

Accelerate, Transform, Regenerate:

# NESTLÉ'S NET ZERO ROADMAP

March 2023



Nestlé

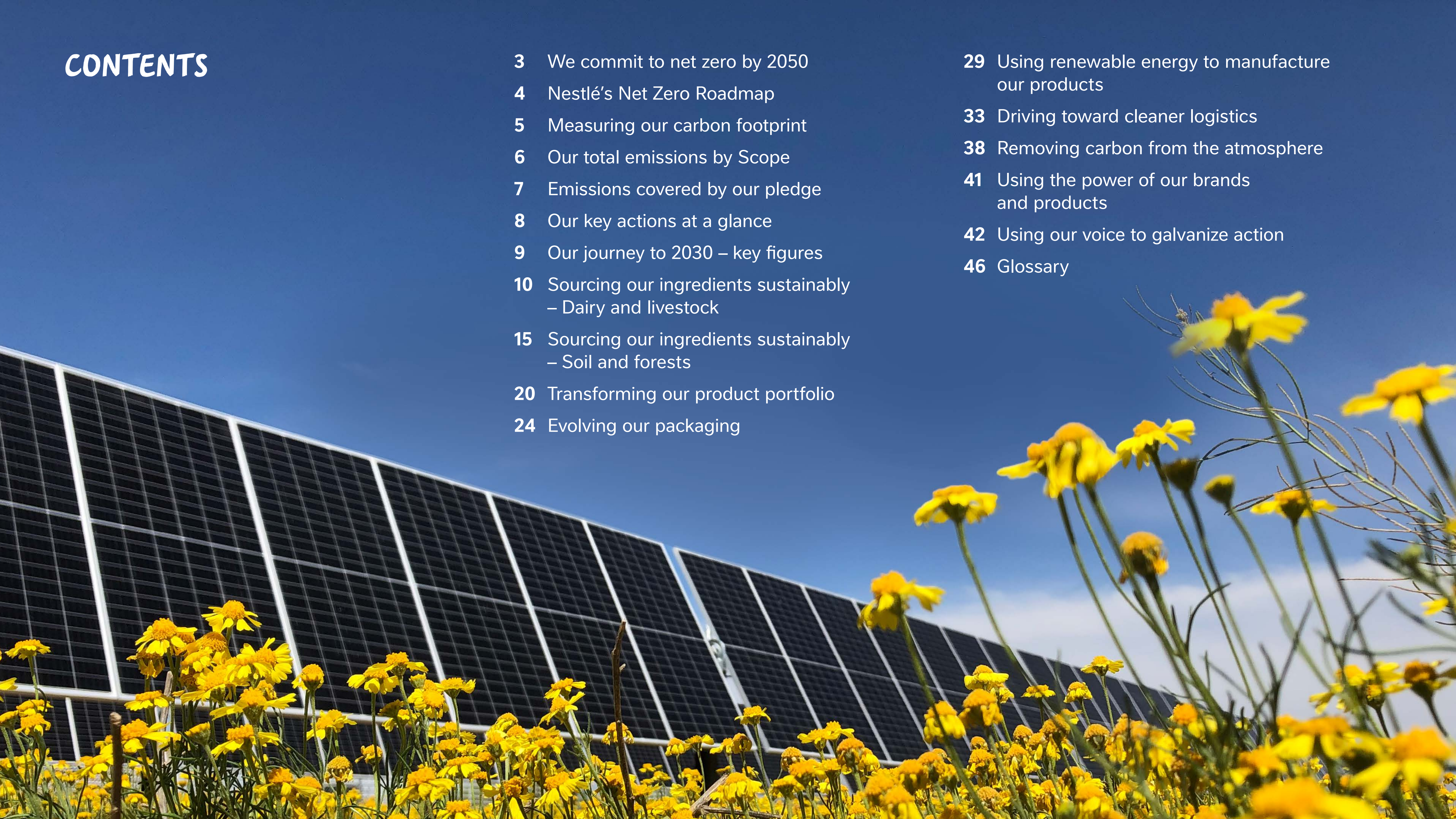
Good food, Good life





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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.

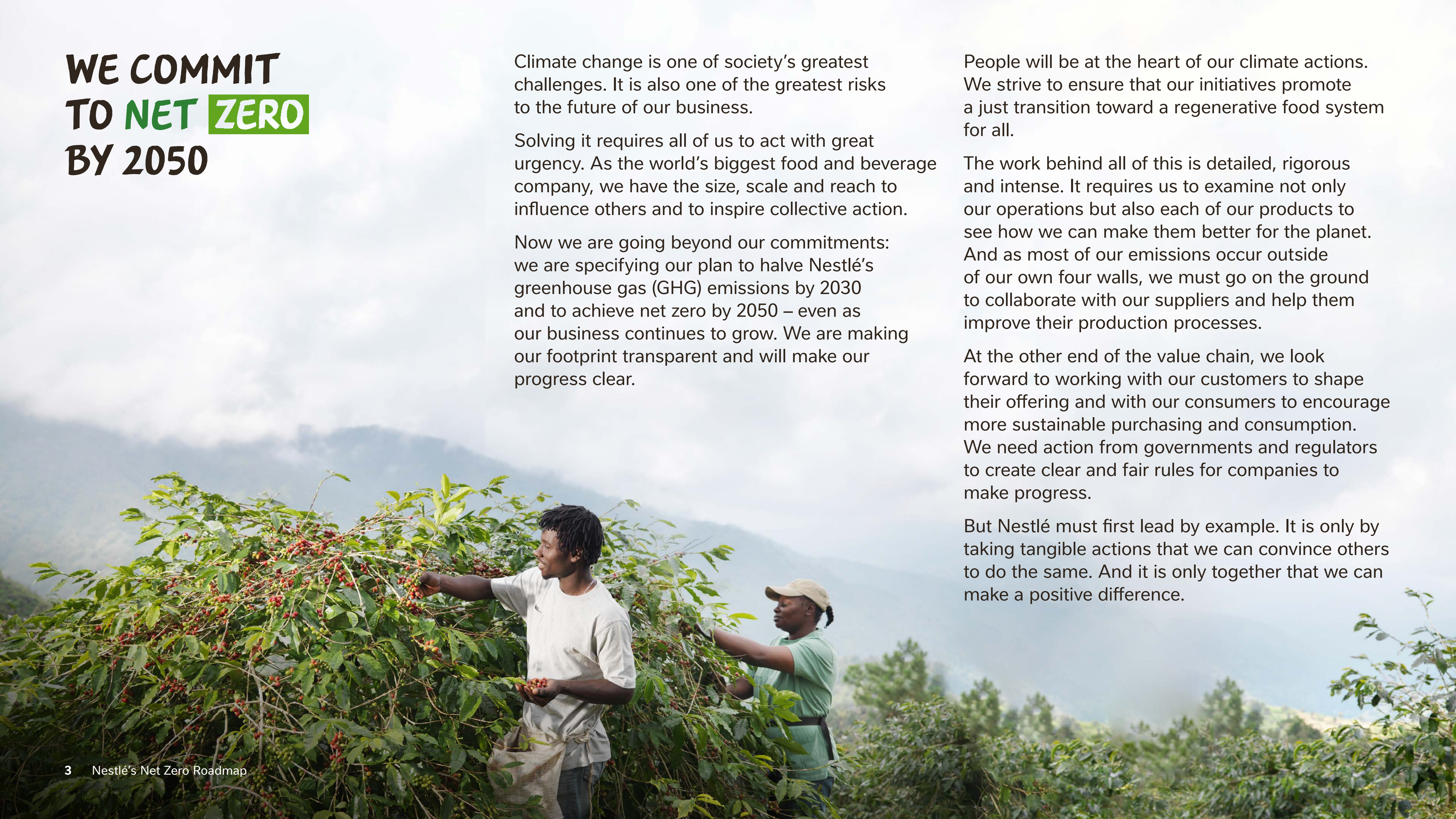
Now we are going beyond our commitments: we are specifying our plan to halve Nestlé's greenhouse gas (GHG) emissions by 2030 and to achieve net zero by 2050 – even as our business continues to grow. We are making our footprint transparent and will make our progress clear.

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 chains\*\* by 2022
- ⚡ Switch our global car fleet to lower emission options by 2022
- 🌴 100% certified sustainable palm oil by end of 2023
- 🔌 100% sourced 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
- 🌱 Source 20% of key ingredients through regenerative agricultural methods by 2025
- 🗑️ Cut virgin plastic in our packaging by a third by 2025
- 🌳 Plant 20 million trees a year

By 2025, we will reduce our emissions by 20%

By 2030, we will reduce our emissions by 50%

## 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

## 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

\*\*Scope: Direct supplies of palm oil, pulp and paper, soya, meat and sugar.

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.

