

Accelerate, Transform, Regenerate:

# NESTLÉ'S NET ZERO ROADMAP

December 2020



Nestlé

Good food, Good life



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# WE COMMIT TO NET ZERO BY 2050

Climate change is one of society's greatest challenges. It is also one of the greatest risks to the future of our business.

Solving it requires all of us to act with great urgency. As the world's biggest food and beverage company, we have the size, scale and reach to influence others and to inspire collective action.

Now we are going beyond our commitments: we are specifying our plan to halve Nestlé's greenhouse gas (GHG) emissions by 2030 and to achieve net zero by 2050 – even as our business continues to grow. We are making our footprint transparent and will make our progress clear.

People will be at the heart of our climate actions. We strive to ensure that our initiatives promote a just transition toward a regenerative food system for all.

The work behind all of this is detailed, rigorous and intense. It requires us to examine not only our operations but also each of our products to see how we can make them better for the planet. And as most of our emissions occur outside of our own four walls, we must go on the ground to collaborate with our suppliers and help them improve their production processes.

At the other end of the value chain, we look forward to working with our customers to shape their offering and with our consumers to encourage more sustainable purchasing and consumption. We need action from governments and regulators to create clear and fair rules for companies to make progress.

But Nestlé must first lead by example. It is only by taking tangible actions that we can convince others to do the same. And it is only together that we can make a positive difference.



# NESTLÉ'S NET ZERO ROADMAP

## Our path to regeneration for future generations

Solving the problem means identifying the problem. We found Nestlé emitted 92 million tonnes of greenhouse gas emissions in 2018\*. Now we know the extent, we know the road ahead.

\*Total GHG emissions were 113 million tonnes (CO<sub>2</sub> equivalent) in 2018, 92 of which are in scope of our UN 1.5°C pledge.

Companies and their emissions grow over time. That's why we're promising to be net zero based on our 2018 baseline, no matter how much our company grows.

— Path to zero emissions by 2050  
- - Business as usual

**Emissions by operation**  
(million tonnes of CO<sub>2</sub>e, 2018)

- 65.6 Sourcing our ingredients
- 7.0 Manufacturing our products
- 11.0 Packaging our products
- 7.5 Managing logistics
- 0.8 Travel and employee commuting

## Moving faster

We're excited to hit the soil running. We're accelerating our work in manufacturing, packaging and carbon-neutral brands. We're also investing CHF 1.2 billion to help spark regenerative agriculture across our supply chain, as part of a total investment of CHF 3.2 billion by 2025.

### Our milestones

- 🌲 100% deforestation free for primary supply chain by 2022
- ⚡ Switch our global fleet of vehicles to lower emission options by 2022
- 🌴 100% certified sustainable palm oil by 2023
- 🔌 100% renewable electricity in all our sites by 2025
- ♻️ 100% of our packaging recyclable or reusable by 2025
- ✅ 100% certified sustainable cocoa and coffee by 2025
- 🌱 Plant 20 million trees a year
- 🏠 Nestlé Waters becomes carbon neutral by 2025
- 🌿 Source 20% of key ingredients through regenerative agricultural methods by 2025
- 🗑️ Cut virgin plastic in our packaging by a third by 2025

By 2025, we will reduce our emissions by 20%

## Scaling up

Further down the greener path, we will invest in new technologies and fundamental changes to our products and businesses around the globe.

- ☀️ Use more renewable thermal energy in our manufacturing
- 🌱 Source 50% of key ingredients through regenerative agricultural methods by 2030
- 🌳 Plant 200 million trees by 2030

By 2030, we will reduce our emissions by 50%

## Delivering our promise

Advanced agricultural techniques will deliver a regenerative food system at scale, supported by zero emission logistics and company operations. We will balance any remaining emissions through high-quality natural climate solutions that benefit people and the planet.

By 2050, we will reach

# net zero

2018

2021

2025

2030

2050

# MEASURING OUR CARBON FOOTPRINT

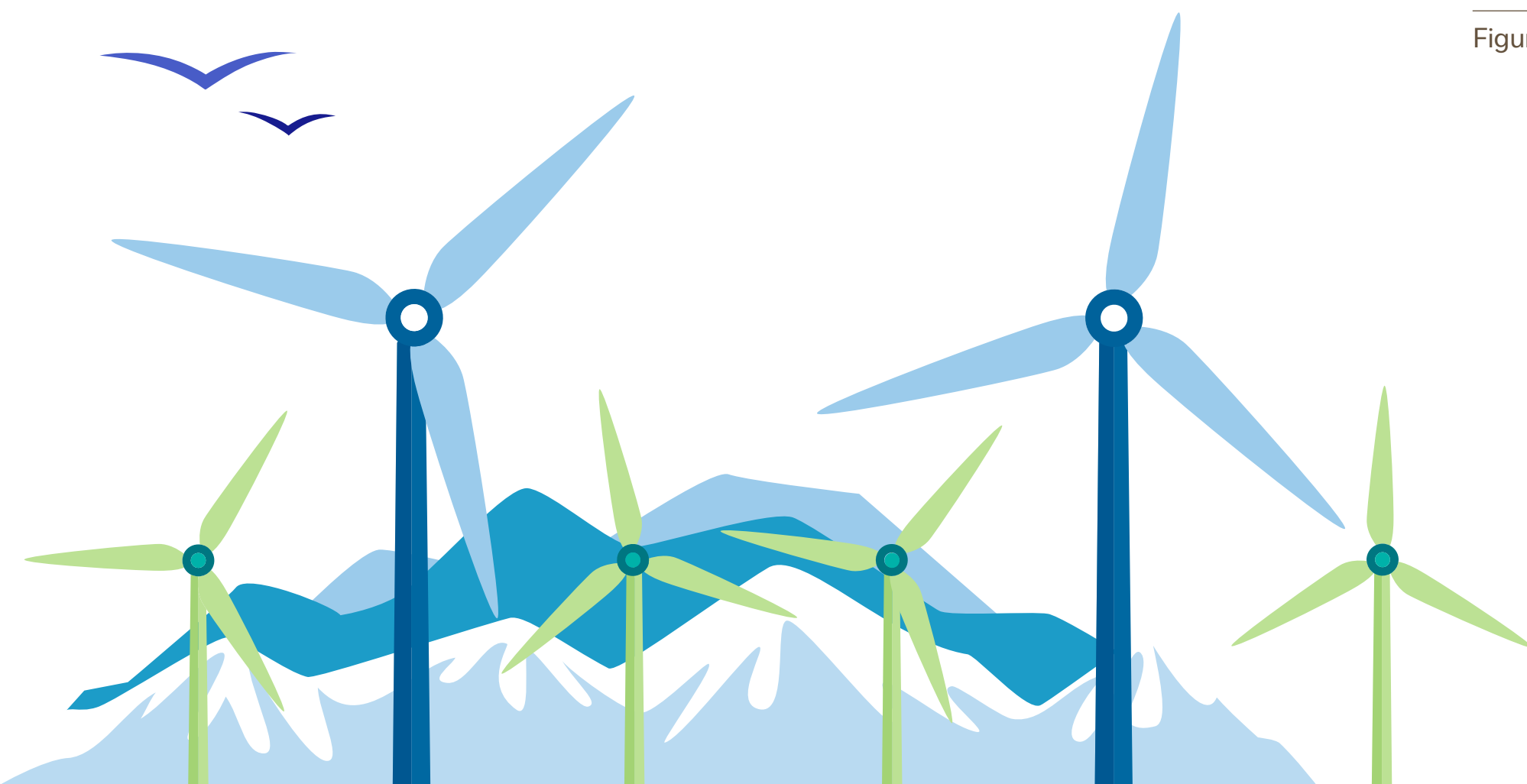
We take a whole life cycle approach to determining the carbon footprint of our products. It is a process that involves working with many others, such as farmers, logistics providers and consumers. To achieve net zero GHG emissions by 2050, we need to act throughout our value chain.

## Product emissions from farm to fork



# OUR TOTAL EMISSIONS BY SCOPE

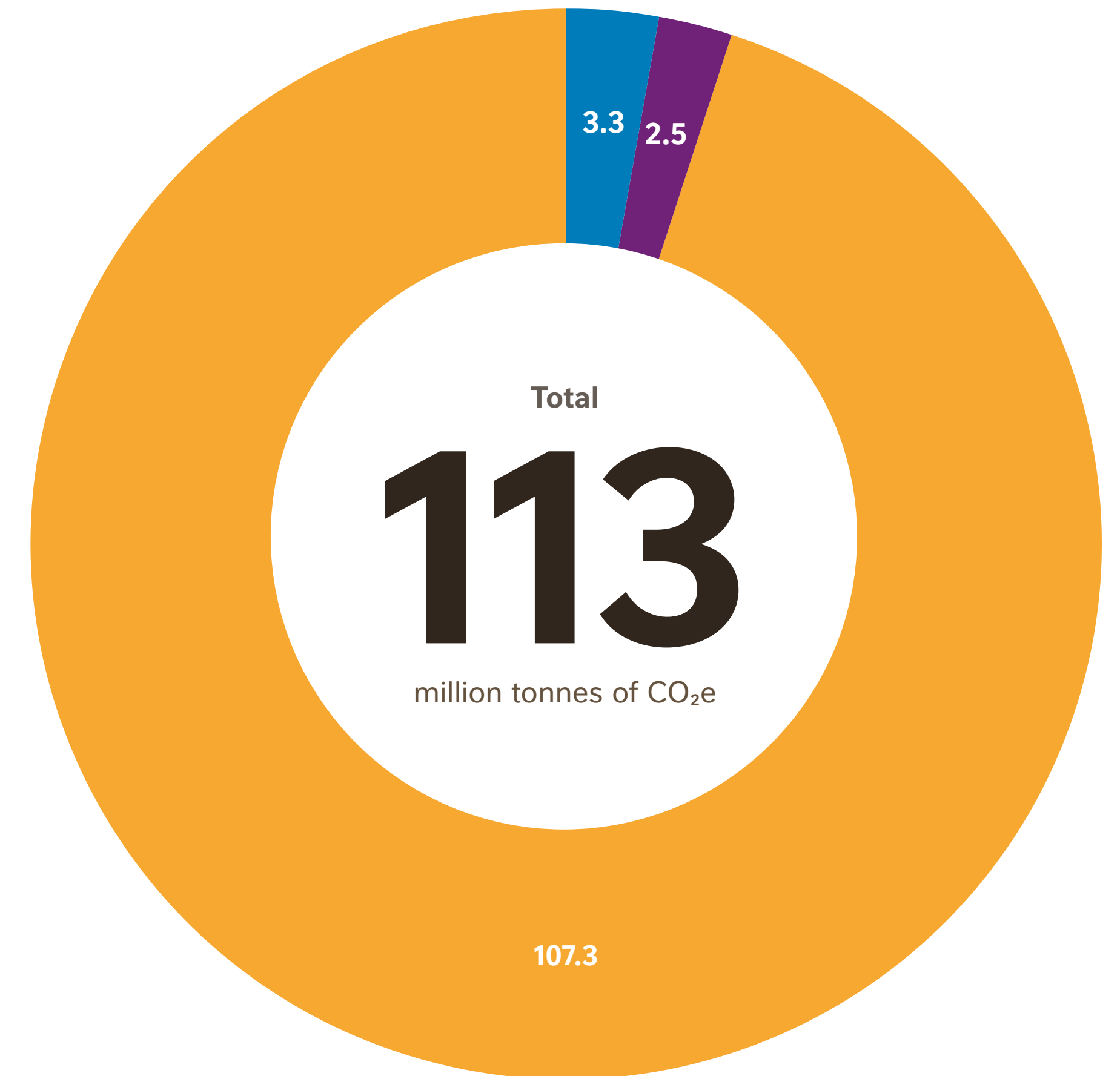
Emissions from our direct operations, known as Scope 1 and Scope 2, accounted for just 5% of our GHG emissions. The vast majority of our GHG emissions (95%) come from activities in our supply chain. As a result, that is where we focus most of our efforts.



