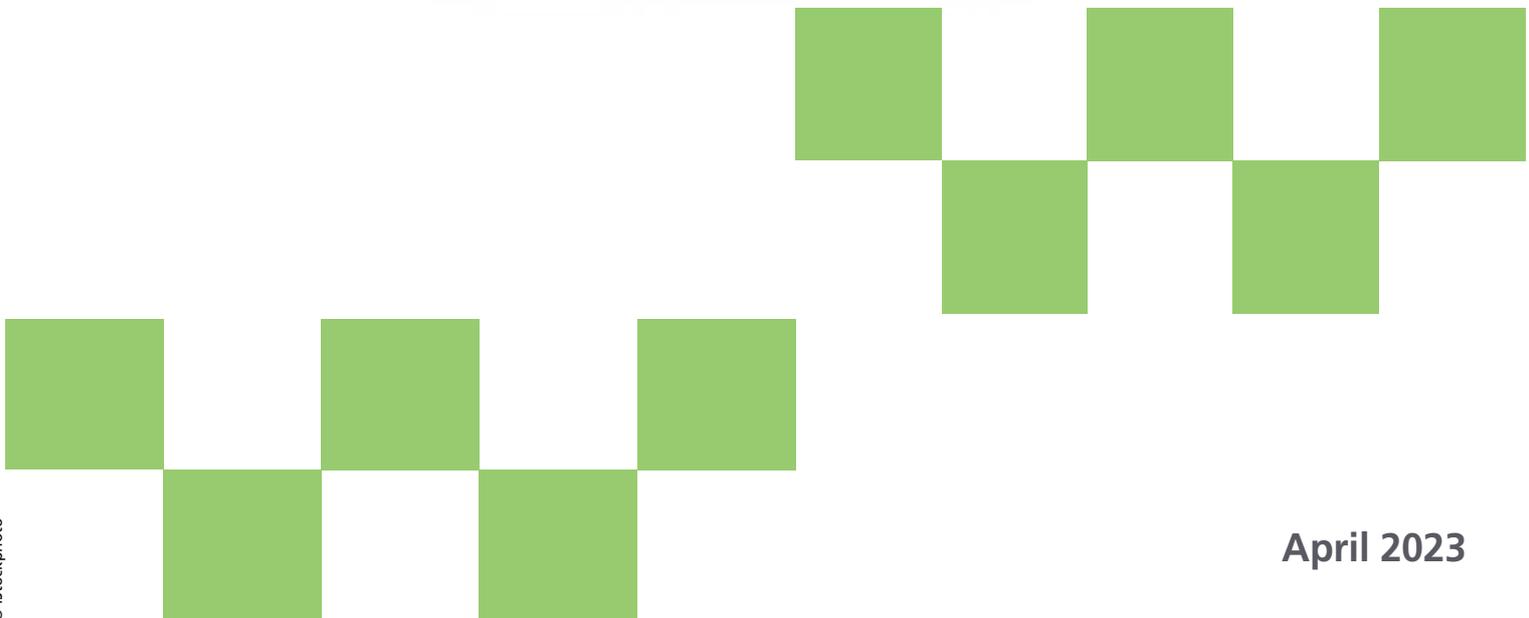


MORE MONEY MORE MEAT

**HIGH INCOME COUNTRIES
MUST LEAD ON REDUCTION**



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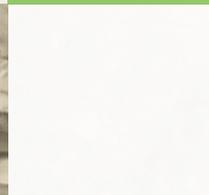
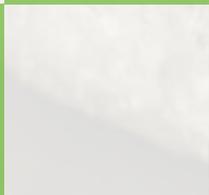
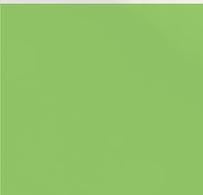
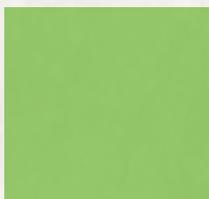


INTRODUCTION

Our excessive appetite for animal-sourced foods – such as meat, fish, dairy and eggs – is harming us, damaging our planet, and depriving farmed animals of lives worth living. Urgent global action is needed to transform diets and food production for our health, animals, and the environment.

In 2019, over 11,000 world scientists issued a stark warning of a climate emergency, stating that reducing the consumption of animal-sourced foods is one of the most effective ways to reduce greenhouse gas emissions and avert the climate crisis, with other environmental, human health, and biodiversity benefits ⁽¹⁾. In the same year, the EAT-Lancet Planetary Health Diet provided global scientific targets for healthy diets from sustainable food systems to significantly reduce consumption of animal-sourced foods ⁽²⁾.

In a world first, this report provides detailed calculations for the amounts of animal-sourced foods consumed by the 103 high- and middle-income countries published by the FAO in 2018. It compares the consumption with the amounts recommended in the EAT-Lancet Planetary Health Diet, giving the percentage reduction required by each country and across all animal-sourced foods to ensure a healthy future for people, animals and our planet.



EXECUTIVE SUMMARY

There is overwhelming scientific evidence that urgent action is needed to curb our excessive appetite for animal-sourced foods such as meat, fish, dairy and eggs ^(1, 3-5). It is harming us, damaging our planet, and inflicting suffering on billions of farmed animals.

● The Intergovernmental Panel on Climate Change (IPCC) has stated: *“Where calories and ruminant animal-source food are consumed in excess of health guidelines, reduction of excess meat (and dairy) consumption is among the most effective measures to mitigate GHG emissions, with a high potential for environment, health, food security, biodiversity, and animal welfare co-benefits (robust evidence, high agreement)”* ⁽³⁾.

● Without accelerated declines in high-income, high-consuming countries, and with expected increases in low-income, low-consuming countries, the world is on a dangerous trajectory – heading towards the collapse of many global ecosystem functions on which humanity critically depends ^(6,7).

● The top 25 consumers of animal-sourced foods are 15 of the 27 EU countries (Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Spain and Sweden), five other European countries (Iceland, Norway, Russia, Switzerland and the UK), North America (Canada, USA), Israel, Australia and New Zealand.



