



Sustainability in Food Policies

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UCC
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Coláiste na hOllscoile Corcaigh

School of
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Current crisis

- **Global syndemic crisis:**
 - > Over nutrition
 - > Undernutrition
 - > Climate change
- **Covid-19 exasberating food insecurity**
- **Political Unrest/war in Ukraine**
- **Role of the agri-food sector**
- **Public movement on climate action**
- **Pressure on Governments & the food industry to act**



Sustainable Development Goals

•INSERT SDG Logo



The State of Food and Nutrition



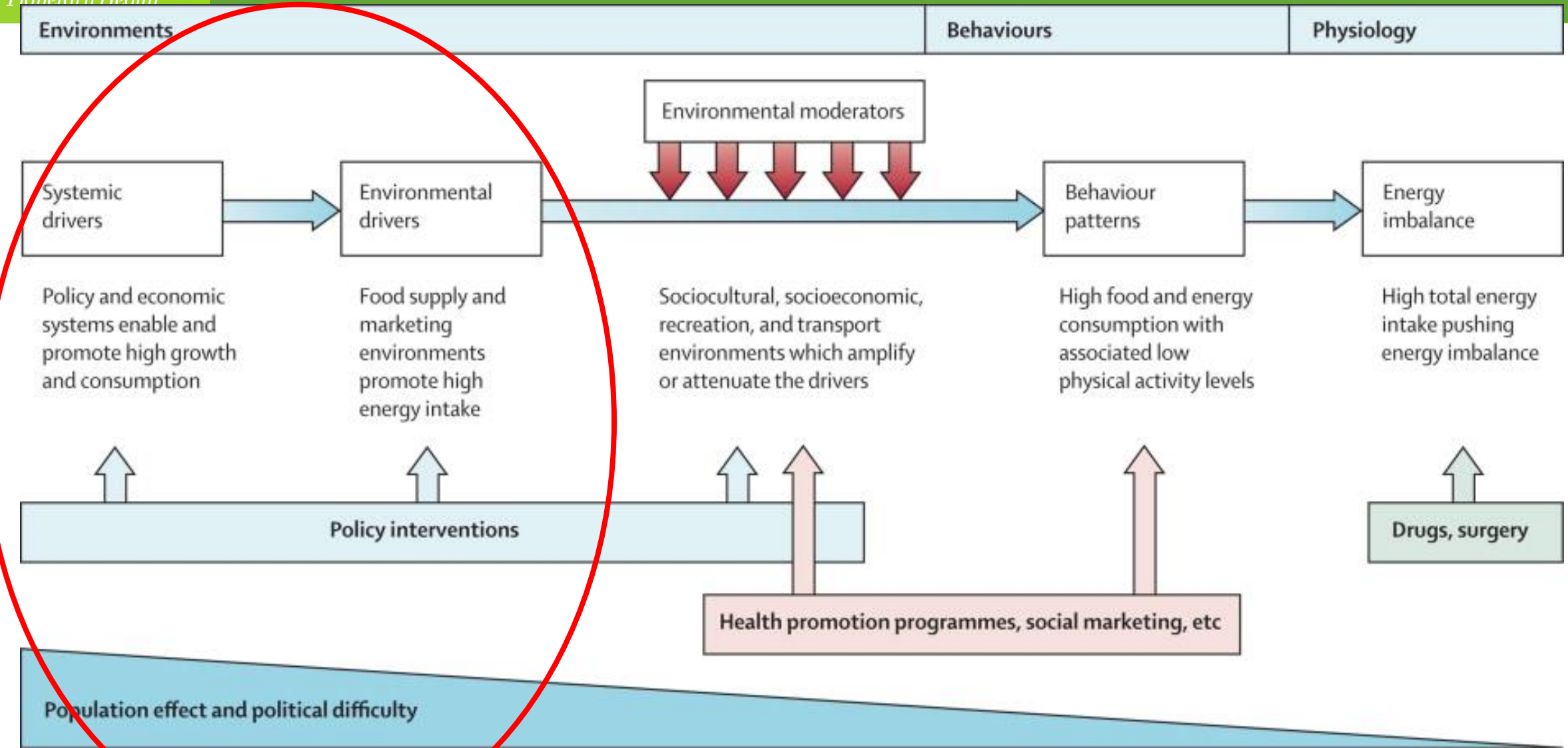
<https://www.fao.org/interactive/state-of-food-security-nutrition/en/>

FAO, IFAD, UNICEF, WFP and WHO. 2022. *The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable*. Rome, FAO. <https://doi.org/10.4060/cc0639en>

Nutritional health is a fundamental resource for the social, cultural and economic wellbeing of local, national and global communities

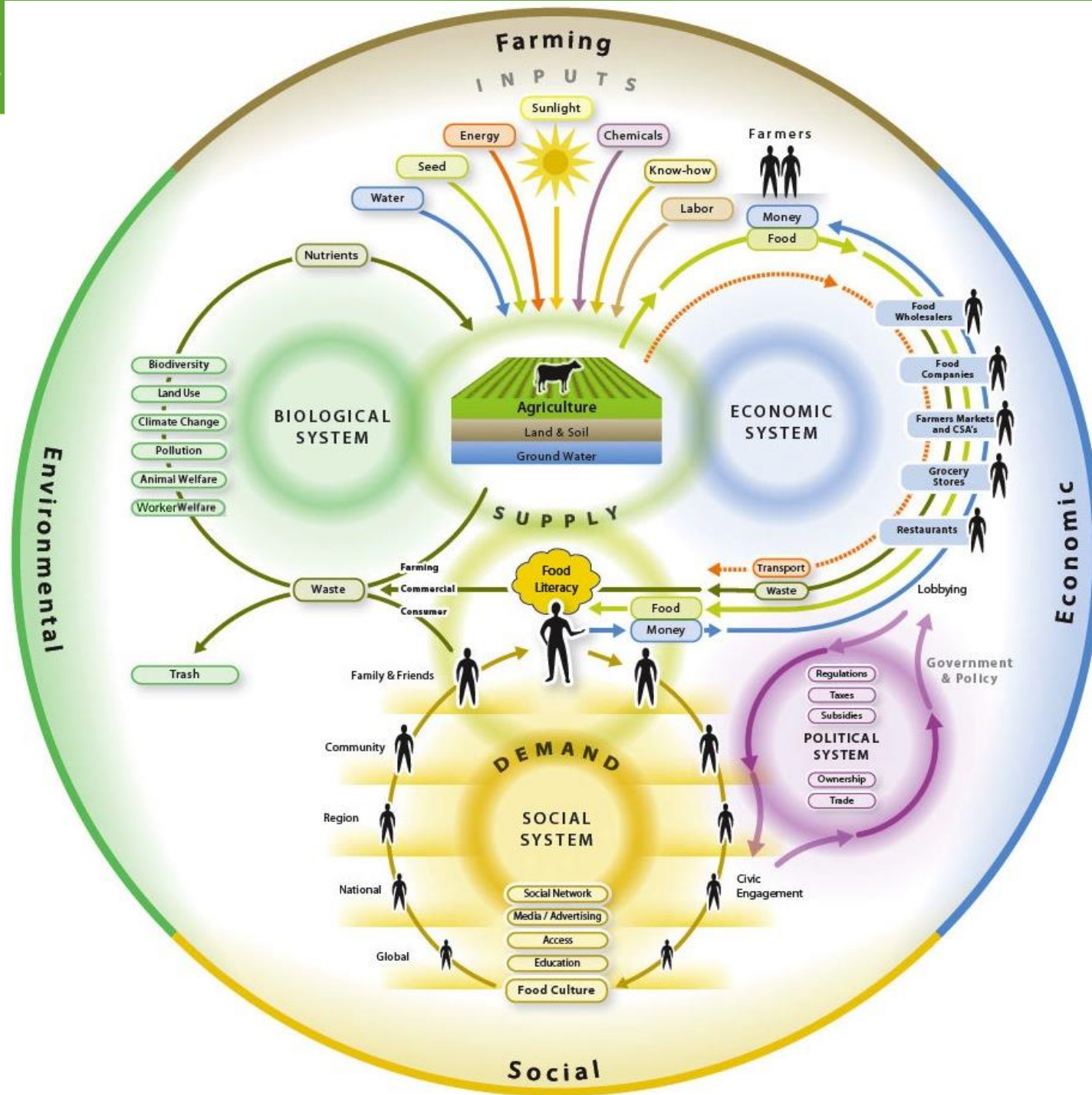
Need to move away from the individual blame game





The Food System

- Complex
- Operates at multiple levels
- From 'Farm to Flush'
- Current food system enabling increased supply of cheap, palatable, energy dense foods; increased food mobility leading to increased distributions and convenience and more persuasive and pervasive food marketing
- Our food environments are influenced by the wider food system





Food environments shape what food we buy and eat.

