



Protein Challenge 2040
Future Plates: Rebalancing protein
consumption for health and sustainability
Report on expert roundtable June 2019

#Protein2040

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About this report

This report summarises insights generated for and at an expert roundtable held 6th June 2019 in London, UK, hosted by the Future Plates European Working Group on Rebalancing Protein Consumption, as part of the Protein Challenge 2040. It combines a pre-read prepared by Forum for the Future, and insights from the discussions on the day (pages 12-13). Please note that it does not necessarily reflect the individual views and opinions of the people and organisations who participated in the roundtable or who are part of the Working Group.

The report is intended as a useful contribution to the question of how to achieve sustainable, healthy protein consumption. The primary audience for this report is foodservice, retail and other food industry organisations interested in understanding, and acting on, the future of sustainable, healthy protein consumption and what it means for them and for their sectors.

For example, you could use the insights and discussion questions in this report to:

- Assess how well prepared your business or sector might be for the future of healthy and sustainable protein consumption
- Identify opportunities for action, innovation and collaboration
- Engage colleagues, clients and suppliers on the future of protein consumption

Written July 2019 by Geraldine Gilbert, Forum for the Future

With thanks to the Roundtable participants and Working Group for their input.

Contact us to find out more about the Protein Challenge and our work on rebalancing protein consumption:

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Forum for the Future is a leading international sustainability non-profit with offices in London, New York, Singapore and Mumbai. Company number: 2959715. Charity number: 1040519. We specialise in addressing critical global challenges by catalysing change in key systems. For over 20 years, we've been working in partnership with business, governments and civil society to accelerate the shift toward a sustainable future. Together we are reinventing the way the world works. Find out more at www.forumforthefuture.org

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About the Protein Challenge 2040 and our work on protein consumption

The **Protein Challenge 2040** is an international multi-stakeholder collaboration, run by Forum for the Future, exploring how to ensure a future in which everyone has access to healthy, sustainable and affordable sources of protein. Several years into this pioneering initiative, we are currently working on two key areas of impact: addressing **protein production**, with a particular focus on how to scale up use of **sustainable animal feeds**; and rebalancing **protein consumption**, by enabling action to reduce animal protein and increase alternatives, especially plant proteins, in human diets. www.forumforthefuture.org/protein-challenge

Our work on **rebalancing protein consumption** focuses on the role of food businesses in enabling the necessary shift in eating habits. Food service companies, suppliers and retailers play a crucial role in almost every meal we eat. We are working with partners across food industry sectors to accelerate and scale up their progress in enabling rebalanced protein consumption.

Our US workstream is testing approaches for driving rebalanced protein consumption starting at school, by spurring innovation in the provision of tasty, healthy and affordable plant-based options for school chefs, and developing education and behaviour change campaigns for children and their communities to drive uptake of the meals. We are piloting this work with ten US school districts representing 38 million meals a year, with ambitions to scale what we learn from this work, including to other food service contexts.

Our European workstream is focused on two connected and complementary activities: firstly, bringing to life what “good” looks like in **practice** for different food industry sectors, in terms of mainstreaming rebalanced protein consumption, drawing on a wide range of available guidance and insight; and secondly, **transforming culinary skills provision**, to **equip chefs with the knowledge and skills** needed to create and deliver the rebalanced protein dishes, menus and products of the future. We are piloting ways to integrate more knowledge about sustainability and nutrition, and more skills for preparing rebalanced dishes, into mainstream chefs training courses.

EU Working Group



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About the June 2019 roundtable: context and aims

Science-based guidance about what sustainable and healthy protein consumption could or should be like is increasingly available and high profile – and **the general trajectory and scale of change needed are ever more clear**: achieving a sustainable protein system will require a “**new normal**” for **global protein consumption**, with significantly reduced consumption of animal proteins and increased consumption of alternatives, especially plant-based proteins – including, and especially, in European diets.

But although the *direction* is becoming clearer, the *destination in practice* is less obvious – for one, the **recommendations vary** in format, scope, timelines and underlying assumptions. So while food industry leaders and innovators recognise the need to rebalance protein consumption, it's not so easy to understand how far or how fast that change should go; or what the full implications would be of reaching a good destination. There is plenty of innovation, investment, thought leadership and experimentation happening, but how much further do we need to go?

To better understand the implications of the change that's got to come, we believe it is useful and important to explore the destination more – looking beyond today's innovations and levels of consumer interest (even though they are rising), stretching our imaginations to better understand what the new mainstream could look like in future. From there we believe we can more clearly identify the opportunities for positive change, and bring the full story to life in order to engage those around us and enable more progress – for our respective organisations as well as on a pre-competitive or collective level.

What do different food sectors look like in practice, once rebalanced protein consumption has become the norm? How well are we doing now and what more do we need to get there? How do we successfully mainstream rebalanced protein consumption, how do we manage the transition?

The Protein Challenge 2040 European Working Group on Rebalancing Protein Consumption, along with selected special guests, came together in June 2019 for an expert roundtable, in order: to **better understand the destination on sustainable, healthy protein consumption**, by looking for common threads across available guidance; to **bring that to life for the food industry**, with corresponding practical guidance for different food sectors; and to **enable more action**, by establishing what is needed to enable different food sectors to make more practical progress, whether within or across organisations and sectors.

Roundtable participants

Organisation	Name	Role
Ahold Delhaize	Karin Bogaers	Director Product Sustainability & Innovation
BaxterStorey	Mike Hanson	Head of Sustainable Business
BaxterStorey	Stephanie Ferguson	Head of Food and Sustainability for WeWork
British Nutrition Foundation	Prof. Judy Buttriss	Director General
Firmenich	Birgit Schleifenbaum	Senior Director Pioneering Innovation, Flavors
Sainsbury's	Alexa Masterson-Jones	Trends & Innovation Manager
Soil Association	Rob Percival	Head of Policy (food and health)
The Sustainable Restaurant Association	Rosie Rayner-Law	Membership Project Assistant
University of West London	Peter Cross	Senior lecturer
WWF	Sarah Halevy	Acting Sustainable Diets Manager
Forum for the Future	Geraldine Gilbert	Principal Strategist
Forum for the Future	Kat Campbell	Senior Project Manager
Forum for the Future	Roberta Iley	Principal Change Designer

1.1 What does “good” look like for healthy, sustainable protein consumption?

- European diets today are relatively high in meat and dairy. While the picture varies across groups (e.g. men vs women), on average Europeans eat more protein than needed for health requirements, the majority of which comes from meat and dairy. In fact, many Europeans eat more red and processed meat than is considered healthy, and not enough veg/plant-based foods to ensure a balanced diet which also contains enough fibre. Recommendations are now emerging that combine environmental science with nutritional science, and further support the need to rebalance sources of protein in diets, **flipping the balance between animal and plant proteins**.
- The most recent study, by the EAT-Lancet Commission, was particularly high profile and has triggered extensive debate across food industry and food-related stakeholders. Overall, the available guidance for the future of protein consumption comes in different shapes and sizes and with different timelines, and very little of it has so far been translated into practical guidance about outcomes or full implications for food sectors.
- Leaders in the food industry already acting on protein consumption are innovating and experimenting with ingredients, products, ranges, dishes, menus and initiatives that rebalance animal vs plant proteins. But it's not clear how far they might need to go with these efforts to help get sustainable, healthy protein consumption to become mainstream. **How will we know when we've got to the right place? When do we need to get there? What does “good” look like for different food sectors if they're enabling healthy, sustainable protein consumption in line with what the science is telling us is needed?**
- To provide a starting point for some progress on these questions, Forum for the Future compared a **selection of relevant expert sources**, to look at their messages or recommendations on rebalancing protein consumption. The aim was to see if we could pull out common targets or ranges for different sources of protein, as a way of defining the “destination” for rebalanced protein consumption. There are more reports and studies available to date – this is just a snapshot. So it's not an exhaustive or perfect exercise – it's a starting point for an **expert conversation at the roundtable and beyond**.