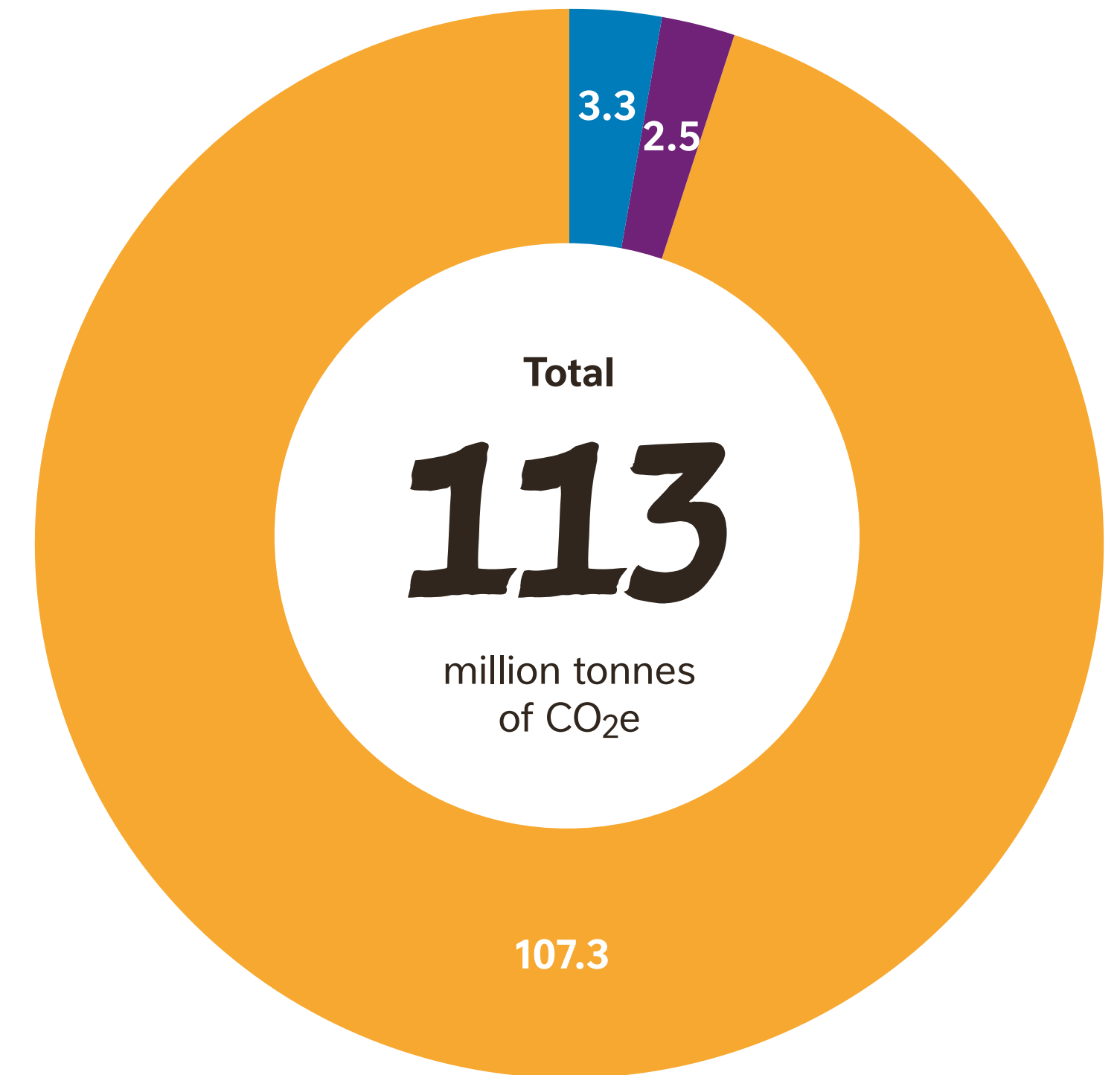


## Nestlé's total GHG emissions by Scope

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.

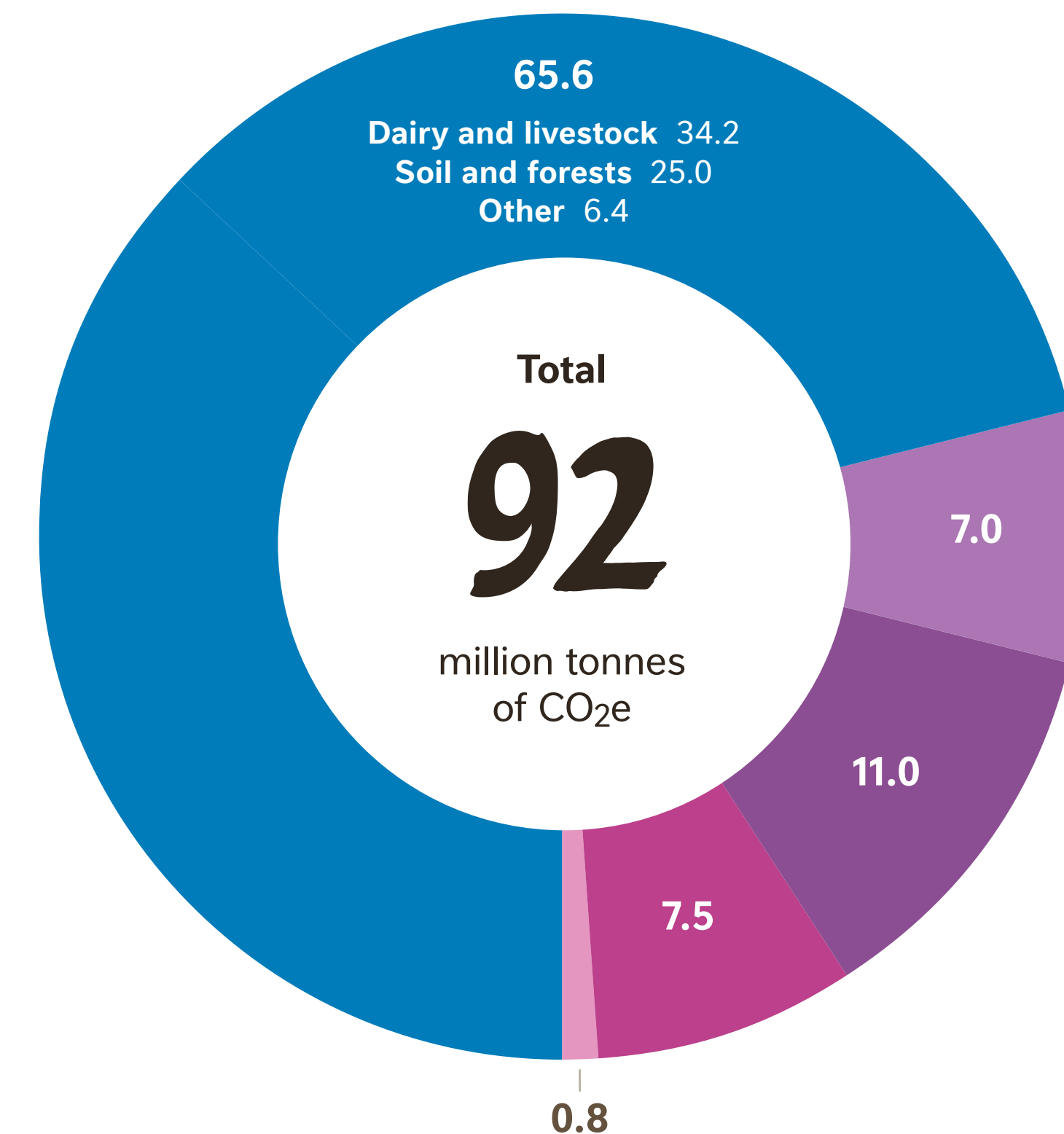
This data is our starting point. As we enhance our ability to identify and measure emissions, and better use the data that has been disclosed by our suppliers and others, our monitoring will improve. We intend to also share our science-based methodology for calculating GHG emissions to help push new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

## 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.



### 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 commitment\*:

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

\* We support ambitious action across economies to tackle climate change and will continue working with others on ways to address emissions not covered by our net zero commitment.



# OUR KEY ACTIONS AT A GLANCE

## Sourcing our ingredients sustainably

Working with farmers, suppliers and communities to source ways that protect ecosystems, reduce emissions and enhance livelihoods.

➔ Dairy and livestock  
Page 10

➔ Soil and forests  
Page 15



## Evolving our packaging

Packaging helps keep our food safe but causes waste. Investments in packaging innovations and new business models help keep waste out of landfill.

➔ Page 24



## Driving toward cleaner logistics

Optimizing routes, filling vehicles more efficiently, switching to low-emission fuels and renewable electricity and using more rail transport.

➔ Page 33



## Using the power of our brands and products

As consumers demand increasingly transparent and sustainable products, our brands will continue to adapt, embracing sustainability.

➔ Page 41



## Transforming our product portfolio

Creating new, low-carbon products, and reformulating existing ones using ingredients and processes that are good for both consumers and planet.

➔ Page 20



## Using renewable energy to manufacture our products

Making products more sustainably by switching to renewable electricity, using more renewable fuels and investing in energy efficiency.

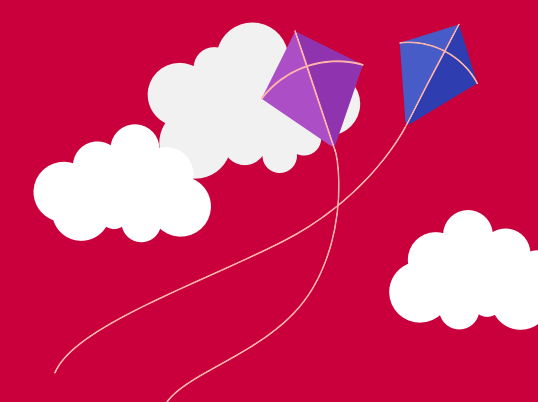
➔ Page 29



## Removing carbon from the atmosphere

Using nature's own solutions such as agroforestry, soil management, and restoring peatlands and forests to lock GHGs in the ground.

➔ Page 38



## Using our voice to galvanize action

Forging deep engagement on climate issues with farmers, industry, governments, NGOs and communities.






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# OUR JOURNEY TO 2030 – KEY FIGURES

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

	Baseline (2018)* (a)	Planned GHG emissions by 2030 (b)	Estimated growth of GHG (2018–2030) without reductions and Scope 3 removals (c)	Estimated GHG in 2030 according to business-as-usual scenario (d)=(a)+(c)
 <b>Sourcing our ingredients</b>	<b>65.6</b>	<b>44.3</b>	<b>31.5</b>	<b>97.1</b>
Dairy and livestock	34.2	29.3	16.4	50.6
Soil and forests	25.0	14.0	12.0	37.0
Others	6.4	1.0	3.1	9.5
 <b>Manufacturing our products</b>	<b>7.0</b>	<b>3.8</b>	<b>2.7</b>	<b>9.7</b>
 <b>Packaging our products</b>	<b>11.0</b>	<b>10.1</b>	<b>5.2</b>	<b>16.2</b>
 <b>Managing logistics</b>	<b>7.5</b>	<b>6.5</b>	<b>2.5</b>	<b>10.0</b>
 <b>Travel and employee commuting</b>	<b>0.8</b>	<b>0.5</b>	<b>0.0</b>	<b>0.8</b>
<b>Portfolio transformation</b>		<b>-6.0</b>		
<b>Scope 3 removals</b>		<b>-13.0</b>		
<b>Total</b>	<b>91.9</b>	<b>46.2</b>	<b>41.9</b>	<b>133.8</b>

## By 2030, we will reduce our emissions by 50%

Our net zero commitment by 2050 includes SBTi-approved near-term targets of 50% reduction of our annual net GHG emissions by 2030 compared to the 2018 baseline.