## Nestlé's total GHG emissions by Scope million tonnes of CO<sub>2</sub>e, in 2018

Scope 1			
<b>Emitted directly</b>	<b>3.3</b>	<b>3.0%</b>	from sources we own or control such as on-site combustion (coal, natural gas, fuel for company's vehicle fleet).
Scope 2			
<b>Emitted indirectly</b>	<b>2.5</b>	<b>2.2%</b>	from the generation of purchased energy like electricity and heating/cooling network.
Scope 3			
<b>All other indirect emissions</b>	<b>107.3</b>	<b>94.8%</b>	in our value chain, both upstream and downstream, such as sourcing and use of sold products.

Figures have been rounded.



# EMISSIONS COVERED BY OUR PLEDGE

Progress toward net zero will be measured against our 2018 GHG emissions. We calculated this baseline and defined our footprint in partnership with South Pole, an external consultant.

In setting our targets, we have followed the Science Based Targets initiative's (SBTi) criteria. They provide a clearly defined pathway for coupling future-proof growth with reductions in GHG emissions. As our Scope 3 emissions make up 95% of our footprint, we are addressing more than 80% of these. The SBTi approved our targets in November 2020.

This data is our starting point. As we enhance our ability to identify and measure emissions, and better use the data that has been disclosed by our suppliers and others, our monitoring will improve. We intend to also share our science-based methodology for calculating GHG emissions to help push new frontiers in climate data transparency for the food and beverage industry.






## What's not included

As a company at the start of its net zero journey, following SBTi guidelines for now we have excluded the following emissions from our net zero pledge:

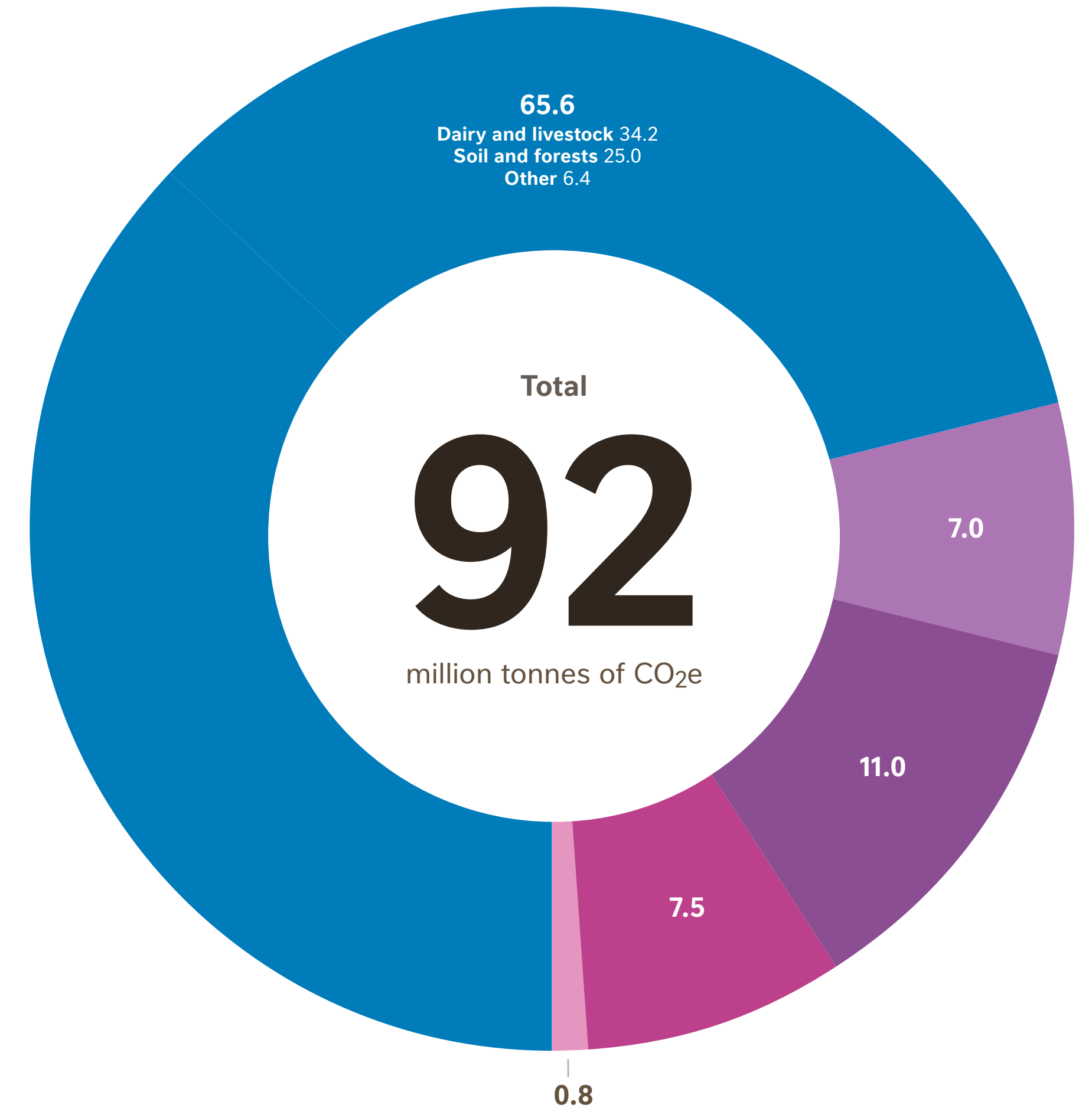
Scope 3  
**Consumer use of sold products**  
12.7 million tonnes of CO<sub>2</sub>e

Scope 3  
**Purchased services, leased assets, capital goods, investments**  
8.6 million tonnes of CO<sub>2</sub>e

## Nestlé's in-scope GHG emissions by operation (92 out of 113) million tonnes of CO<sub>2</sub>e, in 2018

	Scope 3 <b>Sourcing our ingredients</b>	<b>65.6</b>	<b>71.4%</b>
	Scope 1, 2 & 3 <b>Manufacturing our products</b>	<b>7.0</b>	<b>7.7%</b>
	Scope 3 <b>Packaging our products</b>	<b>11.0</b>	<b>11.9%</b>
	Scope 3 <b>Managing logistics</b>	<b>7.5</b>	<b>8.2%</b>
	Scope 3 <b>Travel and employee commuting</b>	<b>0.8</b>	<b>0.8%</b>

Figures have been rounded.




# OUR KEY ACTIONS AT A GLANCE

### Sourcing our ingredients sustainably

We work closely with farmers, suppliers and communities where we operate to source our ingredients in a way that generates positive environmental and social impacts.

We are launching initiatives to protect ecosystems, enhance biodiversity and reduce emissions caused by farming in our supply chain. Our work will help the half a million farmers we directly and indirectly purchase ingredients from adopt sustainable practices and enhance livelihoods. It will also help create economic opportunities in rural communities and protect food security.


- ➔ Dairy and livestock page 9
- ➔ Soil and forests page 11



### Transforming our product portfolio

Using our know-how and resources, we aim to transform our portfolio with products that are good for consumers and good for the planet. This means creating new, low-carbon offerings, and reformulating existing products using ingredients and processes with a lower carbon footprint.


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### Evolving our packaging

Packaging helps keep our food safe and fresh, but plastic waste in the environment is a pressing global challenge. We continue to invest in packaging innovations, alternative delivery systems and new business models that help stop waste going to landfill or ending up as litter and reduce carbon emissions.


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### Using renewable energy to manufacture our products

Achieving net zero emissions will involve big changes to the way we make our products. We will switch to 100% renewable electricity in our facilities by 2025, invest in energy efficiency measures to reduce the overall amount of energy we use, and switch to renewable fuels for thermal heating or other processes.

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### Driving toward cleaner logistics

A key part of our 2050 ambition depends on creating a cleaner, leaner logistics network. We are optimizing routes, filling vehicles more efficiently and working with logistics providers to switch to low-emission fuels. These include green electricity, green hydrogen, and biofuels made from waste rather than virgin crops.

We expect to also use more rail and intermodal transport options, and our warehouses are minimizing energy consumption, switching to renewable electricity and reducing waste.

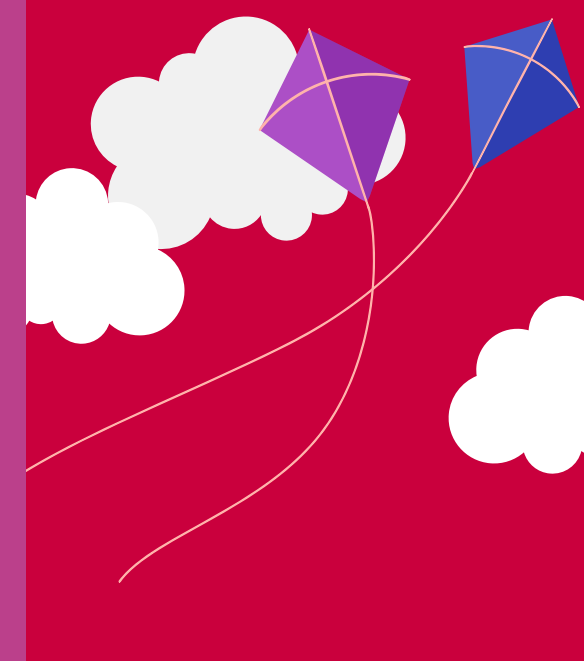
➔ Page 19



### Removing carbon from the atmosphere

Using nature's own solutions will counterbalance the emissions we cannot eliminate. Establishing new standards for our farmers in agroforestry, soil management, restoring peatlands, forests and other natural landscapes will draw GHGs from the atmosphere, locking them in the ground.


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### Moving toward carbon-neutral brands

Our more than 2,000 brands will play a critical role in our journey toward net zero. As consumer tastes change and preferences move toward more transparent and sustainable products and services, our brand teams will continue to adapt, embracing sustainability and meeting market demand.

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### Using our voice to galvanize action

We know that we cannot achieve net zero alone. We will continue working with farmers, suppliers, industry, employees, consumers, governments, NGOs and communities where we operate, to forge new and deeper levels of engagement on climate issues.

We will transparently advocate for clear and fair standards and regulation that support sector wide efforts, and for necessary public policies to enable the transformation of economic and social systems for a net zero carbon future.

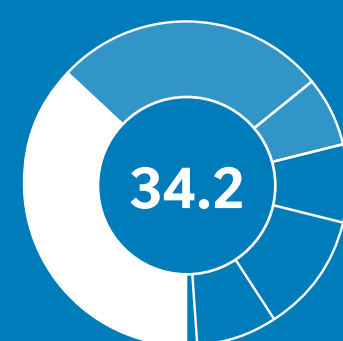
➔ Page 24





# SOURCING OUR INGREDIENTS SUSTAINABLY

## Dairy and livestock



### Sourcing our ingredients

Our dairy and livestock supply chains accounted for 34.2 million tonnes of CO<sub>2</sub>e in 2018 – more than half of the emissions created in sourcing our ingredients.



Dairy and livestock ingredients are our largest single source of emissions. Charting a course to net zero means driving a major shift in the way we source and produce these nutritious ingredients, investing in innovations and new business models.

Some of the most exciting agricultural innovations are in dairy and livestock farming, making them a vital part of the overall solution to achieve net zero agriculture. By strengthening our programs with livestock farmers to restore land, for instance, we can scale up initiatives to absorb more carbon from the atmosphere.

As we do so, we aim to continue improving livelihoods, investing in climate and nature with university-led research that will help develop climate-resilient and more equitable farming communities. Continuously improving animal welfare will remain a primary focus throughout our work.

### Our key actions

To find the most effective ways of reducing emissions, in partnership with the Sustainability in Business Lab at ETH Zurich, we developed a simulation tool to evaluate actions and costs for dairy, which represents most of our livestock emissions.