1.2 Comparing different guidance on rebalancing protein consumption

Source [see appendix for details]	Summary of main recommendations relevant to rebalancing protein consumption	
	Plant-based consumption	Animal-based consumption
EAT-Lancet Commission (2019) By 2050....	Global: >2x fruit, veg, legumes, nuts Europe: 15 times (15x) more nuts and seeds	Global: >50% less red meat Global: max 98g red meat (pork, beef, lamb), 203g poultry, 196g fish per week Europe: 77% less red meat
Springmann et al, <i>Nature</i> (2018) By 2050....	Global: 3x more beans and pulses Global: 4x more nuts and seeds Europe: 4-6x more beans and pulses	Global: 75% less beef, 90% less pork, 50% fewer eggs Europe: 90% less beef, pork, lamb; 60% less milk
WWF Livewell Plate 2030 (2017)* By 2030...	UK: 2.5x more plant protein (legumes and meat replacers) UK: 1.6x more veg in general	UK: 35% less animal protein (meat, fish, egg) UK: 78% less beef/veal, 70% less poultry UK: 3x more farmed fish (no change to wild caught fish) UK: Dairy: from 179 to 186g/day. Cheese: reduce from 14 to 8g/day
Poore and Nemecek in <i>Science</i> 2018	100% plant-based diets could reduce food's emissions by 49% compared to 2010	Reducing by 50%, with a focus on highest-impact producers, achieves 71% of the reductions achieved by a fully plant-based diet
2030 Sustainable Development Goals, and the Chefs' Manifesto	No specific guidance in the SDGs. But the Chefs Manifesto, which outlines how chefs can contribute to the goals, includes in its 8 themes: "A focus on plant-based ingredients: Make vegetables, beans & pulses the centre of your dishes"	No specific guidance in the SDGs Chefs Manifesto: "Use less, and better, meat."
National dietary guidelines in general (based on FReSH review)	Daily consumption of legumes/pulses. NB Achieving eg the UK Eatwell Guide would lead to GHG emissions reductions.	No more than 500g cooked meat/week (Netherlands: no more than 300g) Dairy: 2-4 portions/day (250-300g) / Fish: 1-2x per week / Eggs: 3-4/week

*WWF Livewell Plate: NB Not aspirational targets, but the result of conservative estimates on what's required to uphold the Paris Agreement on Climate change

1.3 What does this tell us? Looking for common threads...

- There is **no perfect or definitive way** (so far) of describing the “destination” for healthy and sustainable protein consumption.
 - Across these sources, the variations in aims, methodology and underlying assumptions mean that, unsurprisingly, it’s hard to pull out a final conclusion about what the destination looks like for rebalanced protein consumption in European diets.
 - The EAT-Lancet Commission is a valiant attempt, but still comes with caveats, assumptions, and also some criticisms.
- That said, **taking the various sources as a set is useful** and does **confirm the general trajectory**: that rebalanced protein consumption needs to become the norm – for both human and planetary health – with dramatically lower consumption of animal proteins (esp. beef/red meat), and big increases in plant protein consumption – and ideally as soon as possible within the next 30 years, given the urgency of our global health and environmental challenges. Based on our selection of sources, for European diets this might look something like:

- 77-90% less red meat (beef, pork, lamb), 35-50% fewer eggs, achieved between 2030 and 2050
- 15 times more nuts and seeds
- 2-6 times more pulses and beans
- Max 1 (98g) portion of red meat (pork, beef, lamb), 1-2 (203g) of poultry, 1-2 (196g) of fish per week

- **National dietary guidelines are already a helpful, established milestone to aim for in that direction**: achieving those implies a big drop in protein consumption, especially meat, and so would have positive environmental as well as health impacts.
- Alongside flipping animal vs plant protein consumption in diets, a sustainable protein system will only be achieved by also **reducing food waste and loss by at least half by 2030**, and ensuring **sustainable protein production**, with **sustainable animal feed** and **regenerative forms of production** that repair the natural world and sequester carbon.

2. Discussion questions for food businesses/sectors: What are the implications of rebalanced protein consumption?

Imagine a world where healthy and sustainable diets with rebalanced protein consumption are the norm – mainly plant-based eating, with animal protein consumed in smaller quantities and/or far less frequently. What would different food sectors look **like in practice**?

Foodservice/restaurants

- What would most menus look like?
- What would most dishes look like?
- What skills/knowledge would chefs be applying?
- What would kitchen layouts look like?
- Would some settings be veggie by default? (eg schools, hospitals)
- Who might serve animal protein and when?

Retail

- What might store layouts look like?
- How big would the meat or fish sections be?
- Would some stores be vegetarian by default?
- What skills would product developers be applying?
- Where would revenue and margins come from compared to today?

Skills providers

- What would mainstream chefs training look like?
- Would meat/fish skills be taught to everyone? Would they be taught as an additional course?
- What skills/knowledge would chefs need to get the best from plant ingredients? From sustainably produced animal proteins?

Procurement/supply chain

- Where might plant proteins come from?
- Where might animal proteins come from?
- What skills/knowledge would be applied to supply low-impact animal protein?
- How might logistics/distribution look different from today?

3. Discussion questions for food businesses/sectors: How are we doing? What would enable more progress?

How are we doing? Where are we on this journey?

- What's going well in our organisations, our sectors, in terms of understanding and acting on rebalancing protein consumption?
- What's going well across the food "system" (i.e. including food industry as well as other food stakeholders in e.g. civil society, health...)
- What innovations or activities (products, initiatives...) are we proud of and excited about?
- What is going less well? What barriers to progress are we experiencing?

What needs to change?

- Where is the boundary between competitive and non-competitive issues and activities? Do we see that shifting?
- Which intervention points might be most promising? (e.g. engaging or influencing suppliers, investors, decision-makers within our organisations, customers/clients, consumers, government...; investment in R&D, innovation...)
- Where do you feel you can act most effectively, or could do in future?
- What would you need from others to help you do it?
- What could the Protein Challenge 2040 workstream take forward to enable progress?

4.1 Insights from the roundtable discussion: reflections, challenges, implications

- **Keep moving in the right direction:** More work on defining exact targets for ideal amounts of animal vs plant proteins in human diets is not what's most needed for food businesses – there is reasonable consensus on the general direction of travel, and agreement that we have a long way to go. **More action to move in the right direction** is what's most needed.
- **Supply challenges:** For organisations that are already acting on increasing provision of dishes, menus or products with rebalanced protein (i.e. less or no animal protein and more plant-protein), **securing the supply of plant-protein ingredients** of the right quality, from sustainable sources, and in big enough volumes, is a challenge and a barrier to progress.
- **Cost perception challenge:** Preparing rebalanced dishes, in particular vegetarian or vegan dishes, is generally more labour- and time-intensive than dishes based on animal proteins. This can potentially clash with the perception that dishes with less meat/fish should be cheaper.
- **Health challenges:** Action to drive rebalanced protein consumption for sustainability **shouldn't lose sight of health.** Food businesses should be careful not to create or reinforce false perceptions of plant-based dishes as inherently more healthy (“vegan junk food” is still junk food) – and should aim to help move towards healthier eating regardless (rather than towards unhealthy ultra-processed plant-based products, for example). This includes understanding and managing possible nutritional trade-offs and unintended consequences of switching protein sources, and ensuring other nutrient requirements can still be met, besides protein.
- **Room for treats:** That said, in a world where rebalanced protein consumption has become the norm, by definition we would expect to see plant-based ingredients become the norm across all food categories, from ingredients for scratch cooking to convenience foods to luxuries/treats.
- **Practical implications:** Rebalanced protein consumption becoming the norm would entail quite significant changes in store layouts, menus etc. Some of these shifts might emerge sooner rather than later, for example “protein aisles” in supermarkets rather than separate meat and veg protein sections.

4.2 Insights from the roundtable discussion: barriers and enablers to mainstreaming rebalanced protein consumption

What would help progress across the food industry:

- **Transforming culinary skills training to integrate rebalancing protein (both academic and on-the-job) – and making clear the industry demand for this:** chefs and product developers need to learn new skills and knowledge (including about sustainable procurement and behavioural science).
- **Simple messaging:** for consumers, but also for e.g. buyers within food businesses to help them understand and engage with what's happening and what's needed.
- **Consistent terminology across businesses,** to improve consumer understanding and help to create a movement (could marketing expertise help with this?).
- **Learning from behavioural science** to ensure the success of products, ranges, dishes etc in each context (e.g. where should they sit on the menu or in a store/aisle?).
- **How to respond to, tackle or pre-empt hostile/backlash responses** to rebalancing messages, for example due to consumers' cultural sensitivities, or from parties that feel threatened (e.g. meat producers)
- **Clear demand signals** from leading foodservice customers to say they want the shift to rebalanced proteins
- **Policy:** for example influencing food provision and food education in schools
- **Better consumer skills/knowledge** on how to cook tasty plant proteins – but also, making the most of the potential of foodservice and restaurants to inspire changes in other parts of peoples lives (for example with recipe cards to take home)

5. What next for Protein Challenge 2040 Future Plates?

The Protein Challenge 2040 Future Plates work in Europe will be focusing on two main activities in the coming months:

- 1. Further exploration of what good looks like for different food industry sectors in the “new normal” of rebalanced protein.** The aim is to bring to life the practical implications for businesses, in order to: help them better understand where they need to get to and how they’re doing today; engage colleagues, suppliers, customers and industry peers in the change that’s needed; identify more opportunities for progress; and shape strategies for addressing barriers and enablers of that journey. This might include creating resources to illustrate the future (e.g. concept menus, kitchens, stores), and/or looking at how to amplify demand signals between different parts of the food industry to encourage more action (e.g. from customers to suppliers, or from businesses to skills providers).
- 2. Chefs training pilot with the University of West London,** to test first steps towards transforming chefs training for the future. We are preparing a programme of lessons and resources that start to integrate more knowledge and skills about sustainability, nutrition and rebalanced protein dishes, into mainstream chefs training. This will be tested with culinary students starting in September 2019.