Availability, accessibility, affordability

Source: European Public Health Alliance

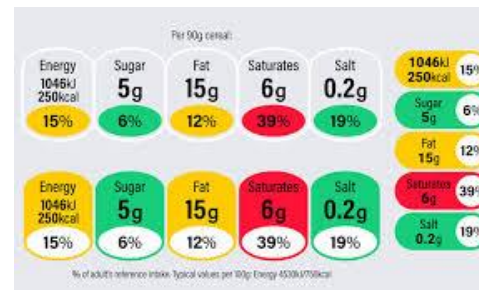
FOODPATH:



Is the healthier & sustainable choice the easier choice?



If not....why not????



Is the healthier & sustainable choice the more affordable choice?



If not....why not????



Structural government policies

- Structural, government policies can play an important role to create healthy food environments, supporting the entire population to make healthy food choices;
- More effective in improving population diets than interventions which address individual behaviour, such as health education.
- Environmental approaches are not only more effective but also more cost effective
- Such structural policies could also be especially beneficial for the most vulnerable groups and thus contribute to a reduction in socioeconomic inequalities in dietary intake



Sustainable Diets



What is a sustainable diet?



Food and Agriculture
Organization of the
United Nations



World Health
Organization

**SUSTAINABLE HEALTHY DIETS
GUIDING PRINCIPLES**

**Inequality
Inequity**

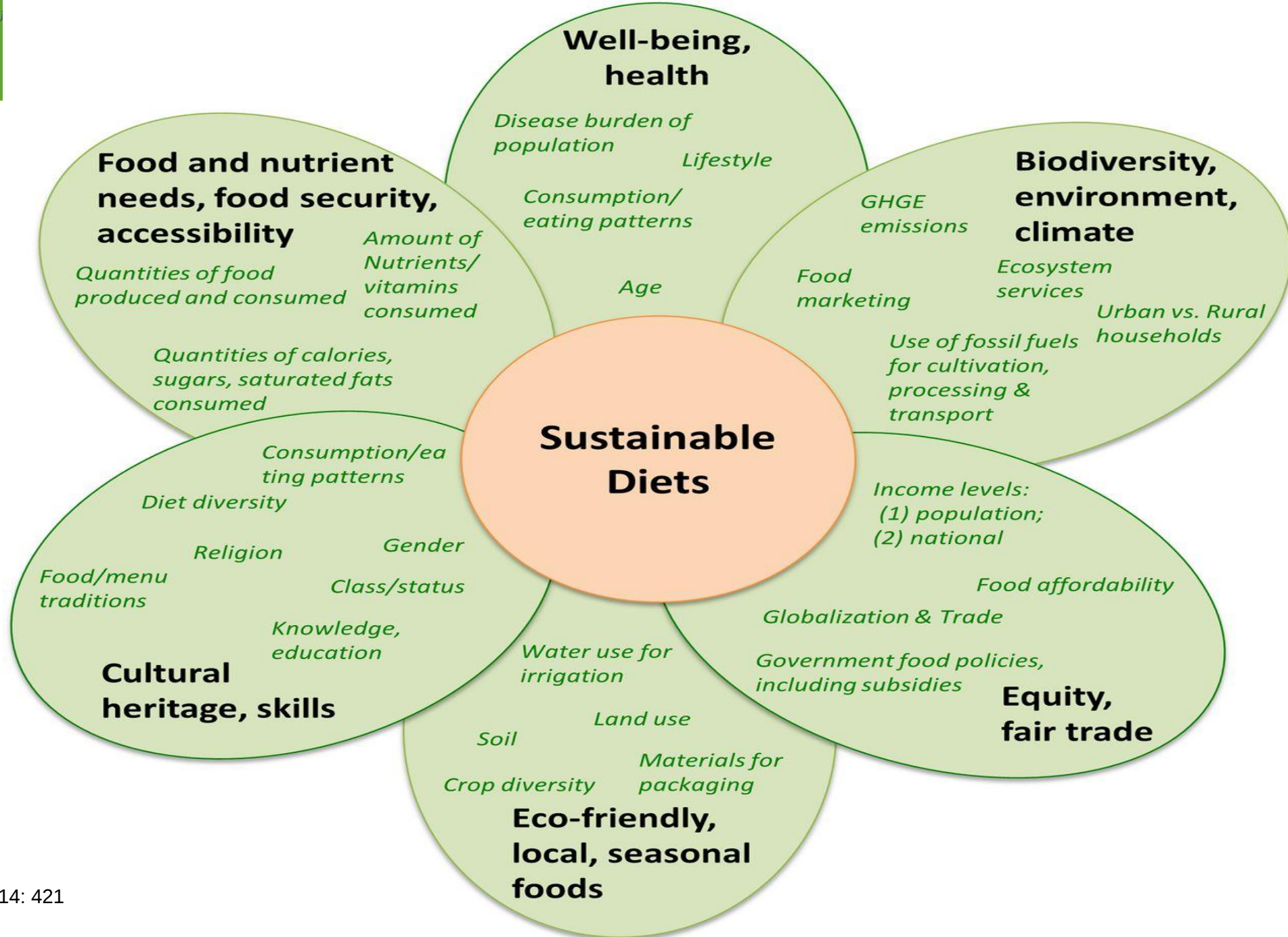


AIMS OF SUSTAINABLE HEALTHY DIETS

Sustainable Healthy Diets are dietary patterns that promote all dimensions of individuals' health and wellbeing; have low environmental pressure and impact; are accessible, affordable, safe and equitable; and are culturally acceptable. The aims of Sustainable Healthy Diets are to achieve optimal growth and development of all individuals and support functioning and physical, mental, and social wellbeing at all life stages for present and future generations; contribute to preventing all forms of malnutrition (i.e. undernutrition, micronutrient deficiency, overweight and obesity); reduce the risk of diet-related NCDs; and support the preservation of biodiversity and planetary health. Sustainable healthy diets must combine all the dimensions of sustainability to avoid unintended consequences.

Figure 1.1: Components, determinants,

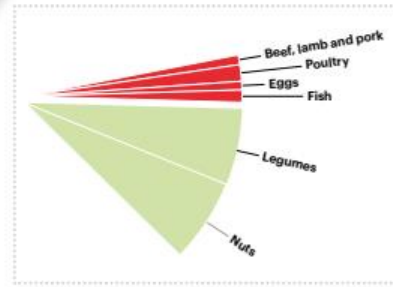
FOODPATH:
Food Policy for
Planetary Health



Challenge



- How can we transition towards dietary patterns that are:
 - Healthy for the population (‘People’)
 - Environmentally sustainable (‘Planet’)
 - Affordable (‘pocket’)
- ‘Win’ ‘Win’ ‘Win’
 - People-Planet-Pocket



Targets for Healthy Diets and Sustainable Food Production



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

EAT-Lancet planetary health diet - 2018

37 experts from 16 countries

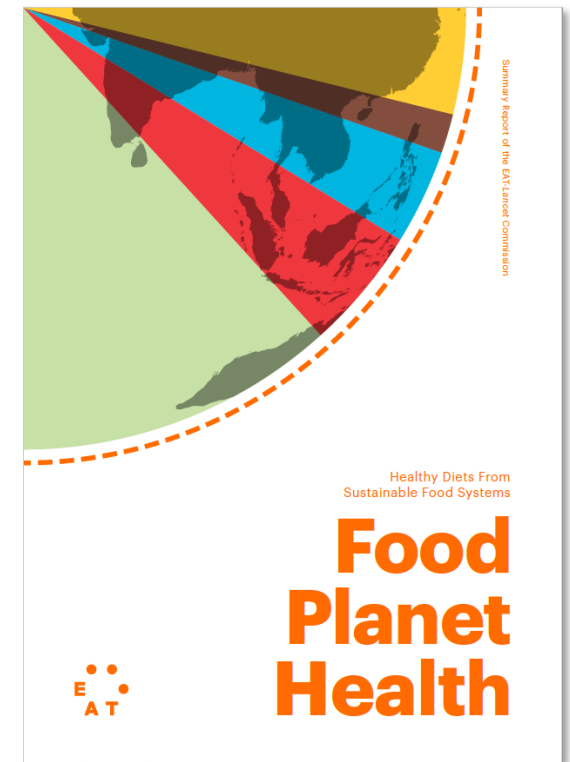
- Health, nutrition, environmental sustainability, foods systems, economic, political governance.

6 environmental systems:

- Climate change, biodiversity loss, land-system use, freshwater use, and nitrogen and phosphorus flows.
- Safe operating system and upper-limit boundaries to avoid potential ecological catastrophe.

Healthy diet:

- Optimum dietary habits that would meet essential macro and micronutrient needs, bring energy intakes in line with requirements → reduce premature deaths worldwide by 19–23%.
- Dietary patterns, specific foods groups, macro and micronutrients investigated.