It means that our key actions (see page 8) will help decrease our annual net emissions from 91.9 to 46.2 million tonnes of CO<sub>2</sub>e between 2018 and 2030.

We commit to achieve this target by 2030 even as we grow our business.

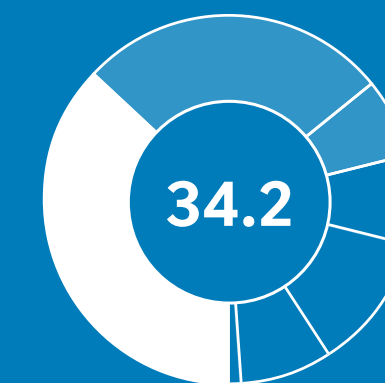
Growing our business would normally be a factor for additional emissions. To reflect this, we take into account a ‘business-as-usual’ scenario based on a theoretical average annual GHG emissions growth rate of 3.3% between 2018 and 2030 (based on historical trends). It helps provide perspective on the importance of our key climate actions.

\* Original baseline – Updated figures are available in the latest [Nestlé CSV and Sustainability report](#)



# SOURCING OUR INGREDIENTS SUSTAINABLY

## Dairy and livestock



**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.

### **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.





# SOURCING OUR INGREDIENTS SUSTAINABLY Dairy and livestock

## 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.





# SOURCING OUR INGREDIENTS SUSTAINABLY Dairy and livestock

## Our key actions (continued)

### 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.

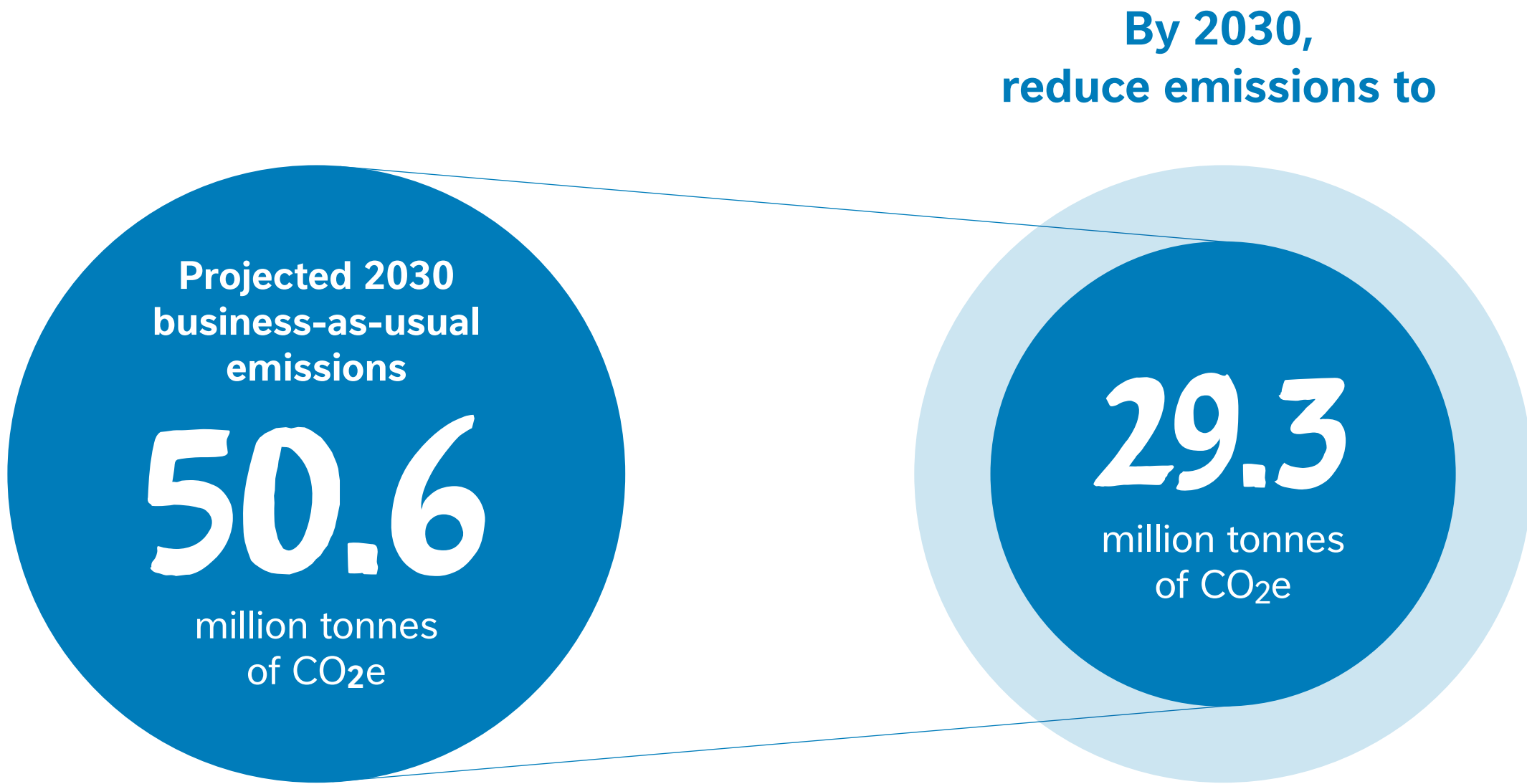




# SOURCING OUR INGREDIENTS SUSTAINABLY Dairy and livestock

## 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

<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 Dairy and livestock

## 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

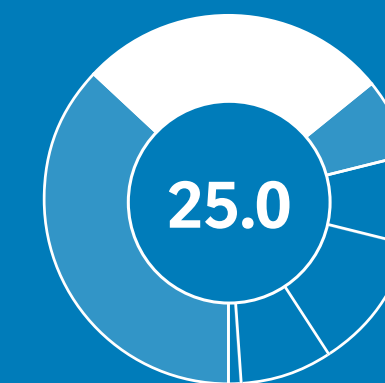
We will continue to support family-operated farming systems through regenerative agricultural practices that help reduce the carbon footprint of dairy farming. Activities will also include investing in partnerships to develop technologies to help take farming to the next level of sustainability.





# SOURCING OUR INGREDIENTS SUSTAINABLY

## Soil and forests



**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 areas connected to our sourcing activities.

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.

### **Sourcing our ingredients**

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





# SOURCING OUR INGREDIENTS SUSTAINABLY

Soil and forests

## 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.





# SOURCING OUR INGREDIENTS SUSTAINABLY

## Soil and forests

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### Our key actions (continued)

