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FOOD ENVIRONMENTS & EU FOOD POLICY

DISCOVERING THE ROLE OF FOOD ENVIRONMENTS FOR SUSTAINABLE FOOD SYSTEMS

CONTENTS

1 SETTING THE STAGE

Food environments are increasingly at the heart of deliberations about food systems change. The concept has been adopted by a range of leading organisations and incorporated in a number of initiatives, including the European Union's (EU) Farm to Fork Strategy.[1,2,3,4]

But what *are* food environments? What added value does the concept of 'food environment' bring to efforts to transition to sustainable food systems? And how do you change food environments for the better?

Food environments can be defined as the "*physical, economic, political and socio-cultural context in which consumers engage with the food system to make their decisions about acquiring, preparing and consuming food*".[5]

The aim of this policy brief is to further sharpen understanding about food environments and what a 'food environment approach' entails for EU food policy and the transition to sustainable food systems.

[1] World Health Organization. (2015) European food and nutrition action plan 2015–2020.

[2] Grace (2016) Influencing food environments for healthy diets through food safety. *UN Food and Agriculture Organization*

[3] United Nations Children's Fund (UNICEF) and United Nations Special Rapporteur on the Right to Food, (2019) Protecting Children's Right to a Healthy Food Environment, *UNICEF and United Nations Human Rights Council, Geneva.*

[4] European Commission (2020) A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM/2020/381 final

[5] HLPE (2017) Nutrition and food systems. *A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome*

2 WHY FOOD ENVIRONMENTS?

CONSUMPTION, A CRITICAL PILLAR OF SUSTAINABLE FOOD SYSTEMS

The challenge of shifting food consumption patterns looms large over the food systems debate. While major progress has been made in ensuring food availability,[6] the European food system is not sustainable.[7,8] Current dietary patterns are deeply implicated in this state of affairs.

Today's diets[9] are an important underlying cause of Europe's burden of disease.[10] They also rely on, and help perpetuate production systems that drive the climate and biodiversity crises, reinforce social inequalities among producers and consumers, jeopardise access to food for communities in developing countries, contribute to global health problems and undermine animal welfare.[11,12]

Food demand patterns are an outcome of food systems, but can also be important levers of change. Eating well is a cornerstone of our physical, social, cultural and mental well-being. Eating is also an 'agricultural act' in that it can support demand for better supply chains and production models that work with nature, rather than against it, that value the livelihoods of food producers and workers, and that take the welfare of animals as their starting point.

To make sure that food consumption patterns contribute to a sustainable food systems transition and the success of EU political priorities,[13] it is important to understand how eating patterns are established and what needs to be done to help them shift in an equitable and effective way.

THE 'CONSUMER RESPONSIBILITY' NARRATIVE MISSES THE POINT

Over the last decades, the dominant food policy narrative has focused on promoting 'responsible consumer choices'.[14] This approach is founded on the idea that awareness raising and education about better food choices will make people change their food behaviours.[15] This model largely absolves food industries and regulators, but places considerable responsibility on citizens and consumers.[16] The latter are expected to make the 'right' food choices – be it related to health, environmental, social or ethical goals – based on little else than information campaigns or prompts to adopt 'green' and 'healthy' lifestyles.

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[6] Food availability is not to be confused with 'food security'. While availability is a core pillar, food security also encompasses the key dimensions of access, nutrition, stability, agency and sustainability. HLPE (2020) Food security and nutrition: building a global narrative towards 2030. *A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.*

[7] Scientific Advice Mechanism, Group of Chief Scientific Advisors (2020) Towards a sustainable food system. *Scientific Opinion Nr. 8. European Commission*

[8] SAPEA, Science Advice for Policy by European Academies. (2020). A sustainable food system for the European Union. Berlin: SAPEA

[9] Diet refers to a pattern of food consumption (the foods a person habitually eats), not to a regimented way of eating (being on a 'diet').

[10] Gakidou et al. (2017). Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet, 392(10159), 1923-1994*

[11] Tilman & Clark (2014) Global diets link environmental sustainability and human health. *Nature 515, 518–522*

[12] World Health Organization et al. (2021). The state of food security and nutrition in the world 2021: transforming food systems for affordable healthy diets (Vol. 2021)

[13] The European Green Deal, A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system, Europe's Beating Cancer Plan, European Pillar of Social Rights

[14] SAPEA, Science Advice for Policy by European Academies. (2020). A sustainable food system for the European Union. *Berlin: SAPEA.*

[15] The term 'food' includes both solid food and all non-alcoholic beverages.

[16] The terms 'consumer', 'citizen', 'citizen-consumer' and 'people' are used interchangeably throughout the document. This in recognition that the term 'consumer' may not fully capture the whole range of relationships between people and food systems. Likewise, 'citizen' is not entirely satisfactory as it excludes persons without the citizenship of an EU country. For further discussion on this, see for instance: SAPEA, Science Advice for Policy by European Academies. (2020). A sustainable food system for the European Union. Berlin: SAPEA, and: Micheletti & Stolle (2012) Sustainable citizenship and the new politics of consumption. The ANNALS of the American Academy of Political and Social Science

Daily food choices are not typically based on the best available information

But, this is not how things work as people go about their everyday lives. Evidence is overwhelming that **daily food choices are not typically based on the best available information**.[17] While the potential to exercise individual agency is not in doubt, food choices are constrained and shaped by a whole range of physical, economical, political and socio-cultural influences, most of which are beyond an individual's control. [18,19]