 **Meat is the most over-consumed animal product. The top five consumers of meat and the reduction needed to meet the EAT-Lancet Planetary Health Diet are:**

**USA (82%);
Australia (80%);
Argentina (80%);
Israel (78%);
Spain (78%).**

 **The top five for dairy are:**

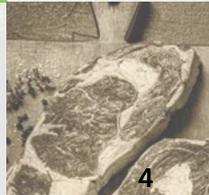
**Finland (74%);
Montenegro (74%);
Albania (71%);
Netherlands (69%);
Switzerland (68%).**

 **The top five for fish and seafoods are:**

**Iceland (77%);
Maldives (76%);
Seychelles (64%);
Republic of Korea (63%);
Malaysia (63%).**

 **The top five egg consumers and their reduction targets are:**

**Mexico (76%);
China (76%);
Japan (75%);
Netherlands (74%);
Malaysia (73%).**



EXECUTIVE SUMMARY

- Despite compelling evidence, countries are failing to include reduction of animal-sourced foods in their national action plans or strategies on food, climate and environment. For example, the UK's National Food, and the EU's Farm to Fork Strategies, fail to address urgently needed reductions in the consumption of animal-sourced foods.
- Denmark, which sits at #9 on the list of top consumers, is taking some meaningful action, having recently published some of the world's greenest dietary guidelines with the slogan 'good for health and climate' and has agreed to create a National Action Plan for Plant-Based Foods with significant funding.
- In the Nationally Determined Contributions, outlining how countries are dealing with climate change, Germany has made progress by committing to move away from harmful subsidies. It also plans to promote sustainable production

and consumption by investment in research, incentivising alternative proteins, with actions to increase health and dietary literacy.

- It is clear that climate and biodiversity goals will not be achieved without food system transformation, including reducing the production and consumption of animal-sourced foods. Reductions must come from intensive, factory farming systems that harm the environment and our health, and cause unnecessary suffering to farmed animals.
- Reducing consumption of animal-sourced foods can return land to nature. Having fewer farmed animals in nature-positive, agroecological or regenerative systems can regenerate our soils, restore and enhance biodiversity, build climate resilience, reduce soil, water and air pollution levels with high farmed animal welfare at the centre.



KEY RECOMMENDATIONS

- **Set clear targets for reducing consumption of animal-sourced foods to be aligned with the Paris Agreement and the Kunming-Montreal Global Biodiversity Framework.**
- **Support these reduction targets with a holistic transformative food strategy or action plan, coordinated across government departments to ensure consistency, and including a range of measures to enable uptake and meet targets for reduction.**
- **Align dietary guidelines with the principles of the EAT-Lancet Planetary Health Diet for healthy diets from sustainable food systems, and provide advice on healthy plant-based diets.**
- **Ensure that subsidies are not provided for intensively farmed animals or their feed, and instead, support producers of fruit, vegetables, wholegrains, legumes and nuts, as well as producers who farm animals for food in nature-positive systems, adopting high environmental and animal welfare standards.**



PLANETARY [ILL] HEALTH

Planetary Health, put simply is *“the health of human civilization and the state of the natural systems on which it depends”*.

Rockefeller Foundation-Lancet Commission on planetary health ⁽⁸⁾

Excessive appetites for animal-sourced foods are not only harmful to human health and damaging to the environment, they also inflict suffering on billions of farmed animals. The food we eat shapes our very future on this planet, and global action is urgently needed to transform diets and food production to ensure a healthy future ⁽⁴⁾.



ENVIRONMENT

“Where calories and ruminant animal-sourced food are consumed in excess of health guidelines, reduction of excess meat (and dairy) consumption is among the most effective measures to mitigate GHG emissions, with a high potential for environment, health, food security, biodiversity, and animal welfare co-benefits (robust evidence, high agreement).”

Intergovernmental Panel on Climate Change ⁽³⁾



ENVIRONMENT

Greenhouse gases are heating the planet, with food systems accounting for almost a third of all human-induced greenhouse gas emissions ⁽³⁾. Animal-sourced foods account for a disproportionate 60%, twice as much as plant-based foods ⁽⁹⁾. Without rapid and ambitious change to food systems, the Paris Climate Agreement’s target to limit average global temperature increases above preindustrial levels to 1.5°C is impossible and even the 2°C target is extremely challenging ⁽¹⁰⁾.

Animal farming uses over three-quarters of our agricultural land. Around 40% of land used to grow crops feeds animals ⁽¹¹⁾, yet animals provide only 18% of the calories and 37% of protein in our diets ⁽¹²⁾. Because animals convert cereals very inefficiently into meat and milk, we receive just 3-40 % of the calories and 5-43% of protein of the human-

edible grain fed to animals in the form of meat and milk ⁽¹³⁾.

