consumer homes.

Of the Valio Baltics climate impacts, we currently report emissions from the production plants and milk collection logistics. The subsidiaries in Sweden and China only sell products made in Finland, so the majority of the

emissions of these subsidiaries are already included in Valio's emissions calculations. Valio USA manufactures products locally, and the emissions generated by them are estimated to be 2.5 per cent of the total emissions of Valio's Finnish operations. We are developing the emissions calculation of all subsidiaries towards Group-level emissions reporting.

Including the new wholesale operations, total emissions from Valio's Finnish operations increased by about two per cent from 2021 to 2022. Excluding wholesale operations, the total emissions reduction was about five per cent in the year. The emissions reduction from energy use and refrigerants at production plants (scope 1 and 2) in 2021-2022 was a total of 17 per cent and from logistics 16 per cent (including wholesale).

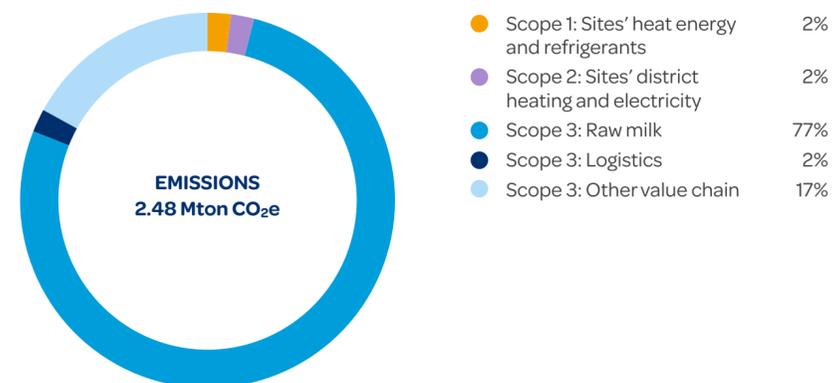
The emissions reductions from our plants are driven by the increasing transition to renewable heat sources as well as energy efficiency measures and investments. We have reduced emissions from logistics by improving the efficiency of transports, but the biggest driver behind

the emissions reductions is the EU's blending obligation, which has increased the share of renewable raw materials in the fuels used.

Total emissions from milk production decreased by over four per cent in the year. This is partly the result of a reduction in the volume of milk purchased. Additionally, the calculation of emissions is more accurate than in previous years, as the carbon footprint of raw milk has been calculated by an increasing number of farms. Farms are also aiming for production that is increasingly more resource-efficient. The results of Valio's Climate Programme can be seen in the graph **"Progress of Valio's Climate Programme in Finland 2019-2022"**.

The base year for our Climate Programme is 2019, the year we standardised our emissions calculation with the international Greenhouse Gas Protocol. We report emissions in Finnish functions for the entire value chain – from primary production to the consumer. We use an operational review in reporting, and the calculation is assured by a third party. Read more about the **assurance report**.

Greenhouse gas emissions of Valio Finland's operations 2022
(incl. wholesale)





Greenhouse gas emissions of Valio's Finnish operations 2019-2022

	2019 ton CO ₂ e	2020 ton CO ₂ e	2021 ton CO ₂ e	2022 ton CO ₂ e	2022 (excl. wholesale) ton CO ₂ e
Scope 1: production plants, offices and wholesales	74,600	91,200	63,700	43,600	43,600
Heat (non-renewable)	73,800	90,600	63,200	42,000	
Refrigerants	800	600	500	1,600	
Scope 2: production plants, offices and wholesales	84,600	63,900	60,100	59,000	56,300
Heat (non-renewable)	16,500	15,700	16,200	14,300	
Electricity (Market based)	68,100	48,200	43,900	44,700	
Electricity (Location based)*	37,100	34,000	31,000	21,100	
Scope 3: other value chain (GHG Protocol category)	2,416,600	2,392,300	2,308,100	2,378,700	2,219,600
Raw milk (1)	2,086,800	2,074,400	1,998,600	1,909,000	
Other products' raw materials and packaging materials (1)	66,100	66,400	53,100	56,000	
Cleaning agents and cleaning services (1)	3,800	4,000	7,300	3,000	
Wholesale products and wholesale packaging materials (1)	0	0	0	142,900	
Capital investments (2)	62,100	59,200	56,500	69,900	
Electricity transfer and fuel production losses (3)	25,800	24,600	32,100	27,900	
Milk collection logistics (4)	20,200	20,900	20,100	13,300	
Transport logistics between plants (4)	4,200	3,800	3,300	2,100	
Inbound freight logistics (4)	0	0	0	200	
Waste management (5)	3,700	2,000	1,800	1,700	
Business travel and work commute (6, 7)	4,600	3,600	3,800	6,500	
Product transport and distribution logistics (9)	22,600	21,900	22,100	22,600	
Product processing, use and disposal (10, 11, 12)	116,700	111,500	109,400	123,600	
Valio Finland total	2,575,800	2,547,400	2,431,900	2,481,300	2,319,500

Valio Finland renewable heat energy 2022

	ton CO ₂ e (renewable**)
Scope 1	
Heat (renewable)	115,800
Scope 2	
Heat (renewable)	36,900

**Emissions from renewable heat production are reported, but they are computationally zero.

Baltics greenhouse gas emissions 2022

	ton CO ₂ e
Scope 1	9,800
Heat (non-renewable)	8,500
Milk collection logistics (own vehicles)	1,300
Scope 2	11,800
Electricity (Market based)	11,800
Electricity (Location based*)	17,500
Total	21,600

- **Scope 1** includes emissions from Valio's own operations
- **Scope 2** includes emissions from Valio's purchased electricity and heat
- **Scope 3** includes all other indirect emissions from Valio's value chain

Climate impacts of Valio's Finnish operations in 2019-2022. For comparison, 2022 figures also without (excluding) emissions of new wholesale operations. Valio's emission calculations are made in accordance with the international GHG Protocol, and the emissions report is verified by a third party. Scope 3 categories 8, 13, 14 and 15 do not apply to Valio's operations in Finland and thus are outside the scope of the reporting. The 2021 GHG emission figures (scope 2 and scope 3) have been revised retroactively in the verification of the emissions calculation carried out in spring 2022.

*Electricity emissions are reported as market based and location based. The emissions calculation uses the market-based figure.

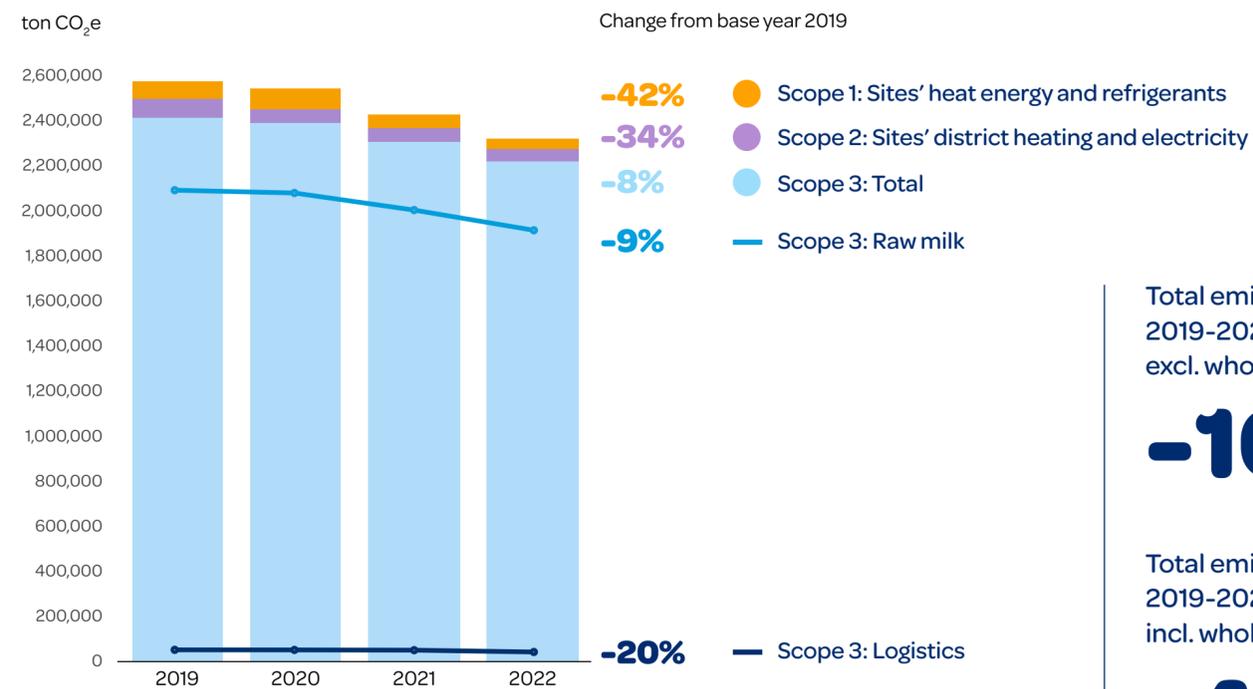


OUR CLIMATE PROGRAMME PROCEEDS AND EMISSIONS CALCULATION DEVELOP

We are proceeding in our climate work according to plans and our emissions have decreased by over 10 per cent (excluding wholesale) in four years. Dairy farms report precise data about their climate impacts to Valio for the period of the previous, full calendar year. Calculations are accumulated throughout the year. Therefore, the average carbon footprint of raw milk and the estimate of the soil's carbon balance are always based on the data from the year preceding the reporting year. However, in the calculation of Valio's total emissions, the other data from the milk intake is data from the reporting year.

For now, milk production's climate impacts do not include the carbon balance of agricultural land, i.e. the carbon emissions and carbon sequestration in the soil. In milk production, the Land Use and Land Use Change (LULUCF) sector emissions are mainly generated from peatlands. We have estimated that carbon dioxide emissions from cultivated fields at dairy farms are about 1.4 Mt CO₂e (2021), calculated using the IPCC (Intergovernmental Panel on Climate Change) emissions factors. In LULUCF sector, it is also possible to calculate carbon sequestration from the atmosphere, although the method is not yet well established in national emissions calculation for arable lands. Based on study data, the carbon sequestration in the soil using carbon farming methods at Valio farms is estimated to be about 125,000 tonnes CO₂e per year (calculated on the basis of the 2021 carbon farming hectares reported in the Carbo® Farm calculator). We are actively developing soil emissions measuring and calculation methods in collaboration with researchers. The aim is to include farm- and parcel-level carbon balance in raw milk's carbon footprint calculation as soon as possible.

Progress of Valio's Climate Programme in Finland 2019-2022



Progress of Valio's Climate Programme in Finland 2019-2022 excluding wholesale business and soil's carbon balance.

Total emissions 2019-2022, excl. wholesale
-10%

Total emissions 2019-2022, incl. wholesale
-4%



ACHIEVEMENTS IN VALIO SCIENCE BASED TARGETS

Our Climate Programme's target of a carbon-neutral milk chain spans to 2035. We are also committed to Valio's science-based SBT climate targets that are in line with the Paris Agreement. The Science Based Target initiative (SBTi) accepted our targets in 2021.

The target is to reduce emissions from energy use at production plants by at least 47 per cent and emissions from milk collection logistics by at least 28 per cent, as well as to cut Valio milk production carbon footprint in half in Finland by 2030 to limit global warming to no more than 1.5 degrees Celsius.

We achieved the logistics target during 2022. Logistics emissions have been reduced through more efficient transports and more biogas-powered vehicles in operation. However, the main factor behind the achievement



**We are making
science-based
emissions reductions.**

of this target is the European Union's blending obligation, which increases the share of renewable raw materials in the fuels used. We achieved 67 per cent of the target for production plants and nine per cent of the target for milk production.

Progress of Valio's Science Based Targets 2019-2022

Energy used by factories (Finland and Estonia)

Target by 2030 -47%



Milk collection logistics (Finland)

Target by 2030 -28%



Carbon footprint of dairy farms (Finland)

Target by 2030 -50%





Climate Programme's key achievements in 2022

The key achievements of our Climate Programme in 2022 were related to the carbon footprint calculation of dairy farms, piloting emissions-reducing technology, and advancing energy self-sufficiency on farms and climate-smart farming practices. Additionally, we published a Climate Guide for Dairy Farms.

1.

Suomen Lantakaasu planning Finland's largest biogas plant in Upper Savo

Suomen Lantakaasu Oy, the joint venture of Valio and energy company St1, is planning to build the first hybrid biogas production plant complex in Upper Savo in Finland.

The plan advanced significantly in 2022. In addition to the industrial-scale biogas plant in Kiuruvesi, we started planning three medium-sized biogas plants in nearby areas. To realise these four biogas plants, we received investment support of EUR 19.2 million. The Ministry of Employment and the Economy's funding decision is conditional, as it is subject to approval by the European Commission. The aim is that in 2026 the biogas plants will be generating a total of 120 GWh of renewable liquefied biogas suitable for heavy transportation. Its energy content is equivalent to 12 million litres of fossil diesel.

The hybrid model of biogas production doesn't require big investments from participating farms. Therefore, in addition to the big farms, also the smaller farms can participate. Valio has determined that 81 per cent of Valio farms in the region could participate in the biogas production planned for North Savo based on their location. Moreover, farmers in the region have great interest in Suomen Lantakaasu's biogas production with the hybrid model.

Regionally comprehensive production of transport biogas can reduce the climate impacts of both agriculture and transport. Additionally, the production and use of manure-based biogas can improve the profitability and security of supply of Finnish food production and contribute to Finland's energy self-sufficiency.





2.

Half of Valio dairy farms calculated their milk carbon footprint

The Valio Carbo® Farm calculator we developed for Finnish dairy farms was launched in October 2020. The calculator gives dairy farmers precise information on the climate and environmental impacts of their own farm's raw milk and how to reduce the impacts at the farm level. The Carbon Trust organisation certifies the calculation model every year.

We have held weekly trainings for farms on how to use the Valio Carbo® Farm calculator since October 2020. More than 100 training sessions have been held, and 3,000 dairy farms have already participated. More than 1,900 of the farms have reported their own raw milk carbon footprint to Valio. The carbon footprint reporting covers about 60 per cent of the milk received by Valio. When the farm-specific baseline and emissions sources are known, the measures to reduce emissions can be targeted more accurately.



CASE



Use of Valio Carbo® Farm calculator expands to Finnish cattle farms

Development of the Valio Carbo® Farm calculator started at Valio 18 years ago when we were studying animal nutrition and its impact on milk production and nutrient balances at the farm. Over the years, we have added national emissions calculation models to the calculator and have expanded it into a farm-level emissions calculator. Today the calculator's calculating principles are based on the Intergovernmental Panel on Climate Change (IPCC) recommendations, the European Commission's Product Environmental Footprint Category Rules (PEFCR) and Valio's own research.

In addition, we have formed a tripartite agreement with the Natural Institute of Finland and Atria Finland Ltd to jointly develop the calculation for use by the entire domestic livestock industry. Together, we have also developed a farm-level climate calculation for beef production farms. Valio Carbo® Farm calculator is expanding to the entire cattle sector; beef producers will also have the opportunity to calculate the carbon footprint of the beef they produce. A standard, national model improves the assessment of climate impacts at the Finnish livestock breeding level and creates common game rules for calculations.



3.

A thousand farms trained in carbon farming

Climate change can be mitigated by increasing the carbon sequestration of fields through carbon farming methods. We arrange carbon farming training events for dairy farmers to promote more climate-sustainable farming and food production.

Farmers can improve the soil's carbon sequestration ability, e.g., by increasing the variety and deep-root species of grasses and by keeping fields green year-round. Together with Finnish grass experts and the Baltic Sea Action Group (BSAG), we are training dairy farmers in carbon farming.

By the end of 2022, we had trained about 1,000 farms, i.e. more than 25 per cent of all Valio farms. Carbon farming is already happening on almost 85,000 hectares. We are the main partner in BSAG's E-College for regenerative agriculture. The free online course offers farmers and students information about regenerative agriculture and improving the soil health.

4.

We tested methane emissions-reducing technology

Methane emissions per litre of milk from Finnish dairy cows have dropped by half over the past 50 years thanks to improved cow nutrition and health, and as a result of breeding. However, the methane produced in the rumination process of cows still accounts for about 50 per cent of Valio's milk carbon footprint when the soil's carbon balance is not taken into consideration. We are actively exploring new technologies to reduce methane emissions. Examples of these technologies include feed innovations and solutions related to the recovery of methane gas in barn air.

In 2022, we tested a feed innovation with some 400 cows at Valio farms. The aim is to make the feeding innovation widely available in the future. Additionally, we are a member in two EU-funded international consortia studying methane capture and break down in barns. The work of the consortia started in autumn 2022 and will continue for four years.



Feed innovation to reduce methane production in cows

The Dutch feed industry company DSM has developed a new additive that can reduce ruminal methane emissions from cows by about 30%. The technology reduces milk's carbon footprint by more than ten per cent. In early 2022, we implemented a pilot together with DSM and A-Rehu to test the technology in the feeding of some 400 dairy cows for a period of six weeks.

In September 2022, a large-scale cooperation project between Valio, Natural Resources Institute Finland, the University of Helsinki and A-Rehu got under way with funding from the Ministry of Agriculture and Forestry. In the project, the feed additive is being studied both on research farms and widely at 43 Valio dairy farms. The first results will be available in 2023.



5.

We advanced the use of solar energy at dairy farms

We promoted solar energy investments at dairy farms in partnership with the Finnish energy company Väre to boost sustainable energy self-sufficiency at dairy farms. The partnership helps dairy farms to invest high-quality turnkey solar energy systems. Dairy farms have shown a strong interest in renewable solar energy. In 2022, more than 100 Valio dairy farms reported owning a solar power system. This cooperation and the increase in dairy farms' energy self-sufficiency will continue in the future.

6.

We are piloting climate-smart farming practices of peatlands at 11 farms

It is possible to mitigate peatland climate impacts to some extent by developing farming practices. Valio is participating in the "Lower-emission grass rotations on cultivated peatlands (VÄPÄ)" project, in which 11 Valio farms are testing cultivation methods that reduce emissions on their own peat fields. The goal is to apply the research data and to find out how the climate measures succeed at the farm level.

Based on current research, it is possible to reduce emissions by reducing soil tillage and by raising groundwater levels, among other things. In the VÄPÄ project, farms are testing various tillage methods, direct seeding and extending periods of grass rotation with e.g. overseeding. Every parcel in the project has a real-time groundwater level sensor, which farms can monitor via an app. The aim is to practice peatland water management to reduce emissions without jeopardising grass crops.

Farm-level land use is also being addressed with the pilot farms by mapping low-yielding peat fields and by interviewing farmers about current issues, like restoration, afforestation and farming on rewetted peatlands.

7.

We published a climate guide for dairy farms

In autumn 2022, we published and distributed to dairy farms a climate guide on the climate impacts of milk production and ways to reduce them. The guide is based on research data. We encourage dairy farmers to consider different climate actions and their suitability for their own farm. At the same time, animal welfare, the farmer's wellbeing and financial aspects should be taken into consideration. The guide is published also online in [Finnish](#) and [Swedish](#).



We strengthen biodiversity

A SUSTAINABLE LIFESTYLE, responsible production that is in line with a circular economy and moderate consumption are the basis for halting biodiversity loss and helping the biodiversity recover. Our biggest impacts on nature are in milk primary production.

In addition to milk, we use other raw materials in our own products and our wholesale has an extensive product portfolio. We have started our biodiversity-related work with milk production work because it has the most material biodiversity impacts in Valio's value chain. However, we are also constantly looking at our other value chains that have more complex biodiversity impacts than milk production, and we are developing, e.g., our sourcing criteria.

