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A shift from animal proteins to vegetal proteins will be necessary to achieve our Scope 3 emissions targets."

As more and more Europeans look to cut down on meat consumption, some of the leading food retailers in Europe adopt key measures to incentivise plant-rich diets. The goal is to support consumers in their pursuit of balanced diets in line with the Planetary Health Diet recommended by leading scientists and nutritionists at EAT-Lancet. Since meat and dairy are the largest source of emissions in a supermarket's operations, these moves are critical to achieving net-zero climate goals too. As French retail giant Carrefour puts it: "A shift from animal proteins to vegetal proteins will be necessary to achieve our Scope 3 [emissions] targets."

Madre Brava assessed the 15 largest European supermarket chains on their climate and diet shift/protein transition ambitions. The analysis shows that all retailers have a target in place or will set one by the end of this year to reduce emissions from the food they sell. Half of these emissions are driven by two food categories alone: meat and dairy.

The race is on

Three retail groups - Ahold Delhaize, Aldi Nord, and Lidl – are leading the race to advance the protein transition. That is, the systemic shift from diets heavy on animal meat and dairy to diets richer in healthier, more sustainable plant proteins. Concretely, these three supermarket giants have set targets to increase the share of vegetal protein sales, both wholefoods and plant-based products and decrease the share of meat and dairy sales. These targets are also known as plant/animal protein split targets.

While the protein transition ambition of Aldi Nord and Ahold Delhaize (owner of Albert Heijn) is currently limited to The Netherlands, the Ahold Delhaize group has bigger plans. In response to Madre Brava's inquiry, Ahold Delhaize confirmed that by the end of 2024, all their food retail brands in Europe will set targets to sell a higher proportion of plant proteins and less animal-sourced foods.

Europe's biggest supermarket chain, Lidl, is also racing to be the first to commit to increasing the share of plant proteins across

all countries. Lidl International confirmed to Madre Brava that the retail brand has public plant/animal protein split targets in six European countries: Austria, Belgium, Croatia, Germany, Netherlands, and Switzerland. Moreover, Lidl affirmed that "all other Lidl countries will set a concrete [public] target to improve the [plant/animal] ratio continuously". If Lidl goes public with concrete protein split targets in the remaining 25 countries where they operate, it will make the supermarket giant the first retailer in the world to align their protein offerings with human and planetary health goals.

The benefits of the protein transition

Plant/animal protein split targets are starting to deliver on their promise to help consumers buy more plant protein products at affordable prices and reduce their meat purchases. In the Netherlands, where all seven largest food retailers committed to increasing the share of plant protein products, meat sales in retail stores have gone down by a considerable 16.4% since 2020.

The benefits of a shift to a higher ratio of plants and a lower ratio of animal foods for the planet are significant. A <u>recent Profundo study</u> for Madre Brava found that if supermarket giants Ahold Delhaize, Carrefour, Lidl, and Tesco replace 50% of their beef, pork, and chicken sales with a mix of legumes, tofu, and plant-based meat alternatives by 2030 (excluding dairy and other meat products), these four supermarket giants alone would save:

- emissions equivalent to taking 22 million cars off the road (27.7 million tonnes of CO2e per year), or nearly every car in
- an area of land the size of Portugal (91,000 sq km);
- water equivalent to 228,000 Olympic-size swimming pools every year (570 million cubic meters).

Still too many laggards

However, while some retail groups have started to transition to plant-rich diets, all other major supermarkets are failing to move. Unlike the energy transition, the protein transition has a long way to go.

Civil society groups straddling the environment, health, and animal advocacy are calling for a 'protein transition' as a core climate mitigation strategy as well as one that would support better human health. Just as an energy transition has instigated a shift from fossil fuels to renewable energy, a protein transition would support consumers in accessing sustainable, healthy, and affordable proteins rich in plants.

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Meat sales in [Dutch] retail stores have gone down [...] 16.4% since 2020."