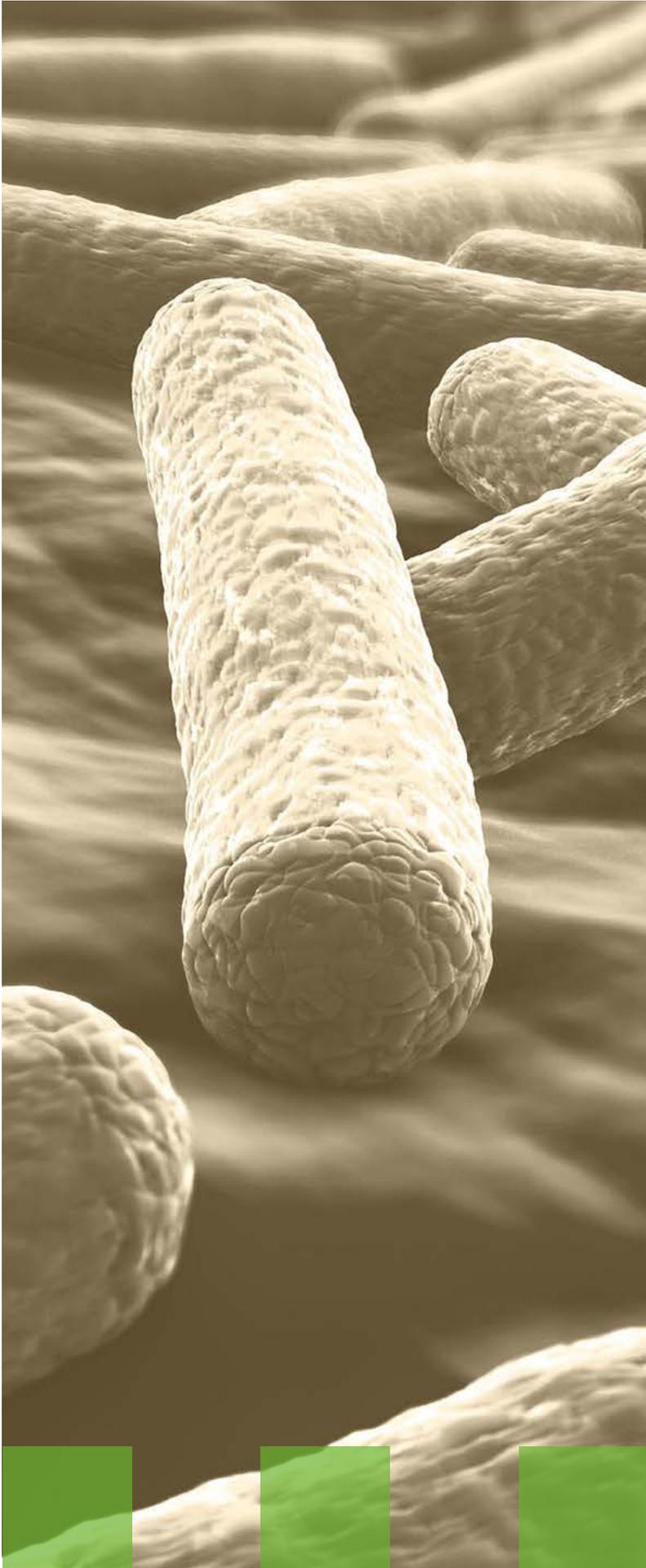
An increasing proportion of aquaculture production is intensive and relies on high-quality feed inputs containing wild-caught forage fish as well as farmed plant ingredients ⁽¹⁴⁾. Like terrestrial farmed animals, we only receive an estimated 14-28% of the high-quality protein and 6-25% of calories used in farmed aquatic animal feeds ⁽¹⁵⁾, which is extremely wasteful, since an estimated 90% of the wild fish used in feeds could instead be eaten directly by humans ⁽¹⁶⁾. This results in a net loss of food ⁽¹⁷⁾.

Inefficient use of calories and protein means that feeding a global population with increasing appetites for animal-sourced foods puts great pressure on Earth’s precious natural, finite resources. Overconsumption of animal-sourced foods enhances soil erosion ⁽¹⁸⁾, deforestation and

biodiversity loss ⁽¹⁹⁾, and increases the water footprint of food ⁽²⁰⁾.

Nitrogen (N) and phosphorus (P) are essential nutrients for food production, but sourcing them naturally and recycling them are no longer enough to feed us ⁽²¹⁾. Food production increasingly relies on excessive amounts of energy-intensive, industrially-produced nitrogen and mined phosphorus fertilisers. On average, 80% of nitrogen and 25-75% of phosphorus is lost to the environment – contributing to greenhouse gas emissions, biodiversity loss, and air, water, and soil pollution ⁽²¹⁾. Animal products have far greater N and P footprints than plant products, causing more pollution ⁽²²⁾. And, increasing appetites for animal-sourced foods have contributed to more than doubling the global land-based cycling of N and P, leaving them severely ‘out of balance’ ⁽⁴⁾.





HUMAN HEALTH

The impacts do not end there. Increasing demand for animal-sourced foods and the unsustainable intensification of agriculture are key drivers for the emergence of new diseases that infect humans – we can expect more pandemics to come ⁽²³⁾.

Around **70%** of the world's antibiotics are given to farmed animals ⁽²⁴⁾, which contributes to antibiotic resistance – predicted to kill 10 million people a year by 2050 ⁽²⁵⁾. This is edging us closer to a post-antibiotic era.

Pollution from animal agriculture also directly harms human health. Globally, agriculture – mostly animal production – emits

81% of ammonia which reacts with other chemical compounds in the air to form particulate matter (PM_{2.5}) ⁽²⁶⁾. PM_{2.5} penetrates deep into the lungs causing long term illnesses such as Chronic Obstructive Pulmonary Disease (COPD) and lung cancer.

The consumption of animal-sourced foods, particularly red and processed meat, increases the risk of certain cancers, coronary heart disease, stroke and type II diabetes, as well as obesity ⁽⁴⁾.



“A particular target for criticism has been the industrialisation and intensification of animal production (“factory farming”) that would appear to treat the animals as commodities rather than sentient beings.”

Professor John Webster ⁽²⁷⁾

ANIMAL WELFARE

High demand for animal-sourced foods means production on an industrial scale – factory farming – where animals suffer at scale.

Land animals face overcrowding, severe confinement (often in cages), where diseases are common and spread fast.

They are subjected to barren environments that don't fulfil their natural instincts. As a result, they are often mutilated to reduce the incidence and severity of damaging behaviours in the sub-standard conditions (e.g., hens are beak trimmed and pigs tail docked).

They are bred to produce unnatural volumes of meat, milk and eggs, with the side-effects

of hunger, exhaustion, chronic diseases, disability and pain.

They often face long, arduous journeys and are slaughtered inhumanely.

Farmed fish are confined in ways that are at odds with their natural behaviour, face painful disease and parasitic infections, inhumane transport and slaughter.