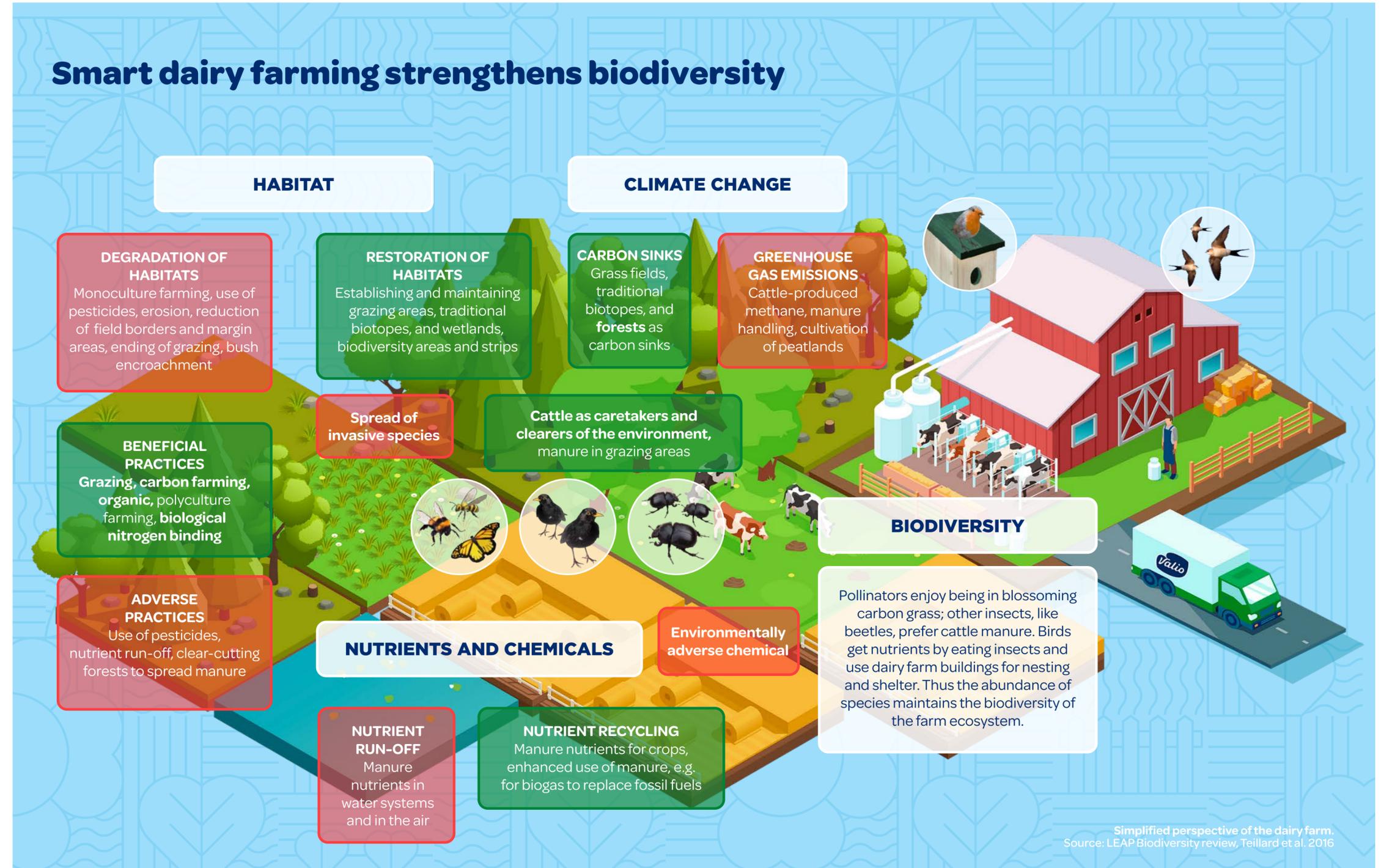
In addition, we are aiming to remap and strengthen the biodiversity values in our industrial areas.

ROADMAP GUIDES OUR WORK

We manage our biodiversity work as part of the environmental sustainability operations. In 2021, we drafted a biodiversity roadmap, which we will refine in 2023. In the near future, we will also set targets and indicators for biodiversity enhancement.

We have identified biodiversity risks and opportunities for our business. We also actively monitor national and international biodiversity regulation and its development.

The main risks in the sector relate to the weakening of the ecosystem services and the major ecosystem change caused by the accelerating loss of biodiversity.





We have assessed our role as a significant domestic actor in strengthening biodiversity as an opportunity. Milk production has a key role in maintaining Finland's biodiversity. If animal husbandry and grazing disappear, pasture habitats will decline because of overgrowth and biodiversity will weaken, impacting birds and insects in particular. Grazing, traditional biotopes, cattle breeds of Finnish origin and diverse grassland are examples of how milk production contributes to agricultural biodiversity.

WE PLANNED TARGETS FOR NATURE AND DEVELOPED INDICATORS

In 2022, we participated in a pilot project organised by FIBS (Finnish Business & Society) and Sitra, the Finnish Innovation Fund, in which we started setting Science Based Targets for Nature. The four-workshop pilot helped us to start to work in line with Science Based Targets Network's action framework. However, we did not yet set the targets, as the further developments for framework is still ongoing. We are actively following the completion of the work. Our goal is to set Science Based Targets for Nature in the same way we have set Science Based Targets for Climate.

We also participated in the EU's five-year CircHive project, which focuses on developing methods for biodiversity footprinting and natural capital accounting. In 2023, we will continue to develop metrics related to biodiversity. We have been exploring different possibilities since 2019, as we want to develop a tool that is suitable for our farms and tailored to Finnish conditions.

Developing a suitable metric for nature values has proven to be a more challenging task than the carbon footprint calculation.

We joined hundreds of companies in a campaign to encourage decision-makers at the UN Biodiversity Conference (COP15) in Montreal to require companies to transparently report their impacts on nature. [Read more about the campaign on Valio's website.](#) →

In summer, Valio communicated to consumers about the importance of biodiversity by opening 'buzzer buffets' in three cities. The buffets of pollinating-friendly flowers raised awareness about the important role of grazing in maintaining valuable habitats. [Read more about the buzzer buffets.](#) →

We also promoted biodiversity on a practical level at three pilot farms where we restored a pond and a forest pasture and created flower strips. For years, we have persistently worked to support biodiversity on dairy farms. We have worked with the Rural Women's Advisory Organisation in the past on, e.g., mapping the nature values of more than 60 dairy farms. 65 per cent of the farms in these surveys received a score of good or excellent. We have also offered our farms financing to maintain valuable natural sites. For example, repairing fences has enabled grazing in valuable traditional biotopes.

In May 2023, we will renew the voluntary sustainability bonus paid to our dairy farms. With the renewal, Valio will annually pay EUR 50 million to its owners for going above and beyond the legislative requirements for animal welfare, for supporting biodiversity and for climate change actions.



Meadow flowers and Carbo[®] grass for Valio headquarters

We planted 140 m² of Valio Carbo[®] grass and Finnish meadow flowers to replace a lawn area at our headquarters in Helsinki. Multi-species and dense grasses are the foundation of carbon farming. Valio has six different Carbo[®] grass seed mixtures, all of which aim to provide good grass forage in terms of nutritional value and, as they grow, increase the soil's carbon storage.

Flowering meadows offer a diverse habitat for a variety of plant and animal species. It takes years after establishment before meadows reach their full glory. This is why the headquarters grounds have different species in different years. Summer 2023 will feature mainly annual plants flowering in the meadow. In summer 2024, you will see several perennials chosen from old Finnish garden strains.



We improve resource efficiency in production

OUR OPERATIONS are guided by Valio's **Environmental Policy** and our environmental management system, which has **ISO 14001 certification** covering Finnish and Estonian operations. We have identified the most significant environmental impacts of our operations and are committed to reducing them by continuously improving our operations from a life-cycle perspective. We regularly monitor environmental issues at sites at various organisational levels in line with our management system. The key indicators are also monitored by Valio's top management.

The efficient use of energy and materials is closely related to reducing climate emissions and enhancing biodiversity. Valio uses the most energy in maintaining the production hygiene needed to produce high-quality products. Of materials used, raw milk is by far the most used at Valio.

WE ARE IMPROVING ENERGY EFFICIENCY AND INCREASING THE SHARE OF RENEWABLE ENERGY

Improving energy efficiency is an important part of our Climate Programme. Valio has committed to improving energy efficiency by signing an Energy Efficiency Agreement and by joining the Food industry's energy efficiency programme. In line with the programme, we are implementing energy efficiency actions at our production plants, and report on them annually to Motiva. Energy efficiency is also closely linked to Valio's cost efficiency programme. These actions are monitored and reported on monthly in the energy steering group meetings.

Our goal, consistent with the Finnish food industry's energy-efficiency agreement started in 2017 and ending in 2025, is to improve energy efficiency in Valio's own operations by 7.5 per cent from the 2015 level. So far, the combined impact of the energy-efficiency actions accounts for about 10.2 per cent of our 2015 energy consumption, i.e. an annual energy savings totalling 72.8 GWh.

Thus, we have already exceeded our target, but we aim to continue with good momentum. We will continue efficiency-boosting actions to minimise environmental impacts and to improve cost.

Total energy consumption has remained at about the same level, but the share of renewable fuels in heat production has increased significantly and now accounts for about two thirds of total heat production fuels. We are continuously increasing the use of renewable energy sources at our Finnish plants. Renewable biofuels, like wood chips, sawdust, bark and bio-pellets, are sometimes in short supply. To ensure security of supply, we will continue to maintain the possibility to burn peat.

We improved energy efficiency significantly in 2022. The success is largely attributed to the flue-gas condenser and heat pump system commissioned at the Lapinlahti plant. The system is the biggest energy efficiency investment in our history. Valio's investment earned Motiva, the Ministry of Economic Affairs and Employment, and the Finnish Energy Authority's "Energy Genius of the Year 2022" award.

Energy consumption by source in Finland*

	UNIT	2018	2019	2020	2021	2022
Consumption of heat	GWh	499	499	494	491	492
Consumption of electricity	GWh	239	238	243	237	238
Consumption of energy altogether	GWh	738	730	737	728	730
Heat fuel shares		100	100	100	100	100
Peat	%	36	27	35	25	16
Light fuel oil	%	6	6	5	9	9
Natural gas and liquid petroleum gas	%	12	10	10	10	5
District heat**	%					2
Electricity ***	%					1
Renewable fuels	%	47	55	48	56	67
Fuel shares of heat production		100	100	100	100	100
Domestic fuels	%	83	83	83	81	83
Import fuels****	%	17	17	17	19	17

*Including production plants, main office, wholesale operations and Tuusula Itäkngas from 2022 onwards.

**District heat without certificates of origin is reported separately from 2022 onwards.

***Electricity used by energy partners in electric boilers and heat pumps.

****District heat and electricity are calculated as imported fuels.

**Energy consumption at Valio's production plants, 2022 (GWh/a)***

	FINLAND	ESTONIA	TOTAL
Electricity (total)	226	19	245
Electricity (renewable)	45	0	45
Electricity (non-renewable)	181	19	200
Heat (total)	510	28	538
Heat (renewable)	346	0	346
District heat (without certificates of origin)	3	0	3
Heat (non-renewable)	161	28	189
All total	736	47	783
Renewable total	391	0	391
Non-renewable total	345	47	392

*Does not include main office, only production plants.

Energy consumption at Valio's production plants, 2022 (TJ/a)*

	FINLAND	ESTONIA	TOTAL
Electricity (total)	814	67	880
Electricity (renewable)	162	0	162
Electricity (non-renewable)	652	67	718
Heat (total)	1,836	101	1,937
Heat (renewable)	1,246	0	1,246
District heat (without certificates of origin)	11	0	11
Heat (non-renewable)	580	101	680
All total	2,650	168	2,817
Renewable total	1,408	0	1,408
Non-renewable total	1,242	168	1,410

*Does not include main office, only production plants.

Examples of other energy-efficiency actions taken during the year:

- Installation of LED lighting
- Optimisation of cold storage defrosting
- Introduction of energy-savings mode for sterilisers
- Operational development of heat recovery networks
- Adjusting the temperature settings of the cooling coils of air handling units

We also joined the nation-wide Down a Degree energy saving campaign.

A goal in 2023 is to build a new heat pump system for the Seinäjoki plant. The system consists of several heat pumps and will have a major impact on the Seinäjoki plant's energy consumption. The aim is to also continue introducing the use of LED lighting. We will also optimise the operation of heat distribution and ventilation systems.

We contribute to energy efficiency in the food industry by participating in the steering group of the Finnish Food and Drink Industries' Federation's energy efficiency action plan. We are also participating in the working group on continuous improvement of energy-intensive industry and in the work of the Confederation of Finnish Industries' energy and climate committee. We will continue participating in these groups in 2023, and we will maintain the exchange of information between production plants to ensure the development of energy efficiency actions.

WE ARE SYSTEMATICALLY REDUCING THE ENVIRONMENTAL IMPACTS OF OUR PRODUCTION PLANTS

From the environmental perspective, the biggest challenge for the development of Valio's strategy and business comes from the fragmentation of production operations, which is continuing to grow. The fragmentation is visible in the volume of individual products, the volume of semi-manufactured products needed for the manufacturing of a single product and the high number of production batches. These factors increase the need to wash machinery and equipment, thus increasing also water consumption and wastewater loss. The increasing production of plant-based products on the same production lines as milk-based products further increases the need for washing. Data from environmental monitoring is steering our production activities and the related decision-making in a more resource-efficient direction.

Read more about the environmental impacts of our operations on our website. →





WE ARE IMPROVING WATER EFFICIENCY AND REDUCING WASTEWATER LOADS

Valio's sites in Finland are connected to municipal sewer networks and their wastewater is routed to municipal wastewater treatment plants. We have made industrial wastewater treatment agreements with water utilities, which set maximum permitted load values for various parameters. In several of the municipalities where we operate, we have directly contributed to the investment costs of the treatment plants. The sites in Estonia have their own wastewater treatment plants.

We monitor our wastewater load and volume by comparing them to the milk volume received. Our goal in 2022 was to maintain water consumption in relation the amount of milk received and to limit the increase in the Chemical Oxygen Demand (COD) load to 0.4 per cent; COD reflects the hazardousness of wastewater to

oxygen-dependent organisms. We achieved the wastewater load target, as the load decreased by 2.6 per cent. We didn't achieve the wastewater volume target. The wastewater amount relative to the milk volume received increased by 1.3 per cent.

In 2022, we developed a concept to improve production plant water efficiency. The concept takes into account not only the reduction of water use, but also the potential to increase water recycling. The concept includes measurements, audits and calculations. We tested the concept in 2022 at one site, and found several areas for improvement. We will introduce the concept at other production plants in the coming years.

At one site, we were able to significantly reduce the load in wastewater by effectively using root cause analysis and systematic problem-solving tools. We are actively rolling out the new approach also to other sites.

Water use in Valio's production plants, 2022 (m³)

	FINLAND	ESTONIA	TOTAL
Fresh water withdrawal by source			
Municipal waterworks	4,368,182	0	4,368,182
Groundwater (own wells)	441,642	596,417	1,038,059
Surface water (own treatment)	100,361	0	100,361
Domestic water All	4,910,185	596,417	5,506,602
Cooling water from water bodies*	3,258,585	0	3,258,585
Water recycled and reused	1,257,485	72,288	1,329,773

*Returned to water body.

Wastewater and wastewater loads, 2022 (m³)

	UNIT	FINLAND (Loads to the municipal treatment)	ESTONIA (loads from the own treatment to the water body)
Waste water flow	m ³ /a	5,365,110	635,585
COD	tn/a	5,652	9.6
BOD	tn/a	8,679	1.7
Nitrogen	tn/a	138	3.1
Phosphorus	tn/a	493	0.4
Suspended solids	tn/a	1,988	4.7



WE ARE REDUCING WASTE VOLUMES BY RECYCLING MATERIALS

Our goal is to use raw materials and consumables resource-efficiently. In waste management, we aim for the order of priority principle, i.e. to divert as much material as possible for reuse and material recycling.

Environmental authorities oversee the operations of Valio and waste management companies. We check the permits and registrations of the waste mismanagement companies before we start partnering with them.

The most significant change in terms of waste management in 2022 was the substantial decrease in the amount of waste going to biogas production in Finland. The change was driven by a reduction in waste.

The amount of waste going to biogas production in Finland decreased substantially in 2022.

Raw materials used in Valio's own production plants, 2022 (tn)

	FINLAND	ESTONIA	TOTAL
Raw milk	1,681,634	226,528	1,908,162
Fruits and fruit preparations	10,659	1,538	12,197
Other raw materials (sugars, salts, vegetable oils etc.)	25,012	637	25,649
Packaging materials	23,513	2,891	26,404

Waste management by type and disposal method, 2022 (tn)

	FINLAND	ESTONIA	TOTAL
Hazardous waste	113	4.4	117.3
Reuse & Recycling (plastic, metal, glass, paper etc.)	1,913	383	2,296
Waste to energy	1,201	36	1,237
Composting and biogas	25,734	7,557	33,291
Waste incineration	450	163	614
Waste to landfill	41.6	10.2	51.7

Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions, 2022 (tn)

	FINLAND	ESTONIA	TOTAL
Nitrogen oxides	5.3	13	18
Sulfur oxides	107	43	150
Particles	263	1	264
Powder dryers, dust emissions	13,740	0	13,740

WE ENGAGE IN COOPERATION WITH ENVIRONMENTAL AUTHORITIES

All production plants in Finland and Estonia, except one, require an environmental permit. In 2022, we completed the permitting processes for our production plants, as required by the EU-level environmental permit requirements for the food industry (published in 2019). The permitting processes didn't bring any surprises. At two sites, we are continuing technical studies and test runs to reach the new dust emissions limits for powder drying. In 2022, we did not need noise abatement measures or the noise studies required for their design.

The hazard classification of concentrated nitric acid, which is widely used in our process washing, changed at the beginning of March 2022. The change elevated five of our sites to a higher category of regulatory requirements. Despite the change, the authority did not deem it necessary to increase the frequency of inspection of these sites, even though the legislation would have allowed it.

The amended Waste Act that took effect in 2021 and the new waste decree do not significantly impact the waste management of our Finnish operations, but their impacts on the arrangements and costs for recycling the packaging we release into the market began to materialise in 2022. Valio Ltd has been a stakeholder in associations responsible for the recycling of plastic and fibre packaging. In 2022, a producer association covering all packaging materials was formed under the new Waste Act, and Valio is a stakeholder in the association.

We monitor the preparation of environmental legislation at both the EU level and in Finland through our membership in the Finnish Food and Drink Industries' Federation.

The environmental audits and regulatory inspections in 2022 did not reveal any material shortcomings in our operations.

WE ARE REDUCING MILK WASTE

Reducing milk waste in our production is important from a cost and productivity perspective. As a result of the waste reduction, it takes less raw material to make the products since all the milk is utilised. At the same time, less emissions are produced.

We have reduced the waste generated in our production through dozens of development projects in 2022. Reducing waste was part of the 2022 launch of the strategic #2025 programme that aims to increase the milk return through efficiency improvements, operational development and new profitable business. Our main objective is to reduce waste from the use of milk raw material and from quality defects and operations by 50 per cent over a four-year period (2022-2025).

We continued renewing #2025 programme-related operational reporting and the strengthening of technological capability. This enables better knowledge-based management, development of the milk raw material reporting system and real-time analysis. We expanded the use of the technology platform of the plant automa-



tion systems to support and assist various operational applications. In doing so, we are making waste a more transparent part of daily management practices.