The problem: Emissions from food and supermarkets' responsibility

Globally, food is the <u>second biggest</u> source of greenhouse gas emissions after fossil fuels. In the European Union, food is the main cause of climate change linked to consumption, accounting for 38% of all greenhouse gas emissions.

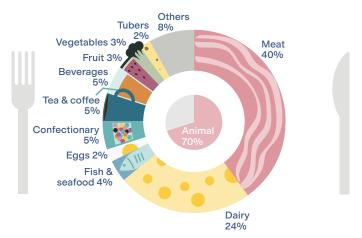
Food is the top driver of climate change linked to EU consumption



Source: https://epica.jrc.ec.europa.eu/ConsumptionFootprintPlatform.html

Meat and dairy are the most climate-polluting products, representing almost two-thirds of food's overall climate impact.

Animal-based products account for 70% of the greenhouse gas emissions driven by EU food consumption



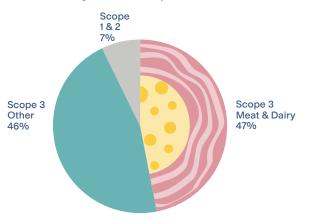
Source: https://epica.jrc.ec.europa.eu/ConsumptionFootprintPlatform.html

Besides being a major source of greenhouse gas emissions, livestock takes up 71% of EU farmland. Animal agriculture is the leading driver of deforestation, as well as a primary cause of water pollution and scarcity, air pollution, along with health impacts such as zoonotic diseases, antimicrobial resistance, and diet-related illnesses such as cardiovascular disease. All of this whilst only providing a fraction of the calories consumed in the bloc.

Supermarkets sell most food Europeans eat and, therefore, are responsible for the emissions and other negative externalities created by these sales.

A colossal 93% of a supermarket's total emissions come from their 'Scope 3' emissions – that is: the products they sell. Scope 3 emissions are emissions from the entire value chain, which originate both upstream (from agriculture, food processing, food waste, and transport), as well as downstream. Animal-based products take the lion's share: meat and dairy alone make up almost half of all emissions of a food retailer – the highest-emitting product categories.

Meat and dairy alone make up almost half of all emissions of a food retailer

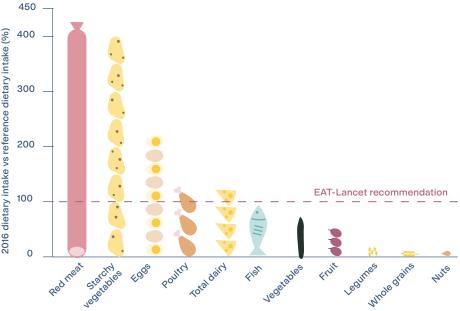


Grocery retail GHG emission breakdown (% of CO₂e)

Source: https://www.eurocommerce.eu/app/uploads/2023/05/State-of-grocery-2023_Low-res.pdf

Some European markets have recently seen a <u>decrease</u> in <u>demand</u> for meat products. However, current consumption levels across Europe are still way higher than what is needed to bring our food system within the <u>boundaries of planetary and human health</u>.

Europeans overconsume beef, pork, potatoes, eggs, dairy, and poultry; and under-consume vegetables, fruits, whole grains and legumes. This is not only bad for the health of our planet, but also for our own health - over 800,000 deaths every year are attributable to unhealthy diets in the EU.



Source: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31788-4/abstract

In their scientific opinion <u>'Towards Sustainable Food Consumption'</u>, the European Commission's Group of Chief Scientific Advisors puts forward diet shifts as a key measure to tackle both the health and climate crises

in the EU. To shift to a healthier and more sustainable diet, scientists recommend consuming more legumes, fruits, vegetables, and nuts and less meat – especially red and processed meat – fewer foods rich in saturated fat, salt, and sugar, and fewer ultra-processed foods.