A GREAT FOOD TRANSFORMATION (4)

Two frequently explored alternatives to the future of food production are:

- 1) further increasing productivity and efficiency with 'business-as-usual' consumption, or
- 2) reducing food loss and waste and adopting a healthy diet from sustainable food systems (e.g., a 'flexitarian' diet (4)).

In high-income countries, which also tend to be the high-consuming ones, food production that eliminates food-feed competition between farmed animals and humans is a way to achieve a sustainable food system. Farmed animals consume foods inedible to humans, including grassland not suitable for crop production, food waste and by-products of human food production (28). This requires a flexitarian diet with large reductions in consumption of animal products, with increases in fruits, vegetables, and plant-based proteins (legumes, nuts and seeds), as part of a healthy diet.

On a business-as-usual basis, the use of cropland will increase by 8.4 million km² (67%) by 2050 compared with 2010 (7) – that's equal to the size of Brazil. By contrast, a shift to flexitarian diets would lead to a reduction of 2.3 million km² in the use of cropland, and a 'food not feed' scenario would result in a reduction in the use of cropland of 4.3 million km² (7, 28). Given the impacts, the need for reductions in the production and consumption of animal-sourced food is obvious and urgent.





In 2019, the EAT-Lancet Commission of 37 scientists from 16 countries, working in various fields such as human health, agriculture, political science, and environmental sustainability, published what soon became known as the 'Planetary Health Diet'^(2, 4). They developed global scientific targets for healthy diets from sustainable food systems to meet by 2050. Along with other measures, such as halving food loss and waste and improving food production practices, the targets aim to enable the achievement of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.

The Planetary Health Diet provides targets, with possible ranges, of food groups with an optimal calorie intake of around 2500 kcal/day. It contains a diversity of plant-based foods, is low in animal-sourced foods, contains unsaturated rather than saturated fats and limited amounts of highly processed foods and added sugar.



THE EAT-LANCET PLANETARY HEALTH DIET

This is what one week of food for one person looks like:



Image 1. 1) 2100g of edible vegetables; 2) 1400g of edible fruit; 3) protein foods: 525g of legumes, 350g of nuts, 203g of chicken (a medium sized chicken breast), 196g of seafood (a lemon sole with 98g of edible fish, and 98g of smoked oysters), two small eggs (approximately 91g); 4) 1624g of whole grain foods and 350 of tubers; 5) 363g of added fats and 217g of added sugar; 6) 1750g of dairy foods: 750g of milk, 550g of cheese, 225g of yogurt, 125g of butter and 100g of cream.

TOP CONSUMERS OF ANIMAL-SOURCED FOODS

This report provides calculations for the animal-sourced foods consumed by the 103 high- and upper-middle income countries included in the FAO's food balance sheets for 2018 ⁽²⁹⁾. Calories available from animal products are calculated as a percentage of total calories

available. Amounts consumed in grams per person per day are calculated for meat, dairy, eggs, and fish and seafood from the data on food availability (see [Appendix I Methodology for details](#)).

We compared the amounts consumed and the percentage of calories from animal products with the targets for consumption of animal-sourced foods in the EAT-Lancet Planetary Health Diet...

12% OF CALORIES FROM ANIMAL PRODUCTS, WITH:



250g
DAIRY



43g
MEAT



28g
FISH AND SEAFOOD



13g
EGG

PER PERSON PER DAY



The countries are listed in order of those with most to do in terms of reduction in consumption of animal-sourced foods to meet the targets in the EAT-Lancet Planetary Health Diet across the different animal-sourced food groups (meat, eggs, dairy and fish and seafood) and by the percentage of calories from animal products available (see [Appendix II for the full list of the 103 high- and upper-middle-income countries](#)).

THE TOP 25 COUNTRIES

with the highest levels of reduction needed to meet the EAT-Lancet Planetary Health diet are 15 of the 27 EU countries (Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Spain and Sweden), five other European countries (Iceland, Norway, Russia, Switzerland and the UK), along with North America (Canada, USA), then Israel, Australia and New Zealand. See Table 1 on next page.

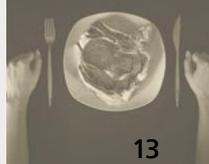


Table 1. Top 25 consumers of animal-sourced foods in order from highest to lowest

COUNTRY	Consumption in grams per person per day and % reduction (or slight increase +) needed to meet the EAT-Lancet Planetary Health Diet				% of calories from animal products in the diet	% reduction to meet the EAT-Lancet target of 12% animal products
	MEAT	DAIRY	SEAFOOD	EGGS		
1. Iceland	170.3g; 75%	595.0g; 58%	123.2g; 77%	30.7g; 58%	45	73
2. Finland	138.9g; 69%	967.4g; 74%	45.0g; 38%	28.7g; 55%	40	70
3. Spain	191.9g; 78%	434.1g; 42%	57.0g; 51%	37.3g; 65%	26	54
4. Norway	128.0g; 66%	479.4g; 48%	68.4g; 59%	31.8g; 59%	33	64
5. Portugal	173.9g; 75%	395.3g; 37%	76.5g; 63%	27.4g; 52%	30	60
6. Sweden	133.0g; 68%	522.6g; 52%	43.8g; 36%	37.5g; 65%	33	64
7. France	146.7g; 71%	518.0g; 52%	45.2g; 38%	31.4g; 59%	32	62
8. Italy	140.7g; 69%	529.2g; 53%	40.0g; 30%	30.7g; 58%	24	50
9. Denmark	144.4g; 70%	671.5g; 63%	35.7g; 22%	40.6g; 68%	37	68
10. Latvia	127.8g; 66%	520.5g; 52%	32.8g; 15%	34.2g; 62%	30	60
11. USA	233.3g; 82%	622.5g; 60%	29.9g; 6%	43.0g; 70%	28	58
12. Netherlands	107.9g; 60%	807.0g; 69%	29.5g; 5%	50.9g; 74%	34	64
13. Israel	194.2g; 78%	471.5g; 47%	34.3g; 18%	33.5g; 61%	24	50
14. Australia	214.8g; 80%	600.1g; 58%	35.5g; 21%	22.0g; 41%	32	63
15. Luxembourg	149.0g; 71%	316.5g; 21%	42.4g; 34%	43.8g; 70%	34	65
16. Lithuania	152.8g; 72%	316.8g; 21%	43.1g; 35%	37.3g; 65%	29	58
17. New Zealand	167.6g; 74%	371.7g; 33%	33.2g; 16%	29.3g; 56%	29	59
18. Malta	139.0g; 69%	285.3g; 12%	43.8g; 36%	32.2g; 60%	28	57
19. Canada	171.4g; 75%	461.2g; 46%	29.6g; 5%	39.8g; 67%	26	54
20. Ireland	148.7g; 71%	760.0g; 67%	31.0g; 10%	23.4g; 44%	29	58
21. UK	148.5g; 71%	566.7g; 56%	25.0g; +12%	30.0g; 57%	29	59
22. Russia	141.1g; 70%	385.3g; 5%	27.0g; +4%	43.6g; 70%	25	53
23. Greece	142.0g; 70%	634.9g; 61%	26.2g; +7%	24.3g; 47%	24	51
24. Switzerland	127.1g; 66%	783.7g; 68%	22.6g; +24%	27.0g; 52%	33	64
25. Estonia	122.9g; 65%	769.5g; 68%	19.7g; +42%	34.1g; 62%	35	65