In 2022, we succeeded in managing the seasonal variation of milk much better than in previous years, thus reducing waste. In the #2025 programme projects, we reduced milk raw material waste by about 13 per cent and production error costs by about 9 per cent compared to 2021.

We continued implementing Valio's common production method into practice in plant management. We started extensive personnel training, accompanied by quality improvement projects in the daily work at the plants. We trained quality improvement experts at the plants to systematically implement improvement projects to eliminate waste. We will expand the personnel training to the supervisor and expert levels in 2023.

Climate-smart packaging

Minimising climate impacts

Packaging commitments

TOWARDS A CIRCULAR ECONOMY AND MINIMIZING CLIMATE IMPACT



Priority areas



Our goal is environmentally smart packaging. We are committed to protecting products, to minimising food waste, to using packaging that truly aligns with a circular economy, and to minimising climate impacts by using packaging solutions that are made from renewable plant-based or recycled materials. The carbon footprint of Valio's packaging is about 1.5 per cent of the product's total carbon footprint. [Read more about sustainable packaging on our website.](#) →

OUR PACKAGING PROTECTS FOOD AND PREVENTS WASTE

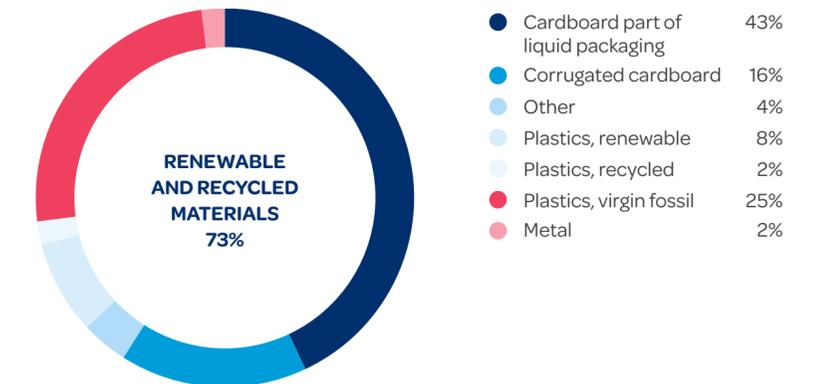
Packaging's most important task is to protect the product, ensure safety and shelf-life, and thus prevent food waste. In 2022, we continued the enhanced quality control of the packaging process and packaging at our production plants. The number of microbiological consumer feedback has decreased significantly from the 2019 base level of 4.7: in 2022, we received 2.1 feedbacks for every million products packaged.

WE CONSERVE NATURAL RESOURCES BY USING RENEWABLE AND CIRCULAR ECONOMY MATERIALS

Packaging made from renewable materials and suitable for the circular economy helps us conserve natural resources and reduce climate emissions. Our goal is that by 2030 all the single-use packaging materials we manufacture and sell in Finland are made from renewable or recycled materials.

In 2022, 73 per cent (2021: 73%) of our single-use packaging materials were made from renewable or recycled materials. About 29 per cent (2021: 28%) of

Single-use packaging material in Finland, 2022 (17.2 MKG)



Renewable or recycled plastics
29%

Recycle-ready packages
88%

the plastic packaging was made from renewable or recycled materials. Currently, all our gable-top milk, sour milk, cream and yoghurt containers and caps sold in Finland are made from 100% renewable materials.

In 2022, we introduced new cups that can be recycled with cardboard. Some Valio PROfeel® protein quarks and Oddlygood® products are now packaged in cardboard cups. In this way, we are reducing the amount of plastic we use by replacing it with renewable materials. In 2023, our goal is to continue expanding the use of cardboard cup packaging.

We also successfully continued the use of recycled plastic in our sliced cheese packaging. All sliced cheese packaging contains at least 55 per cent recycled plastic.



THE RECYCLING OF PACKAGING CONTRIBUTES TO A TRUE CIRCULAR ECONOMY

All of Valio's single-use packaging sold in Finland is easy to recycle in packaging collection systems. However, all packaging materials from collection systems still do not end up within the sphere of a true circular economy, i.e. into new products. In 2022, 88 per cent of the packaging materials produced by Valio and sold in Finland can truly end up as new products through the circular economy.

We encourage consumers to recycle. In 2020, we started adding new, easy-to-find, plain-language recycling instructions to our packaging to make everyday life easier. We will continue the work as planned. We have also added easy recycling instructions to Valio's packaging-related [website](#). At the end of 2022, we also introduced the first green sustainability labels on our packaging. These offer a visible, easy and understanda-

ble indication of environmentally smart packaging. We will significantly boost the use of the labels in 2023. [Read more about packaging on our website.](#) →

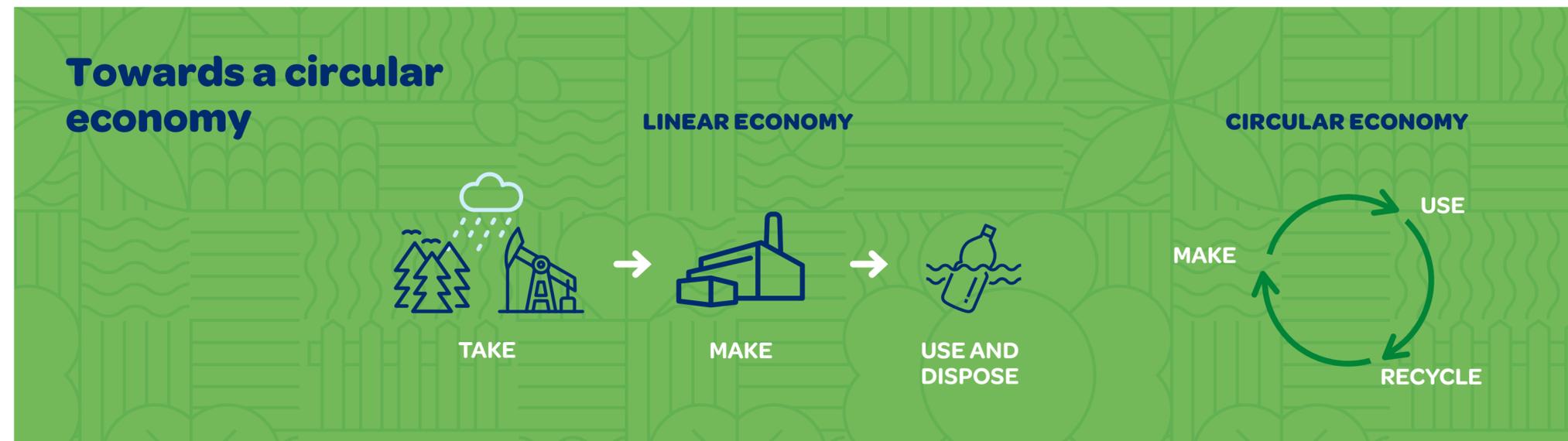
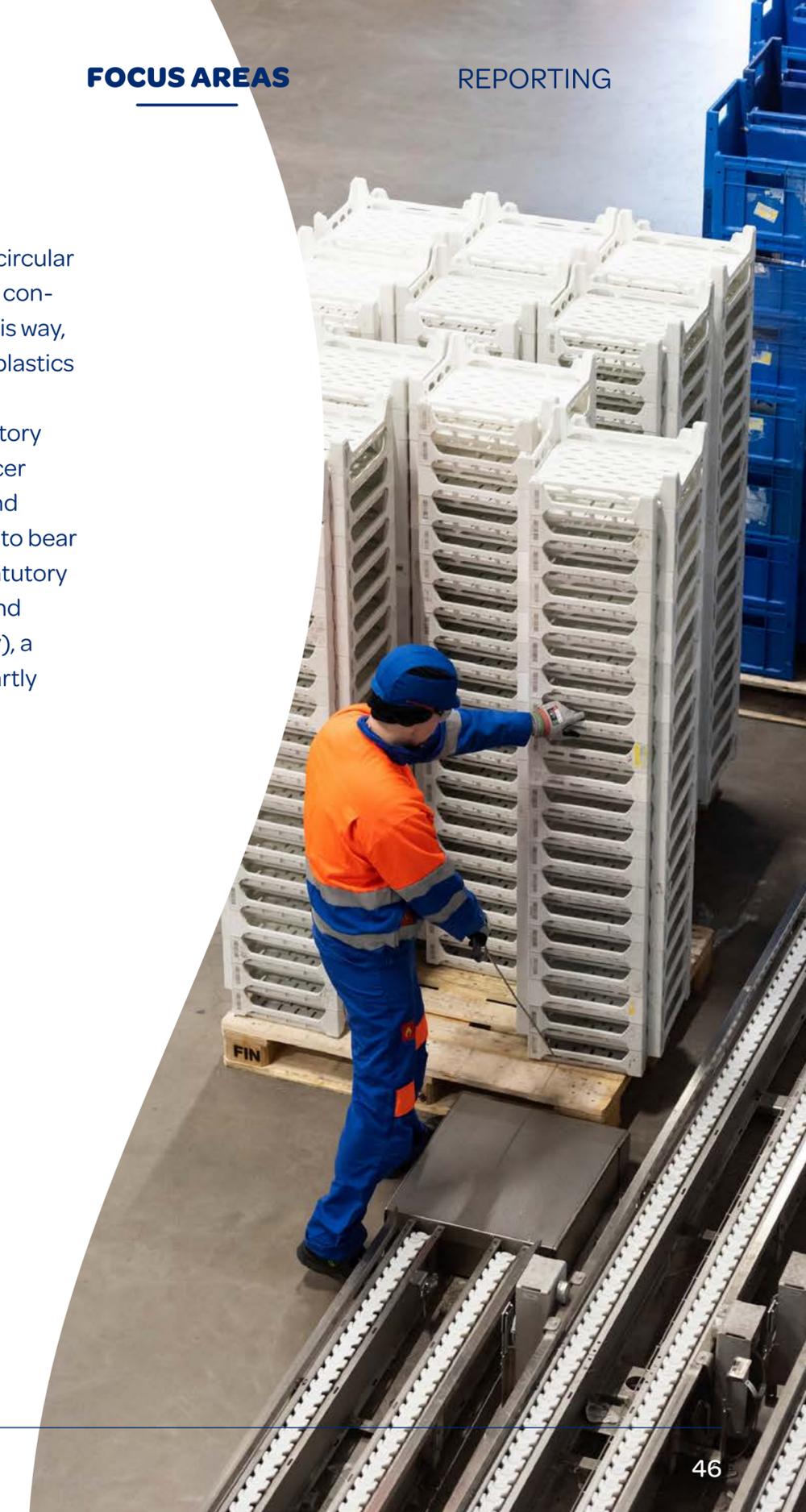
In transporting milk, yoghurt and other products, we use recyclable plastic milk crates, dollies, and trays. They are used about 40.2 million times in a year. This way we avoid using the same amount of single-use cardboard boxes or units. We recycle the plastic units that have become worn out or damaged in use. In 2022, we used reusable wooden pallets about 1.2 million times.

We package export products in cardboard transport and wholesale packaging that is compliant with EU recyclability guidelines. The recyclability in the destination country depends on the local recycling arrangements.

We have launched a circular economy collaboration project for packaging with waste operators, packaging manufacturers and other major food brand companies.

The aim of the project is to achieve a true closed circular economy in which food packaging collected from consumers is used to make new Valio packaging. In this way, we will significantly reduce the use of virgin fossil plastics in the future.

Producer responsibility for packaging is a statutory obligation for businesses. A company with producer responsibility is obligated to arrange collection and recycling of its packaging waste in its entirety and to bear responsibility for the costs of this. We fulfil this statutory obligation through our agreement with Rinki Oy and through Finnish Packaging Producers Ltd (SPT Oy), a producer organisation established in 2021 and partly owned by Valio.



WE ARE PREPARING FOR MORE PACKAGING REGULATIONS

The increasing volume of single-use plastic and packaging material and the environmental pollution caused by packaging material is a global problem. The EU is drafting new legislation to eliminate this problem. The changes will significantly impact also Valio's operations in the future.

In 2022, we prepared for the new requirements of the EU's Single Use Plastics Directive 2019/904/EU. In one of our biggest projects, we planned how we will implement the directive requirement that the caps of beverage containers of up to three litres must remain attached to the container. The first containers with tethered caps were rolled out to stores in early 2023.

In 2023, we will prepare for the voluntary Green Deal on reducing the use of plastic single-use packaging and the related practical measures. The deal is a joint initiative between the Ministry of the Environment and industry operators.

We are preparing for the future, in line with the Directive on Packaging and Packaging Waste proposed by the EU Commission in November 2022. The aim of the



Directive is to harmonise packaging-related legislation in the EU, and to

- prevent the generation of packaging waste by limiting unnecessary packaging
- increase the reuse of packaging
- strengthen the circular economy
- reduce the consumption of natural resources
- create a functioning market for recycled raw materials in the EU

Valio's own packaging-related commitments and ambitious targets are already well aligned with the new proposed directive. We will closely monitor the preparation of the proposed directive and will further define our own targets where necessary.





Our logistics efficiency reduces emissions

IN LOGISTICS, our most important goal is to maintain cost efficiency and customer satisfaction, which contribute to milk production. We design our milk collection and distribution routes to optimise our performance: we avoid unnecessary driving and aim to drive fully loaded trucks. Efficient routing reduces fuel consumption and environmental impacts.

In 2022, we managed to make our logistics responsive to the ever-changing demand. During the Covid years, distribution and the entire supply chain were unpredictable. Customer needs, consumer shopping behaviour and retail sales volumes changed quickly. At the same time, customer orders from the hotel and restaurant sector declined.

We distribute more than one third of Finland's temperature-controlled food every year. Valio's joint distribution with other companies reduces the environmental load of product distribution and decreases the number of kilometres driven. Product distribution in Finland is handled by 125 transport entrepreneurs and 227 delivery trucks. Valio's own personnel plans and optimises the distribution routes. This way, we ensure that we use the fleet efficiently and take customer needs into consideration. In 2022, domestic distribution made some

1.8 million customer visits, which means around 6,500 customer encounters per day.

Milk collection from dairy farms in Finland is carried out by roughly 45 subcontractors and 69 trucks. On average, the trucks were on the road for more than 20 hours per day, every day, in 2022. The average age of the fleet is about two years. All the trucks meet the latest EURO 6 emissions standards. Larger trucks are used to increase load sizes and to reduce emissions. The number of routes decreased by 4.3 per cent in 2022. Milk collection trucks drove 834,000 kilometres less than the previous year. When we choose our partners, we verify the EURO emission rating of the vehicles used.

We participated in the Finnish market research company Taloustutkimus "Bread, Board and Heat" project together with the Central Union of Agricultural Producers and Forest Owners (MTK), Finnish Forest Industries, and the Bioenergy Association of Finland. We lobby Finnish decision-makers to increase road funding for the low-traffic road network. The good condition of the low-traffic road network is a prerequisite for growing transport needs of agriculture and the energy and forest industries, which are important for security of supply.

Key figures in Finland's logistics:

MILK'S AVERAGE DISTANCE FROM FARM TO DAIRY

79 km



MILK'S AVERAGE DISTANCE FROM DAIRY TO GROCERY STORE

88 km

DELIVERY RELIABILITY OF OUR PRODUCTS TO CUSTOMERS

99%

50

OVERSEAS SHIPPING CONTAINERS AND ABOUT

100

TRUCK CONTAINERS EXPORTED EVERY WEEK

EXPORTS FROM FINLAND TO

50

COUNTRIES

ABOUT

96%

OF EXPORT CONTAINERS WERE FULLY LOADED

CASE**Aiming for fossil-free and carbon-neutral logistics in Sweden**

In 2022, our subsidiary in Sweden assessed for the first time the material environmental impacts of its own operations. The assessment was made based on data from 2021. It was determined that product logistics is the largest source of emissions (2021: 6,900 tonnes CO₂e). We set a target to transition to fossil-free fuel by 2025 and to achieve carbon-neutral logistics in 2035. We are harmonising Valio Sweden's emissions calculation to align with the international Greenhouse Gas Protocol (GHG) Protocol.

**WE ARE INCREASING THE USE OF BIOGAS IN MILK COLLECTION**

Biogas is a renewable fuel that can reduce greenhouse gas emissions from transport by as much as 85 per cent compared to fossil fuels. The five biogas-powered milk trucks we have in operation together covered about 1.1 million kilometres in 2022. We are increasing the number of biogas-powered vehicles every year as the refuelling network grows.

In 2022, we had four trucks running on liquefied biogas (LBG). February 2022 brought the rollout of the first milk truck running on compressed biogas (CBG) made from manure. Biogas-powered trucks accounted for about 5.7 per cent of the total kilometres driven in milk collection. The use of biogas reduced carbon dioxide emissions by about 900,000 kg CO₂e compared to fossil diesel.



VITALITY OF DAIRY FARMS AND ANIMAL WELFARE

The vitality of dairy farms is built on animal welfare and the wellbeing of people and the environment. Competent and healthy dairy farmers are able to take good care of their herds and develop their business in a changing world. Our business operations support the vitality of Finnish dairy farms and promote employment throughout Finland. Our profits go to our owners, i.e. to Finnish dairy farmers. We offer expert services to help our owners develop their business, improve animal welfare and ensure high milk quality.

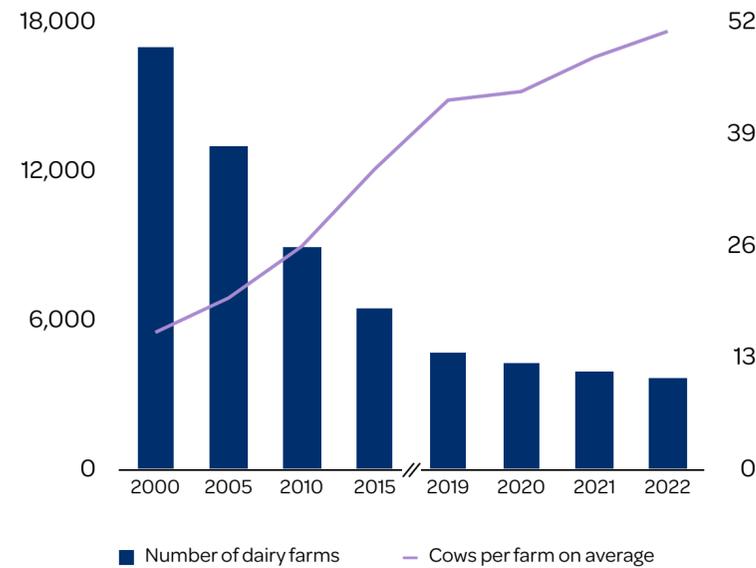
Valio dairy farms provide employment throughout Finland

PURCHASING VALIO PRODUCTS promotes employment throughout Finland. Dairy farms employ veterinarians, relief workers, feed producers, agricultural equipment service technicians and manufacturers, transport and construction contractors, and others. We offer our owners a range of services to improve animal welfare and ensure high quality milk.

There were some 3,700 Valio farms in 2022, i.e. about 300 fewer than in 2021. There were 101 organic producers in 2022. The number dropped slightly from the previous year but has remained around the same level during recent years. On the other hand, dairy farm size has increased year by year. In 2022, the average number of cows per dairy farm throughout the country was 53. Finnish farms are relatively small. The ICAR organisation's statistics show that the average number of cows per herd in 2020 was over 200 in Denmark and 90 in Sweden.

Valio dairy farmers produce about 80 per cent of Finnish milk. The vitality of dairy farms and their ability to continue operating in different situations is important for safeguarding domestic food production.