#### Cutting the methane produced by animals

Methane produced during digestion, known as enteric fermentation, is the most challenging source of emissions to mitigate in cattle. We will support innovation in rumen modification that reduces emissions, mainly through the inclusion of feed additives and dietary supplements, with the help of dedicated research and development (R&D) support for the Agriculture team.

#### Feeding livestock with more sustainable feed

We need to work with our farmers to ensure the feed used comes from regenerative agricultural practices. This will help avoid deforestation and reduce the carbon impact of feeding livestock.

#### Making farms more productive through better herd management

Supporting agripreneurship will help increase the productivity and livelihoods of farmers, by developing sustainable business models and helping them adopt successful business practices. The use of training, investments, better technologies and professional herd management all play a significant role in driving continuous improvement.

#### Grassland management and increasing carbon storage in the soil

Soil is an excellent carbon sink. By introducing regenerative agricultural practices such as better paddock management and silvopasture – the practice of integrating trees into areas where livestock forage – and switching to organic fertilizers, we can improve the ability of farmland to store carbon.

#### Helping suppliers become more innovative

Our support for R&D into new technologies will help increase the efficiency of dairy farms, maximizing output while using minimum energy and improving animal welfare.

Measures include:

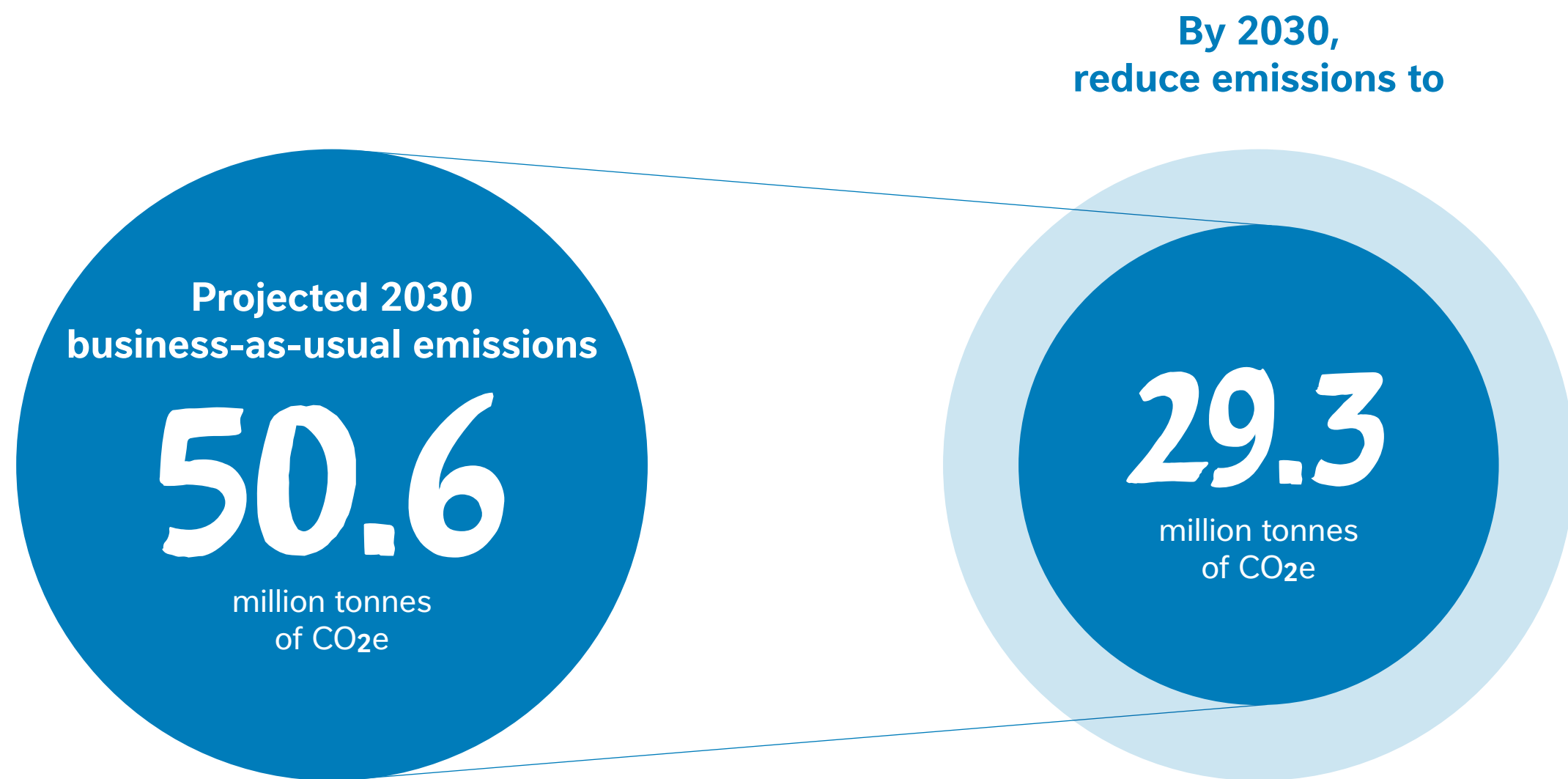
- Improving manure management, including the use of biogas digesters.
- Creating an R&D accelerator to drive innovation in dairy.
- In China, expanding our Dairy Farming Institute and launching a Grain Competence Center to coordinate research and encourage knowledge sharing.
- Piloting net zero farms, including partnering with the US dairy industry and academia to implement new technologies and economically viable practices.

Working with our suppliers, we will focus on collecting and validating emissions data, helping improve accuracy and enabling us to work more effectively together in different countries.

**SOURCING OUR INGREDIENTS SUSTAINABLY –  
DAIRY AND LIVESTOCK**

**Dairy and livestock supply chain emissions  
and reductions, 2018 to 2030**

million tonnes of CO<sub>2</sub>e



2018 emissions baseline  
plus our forecast company growth  
(16.4 million tonnes of CO<sub>2</sub>e) to 2030

**Actions to reach our 2030 emissions goal<sup>1</sup>**

- 8.4** Making farms more productive through training and better herd management
- 3.2** Caring for grassland to store more carbon by using regenerative agriculture and organic fertilizers
- 3.2** Cutting the methane produced by animals during digestion through nutrition changes
- 2.7** Feeding livestock with more sustainable feed
- 2.3** Other livestock actions
- 1.0** Helping suppliers become more energy efficient
- 0.5** Making the most of manure and using biogas digesters

**Our projected reductions by 2030**

Our actions will reduce the emissions from sourcing our dairy and livestock ingredients by 21 million tonnes by 2030. This represents 23% of our in-scope 2018 carbon footprint.

For fresh milk, reductions in emission intensity will largely be made through improvements in productivity in less advanced economies. For milk derivatives, some of our suppliers are already developing ingredients with a lower carbon footprint and we will continue working closely with them in this complex area.

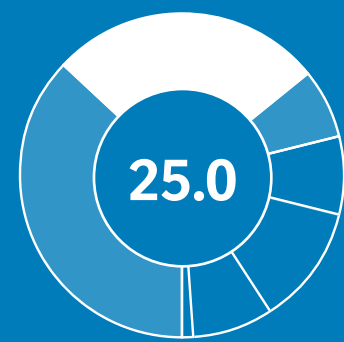
**Looking to 2050**

We will continue to support family-operated farming systems through regenerative agricultural practices that help reduce the carbon footprint of dairy farming. Activities will also include investing in partnerships to develop technologies to help take farming to the next level of sustainability.

<sup>1</sup> These actions have been defined based on research and data as at December 2020. The contributions to emissions reductions may be subject to change over time.

# SOURCING OUR INGREDIENTS SUSTAINABLY

## Soil and forests



### Sourcing our ingredients

25 million tonnes of CO<sub>2</sub>e emissions in 2018 were generated through the sourcing of our agricultural ingredients.

Good food depends on diverse and quality ingredients, so protecting the ecosystems where they grow is vital to our long-term success.

A significant quantity of the ingredients we purchase come from natural ecosystems, which are under pressure from agriculture: 27% of our in-scope 2018 footprint can be linked back to these agricultural ingredients.

We are going to accelerate our efforts to protect and restore these areas, working with farmers and suppliers to enhance biodiversity and limit GHG emissions. This includes avoiding/eliminating deforestation and natural habitat conservation as well as planting hundreds of millions of trees to unlock the power of agroforestry and reforestation in tackling emissions.

A key step in this journey will be to work with our suppliers and farmers to improve transparency around where our ingredients come from and how they are produced, as part of an overall commitment to drive up standards. This will include working with others to strengthen land rights for local communities and the concept of Free, Prior and Informed Consent (FPIC).

People remain at the heart of our climate actions, whatever the initiative or scheme. We aim to deliver new economic opportunities for young people and women in rural communities, and protect food and nutrition security. We will support young agripreneurs to implement regenerative agricultural practices.

### Our key actions

With the support of South Pole, we have developed a model to calculate the GHG mitigation potential of agricultural land that assesses various actions and their costs.

Delivering against our zero deforestation commitment and removing carbon through agroforestry and regenerative agriculture are key to reaching net zero. As part of a strategy of more ambitious engagement with our suppliers, we are now broadening these programs to accelerate progress.

#### Agroforestry and shade management

Some crops, such as cocoa and coffee, grow better in the shade. We are encouraging farmers to plant more shade trees to protect these crops from heat stress and other threats such as excessive rainfall. Shade trees also improve water management and biodiversity, and absorb carbon from the atmosphere to drive down emissions.

We also support alley cropping, or planting between hedgerows, which can bring similar benefits when growing crops such as cereals, fruits and vegetables.

#### Improving soil health

Improving soil health makes land more productive. We will help improve agricultural practices such as no tillage, cover cropping, multiple crop rotation and switching to organic fertilizers for most of our soil-grown ingredients. These practices will support nutrient uptake, water retention and fertility, and restore the soil's carbon content.

Composting of agricultural waste, such as empty fruit bunches from palm oil plantations, is another inexpensive way of enriching the soil.

#### Agroforestry in border areas

Field margins and farm borders offer important opportunities to support our climate goals. Forest and peatlands can be restored, or specific projects such as windbreaks introduced, helping to enhance ecosystem resilience.

#### Preventing and remediating land use change

The conversion of natural landscapes for ingredients in our supply chain is estimated to account for between 25–35% of our total ingredient emissions. For key crop supply chains, such as cocoa, coffee, palm oil and soybean, the proportion can be even higher.

Our zero deforestation commitment forms a critical element of our journey to net zero. Alongside new partnerships and initiatives, farm-level assessments, sustainability certifications and satellite monitoring systems will continuously scrutinize and prevent forest cover and land use change.

Where forest degradation has happened, we have ambitious reforestation plans and are set to plant at least 3 million trees in key sourcing locations by 2021, and a further 3 million by 2023. We have also invested CHF 2.5 million in critical forest conservation and restoration in Côte d'Ivoire.