All top 25 countries need to reduce their dairy, meat and egg consumption, but fish and seafood is more variable, with reductions needed in 16 countries (Iceland, Finland, Spain, Norway, Portugal, Sweden, France, Italy, Denmark, Latvia, Israel, Australia, Luxemburg, Lithuania, New Zealand and Malta), six countries eating about the recommended amount (USA, Netherlands, Canada, Ireland, Russia and Greece), and three countries

consuming more than 10% less than the diet recommends (UK, Switzerland, Estonia).

Since all countries already overconsume meat, dairy, and eggs, diversifying diets to increase plant-based protein rather than fish and seafood should be encouraged, particularly given the environmental impacts of capture fisheries and aquaculture ⁽³⁰⁾.

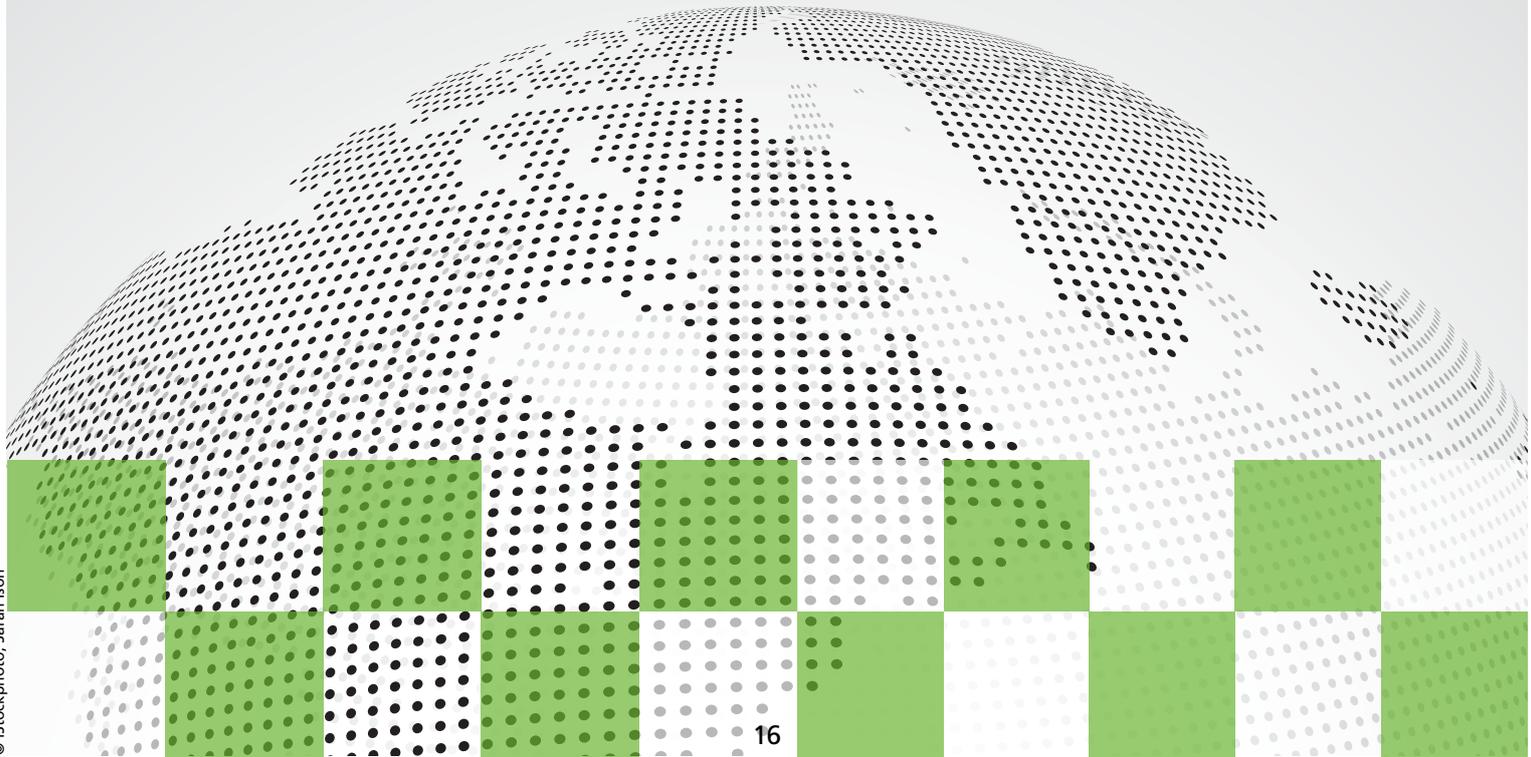
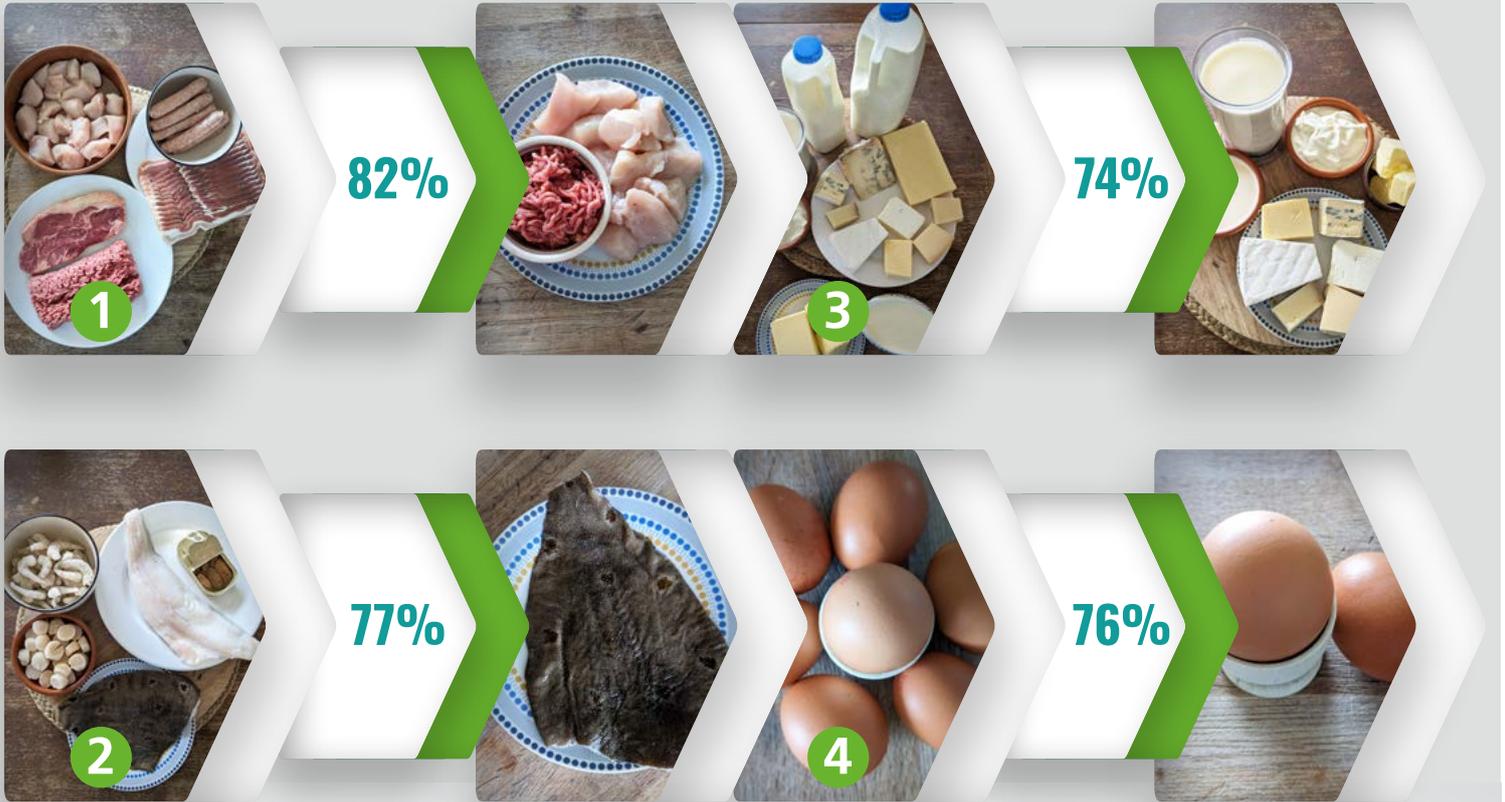
From the full list of 103 high- and upper-middle income countries, the top consumer of meat is the USA, who need a massive 82% reduction to meet the EAT Lancet Planetary Health Diet (Table 2; Image 2). Finland tops the table for dairy, consuming on average over 6.5kg of dairy products per person in a week and would need to reduce by 74%. Iceland is top on fish and seafood, consuming over 850g of edible fish per person per week, and needs to reduce by 77%. Finally, Mexico is the top consumer of eggs, eating seven large eggs per person per week and would need to reduce this to two small eggs to meet the EAT-Lancet Planetary Health Diet.