Number of dairy farms in Finland and average herd size (year end)



WE SECURE THE LIVELIHOODS OF DAIRY FARMERS

Valio aims to secure the livelihood of its owner entrepreneurs and opportunities to succeed as dairy farmers. We aim to secure the medium- and long-term future of Valio dairy farms and to ensure that milk production, which is particularly well suited for Finnish natural conditions, remains in Finland. By conducting business responsibly, we earn the best possible milk return for the milk collected from dairy farms. Additionally, we offer our owner entrepreneurs with high-quality expert services to support sustainable and evolving dairy farming as well as the professional skills and wellbeing of the owner entrepreneurs.

The vitality of dairy farms is built on animal welfare and the wellbeing of people and the environment. Because the different aspects of dairy farm vitality are strongly interlinked, we aim to improve the vitality of dairy farms by identifying and implementing measures that synergistically promote all the aspects.

In 2022, Russia's war of aggression exacerbated the agricultural cost crisis that started in 2021. Prices for agricultural inputs, i.e. energy, fertilisers and feed, skyrocketed, which significantly reduced the profitability of dairy farms. We responded to the difficult financial situation of the dairy farms by increasing the milk price paid to the cooperatives several times during the year, by a total of about 36 per cent.

Along with rising production costs, milk production in 2022 was threatened by disruptions in the availability of critical production inputs. For example, the risk of electricity supply disruptions due to power shortages

increased in late 2022. We prepared for market disruptions by determining the level of preparedness of dairy farms and by compiling preparedness guidance materials and training for dairy farmers in collaboration with stakeholder groups, such as the National Emergency Supply Agency.

Valio plays a key role in the profitability of dairy farms, since the dairy farm entrepreneur faces the market as a derived demand through Valio. Sales income from milk makes up the majority of a Valio dairy farmer's net sales. Dairy farmers can influence production volumes and improve unit costs through their own actions, but they have no influence on the added value of the milk and thus on the milk price.

Valio's basic mission is to create the best possible milk return* for the milk collected from dairy farms.

This is achieved by generating the highest possible net sales from every litre of milk collected from dairy farms in a cost-effective way that respects the wellbeing of people, animals and the environment. The key measures to achieving this goal include reducing waste throughout the production chain and increasing the added value of milk in a cost-effective way.



We received 1,682 million litres of raw milk in Finland in 2022, which is 42 million litres less than in the previous year. The average price paid to the cooperatives was 52.1 cents (2021: 42.3 c/l) per litre of raw milk. The price includes after payments to dairy cooperatives for 2022. We paid the cooperatives a total of EUR 883 million (2021: EUR 736 million), comprising the raw milk price, after payments, dividends and interest.

Number of Valio farmers producing organic milk:

Year	Amount
2000	101
2005	133
2010	106
2015	127
2019	118
2020	113
2021	111
2022	101



$$\begin{aligned}
 \text{*Milk return} &= \frac{\text{(milk margin - the need for depreciation of fixed assets i.e. financing requirement for investments)}}{\text{milk volume supplied by the owners}} \\
 \text{Milk margin} &= \text{Net sales less other costs, excluding depreciation and the price paid to owners for raw milk and interest on shareholder loans.}
 \end{aligned}$$

UPDATES TO DAIRY FARM SUSTAINABILITY PROGRAMME

Since the beginning of 2018, Valio has paid sustainability bonus to those farms that commit to voluntary actions improving animal welfare. As of the beginning of 2021, all Valio dairy farms are within the sphere of the sustainability bonus.

Receiving the sustainability bonus requires the following:

- The farm is included in Naseva, the Centralised Health Care Register for Finnish Cattle Herds, and a veterinarian makes a herd healthcare visit to the farm at least once a year. Many of the farms are visited by a veterinarian even more often.
- Hoof health is monitored and hooves are treated regularly.
- Anaesthetics, pain relief and sedation are used in disbudding, i.e. the removal of a calf's horn buds.
- New barns are freestall barns where cows can move about freely.
- Feed is soya-free and GMO-free.

The dairy farm sustainability programme will be updated in 2023. New voluntary actions will be added to the programme to improve animal welfare and biodiversity and to reduce the climate impacts of milk production. A maximum of 1 cent/milk litre (in addition to the previous 2 cents) will be paid for the voluntary actions. The key to the sustainability bonus actions is that they go beyond legislative requirements. The new programme takes effect on 1 May 2023.



We promote animal welfare at dairy farms

ANIMAL WELFARE is the foundation of our operations. Valio is a company owned by dairy farmers; taking care of animals is their daily work.

WELFARE OF COWS IS SYSTEMATICALLY MONITORED AT VALIO DAIRY FARMS

Animal welfare is an animal's experience of its own mental and physical state. (Source: the Finnish Farm Animal Welfare Council, 2019). Good health, nutritious feed, and a habitat that allows for species-specific behaviour are important parts in the welfare of cattle. Valio farms want to ensure a good life for calves, youngstock and cows and to satisfy their basic needs and provide opportunities for positive experiences.



How is animal welfare assessed during Naseva health care visit?

During a health care visit, the veterinarian assesses farm's conditions and practices

All Valio dairy farms belong to Naseva, the Centralised Health Care Register for Finnish Cattle Herds, in which the welfare of cows is monitored and promoted systematically. In addition to welfare information, Naseva includes information about the farms' animal care practices and infectious disease protection, as well as information about medications and results of laboratory analyses. **Naseva** is administered by Animal Health ETT; see their website for more information about the system.

In addition to participating in Naseva, regular visits by a veterinarian are basic requirements for Valio milk production. During the annual health visit to each of our farms, the veterinarian assesses all aspects of animal welfare, such as feeding, conditions, health and behaviour. At the same time, the veterinarian and the farmer together draw up a healthcare plan, i.e. an action plan to improve the health and welfare of the herd. Additionally, a veterinarian visits the farm whenever necessary, for instance due to the acute illness of an animal.

Naseva was granted ISO 9001 certification in June 2021. The assessment was conducted by Kiwa Inspecta certification body. The certificate tells consumers that proactive and systematic efforts to promote animal health and welfare and food safety are being carried out at dairy and meat production farms included in Naseva.

GOOD REARING ENVIRONMENT/ HOUSING

- Clean and dry animals
- Barn air quality and temperature
- Space available per animal
- Space available for resting
- Comfort, softness, dryness and cleanliness of resting area
- Calving space size, hygiene, amount of bedding
- Are barn passageways slippery
- Grazing opportunities, which animal groups are allowed to graze
- Exercise, can animals use an exercise pen
- Are cows or heifers tethered (tiestall) or not
- Are there any structures restricting movement in the barn

GOOD FEEDING

- Cattle feeding: assessment of the quality and quantity of feed used, and the nutritional status of animals
- Sufficiency of water supply
- Sufficiency and mode of milk drinking for calves

BEHAVIOUR

- Behaviour of the animal group towards each other, herd dynamics. Are the animals peaceful with each other, or is there fighting
- Human-animal relationship, how trusting the animals are of an approaching human
- Abnormal behaviour, does it exist
- Animal handling: how well animals are handled so that transfers etc. do not cause fear
- Handling spaces and equipment: availability of gates or moveable fences and treatment crates suitable for handling

GOOD HEALTH

- General condition of animals, health condition, coat shine
- Growth of calves
- Udder health, incidents of mastitis and number of treatments
- Lameness, in what proportion of the cows is it prevalent
- Skin and joint lesions, are they present and on what proportion of the animals
- Pain relief practices in disbudding of calves
- Monitoring of mortality by age group; what proportion of animals died or had to be euthanised due to illness
- Sufficient functional claw trimming and hoof health care practices
- Prevalence of infectious diseases nationally and at herd level
- Prevention of infectious diseases at the farm
- Laboratory and survey results about animal health
- Monitoring of the antimicrobial and other veterinary medicines use at animal and herd level



WE ARE DEVELOPING A NEW METHOD FOR ASSESSING ANIMAL WELFARE

We are working with Natural Resources Institute Finland, Animal Health ETT, University of Helsinki Research Centre for Animal Welfare researchers, and veterinarians from Valio and cooperation organisations to develop a completely new set of indicators to assess the welfare of dairy farm animals.

To start the development work, all possible cattle welfare indicators were identified and collected from over 400 sources. Based on scientific literature and expert assessments, the most suitable for measuring welfare at herd level were selected and tested at the Natural Resources Institute Finland's research barn in Maaninka. After the preliminary validity, reliability and practicality tests, a total set of 57 welfare indicators were selected, covering all dairy farm animals: calves, youngstock and cows. The set of indicators was published at Maataloustieteen Päivät 2022 [Agricultural Science Days] in June 2022.

Development of the animal welfare assessment method will continue in the Naseva Welfare Assessment of Cattle project, which is being carried out by Natural Resources Institute Finland, Valio Ltd, Atria, HKScan, Snellman and Animal Health ETT/Naseva. In 2023, the set of welfare indicators developed for dairy farms will be widely tested, similar methods will be created for beef cattle farms, and building a statistical model for the overall assessment of welfare will begin.

The aim is for a cattle welfare assessment method that is as modern, transparent and easy-to-understand as possible, is scientifically valid, reliable and repeatable, and the data generated by it can be included in the Naseva system in the future. The welfare criteria and

assessment method will be published nationally in simple language and also internationally as peer-reviewed scientific articles and seminar presentations.

ANTIBIOTICS ARE USED AT OUR FARMS ONLY WHEN NECESSARY

The proliferation of antibiotic-resistant bacterial strains is prevented at Valio dairy farms by treating cows with antibiotics only when there is a proven need. Production animals in Finland are given medication in moderation compared to, e.g., southern European countries, and production animals are not treated with antibiotics critical to human medicine. In Finland, cows are not given antibiotics as a preventive measure. If a cow is sick, a veterinarian will examine it and prescribe the appropriate medication. Records of medications administered to animals must also be kept.

We verify milk purity by testing for antibiotic residues. If a cow is treated with antibiotics, its milk is tested clean after a waiting period before milking into the farm's tank. The milk is tested three times: first at the farm, then at the dairy before the milk is unloaded and, finally, before the milk is moved to production. These measures ensure that there are no trace antibiotics in the products.

COWS MOVE FREELY IN FREESTALL BARN

In a freestall barn, cows can move about freely year-round and they can eat and rest when they choose to. Milking is done at a milking station or by an automatic milking system. About 44 per cent of the barns at Valio farms are freestall barns, and about 75 per cent of the cows live in them.

In a tie stall barn, every cow has its own stall where it eats, drinks and rests; it is also milked there. Tie stall barns are gradually disappearing because most of the dairy farms that are going out of business – particularly the smaller





farms – are farms with tie stall barns. Valio's requirement that new barns must be freestall barns is contributing to the decreasing number of tie stall barns. Less than 30 per cent of all the milk supplied to Valio is produced in tie stall barns.

About 70 per cent of dairy farms graze cows and heifers for at least three months and at least six hours per day. Additionally, cattle at some of the farms move about in exercise yards during summer. About 19 per cent of the dairy farms provide year-round outdoor access. We advise farms to take grazing and exercise opportunities into consideration whenever planning a new barn. At Valio's organic dairy farms, all animals graze on grass and live in freestall barns. [Read more about different types of barns and outdoor access for cows on our website.](#) →

PAIN RELIEF IS USED IN DISBUDDING

Calves are disbudded, i.e. their horn buds are removed, for safety reasons: caretakers and other animals are safer when the animals don't have horns. Disbudding a calf is a less harmful procedure to the animal than de-horning an adult animal.

A requirement at all Valio farms is that adequate pain relief must be given to a calf undergoing a disbudding procedure. The calf is sedated, pain medication is given and its horn buds are anaesthetised prior to disbudding. This way, the procedure causes the animal as little distress and pain as possible. Most of the farms have been applying this method already for years, and Valio has required it at its farms since the beginning of 2021.

FARM SUPPORT AND VISITS SAFEGUARD ANIMAL WELFARE

Maintaining and developing the welfare of cows requires work, knowledge and support. Dairy farmers are supported in their work by Valio's primary production experts and

about 20 experts that work in the cooperatives. Valio's laboratory services produce data on the quality of feed and milk, analyse milk yield recording and mastitis samples, and perform gestation tests from milk samples.

The cooperative experts offer no-cost consultation and support in issues related to milk quality, milk processing equipment, feed production, new investments, etc. Valio and the cooperatives also arrange a variety of training courses for dairy farmers and dairy farm workers [Read more about farm support services on our website.](#) →

We aim to audit 20 per cent of our farms each year. In 2022, an audit was conducted at 21 per cent (2021: 19.5%) of the farms. During the farm visit, a production advisor from the cooperative observes how well the farm's milk production process aligns with Valio's approach: how milk quality, animal welfare, feeding and general cleanliness are managed at the farm. If a shortcoming is found, the dairy farmer receives instructions on remedying the issue. In the more serious cases, milk collection is suspended until the shortcomings are corrected. An expert from the local cooperative will visit a farm also if there is a drop in the milk quality or a disruption in production. We are constantly developing our collaboration also with health-care and supervisory veterinarians. In addition to our own audits, a veterinarian makes an annual Naseva-compliant visit to every farm and documents the observations made into the system. Additionally, a veterinarian visits the farms whenever necessary, for instance due to the acute illness of an animal.

WE PRODUCE INFORMATION TO SUPPORT DAY-TO-DAY WELFARE EFFORTS AT FARMS

We continuously participate in research and development projects that seek to improve the health and welfare of cows and calves. The projects result in scientific



research publications and practical instructions, guides and calculators to help dairy farmers and their partners maintain and improve the welfare of their livestock.

In 2022, we created the Voimavasikka [Strong Calve] section in the Maito ja me [Milk and Us] online magazine to support improvements in the daily care and welfare of calves. We developed the SimValiokarja calculator modelling the economic links between livestock welfare and animal health to taken into account contract pricing of milk, and we produced a guide to managed livestock renewal to promote animal sustainability and longevity. We implemented antimicrobial tracking graphs in Naseva so that farms can compare the amounts of medicines needed to treat the animals with the numbers at other Naseva farms.

We are participants in research projects that generate data to help manage or prevent challenges related to cattle health, welfare or the need for antimicrobials. During 2022, we participated in projects led by the University of Helsinki Faculty of Veterinary Medicine, the Finnish Food Safety Authority and Natural Resources Institute Finland, which explored the best practical methods for measuring welfare, promoting calf health and immunity, promoting cow and calf welfare through weaning, the causes and risk factors for cow mortality, best practices in conjunction with omitting cow dry-off, prevention and risk management of cryptosporidiosis on cattle farms, and good grazing practices.



RESPONSIBLY PRODUCED, HEALTHY PRODUCTS

We take care of the delivery reliability of food and food security. We use high quality and sustainably produced raw materials. Food safety and promoting healthy lifestyles are our sustainability focus areas. We develop products and recipes that improve nutrition, wellbeing and health. We provide nutrition information for home and professional kitchens, and we market our products in a responsible way.

We take care of delivery reliability and food security

AS THE GLOBAL POPULATION GROWS, the need for food is increasing. For example, according to the World Resources Institute (WRI), the demand for food will double by 2050 compared to 2020. The world will need sustainably produced milk and meat, plant-based food and new innovations in cellular agriculture. Valio's business is responding to all these needs and thus to the changing world.

We are developing sustainable food production that takes into account environmental issues, local security of supply and food safety. Milk production plays an important role in food production in the cooler and wetter regions of the world. Also in Finland's northern climate, grass yields a more abundant harvest than many food crops and is the most important food source for cows.

OUR DELIVERY RELIABILITY REMAINED AT AN EXCELLENT LEVEL

In 2022, a wide range of threats affected food security, including global uncertainty over the availability of raw materials, supply chain challenges, energy crisis preparedness and, with inflation, changing consumer behaviour. However, we managed to keep the delivery reliability of our products at a very high level. Our delivery reliability in 2022 was 98.7 per cent.

Russia's invasion of Ukraine in February had many different impacts on supply chains and the availability of raw material and packaging materials, especially within Europe. We regularly monitored availability and were able to react proactively and quickly to the various challenges.



We are continuously developing food safety

FOOD SAFETY is one of our sustainability focus areas. We constantly strive for better food safety management in all our operations and products. Our food safety targets include, e.g., the continuous reduction of foreign objects and other product defects that cause recalls. We maintain and develop the management of food safety in compliance with FSSC 22000 and BRC requirements. Our plant certifications are available on [our website](#).

Our plants carry out self-monitoring based on the HACCP (Hazard Analysis and Critical Control Points) system to identify and eliminate factors that could jeopardise consumer health and safety. Self-monitoring covers the whole production process, from receiving packaging materials and raw materials to product, facility and process equipment monitoring, storage and transportation. With good traceability, we know what raw materials and packaging materials have been used in each batch of our own products and where each of our product batches has been sent. [Read more about ensuring food safety on our website.](#) →

In 2022, we launched a project to develop Valio Finland's food safety culture. This project will remain our main food safety focus in 2023. We will develop food safety metrics, internal communication and training, among other things.

We are also continuing the foreign object project that we initiated in 2021. We launched the multiyear project because the feedback on foreign object had not decreased as expected. A foreign object is any non-food item, such as a piece of packaging material. Some foreign objects can be harmful to the health of the consumer. Based on the 2022 feedback, the occurrence of foreign objects included in the project has decreased significantly.

A total of 11 recalls were made in 2022 (2021: 8).

- We announced three of the recalls publicly so that also consumers received information about possible product errors. Two of these recalls involved Valio's own production.
- The other recalls were made from our customers as a precautionary measure or for incorrect date markings. One of these recalls involved a product not made by Valio.

We also developed our food safety crisis and HACCP activities in 2022 and continued the development of food fraud risk management.

In 2022, we launched a project to develop Valio Finland's food safety culture.





Our products are made from clean and sustainably produced raw materials

PURE FINNISH MILK is the foundation of most Valio products. The quality and safety of all the milk we use is carefully ensured through proper handling and regular sampling.

In addition to milk, we use many other raw materials. The quality and food safety of each raw material is ensured through a detailed raw material analysis and approved before the raw material is taken into use in production.

Additionally, we have widely assessed raw material-specific sustainability risks and, based on the supply chain sustainability risks, identified the raw materials requiring special attention and whose production involves a high level of globally known sustainability risks. These raw materials are primarily agricultural production plant products or raw materials of animal origin.

We systematically consider high-risk raw materials in the product development process and engage in cross-organisational collaboration related to them. In 2022, we expanded awareness of the issue by holding briefings in, e.g., product development, product category and sales. In 2023, we will continue to advance policies on high-risk raw materials, with regular topic-related collaboration between different organisations. We will

extend the raw material-specific review to berries and more. Read more about Valio's responsible sourcing in the [supply chain section of the report](#).

MILK QUALITY REMAINED AT ITS BEST

In 2022, the share of the best (E-rated) milk from Valio farms rose to a record high of 97.8 per cent (2021: 97.1%). Only 0.003 per cent of the milk was of the weakest quality rating, 2.

Excellent milk quality requires continuous monitoring by the dairy farmer and a quick response to deviations. Milk quality is verified before the milking of every cow. In the daily quality verification of the farm tank milk, temperature and one's own senses are important tools. Additionally, the farm monitors the milk's cell and bacterial counts and the milk composition analysis results of every milk collection. In conjunction with every milk collection visit, milk truck drivers inspect the temperature, smell and appearance of the farm tank milk. Only milk that meets the requirements can be pumped into the truck's tank. The drivers also test the milk for residues of antimicrobial agents before it is pumped from the truck into the dairy's silo.

**WE USE CERTIFIED COFFEE AND COCOA**

In 2022, we continued to advance our coffee and cocoa policies by switching to certified coffee and cocoa raw materials. We are not able to operate close to the primary production of the raw materials, but by purchasing certified raw materials we ensure that they are produced in accordance with sustainability principles.