Contact us to find out more or if you’re interested in getting involved: g.gilbert@forumforthefuture.org

For more information about the Protein Challenge 2040 and other activities and workstreams within the initiative, visit: www.forumforthefuture.org/protein-challenge

Appendix 1:

Example sources of guidance on rebalancing protein consumption

- EAT-Lancet Commission 2019
- Options for keeping the food system within environmental limits, Springmann et al., *Nature* 562 // Oct 2018
- Livewell plates: Eating for 2 degrees, WWF // Aug 2017 (updated from 2011)
- Reducing food's environmental impacts through producers and consumers, J. Poore, T. Nemecek, *Science* // June 2018
- UN 2030 Sustainable Development Goals
- UK National Dietary Guidelines – revised 2016
- France guidelines – revised 2019
- Canada guidelines – revised 2019
- FReSH insight report: Sustainable and Healthy diets: reviewing existing dietary guidelines and identifying gaps for future action, WBCSD // Oct 2018

EAT-Lancet Commission on Healthy Diets From Sustainable Food Systems - Food in The Anthropocene // Jan 2019

<https://eatforum.org/eat-lancet-commission/eat-lancet-commission-summary-report/>

What is it?

- First attempt to reach global consensus on healthy diets and sustainable food production, assessing whether and how “planetary health diets” can be achieved for 10 billion people by 2050 (on basis of 2,500 calories/day and meeting nutritional needs).
- EAT Foundation and Lancet Medical Journal convened 37 leading scientists from 16 countries across disciplines, including health, agriculture, political sciences, environmental sustainability, to develop global scientific targets for healthy diets and sustainable food production. Focused on final consumption (healthy diets) and production (sustainable food production) – due to their impacts.
- Assessed existing science to develop global targets, and integrated them into a common framework, a “safe operating space” for food systems, indicating which diets & production practices together enable achievement of the SDGs and the Paris Agreement. Includes a reference diet, but also ranges for consumption of different foods.
- Underlying assumptions: that the world will follow the Paris Agreement (global warming to below 2°C, aiming for 1.5°C), and decarbonise the global energy system by 2050; global agricultural transition toward sustainable food production, with shift to land use becoming a net sink of carbon.

Headlines on rebalancing protein consumption:

- **More than doubling** in consumption of healthy foods such as fruits, **vegetables, legumes and nuts**
- **Globally: a greater than 50% reduction** in global consumption of less healthy foods such as added sugars and **red meat** (i.e. primarily by reducing excessive consumption in wealthier countries)
- **For Europeans: 77% less red meat, 15 times more nuts and seeds.**
- For North Americans: 84% less red meat; six times more beans and lentils.
- “Aim to consume no more than 98g of red meat (pork, beef, lamb), 203g of poultry and 196g of fish per week”
- Reference diet: one beef burger and 2 fish servings/week; most protein from pulses and nuts. Glass of milk/day, some cheese/ butter, 1-2 eggs/week. Half the plate is fruit and veg; 1/3 is wholegrain cereals.

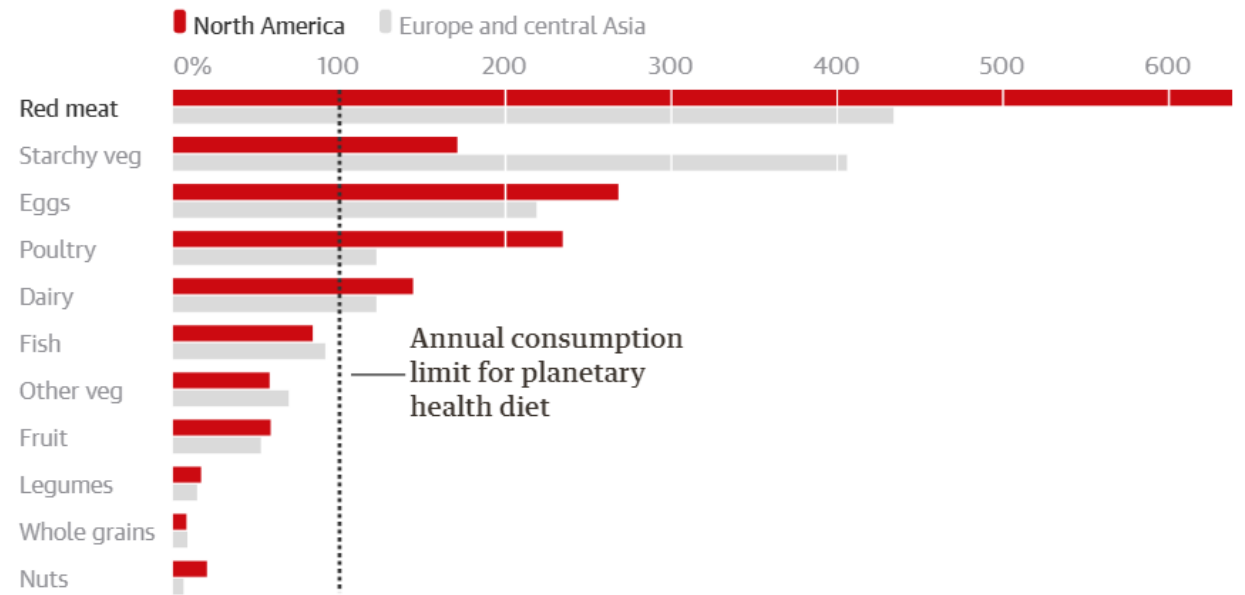
EAT-Lancet Commission on Healthy Diets From Sustainable Food Systems - Food in The Anthropocene // Jan 2019

Target 1 Healthy Diets

Healthy diets have an optimal caloric intake and consist largely of a diversity of plant-based foods, low amounts of animal source foods, contain unsaturated rather than saturated fats, and limited amounts of refined grains, highly processed foods and added sugars.

	Macronutrient intake grams per day (possible range)	Caloric intake kcal per day
 Whole grains Rice, wheat, corn and other	232	811
 Tubers or starchy vegetables Potatoes and cassava	50 (0-100)	39
 Vegetables All vegetables	300 (200-600)	78
 Fruits All fruits	200 (100-300)	126
 Dairy foods Whole milk or equivalents	250 (0-500)	153
Protein sources		
 Beef, lamb and pork	14 (0-28)	30
 Chicken and other poultry	29 (0-58)	62
 Eggs	13 (0-25)	19
 Fish	28 (0-100)	40
 Legumes	75 (0-100)	284
 Nuts	50 (0-75)	291
Added fats		
 Unsaturated oils	40 (20-80)	354
 Saturated oils	11.8 (0-11.8)	96
Added sugars		
All sugars	31 (0-31)	120

Table 1
Scientific targets for a planetary health diet, with possible ranges, for an intake of 2500 kcal/day.