- The EAT Lancet reference planetary health diet:
 - A range of daily intakes of specific food groups that would meet the environmental boundaries & optimise health outcomes.
 - Target for **2050** to adequately meet the needs of a global population of 10 billion.
- Each country to align the recommendations to meet cultural and national needs and preferences.

Diet gap between dietary patterns worldwide in 2016 and proposed reference dietary intakes

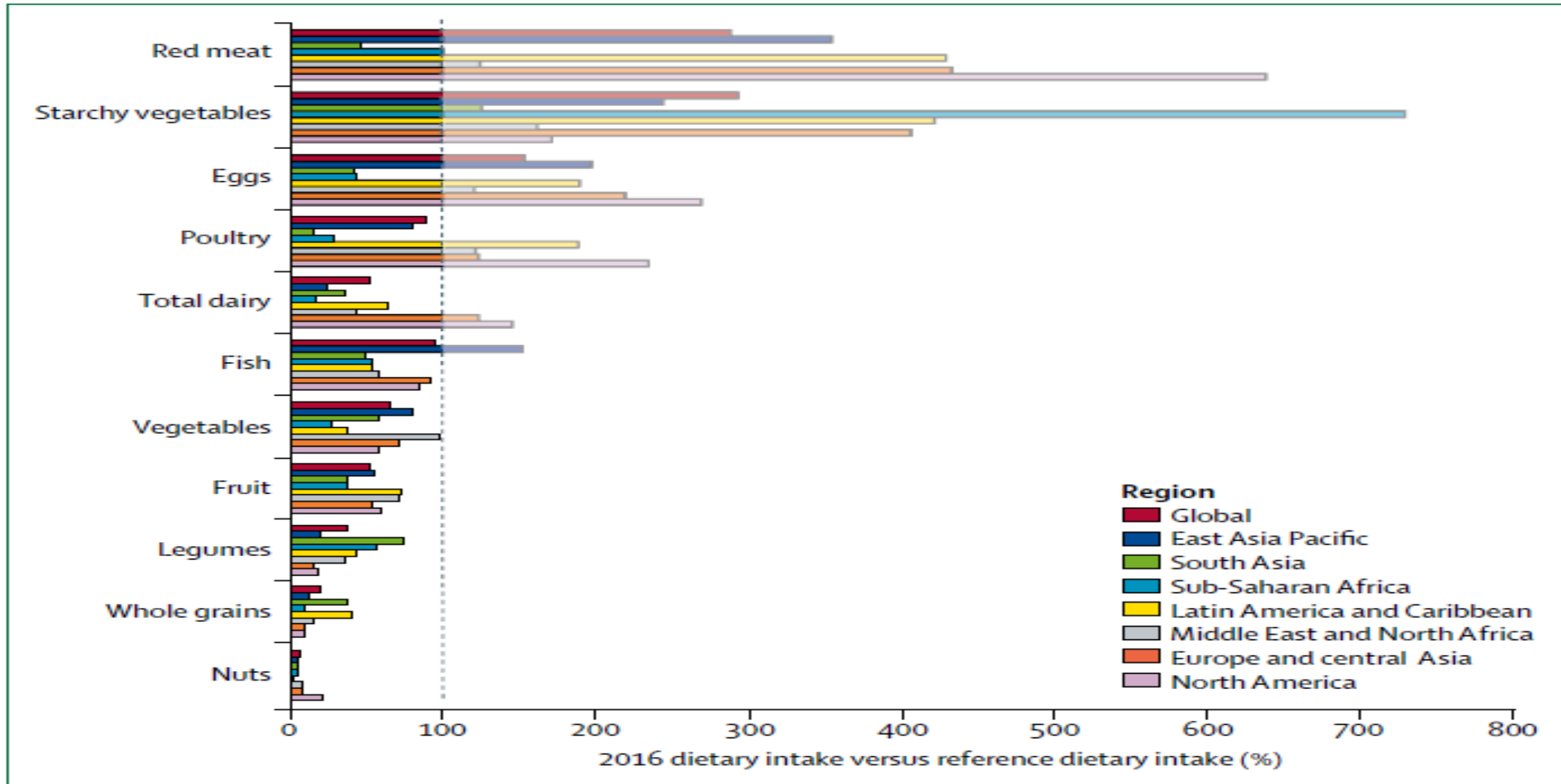
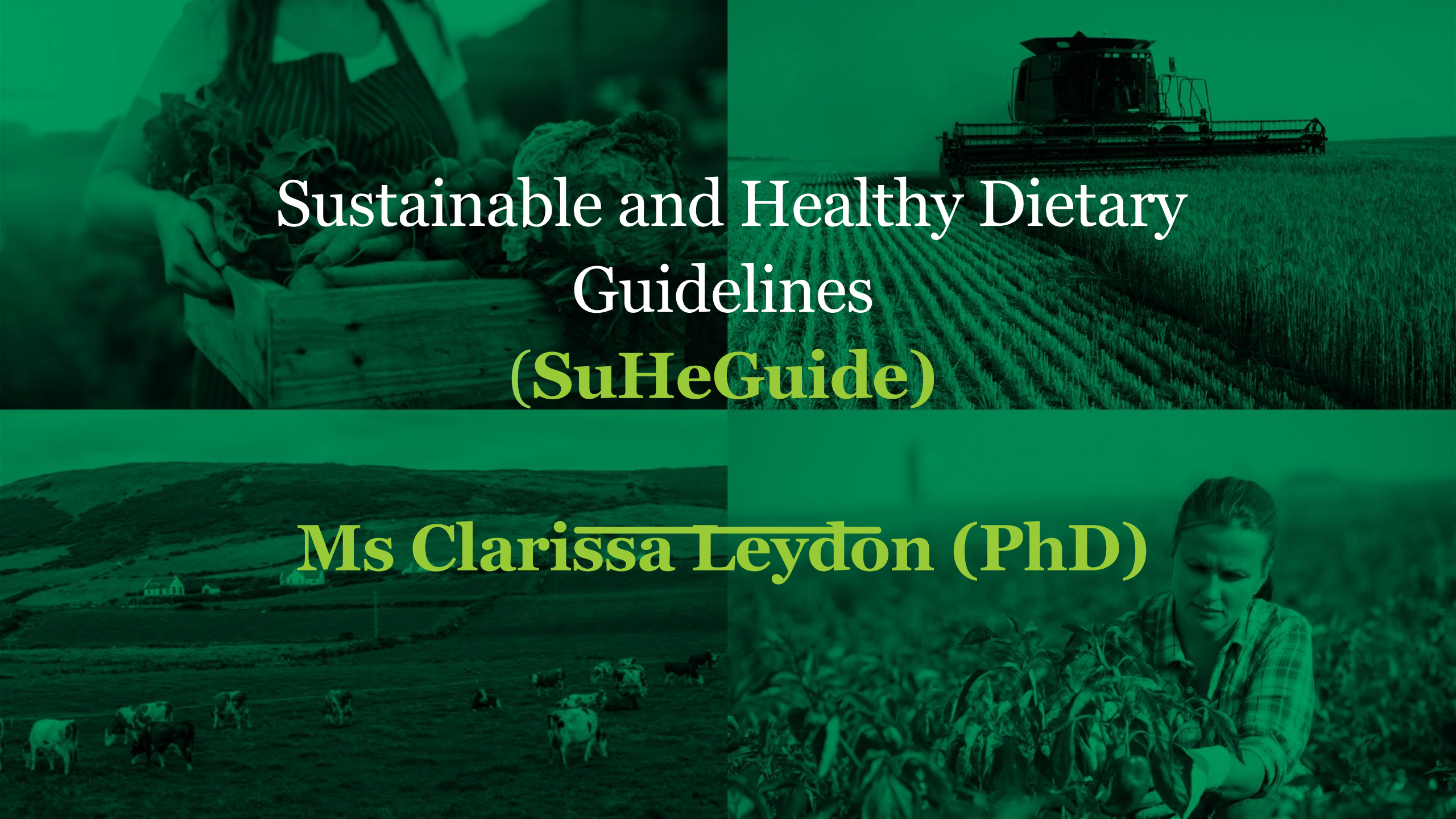


Figure 1: Diet gap between dietary patterns in 2016 and reference diet intakes of food



What do healthy and sustainable dietary guidelines look like?