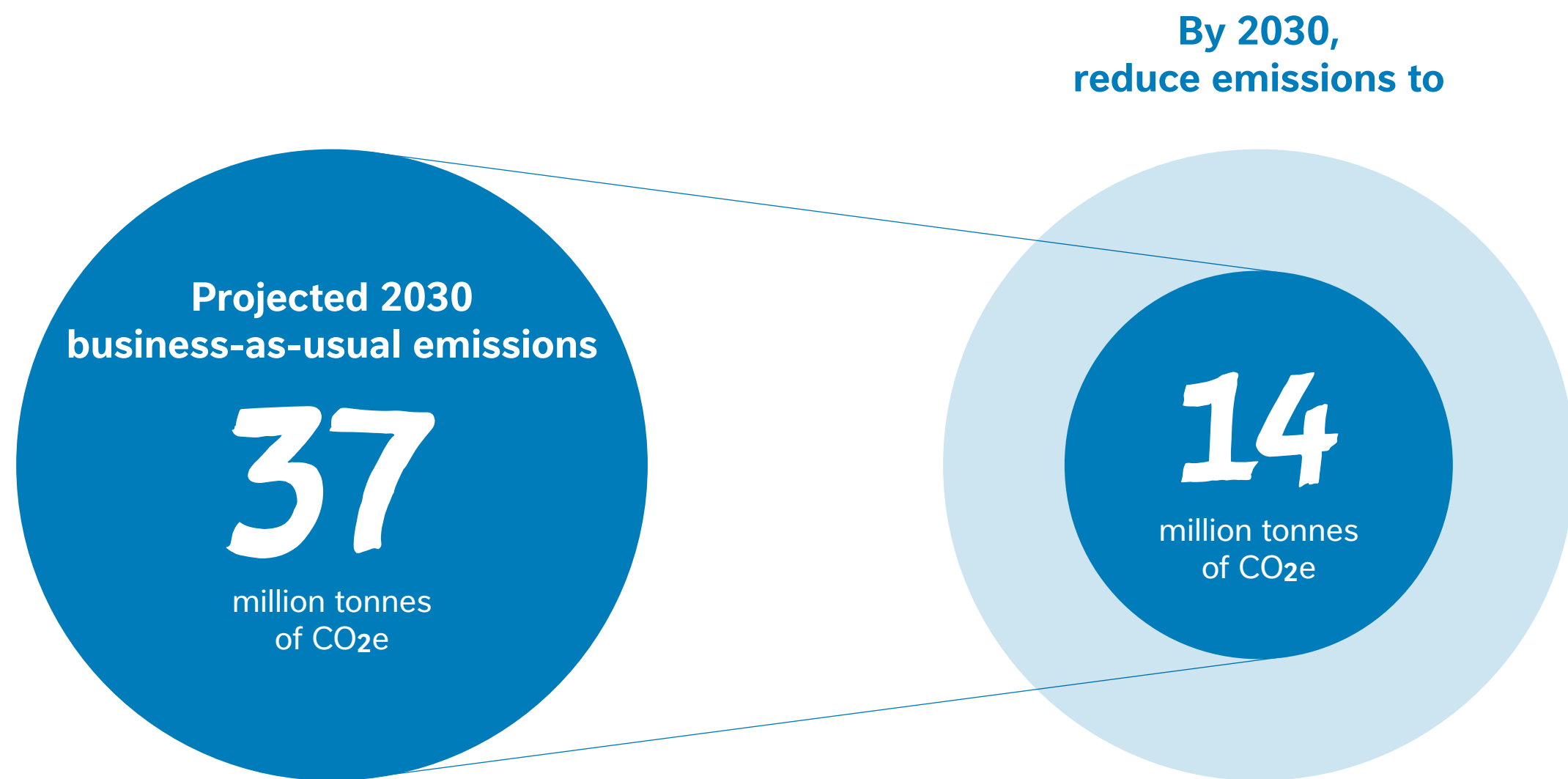
This is the start of a broader and much larger global conservation and restoration strategy to remove more carbon and deliver important ecosystem services in the landscapes we source from. Our ambition is to make conservation and restoration standard practice throughout our supply chains.



**SOURCING OUR INGREDIENTS SUSTAINABLY – SOIL AND FORESTS**

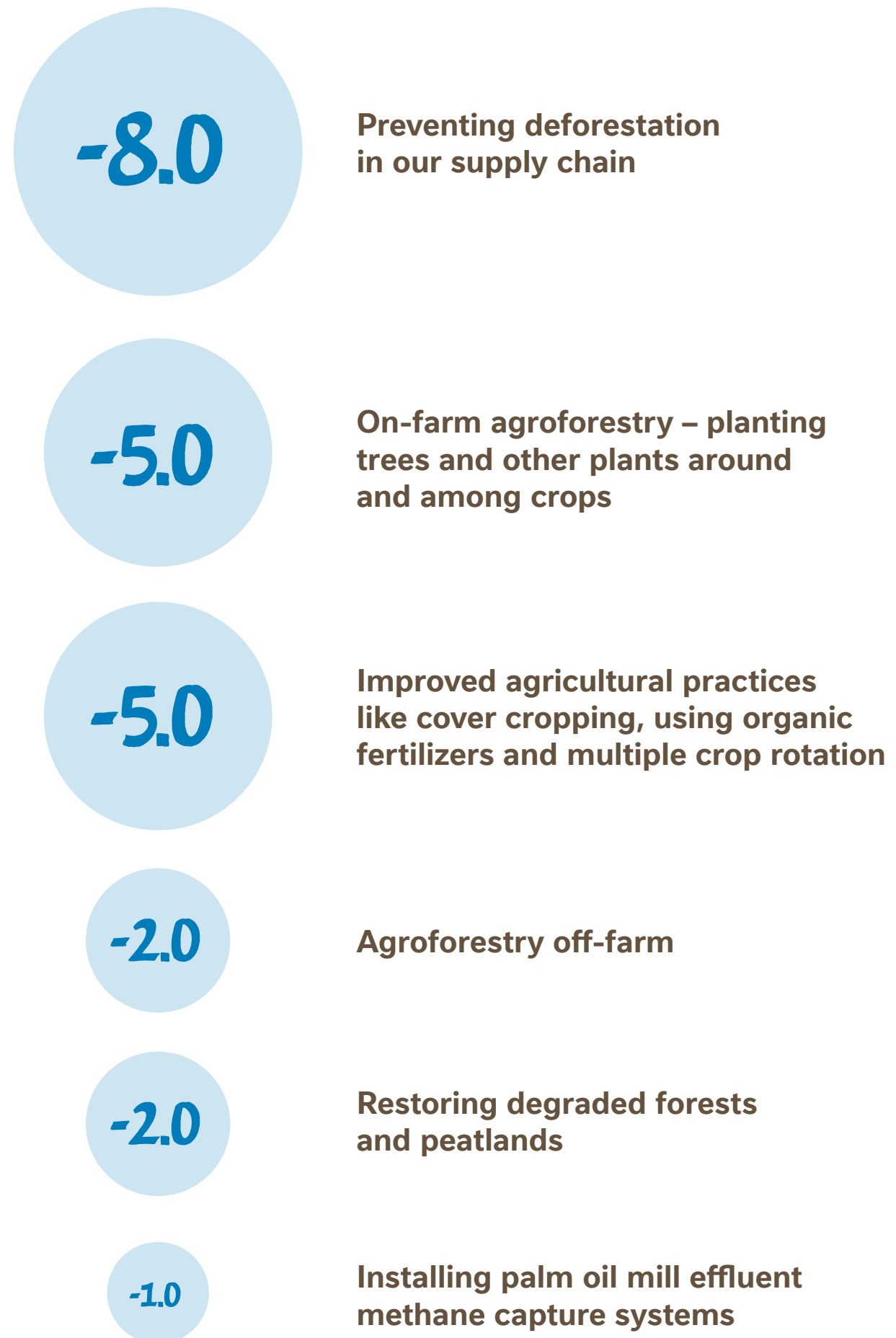
**Soil and forests supply chain emissions and reductions, 2018 to 2030**

million tonnes of CO<sub>2</sub>e



2018 emissions baseline plus our forecast company growth (12 million tonnes of CO<sub>2</sub>e) to 2030

**Actions to reach our 2030 emissions goal<sup>2</sup>**



**Our projected reductions by 2030**

By 2030, we forecast a 44% reduction in GHG emissions from investing in soil health and forests compared to our 2018 in-scope baseline. Up to 80% of the target can be addressed through carbon removals delivered by agroforestry, improved agricultural practices and tackling deforestation.

Forest conservation and the restoration of natural landscapes are some of the most cost-effective and impactful ways we can mitigate GHG emissions. Other measures, such as changing agricultural practices, may be more expensive in the short term but are better suited to local conditions. An important part of what we need to do next is to help find the right actions for different local contexts.

**Looking to 2050**

We want our work to support resilient landscapes and communities. In the coming years, we aim to transform our relationship with suppliers and move to a collective level of engagement, investing in collaborative actions that impact wider regions.

We must work to ensure no further loss of high-carbon stock or high-conservation value land, and implement policies and initiatives that restore these ecosystems. This is part of our ambition to deliver sustainable landscapes where production, sustainable livelihoods and protection go together.

<sup>2</sup> These actions have been defined based on research and data as at December 2020. The contributions to emissions reductions may be subject to change over time.

# TRANSFORMING OUR PRODUCT PORTFOLIO

Using our R&D experience and resources, we are accelerating innovation and making our portfolio fit for the future. Trends show growing consumer demand for low-carbon products such as plant-based foods and drinks. Our core strategy is in line with this shift and that means engaging the one billion consumers a day who buy our products by offering more foods and beverages that are good for them and good for the planet.



## Our key actions

### **We will lower the environmental impact of our recipes**

Our process of constant improvement is our competitive advantage, reducing our environmental footprint while continuing to contribute to healthy and nutritious diets.

It is crucial that we educate our employees about climate change and provide them with the knowledge, skills and tools they need to make informed decisions around product development.

We will help our portfolio and product managers incorporate GHG emissions information more effectively into their decision-making, including selecting which ingredients to use and continuously improving our ecodesign tools used in R&D. To support this, we will make more environmental impact data about ingredient supply chains available at the product level.

### **We will improve how we measure and manage emissions**

We will establish clear key performance indicators (KPIs) and refine our central data tracking systems to better measure progress and improve the allocation of emissions and reductions to specific businesses.

More broadly, we expect to align GHG accounting methodologies across our brands so that it is easier to make comparisons and consult with brand managers around translating corporate targets into business-specific ones.

**Reducing future emissions growth: our 2030 goals<sup>3</sup>**

million tonnes of CO<sub>2</sub>e

By 2030, reduce emissions by



**Evolving product offering toward more sustainable options**



**Shifting toward more sustainable alternative ingredients like plant-based foods**



**Implementing more sustainable, circular business models**



**Improving the efficiency of our machines**

**Our projected reductions by 2030**

- The forecasted growth of 44 million tonnes of CO<sub>2</sub>e refers to the total forecast company growth by 2030.
- As product portfolio actions encompass the full scope of a product life cycle, including sourcing, packaging, manufacturing and logistics, we have chosen to showcase them in a separate way to avoid double counting.
- The levers already identified by our businesses will mitigate 14% of the GHG emissions associated with our forecasted 44 million tonnes of CO<sub>2</sub>e by 2030. They include:
  - Evolving our product offering to include more sustainable options.
  - Switching to plant-based ingredients – specifically in our frozen meals and pizzas and dairy categories.
  - Implementing more sustainable, circular business models.
  - Improving the energy efficiency of equipment such as machines.

**Looking to 2050**

Dietary shifts – particularly toward plant-based diets – are the most important thing that we, as a global community, can do to keep our food system within environmental limits.

We will strive to continuously reduce the environmental impact of our ingredients and recipes and investigate ways to transparently communicate these impacts. By engaging with consumers, we can increase demand for these products, which in turn will help us toward our net zero pledge.

<sup>3</sup> These actions have been defined based on research and data as at December 2020. The contributions to emissions reductions may be subject to change over time.

# EVOLVING OUR PACKAGING



## Packaging our products

We emitted 11 million tonnes of CO<sub>2</sub>e in 2018 through our product packaging ready for sale.



Packaging helps to keep our food safe and fresh and is essential for the distribution and storage of our products.

Although it reduces food waste and associated emissions, packaging itself can be a significant source of GHG emissions. It accounts for around 12% of our in-scope 2018 carbon footprint. The issue of plastic waste ending up in the environment is also one of the most pressing global challenges the world faces.

Building on a decade of action, we have committed to make 100% of our packaging recyclable or reusable by 2025 and to reduce our use of virgin plastics by one-third in the same period. So far, 87% of our total packaging and 66% of our plastic packaging is recyclable or reusable. Tackling this challenge requires a wide range of actions and we know we need to go further.