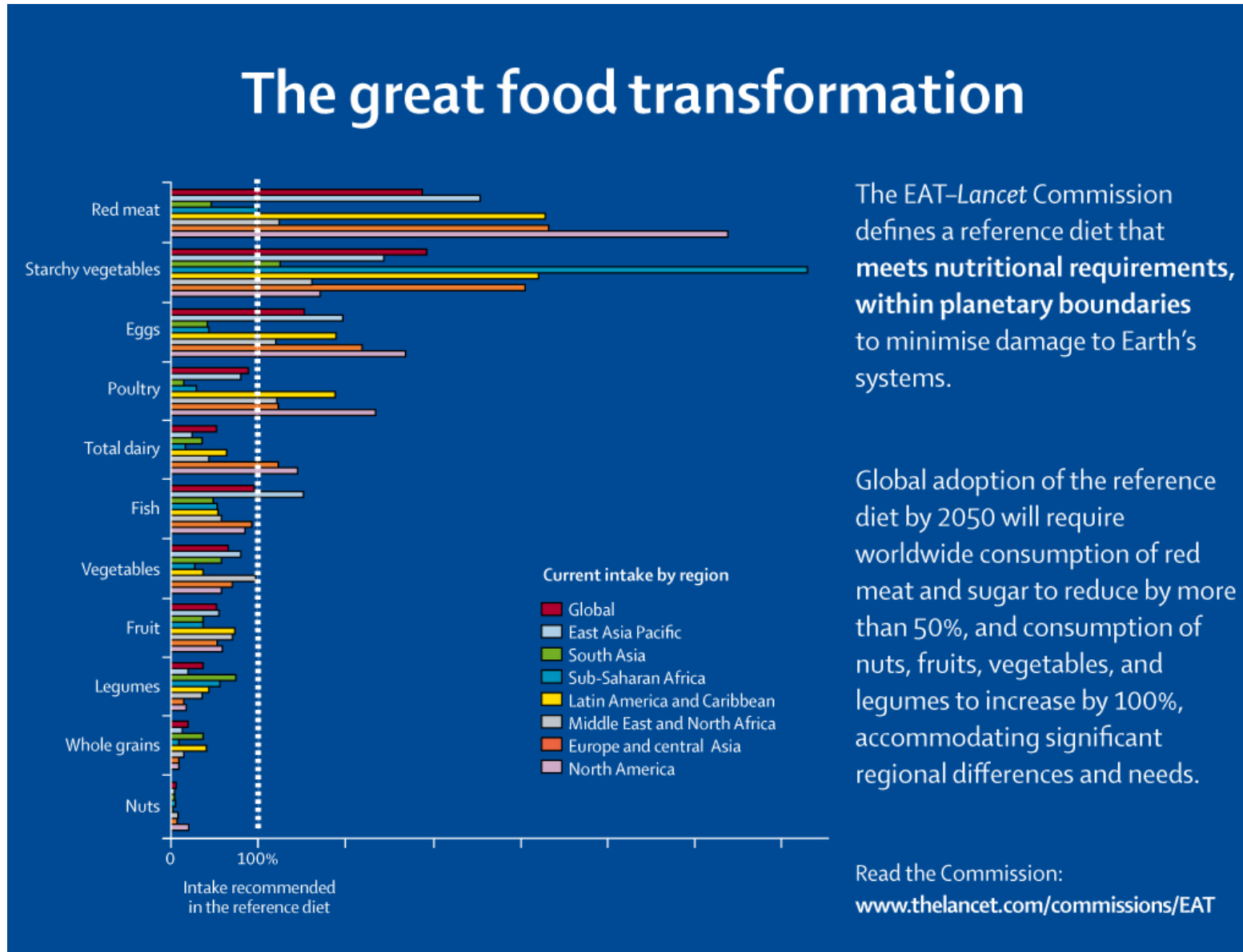


Guardian graphic. Source: EAT-Lancet Commission

<https://www.theguardian.com/environment/2019/jan/16/new-plant-focused-diet-would-transform-planets-future-say-scientists>

<https://eatforum.org/eat-lancet-commission/eat-lancet-commission-summary-report/>

EAT-Lancet: regional dietary changes to align with recommended intakes



Options for keeping the food system within environmental limits

Springmann et al., *Nature* 562 // Oct 2018

What is it?

- Comprehensive analysis combining data from every country to assess the impact of food production on the global environment, and looking at possible responses for feeding 10 billion people by 2050 within safe planetary boundaries.
- Led by University of Oxford, published in the journal *Nature*
- Funded by EAT as part of the EAT-Lancet Commission for Food, Planet and Health and by Wellcome's "Our Planet, Our Health" partnership on Livestock Environment and People.
- Options explored include dietary changes towards healthier, more plant-based diets; improvements in technologies and management, reductions in food loss and waste. No single measure enough - a synergistic combination of measures needed to sufficiently mitigate projected environmental pressures.

Headlines on rebalancing protein consumption:

- A global shift to a "flexitarian" diet needed to keep climate change even under 2C, let alone 1.5C.
- Globally: 75% less beef, 90% less pork, half the number of eggs, three times as many beans and pulses, four times as many nuts and seeds.
- For western countries: beef consumption needs to fall by 90%, milk by 60%
- For western countries: 4-6 times more beans and pulses.

<https://www.nature.com/articles/s41586-018-0594-0>

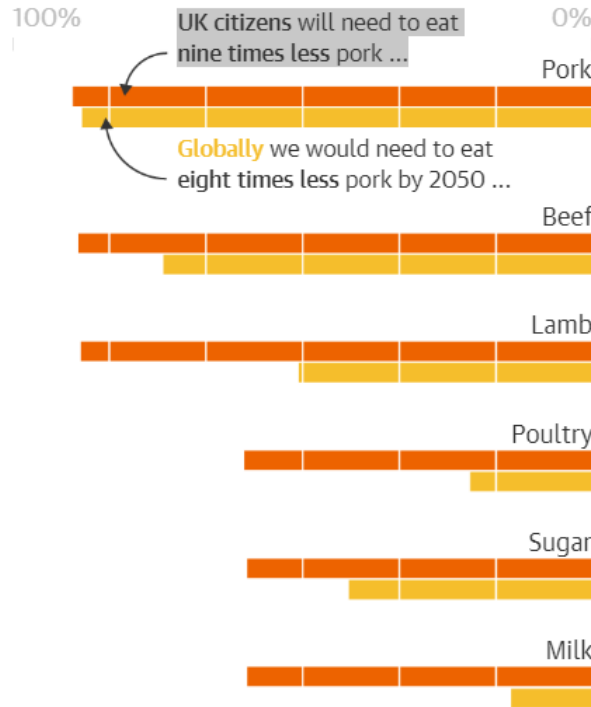
<https://www.theguardian.com/environment/2018/oct/10/huge-reduction-in-meat-eating-essential-to-avoid-climate-breakdown>

<http://www.futureoffood.ox.ac.uk/news/researchers-set-out-options-keeping-food-system-within-planetary-limits>

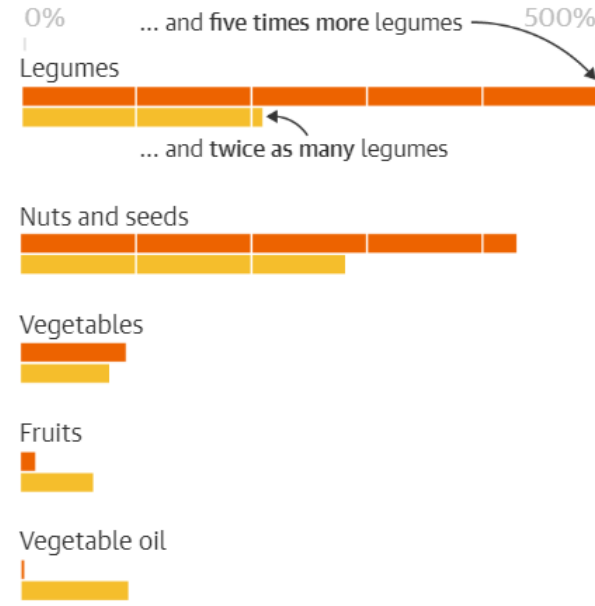
Options for keeping the food system within environmental limits

Springmann et al., *Nature* 562 // Oct 2018

To keep global temperature rises to under 2C by 2050, we need to eat much less of these foods ...



... and much more of these



Guardian graphic. Source: Nature

<https://www.theguardian.com/environment/2018/oct/10/huge-reduction-in-meat-eating-essential-to-avoid-climate-breakdown>



Livewell Plate 2030: Eating for 2 degrees, WWF // Aug 2017 (updated from 2011)

What is it?

- Work by WWF that looks at what to eat between now and 2030 in the UK to meet Paris Agreement commitments and reduce other environmental impacts including water use and land footprint, while maintaining a familiar diet.
- Aims for a 30% reduction in carbon footprint by 2030 compared to 1990 levels.
- The guidance is based on meeting nutritional needs within a set of environmental constraints, while making the fewest possible changes compared to current diets. Includes guidance for adults, elderly, adolescents and vegans.
- Compares a 2030 diet to current consumption (based on UK National Diet and Nutrition Survey).