Overview

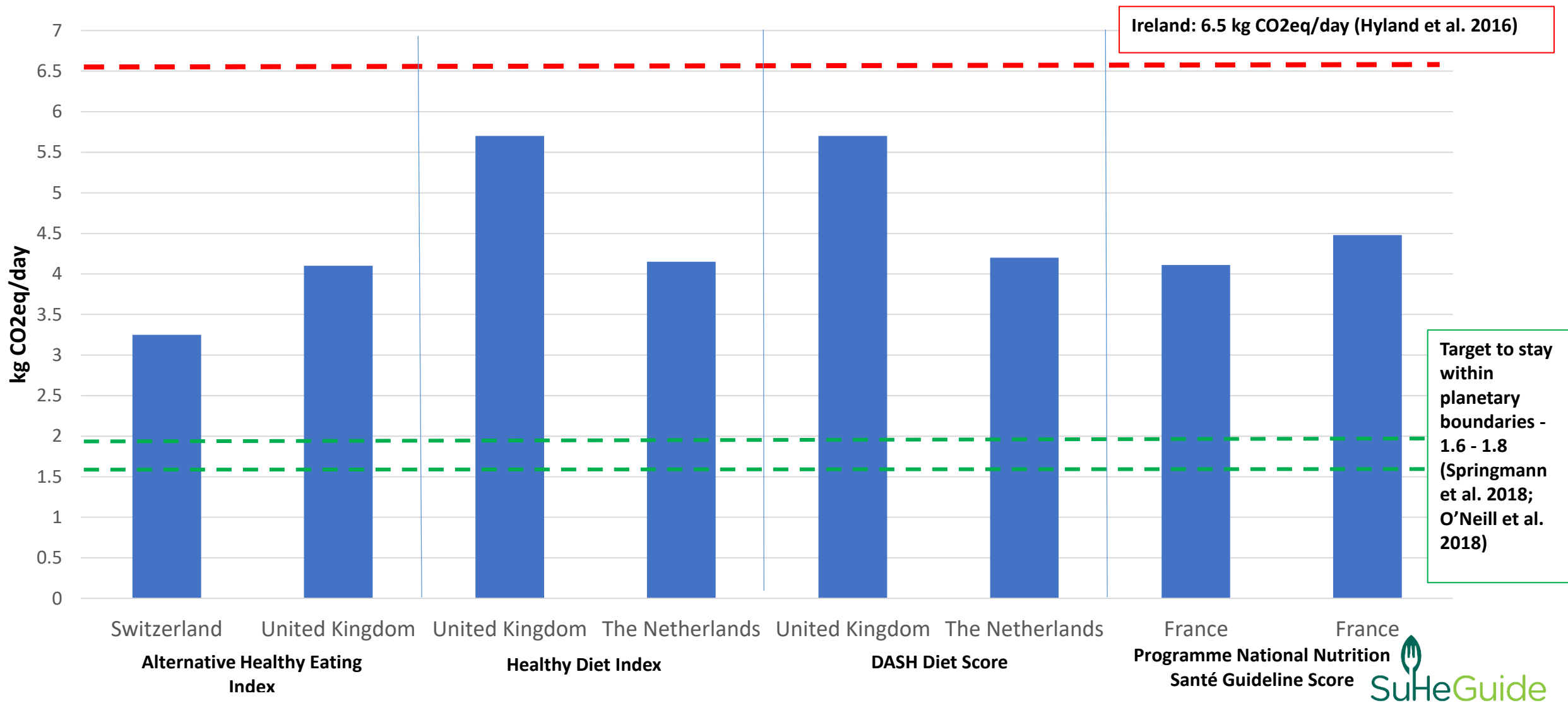


Sustainable and Healthy Dietary Guidelines (**SuHeGuide**)

Ms Clarissa Leydon (PhD)

Review of evidence to identify dietary patterns or components of, which contribute to better health outcomes and lower GHGE

Carbon footprint of healthy dietary patterns

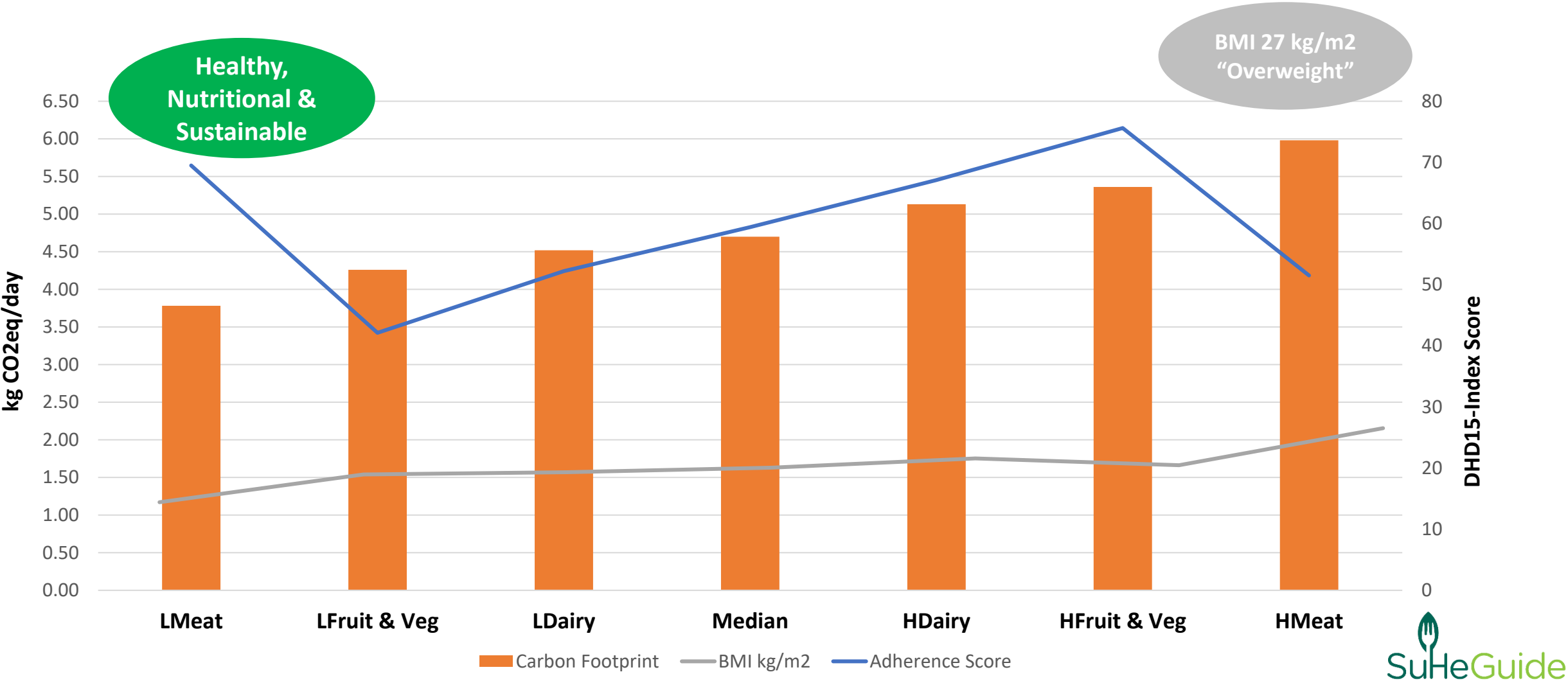


Current Progress

Systematic Literature Review - Diet Quality, Environmental Impact & Health Outcomes

-Which dietary patterns meet nutritional requirements, reduce environmental impact and promote health?

► Evidence Synthesis ongoing



*Review of International Practice on Building
Sustainability into National Healthy Eating
Guidelines and Practical Implications for
Policy*

Dr. Tara Kenny
Postdoctoral Researcher

[illegible]

FOODPATH: <i>Food Policy for Planetary Health</i>	How do these guidelines align with existing guidance on integrating/creating sustainable FBDG?				
Country, year, entity responsible	Clear guidance on food waste reduction	Clear guidance on the environmental benefits of limiting overconsumption of all foods	Relationship between food and the environment referenced in guidelines	Advice to choose seasonal, local fruits and vegetables	Advice on which fruits and vegetables to seek out in preference to others
Brazil (2014)	Yes	Some	Yes	Yes	No
Sweden (2015)	Yes	Some	Yes	Yes	Yes
Qatar (2015)	Yes.	Yes	Yes	Yes	No
The Netherlands (2016)	Yes	Some	Yes	Yes	No
Canada (2019)	Yes	Some	Yes	Yes	No
Denmark (2021)	Yes	Some	Yes	Yes	No
France (2019)	No	No	Yes	Yes	No
(Gonzales-Fisher & Garnett, 2016)					

Certainty in guidance...

	fruits & veg	red meat	fish	milk	eggs	legumes	nuts & seeds	whole grains	processed meat	sugar
Brazil	5	4	5	5	4	5	5	4	4	4
Canada	5	5	5	5	5	4	4	4	5	1
Netherlands	1	1	1	1	1	1	1	4	4	4
France	2	1	2	1	5	2	2	4	4	5
Qatar	1	5	2	1	5	3	5	4	1	4
Denmark	1	2	1	1	2	1	1	1	4	1
Sweden	1	1	1	1	5	5	2	4	4	4
Ireland	2	4	3	3	3	4	3	4	4	4

Low value = low uncertainty	
1	exact value
1	range of values
1	value with qualifier
2	value but serving size is missing
3	eat daily
3	value for more general food group
4	one value across several food groups
4	eat regularly OR multiple times a week
4	increase or decrease intake
5	vague qualitative recommendation

Netherlands, red meat: 9 yr and older: maximum 500 g per week, including maximum 300 g of red meat per week

France, milk: 2 dairy products per day. Portion size - 150ml serving of milk and 30g of cheese.