Key to our efforts is our Institute of Packaging Sciences in Lausanne, Switzerland. The Institute is the first of its kind in the food industry and is working on research to accelerate efforts to bring safe packaging solutions to the market that have a low environmental footprint.

This work requires collaboration and innovation on a global scale. By working with partners from materials scientists and packaging specialists to community groups, NGOs, governments, suppliers and other companies, we want to create lasting and impactful change.

## Our key actions

Transforming how we make, use, reuse and recycle our packaging can play an important role in our journey to net zero. For 2030, that means:

- Improving packaging design, including switching from composites to single materials, and introducing reusable and refillable options.
- Leading the shift from virgin plastics to food-grade recycled plastics by developing a market for these materials.
- Helping to increase end-of-life recycling rates to tackle packaging waste and reduce the amount of raw materials we use.
- Increasing the amount of low-carbon energy used for the production and recycling of packaging.
- Collecting and co-processing post-consumer waste (in the absence of a well-functioning waste management system) to prevent the further flow of plastic into the environment and to provide a valuable resource for energy and other new products.

### Expanding the market for food-grade recycled plastics

At the time of writing, more than 3% of the packaging we use contains recycled plastics – this will increase significantly. We have made a significant commitment to lead the shift from virgin plastics to food-grade recycled plastics and to accelerate the development of innovative sustainable packaging solutions under the principles of the circular economy. Less use of virgin plastics means less use of fossil-based derivatives and associated emissions.

### Scaling up reusable and refillable options for consumers

We continue to offer consumers a shopping experience free of single-use packaging through collaboration with companies like Loop, MIWA and Algramo.

### Improving waste management infrastructure

We support the design and implementation of effective, mandatory Extended Producer Responsibility schemes. We are also working to improve recycling rates and infrastructure in 20 countries, which account for more than 50% of our plastic usage.

In 12 countries, we aim to collect and co-process as much plastic as we sell, addressing over 10% of our total plastic usage.

While we implement these activities, we will continue to support the respect and promotion of human rights in the downstream recycling waste supply chain of Post-Consumer Resin (PCR) material through accountability and engagement of the most relevant actors – the key waste stream suppliers.

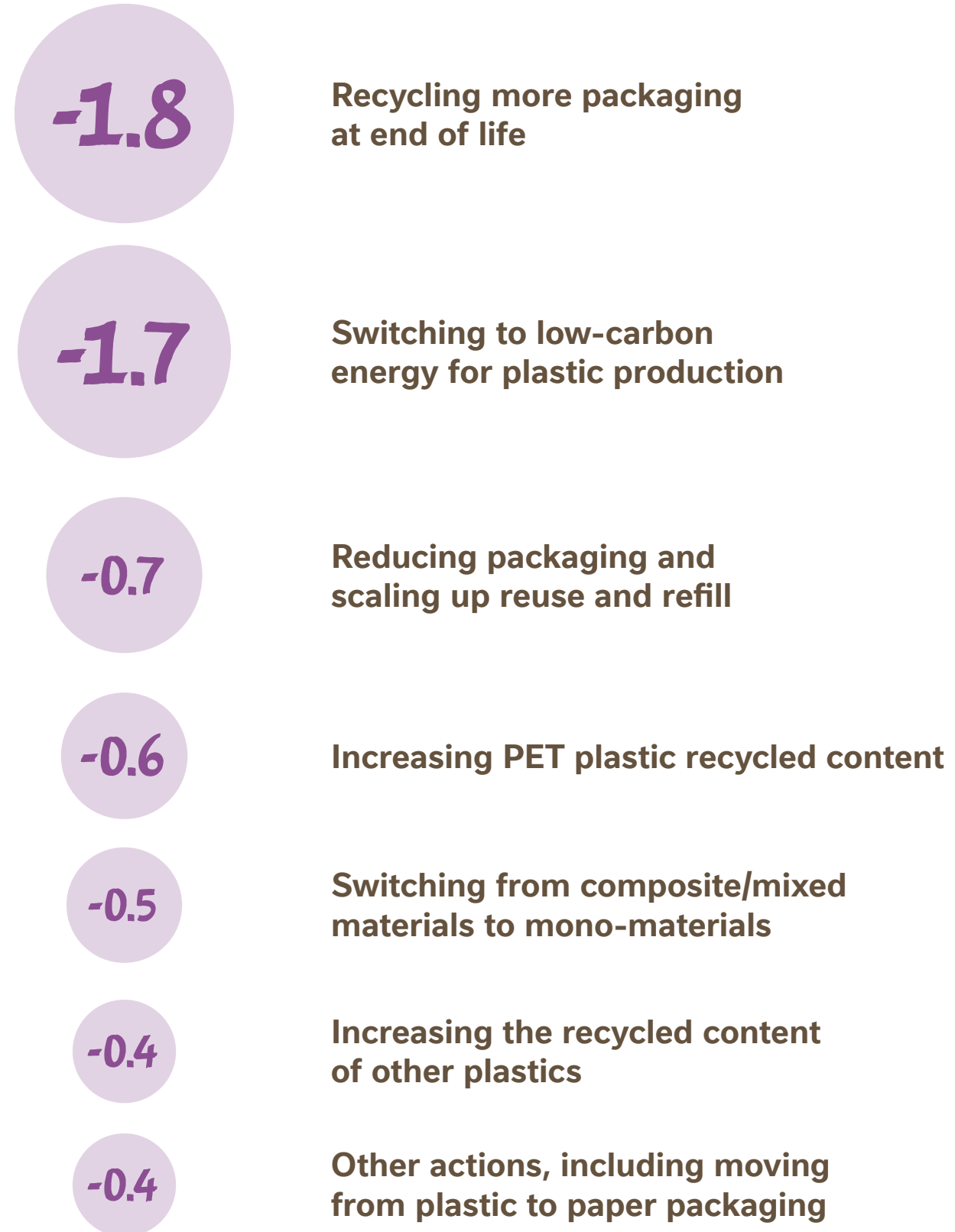
**Packaging and products supply chain emissions and reductions, 2018 to 2030**

million tonnes of CO<sub>2</sub>e



2018 emissions baseline plus our forecast company growth (5.2 million tonnes of CO<sub>2</sub>e) to 2030

**Actions to reach our 2030 emissions goal<sup>4</sup>**



**Our projected reductions by 2030**

We expect that significant reductions in emission intensity will be achieved from 2025 onward by further increasing the recycled content in our packaging, the use of low-carbon energy in our supply chain, and the broadening of recycling and co-processing infrastructures where we operate.

**Looking to 2050**

From 2030, there is huge potential to increase our ambitions around reusable packaging and bio-based plastics. This will be driven by new technologies that enable further emissions reductions, such as net zero synthetic plastics made from CO<sub>2</sub> converted to hydrocarbons, using renewable electricity.

<sup>4</sup> These actions have been defined based on research and data as at December 2020. The contributions to emissions reductions may be subject to change over time.



# USING RENEWABLE ENERGY TO MANUFACTURE OUR PRODUCTS



## Manufacturing our products

Making our products accounted for 7 million tonnes of our CO<sub>2</sub>e emissions in 2018.

We are the world's largest food and beverage company. That means our manufacturing has a significant footprint, and accounts for around 7% of our in-scope 2018 emissions. Building on our existing track record, we are making fundamental changes to reduce this even further.

Cutting emissions begins with energy efficiency and continues with the move toward less energy-intensive processes. At the same time, we will continue to ramp up our use of renewable electricity to reach 100% by 2025. In 2018, 34.5% of our electricity came from renewable sources.

As we increase the use of electricity from renewable sources, we also increase market demand, incentivizing providers to invest in new infrastructure such as wind and solar farms.

## Our key actions

### **We will power our manufacturing renewably**

We will increase the proportion of renewable electricity that we use through power purchase agreements, green tariffs, renewable energy certificates and on-site production to achieve 100% renewable electricity by 2025.

Alongside established forms of renewable electricity, such as wind and solar, we will also work with suppliers to increase the availability of renewable thermal energy generated from sources, such as biogas and biomass, by 2030.

### **We will improve efficiency to lower emissions**

Further emissions reductions will be delivered by increasing the efficiency of our operations. Many energy efficiency projects are already planned for sites across the globe, ranging from LED lighting systems to optimizing energy consumption during non-production times and recovering heat energy.

### **We will phase out refrigerants with a high global warming potential**

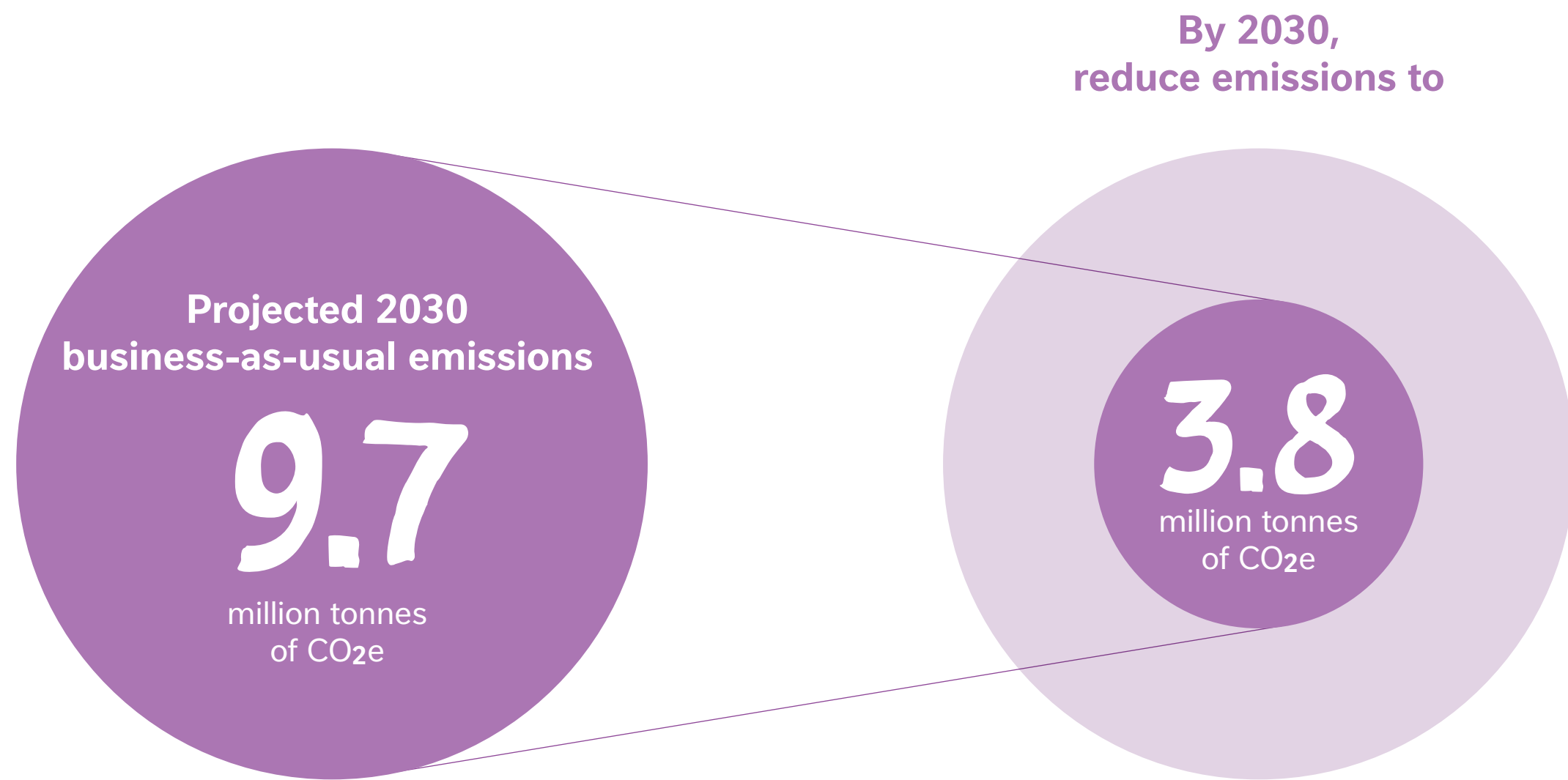
We will continue to phase out refrigerants with high global warming potential (GWP), such as hydrofluorocarbons, in our industrial refrigeration systems. We will replace these with new, natural refrigerants with zero or low GWP, such as ammonia, CO<sub>2</sub> and hydrocarbons.