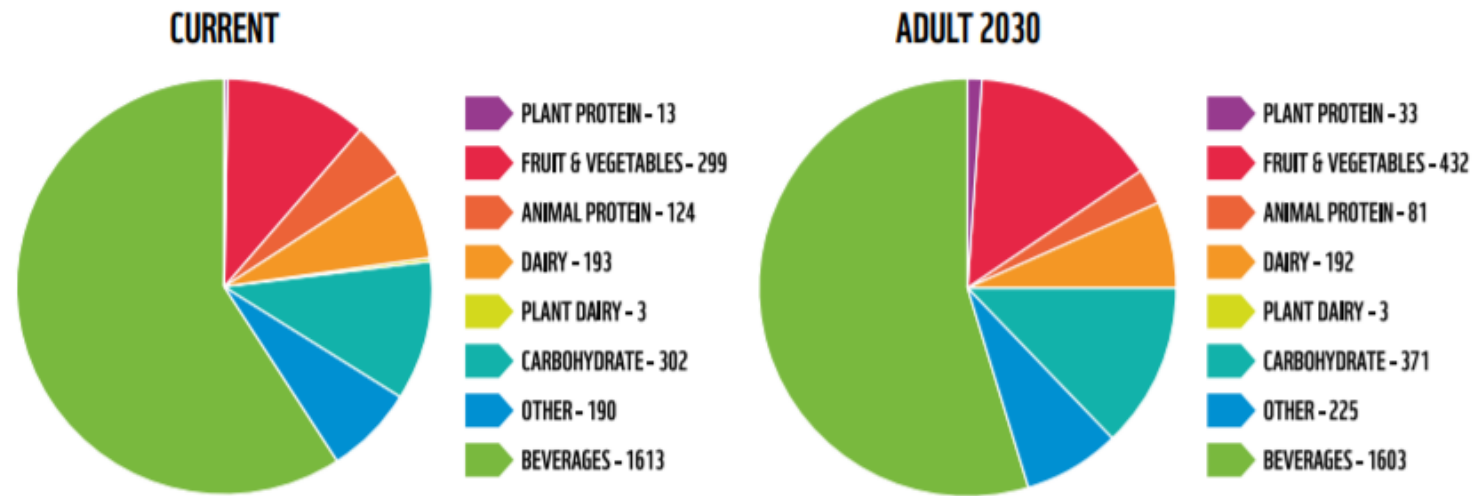
Headlines about rebalancing protein consumption:

- Increase plant protein consumption (legumes and meat replacers) two and a half times, from 13g/day to 33g/day
- Decrease animal protein consumption (meat, fish, egg) by 35%, from 124g/day to 81g/day
- Beef/veal: decrease from 18g/day to 4g/day, 78%
- Poultry: decrease from 30g/day to 9g/day, 70%
- Dairy: slight increase from 179g/day to 186g/day. Cheese: decrease from 14g/day to 8g/day
- Wild caught fish: no change (19g/day); farmed fish: increase three times from 7g/day to 21g/day
- Veg in general: 160% increase from 146g/day to 232g/day

https://www.wwf.org.uk/sites/default/files/2017-09/WWF_Livewell_Plates_Summary_Report_Sept2017_Web.pdf

Livewell Plate 2030: Eating for 2 degrees, WWF // Aug 2017 (updated from 2011)

Figure 3: Pie-charts of the composition of the current adult diet (NDNS) and the adult Livewell Plate for 2030. Amounts are in grams/day. Please see Table 5 for the detailed composition of the Livewell Plates.



Please note: *Animal protein* includes meat, fish and egg; *Plant protein* includes legumes and meat replacers; *Plant dairy* includes soy drink and soy yoghurt; *Carbohydrate* includes grains and grain-based products, starchy roots and tubers, and sugar and confectionery.

	ADULT CURRENT	ADULT 2020	ADULT 2030
	g/day	g/day	g/day
Legumes, nuts and oilseeds	11	28	28
Fruit and fruit products	92	131	131
Beef & veal	18	4	4
Pork	7	6	5
Lamb	6	4	4
Poultry	30	8	9
Processed meat	29	12	12
Meat replacers	2	6	5
Fish wild-caught	19	19	19
Fish aquaculture	7	21	21
Dairy	179	187	186
Cheese	14	5	6
Dairy replacers	3	3	3
Eggs and egg products	8	8	7
Sugar and confectionary	19	3	3
Fats and oils	13	49	49
Fruit and vegetable juices	61	68	68
Non-alcoholic beverages	608	598	598
Alcoholic beverages	280	280	280
Drinking water	725	726	726
Herbs, spices and condiments	30	30	30
Composite food	129	126	122
Snacks, desserts, and other foods	17	24	25
Grains and grain-based products	193	261	262
Vegetables and vegetable products	146	232	232
Starchy roots and tubers	90	106	106



Reducing food's environmental impacts through producers and consumers

J. Poore, T. Nemecek, *Science* // June 2018

What is it?

- Assessment of full environmental impacts of foods, from farm to fork, on land use, climate change emissions, freshwater use, water pollution, and air pollution. Based on data from 40,000 farms in 119 countries across 40 food products representing 90% of all that is eaten.
- Led by Oxford University and Swiss agricultural research institute Agroscope, published in the journal *Science*.
- Suggests that without meat and dairy consumption, global farmland use could be reduced by more than 75%.
- Shows huge variability between different ways of producing the same food, e.g. beef cattle from deforested land results in 12 times more greenhouse gases and 50 times more land used than grazing on rich natural pasture. But even the lowest impact beef leads to six times more greenhouse gases and 36 times more land used than plant protein such as peas.

Headlines on rebalancing protein consumption:

- Moving to a plant-based diet could reduce food's emissions by 49% compared to 2010.
- Reducing consumption of animal products by 50% with a focus on avoiding the highest-impact producers achieves 71% of the plant-based diet's GHG emission reduction, compared to 2010
- Confirms potential for reducing negative environmental impacts by reducing animal protein consumption.

<https://science.sciencemag.org/content/360/6392/987.full?ijkey=ffyeW1F0oSl6k&keytype=ref&siteid=sci>

<https://www.theguardian.com/environment/2018/may/31/avoiding-meat-and-dairy-is-single-biggest-way-to-reduce-your-impact-on-earth>

<http://www.ox.ac.uk/news/2018-06-01-new-estimates-environmental-cost-food>

UN 2030 Sustainable Development Goals

What is it?

- 17 goals for the world (governments, businesses, civil society, citizens...) to get behind to ensure a stable and prosperous world for all by 2030.
- No specific goals or targets on rebalancing protein consumption per se
- However, several of the goals relate to sustainable food production or consumption. Within that, achieving sustainable, healthy protein consumption would significantly contribute to many of the goals, and will be necessary in order to meet the goals.



SUSTAINABLE DEVELOPMENT GOAL 2

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SUSTAINABLE DEVELOPMENT GOAL 3

Ensure healthy lives and promote well-being for all at all ages

SUSTAINABLE DEVELOPMENT GOAL 12

Ensure sustainable consumption and production patterns

SUSTAINABLE DEVELOPMENT GOAL 13

Take urgent action to combat climate change and its impacts*

SUSTAINABLE DEVELOPMENT GOAL 14

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

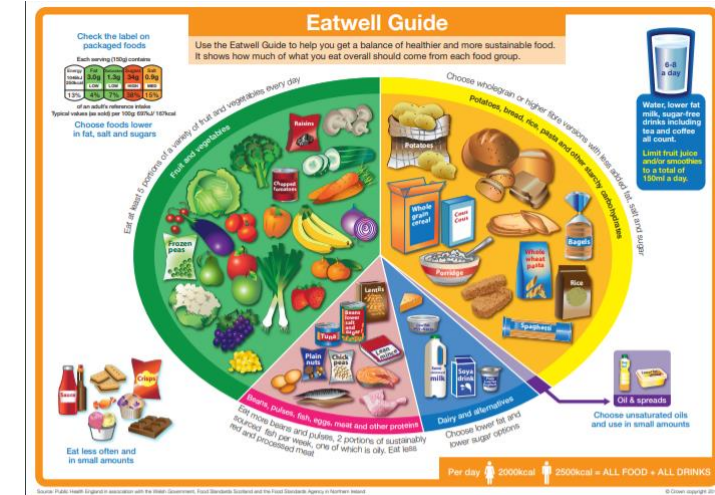
SUSTAINABLE DEVELOPMENT GOAL 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

UK National Dietary Guidelines – revised 2016

What is it?

- UK national dietary guidelines: defines government recommendations on eating healthily and achieving a balanced diet.
- The Carbon Trust estimates that simply moving from current eating patterns (NDNS 2010/2011) to the Eatwell Guide recommendations would deliver a 31% reduction in GHG emissions, 17% saving on water use and 34% reduction in land use.
- A more recent found that UK emissions could fall by 17% if everyone ate in line with the healthy eating guidelines. In other high-income countries, including the US, Canada and Japan, a switch to a nationally-recommended diet could cause emissions to fall by between 13% and 25%.