#### 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 and 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.

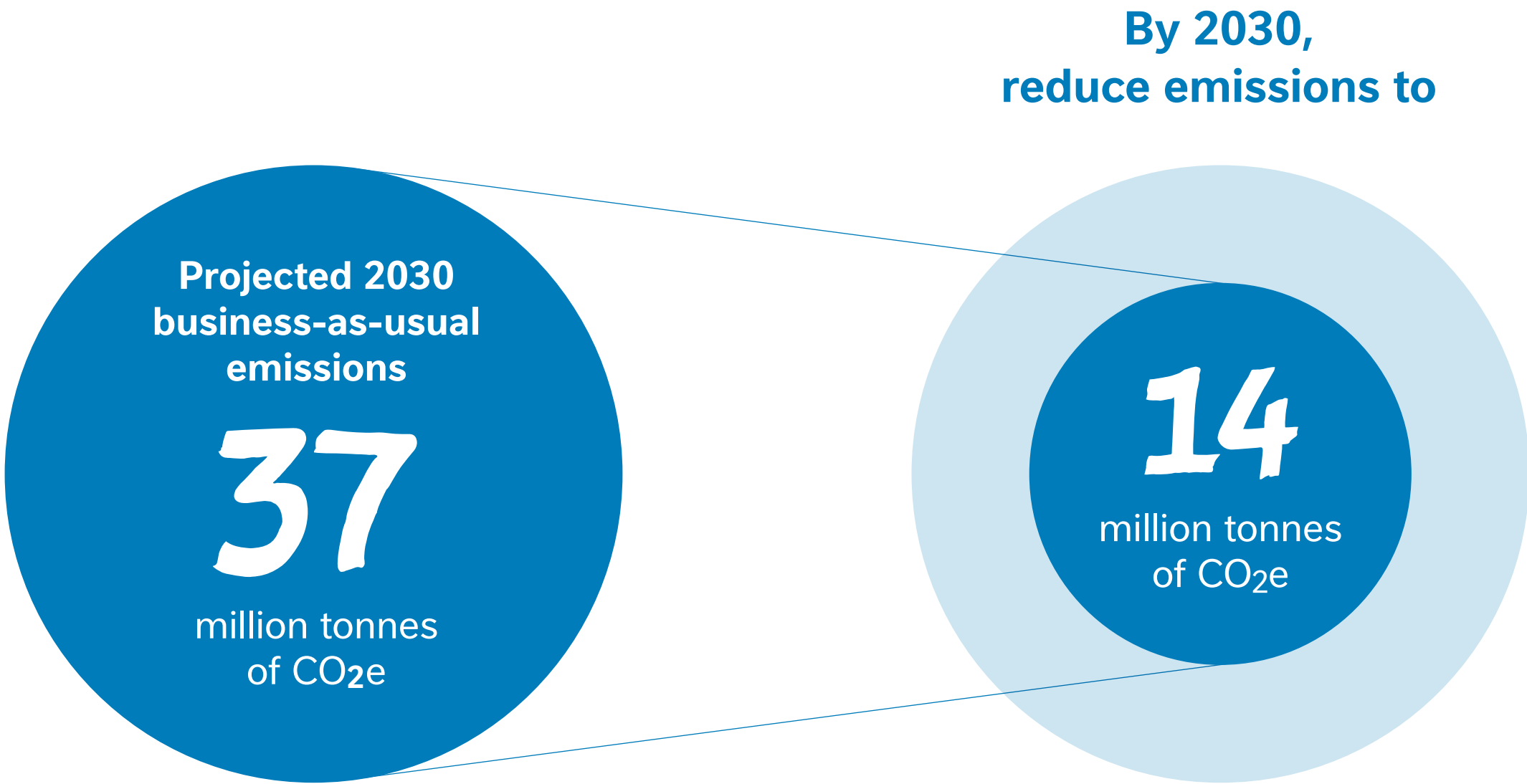


# SOURCING OUR INGREDIENTS SUSTAINABLY

## Soil and forests

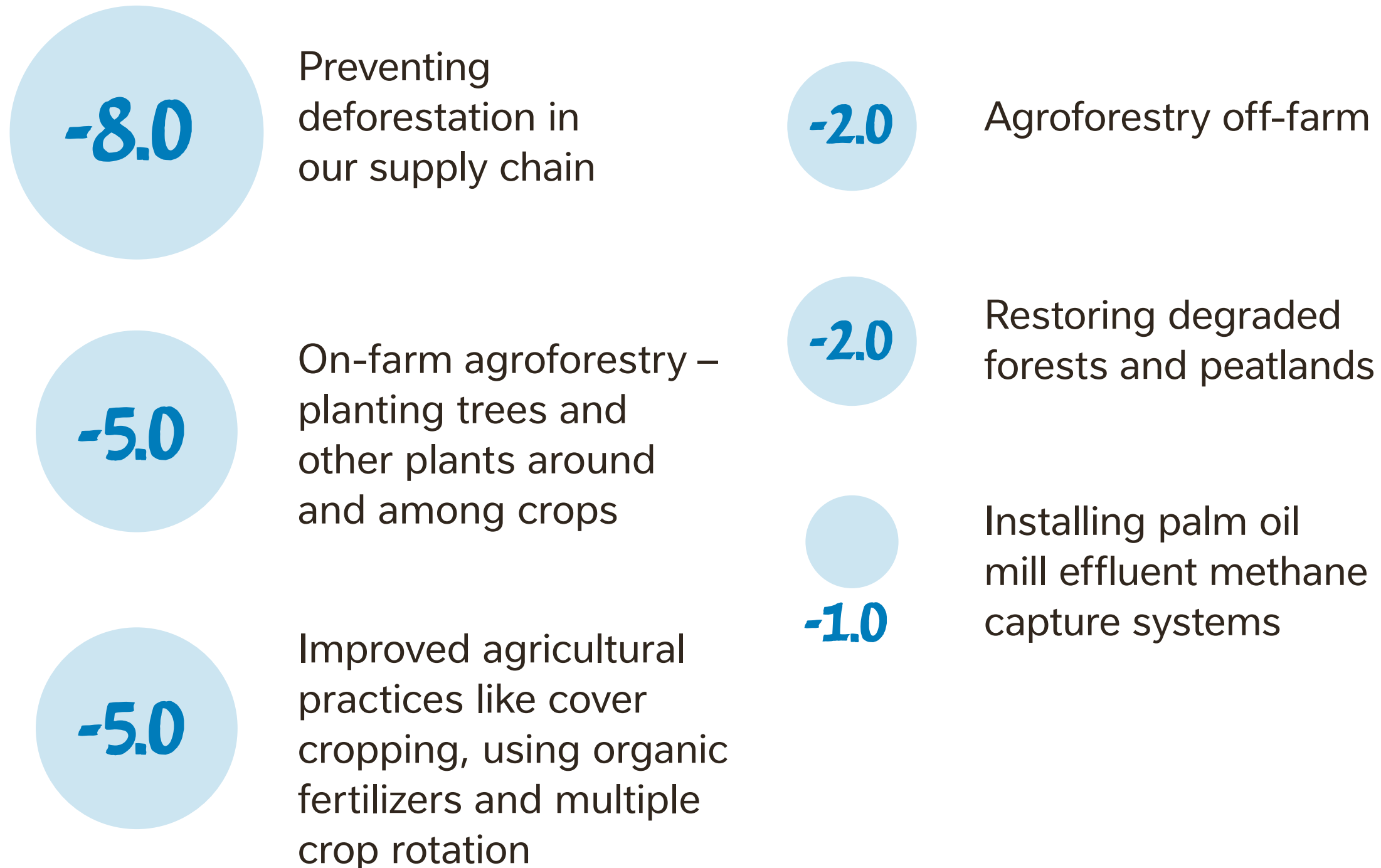
### Soil and forests supply chain emissions and reductions, 2018 to 2030

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>



<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.



# SOURCING OUR INGREDIENTS SUSTAINABLY

## Soil and forests

### 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 Scope 3 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.





# 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.





# TRANSFORMING OUR PRODUCT PORTFOLIO

## 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.



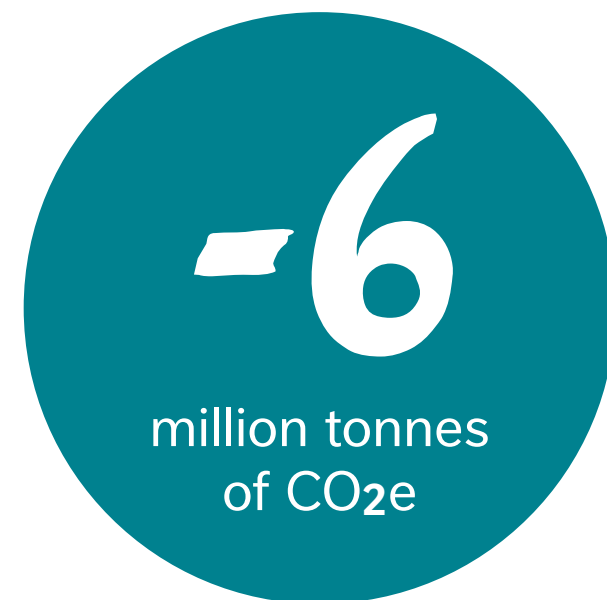


# TRANSFORMING OUR PRODUCT PORTFOLIO

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

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

By 2030, reduce emissions by



## Actions to reach our 2030 emissions goal



Evolving product offering toward more sustainable options



Implementing more sustainable, circular business models



Shifting toward more sustainable alternative ingredients like plant-based foods



Improving the efficiency of our machines

<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.



# TRANSFORMING OUR PRODUCT PORTFOLIO

## Our projected reductions by 2030

- The forecasted growth of 41.9 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 41.9 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.





# EVOLVING OUR PACKAGING



## 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.

## Packaging our products

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





# EVOLVING OUR PACKAGING

## 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.





# EVOLVING OUR PACKAGING

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## Our key actions (continued)

### **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 recycle or recover as much plastic as we use, addressing over 10% of our total plastic usage.

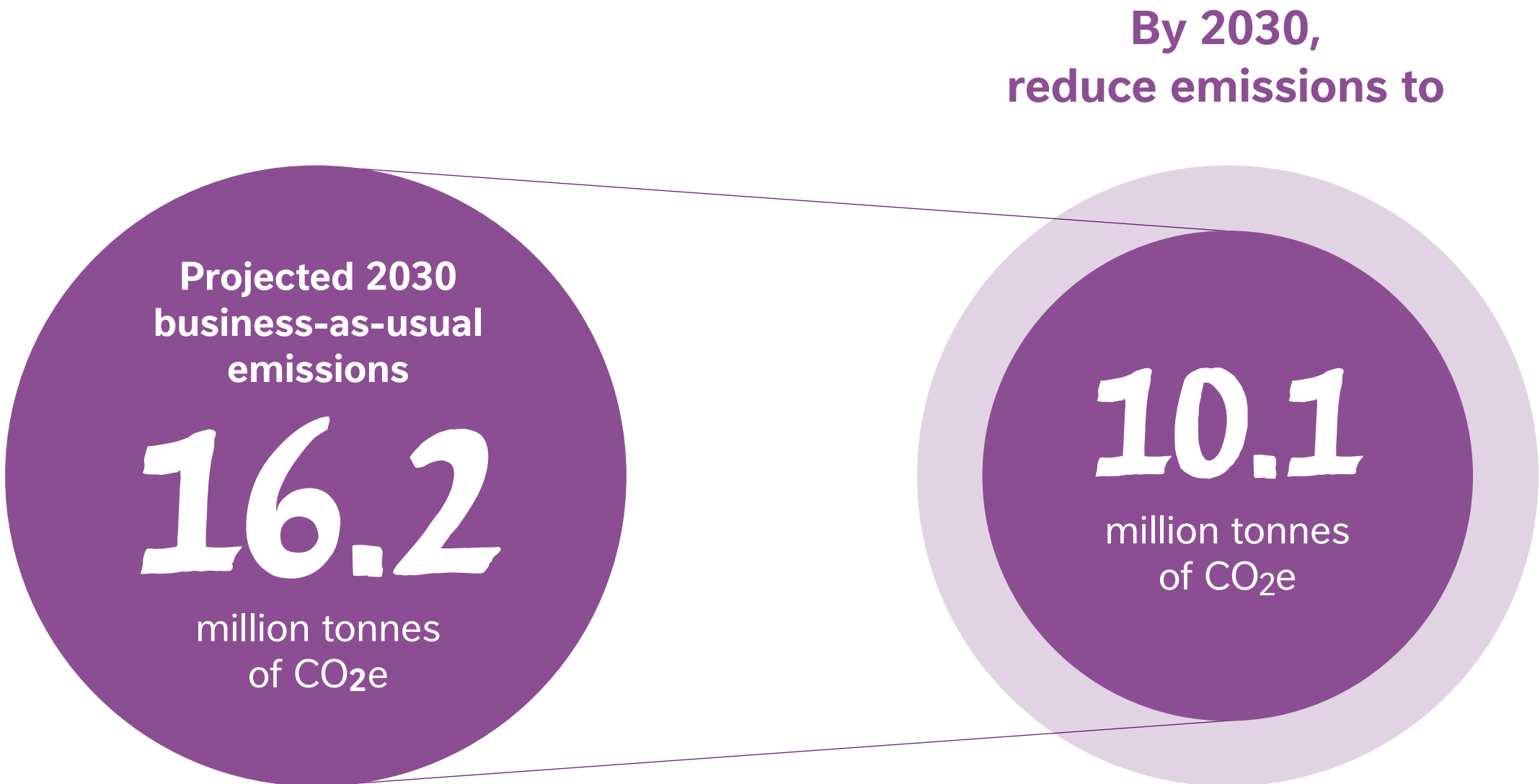
While we implement these activities, we will continue to support the respect and promotion of human rights in the downstream recycling waste supply chain of Post-Consumer Resin (PCR) material through accountability and engagement of the most relevant actors – the key waste stream suppliers.