Of the certification schemes available, we chose Rainforest Alliance certification, as it was the most suitable for our needs. We defined the procedures and responsibilities for the management of certified raw materials and products. At the beginning of 2023, we were awarded a Rainforest Alliance licence, which allows us to manufacture Rainforest Alliance-certified products from certified raw materials at our plants in Jyväskylä, Suonenjoki, Turenki and Seinäjoki.

Palm oil is no longer used in Valio's production plants. We used palm oil in one industrial product manufactured for a customer. The palm oil in this product was replaced with another vegetable oil at the end of 2022, so we also gave up the RSPO certificate of the one production plant where it ensured that the palm oil used in the product was certified.

USE OF SOY IN PLANT-BASED PRODUCTS

Valio has decided to add soy protein as a possible raw material in plant-based Oddlygood® products due to its good nutritional, textural and taste properties. In line with the new policy, the soy must originate from the EU or North America to eliminate the risk of rainforest destruction.

Progress of raw materials policies

	TARGET	PROGRESS 2022	2020	2021	2022
PALM OIL	No palm oil in consumer products.	No palm oil in consumer products.	100%	100%	100%
	Palm oil in industrial products verifiably certified.	No palm oil in industrial products.	0%	100%	100%
SOY	No soy in consumer products (excl. Oddlygood®).	No soy in consumer products (excl. Oddlygood®).	99%	100%	100%
	Soy is not used in feed in Finland.	No soy in feed.	100%	100%	100%
	New target as of 2023: The origin of soy for plant-based products (Oddlygood®) is Europe or North America, and the soy must be of a non-GMO quality.	–			
	Non-GMO quality: The labelling requirements for food containing genetically modified organisms as described in Regulation (EC) No. 1829/2003 do not apply to the product.				
COCOA	Only certified cocoa is used.	Identified certification options for the four highest volume cocoa raw materials in Finland, and have changed them to be certified accordingly. Formula: Certified cocoa raw materials / all cocoa raw materials.	Finland 0%	Finland 3.6%	Finland 95%
	Cocoa is verifiably certified.	Rainforest Alliance certification of supply chain acquired for four production plants. Work started to advance product and packaging changes. Formula: Certified cocoa products / all cocoa products (consumer products).	Finland 0%	Finland 3.6%	Finland 10%
COFFEE	Only certified coffee is used.	Identified certification options for coffee raw materials in Finland, and changed them to be certified accordingly. Formula: Certified coffee raw materials / all coffee raw materials.	Finland 0%	Finland 0%	Finland 100%
	Coffee is verifiably certified.	Rainforest Alliance certification of supply chain acquired for three production plants. Work started to advance product and packaging changes. Formula: Certified coffee products / all coffee products (consumer products).	Finland 0%	Finland 0%	Finland 91%

CASE



We are investigating supply chain responsibility in domestic wild berries

At the end of 2022, suspicions of human trafficking in conjunction with the harvesting of domestic wild berries were raised in Finland. Valio mainly uses Finnish wild berries in its products, so the case also affects Valio's supply chain. The berries for the 2022 harvest were purchased before we had knowledge of the criminal investigation.

We do not tolerate any human rights abuses in our supply chain. It is very important that all suspected violations are investigated so that we can ensure the entire supply chain's commitment to responsible operations.

We have identified risks related to berries as part of a human rights assessment carried out in 2019 and in subsequent, more detailed risk mapping of raw materials. In Finland, the risks associated with wild berry picking are strongly linked to seasonal work, the short growing season, the extensive need for foreign seasonal labour, and the working conditions and earnings of the pickers.

We have strived to ensure the responsibility aspect of Finnish berries through long-term cooperation with our suppliers and supplier management procedures.

Following the suspicion of a criminal offence, we immediately initiated the following measures:

- We set up an internal investigation team.
- We analysed our overall process of berry procurement.
- We sought clarification from the berry supplier under investigation.
- We reviewed our procurement principles as well as our supplier and raw material management practices.

In line with our sustainability principles, we do not automatically suspend our cooperation when a potential violation occurs, but we do demand that the situation will be corrected. This principle of responsible procurement is widely used, as it is a more effective way of improving the situation than ending cooperation.

At publication of this report, the criminal investigation into suspected human trafficking is still ongoing, and no decisions have been taken on berry purchases for the 2023 harvest season. Domestic wild berries are key raw materials in Valio products. We want to be able to buy responsibly produced Finnish wild berries, and we want to work together to improve working conditions for berry pickers in Finland.

For our part, we will focus on improving the management measures and will urge our supply chain players to do the same. Valio's development plan:

- We will further review our procurement policies and supplier management practices.
- We will regularly monitor the progress of the supplier's corrective action plan.



We promote healthy lifestyles and good nutrition

PROMOTING HEALTHY LIFESTYLES is one of our sustainability focus areas. We want to improve the nutritional quality of diets by encouraging Finns to eat in line with nutritional recommendations, including through the nutrition commitments and our other nutrition stewardship actions. We offer comprehensive product info on our website. We innovate new products that contribute to consumer wellbeing and health. We engage in responsible marketing communications.

NUTRITION COMMITMENTS IMPROVE CONSUMER NUTRITION

A nutrition commitment is the National Nutrition Council of Finland's operating model that is part of Society's Commitment to Sustainable Development (Commitment2050). Nutrition commitments are concrete, significant and measurable actions taken over a period of 1-5 years, aiming to improve the nutritional quality of products or to establish nutritionally responsible operating practices.

In the last five years (2017-2022), we have published seven targeted and measurable commitments. Public commitments are available on the [Commitment 2050 website \(in Finnish\)](#). With the 2022 commitment, we wanted to provide professional kitchens and catering

services with tasty and tested recipes that comply with the nutritional recommendations. We achieved our goal and we increased the number of Heart Symbol recipes by publishing 10 new recipes for professional kitchens and catering services.

Valio's new nutrition commitments for 2023-2024 are published in the Commitment2050 service:

1. We will reduce added sugar by 10-15 per cent in 40 per cent of the Gefilus® juices and berry soups by the end of 2023.
2. We will reduce added sugar by 5-10 per cent in the traditional, sugar-sweetened Valio berry soups and sugar-sweetened Valio Hedelmätarha® juices, as well as in glogg drinks by the end of 2024.
3. We will develop 10 Heart Symbol recipes for home kitchens by the end of 2023.

We have engaged in other health-promoting, nutritionally responsible activities for years. Examples:

- **Products promoting health and wellbeing.** We make reduced-salt Valio ValSa® products, yoghurts and berry soups with no added sugar, Valio PROfeel® protein products, plant-based Oddlygood® products, and Valio Gefilus® products that contain LGG® bacteria.

- **Heart Symbol products.** A product with the Heart Symbol is a better choice in its product category, in terms of the fat content and type, sugar and salt. At the end of 2022, our product portfolio in Finland contained a total of 131 Heart Symbol products.
- **Nutritional stipends.** Valio Akatemia® supports youth sports by awarding nutritional and other stipends. Nutritional stipends can be used for nutritional coaching, lectures or cooking classes for individuals or teams. In 2022, we awarded 40 nutritional stipends.
- **Responsible marketing.** In line with our [Marketing Policy](#), we are committed to the responsible marketing of infant formula and follow-on formula in accordance with the WHO Code.
- **Innovations promoting health.** We participate in public nutrition research and we conduct research within our own projects. The aim of Valio's nutrition research is to produce responsible and nutritious food product innovations.





WE OFFER COMPREHENSIVE PRODUCT INFO ONLINE

Valio.fi is one of Finland's most popular food sites. The website offers extensive information about our products, e.g., information about the ingredients in all our products, nutritional content, allergens and storage information.

You can search the website for product alternatives that fit your diet preferences. Categories include, for example, lactose-free, gluten-free, vegan and low-fat.

All our valio.fi recipes include nutritional information and salt content to help consumers make choices that comply with nutritional recommendations. We also offer Heart Symbol recipes for professional kitchens (26 recipes) and nutritionally recommended, climate-friendly recipes for home cooks (10 recipes).

We actively communicate about wellbeing and healthy lifestyles. The [Valio.fi/hyvinvointi](https://www.valio.fi/hyvinvointi) website

provides a wide range of nutrition information based on the Finnish dietary recommendations in Finnish. Particular areas of focus include the plate model, eating habits and general nutrition. The site also provides a range of calculators and tests to support healthy lifestyles.

INNOVATIONS TO PROMOTE HEALTH AND WELLBEING

Already during Nobel Laureate A.I. Virtanen's time as head of Valio's laboratory, the concept of improving wellbeing through innovation became our guiding principle. Valio's product development is based on listening to the consumer and customer, on tasty, nutritious products that make everyday life easier.

We believe in the power of eating together. Cooking and baking is one of the most important ways to create shared moments and show caring and love. Immersing yourself in

making things with your hands makes you feel good. There is also a place for indulgence.

In 2022, we developed new, innovative baking, cooking and snacking products – from milk and plant-based ingredients – to make everyday life easier. We introduced new PROfeel® products, flavoured crème fraiche products to help in food preparation, Valio Oivariini® three-oil spread, plant-based Oddlygood® Dreamy Desserts and new Gold&Green products.

RESPONSIBLE MARKETING COMMUNICATIONS

We are committed to the responsible marketing of our products, our services and our operations. Our marketing communications are compliant with applicable laws and regulations, and are honest and truthful. Valio's responsible Marketing Policy sets forth the principles for all Valio markets. We review the policy annually. The Marketing Policy is available on our [website](#).

Our marketing communications are expected to provide concrete, clear information about sustainability and our actions, as well as examples of how to promote wellbeing and responsible lifestyles.

In spring 2022, we launched the "Viljele hyvää" [Cultivate Good] campaign to raise awareness of the carbon farming at our dairy farms. Milk cartons were decorated with designs by Finnish artists, delighting and encouraging Finnish consumers to upcycle the empty cartons e.g. to germinate seedlings or rye-grass. The milk cartons also offered consumers an augmented reality (AR) opportunity to learn more about carbon farming activities on dairy farms. The campaign attracted a lot of attention and received plenty of positive feedback.

Throughout the year, we communicated our various sustainability actions, both large and small, on the packaging of our 1-kg and 1-litre products. The side panels of the packaging explained our ownership structure and how Valio's profits are paid to our milk producers. The packaging also included information about carbon farming, the Valio Carbo® Farm calculator, and how to recycle the packaging. The 'Profits always go to Valio farmers' logo was added to Valio milk and Valio yoghurt containers to remind consumers that we pay our operating profit to Finnish dairy farms, i.e. Valio's ownerentrepreneurs.

In late summer, we highlighted biodiversity by opening Valio Luomu™ [Organic] buzzer buffets. Organic farming is an effective way to maintain biodiversity in agricultural areas, enriching in particular the vegetation and birdlife. The flower buffets created for flying insects raised awareness about pollinator depletion, the importance of biodiversity and the role of grazing in promoting biodiversity. The campaign also provided instructions on how to build your own buzzer buffet. Valio Luomu™ products are an easy pro-biodiversity choice for consumers. The new A+ Luomu natural yoghurt we launched in 2022 for professional kitchens won the Finnish Organic Association's Organic Product of the Year in the professional kitchen category.

For the past several years during the back-to-school period in August, Valio has been highlighting the importance of watching out for young children in traffic. Mr Oltermanni® watches out for the little ones, and this time he brought a bright yellow reminder to outdoor advertising, reminding drivers to also keep their attention low to the ground to see little school kids.



PEOPLE'S WELLBEING

We are committed to respecting human rights across our value chain and we systematically promote human rights. People are an important asset for us, and we want to ensure a fair, equal, supportive, safe and healthy workplace for our personnel. We actively develop the competence and leadership of Valio employees.

We respect human rights and labour rights

VALIO IS COMMITTED to respecting human rights across its value chain. Our ethical guidelines, i.e. the Code of Conduct (Our ways of working – One Valio), cover our Human Rights Policy and guide our personnel.

[Read more about the Code of Conduct. →](#)

Our requirements targeting the supply chain are described in the Supplier and Distributor Code of Conduct.

[Read more about supply chain responsibility. →](#)



Valio's operations impact people directly and indirectly



Valio's internal policies and the mutual interaction among Valio employees have a direct impact on our employees. The outer perimeter of the graphic shows the people who are indirectly impacted by Valio's own operations or its supply chain.

We systematically promote human rights

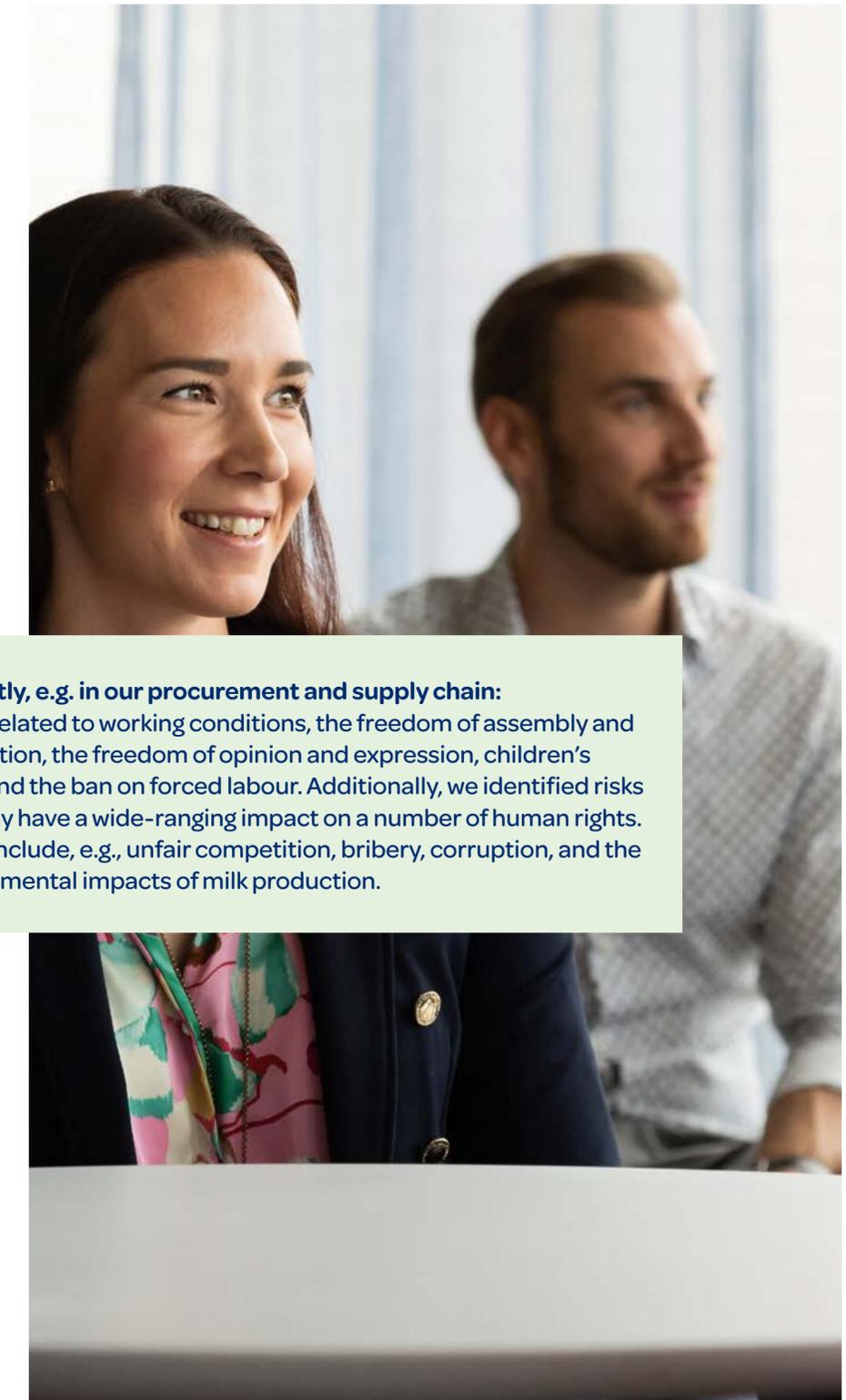
IN OUR HUMAN RIGHTS IMPACT ASSESSMENT in 2019, we broadly identified our most significant impacts. Read more about the assessment on [our website](#). In 2022, we launched a review and update of the human rights impact assessment with support from a company specialising in the subject. The assessment will continue during spring 2023. Based on the assessment results, we will update our human rights due diligence process and our long-term action plan.

If these risks materialise, Valio can impact on the following human rights:

Directly in our own operations: Human rights to health, safe working conditions, as well as non-discrimination and non-harassment.

Indirectly, e.g. in our procurement and supply chain: Rights related to working conditions, the freedom of assembly and association, the freedom of opinion and expression, children's rights and the ban on forced labour. Additionally, we identified risks that may have a wide-ranging impact on a number of human rights. These include, e.g., unfair competition, bribery, corruption, and the environmental impacts of milk production.

We manage and mitigate the human rights risks we identify as part of our overall social sustainability. We have defined social sustainability focus areas and we advance them as part of our organisations' action plans. We regularly monitor the targets related to the focus areas, and we share information through a social sustainability team, which includes experts from different functions. The summary on the next page presents our social sustainability focus areas, targets and indicators.





SOCIAL SUSTAINABILITY FOCUS AREA	VALIO TARGET	PROGRESS IN 2022	STATUS
SAFEGUARDING FOOD SECURITY <ul style="list-style-type: none"> • Clean and safe raw materials and products • World-class food safety culture 	0 public and customer recalls.	We had 11 recalls in 2022 (2021: 8 recalls).	NOT ACHIEVED
PROMOTING HEALTHY LIFESTYLES	Heart Symbol products (no.)	At year-end 2022, 130 Heart Symbol products in domestic portfolio. We developed 10 Heart Symbol products in 2022.	PROGRESSING
	Nutrition commitments.	Nutrition commitment achieved in 2022: we increased the number of Heart Symbol recipes by publishing 10 new recipes for professional kitchens and catering services.	COMPLETED
	Valio Akatemia® programme upkeep (stipends/EUR, nutritional stipends/no.)	We distributed EUR 130,000 in stipends through the Valio Akatemia® programme. Of these, 40 were nutritional stipends.	PROGRESSING
WORKPLACE WITH A GOOD FEELING <ul style="list-style-type: none"> • Committed Valio people • 0 work-related burnout 	Reduce sickness absences (%).	Sickness absences increased in 2022 primarily due to Covid (2022: 4.9% vs. 2021: 4.1%).	NOT ACHIEVED
	Improve engagement result in Valio Voice employee survey.	Engagement result improved from 2021. Average result in 2022 was 8.0 (2021: 7.9). The result was among the top 25% in the industry benchmark.	PROGRESSING
SAFE WORKPLACE	0 incidents.	TRIF (total recordable incident frequency) decreased in 2022 to 14.7 incidents per million hours worked (2021: 21). From 2023 onwards, we will monitor LTIF (lost-time incident frequency).	PROGRESSING

SOCIAL SUSTAINABILITY FOCUS AREA	VALIO TARGET	PROGRESS IN 2022	STATUS
EQUITY IN THE WORKPLACE <ul style="list-style-type: none"> • Equality • Non-discrimination • Inclusive • Fair 	Improve the result of Valio Voice survey question on equity.	Result improved from 2021. Result average in 2022 was 7.6 (2021: 7.4) and NPS was 20 (2021: 15).	PROGRESSING
INSPIRING EMPLOYER <ul style="list-style-type: none"> • Values • Empowering • Flexible • Progressive 	Our coaching leadership programme will be implemented according to plan for Valio supervisors and specialists in 2022-2024.	The programme progressed according to plan, starting with the Finnish production and warehouse organisations.	PROGRESSING
	Implementation of performance and development discussions in the organisation to remain at the previous year's level (95%).	82% of tracked Valio employees took part in a performance and development discussion in 2022 (2021: 95%).	NOT ACHIEVED
TAKING RESPONSIBILITY <ul style="list-style-type: none"> • Responsible supply chain • Stakeholder collaboration 	Commitment to Supplier Code of Conduct, %.	Direct sourcing (raw materials/packaging materials) 100% Contract manufacturing 93% Indirect sourcing 36% Total 45%	PROGRESSING
SAFEGUARDING FOOD SECURITY <ul style="list-style-type: none"> • Equality in cooperatives, dairy farms as owners • Food security in Finland • Vitality of dairy farms 	Increasing the milk return.	Milk return grew to 52.5 cents per litre (2021: 43.7 c/l).	PROGRESSING
TAKING RESPONSIBILITY Respecting and promoting human rights through social sustainability focus areas.	Over 90% of personnel in each country have completed Code of Conduct training.	Code of Conduct training by country Estonia 100% Finland 85% Sweden 100% USA 100% China 100%	PROGRESSING
	0 human rights violations.	Valio Whistle channel reports, 34 reports (2021: 26 reports). Human rights violations 0; 1 suspected in supply chain – read more here. →	



People are at the core of our strategy

THE HEALTH, SAFETY AND WELLBEING of Valio employees and those working in our supply chain are the foundation of our operations. The exceptional conditions caused by the Covid pandemic continued in 2022. We continued our pandemic-era practices for both remote and in-person working, and, in line with regulatory guidance, were not able to dismantle them until later in the year.