**USING RENEWABLE ENERGY TO MANUFACTURE OUR PRODUCTS**

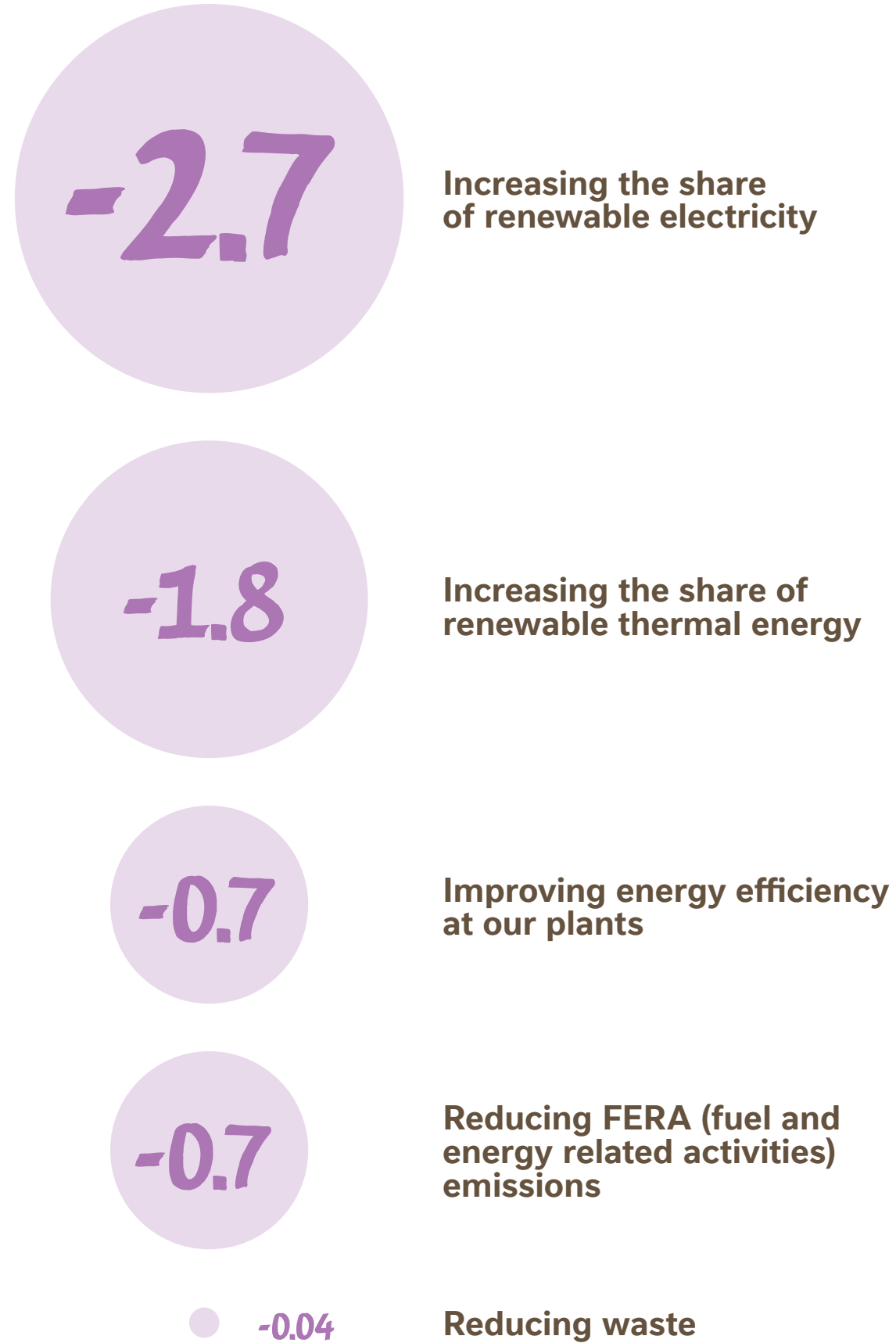
**Manufacturing supply chain emissions and reductions, 2018 to 2030**

million tonnes of CO<sub>2</sub>e



2018 emissions baseline plus our forecast company growth (2.7 million tonnes of CO<sub>2</sub>e) to 2030

**Actions to reach our 2030 emissions goal<sup>5</sup>**



**Our projected reductions by 2030**

We are working hard to improve the efficiency of our operations, and the projections in our roadmap are the minimum we expect to achieve. We expect to maximize gains in efficiency first, supplying our remaining energy needs through renewable sources.

We will reduce emissions by 20% by 2025 and 50% by 2030, driven by energy efficiency measures and increasing the amount of renewable electricity we use to achieve 100% by 2025. The amount of renewable thermal energy we use will increase by 2030.

**Looking to 2050**

By 2050, we will reduce our direct emissions related to energy to zero by using 100% renewable energy.

Based on today's technology, we expect that a small fraction (around 1%) of direct emissions linked to refrigerants will remain. There may also still be some Scope 3 emissions related to fuel and waste, which we expect to address through close collaboration with our suppliers.

<sup>5</sup> These actions have been defined based on research and data as at December 2020. The contributions to emissions reductions may be subject to change over time.

# DRIVING TOWARD CLEANER LOGISTICS

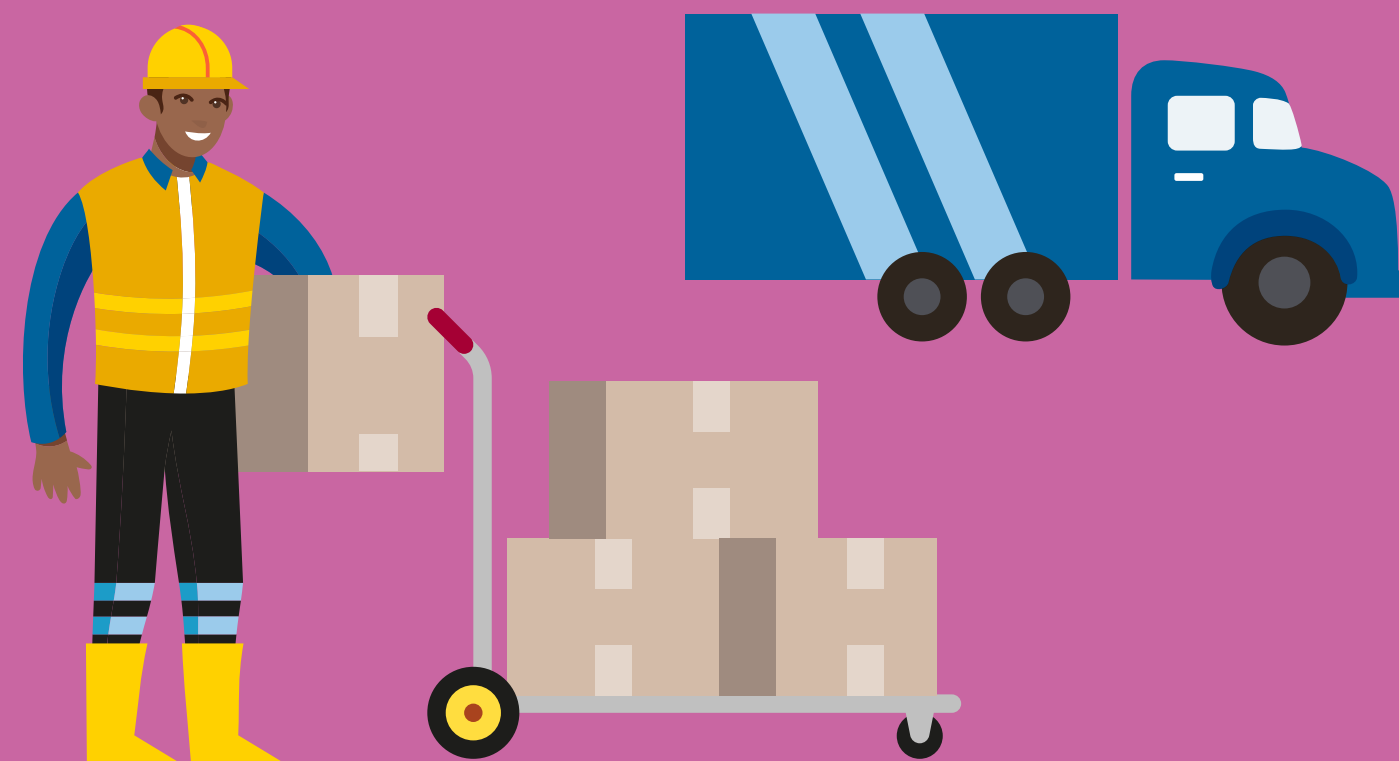


## Managing logistics

Transporting and distributing our ingredients and products accounted for 7.5 million tonnes of our CO<sub>2</sub>e emissions in 2018.

### Our primary sources of logistics emissions in 2018 (million tonnes CO<sub>2</sub>e):

- Inbound transportation: 3.2
- Outbound transportation: 3.6
- Energy: 0.4
- Waste: 0.02



Limiting global warming to 1.5°C will require major changes to the way we move goods around the world. Our 2050 ambition will be realized through a cleaner, leaner logistics network that delivers ingredients from the farm to our factories, and our products to distribution centers around the world.

We will continue to reduce emissions across transportation by maximizing the use of space in our vehicles, reducing fuel consumption and switching to lower emission fuels.

In our distribution centers, we will cut energy use, switch to renewable electricity, phase in natural refrigerants and replace fossil fuel-based machine handling equipment. We are also reducing waste for disposal, and will cut waste caused by products that have gone bad or reached their end of life by 5% year on year. In our top 100 distribution centers, GHGs decreased by close to 40% between 2016 and 2020.

Technology plays a crucial role in helping us meet our objectives. We are already a digitally enabled, data-powered business, and we are exploring new ways in which we can use analytics, automation, artificial intelligence and machine learning to make our operations even more efficient.

## Our key actions

By modeling emissions reductions across eight geographical clusters, we have identified 11 important areas where we can make significant cuts to emissions. These include improving existing transport modes and shifting to less carbon-intensive ones, implementing lean logistics and developing roadmaps tailored to specific regions and businesses.

### Maintaining and improving operational efficiency

Investments in IT will allow us to fill vehicles and plan journeys more efficiently. This helps avoid empty miles by connecting inbound and outbound transport, further reducing emissions.

We need to use transport modes in a smart way, such as shifting to lower emission intermodal transport routes like rail and shipping. This also means minimizing air freight as much as possible.

Our lean-logistics transportation hub (T-Hub) program will play an important role in the short and medium term. The program will create 19 offices at regional and local levels, and centralize the management and coordination of transport, using real-time visibility tools and advanced analytics to enable the proactive management of goods movements and vehicle optimization. By 2022, T-Hubs will be responsible for 80% of our total transport spend.

### Shifting to the lowest emission options

In our own operations, we will switch our global fleet of vehicles to lower emission options by 2022 and to offset any remaining emissions. We will initially reduce emissions by shifting to vehicles adhering to the EURO V and VI emissions standards.

In partnership with our logistics suppliers, we will shift away from fossil fuel-powered transport to fuels with lower or zero tailpipe emissions. These include hydrogen, electricity and biofuel powered vehicles, where these fuels have not been produced in competition with food crops.