Headlines about rebalancing protein consumption:

- Compared to previous guidelines (2007 Eatwell Plate), the Eatwell Guide puts more emphasis on plant-proteins as more environmentally sustainable options in their food group – it advises more beans and pulses and less red and processed meat, as well as two portions of sustainably sourced fish, one of which should be oily.
- The names of the food group segments have been updated to place emphasis on certain food products within a food group that can be considered more environmentally sustainable.
- It suggests “some dairy or dairy alternatives (such as soya drinks and yoghurts)”

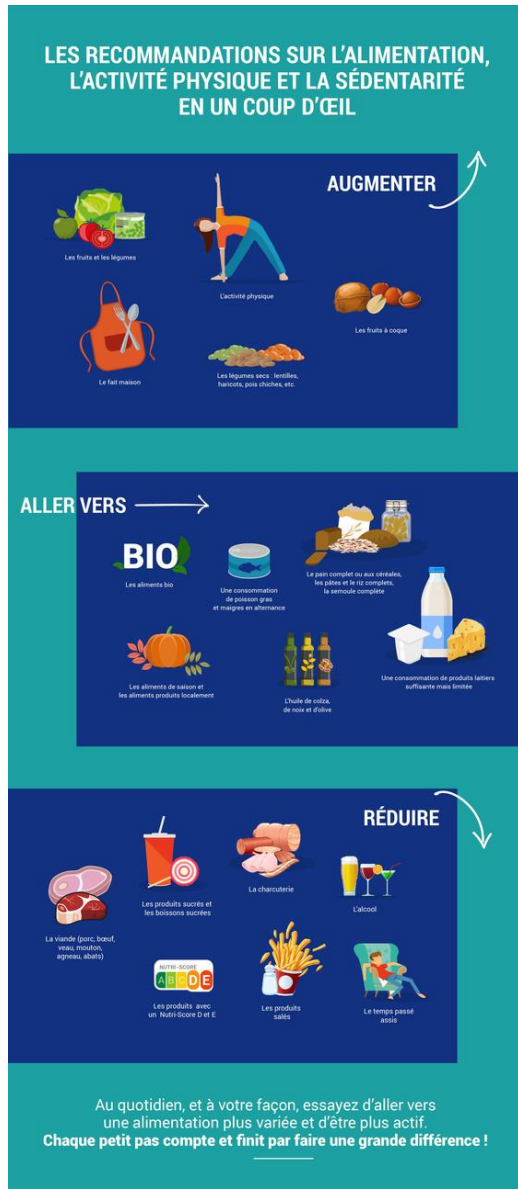
<https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/>

<https://www.carbontrust.com/media/672635/phe-sustainable-diets.pdf>

<https://www.carbonbrief.org/uk-could-cut-food-emissions-17-per-cent-by-sticking-to-healthy-diet>

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/528201/Eatwell_guide_whats_changed_and_why.pdf

France National Dietary Guidelines – revised 2019



What is it?

- The French public health agency Sante Publique France is updating the national nutrition guidelines, with the five-year process set to finish in 2021, but with some amendments introduced in 2019.
- The new guidelines will encourage higher consumption of produce, whole grains, plant proteins, and heart-healthy fats such as olive and walnut oils over animal fats.

Headlines on rebalancing protein consumption:

- Increase consumption of legumes and pulses to at least twice a week, and of nuts
- Go towards a sufficient but modest consumption of dairy products
- Reduce consumption of cured meats (no more than 25g/day) and meat excluding poultry (pork, beef, veal, mutton, lamb, offal) (no more than 500g per week)
- Maintain twice-weekly consumption of fish including an oily fish.

<https://www.foodnavigator.com/Article/2019/01/28/2019-on-the-pulse-France-champions-nuts-legumes-and-wholegrains-in-dietary-guidance>

<https://www.anses.fr/en/content/anses-updates-its-food-consumption-guidelines-french-population>

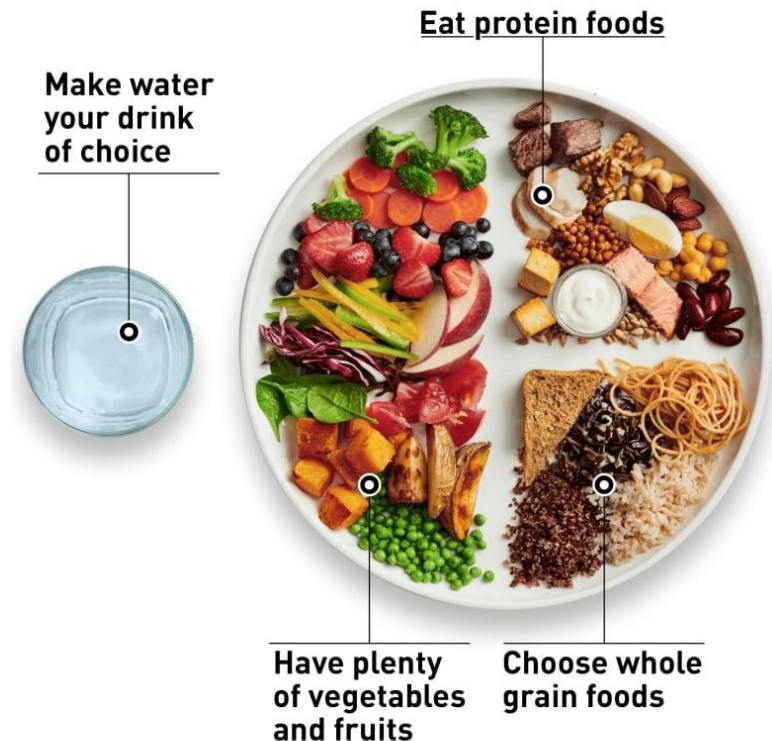
Canada National Dietary Guidelines – revised 2019

Headlines about rebalancing protein consumption:

The guidelines include a focus on plant proteins:

- “Eat plenty of vegetables and fruits, whole grain foods and protein foods. Choose protein foods that come from plants more often.”
- “Plant-based foods can include: vegetables and fruits, whole grain foods, plant-based protein foods”
- “Here are some easy ways to eat more protein foods that come from plants:
 - Add soft tofu to a blended soup to make it thicker and creamier.
 - Try a bean salad, lentil and rice pilaf or a bowl of vegetarian chili for lunch.
 - Spread hummus on the inside of a whole grain pita and fill with vegetables such as romaine lettuce and shredded carrots.
 - Each week, plan a couple of meatless meals. As your main course, try using:
 - beans in a burrito
 - tofu in a vegetable stir-fry
 - chickpeas and beans in tacos
 - lentils in a soup, stew or casserole”

Canada’s food guide recommendations



CBC NEWS

Source: Health Canada

FORUM
FOR THE
FUTURE

FReSH insight report: Sustainable and Healthy diets: reviewing existing dietary guidelines and identifying gaps for future action, WBCSD // Oct 2018

What is it?

- A review of 12 countries' national dietary guidelines by the WBCSD's "Food Reform for Sustainability and Health" Initiative, including France, Italy, Spain and the UK in Europe, as well as countries from every other region.
- Review included looking at guidelines that only address health, and those that have explicitly started to integrate a food sustainability related angle too.

Headlines about rebalancing protein consumption:

- A recurring common guideline (for both sustainability and conventional guidelines) is to eat a diversity of protein-rich foods, including those from plant sources.
- The five countries with the clearest sustainability guidelines (China, Germany, Netherlands, Sweden, UK) give guidance on type and amounts to be consumed and are very much aligned, with guidance amounts of **no more than 500/600 g cooked meat per week** (45–70 g per day). These amounts are not usually split into meat types (red, poultry, etc.). The Netherlands indicates maximum red meat consumption of 300 g per week.
- Countries with sustainability guidelines mostly recommend consuming fish one or two times per week.
- All sustainability guidelines recommend daily consumption (2-4 portions) of low-fat, low-sugar dairy products. Some (Qatar, Sweden) recommend choosing dairy products fortified with vitamin D or plant-based alternatives fortified with calcium and vitamin D.
- Countries outside Europe tend to give clearer and more specific guidance on consuming legumes/pulses on a daily basis

https://docs.wbcsd.org/2018/10/FReSH_Sustainable_and_Healthy_Diets_web.pdf

FReSH insight report: Sustainable and Healthy diets: reviewing existing dietary guidelines and identifying gaps for future action, WBCSD // Oct 2018