With the current meat consumption trend of the average European, the reduction needed to rebalance our diets in line with human and planetary health goals will simply not happen. In fact, the latest Agricultural Outlook of the European Commission forecasts that EU meat consumption per person will drop by a mere 2.4% between 2023 and 2035. This is far too little compared to what is needed to limit global heating to 1.5C. Thus, we need retailers to take responsibility and support their consumers with easy access to sustainable, healthy and affordable plant-based proteins.

What's the beef with supermarkets?

Retailers are 'middle-of-the-chain' actors with major influence over the food supply chain. They heavily shape 'what' people eat and producers make, and 'how' food is produced and consumed. The main responsibility for food choices therefore lies on retailers – and the food environment they create – not the consumer. The European Commission's Group of Chief Scientific Advisors advises large food retailers and manufacturers to act responsibly and ensure that sustainable and healthy food becomes the easiest choice for Europeans.

The easiest choice means that the most sustainable protein choices are also the cheapest, tastiest, and most readily available to consumers. Setting a plant/animal protein split target is one of the most effective measures supermarkets can take to achieve that. These targets support consumers in eating sustainably and healthily while enabling retailers to achieve their climate targets.

Setting a protein split target means increasing the share of plant-based sales and decreasing the sales of animal-based products over time. This is in line with recent changes in consumer attitudes in Europe. A 2023 comprehensive poll of 10 European countries found that half of Europeans (51%) say that they are eating less meat, citing health (47%) as the primary reason for reducing meat consumption.

Despite this trend, the EU Agricultural Outlook estimates that animal products will remain the main protein source of the average EU diet in 2035. The EU Commission assumes a protein split around 40% plant-based / 60% animal-based to remain constant between now and 2035. The EAT-Lancet community of scientists and nutritionists recommends reversing this split to achieve a 60% plant / 40% animal protein split on an average diet. To rebalance diets that are healthy for both people and planet, retailers must contribute to the shift needed.

Madre Brava analysed retailers on these efforts. We compared the climate plans and protein transition strategies of the 15 largest food retail groups in Europe in two areas:

- Setting a Scope 3 emission reduction target for the FLAG sector
- Setting a plant/animal protein split target in line with the Planetary Health Diet

Europe's top supermarkets race towards plant-rich diets – but the finish line is far

Supermarket group	Revenue (2023 – forecast)	Headquarters	Top brands	Scope 3 FLAG - Emissions Reduction Target	Plant/Animal Protein Split Target
Schwarz	€ 172bn	_	Lidl	In review	Yes, in six countries
			Kaufland	In review	No
Rewe	€ 90bn	_	Rewe	Verified	No
			Penny	Verified	No
Aldi	€ 85bn	_	Aldi Nord	In review	Yes, in one country
			Aldi Sud	In review	No
Tesco	€ 77bn		Tesco	Verified	No, but plant-based sales targets
Carrefour	€ 76bn	••	Carrefour	In review	No, but plant-based sales targets
Edeka	€ 75bn	_	Edeka	In review	No
			Netto	In review	No
Leclerc	€ 51bn		Leclerc	In review	No
Les Mousquetaires	€ 39bn	••	Intermarché	In review	No
			Netto	In review	No
Auchan	€ 38bn	••	Auchan	In review	No
Sainsbury's	€ 38bn		Sainsbury's	Verified	No
Ahold Delhaize	€ 37bn	=	Albert Heijn	In review	Yes, in one country
			Delhaize	In review	No
Mercadona	€ 34bn	<u>c</u>	Mercadona	In review	No
Metro	€ 34bn		Metro	In review	No
Asda	€ 29bn		Asda	In review	No
Système U	€ 29bn	••	Système U	Verified	No



All top 15 European retail groups have a Scope 3 emission reduction target for the forest, land, and agriculture (FLAG) sectors.

All major food retailers in Europe made public commitments to reduce indirect greenhouse gas emissions from their supply chain (Scope 3 emissions). Except for France's Système U, the smallest player in the list, all of them have chosen to set these targets under the Science-Based Targets initiative (SBTi), a global arbiter of corporate climate ambitions.