Table 2. Top five consumers of meat, dairy, fish and seafood, and eggs of the 103 high- and upper middle income countries with % reductions needed to meet the targets in the EAT-Lancet Planetary Health Diet

Meat			Dairy		Seafood		Eggs	
Country		%	Country	%	Country	%	Country	%
1	USA	82	Finland	74	Iceland	77	Mexico	76
2	Australia	80	Montenegro	74	Maldives	76	China	76
3	Argentina	80	Albania	71	Seychelles	64	Japan	75
4	Israel	78	Netherlands	69	Republic of Korea	63	Netherlands	74
5	Spain	78	Switzerland	68	Malaysia	63	Malaysia	73



Image 2. One week's worth by weight of: **1** meat in USA (1633g); **2** fish and seafood in Iceland (861g); **3** dairy in Finland (6772g); and **4** eggs in Mexico (seven large eggs) vs. the EAT-Lancet Planetary Health Diet with the percentage reductions needed.



ENABLING REDUCTION IN HIGH CONSUMING HIGH- AND UPPER MIDDLE-INCOME COUNTRIES

Cooperation across policy areas, such as agriculture, nutrition, health, trade, climate and environment are needed to enable dietary change and contribute to food system transformation^(3, 31). Strategies or action plans that can trigger change must combine these policy areas, bringing together stakeholders, and involve multiple measures to make transformation happen at scale. Policy options include:

1 Sustainable food-based dietary guidelines: Adopting healthy plant-focused (flexitarian diets)⁽²⁾ and options for plant-based diets⁽³²⁾.