Netherlands, processed meat: Not part of the wheel of five, it is advised to limit the consumption of processed meat.

Brazil, meat: 7.5 servings/day of Meats, eggs and dried legumes] Red meats (beef or pork) are restricted to one third of the meals presented, giving priority to lean cuts and grilled or roasted preparations

This table is not highlighting how sustainable the guidelines are – it is simply highlighting where there is certainty and where there is not.

Context and process: considerations

- **Guided by experts** representing the multiple dimensions of sustainability (Gonzales-Fisher and Garnett, 2016)
- **Strong guiding principles** based on a broader conceptualisation of sustainability (Brazil, Canada)
- Review of current and national diet related health challenges (all), dietary patterns (all) and food availability (Sweden, Denmark, Netherlands, and Canada)
- **Using up-to-date consumption data and food supply data** and modelling based on country specific indicators and production methods rather than global datasets to assess the dietary changes necessary to align with national and international agreements (Denmark but only in relation to GHGe).
- Initial survey to capture consumer expectations and challenges associated with past guidance (Sweden, Brazil, Canada)
- **A clear statement of intent based on the challenges ahead** (Gonzales-Fisher and Garnett, 2016). I.e. not letting perceived cultural acceptability slow down essential progress. Food cultures and cultural acceptability are not fixed.
- **Protective measures to limit any potential conflicts of interests** and industry influence throughout the development process (Netherlands, Canada, Brazil, Denmark, Sweden)

Content: guidance

- **Clear link** between each guideline and sustainability (Brazil & Sweden)
- FBDG accompanied by and built upon information that **highlights the link between health and sustainability,**
- Recognition of **the influence of food environment** (marketing etc) and advice on how to navigate (Brazil, Canada and the Netherlands)
- **Clear guidance on dairy foods along with red and processed meat reduction** (France, Denmark)
- Dairy and meat included alongside plant-based protein foods, rather than as a separate group (Canada)
- Specific guidance on seafoods (species, portion size - Qatar, Canada, Denmark) based on emerging evidence and country context
- Specific guidance for vegetarian and vegan diets (Canada, Qatar, and Sweden)
- **Specific guidance on all UPFs** (including plant-based) based on emerging evidence and country context (Brazil).
- Breastfeeding promotion (Qatar) based on emerging evidence and country context.

- Joint human and environmental health remits and objectives within the workings of key state bodies which acknowledge the relationship between food and the environment (Sweden and Canada)
- Aligning national (agricultural production) efforts with proposed consumer efforts - recognising the interdependence of production and consumption (Denmark, France, Netherlands). Dietary guidelines are just one component that require additional policy support.
- Complimented by further actions and collaborations celebrating dietary diversity, healthy eating practices, and sustainability (Brazil, Canada, Denmark, Netherlands).
- Develop guidelines along with introducing or updating national food policy (Canada, France, Qatar)



What is currently known about consumers behaviours and attitudes towards sustainable healthy diets?

Method: Scoping review (n=54)

Structural determinants (-/+)

- Western food environments (-)
- Lack of political will (-)
- Vested interests (-)
- Conflicting and confusing messages (professionals, industry, media, government) (-)
- Neighbourhood food environment (-/+)
- Wider economic context (Strong agricultural sectors) (-)
- Access to transport & markets (-/+)
- Lack of exposure to more sustainable options within social settings/institutions (-)
- Economic restrictions/incentives (-/+)
- Competitive pricing of alternative foods to meat (+)

Structural & Intermediate determinants (-/+)

- Budgetary constraints (-)
- Sex (-/+)
- Social class (-/+)
- Time pressure (cooking, shopping, sourcing alternatives) (-)
- Habits and routines (practical difficulties) (-)
- Change in family circumstances (unemployment, retirement, bereavement, divorce, children leaving home) (+)
- Culture/ tradition/norms (meat central to meal structure, 'proper dinner', 'this is how I was raised') (-)
- Social supports (networks/friends eating less meat/more plants) (-/+)
- Neophobia (-)
- Consuming one or more portion of meat per day (-)
- Family/household resistance (-)
- Ties to agricultural sector (living in the country) (-)
- Low acceptance of meat alternatives (-)

Beliefs and attitudes (-/+)

- Belief that there is no link/weak link between farming and climate change/environmental concerns (-)
- Belief that plant-based diets are unhealthy
- Positive attitudes and attachments to meat (entitlement, pleasure, taste, 4 'Ns')
- Moral disengagement (-)
- Sceptical of evidence and dietary advice (-)
- Low perceived consumer effectiveness (-)
- Belief that current diet is already sustainable (-)
- Negative perceptions/experiences of meat replacements (poor taste, inappropriate in formal settings, boring) (-)
- Belief that meat reduction is necessary to mitigate climate change (+)
- Belief that animal welfare issues are not a concern in their country (-)
- Belief that plant-based diets are expensive (-)
- Cognitive dissonance (-)
- Belief that meat essential to healthy diet
- Belief that meatless diets are restrictive
- Collectivist attitudes (+)
- Positive attitudes to animal welfare (+)
- Positive moral attitudes (+)
- Positive attitudes to plant-based diets (+)
- Mindfulness (+)

Knowledge and information (-/+)

- Low awareness of health benefits of eating more diverse/plant-based diets (-)
- Low awareness of dietary impacts (-)
- Food skills/knowledge on how to prepare meals with less meat/more plants/meat alternatives (-/+)
- Environmentally aware (+)
- Social media engagement (-/+)
- Knowledge of dietary impacts on health, environment, and animal welfare (+)

Values & motivations (-/+)

- Consumers who value social image (-)
- General orientations towards choice and convenience (-)
- Low concern for sustainability issues (-)
- Motivated by environmental concerns (+)
- Socially and ethically motivated (+)
- Motivated by financial savings (+)
- Motivated by health (+)
- Motivated by animal welfare (+)
- Valuing traditional production and local foods (-/+)
- Interest in cooking and exploring new tastes (+)
- Political values (left-wing leaning +)
- Ethically conscious (+)

Sustainable diets: multiple meanings

- Several meanings for consumers (i.e: consuming a healthy balanced diet, natural, organic fresh local and seasonal food, plant based whole food, less but better quality meat consumption or an overall better quality diet)

Human health is the strongest component

- Protecting the environment is a characteristic of sustainable diets but health motivations and concerns have much stronger affiliations in comparison to other components
- Dietary carbon, water, land footprints, along with the social and cultural impacts of diets are generally not considered when conceptualising sustainable diets

Low awareness of diet related environmental impacts

- People find the terminology used to capture and measure the ecological impacts of diets confusing,
- They do have difficulty in discerning which dietary behaviours carry the heaviest environmental burden
- Underestimate the ecological impacts stemming from dairy, fish, and ruminant meat production and overestimate the impact of food miles, origin and the healthiness of some cheese and meat products.