Russia's invasion of Ukraine brought changes to our operating environment, challenging the resilience of our employees. We continued putting special emphasis on mental wellbeing. Employees working in person and remotely in all Valio countries did a tremendous job of implementing the strategy and ensuring operational excellence.

VALIO EMPLOYEES IMPLEMENTED THE STRATEGY WITH GOOD MOMENTUM

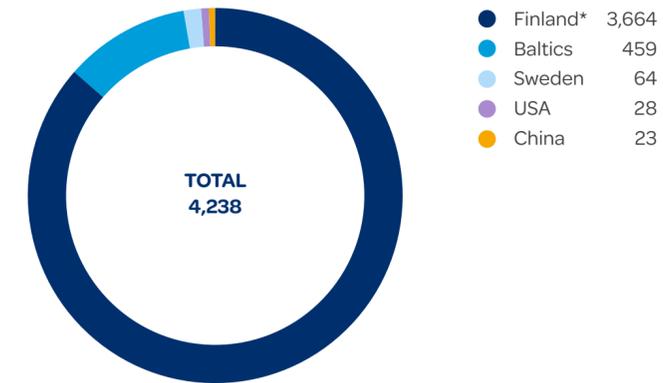
We continued putting the strategy into practice in 2022. Following the acquisition, we continued to integrate the Valio Aimo® wholesale business into Valio, and we strengthened its operations through recruitment. The acquisition of the Gold&Green brand, Gold&Green Foods' intangible assets, as well as its research and development activities gave us new expertise in plant-based cooking products. The Oddlygood® business also continued to grow as a stand-alone company.

In 2022, we launched a project to develop resourcing. We are looking at what skills we want to keep in the hands of our employees in the longer term, where we can use more flexible resourcing means, and what things can be increasingly automated in the future. The long-term aim is to ensure workforce availability, improve resource efficiency, help with prioritisation and reduce organisational overload.

We enhanced strategy understanding at the top management Strategy and Leadership Forum, which brought together some 100 Valio key employees from different countries. The goal was to strengthen the key leaders ability to lead strategy implementation and renewal. We continued to develop innovation management by putting together a team dedicated to it. The team's objective is to strengthen the innovation culture and the continuous improvement model throughout the Group. Innovativeness has been at the core of our corporate culture since Valio's beginning.

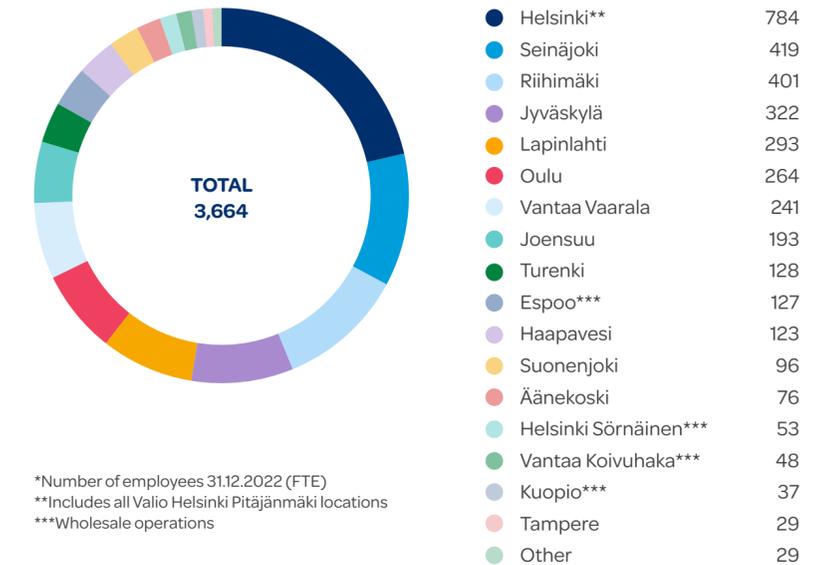
Specific organisational and human resources issues are addressed in the People Forum, which is held three times a year as part of Valio's management model. Valio's Executive Board and representatives of the People function take part in the People Forum.

Number of employees by country



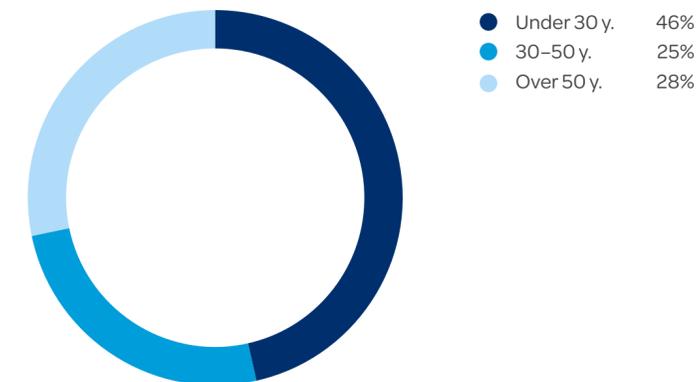
*Proportional number of employees (FTE) 31.12.2022.

Number of employees by site in Finland*



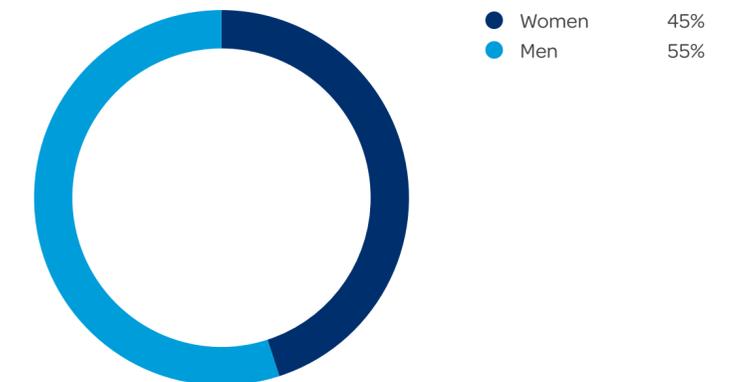
*Number of employees 31.12.2022 (FTE)
**Includes all Valio Helsinki Pitäjänmäki locations
***Wholesale operations

Personnel by age*



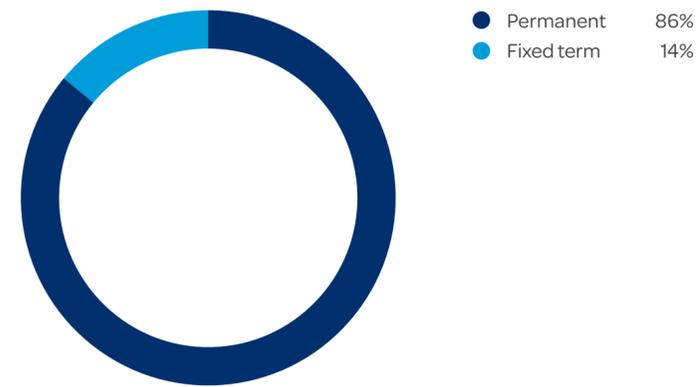
*Global 31.12.2022.

Personnel by gender*



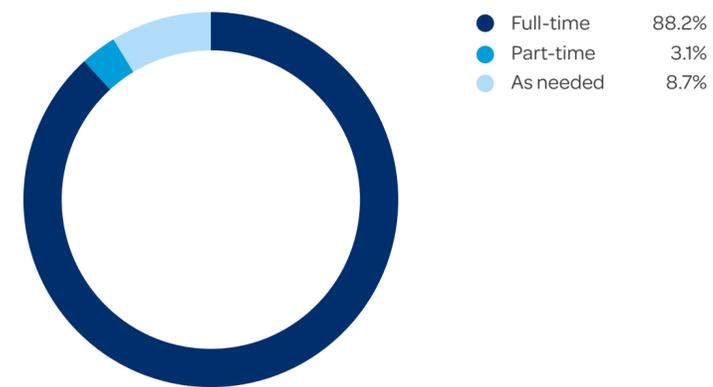
*Global 31.12.2022.

Personnel by employment contract*



*Global 31.12.2022.

Personnel by employment type*



*Personnel in Finland 31.12.2022.



Rate of permanent employee turnover*

Turnover rate

5.1%

Men

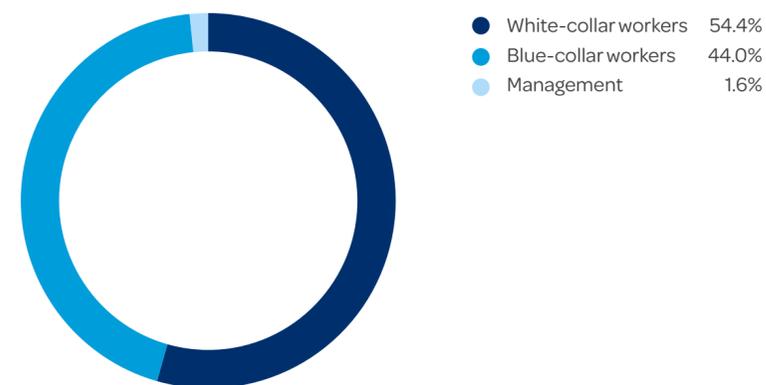
2.9%

Women

2.2%

*Employees in Finland 31.12.2022. Counting individuals who have resigned from a permanent post during the year / The number of permanent employees.

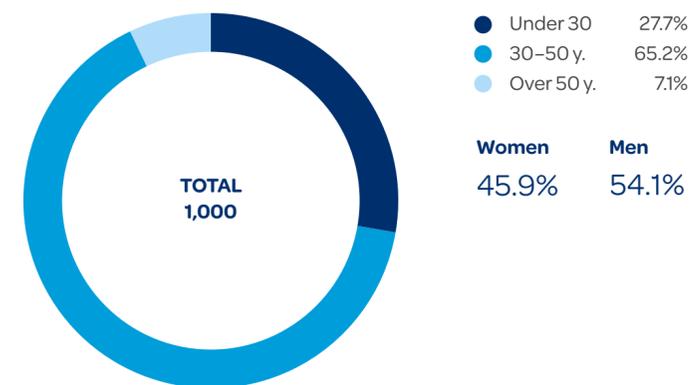
Personnel by collective bargaining agreement*



*Personnel in Finland 31.12.2022.

White-collar workers = MVL clerical workers and salaried employees, Pro-clerical workers, Senior salaried employees, Commercial sector CBAs: warehouse and transportation supervisors and retail supervisors.
Blue-collar workers = SEL dairy workers, Commercial sector CBA (incl. truck drivers).
Management agreement = Management agreements.

Total number of new hires by age and by gender*



*Personnel in Finland. Counting all new people who have started during the year. Figures include summer workers and interns.

PUTTING STRATEGY INTO ACTION THROUGH PERFORMANCE AND DEVELOPMENT DISCUSSIONS

Valio's strategy and business objectives are translated into concrete action through the performance and development discussions. All Valio's permanent employees are within the scope of the annual discussions. At production plants, the discussions can also take the form of group discussions. The aim is to create a common understanding of how each employee's work contribution advances the implementation of the strategy.

According to the Valio Voice employee survey, most Valio people understand what is expected of them at work. The 2022 survey showed that our personnel are even more confident that our strategy is moving us in the right direction. This confidence is one of Valio's strengths.

WE ARE DEVELOPING THE COMPETENCIES AND LEADERSHIP CULTURE OF VALIO EMPLOYEES

Quality leadership and managerial work are part of the Valio leadership promise. Our leadership culture is based on coaching leadership style that is inclusive and supportive. The aim is to foster a psychologically safe working environment that enables insights, new ideas and solutions to be generated from within the workforce.

All new managers participate in a training that covers topics on coaching leadership, supporting wellbeing at work, and performance and competence management. We are strengthening our coaching leadership culture with a new training programme. The programme was launched in 2022 with the management teams of our Finnish production sites and will cover all supervisors



and specialists in all our countries of operation in 2023-2025.

The aim of competence development at Valio is to ensure that the workforce has opportunities to develop their skills in their current positions and to prepare for changing competence needs.

We encourage employees to actively develop their skills. In 2022, we launched Eduhouse, an online training platform to support continuous learning alongside work. The service gives every Valio employee the opportunity to develop skills that are important in work life, such as interpersonal, digital and technology skills. The service was first introduced in Finland and it has been very well received. During the first year, Valio employees participated in more than 400 virtual and online training sessions. We will launch the service in other countries in 2023.

We support personnel in identifying future competence needs and in developing their careers with a career development workshop concept, which we piloted in 2022. We will continue to strengthen career management skills in 2023 as part of the Finnish Institute of Occupational Health's "Professional and Reforming Careers" research project. We will also support career development and internal knowledge-sharing through a mentoring programme, which we are piloting in Finland and will expand internationally in 2023.

In the aftermath of Covid, the skills needed to work and lead under a hybrid model were highlighted in

the work of experts. We supported our managers and experts in the transition to hybrid working by creating common ground rules, with lectures from experts supporting hybrid working, and with facilitated sparring sessions for managers. To strengthen self-management and readiness for change, we launched two global training programmes, which were attended by around 10 per cent of Valio employees in expert roles.

The challenges of finding skilled labour have increased, especially in production and logistics. In Finland, the future availability of labour will be significantly affected by trends in the working-age population and regional differences.

In Estonia, we employed Ukrainian workers at our production plants in 2022, and in Finland we will start pilot projects in 2023 to develop models for employing people who don't speak Finnish. We will use best practices from our Estonian plants in these pilot projects. We will also work with educational institutes to develop dairy sector education in foreign languages.

We also aim to improve the attractiveness of the industry by participating in recruitment events, strengthening cooperation with educational institutes at all levels and taking part in educational development projects in the sector. We offer around 300 summer jobs each year, providing work experience for dairy sector students or individuals considering the sector.

Performance and development discussions*

	EMPLOYEE COUNT (ACTIVE EMPLOYEES)	NO. OF PERFORMANCE AND DEVELOPMENT DISCUSSIONS HELD	DEVELOPMENT DISCUSSIONS HELD, PERCENTAGE OF TOTAL PERSONNEL
White-collar workers	2,422	1,986	82%

*Regular performance and development discussions process covers all Valio employees. The reporting of held discussions covers all white-collar workers. The process, monitoring and reporting for the entire organisation will be developed during 2023.

Training hours by country*

Country	NUMBER OF EMPLOYEES*	AVERAGE HOURS OF TRAINING / PERSON	TRAINING HOURS/ GENDER		TRAINING HOURS/ EMPLOYMENT	
			Female	Male	White collar	Blue collar
Finland	4,072	7.5	8.6	6.6	10	4.3
Sweden	64	15	15.7	15.8	15	-
Estonia	459	24.7	25.2	24.1	12.5	33.6
USA	28	66	31	65	66	-
China	23	57	60	46	57	-
Total	4,646					

*Number of employees, all contract types 31.12.2022.

The average number of training hours varies substantially between Valio Finland and the subsidiaries. The differences are explained by the number of employees, as well as by the different training needs of the different markets. In the subsidiaries, training at the individual level has a big impact on the average.

MENTAL WELLBEING REMAINED A PRIORITY OF WELLBEING AT WORK

The biannual global mental wellbeing weeks are well established within Valio. The spring theme was sufficient resources. We encouraged Valio employees to support mental wellbeing through physical and other activities. In the autumn, we focused on good sleep, shift work and recovery.

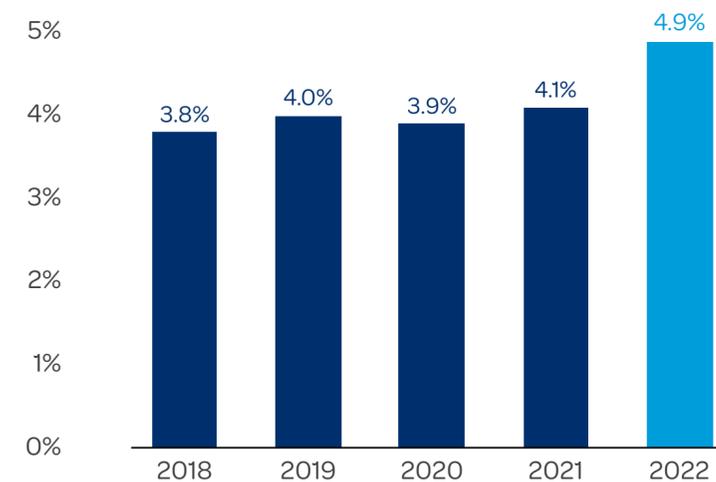
In Finland, we added short-term psychotherapy to our regular occupational health services. At the end of the year, we piloted Auntie Solutions, a service that provides personalised, low-threshold support in life's difficult moments. In recognition of our commitment to mental wellbeing, we were designated as a "Mental Health Friendly Workplace" for the second time by the MIELI Finnish Association for Mental Health.

Although social crises and changes in working life took their toll on Valio employees during the year, in Valio's global employee survey in autumn 2022 we saw positive signs regarding mental wellbeing. Mental wellbeing scores were above the industry average and the share of very satisfied had increased.

Ensuring a healthy working environment for employees has been a top priority for us throughout the Covid era. We have had strict Covid guidelines and have not allowed people to come to work with even mild symptoms. This was naturally reflected in our sickness absence rate in 2022, which was 4.9. The increase in sickness absences compared to the previous year is mainly due to respiratory illnesses and includes sickness absence due to Covid.

We also made additional investments in employee benefits in 2022 to increase employee satisfaction and wellbeing. We expanded our occupational health services in Finland by adding weekend on-call services and broader access to consultations with physician specialists and to MRI scans. We also introduced a company bike benefit.

A clear decrease in the number of mental wellbeing-related absences will remain a distinct priority in 2023. However, musculoskeletal problems due to the physical nature of the work are the leading cause of absenteeism at Valio, and they clearly trended downward in recent years. We have continued our strong commitment to prevention of these problems among other things by intensifying cooperation between supervisors and occupational health, and by adding occupational physiotherapist services in the workplace.

Sickness absences in Valio Finland

At the end of the year, we took a fresh look at diversity, equity and inclusion. Our consultative working group, made up of different employee groups, reconvened after a break. In the future, we will focus not only on equality and non-discrimination, but also on diversity and inclusion in the workplace and, for example, in various human resources management processes. Our aim is to take stock of the current situation and to start increasing the understanding of diversity, equity and inclusion among Valio employees. Global efforts have also been launched around this theme.