Three of Europe's biggest retail groups, Rewe, Sainsbury's and Tesco have their concrete emissions reduction target for the FLAG sector already verified by the SBTi. The remaining 11 supermarket giants confirmed to us that the SBTi is in the process of verifying their emissions reduction plans and will have a public FLAG target in place by the end of 2024.

As part of this verification process, supermarkets must come up with concrete plans on how they are planning to reduce emissions associated with forests, land, and agriculture. Given the outsized role of livestock (meat and dairy) in retailers' Scope 3 emissions, setting a protein split target is a necessary condition to hit their FLAG targets. Ineffective measures such as carbon offsets in other sectors or minor changes in agricultural practices will not be sufficient.

Pioneering supermarkets are taking steps in the right direction: plant/animal protein split targets.

Food retailers in Europe are beginning to set targets to increase the share of plant-based proteins and decrease the share of animal-based products in their overall protein portfolio. They are doing so to achieve their climate goals while supporting consumers in following healthier, more sustainable diets. The three pioneering supermarket chains that have moved first in the race to incentivise plant-rich diets are:

Lidl International confirmed to Madre Brava that the retail brand is
working towards public protein split targets across the group. Six
Lidl countries have published their protein split targets already, all
other Lidl countries will eventually follow suit. Doing so within this
year could potentially turn Lidl into the first supermarket chain to
publicly commit to align their protein offerings with human and
planetary health goals.

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Carbon offsets in other sectors or minor changes in agricultural practices will not be sufficient."

- Albert Heijn the largest food retailer in The Netherlands, has a target to invert the plant/animal protein split to achieve a 60% plant / 40% animal protein split by 2030. Ahold Delhaize group has ambitious plans for this year. The global food retail group confirmed to Madre Brava that all their food retail brands in Europe will set targets to sell a greater share of plant proteins and less animal-sourced foods by the end of 2024.
- Aldi Nord also committed to a 60/40 protein transition target by 2030 in The Netherlands.

Setting these protein transition targets in selected countries constitutes a significant step forward. Madre Brava urges major retailers to increase their ambition and roll out a protein transition strategy across all countries and brands within each of the groups.

Two other retailers, Carrefour and Tesco, have committed to increase their plant-based sales alone. This could be a stepping stone to committing to a protein transition but doesn't displace meat and dairy sales to achieve human and planetary health goals.

In November 2022, Carrefour set a goal to boost its plant-based product sales across Europe by 65 per cent by 2026. The France-headquartered retailer exceeded the goal in one year, with sales reaching €514 million in 2023. Carrefour told Madre Brava that it has now revised its target upwards to €650 million. Looking ahead, the retail giant has committed to providing annual updates on this key performance indicator, allowing stakeholders to monitor progress over the coming years.

In the UK, Tesco made a similar pledge on a more-ambitious scale: Tesco wants to triple its plant-based sales by 2025, compared with 2018.

No group-wide commitment for the protein transition

None of the 15 retail groups analysed and contacted have published a plant/animal protein split target at group level, meaning for all their supermarket brands across all geographies they operate in. Just a few national branches in key pioneering markets in central and western Europe have seen public commitments made by some supermarkets. This begs the question of whether Aldi customers in Spain, Lidl shoppers in France, or Delhaize shoppers in Belgium deserve less than their counterparts in The Netherlands.

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Madre Brava urges major retailers to increase their protein transition ambition across all countries."

The Solution: a protein transition for Europe

All major supermarkets in The Netherlands have committed to a 60% plant / 40% animal protein split target by 2030."

Netherlands paves the way

The Netherlands has been at the forefront of shaping the protein transition in Europe.

In 2020, the Dutch government launched its National Protein Strategy aiming to achieve a 50/50 protein split by 2030 – compared to a 40% plant / 60% animal baseline in 2020. In 2022, <u>Albert Heijn</u> committed to invert the 2020 dutch national split and achieve a 60% plant-based / 40% animal-based protein split by 2030 across their stores.