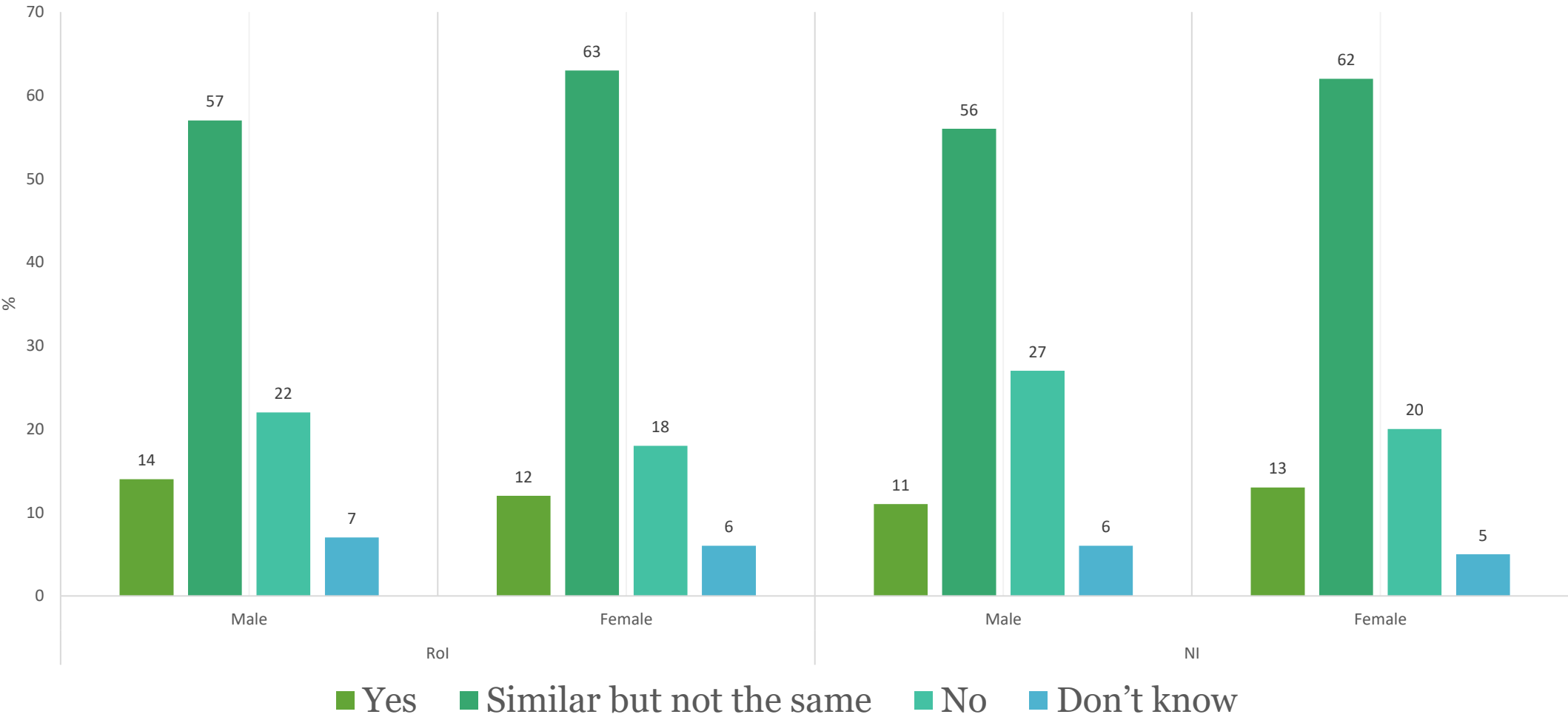


Measure current beliefs, attitudes, knowledge and behaviours of a representative sample of adults on the island of Ireland (IOI) to sustainable healthy diets.

Method: All-island survey (n=2525)

Objective 2

Belief that a sustainable diet and healthy diet are the same thing
(%)



When purchasing food...sustainable characteristics

Most important characteristics:

Affordability (85.7%)

Accessibility (73.6%)

Nutrition & health (72.7%)

Least important characteristics:

Organic (14.6%)

Low environmental/climate impact (10.2%)

Short or local supply chain (8.3%)

What sustainable dietary practices are people already engaged with?

N=2525

	I am not interested in doing this at the moment	I am thinking about this but I need more information	I would like to do this but things are stopping me	I have started to do this some of the time	I am doing this confidently most of the time	I am not currently doing this but have done in the past
Eating mostly plant-based proteins (lentils, beans, tofu, chickpeas)	47	12	8	17	8	8
Reducing red and processed meat consumption	31	15	9	24	17	4
Eating less animal-based foods overall (meat & dairy)	39	15	11	22	11	4
Eating sustainably sourced seafood	33	17	13	20	13	5
Eating more wholegrain food such as wholemeal or rye bread, brown rice, bulgur wheat, wholegrain pasta	18	10	10	31	27	5
Eating more whole, plant-based proteins (lentils, beans, tofu, chickpeas)	40	13	10	20	12	4
Purchasing organically produced fruit and vegetables	23	13	17	27	16	4
Purchasing seasonal and locally produced fruits and vegetables	11	12	13	33	27	4
Reducing food waste by purchasing less food and planning meals	7	8	10	28	43	4
Eating more home-cooked meals	3	3	6	19	65	5
Eating less discretionary foods (crisps, sweets, chocolate, cakes)	11	7	20	34	23	6



Explore opinions regarding sustainable dietary recommendations and policy actions where sustainability could be easily incorporated and/or strengthened.

Method: Expert survey (N=24 as of 5pm 22/04/2022)

Policy action review (N=12 as of 10am 26/04/2022)

Level of agreement

	Strongly Agree (%)	Somewhat agree (%)	Neither agree nor disagree (%)	Somewhat disagree (%)	Strongly Disagree (%)
The world's current food system(s) is sustainable	8	0	0	25	67
Ireland's current food system is sustainable.	4	4	4	29	58
Ireland's needs to adopt more /better environmentally friendly farming practices.	67	25	0	0	8
Ireland's farming systems needs to align more/better with the health and nutritional needs of its population.	25	62	4	4	4
Sustainability recommendations should be included in the Ireland's food based dietary guidelines	58	29	8	0	4

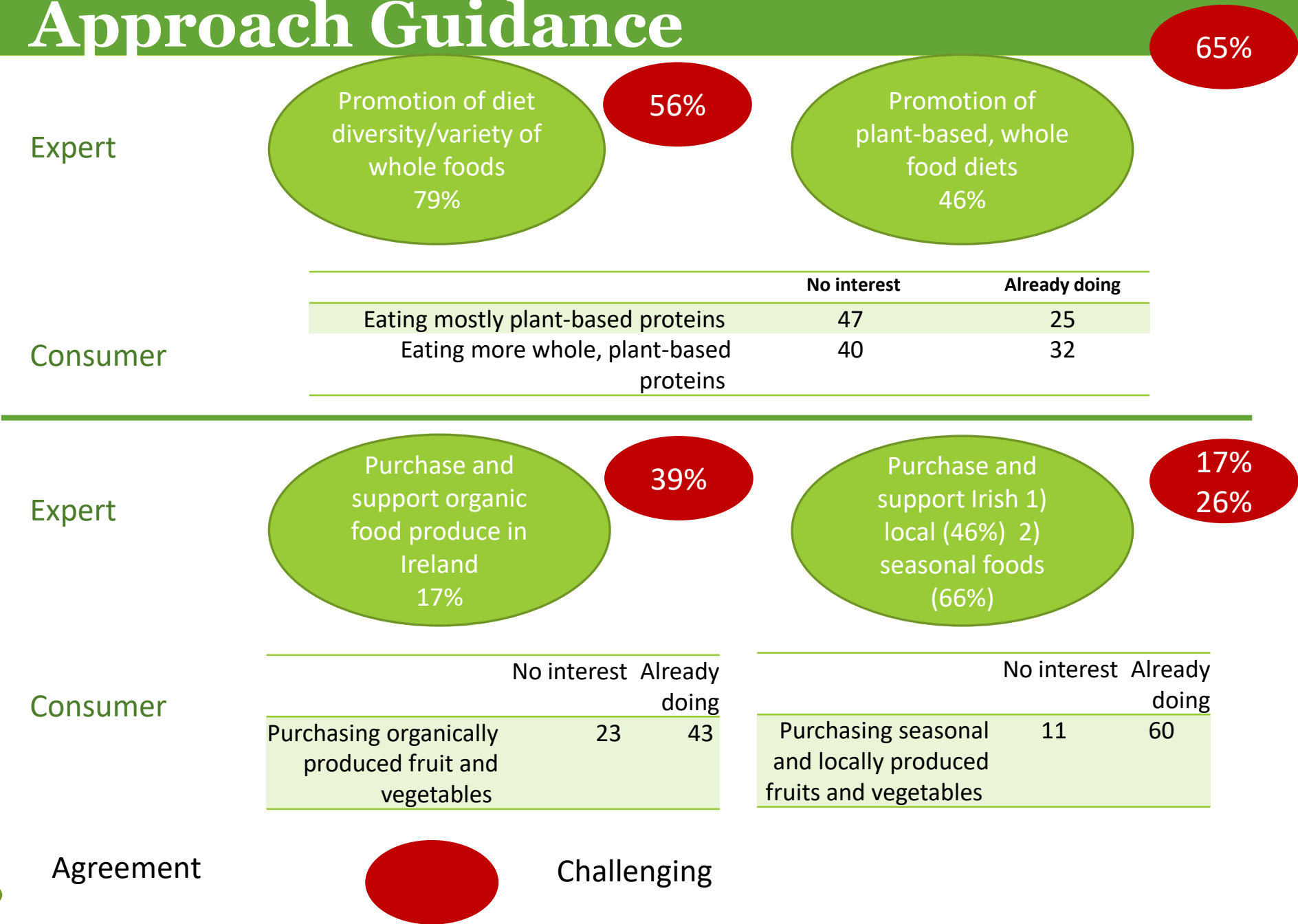
FOODPATH: <i>Food Policy for Planetary Health</i>		Strong agreement to include	Importance (Extremely) to include	Challenging (very/extremely) to include
Approach Guidance	Promotion of diet diversity/variety of whole foods	79	43	56
	Promotion of breastfeeding as a cornerstone of sustainable diets	75	65	17
	To purchase and support seasonal food produce in Ireland	66	48	26
	Promotion of lifestyle behaviours (for example, physical activity)	54	52	17
	Promotion of plant-based, whole food diets	46	38	65
	To purchase and support local food produced in Ireland	46	30	17
	Promotion of sustainable seafood consumption	46	38	30
	To purchase and support organic food produced in Ireland	17	8	39
Avoidance Guidance	To limit/reduce processed meat consumption	92	67	57
	To limit/reduce foods high in fat, salt and sugar	83	71	30
	To limit the consumption of ultra processed foods	71	63	65
	To reduce food waste by planning meals	67	65	26
	To limit/reduce red meat consumption	63	42	52
	To limit the consumption of dairy products	25	13	74
Other	Standards for ethical treatment of livestock	50	30	35