Nutrient	Amount	General	Impact
Energy	Varies	To match requirements (by age, gender and activity)	♥ ♣
Meat - red	No more than 500/600 g cooked meat per week (45–70 g per day); ideally don't eat every day	Restrict amount (non-ruminant preferred); add more only for nutritional adequacy.	♥ ♣
Meat - poultry		Restrict amount (white preferred); add more only for nutritional adequacy	♥ ♣
Meat - processed		Eat less	♥ ♣
Fish	One to three times a week (adults 20–40 g/d, children 5–10 g/d)	Low-fat, oily fish recommended, sustainably sourced	♥ ♣
Dairy	Two to four times a day (200–250 g toddlers, adolescent/ adult 250–300 g)	Low-fat, low sugar, potentially fortified with calcium/ vitamin D Plant alternatives fortified	♥
Egg	Three to four eggs a week (~180–240 g)	Loose guidance	♥
Nuts/seeds	15–18 g/day (7–8 g/day for children)	Eat salt-free nuts daily	♥
Non-meat protein	Daily consumption	Legumes and pulses (beans, peas, lentils) daily	♥ ♣
Sugar	Less than 10% of energy	Limit, especially in beverages	♥
Fats/oils	<35% of energy in total <10% energy from SFA ~10% energy from polyunsaturated fatty acids (PUFA)	Choose liquid, unsaturated oils; limit trans-fat; reduce SFA	♥
Fruits/juices		Whole fruit preferred over juices (maximum of 150g of juice per day)	♥
Vegetables	Five portions of fruits and vegetables daily, equivalent to ~500g (toddlers 175 g, adolescents 260–350 g)	Prefer high-fiber vegetables, dark vegetables daily	♥
Grains/ wholegrains	55% energy (adult: three to five servings 150 g/day, children: two to three servings 50–100 g/day)	Eat at each meal, switch from refined to wholegrain; at least half of grains to be wholegrains	♥
Sodium	<6 g/day salt (<2,300 mg Na/day)		♥
Water	~2 liters/day (varies)	Preferred beverage daily	♥ ♣

♥ Health ♣ Environmental sustainability



Appendix 2:

Examples of sources of practical guidance for food industry

- Chefs Manifesto
- EAT-Lancet strategies for achieving a “Great Food Transformation”
- EAT-Lancet Summary Brief for Business: business solutions
- EAT-Lancet Brief for Food Service Professionals
- EAT/WBCSD FReSH Science to Solutions Dialogues
- Sustainable Restaurant Association tips and guidance

SDG2 Advocacy Hub / Chefs' Manifesto: by chefs for chefs

- The SDG2 Advocacy Hub worked with chefs all over the world to create a Chefs' Manifesto - a thematic framework outlining how chefs can contribute to the SDGs through simple, practical actions. They asked 100+ chefs what food issues matter most to them, and the role they want to play in inspiring and influencing change. They then developed eight thematic areas, aligned with the SDGs, that chefs are most passionate about working on:
 1. Ingredients grown with respect for the earth & its oceans
 2. **Protection of biodiversity & improved animal welfare**
 3. Investment in livelihoods
 4. Value natural resources & reduce waste
 5. Celebration of local & seasonal food
 6. **A focus on plant-based ingredients**
 7. Education on food safety & healthy diets
 8. Nutritious food that is accessible & affordable for all
- The Chefs' Manifesto Action Plan is a practical guide, with **simple actions chefs can take** in their kitchens, classrooms and communities to deliver a better food system for all.

<http://www.sdg2advocacyhub.org/chefmanifesto>



SDG2 Advocacy Hub / Chefs' Manifesto: focus on plant based ingredients

What can you do in your own kitchens?

- **Lead by example.** Make vegetables, beans & pulses the centre of your dishes.
- **Lead by example.** Use less, and better, meat.
- **Lead by example.** Champion plant-based proteins on your menus and in your restaurants. Be creative in describing veg based dishes.
- **Lead by example.** Avoid using words like "vegan" / "vegetarian" which may be off-putting.

What can you ask of others?

- **Advocate** for all chef training to be updated to include promotion of plant-based dishes.

Chef Tips:

- Scream flavor & whisper health
- Mastering vegetable cookery is hard and is not typically taught to young cooks, until now:
 - Chefs should work to develop skills in cooking a greater diversity of plant-based ingredients in the most desirable way with both classic & innovative techniques to make plant-based dishes the more desirable option
- Make the better choice, the easier choice: Plant-based dishes should be at the forefront- first seen, more appealing, most tasty, convenient, talked about & celebrated by our culinarians
- Use descriptive dish titles:
 - Use 'indulgent' language
 - Highlight unique ingredient(s) and cooking techniques
 - Celebrate what the dish has vs. has not. Skip terms like healthy, low fat, vegan as they do not create excitement in an audience you are looking to welcome
 - Tell a personal story or use cultural descriptors i.e. Great Grandma's Tuscan Summer Vegetable Stew or Moroccan Eggplant Tagine

EAT-Lancet strategies for achieving a “Great Food Transformation”

1. Seek international and national commitment to shift toward healthy diets:

Increased consumption of plant-based foods, incl. fruits, vegetables, nuts, seeds, whole grains, while in many settings substantially limiting animal source foods.

[..Make] healthy foods more available, accessible and affordable in place of unhealthier alternatives, improving information & food marketing, investing in public health information & sustainability education, implementing food-based dietary guidelines, using health care services to deliver dietary advice and interventions

2. Reorient agricultural priorities, from producing high quantities of food to producing healthy food

3. Sustainably intensify food production to increase high-quality output

4. Strong and coordinated governance of land and oceans

5. At least halve food losses and waste, in line with the UN SDGs

<https://eatforum.org/eat-lancet-commission/eat-lancet-commission-summary-report/>

Business solutions

Promote food products contributing to healthy and sustainable diets

- **Embrace a diverse and sustainable mix of proteins**, increasing diverse plant-based protein sources.
- **Expand and standardize food labeling** to include information on the health and sustainability implications of products, including suggested serving sizes and their environmental costs.
- **Drive transparent marketing practices** that promote the consumption of healthy and sustainable foods.
- **Develop strategies** for making healthy ingredients and food more accessible and affordable, especially in emerging markets.

Produce and supply food sustainably

- **Decrease GHG emissions** across operations and supply chains by, for example, using natural climate solutions, no till, low till, and precision-agriculture technology.
- **Increase water use efficiency** with improved water management and technology.
- **Improve animal farming practices** by scaling up sustainable feeds and using diverse, locally-relevant integrated production systems.
- **Support farmers** in this transition with training and development, grants and recognition.
- **Align business strategies and R&D** to provide nutritious and affordable foods sourced sustainably.

Halve food loss and waste across your value chain in line with the SDGs

- **Use the Food Loss and Waste Protocol** to set a benchmark and quantify food loss and waste in terms of nutrition and environmental impacts.
- **Build business capabilities** through education and training.
- **Help consumers** reduce their food waste with ideas and apps for using leftovers, portion sizes.
- **Deploy logistics solutions and technology** to improve storage, and smart packaging solutions.



What can you do?

Change culture by changing menus

- ◆ Chefs and other culinary professionals are well-positioned to make healthy and sustainable foods delicious by applying unique insights, skills and creativity to craft next-generation models of innovation in food service and hospitality. This is integral to bring the public along on a journey of discovery and adoption of the planetary health diet.

Emphasize the benefits of dietary shifts

- ◆ Eating healthy foods from sustainable food systems is only partially about decreasing the intake of certain foods. Place the emphasis on eating more of the healthy options rather than simply focusing on decreasing the intake of unhealthy foods.

Explore new foods and mix up menus

- ◆ Focus on the array of new flavors, ingredients and menu options that the planetary health diet opens up by embarking on a lifetime of discovery. Commit to regularly menuing new ingredients to keep planetary health diets innovative and exciting.

Lead with messaging around flavor

- ◆ Use culinary techniques and source the best-tasting ingredients to ensure that healthy and sustainable options are as desirable as, or more so than, the alternatives. Making the healthiest and most sustainable options by far the tastiest and appealing is critical.

Work with suppliers and consumers

- ◆ Whether they are managing a cafeteria at Google or running a school program in Burkina Faso, food service professionals have tremendous leverage with both food suppliers and consumers. Work with both and utilize the positioning of food service professionals as primary pathways to nudge consumers toward planetary health diets.

Focus on both quality and quantity

- ◆ Use culinary strategies to promote satiety, value and pleasure from food without fueling overconsumption. Actions from using smaller plates and bowls to avoiding dining hall trays and all-you-can-eat buffets will also help reduce food waste.

Waste not, want not

- ◆ Minimize food waste through careful planning and portioning and be proactive by using the entire product at every chance. Converting unusually shaped or sized produce into dishes where shape and size do not matter can also be helpful.

Let plants take center stage

- ◆ Minimize food waste through careful planning and portioning and be proactive by using the entire product at every chance. Converting unusually shaped or sized produce into dishes where shape and size do not matter can also be helpful.

Embrace cultural food influences

- ◆ Look to a variety of traditional, plant-forward food cultures across the globe for inspiration around both flavor strategies and to craft tasty dishes on restricted budgets through cultural exchanges.

Bring biodiversity to the table

- ◆ Bold conservation targets require collaboration between farmers and farming communities to maintain habitats on or around farms and to enable the safe passage of wildlife. Source ingredients from farmers and suppliers who contribute to efforts for biodiversity.