2 Taxes and subsidies (e.g., the sugar tax). Olivier De Schutter, former UN Special Rapporteur on the right to food, has said that *“any society where a healthy diet is more expensive than an unhealthy diet is a society that must mend its price system”*⁽³³⁾. Taxes could be placed on industrially produced meat and dairy

products with all the revenue raised being used to lower the price of healthy predominantly plant-based diets from sustainable food systems.

3 Public procurement: Public bodies should provide meals (e.g., in schools and hospitals) produced to high nutritional, environmental and animal welfare standards.

4 Mandatory food labelling: Food labels that include environmental, health and animal welfare impacts with method of production.

5 Food regulations: Food companies reporting annually on metrics including sales of protein by type and origin – meat, fish, dairy, plant-based or alternative proteins (Recommendation #2 in⁽³⁴⁾).

6 No more investment in industrial animal agriculture: Banks and other financial institutions should stop funding industrial

animal agriculture and instead support a move to regenerative agriculture.

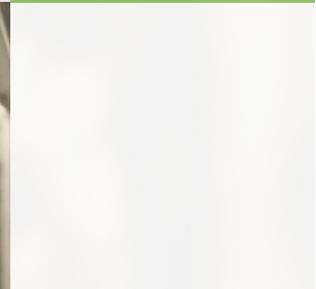
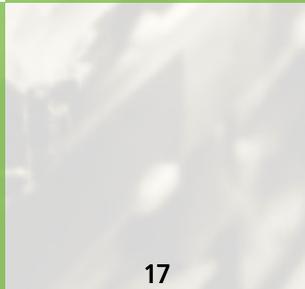
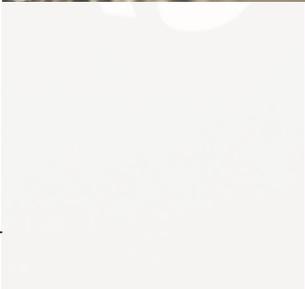
7 Investment in research and innovation: Alternative proteins such as plant-based proteins, protein from fermentation and cultivated meat.

8 Trade policy: Enhancing awareness of the fact that the World Trade Organization (WTO) rules already allow a country to prohibit the sale of unhealthy, environmentally damaging or low animal welfare food, with the prohibition applying to imports as well as domestically produced food. Align trade policy with national/regional animal sourced food reduction targets.

9 Marketing regulations: Marketing regulations on promoting unhealthy food to children.

10 Consumer ‘nudging’: Making healthy diets the most appealing choice.

11 Education on food/nutrition: Consumer awareness of sustainable food systems, and promote food/nutrition literacy.



UNTAPPED POTENTIAL

The Global Alliance for the Future of Food performed an assessment of food system integration into Nationally Determined Contributions (NDCs)⁽³⁵⁾. Under the Paris Agreement, NDCs outline how countries are dealing with climate change, including how and how much they aim to reduce greenhouse gas emissions. Despite the potential for reducing the consumption of animal-sourced foods to significantly reduce greenhouse gas emissions, none of the 14 countries assessed put forward targets for reduction. France, Germany and the USA include measures to promote healthy sustainable diets, and France includes comprehensive measures to reduce food loss and waste.

The United Kingdom (currently sitting at number 21 of the top consumers) has included several

positive actions in its National Food Strategy, for example, investment in research and innovation, consumer education, increased spending on sustainable food in public procurement, investing in alternative proteins, and reducing food waste⁽³⁶⁾. It also shows strong collaboration across policy areas in the development of food-related strategy. The report commissioned to inform the UK's food strategy, led by Henry Dimbleby, recommended a 30% reduction in meat consumption, along with a 25% reduction in high fat, salt and sugary foods, a 30% increase in fruits and vegetables and 50% increase in fibre to meet the UK's climate and nature commitments⁽³⁴⁾. Despite the 30% meat reduction being significantly less ambitious than the 71% meat reduction needed for the UK to align with the EAT-Lancet Planetary Health

Diet, this target was not incorporated into the UK's National Food Strategy.

The EU Farm to Fork Strategy also puts forward measures towards healthy sustainable diets⁽³⁷⁾. These include labelling to help consumers make healthy choices, sustainability criteria for public procurement such as organic products in schools and reducing food waste. The Farm to Fork Strategy also failed to mention reducing the production and consumption of animal-sourced foods necessary for healthy sustainable diets. It remains to be seen whether the actions included in the UK National Food and the EU Farm-to-Fork Strategies can achieve the reductions needed to meet climate and nature commitments without clear targets for reduction in animal-sourced foods.



DIETARY GUIDELINES

National food-based dietary guidelines (FBDGs) provide advice on foods, food groups and diets to provide nutrients for overall health and to prevent chronic diseases. They inform public food and nutrition, health and agricultural policies and nutrition education programmes to adopt healthy eating habits and lifestyles. Countries are increasingly incorporating aspects of sustainability in their FBDGs, including guidelines on plant-based diets and substitutes for animal-sourced foods ^(32, 38).

Countries that highlight the health and/or environmental benefits of vegetarian diets, include 10 of the top consumers of animal-sourced foods (Australia, Denmark, Finland, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden and the USA) ^(32, 39). Whereas some countries focus on the risks

and not the benefits (including France, Italy, Israel, Luxemburg and Switzerland), others have neutral recommendations without highlighting positives or negatives (Iceland, Latvia, Malta, UK, Greece), and some give no position and do not provide any information about vegetarian or vegan diets (Canada and Ireland). It should be noted that Canada does incorporate plant-based alternatives making it possible to choose a purely plant-based diet from the guidelines ⁽³²⁾.

As the top 25 consumers of animal-sourced foods show, FBDGs have a low influence on diets, as consumption far exceeds the recommendations ⁽⁴⁰⁾. For FBDGs to have a greater influence, coordinated action is needed – government departments must be aligned and not contradict healthy diet recommendations in other policy

areas. Measures to incentivise uptake of FBDGs include those listed above, particularly organisational/public procurement aligned with FBDGs, mandatory food labelling, and taxes and subsidies to encourage healthy eating.