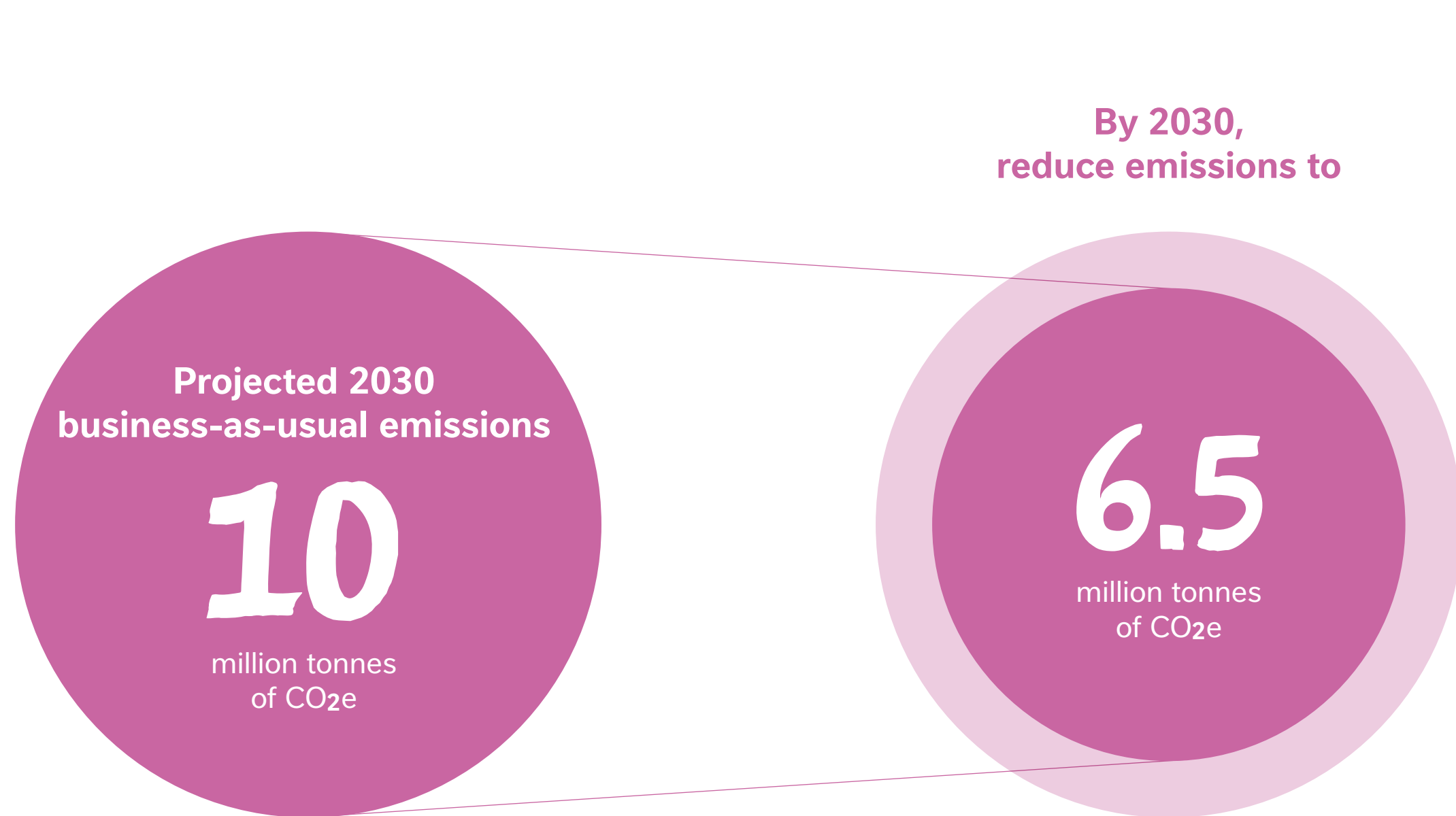
### We can enable this transformation through:

- **Helping develop the right regulatory environment**, specifically policies and public investment supporting intermodal transport and rail corridors.
- **Supporting technological development, commercialization and public investment**, for electric, hydrogen and biogas infrastructure, including charging stations.
- **Engaging logistics providers** (especially truck and ocean freight, and truck manufacturers) to accelerate the provision of low-carbon solutions.

Because no company can achieve this alone, we are actively connecting with green logistics programs, the logistics industry, government organizations and NGOs, as well as benchmarking and auditing organizations.

**Logistics transportation emissions and reductions, 2018 to 2030**

million tonnes of CO<sub>2</sub>e



2018 emissions baseline plus our forecast company growth (3.22 million tonnes of CO<sub>2</sub>e) to 2030

**Actions to reach our 2030 emissions goal<sup>6</sup>**

- 1.4** Introducing electric trucks for short-haul trips
- 0.6** Introducing electric trucks for long-haul trips
- 0.5** Increased intermodal transport
- 0.4** Making sure we fill vehicles efficiently
- 0.3** Introducing hydrogen-powered trucks to our fleet
- 0.1** Removal of EURO 4 and below diesel trucks
- 0.07** Launching trucks powered by biogas
- 0.05** Improving the sustainability of ocean freight
- 0.04** Switch more journeys to rail
- 0.002** Avoid air freight

**Transportation: projected reductions by 2030**

We will reduce absolute emissions by 3.5 million tonnes of CO<sub>2</sub>e from inbound and outbound transportation, or a 4% reduction from our in-scope 2018 baseline. In relative terms, we can reduce emissions per tonne kilometre of transported goods by 11% by 2025 and 35% by 2030.

Until 2025, the operational efficiencies of vehicle fill, reduction of empty backhaul, route optimization and switching to intermodal transport will make the biggest contribution to emissions reduction. Electric vehicles for short haul will make a significant contribution toward our 2030 emissions reduction objectives.

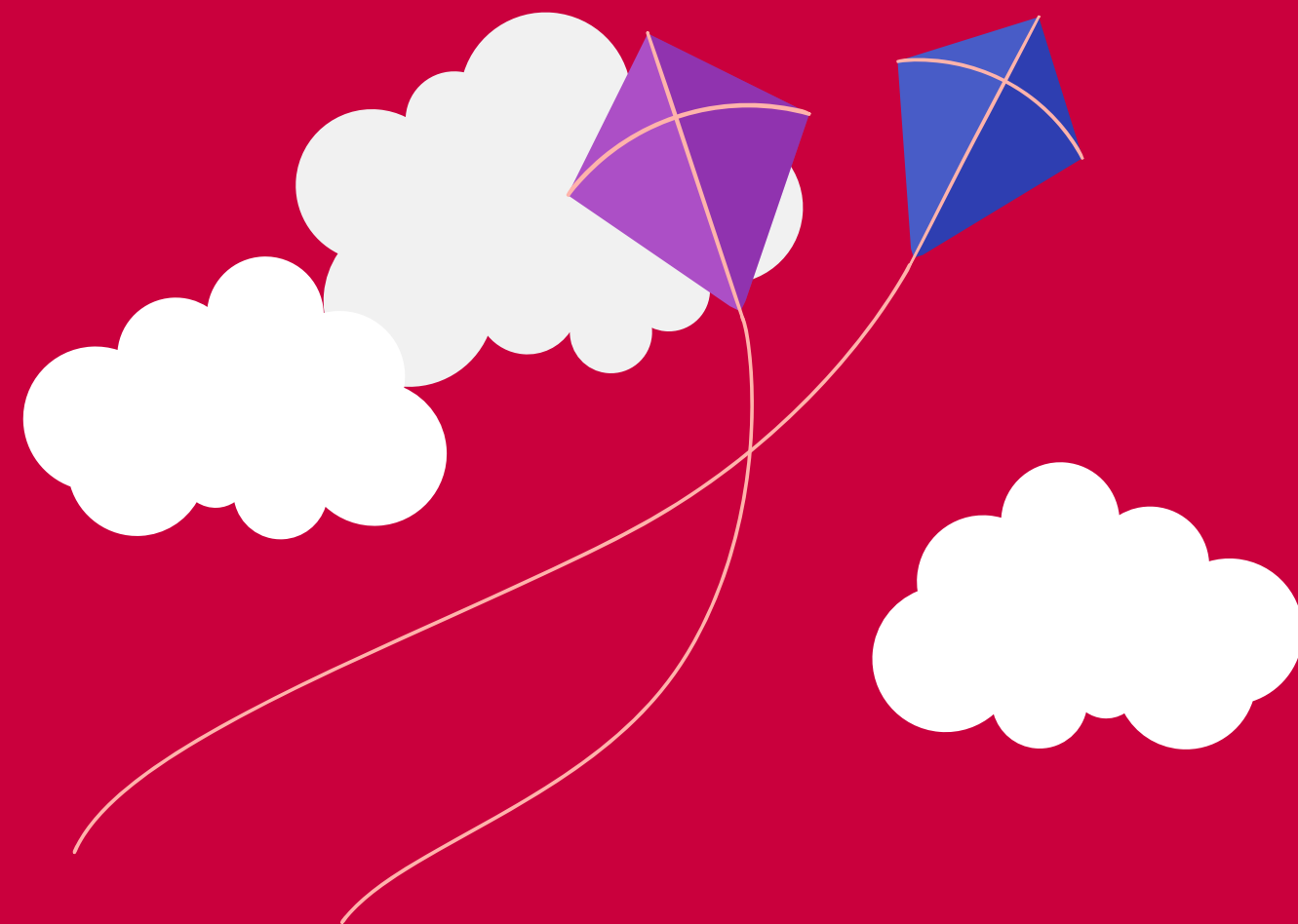
**Transportation: looking to 2050**

The new infrastructure and technologies needed to transform transport and help the switch to alternative forms of fuel are developing rapidly. By 2050, hydrogen and long-haul electric powered vehicles, with their zero tailpipe emissions<sup>7</sup>, will play a key role in our transportation mix across all distances. Biofuels will also play an important role in the decarbonization of ocean freight.

<sup>6</sup> These actions have been defined based on research and data as at December 2020. The contributions to emissions reductions may be subject to change over time.

<sup>7</sup> Real emissions (distinct from tailpipe emissions) from hydrogen and electric trucks depend on their source. If electricity for a truck is generated through coal, emissions are still high.

# REMOVING CARBON FROM THE ATMOSPHERE



We see enormous potential for the removal of GHG emissions from the atmosphere as a way to counterbalance those emissions that we cannot reduce directly.

More than two-thirds of our emissions come from sourcing ingredients, so this is where we see the biggest opportunities. By 2030, we plan to remove 13 million tonnes of CO<sub>2</sub>e emissions from the atmosphere by prioritizing actions we can take now, while we develop projects that will pay off in the future.

Removing GHGs using natural solutions, as well as technologies such as direct air capture and carbon storage, are not alternatives to tackling high emitting activities. However, these developments will play a role in helping us reach our net zero goal. By investing in these solutions now, we can help ensure they are ready to deliver at scale by 2050.

## Harnessing nature's own solutions

Natural climate solutions (NCS), such as agroforestry, silvopasture and the restoration of forests and peatland, are actions that physically remove CO<sub>2</sub> from the atmosphere. They are the most important methods we currently have for carbon removal. They allow us to maximize carbon storage and deliver a wide range of co-benefits. This includes supporting a transition away from intensive monoculture farming toward more diverse agriculture that benefits biodiversity and supports community resilience to climate change.

As well as on-farm actions, we strive to work in local partnerships to prevent the loss of high-carbon stock and high-conservation value land, and invest in the restoration of degraded forests and peatland across our sourcing regions. Throughout, our actions will support robust livelihoods in the areas where we source our ingredients.

## How we will remove 13 million tonnes of CO<sub>2</sub>e from the atmosphere by 2030

### Plant vegetation around water sources and wildlife corridors

Riparian buffers are uncultivated green areas that protect water sources from pollutants and erosion typically caused by nearby land use. They act as filtration systems between agricultural and urban land and bodies of water, improving water quality while also capturing carbon.