# EVOLVING OUR PACKAGING

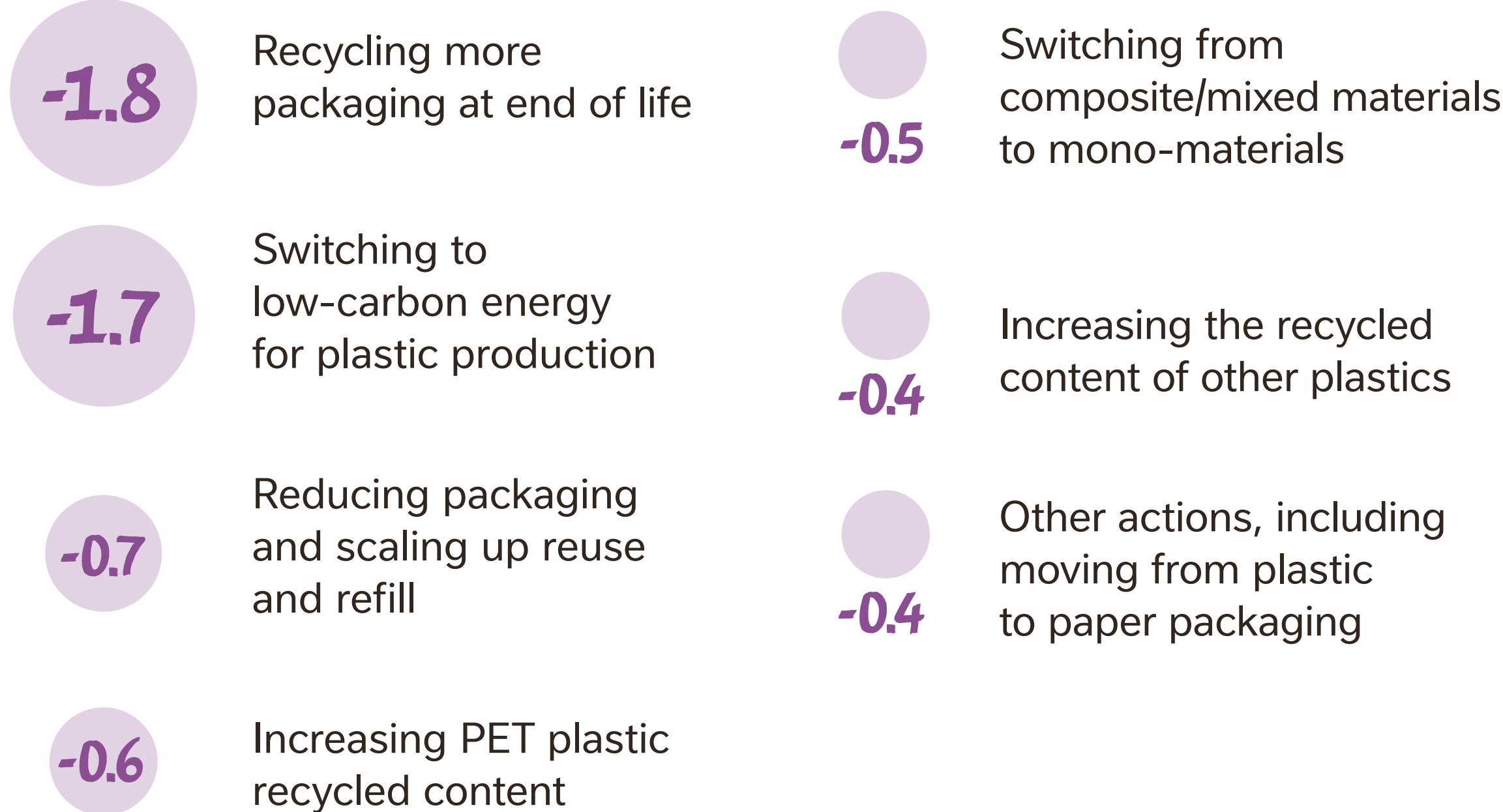
## Packaging and products supply chain emissions and reductions, 2018 to 2030

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>



<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.