Share the farmer's story

- ◆ Convey to diners the important contributions of farmers to conservation and carbon capturing efforts in protecting environmental sustainability through menus and marketing materials. This will, in turn, help create demand for healthy and sustainably produced foods, which translates into a “win-win” dynamic for food service professionals and farmers alike.

EAT/WBCSD FReSH Science to Solutions Dialogues: three future narratives to help focus business action // Dec 2018

In 2030, all people will be consuming healthy foods produced sustainably.

In 2030, all people have access to affordable delicious and healthy food options and consume them in appropriate amounts. Diets are more diverse, with increased amounts of fruits, vegetables, legumes and nuts consumed daily. Consumers move meat to the side of the plate, mix it into dishes or reserve it for celebrations, and most people limit consumption to 600 grams per week. Consumers use sugar sparingly, consuming no more than 30 grams of added sugar daily. The relative risks linked to hunger-, diabetes- and diet-related coronary mortality drop to below 5% (compared to 20% in 2015)

Solutions

- Harmonized, science-based dietary and sustainability guidelines allow business, governments and civil society to coordinate actions without restricting local traditions, contexts and needs.
- Businesses have efficient sourcing and procurement standards to source healthy ingredients from sustainable production systems.
- Business internalizes sustainability, ending consumer confusion on differentiated standards.
- Business offers diverse, delicious and healthy product lines matching marketing efforts.
- Business offers everyone the opportunity to easily access healthy, nutritious and affordable food across all food groups, with an emphasis on fruits, vegetables, nuts and legumes.
- Packaging and marketing clearly indicate portion sizes and consumption frequency, and limit waste.
- Businesses harness their marketing experience and expertise to nudge people towards changes in lifestyle, eating behavior and social norms.

In 2030, we will be producing the right food in the right way in the right place.

In 2030, farmers have increased the production of fruits, vegetables, nuts and legumes by between 100 and 250% globally. The amount of meat consumed is lower in Western style diets for health reasons, and higher where undernutrition persists. Animal- and plant-based protein production efficiency, sustainability and diversification are the norm. Grains remain an important commodity for human consumption, with a growing diversity of grains produced and traded globally and reduced gaps in local productivity. Farmers produce food and receive financial rewards for environmental services generated, notably carbon capture, water quality and biodiversity conservation, increasing the value of rural communities while helping maintain affordable food for consumers.

Solutions

- Businesses offer new services, farming inputs and support that promote productive and regenerative farming practices related to nutritious crops with reduced food loss.
- Private and public sector research rapidly fills the development gap for sustainable increases in fruit, vegetable, nut and legume production (e.g., improved seeds, machinery and inputs).
- Business has re-evaluated the sustainable production of plant- and animal-based proteins, including developing better farming practices, rethinking feeds and feed composition, making much better use of breed diversity and circular production systems, and reducing losses.
- Business shifts to service-oriented business models, with products that work with – rather than against – environmental goals.
- The public and private sectors redirect support and financial reward systems to pay for healthy foods and environmental services – notably carbon, water and biodiversity.
- Markets for a diversity of fruits, vegetables, nuts and legumes have opened, creating new business opportunities for farmers and farming communities.
- Businesses' crop production and purchasing strategies provide more environmental and social services (e.g., agroforestry and intercropping), thereby meeting consumer demand.

In 2030, global trade will mirror global health and environmental targets.

By 2030, national governments and trade agreements have agreed upon and enforce strict land conversion limits to secure environmental protection, including biological carbon stocks, clean water and quality habitat for biodiversity. Nations trade carbon and water internationally in recognition of each country's natural capital. Business increases the number of crops underpinning dietary health and traded as international commodities by a factor of ten and source crops from locations where they are well adapted, resilient and profitable for rural communities. Furthermore, livestock production takes place in ways that best use land (e.g., grazing at appropriate levels on grasslands) and preserve ecosystems.

Solutions

- National land-use plans include and enforce – and international trade agreements recognize – global environmental limits and policies.
- Fair trading in natural capital becomes the norm by valuing a growing number and diversity of commodities produced in highly productive environments with low environmental risk.
- Financial products and services promote fair trading, supported by regulation.
- Organizations accelerate agricultural research and development, extension services and public-private partnerships to close yield gaps in fruit, vegetable, nut and legume crops whose production gaps lag far behind global need and emerging demand.
- Trade supports local economies by creating demand for a diversity of high-quality, healthy ingredients integrating local supply chains into global markets.

Sustainable Restaurant Association tips and guidance

The SRA offers a range of resources and tips for foodservice/restaurants on how to rebalance animal vs plant protein in dishes and ensure they sell thanks to great flavours, menu descriptions and presentation.

FLEX YOUR MENU

Identify opportunities on your menu to increase and improve your offer for people looking to eat more plant-based meals:

- Remove or reduce meat in a few dishes, (especially those where it was not the centrepiece to begin with). Recommended daily portions range from 70-130 grams, depending on the type of animal protein (including fish) you're serving.
- Experiment with more plant protein in your dishes, and feature more flexitarian or semi-vegetarian dishes on the menu.
- Add new and exciting veg-led options to your menu. There are many creative opportunities to not only increase but also improve the veg and plant protein offers on your menu.

<https://thesra.org/campaign/serve-more-veg-better-meat/>

MAKE VEG A STAR *not a side*

*this isn't about vegetarianism or veganism
it's about a changing mainstream*

Many chefs, and a growing number of diners, recognise that a culinary culture in which meat, fish, and dairy are the focus of the plate is bad for the planet and our health. In response, lots of restaurants are creating delicious dishes which make plant protein and vegetables the stars of the show.

Many would argue that an element of animal protein in a dish is absolutely acceptable, and we agree, but how much of it do we really need? And how can you help people put veg and plant proteins at the centre of their plates?

FLEX YOUR MENU

Identify opportunities on your menu to increase and improve your offer for people looking to eat more plant-based meals.

- **Remove or reduce meat in a few dishes.** Especially those where it was not the centrepiece to begin with. Recommended daily portions range from 70-130 grams, depending on the type of animal protein (including fish) you're serving. In general we are eating far more than we need.
- **Experiment with more plant protein in your dishes,** and feature more flexitarian or semi-vegetarian dishes on the menu.
- **Add new and exciting veg-led options to your menu.** There are many creative opportunities to not only increase but also improve the veg and plant protein offers on your menu.

VEG REIMAGINED

Once you have aud your offer you can try different approaches to increase people's curiosity. Our members have used a variety of methods to do this:

- Serve only meat-free starters or support meat-free initiatives, such as Meat-Free Mondays.
- Set goals to increase your veg and plant offer. Increasing the amount of veggie dishes or the amount of veg and plants in each dish.
- Make sure vegetarians always have at least 2 choices of mains.
- Make meat an addition to veg-led plates.
- Promote vegetarian and/or vegan daily specials.
- Tell the story behind the menu, showcase local suppliers, promote sustainable innovation, praise good practice and high standards, share a story with your customers. Let them know they are part of the positive change and that every bite makes a difference.

MAKE VEG A STAR: TOP TIPS

Choice

- Start by choosing your veg and/or plant protein. Decide whether your dish will be based on fava beans, carrots, peas, haricot beans, etc.
- Choose good quality sustainable produce the same way you would for a beef, pork, or chicken dish.
- Choose your vegetable based on seasonality/locality. If you are looking to impress, perhaps look for interesting heritage varieties (carrots for example can also be found in red, white, purple and yellow varieties each with different flavour profiles and appearances).

Flavour

- Work with different techniques to harness the potential of umami flavours.
- Use spices to enhance the natural flavour profile of your veg and plants.
- Work with textures to help make your veg and plants more interesting. Try various cooking techniques such as BBQ, grilled or cooked over a fire, smoked, roasted, steamed, poached, pureed etc.

Presentation

- Rethink your plate-scapes. Meat tends to sit at the top of the food hierarchy in terms of people's perceived value on food. It is often the centrepiece in plating presentation. If you want to change that perception, you have to change the way veg and plants are presented.
- Think about the visual opportunities with veg and plants, using various colours, showing depth through textures and garnishes (even use emulsions to raise the complexity and skill behind the dish, if that suits your brand).

Logos at the bottom include: Eating Better, Friends of the Earth, WWF, Forum for the Future, and others.





Protein Challenge 2040
Future Plates: Rebalancing protein consumption for health and sustainability
Report on expert roundtable June 2019
#Protein2040

Forum for the Future is a leading international sustainability non-profit with offices in London, New York, Singapore and Mumbai. Company number: 2959715. Charity number: 1040519.

We specialise in addressing critical global challenges by catalysing change in key systems. For over 20 years, we've been working in partnership with business, governments and civil society to accelerate the shift toward a sustainable future. Together we are reinventing the way the world works. Find out more at www.forumforthefuture.org

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