### Integrate trees into grazing land in a synergistic way

Trees on grazing land can support grass yields or enhance production, providing additional fodder.

### Use local compost

Using compost made from organic waste such as coffee pulp can enrich the soil, building up organic matter and improving both soil structure and its potential to store carbon.

### Switch to organic fertilizers wherever possible

Organic fertilizers also improve the structure of the soil and its ability to hold water and nutrients while avoiding the damaging runoff caused by synthetic alternatives.

### Adopt more sustainable agriculture practices

Farming techniques like no tillage, crop rotation and cover crops reduce soil disruption. This helps to avoid nitrogen depletion, reduce soil erosion and control pests and weeds.

### Plant trees and shrubs to create natural protection

Natural barriers created through intercropping and alley cropping protect crops against severe weather and erosion. This improves yields and helps capture carbon.

### Shade management agroforestry

Shade trees protect crops such as coffee from excessive heat. They also increase organic matter in the soil, increasing its capacity to retain water and store carbon. Trees planted for shade also sequester carbon themselves.

### Restoring forests and peatlands

Healthy ecosystems store significant amounts of carbon. Forest restoration creates carbon sinks and protects waterways, wildlife and biodiversity. Peatland restoration, in addition to capturing large amounts of carbon, maintains water tables and reduces fire risks.

# MOVING TOWARD CARBON-NEUTRAL BRANDS

In parallel with our corporate net zero emissions pledge, individual Nestlé brands are on a journey to achieving product or brand carbon neutrality.

Nespresso France delivered carbon-neutral coffee through insetting in 2016, and Ready Refresh became carbon neutral through emission reductions and the purchase of carbon offsets in 2020. Other brands already committed to carbon neutrality include Garden of Life, Garden Gourmet and Nespresso by 2022, and Sweet Earth by 2025. Many more are set to follow.

NESPRESSO

Ready Refresh

Garden Gourmet

## Brand highlight: Nestlé Waters

Nestlé will make its global water category carbon neutral by 2025, prioritizing international brands Perrier®, S.Pellegrino®, Acqua Panna® and Vittel® to achieve carbon neutrality by 2022.



We'll get there by driving action to:

**Tackle plastic waste** – much of Nestlé Waters' packaging is already 100% recyclable or reusable. We will build on this by committing to using 50% recycled PET globally by 2025, and supporting the rollout of alternative delivery systems.

**Switch to renewable and alternative fuels in our supply chain** – by 2025, we are committed to 100% renewable electricity and will look to switch to biomass fuels for our trucks.

**Achieve carbon neutrality** – as well as addressing waste and energy use, we are purchasing high-quality offsets that remove and reduce carbon.

**Enhance water stewardship** – we will maintain watersheds by replenishing 100% of the water we use, through locally tailored solutions that also reduce GHG emissions. These include investments in nature-based solutions like wetland restoration and water conservation programs. We will deliver on our commitment to certify all water sites globally to the international Alliance for Water Stewardship (AWS) Standard, which also covers the right to safe water and sanitation of communities.



## MOVING TOWARD CARBON-NEUTRAL BRANDS

### How brand carbon neutrality differs from the corporate net zero pledge

As well as contributing to our corporate pledge by delivering emissions reductions before claiming carbon neutrality, some of our brands are pursuing their own climate journey. Here, we explain how the journey of our brands differs from the overarching Nestlé net zero pledge.

#### Brands

To become carbon-neutral certified, our brands need to assess all their GHG emissions. They must reduce and remove part of these emissions before offsetting the remainder through high-quality, verified schemes. **Offsetting** is the practice of balancing GHG emissions by compensating the equivalent elsewhere, outside of a company's direct value chain. **Insetting**, on the other hand, occurs inside the value chain and is a form of carbon removal.

Carbon neutrality claims for our brands are guided by local regulation. In the absence of this, we follow ISO or other international standards.

#### Corporate

To achieve our corporate net zero pledge, emissions contained in the established carbon footprint baseline must first be reduced as far as possible. Removals within our value chain can then be used to address what is left.

The corporate net zero pledge is guided by the SBTi, related to the United Nations 1.5°C Paris Agreement.

### Scope

### Emissions reduction rules



### FARM TO FORK

(includes consumer use and end-of-life packaging)  
Guided, among others, by ISO and local regulations

**A minimum reduction in emissions, with insetting and offsetting allowed for the rest.**



### FARM TO STORE

(excludes consumer use, but does include end-of-life packaging)  
Guided by the Science Based Targets initiative (SBTi)

**20% reduction by 2025**  
**50% reduction by 2030**

**Net zero by 2050**  
(against a 2018 baseline plus company growth)

**Offsetting is not allowed;** all remaining emissions must be balanced by insetting.

# USING OUR VOICE TO GALVANIZE ACTION

Limiting global warming to 1.5°C requires transformational change across industries, governments and society. Nestlé will expand its advocacy for ambitious government policies and private sector leadership to ensure all sectors move more quickly toward this target.

Our own journey to net zero depends on important new technologies, business approaches and low-carbon infrastructure. It also relies on supportive legislation that, among other things, reduces barriers to renewable energy markets, incentivizes innovation in the agriculture and forestry sectors to capture more carbon, and helps to establish common standards for carbon claims.

Without the right regulatory and policy environment in place, it will be more challenging for Nestlé and other organizations to reach net zero emissions by 2050 and for our collective actions to have a positive impact on altering the current trajectory of climate change.

Because we cannot achieve our goals alone, we need to shape our advocacy and communications around our roadmap and engage with others. Along the way, we will communicate our advocacy positions and share our interactions with governments and civil society. We intend to also use industry-leading data to transparently show our progress throughout our reporting.



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## Advocating clear and fair rules

### Insetting and offsetting

Clear, widely accepted international standards that legitimize high-quality insetting and offsetting as valid carbon compensatory tools.

### Natural climate solutions (NCS)

Recognition of these solutions and their role in the net zero journey, regulated by the GHG Protocol and SBTi with clear reporting rules.

### Carbon pricing/Carbon markets

Transparent carbon pricing that reflects the true cost of CO<sub>2</sub>e emissions and forms the basis of effective carbon markets, supported by internationally recognized standards.

### Environmental claims

Internationally recognized standards to ensure that environmental claims are standardized, and can be communicated by companies in a transparent, comparable and truthful way.

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## Policies to transform industries

### Agriculture

Support for regenerative agriculture and policies that halt deforestation, as well as certification schemes that incorporate low-carbon agriculture into their standards.

### Energy

Infrastructure that increases the availability of renewable energy and public policy that promotes its uptake, as well as aligned definitions for reporting consumption.

### Logistics and infrastructure

Regulations and investment that support intermodal transport, especially rail, and the development of electric, hydrogen and biogas vehicles.

### Packaging

Waste management schemes and legislation that increase recycling in every country.



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## **Clear and fair rules advocacy**

### **Insetting and offsetting**

We want to see clear standards that legitimize high-quality insetting and offsetting as valid carbon compensation tools and focus on outcomes rather than certifications. We also want to see widely adopted international standards that ensure transparency and quality for the actions behind carbon credits.

### **Natural climate solutions**

NCS are conservation, restoration and improved land management actions in landscapes and wetlands that remove GHGs or avoid emissions. They could deliver almost one-third of the emissions reductions needed to limit global warming, while costing less than comparable actions and supporting agricultural resiliency and biodiversity.

We believe NCS must be widely accepted and promoted by governments and agencies, along with clear accounting, reporting and monitoring rules. We want to see NCS as an allowed and recommended GHG insetting tool, regulated under the GHG Protocol and SBTi. We also want them to feature in government Nationally Determined Contributions and National Biodiversity Strategies and Action Plans.

### **Carbon pricing/carbon markets**

Carbon pricing is a way to recognize the external cost of GHG emissions and tie them to their source. Carbon pricing gives an economic signal to emitters, while allowing them to decide whether to transform their activities to reduce emissions or to pay for those emissions instead.

Regardless of the type of carbon pricing system, we are in favor of a transparent and adequate price that reflects the true cost of GHG emissions. We also support internationally recognized standards on how to price GHG emissions and the functioning of transparent, robust and reputable carbon markets.

## **Environmental claims**

Net zero, carbon neutral, climate positive and carbon negative are among many terms now being used by companies to communicate how corporate roadmaps and products are helping them reduce their environmental footprint.

As a result, these claims can be valuable for companies and brands, but they lack clear and widely accepted definitions. This causes confusion and mistrust among consumers and stakeholders.

We want to see clear international standards so companies can make credible claims based on life cycle assessments (LCA) for products.

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## **Policies to transform industries**

### **Agriculture**

Through financial incentives, we want governments to better support a wide range of regenerative agriculture and low-carbon practices, and to halt deforestation. To incentivize voluntary action, we would like to see certification schemes incorporate low-carbon agricultural practices into their standards.

We also need a broad societal understanding of the current state of soils and biodiversity, our collective dependency on natural ecosystems and the value of regenerative agriculture.

We support increased R&D into low-carbon agriculture, including seeds that support regenerative agriculture and low-carbon fertilizers, and solutions for the traceability of raw materials.

## **Energy**

Infrastructure that increases the availability of renewable energy is needed, as are more energy efficiency initiatives and the adoption of best available technology, supported by public investment.

Pledges and policies that promote the uptake of clean energy are important, as are clear standards on methodology for calculating the Scope 3 impacts of renewable energy and alternative fuels. We would like to see aligned definitions on accepted mechanisms for claiming renewable energy consumption.

### **Logistics and infrastructure**

We want to see government policy and public investment that supports intermodal transport and rail corridors, as well as the development and commercialization of electric, hydrogen and biogas infrastructure.

We need logistics providers, especially of truck and ocean freight, to accelerate the provision of low-carbon solutions, and truck manufacturers must increase the availability of electric, hydrogen and biogas vehicles.

### **Packaging**

We want to see waste management schemes set up in every country, and legislation that increases recycling rates and facilitates circular economies (reducing the generation of virgin plastics from oil and gas). It is also important that there is legislation that allows recycled plastics to be in direct contact with food.

Packaging suppliers should switch to renewable sources of energy, and suppliers with innovative technologies should be linked with recycling infrastructure.

# GLOSSARY

## Explaining some important terms

### The Paris Agreement

In 2015, to respond to the threat of climate change, countries around the world convened in Paris under the United Nations Framework Convention on Climate Change. They agreed to keep global temperature rises below 2 degrees Celsius (°C) above pre-industrial levels, and to work toward a 1.5°C limit.

### Greenhouse gases (GHGs)

Gases that trap heat into the atmosphere, therefore contributing to the warming of the planet. They are often expressed as CO<sub>2</sub>e (carbon dioxide equivalent) in terms of their GHG impact levels over time using CO<sub>2</sub> as a reference.

### Carbon dioxide equivalent (CO<sub>2</sub>e)

Carbon dioxide equivalent is a simple way of comparing the warming potential of a range of GHGs (including carbon dioxide and methane) by converting their amounts to the equivalent amount of carbon dioxide.

### Carbon neutral at the product level (based on ISO 14021, 2016)

All the GHG (or CO<sub>2</sub>e) emissions from all stages of the product life cycle, and within the specified processes, have been reduced, removed or, as a last resort, accounted for through a system of offsets resulting in a product that has a carbon footprint of zero.

### Net zero at the corporate level (based on the Science Based Targets initiative)

Net zero emissions are achieved when anthropogenic emissions of GHGs to the atmosphere are balanced by anthropogenic removals over a specified period. The climate metric used here is CO<sub>2</sub> equivalent (CO<sub>2</sub>e), and all GHG emissions are in scope.





**Nestlé**

Good food, Good life

**NET  
ZERO**



[nestle.com](https://www.nestle.com)

Official version (English).  
Translations in other languages may vary.