A balanced food choice index, which was designed to score FBDGs on recommendations that cover a broad spectrum of plant-based diets containing some or no animal-based foods, showed the Netherlands have a top score of 94/100, with Australia, Switzerland, New Zealand and the UK scoring 80 or more ⁽³²⁾. Analysis of the index in relation to prioritisation of environmental policy and the importance of meat production, showed the balanced food choice index increased with a country's ecological effort, and decreased with the economic importance of meat production.



MAKING PROGRESS

In high-income countries, like Germany, consumption is declining with rising income. Concerns about animal welfare and the environment may be driving this change⁽⁶⁾. Public support there for a meat tax was stronger if the revenues are used to improve animal welfare in animals farmed for food⁽⁴¹⁾. In the assessment of Food System

integration into NDCs, Germany was the only country with a clear commitment to move away from harmful subsidies. This includes plans to promote sustainable production and consumption via greater investment in research, use of pricing instruments to incentivise alternative proteins, and actions to increase health and dietary literacy⁽³⁵⁾.

In a recent survey,

51%

of Germans reported reducing their meat consumption in the last year, 10% identified as vegetarian or vegan and 30% as 'flexitarian'

"I sometimes eat meat but I am trying to reduce my meat consumption and often choose plant-based foods instead"⁽⁴²⁾.

The German Health Minister, Prof. Dr Karl Lauterbach calls for an

80%

reduction in meat consumption

And data shows a 12.3% decline between 2011 and 2021. Although 10% of Germans identified as vegetarian or vegan, the German FBDG does not provide recommendations for plant-based diets, instead focusing on the health risks of such diets⁽³²⁾. The German FBDG is expected to be updated this year.



PLANT-BASED POLICIES AND DIETARY GUIDELINES IN DENMARK BY DANSK VEGETARISK FORENING (the Vegetarian Society of Denmark)

Some of the world's greenest dietary guidelines?

In January 2021 Denmark published a new set of official dietary guidelines with the slogan 'good for health and climate'. The dietary guidelines included a significant reduction in meat to 350g per week for all types of meat except fish and a daily intake of pulses of 100g. On average each Dane eats 5g of pulses per day, so there is still quite a way to go.

The new dietary guidelines consist of seven recommendations where the first and overarching one is 'Eat plant-rich, with variation and not too much'.

The new dietary guidelines are based on the 'Nordic Nutrition Recommendations 2012' together with recommendations from researchers at The DTU National Food Institute, which calculated a Danish diet largely based on

the report from the EAT-Lancet Commission.

A National Action Plan for Plant-Based Foods – and significant funding

In October 2021, the Danish Government and Parliament (including almost all parties) agreed on a reform of Danish agriculture and food production. A ground-breaking part of the agreement was the decision:

- To create a National Action Plan for Plant-Based Foods
- To set up a Fund for Plant-Based Food Products with 675 million DKK over eight years.

The National Action Plan will set targets and outline actions for the development of the production and consumption of plant-based foods and production in Denmark over the coming years. The Fund for

Plant-Based Food Products will support a variety of initiatives from farm to table: processing/ product development, seed development/trials, marketing/ export promotion, education, and knowledge dissemination. The funds are taken directly from an existing resource that mostly supports animal products.

Why is Denmark an important country in the global transition towards less animal production and more plant-based production?

For years, Denmark has hosted the largest animal production per capita, with two giants (Danish Crown and Arla) exporting large amounts of pork meat and dairy products. If a transition can happen in Denmark, it gives hope to the rest of the world, that it can happen anywhere.



CONCLUSION AND RECOMMENDATIONS

Without accelerated declines in high- and upper middle income high-consuming countries and with expected increases in low-income low-consuming countries, the world is on a dangerous trajectory – heading towards the collapse of many global ecosystem functions on which humanity critically depends ^(6, 7).

“We simply cannot reduce methane emissions to a safe level, nor free up the land we need for sequestering carbon, without reducing the amount of meat we eat.”

Henry Dimbleby ⁽³⁴⁾

“In the words of the United Nations Secretary-General, the world is ‘tremendously off-track’ to meet Sustainable Development Goals (SDGs), including agrifood-related ones.”

Food & Agriculture Organization of the United Nations ⁽³¹⁾

Without dietary change, we are unable to meet the nutrition targets in Sustainable Development Goal 2 to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. Overweight in the under-fives and obesity in adults are both increasing ⁽⁴³⁾.

Changing diets is a triple win – for human health, climate change and the environment, and animal welfare ⁽⁵⁾. To do this high-consumption nations must:

- Set clear targets for reducing consumption of animal-sourced foods to be aligned with the Paris Agreement and the Kunming-Montreal Global Biodiversity Framework.
- Support these reduction targets with a holistic transformative food strategy or action plan, coordinated across government departments to ensure consistency, and including a range of measures to enable uptake and meet targets for reduction.

- Align dietary guidelines with the principles of the EAT-Lancet Planetary Health Diet for healthy diets from sustainable food systems and provide advice on healthy plant-based diets.

- Ensure that subsidies are not provided for industrially farmed animals or their feed, and instead support producers of fruit, vegetables, wholegrains, legumes and nuts as well as producers who farm animals for food in nature-positive systems, adopting high environmental and animal welfare standards.

It’s clear that business as usual is no longer an option. Climate and biodiversity goals will not be achieved without food system transformation, including

reducing the production and consumption of animal-sourced foods. Reductions must come from unsustainable, intensive – factory farming – systems, that take up land to grow food for animals that could more efficiently feed humans, that harm the environment and our health as well as depriving farmed animals of a life worth living. Reduction can return land to nature and grow a greater diversity of plant-based foods. Fewer farmed animals in nature-positive, agroecological or regenerative systems – can regenerate our soils, restore and enhance biodiversity, build climate resilience, reduce soil, water and air pollution levels and give farmed animals the highest potential for a good quality of life.

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