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Approach Guidance



Avoidance Guidance

Expert

Limit/reduce: 1)
processed meat (92%);
2) red meat (63%); 3)
dairy (25%) consumption

57%
52%
74%

Consumer

	No interest	Already doing
Reducing red and processed meat consumption	31	41
Eating less animal-based foods	39	33

Expert

Limit/reduce
foods high in fat,
salt and sugar
83%

30%

Reduce food
waste by
planning meals
67%

26%

Consumer

	No interest	Already doing
Eating less discretionary foods (e.g. crisps, sweets)	11	57

	No interest	Already doing
Reducing food waste by purchasing less food and planning meals	7	71

Most challenging barriers



Barriers to most challenging guidelines

Commercial interests

- industry influence within media and policy
- Resistance from commercial influences (industry/industry actors, & professional bodies/publicly funded bodies)

Lack of political will/BAU approach/policy incoherence

- lack of incentive for farmers in Ireland to produce organic food
- government promotion of meat and dairy industry

Power concentrated at retailer and processor level

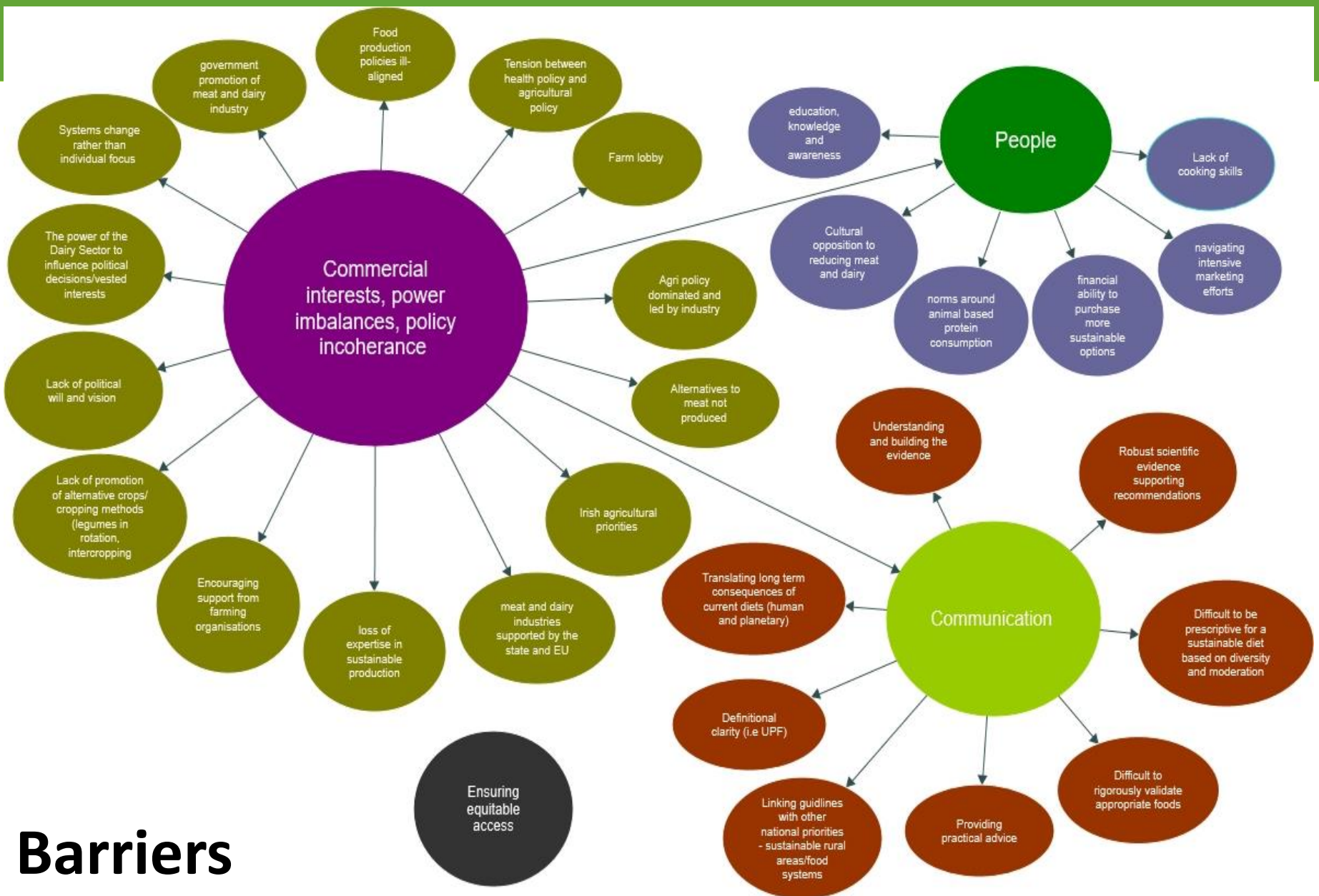
- choice of foods are at the discretion of the supermarket
- power of global retailers and food processors

Communication

- Avoiding overly complex messaging
- Positive framing 'winning over hearts and minds'

People and food environment

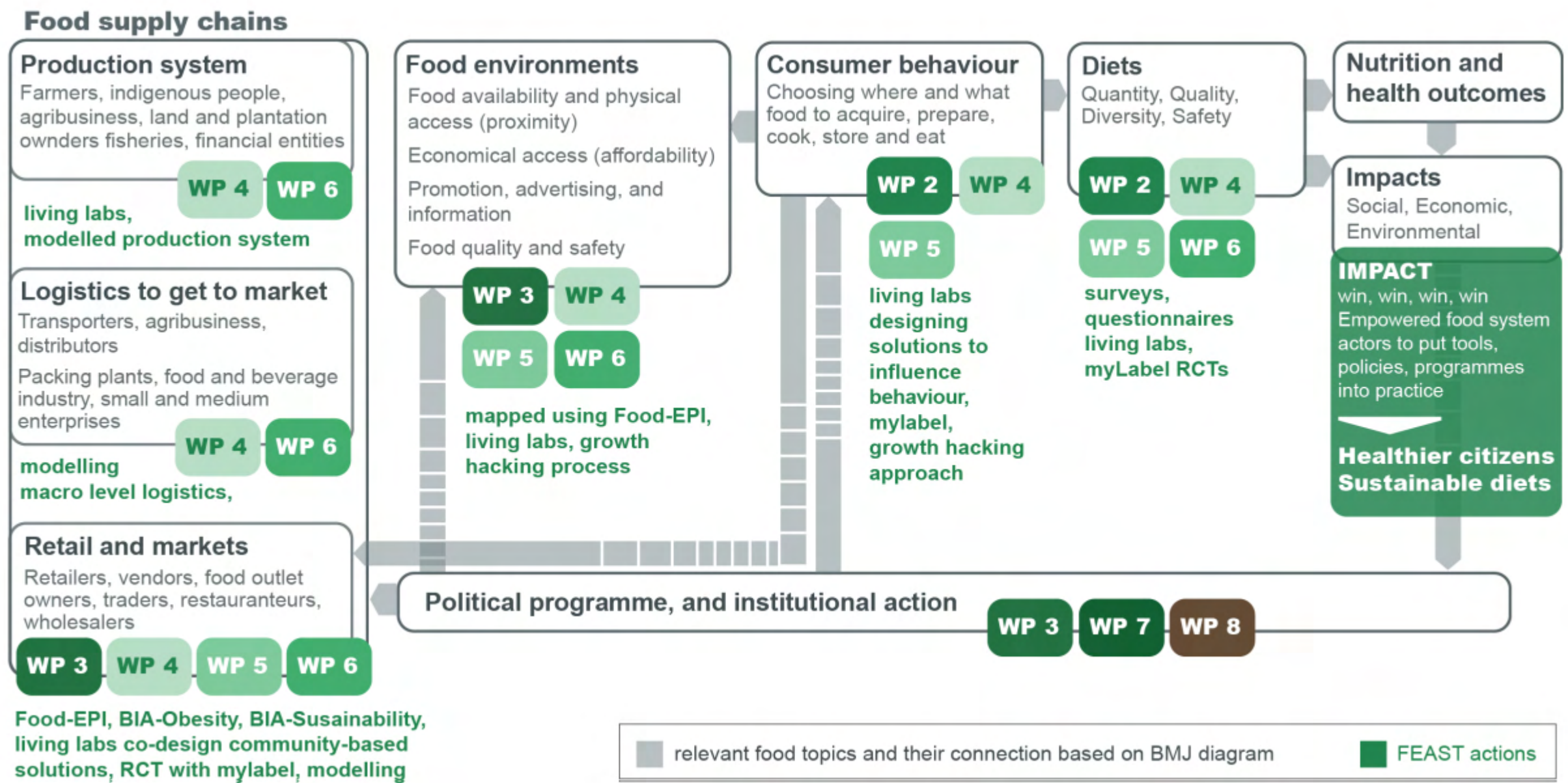
- Attitudes towards meat and dairy
- Rising cost of living