# EVOLVING OUR PACKAGING

## 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.





# USING RENEWABLE ENERGY TO MANUFACTURE OUR PRODUCTS



**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.

## **Manufacturing our products**

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





# USING RENEWABLE ENERGY TO MANUFACTURE OUR PRODUCTS

## 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.

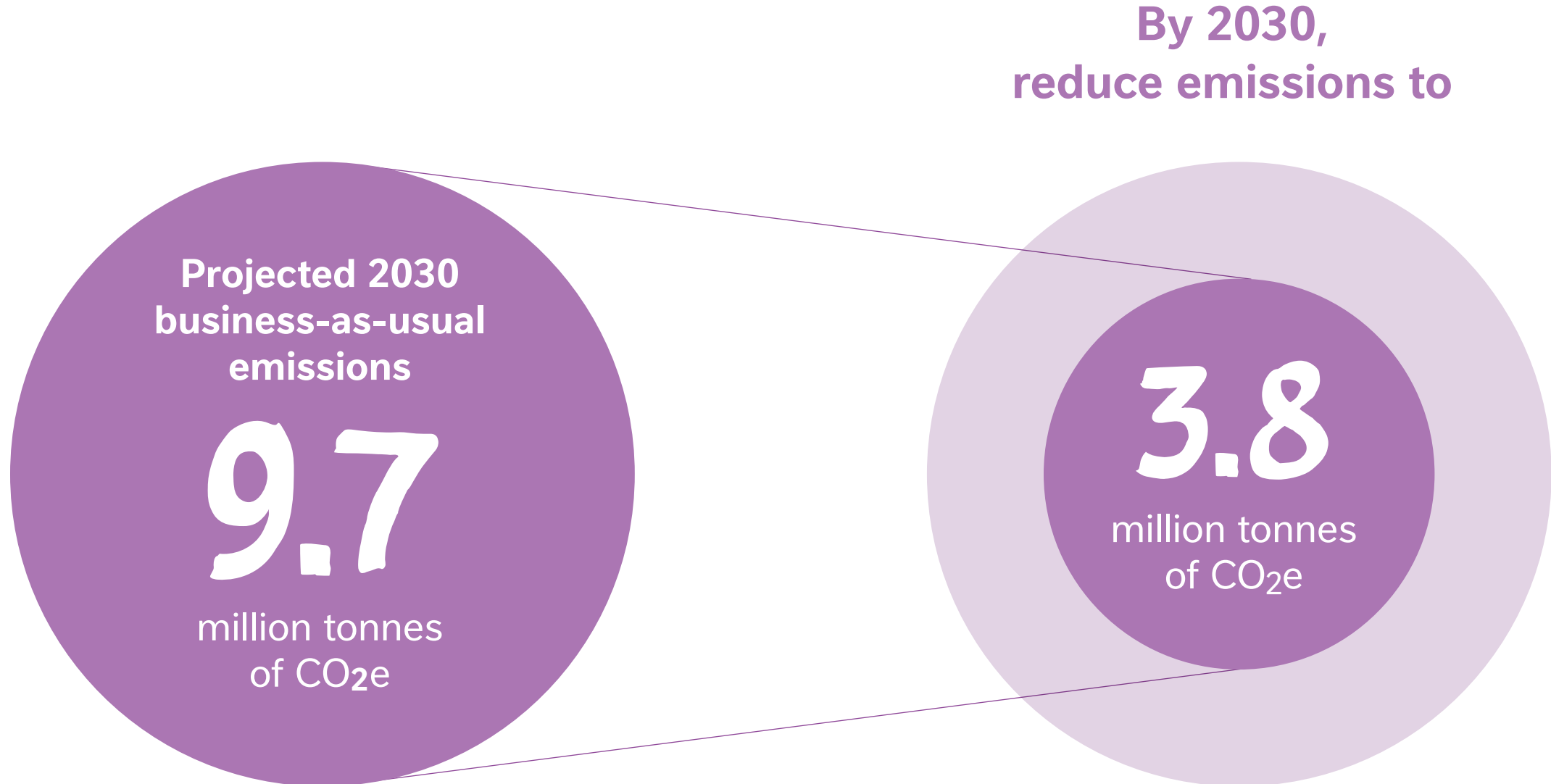




# USING RENEWABLE ENERGY TO MANUFACTURE OUR PRODUCTS

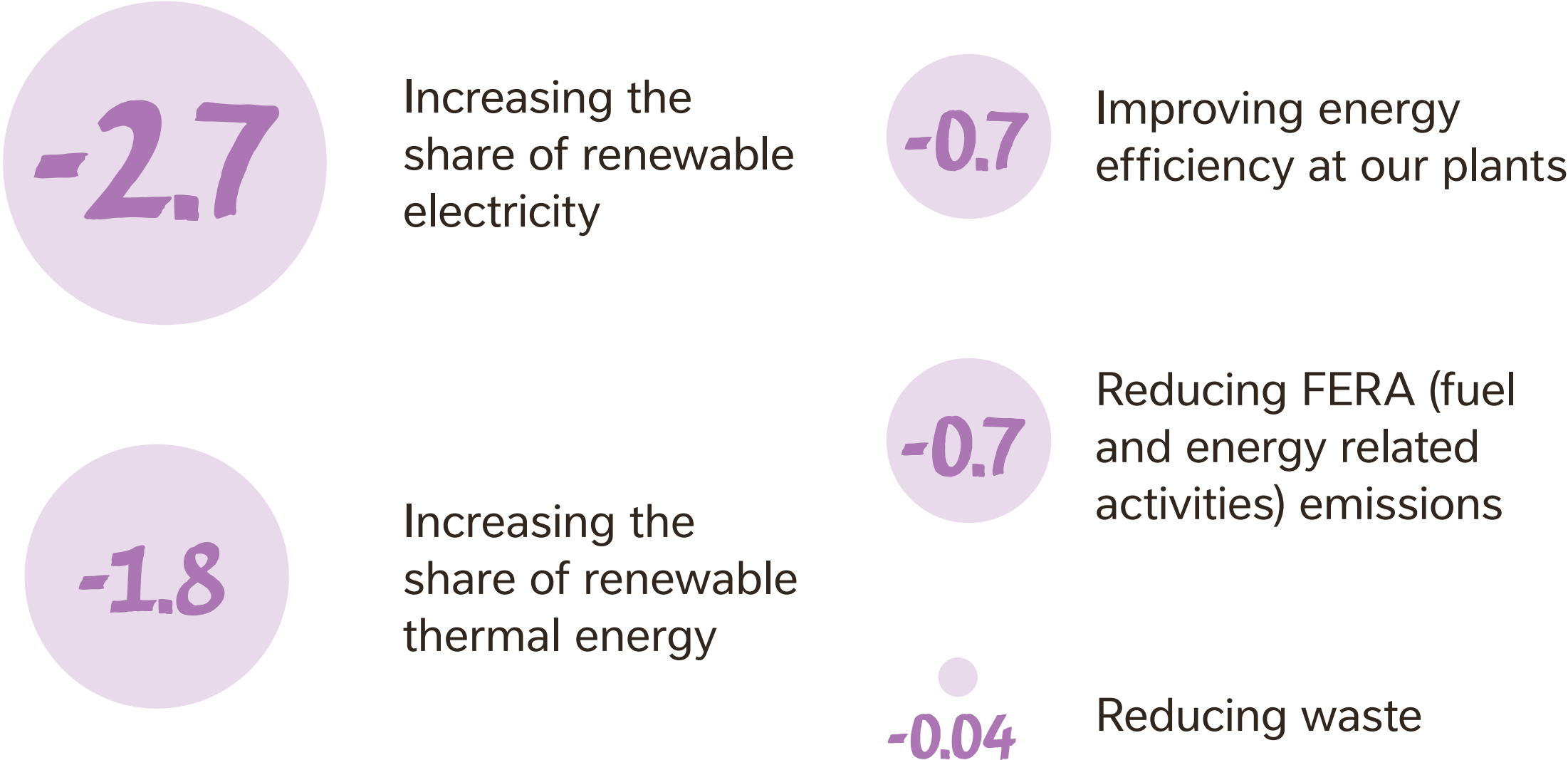
## Manufacturing supply chain emissions and reductions, 2018 to 2030

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>



<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.



# USING RENEWABLE ENERGY TO MANUFACTURE OUR PRODUCTS

## 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

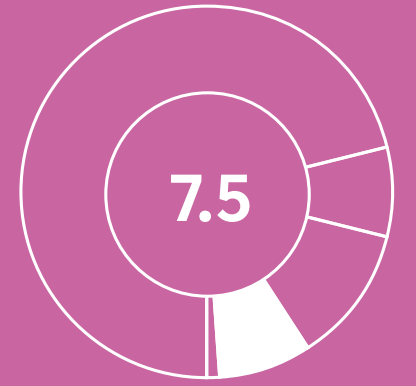
By 2050, we will reduce our direct emissions related to energy to zero by using 100% renewable energy.

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.





# DRIVING TOWARD CLEANER LOGISTICS



**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.

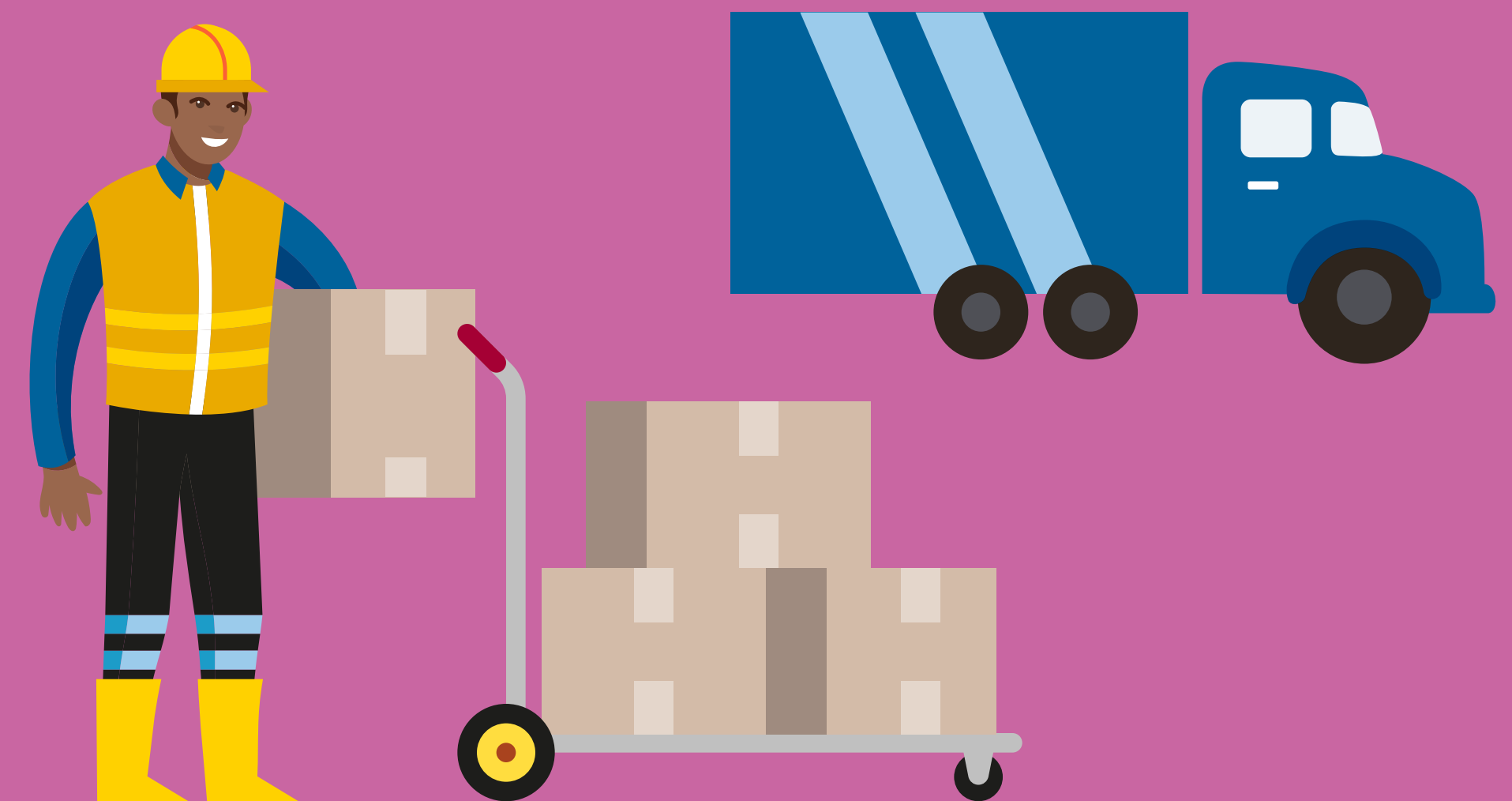
Technology plays a crucial role in helping us meet our objectives. We are already a digitally enabled, data-powered business, and we are exploring new ways in which we can use analytics, automation, artificial intelligence and machine learning to make our operations even more efficient.