We continuously improve work safety

OUR OPERATIONS are guided by a global Occupational Health and Safety Policy. We revised the policy in 2022 to take better account of not only safety but also the management of factors that affect workers' health.

All our sites have a joint body for occupational health and safety comprising representatives of the employer and employees. The occupational safety and health committee meets at regular intervals to develop occupational health and safety issues in the workplace through constructive dialogue. The OHS delegates represent workers in day-to-day activities, such as risk assessments and in investigations of work injuries and hazardous situations. The occupational safety cooperation and the role of the employees' representatives are also described.

Valio also has a number of processes in place to ensure that employees have a voice in the development and implementation of the occupational health and safety management system: safety discussions, Valio Voice employee surveys, an observation system and the Valio Whistle reporting system.

AIMING FOR ZERO WORK INJURIES

We encourage personnel to immediately report any hazardous situations and safety shortcomings they observe. In 2022, 2,587 hazardous situation observations were recorded and processed in Finland. In line with our global management model, we investigate hazardous situations and work injuries, including those involving external parties at properties managed by Valio.

We assess the implementation and quality of risks assessments, work injury and hazardous situation investigations, as well as other key safety improvement procedures through annual internal safety audits. We audit all our production plants in Finland annually. Based on the findings of the safety audits, the sites receive feedback on the strengths of their operations and areas for improvement. A positive observation from the 2022 safety audits was the initiative taken by the sites to come up with and implement good practices. The trends in the areas for improvement were formulated into actions on Valio Group's safety roadmap.

Our aim is to ensure that Valio's operations comply with the requirements of the globally recognised health and safety standard ISO 45001. In 2022, we advanced the adoption of standardised practices. In 2023, we will finalise the implementation of the standard-compliant management model at our Finnish sites, after which the implementation of the procedures will continue at our subsidiaries globally. We will make a decision on the possible certification of the system separately.

In 2022, we designed and implemented a safety decision-making model at our sites to improve the efficiency of implementing development actions and improve the flow of information. We also reformed the procedure for investigating work injuries. We are able to use coaching leadership methods to improve the quality of work injury investigations at the sites. In 2023, we will continue to develop the work injury investigation model and direct resources to the investigation of work injuries resulting

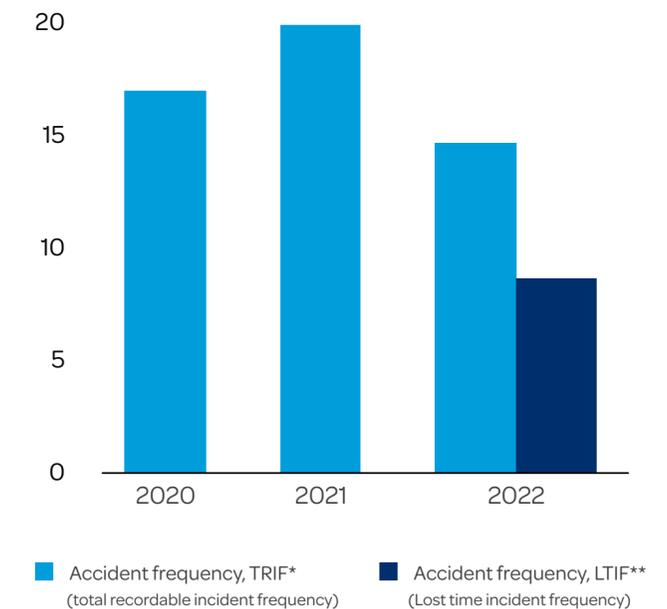
in absence. At the end of 2022, an HSEQ matrix organisation was created at Valio to deal with occupational health, safety, environment and quality issues.

Our long-term goal is zero work injuries and accidents. In 2022, the number of work injuries was the lowest in measuring history, both globally and for Valio Ltd in Finland. The number of workplace injuries decreased by 32% in Finland and 34% globally compared to the previous year. Typically, the work injuries did not cause disability or the disability periods were brief. There were no work injuries leading to absences at, e.g., the Riihimäki plant, the Pitäjänmäki main warehouse and the Tampere site. However, as a Group, we have not yet reached the strategic target of zero work injuries. Valio Ltd is a member of the Finnish Occupational Health Institute's Zero Accident Forum and in 2023 is aiming for a safety level classification awarded by the Forum.

In 2023, we will introduce the LTIF (lost time incident frequency) indicator. Our LTIF target is max. 5 accidents per million hours worked. We will start revised safety training at production plants, in wholesales and in warehouses. In addition, we will communicate about safety in line with the annual plan, and we will improve procedures for particularly hazardous work in maintenance to improve safety.

The integration of Valio's wholesale operations as a cohesive part of the Valio Group started in 2022 with regard to safety management. In 2023, we will continue to develop the safety culture and safety procedures of the wholesalers to conform to Valio's harmonised procedures.

Accident frequency
(incidents per million working hours)



Includes at-work accidents involving Valio Ltd's and subsidiaries employees. Does not include professional diseases or commuting.

*Accidents resulting in an absence from work or in treatment expenses.
**Accidents resulting in an absence from work.



SUSTAINABILITY FOUNDATION

A cooperative approach and good governance are the foundation of our sustainability. Valio's Code of Conduct defines our common ways of working. The Supplier and Distributor Code of Conduct obligates our partners to comply with our ethical principles. We systematically reject corruption and bribery. We improve data security and protection by continuously training our personnel. Our risk management is important for Finland's security of supply. We ensure transparency of our supply chains by, e.g., auditing our suppliers.

Our Code of Conduct is the foundation of our work culture

VALIO'S CODE OF CONDUCT defines the common rules for Valio employees. The Code of Conduct is based on our values and covers the shared ethical principles that we apply and that Valio employees must take into account in all their operations.

We also have a separate Supplier and Distributor Code of Conduct to communicate our sustainability principles to our partners and to define how our partners must take them into account in their operations. As part of the supplier approval process, our supply chain partners commit to compliance with these Valio's sustainability principles. [Read more about responsible sourcing.](#) →



All new Valio employees are introduced to the Code of Conduct as part of Valio's induction programme. Valio employees also complete online Code of Conduct training whenever the Code of Conduct is updated. We communicate regularly on Code of Conduct topics and provide more specific training on the topics to relevant target groups. We regularly monitor the completion rate of Code of Conduct trainings. Our target is that training is completed by more than 90 per cent of employees in each country.

In 2022, we focused on Code of Conduct training for the personnel working with the Valio Aimo® wholesale business, and we monitored the new personnel's impact on the Code of Conduct training completion rate of each country.

Completion of training by country in 2022:

Estonia	100%
Finland	85%
Sweden	100%
USA	100%
China	100%

In 2023, we will review and update our Code of Conduct guidelines and training.

We reject corruption and bribery

VALIO HAS ZERO TOLERANCE for bribery and corruption. In our operations, we comply with anti-corruption and anti-bribery laws and the principles outlined in Valio's Code of Conduct. We prevent corruption and conflicts of interest also through policies on approving internal investments and procurement and sales contracts as well as a policy on signing contracts.

We have defined internal Trade Compliance guidelines to identify customers and suppliers. The purpose of identifying customers and suppliers is to prevent corruption, money laundering and the funding of terrorism. In 2023, we will introduce a KYC (Know Your Customer) tool to identify customers and suppliers.

We have defined internal guidelines also for receiving and offering gifts and hospitality and for avoiding conflicts of interest. Every Valio employee must report any illegal or unethical activity they observe to Valio's CEO, HR Manager, Legal Affairs, or Risk Management. The report can be made also anonymously through the Valio Whistle reporting channel.

WHISTLE REPORTING CHANNEL FOR INTERNAL AND EXTERNAL STAKEHOLDERS

We want even difficult issues to be discussed openly, confidentially and solution-oriented. If a Valio employee experiences or observes unlawful or unethical conduct, they are instructed to discuss the matter first with their own supervisor or other Valio contact. Valio's internal

and external stakeholders can use the channel to report Valio-related activities that are not in compliance with Valio's values, ethical principles or the law. The reporting channel can be used to confidentially and anonymously report serious concerns related to Valio's operations or practices.

In 2022, we received 34 reports, 28 of them through the Valio Whistle channel. The report topics were divided into the following top-level categories:

- Harassment or discrimination: 21 reports
- Other: 8 reports
- Code of Conduct violations: 3 reports
- Supplier and Distributor Code of Conduct violations: 2 reports
- There were no reports involving corruption.

We handled all the reports promptly in accordance with the relevant management process. The required measures have been taken or are in the process of being taken. In two cases, not enough additional information was received to complete the case. Valio's Board of Directors annually receives information about the reports. [Read more about the reporting channel and the handling process on our website. →](#)

We are improving data security and data protection with training

THE PURPOSE OF DATA SECURITY is to protect data and information systems. Data security refers to organisational and technical measures to ensure the confidentiality and integrity of data, the usability of systems and the rights of data subjects. Data security is one way of implementing data protection.

The geopolitical changes of 2022 significantly increased the security threats for Finland's security of supply-critical companies. For Valio, the most significant data security measures during the year were related to reducing and managing cyber risks in its Russian business and securing Valio's IT environment in connection with the sale of its Russian operations.

Data security is linked to Valio's strategy through competent Valio employees. An important part of our data security activities is to develop the data security competence and understanding of our employees through training and through intranet communications about current issues and phenomena. In 2022, we organised online data security training targeting all Valio employees. Some Valio employees participated in continuous year-round email security training.

In 2023, we will extend the continuous training to all users with a personal workstation. The focus in 2023 will be on developing employee data security awareness and on further improving visibility and responsiveness.

The data security management forum is an IT management group that meets weekly. The annual number of serious data security incidents is used as a measure

of data security. The target is zero serious data security incidents. In 2022, the target was met.

We are active in the information exchange groups that Traficom's cyber security centre runs for security of supply-critical companies. Valio's representative is vice chair of the food group in 2023.

WE RENEWED OUR DATA PROTECTION ORGANISATION

We updated Valio's Data Protection Policy in 2022. Its objective is to ensure data subjects' rights and to ensure that all personal data processing always complies with the applicable data protection legislation and good data processing and information management practice.

During the year, we established a data protection organisation. Valio's data protection organisation consists of representatives of the legal department and privacy champions designated in different business operations. The purpose of the data protection organisation is to guide and assist Valio employees in matters related to data protection and to develop processes related to the realisation of data protection. The purpose is also to provide more specific instructions on personal data processing and to maintain documentation related to personal data processing.

The legal department has trained Valio employees in Finland in data protection and other issues. In 2023, we will update the data protection-related online training material and we will train all personnel in Finland.





Our risk management is of national importance

KEY ISSUES IN VALIO'S RISK MANAGEMENT are food safety and quality. If food safety and quality are not up to par, there is a risk of personal injury caused by the products, potential liability risks for consumers and our customer companies, as well as reputational risks damaging the Valio brand. Protecting Valio's strong brand and reputation is an integral part of our risk management objectives. In addition to assessing the financial impacts, our risk metrics include the impact of risk on reputation.

Our annual risk management process aims to identify, assess and manage the risks most significant to the achievement of Valio's business objectives. This is the responsibility of all organisational functions, supported by the Risk Management Office. Valio's Executive Board has overall responsibility for the implementation of risk management. Valio's Board of Directors is responsible for the risk management policies. Valio's strategy work examines not only risks but also opportunities.

Valio's risk management principles are based on the COSO ERM and ISO 31000 standards. We classify risks as strategic, operational, financial or compliance risks.

From a national security of supply perspective, Valio plays an important role in ensuring food supply operations. This role was further highlighted in the exceptional circumstances in 2022. Valio's most important stakeholder in security of supply activities is the food industry

pool, which is comprised of food industry companies that are classified as critical to security of supply. The pool organises continuity management exercises and information and training events. As a multisector player, Valio is also represented in a number of other pools related to security of supply, such as the primary production pool, the digital pool, and the trade and distribution pool. Valio is actively involved in the development of the pools and the security of supply activities and in maintaining a current picture of the situation.

Valio uses its reporting system to monitor the profitability of the business, potential risk concentrations and the development of its financial position on a broad basis. Financial and interest rate risks are managed, e.g., through loan arrangements and credit risks related to trade receivables through lines of credit, collateral and payment terms. Russia's war of aggression against Ukraine increased the volatility of the operating environment, in particular in terms of energy prices and availability, but also cyber threats increased. Extensive sanctions against Russia have increased the need for companies to know their customers and suppliers. In addition, high inflation and rising interest rates caused uncertainty among consumers. The continuing chip and container shortages, the rise in political tensions and extreme weather phenomena increase supply chain

From a national security of supply perspective, Valio plays an important role in ensuring food supply operations.

risks. Despite these challenges, we managed to keep our delivery reliability at an excellent level throughout the year.

In late 2022, we launched a new risk management tool to guide and automate the monitoring and development of risk management. In 2023, we will update the Group-level Risk Management Policy. We will also refine the management of ESG (Environment, Social, Governance) and compliance risks as part of the business risk management process.



Our supply chains are transparent

WE HAVE IDENTIFIED the material sustainability risks in our supply chain. The most important areas of responsible sourcing are food safety, supply chain transparency, social sustainability and environmental sustainability. Together with the product categories, the sourcing team, product development, the food safety team and packaging development, we verify the quality, safety and origin of the raw materials, as well as the regulatory compliance of the packaging. We require also our suppliers and subcontractors to commit to our responsible ways of working.

Valio's Sourcing Policy and Principles guide our procurements. [Read more about our Sourcing Policy on our website.](#) We ensure the food safety and responsi-

bility of the supply chain through a supplier approval and management process. Our suppliers must commit to Valio's Supplier and Distributor Code of Conduct. Suppliers who supply food or food safety-related products or services to Valio must commit to compliance with Valio's food safety-related requirements and guidelines. [Read more about supplier management procedures on our website.](#) →

WE KNOW THE RAW MATERIALS SUPPLY CHAIN

Milk accounts for more than 95 per cent of the raw material kilos used in the products we make in Finland. All the products Valio makes and sells in Finland are made from Finnish milk produced by our owners, which we source from our cooperatives. Read more about milk production in the [Vitality of dairy farms and animal welfare](#) section of this report. Products manufactured in other countries are made using local milk. We always aim for raw materials and end products of a high quality.

In addition to milk, our raw materials include juice concentrates, vegetable oils, berries, sugar, fruit purees, chunks and concentrates, and grains. We know the raw materials supply chain all the way to the manufacturer. The raw material categories we use, excluding milk, and their percentage of the value of our procurements in Finland are presented on the left.

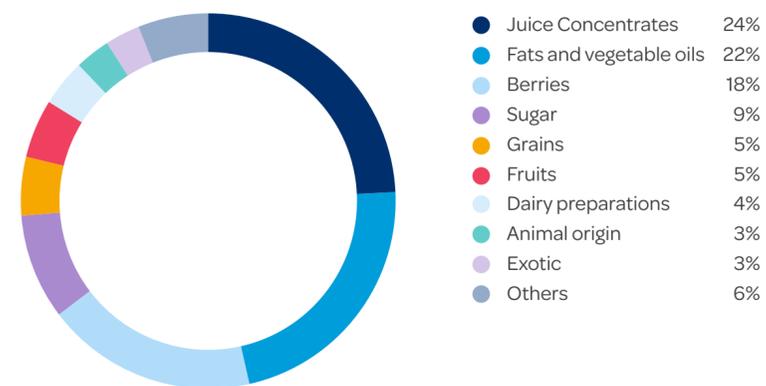
WE PROCURE MATERIALS, SERVICES AND FINISHED PRODUCTS

The sourcing of materials and services that support production and operations, i.e. indirect sourcing, accounts for a big part of our procurements. The main indirect sourcing categories are logistics, maintenance, marketing, real estate maintenance and IT.

Some of Valio's consumer products are manufactured by contract partners. Contract manufacturing is the contract-based manufacturing or packaging of products using Valio's own raw materials and/or Valio-approved raw materials and packaging materials in collaboration with approved manufacturers. As a rule, the products are manufactured under Valio's proprietary brands. Contract manufacturing is carried out in accordance with Valio's procurement principles.

Valio's 2021 acquisition of Heinon Tukku's wholesale operations significantly increased Valio's portfolio of finished products. The Valio Aimo® wholesale portfolio includes a wide variety of products and services for the hotel, restaurant and catering business. The portfolio includes some 25,000 products, ranging from bakery products to napkins, from fish to tableware, and from dairy products to condiments, from more than 850 suppliers.

Raw material categories, 2022*



*By spend.



COMMITMENT TO CODE OF CONDUCT IN 2022*

Direct sourcing (raw materials and packaging materials)

100%

Contract manufacturing

93%

Indirect sourcing

36%**

Total

45%

*Includes suppliers in Finland (excl. wholesale suppliers).

**Roll-out to suppliers ongoing, started in 2021.

WE MONITOR THE RESPONSIBILITY OF SUPPLIERS AND DISTRIBUTORS

Commitment to Valio's Supplier and Distributor Code of Conduct is part of our supplier approval process. We require our suppliers to sign their commitment to the requirements of the Code of Conduct. Committing to the Supplier and Distributor Code of Conduct is also included in the procurement terms of Valio's contracts.

We have about 220 direct suppliers. We require all of them to commit to the Code of Conduct. We started to systematically document the commitment of indirect suppliers in 2021. We require the commitment of the approximately 1,200 key suppliers. We continued to engage the commitment of existing suppliers in 2022, and the number of committed suppliers increased from 25 per cent in the previous year to 36 per cent. We are continuing the work in 2023.

In 2022, we started introducing the Code of Conduct requirement also for suppliers of the Valio Aimo® wholesale portfolio and to define more detailed supplier management procedures. We will continue this work in 2023.

WE INTRODUCED RISK CLASSIFICATION OF SUPPLIERS, MANUFACTURERS AND SERVICE PROVIDERS

In 2022, we developed a more systematic process and documentation related to the approval of suppliers and manufacturers. We introduced a new classification of manufacturers that defines the manufacturer and service provider approval requirements for food safety and sustainability.

We introduced risk classification of suppliers, manufacturers and service providers.

Food safety approval requirements:

We require all contract manufacturers, raw material and packaging material manufacturers who deliver products that come into direct contact with food to have a valid GFSI-approved food safety certificate or to respond to Valio's food safety questionnaire. We always require a contract manufacturer or a manufacturer located in a risk country to respond to Valio's food safety questionnaire.

Sustainability (ESG, environmental, social and governance) approval requirements:

Contract manufacturers, raw material and packaging material manufacturers must respond acceptably to Valio's sustainability questionnaire, which includes questions on the environment, human and labour rights, safety and responsible business practices. If the supplier is a member of Sedex, we require access to the Supplier Self Assessment Questionnaire.



We built the approval criteria and their documentation into our supplier management system in 2022. We will introduce the new approval criteria as the approvals under the old criteria expire. Currently, the approval procedures mainly cover direct sourcing suppliers and manufacturers. In the future, we will develop the governance practices to cover a wider range of also indirect suppliers.



WE AUDIT OUR SUPPLIERS

We audit our suppliers on the basis of food safety and sustainability classification requirements. Food safety and quality audits are carried out by Valio’s own qualified auditors. Our audits are always on-site for manufacturers who supply raw materials of animal origin or who supply raw materials or packaging materials for baby food. We audit other manufacturers separately, if necessary. In 2022, we conducted food safety audits of 29 manufacturers.

In sustainability auditing, we use Smeta (Sedex Members Ethical Trade Audit) and BSCI (Business Social Compliance Initiative) audits conducted by third parties. We have long been a Sedex member. In 2022, we became a member of amfori BSCI, which gives us access to an expanded range of audits. We will require sustainability audits of manufacturers in risk countries based on the revised classification. Less than 0.1 per cent of our raw materials come from risk countries as classified by the amfori BSCI system. In 2022, 35 per cent of our risk country manufacturers were audited under Smeta or BSCI. 46 per cent were audited in the last three years.