As a result of a race-to-the-top dynamic in the country, now all major supermarkets in The Netherlands (Albert Heijn, <u>Aldi Nord</u>, <u>Dirk</u>, <u>Ekoplaza</u>, <u>Jumbo</u>, <u>Lidl</u> and <u>Plus</u>) have committed to such a 60% plant / 40% animal protein split target by 2030.

Setting protein targets delivers on the promise to rebalance protein sales. For instance, <u>Albert Heijn</u> already increased the share of plant-based protein sales by 1.5 percentage points in one year - from 42.6% in 2022 to 44.1% in 2023. However, Albert Heijn needs to increase the pace of the shift to meet the 60% plant protein goal by 2030.

More importantly, demand increase on the plant side led to demand reduction for animal products. Meat sales in supermarket stores have dropped by a considerable 16.4% from 2020 to 2023.

Germany is on the cusp of a protein transformation

Similar changes are happening in neighbouring Germany. The production of meat substitutes such as soy-based sausages, veggie burgers or seitan salami in Germany has more than doubled in the past five years. This increase has been accompanied by a notable and steady decrease in conventional meat consumption in the same period. Last year, meat consumption dropped to a record low of 51.6kg per person per year, a 12% decrease compared to 2019 (58.5 kilograms per capita), according to provisional data from the German Federal Office for Agriculture and Food.

Leading food retailers and manufacturers are actively riding this growing consumer wave. In October 2023, Lidl Germany was the first German retailer to commit to almost double the share of plant-based protein in their meat, egg, fish, and dairy product categories by 2030.

As in The Netherlands, this pledge was accompanied by key supporting measures for consumers. The most impactful one: price parity. Lidl Germany lowered the price of plant-based meat and milk alternatives to match the price of conventional animal-based products to help consumers transition to plant-based diets. This move represented a drop in price of 23% for Lidl's Vemondo brand of plant-based products. Research has shown that price parity is critical for mainstream adoption of plant-based protein products. Now this assumption has been confirmed through real-world data: sales of Lidl's own-brand plant products have jumped 30% in six months. Kaufland, also owned by Schwarz Gruppe, followed suit and dropped the prices of over 90 plant-based products to match or make them cheaper than their animal-based counterparts.

Lidl's ground-breaking price parity initiative has spread across the European retail landscape, prompting a wave of similar commitments from major supermarket chains. Following Lidl Germany's announcement, Lidl branches in Austria, Belgium, Denmark, Hungary and Luxembourg have embraced price parity for meat and dairy analogues. Major retailers, including Germany's Penny, Aldi Süd, the Netherlands' Jumbo, and Austria's BILLA, have also launched comparable price parity programs.

Fast food giant, Burger King, went even further. In March 2024, the burger chain made all their <u>plant-based products cheaper than meat</u> in Germany. Even before the announcement, plant-based burgers were already popular in Burger King stores: one in five Whoppers and one in four Long Chicken are plant-based.

The epitome of the protein transformation unfolding in Germany is the 200-year-old German sausage producer Rügenwalder Mühle: today the company sells more plant-based meat alternatives than animal meat products and is now the market leader in Germany, which is the largest plant-based market in the EU.

The protein transition means fewer emissions, more nature and more water

Plant protein production, in general, uses significantly less land compared to animal meat production, thus drastically reducing deforestation and protecting biodiversity. Moreover, plant protein production uses less water and generates a tiny fraction of the greenhouse gas emissions of livestock.

Consequently, a shift from meat to plant proteins – including a combination of whole vegetal foods and alternative proteins – by a handful of these supermarket giants would have enormous climate, land use, and water benefits.

One in five Whoppers [in Germany] is plant-based."