## 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





# DRIVING TOWARD CLEANER LOGISTICS

## 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.





# DRIVING TOWARD CLEANER LOGISTICS

## Our key actions (continued)

### 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 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.

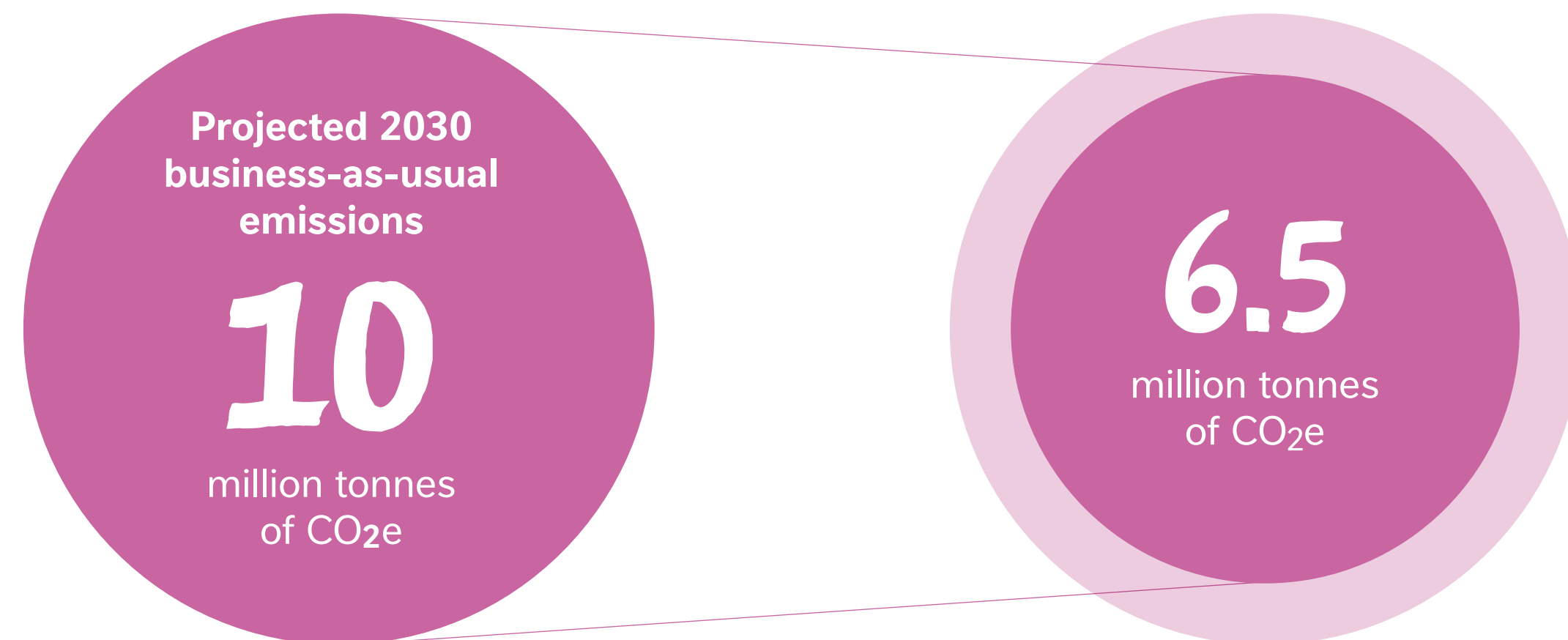
Because no company can achieve this alone, we are actively connecting with green logistics programs, the logistics industry, government organizations and NGOs, as well as benchmarking and auditing organizations.



# DRIVING TOWARD CLEANER LOGISTICS

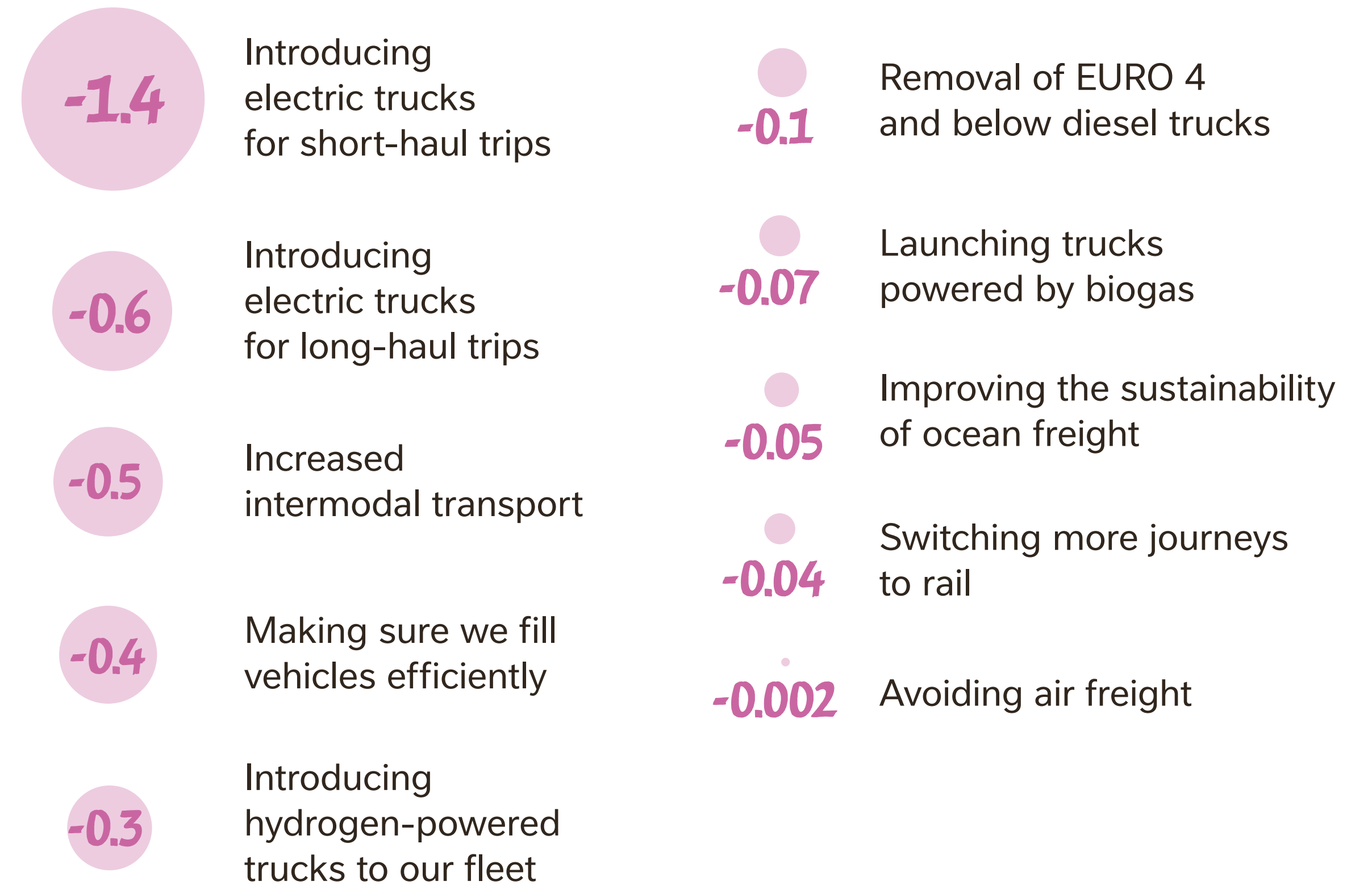
## Logistics transportation emissions and reductions, 2018 to 2030

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



2018 emissions baseline  
plus our forecast company  
growth (2.5 million tonnes  
of CO<sub>2</sub>e) to 2030

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



<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.



# DRIVING TOWARD CLEANER LOGISTICS

## 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.

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>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.

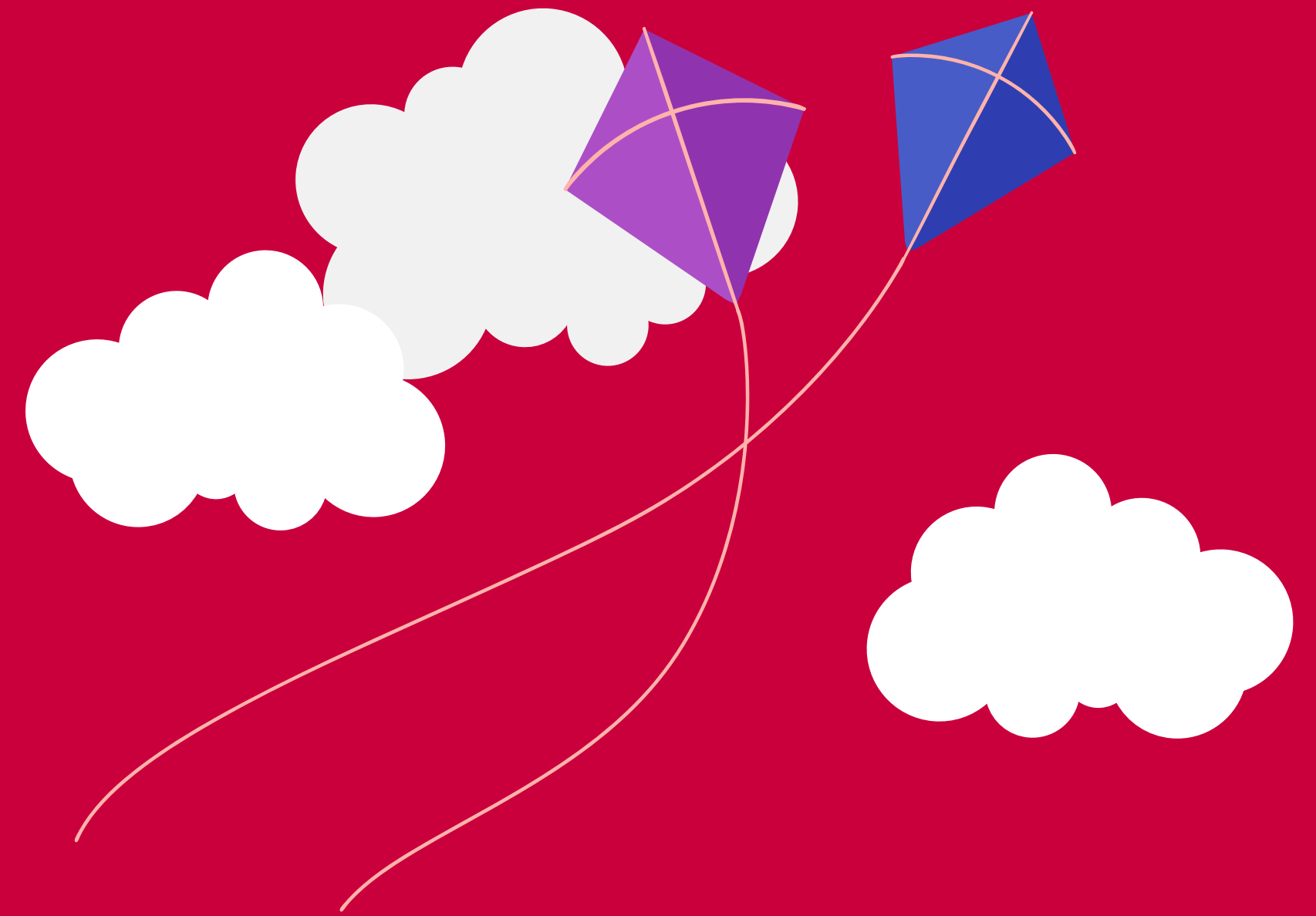


# REMOVING CARBON FROM THE ATMOSPHERE

**Through activities linked to our Scope 3 emissions, we see enormous potential for the removal of GHG from the atmosphere.**

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 in our supply change does not compromise GHG reduction efforts and will play an essential 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 before 2050.