General Barriers



Food systems that support transitions to hEalthy And Sustainable dieTs FEAST (Horizon Europe)





Cork Food Policy Council

The Cork Food Policy Council



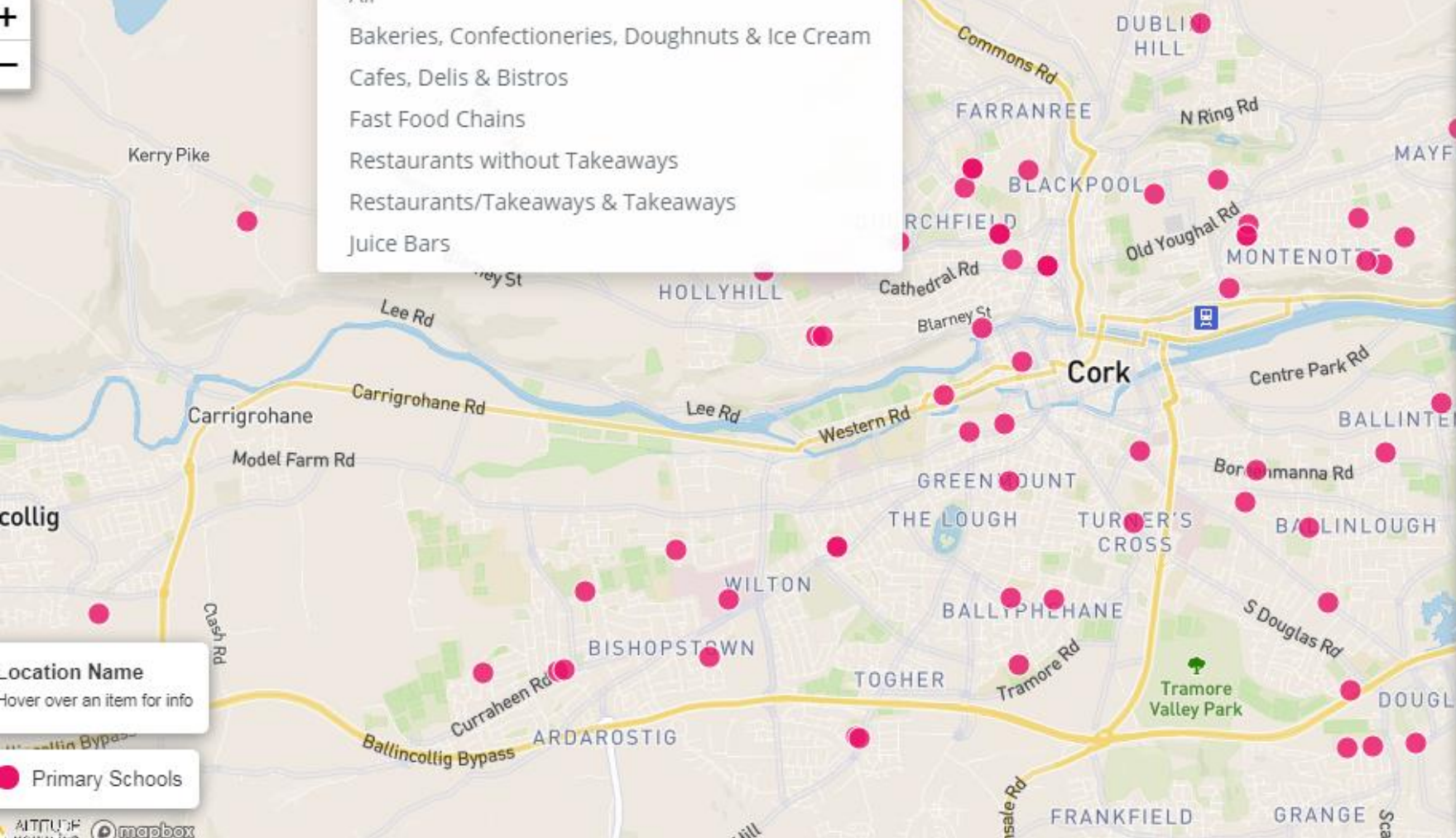
Benefits include; a vibrant local food economy, improved access to affordable food, food skills for life, resilient communities, redistribution of surplus food, reduced food inequality & reduced food waste.

- Influence local food policy
- Supporting new partnerships
- Advocate for innovative community food initiatives

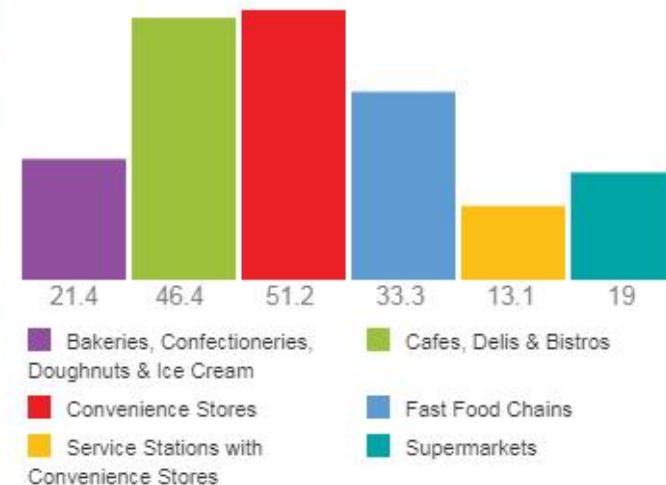
The Food Map



- Cork Food Map is the first step in describing the Cork Food Environment
- An inventory of the types and locations of food businesses in Cork City
- Evidence of exposure to vulnerable groups
- Unequivocal evidence that childhood obesity is influenced by marketing of unhealthy food and beverages



Food outlets within 400 metres (% of schools)



There are a total of 84 primary schools serving Cork City. They are relatively evenly spread without any obvious pattern to their distribution. As can be seen, the highest percentage of schools are within walking distance of a convenience store from the categories above (51.2%). The fact that the convenience store category has the largest number of outlets is a contributor to this being the case. However, having convenience stores on the route to schools is a documented strategy used by some in

1 in 3 primary schools is within walking distance of a fast food chain, exposing these schoolchildren to these brands on a regular basis from an early age.

Nov 2021



Great morning spent at **Togher Community Garden**. The team of volunteers planted 400 trees that will form a new hedgerow. It's incredible what can be achieved in a short time when everyone works together! 🌱



Feb 2022

Togher Community Garden @GardenTogher · Apr 2
Thanks to all our volunteers that came to sow our tomato seed. Big thanks to Audrey for giving us some of her broccoli seed and to Jim from Ballyphehane Men's Shed for creating a water pump for us.
@greenspacescork @CorkHealthyCity @CorkFoodPolicy @corkcitycouncil @CommunityGrdns



Togher Community Garden @GardenTogher · Apr 5

Another busy morning we had the leaving cert lads from @DeerparkCBS we also had **Togher Girls** 5th Class back also Xean and the guys from MTU busy busy morning for us 🌱 @greenspacescork @CorkHealthyCity @corkcitycouncil @CorkFoodPolicy @CommunityGrdns



Togher Community Garden @GardenTogher · Apr 1

Another lovely morning with the volunteers and the kids from @SouthLeeETNS today we planted fennel seed and carrots 🥕 😊
@CorkFoodPolicy @greenspacescork @CorkHealthyCity @CommunityGrdns @corkcitycouncil



Next Steps



- Support and develop a food strategy for Cork City

Challenge



- How can we transition towards dietary patterns that are:
 - Healthy for the population (‘People’)
 - Environmentally sustainable (‘Planet’)
 - Affordable (‘pocket’)
- ‘Win’ ‘Win’ ‘Win’
 - People-Planet-Pocket

What can we do?



- Develop a critical mass to conduct timely research to address policy gaps across the food system

- Bridge between traditional 'food research disciplines', planetary health& public health

- Increase the evidence-base to inform future food and nutrition policies to safeguard population health

What to eat- the bottom line

*“Eat real** food. Not too much. Mostly plants.”*

Michael Pollen

**doesn't have a long ingredient list, isn't advertised on TV, and it doesn't contain stuff like maltodextrin or sodium tripolyphosphate.

**food that your great-grandmother would recognize.

‘No force of nature can stop an idea whose time has come’



UCC

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

School of
Public Health