A <u>recent study</u> by research consultancy Profundo for Madre Brava found that if supermarket giants Ahold Delhaize, Carrefour, Lidl and Tesco replace 50% of their beef, pork and chicken sales with a mix of pulses, tofu and plant-based burgers and sausages by 2030 (excluding dairy and other meat products), these four supermarket giants alone would save:

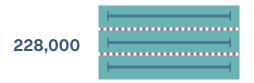
 emissions equivalent to taking more than 22 million cars off the road (27.7 million tonnes of CO₂e per year) – that 's nearly all of the cars in Spain;



• an area of land the size of Portugal (91,000 sq km);



• water equivalent to 228,000 Olympic-size swimming pools every year (570 million cubic meters).



Recommendations for supermarkets

For food retailers to contribute to efforts to align our food system with the 1.5C target and support healthy diets for all, we make the following set of recommendations:

- What can't be measured, can't be managed. We ask all retailers to measure and publicly disclose their plant/animal protein splits at group-level. Currently, there are two methodologies to measure the protein split in supermarket sales: the Green Protein Alliance followed by all major retailers in The Netherlands, and the Protein Disclosure developed by WWF and adopted by Lidl Germany and other national branches. We urge food retailers to agree to one harmonised methodology across Europe to unify efforts, maximise impact and allow for comparability.
- Protein transition as the leading climate solution. A shift towards
 plant-rich diets is key to tackling climate change. All major food
 retailers in Europe will set targets in 2024 to cut Scope 3 emissions,
 particularly from the forest, land use and agriculture sectors. To
 ensure credibility and effectiveness, we ask retailers to come
 forward with a clearly defined pathway of how these targets shall
 be reached, giving diet shifts/protein transition a major role in that
 pathway.
- Set a 60% plant / 40% animal protein split sales target by 2030 at group level. Today, around 40% of all retail protein sales are of vegetal origin in the Netherlands, where all supermarkets disclose the plant/animal protein ratio. The seven largest Dutch retailers have committed to reverse the split to achieve a 60% plant / 40% animal protein split by 2030. We ask all major retailers in Europe to commit to a 60% plant / 40% animal protein split target by 2030. This target should promote the consumption of both wholefoods such as legumes, pulses and nuts as well as traditional meat substitutes like tofu, and tempeh but also novel meat and dairy alternatives such as plant-based and fermentation-derived burgers and sausages.
- Support consumers to follow healthy, sustainable diets. Lowering
 the price of plant-based products to match those of conventional
 meat and dairy products and displaying them next to each other are
 two key actions supermarkets should take to accelerate the protein
 transition. Research and <u>real-world evidence</u> from some of the
 retailers analysed in this briefing shows the effectiveness of such an
 approach.

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We ask all major retailers in Europe to commit to a 60% plant / 40% animal protein split target by 2030."



A shift to plant-based diets could increase farm income by 71% in Europe."

Support farmers for a just transition. Academic research shows that
a shift to plant-based diets can increase farm incomes in both the
short and long term. By 2050, a shift to diets in line with EAT-Lancet
recommendations could <u>increase farm income by 71% in Europe</u> and
14.3% globally, according to recent modelling.

In a sustainable and healthy food system that benefits both the planet and its inhabitants, a portion of current livestock farmers would transition to producing plant-based proteins rather than animal-based ones. The land thus liberated could be managed by farmers specializing in ecosystem services, aiming to maximise the number of ecosystem benefits provided.

For those farmers who choose to continue producing livestock, reduced demand and lowered land conversion pressure would allow for more extensive farming practices such as agroecological silvopasture. These methods promote higher standards of animal welfare.

Ensuring a just transition for farmers is vital and each actor must play its role in it:

- EU subsidies should adapt to reflect changing consumer demand, supporting farmers in their transition rather than locking them into industrial meat production systems.
- Food retailers and processors must pay a fair price to farmers for both: their produce and the ecosystem services they offer for society.
- Given that farming is a long-term, high-capital endeavour, contracts should be long-term to ensure investment certainty and security for farmers.



About Madre Brava

Madre Brava is a global evidence-based advocacy organisation with a mission to achieve 100% sustainable, healthy, affordable food for all. Madre Brava co-creates strategy, builds coalitions, and powers campaigns to persuade companies, financiers, and governments to clean up the food we eat.