Our aim is to ensure that our practices are consistent across all the countries where we operate, so we will continue the global roll out of the procedures in 2023.

WE ONLY ACCEPT SAFE PRODUCTS

Food safety is one of our sustainability focus areas. A key part of this is the food safety of the raw materials and packaging materials we buy. The introduction of raw materials requires responding to and approval of Valio’s Product Questionnaire from a sourcing, product development and food safety perspective. The introduction of

packaging materials requires approval of the specification and the declaration of compliance.

We have carried out an extensive assessment of the raw material-specific liability risks, and, based on the supply chain liability risks, we have identified the raw materials that require special attention and more stringent governance practices. Read more in the section **Our products are made from clean and sustainably produced raw materials.** →

SUSTAINABLE SOURCING PROGRAMME

In 2021, we created the sustainable sourcing programme, which aims to increase the procurement organisation’s knowledge of different areas of sustainability, meet growing customer expectations and make procurement more sustainable from an environmental, economic and social sustainability perspective. The sustainability programme's actions extend to 2025. In 2022, we continued to deepen the understanding of procurement personnel and to refine sustainable sourcing practices through workshops. We will continue our sustainability learning journey with our suppliers in the coming years.

We regularly discuss sustainability with our suppliers. Our aim is to improve our knowledge of suppliers’ plans and measures and to find common measures to advance sustainability. In 2022, we engaged in discussions on advancing sustainable marketing procurement, among other things. We organised a briefing on sustainability for our marketing partners and put the topic on the agenda of the steering groups of selected marketing suppliers to identify relevant sustainability issues and risks in the sector. As a member of the Marketing Finland network working group, we agreed to carry out a sustainability

survey in 2023. Marketing Finland will conduct the survey and, based on the results, we will define the principles and objectives of sustainable marketing procurement for Valio.

In 2022, we created a tool to assess the climate work of suppliers; we will introduce the tool as part of the tendering process for indirect procurements. We will expand the tool in 2023 to cover also social sustainability.

To assess the climate impacts and carbon footprint of procurements, in 2021 we tested a tool that would help us to form a more accurate understanding of

our Scope 3 emissions and identify the procurement categories with the biggest CO₂ emissions. Based on the results, we adopted the tool in 2022. Currently, the tool uses emission factors for commodity categories found in common emission databases. We plan to refine the emission factors category by category by searching for emission factors that are more applicable and by clarifying with suppliers the actual emissions of the materials we purchase. We will continue our dialogue with suppliers to clarify and reduce emissions during 2023.

WE COLLABORATE TO PROMOTE SUSTAINABLE SOURCING

LOGY	SEDEX	AMFORI	NORDIC SOURCE
Valio is a member of the Finnish Association of Purchasing and Logistics (LOGY). Through the professional network, we gain knowledge, training, experience, contacts and good practices to promote sustainability in logistics and procurement.	Sedex (Supplier Ethical Data Exchange) is a non-profit organisation that helps its members to promote responsible supply chains. We are an AB member of Sedex and we use Sedex to assess suppliers and to disseminate responsibility information to customers.	Valio joined amfori BSCI (Business Social Compliance Initiative) and amfori BEPI in 2022. We aim to use our membership to strengthen the verification of supply chain responsibility.	Valio is a member of the Nordic Source cooperative, whose main mission is to find the best operating models and procurement concepts for different procurement categories. Valio uses contracts negotiated by Nordic Source in its procurements. In 2022, we were part of a sustainability working group focused on a sustainability questionnaire for Nordic Source suppliers.



Member of amfori, the leading global business association for open and sustainable trade. For more information visit www.amfori.org



Governance and remuneration

FINNISH MILK PRODUCERS own Valio through cooperatives. We pay our operating profit to the dairy farmers. Valio's Board of Directors, comprising four Valio dairy farmers, assesses how much Valio can pay for the milk at any given time. We pay the cooperatives a so-called milk price for the milk received. The cooperatives pay a producer price to the farmers and independently decide on changes in the milk producer price. The Board of Directors monitors Valio's operative management's activities and the business. Valio is owned by a total of 13 cooperatives. Of these, five are Valio's procurement cooperatives that supply milk to Valio.

Valio Ltd's decision-making bodies are the General Meeting, the Supervisory Board and the Board of Directors. Valio's Executive Board is responsible for the day-to-day management of the business operations and exercises operational decision-making power. Valio's governance model, the activities of the decision-making bodies, key individuals and the Executive Board are presented in more detail on [our website](#).

The Board of Directors decides on the remuneration, including bonus systems, for the CEO and the Executive Board. Remuneration for the Board of Directors is decided on by the Supervisory Board. The General Meeting decides on the remuneration for the Supervisory Board.

SUPERVISORY BOARD REMUNERATION

In 2022, Valio's Supervisory Board was paid a total of EUR 164,772 in monthly and meeting fees.

- Chairman EUR 3,150/month
- Vice Chairman EUR 2,050/month
- Meeting fee for each Supervisory Board meeting EUR 330
- Compensation for lost working time for each Supervisory Board meeting EUR 250

BOARD OF DIRECTORS REMUNERATION

In 2022, Valio's Board of Directors was paid a total of EUR 225,644 in monthly and meeting fees.

- Chairman EUR 4,800/month
- Vice Chairman EUR 3,000/month
- Meeting fee for each Board of Directors meeting EUR 330
- Compensation for lost working time for each Board of Directors meeting EUR 250

UPPER MANAGEMENT REMUNERATION

In addition to a fixed monthly salary and fringe benefits, such as a car and phone, Valio's upper management has profit-sharing targets and retirement benefits. In 2022, Valio Group's Executive Board included six members and the CEO. Members of the Executive Board were paid salaries and bonuses as follows:

- Total salaries and bonuses EUR 2,921,153





SUSTAINABILITY REPORTING AND SCOPE [80](#)

THIRD-PARTY ASSURANCE REPORT [81](#)

GRI INDEX [82](#)

Reporting

Sustainability reporting and scope

WE REPORT Valio's financial and sustainability results once per year. The Sustainability Report is published in conjunction with the publication of Valio's Board of Directors' Report and Financial Statements in Finnish and in English, and it is available on our website.

This Sustainability Report covers Valio's activities in 2022 and early 2023. It covers Valio's operations in Finland and, for the most part, also the operations in other countries. The applicable operations are specified in conjunction with the figures and other information. The methods of calculating the environmental indicators of our Finnish and Estonian production facilities differ due to, for example, the country-specific regulatory guidelines. The report presents environmental data for 2022 to the extent that they are in a comparable format.

In our reporting, we focus on the aspects of sustainability that are most material for our operations – our sustainability focus areas. These focus areas have been defined on the basis of a materiality assessment. We have paid particular attention to the clarity, comparability, comprehensiveness and verifiability of the information in the Sustainability Report.

The Sustainability Report complies with the requirements of the updated indicators of the Global Reporting Initiative (GRI). A comparison of the report's contents with GRI standards is presented in the [GRI index table](#).

The Sustainability Report's financial figures are based on data verified by a third party (PricewaterhouseCoopers). The Auditor's Report is published in conjunction with the publication of Valio's Board of Directors' Report and Financial Statements. The greenhouse gas emissions data have been verified by a third party (PricewaterhouseCoopers Oy) in accordance with the assurance report. More detailed sources and the methodology used in the emissions calculation are described in our [greenhouse gas inventory](#).





Independent practitioner's limited assurance report

TO THE MANAGEMENT OF VALIO OY

We have been engaged by the Management of Valio Oy (hereinafter also the "Company") to perform a limited assurance engagement on selected sustainability information for the reporting period from 1 January 2022 to 31 December 2022, disclosed in Valio Oy Sustainability Report 2022 (hereinafter the Selected sustainability information). In addition, the work covers a review of Valio's updated GHG-inventory after the acquisition of Heinon Tukku.

SELECTED SUSTAINABILITY INFORMATION

The selected sustainability information within the scope of assurance covers:

- GRI 305-1 Direct (Scope 1) GHG emissions
- GRI 305-2 Energy indirect (Scope 2) GHG emissions
- GRI 305-3 Other indirect (Scope 3) GHG emissions

MANAGEMENT'S RESPONSIBILITY

The Management of Valio Oy is responsible for preparing the Selected sustainability information in accordance with the reporting criteria as set out in Valio Oy reporting instructions, Global Reporting Initiative (GRI) and Greenhouse Gas Protocol Standards. The Management of Valio Oy is also responsible for such internal control as the management determines is necessary to enable the preparation of the Selected sustainability information that is free from material misstatement, whether due to fraud or error.

PRACTITIONER'S INDEPENDENCE, OTHER ETHICAL REQUIREMENTS AND QUALITY CONTROL

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

PricewaterhouseCoopers Oy applies International Standard on Quality Control (ISQC) 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

PRACTITIONER'S RESPONSIBILITY

Our responsibility is to express a limited assurance conclusion on the Selected sustainability information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information", and, in respect of greenhouse gas emissions, International Standard on Assurance Engagements (ISAE) 3410 "Assurance Engagements on Greenhouse Gas Statements". These Standards require that we plan and perform the engagement to obtain limited assurance about whether

the Selected sustainability information is free from material misstatement.

In a limited assurance engagement, the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other information in the Selected sustainability information. The procedures selected depend on the practitioner's judgment, including an assessment of the risks of material misstatement of the Selected sustainability information.

Our work consisted of, amongst others, the following procedures:

- Interviewing representatives of the Company.
- Performing three virtual site visits in the Company's sites to evaluate the processes and IT systems and how site level data is collected and consolidated into the Company's reporting
- Interviewing employees responsible for collecting and reporting the Selected sustainability information.
- Assessing how the reporting instructions and procedures are applied in the Company.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.
- Considering the disclosure and presentation of the Selected sustainability information.

LIMITED ASSURANCE CONCLUSION

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Valio Oy's Selected sustainability information for the reporting period 1 January 2022 to 31 December 2022 are not properly prepared, in all material respects, in accordance with the Reporting criteria.

When reading our limited assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Valio Oy for our work, for this report, or for the conclusions that we have reached.

Helsinki 26 April 2023

PricewaterhouseCoopers Oy

Mikael Niskala

Partner
ESG Reporting &
Assurance Services

Niina Vilske

Authorised Public
Accountant (KHT)



GRI INDEX

GRI STANDARDS DISCLOSURE		LOCATION	COMMENTS
GRI 2: GENERAL DISCLOSURES (2021)			
Organizational profile			
2-1	Organizational details	p. 3, 5	www.valio.com/we-are-valio
2-2	Entities included in the organization's sustainability reporting	p. 3, 80	
2-3	Reporting period, frequency and contact point	p. 80	mediadesk@valio.fi +358 10 381 2118 Date of the report: 26th April 2023.
2-4	Restatements of information	GRI index	The 2021 GHG emission figures (scope 2 and scope 3) have been revised retroactively in the verification of the emissions calculation carried out in spring 2022.
2-5	External assurance	GRI index p. 30, 80, 81	The report has not been externally assured. GHG data assurance done according to the assurance report.
Activities and workers			
2-6	Activities, value chain and other business relationships	p. 3-4, 11-12, 75-77	
2-7	Employees	p. 66-69	In 2022, Valio employed 262 summer workers. Reported partially.
2-8	Workers who are not employees	GRI index	The wholesale business employs a variable number of temporary employees (2022 on average 60 employees per month). Temporary workers are able to make up for unexpected absences and provide flexibility to fluctuation in volume.



GRI STANDARDS DISCLOSURE		LOCATION	COMMENTS
Governance			
2-9	Governance structure and composition	p. 78	www.valio.com/we-are-valio/company/owners-and-governance There are no external stakeholders on Valio's Supervisory Board or Board of Directors.
2-10	Nomination and selection of the highest governance body	p. 78	www.valio.com/we-are-valio/company/owners-and-governance
2-11	Chair of the highest governance body		www.valio.com/we-are-valio/company/owners-and-governance
2-12	Role of the highest governance body in overseeing the management of impacts	p. 10, 14-15	
2-13	Delegation of responsibility for managing impacts	p. 14-15	
2-14	Role of the highest governance body in sustainability reporting	p. 14-16	Valio's Executive board has approved the material topics, other reporting topics have been approved by the director responsible for the specific topic. The sustainability report has been approved by the member of the Management Team responsible for Sustainability.
2-15	Conflicts of interest	p. 72, GRI index	In addition to the Code of Conduct, Valio has "648 MGT Valio Ltd Ethical guidelines - Bribery and conflicts of interest" procedure in place. This does not contain all the reporting requirements of the GRI standard.
2-16	Communication of critical concerns	p. 72	www.valio.com/sustainability/responsible-leadership/valio-whistle-channel
2-17	Collective knowledge of the highest governance body	GRI index	Members of the Board of Directors are informed about sustainability-related matters in Valio's Governance meetings. Some topics are discussed directly in Board meetings.
2-18	Evaluation of the performance of the highest governance body	GRI index	Valio's Board of Directors regularly evaluates its performance as a self-assessment. Latest self assessment was done in the beginning of 2023.
2-19	Remuneration policies	p. 78	Omitted due to confidentiality constraint
2-20	Process to determine remuneration	p. 78	Omitted due to confidentiality constraint
2-21	Annual total compensation ratio	GRI index	Omitted due to confidentiality constraint



GRI STANDARDS DISCLOSURE			LOCATION	COMMENTS
Strategy, policies and practices				
2-22	Statement on sustainable development strategy	p. 7		
2-23	Policy commitments	p. 14, 18, 40, 61-64, 70, 72-75	www.valio.com/sustainability/responsible-leadership/policies	
2-24	Embedding policy commitments	p. 14, 18, 71-76		
2-25	Processes to remediate negative impacts	p. 19, 25-26, 58-60, 64-65, 76-77		
2-26	Mechanisms for seeking advice and raising concerns	p. 64, 72	www.valio.com/sustainability/responsible-leadership/valio-whistle-channel	
2-27	Compliance with laws and regulations		No breaches in 2022.	
2-28	Membership associations	p. 24, 26	www.valio.com/we-are-valio/company/stakeholder-relations	
Stakeholder engagement				
2-29	Approach to stakeholder engagement	p. 16-17, 22-26		
2-30	Collective bargaining agreements	p. 67	There are no collective bargaining agreements applicable to personnel in Valio's foreign subsidiaries.	
GRI 3: MATERIAL TOPICS (2021)				
3-1	Process to determine material topics	p. 14, 16-17		
3-2	List of material topics	p. 18-20		
3-3	Management of material topics	p. 14, 18-20, 28-78		
Economic standards				
GRI 201: Economic performance (2016)				
201-2	Financial implications and other risks and opportunities due to climate change	p. 28-30	Board of Directors' Report 2022 www.valio.com/sustainability/reports-and-financial-statements	
201-3	Defined benefit plan obligations and other retirement plans	GRI index	www.valionelakekassa.fi/yritys	



GRI STANDARDS DISCLOSURE			LOCATION	COMMENTS
GRI 203: Indirect economic impacts (2016)				
203-1	Infrastructure investments and services supported		p. 34-37	
203-2	Significant indirect economic impacts		p. 4, 13, 40-41, 52-54, 61	
GRI 204: Procurement practices (2016)				
204-1	Proportion of spending on local suppliers		p. 75	
GRI 205: Anti-corruption (2016)				
205-2	Communication and training about anti-corruption policies and procedures		p. 72	
205-3	Confirmed incidents of corruption and actions taken		p. 72	
GRI 206: Anti-competitive behavior(2016)				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		GRI index	No cases in 2022.
Environmental standards				
GRI 301: Materials (2016)				
301-1	Materials used by weight or volume		p. 43	
GRI 302: Energy (2016)				
302-1	Energy consumption within the organization		p. 40-41	
302-4	Reduction of energy consumption		p. 40-41	



GRI STANDARDS DISCLOSURE			LOCATION	COMMENTS
GRI 303: Water and Effluents (2018)				
303-1	Interactions with water as a shared resource		p. 42	www.valio.com/sustainability/sustainability-in-production/resource-efficiency
303-2	Management of water discharge-related impacts		p. 42	www.valio.com/sustainability/sustainability-in-production/resource-efficiency
303-3	Water withdrawal		p. 42	Valio does not use sea water.
303-4	Water discharge		p. 42	Valio does not use sea water.
GRI 304: Biodiversity (2016)				
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		GRI index	Valio's production sites are located in areas marked as industrial areas and thus, not located in or nearby areas that have an official environmental protection class.
304-2	Significant impacts of activities, products, and services on biodiversity		p. 38-39	
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations		GRI index	There are nesting areas of Siberian flying squirrels in the vicinity of three sites in Finland, and there are Siberian flying squirrel migration routes in the vicinity of the headquarters.
GRI 305: Emissions (2016)				
305-1	Direct (Scope 1) GHG emissions		p. 29-32	
305-2	Energy indirect (Scope 2) GHG emissions		p. 29-32	
305-3	Other indirect (Scope 3) GHG emissions		p. 30-32	
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		p. 43	



GRI STANDARDS DISCLOSURE		LOCATION	COMMENTS
GRI 306: Waste (2020)			
306-1	Waste generation and significant waste-related impacts	p. 43	
306-2	Management of significant waste-related impacts	p. 45-47	www.valio.com/sustainability/sustainability-in-production/resource-efficiency
306-3	Waste generated	p. 43	
306-4	Waste diverted from disposal	p. 43	
Social standards			
GRI 401: Employment (2016)			
401-1	New employee hires and employee turnover	s. 66-67	Reported partially.
GRI 403: Occupational health and safety (2018)			
403-1	Occupational health and safety management system	p. 69-70	www.valio.com/sustainability/sustainability-in-production/wellbeing-and-safety-at-work
403-2	Hazard identification, risk assessment, and incident investigation	p. 70	www.valio.com/sustainability/sustainability-in-production/wellbeing-and-safety-at-work
403-3	Occupational health services	p. 69	
403-4	Worker participation, consultation, and communication on occupational health and safety	p. 16, 20, 69-70	www.valio.com/sustainability/sustainability-in-production/wellbeing-and-safety-at-work
403-5	Worker training on occupational health and safety	p. 68, 70	www.valio.com/sustainability/sustainability-in-production/wellbeing-and-safety-at-work
403-6	Promotion of worker health	p. 69	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	p. 69-70	www.valio.com/sustainability/sustainability-in-production/wellbeing-and-safety-at-work
403-9	Work-related injuries	p. 70	www.valio.com/sustainability/sustainability-in-production/wellbeing-and-safety-at-work Reported partially.



GRI STANDARDS DISCLOSURE		LOCATION	COMMENTS
GRI 404: Training and education (2016)			
404-1	Average hours of training per year per employee	p. 68, 72	
404-2	Programs for upgrading employee skills and transition assistance programs	p. 67-68	Valio has several procedures in place for changes in working life, including in the event of retirement, e.g., age program, transmission of tacit knowledge and arrangements for flexible working and working time.
404-3	Percentage of employees receiving regular performance and career development reviews	p. 68	
GRI 405: Diversity and equal opportunity (2016)			
405-1	Diversity of governance bodies and employees	p. 66	www.valio.com/we-are-valio/company/owners-and-governance Reported partially.
GRI 406: Non-discrimination (2016)			
406-1	Incidents of discrimination and corrective actions taken	p. 72	
GRI 416: Customer health and safety (2016)			
416-1	Assessment of the health and safety impacts of product and service categories	p. 20, 57, 65	
GRI 417: Marketing and labelling (2016)			
417-1	Requirements for product and service information and labeling	p. 58-62	All labeling of Valio's products is subject to legislation.



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