# REMOVING CARBON FROM THE ATMOSPHERE

## 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 Scope 3 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.



# REMOVING CARBON FROM THE ATMOSPHERE

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## 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 areas that we source ingredients from, in addition to capturing large amounts of carbon, maintains water tables and reduces fire risks.



# USING THE POWER OF OUR BRANDS AND PRODUCTS

**Engaging consumers on our net zero journey is crucial to its success, and communicating the many actions undertaken by our brands is our most effective consumer touchpoint.**

Our brand teams drive emissions reductions and Scope 3 removals in support of our company's progress towards achieving net zero GHG emissions by 2050.

Individual brands can also go a step further and deliver additional impact. They can begin with simple steps, such as informing consumers about the carbon footprint of a product to help guide their purchasing decisions. They can go further by obtaining an independent high-quality and high-integrity certification of their GHG emissions reductions or Scope 3 removals across their value chain, to underpin their communications to consumers.

Some brand teams may also decide to invest in additional actions and communicate these to consumers. These actions include:

- Investing in high-quality carbon credits outside of their value chain as a supplementary effort in addition – not as a replacement – to emissions reductions and removals associated with Nestlé's own value chains. Such carbon credits, also known as offsets, are not a substitute for sustained and rapid reductions in Nestlé's GHG emissions.
- Supporting innovations or programs that contribute to GHG emissions reductions beyond their immediate value chain.

Our brand teams will continue to decide on the approach best suited to their portfolio and on any complementary activities they wish to undertake based on their specific carbon footprint and consumer engagement strategy, whilst always ensuring compliancy with local regulatory requirements.



# USING OUR VOICE TO GALVANIZE ACTION

**Nestlé cannot achieve net zero emissions alone. Alongside extensive value chain collaborations, we need to help create a broader enabling environment to deliver change at pace and scale.**

We support progressive climate action and public policies that align with the Paris Agreement and the 1.5°C pathway. Nestlé will continue to be a positive change agent and help countries set and meet ambitious climate targets.

All our climate change lobbying activities align with the goal of restricting global temperature increases to 1.5°C above pre-industrial levels and this translates into specific advocacy efforts at global, regional and country levels. We promote the same approach in the activities of trade associations and other types of private sector-led coalitions where Nestlé is a member at global, regional and local levels. In our Nestlé Climate Advocacy Industry Associations Review, we transparently publish an assessment of our main industry associations' positions and advocacy activities on climate matters and take action in case of misalignments, as per the [Global Standard on Responsible Climate Lobbying](#).





## USING OUR VOICE TO GALVANIZE ACTION

**We engage in climate-related advocacy to encourage government policies and private sector leadership that enable rapid and sustained reductions in GHG emissions around key areas, aligned with the operational focus of our Net Zero Roadmap.**

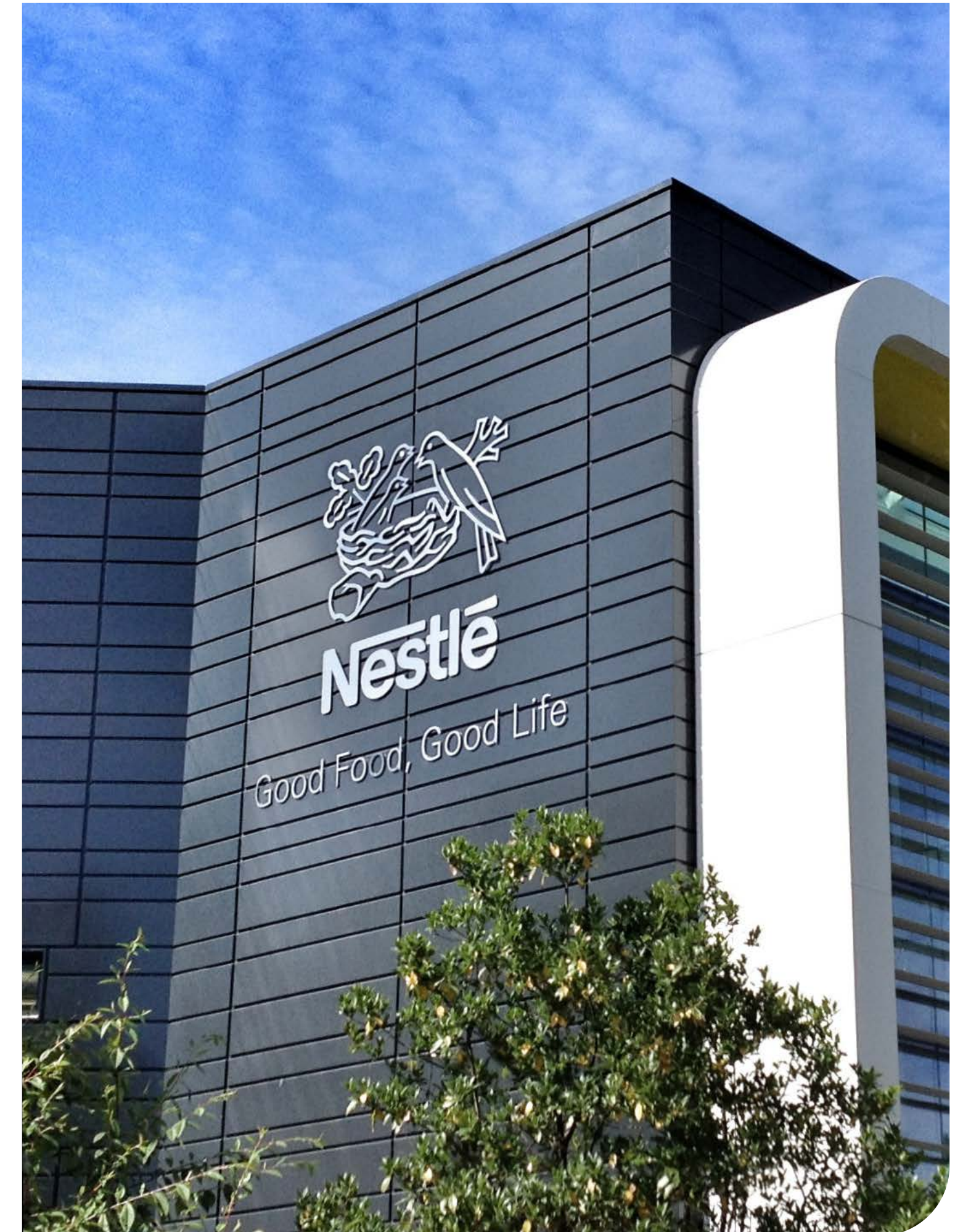
These key areas are:

### **Advocating for higher global ambition**

Despite significant progress to date, the world has still not raised its collective ambition level enough to limit global temperature increases to 1.5 degrees. We advocate for further ambition from countries and companies – and the achievement of existing Nationally Determined Contributions. This includes supporting a regenerative food system at scale approach to reaching net zero.

### **Improved corporate accountability**

To build trust in corporate actions on climate, we support the development of ambitious and clear voluntary and regulatory requirements for net zero commitments and disclosures. A level playing field with widely agreed standards would help raise ambition levels across the private sector and implementation of our own plan.





## USING OUR VOICE TO GALVANIZE ACTION

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### **Encouraging more regenerative forms of agricultural production**

We support and encourage policy measures to incentivize the transition to regenerative agriculture.

To complement and scale voluntary action, we encourage certification schemes to incorporate regenerative agricultural practices into standards and regulation.

We also need a broader 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 public and private R&D investment into regenerative agriculture, including seeds, low-carbon fertilizers, solutions for the traceability of raw materials, soil health monitoring and biocontrol solutions.

### **Support for carbon Scope 3 removals via natural climate solutions**

There is an urgent need for clearer, widely accepted international standards on the value of high-quality carbon Scope 3 removals within value chains, and recognition that these form an essential part of reaching net zero in the land use sector.

Carbon Scope 3 removals – in the form of natural climate solutions (NCS) – offer multiple potential co-benefits in the form of safeguarding biodiversity and water resources and positive social impacts. For Nestlé, they also reflect a long-term commitment to our sourcing regions and communities on the ground. Reflecting this, NCS should be promoted by governments, policymakers and companies with significant land-based footprint, e.g. agriculture and food companies, supported by robust standards including clear accounting, monitoring, reporting and verifications rules.

We advocate for NCS to be an allowed and recommended tool to fight climate change, regulated under the GHG Protocol, SBTi and other recognized standards. Governments should recognize the NCS contribution – that goes far beyond carbon – through inclusion in Nationally Determined Contributions and National Biodiversity Strategies and Action Plans.



## USING OUR VOICE TO GALVANIZE ACTION

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### **Enabling more sustainable logistics**

Public policy has a big role to play in supporting the rollout of intermodal transport and rail corridors, and the development and commercialization of lower carbon transport options.

Delivering radical reductions in emissions also relies on logistics providers, especially of truck and ocean freight services, to accelerate delivery of lower carbon options for shippers like Nestlé.

### **Supporting access to renewable electricity and energy**

More infrastructure that increases the availability of renewable energy is needed in many parts of the world, as are energy efficiency initiatives and the adoption of new technologies, supported by public and private investment.

Pledges and policies that promote the uptake of clean energy are important, and we need 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.

### **Improving consumer communications and 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 for products, to allow consumers to engage in the decarbonization efforts of companies.



## 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 Scope 3 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.