The **consumer choice model is not only scientifically weak, it is morally questionable too**. While often presented as providing people with the 'freedom of choice',[20] the flipside of this approach is that when the 'right' choices are not made, people are blamed as if their actions were purely due to their own shortcomings. This is, for instance, too often visible in the stigma attached to obesity,[21,22] or to choices made by low-income households.[23]

This model also fails to adequately account for the role of food environments, the subject of this paper. For instance, a recent European consumer survey attests to the willingness of many consumers to change to more sustainable eating habits, but that they are finding it hard to do so in current circumstances. Challenges such as price, lack of information, the issue of identifying sustainable foods and their limited availability were the main perceived barriers to sustainable eating.[24]

Moreover, **there may be instances when offering choice can be undesirable and unethical in the first place**. Such cases could include when foods are produced under extremely exploitative working conditions, when production results in the loss of critical ecosystems or intense animal suffering, or when another direct and significant hazard is posed to people and the planet. Offering consumers the market-based option to avoid such foods is not an acceptable or effective strategy. Issues such as these are better addressed through instruments that ensure such outcomes simply do not occur, thereby removing a major burden from the shoulders of individuals and paving the way for a sustainable future.

OVER TO THE 'FOOD ENVIRONMENT APPROACH'

In contrast to the consumer choice model, the 'food environment approach' recognises that the choices we make about food and the impacts they have are, to a significant degree, shaped by the contexts within which they are made. Following from that, it recognises that the **most effective and equitable way to change food behaviours is to change the structural factors that drive food choice**.

The most effective and equitable way to change food behaviours is to change the structural factors that drive food choice

In other words, the food environment approach prioritises root causes over symptoms. In doing so, it does not deny individual agency, reduce choice or 'tell consumers what to eat', rather, **it enables and empowers people to exercise choice in line with the much needed shift towards sustainable food systems**.

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[17] Scientific Advice Mechanism, Group of Chief Scientific Advisors (2020) Towards a sustainable food system. *Scientific Opinion Nr. 8. European Commission*

[18] Swinburn et al. (2013) "INFORMAS (International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support): overview and key principles." Obesity reviews 14: 1-12.

[19] Herforth & Ahmed (2015) The food environment, its effects on dietary consumption, and potential for measurement within agriculture-nutrition interventions. *Food Sec.* 7, 505–520

[20] Thilo Bolde (6/05/2020) Farm to Fork: Consumer power Opinion piece in Euractiv - Opinion piece: Farm to Fork: Consumer power

[21] Swinburn et al. (2019). The global syndemic of obesity, undernutrition, and climate change: the Lancet Commission report. *The Lancet, 393* (10173), 791-846.

[22] Emmer et al. (2020). The association between weight stigma and mental health: A meta-analysis. *Obesity Reviews*, 21(1), e12935.

[23] Reutter et al. (2009) Who do they think we are, anyway?": Perceptions of and responses to poverty stigma. *Qualitative Health Research*

[24] BEUC (2020) One bite at a time: Consumers and the transition to sustainable food

3 WHAT ARE FOOD ENVIRONMENTS?

FOOD ENVIRONMENTS: THE INTERFACE BETWEEN PEOPLE AND FOOD SYSTEMS

The food environment, in a widely used definition, refers to the "*physical, economic, political and socio-cultural context in which consumers engage with the food system to make their decisions about acquiring, preparing and consuming food.*"[25]

From a person-centric perspective, food environments can be seen as the spaces in which people make decisions about food: what to take, where to buy it, where to cook it, and when, where and with whom to eat it.[26]

IN ACADEMIC TERMS, FOOD ENVIRONMENTS CONSIST OF A COMBINATION OF: [27,28,29,30,31,32,33,34]

1 **FOOD CHAIN DYNAMICS** - the main focus of this briefing, and particularly referring to:

- A **'Food entry points',** or the settings in which foods are made available and purchased, such as supermarkets, neighbourhood shops, local markets, digital apps, direct farm sales, canteens, schools, (fast food) restaurants, street food stalls, social dining places, etc.
- B The **foods, beverages and meals** themselves that are made available, and are accessible, affordable and desirable as people go about their everyday lives.

2 ASPECTS OF THE **BUILT ENVIRONMENT** that affect access to food entry points, including the distance to food outlets, the availability of physical infrastructures to access such entry points, such as public transport networks, etc.

3 **PERSONAL CHARACTERISTICS** that influence food choices, including levels of income and education, attitudes, cultural values, skills, etc.

4 THE **POLITICAL, SOCIAL, ECONOMIC AND CULTURAL CONTEXTS** in which the above aspects are embedded.

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[25] HLPE (2017) Nutrition and food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome

[26] Neve, K. et al (2021) Understanding Lived Experience of Food Environments to Inform Policy: An Overview of Research Methods. *London: Centre for Food Policy, City, University of London.*

[27] Idem

[28] Glanz (2009) Measuring food environments: a historical perspective. *American journal of preventive medicine*

[29] Glanz et al (2005) Healthy nutrition environments: concepts and measures. *American Journal Health Promotion*

[30] Swinburn et al. (2013) "INFORMAS (International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support): overview and key principles." *Obesity reviews 14: 1-12.*

[31] Global Panel (2017) Improving nutrition through enhanced food environments. Policy Brief No. 7. London, UK: Global Panel on Agriculture and Food Systems for Nutrition

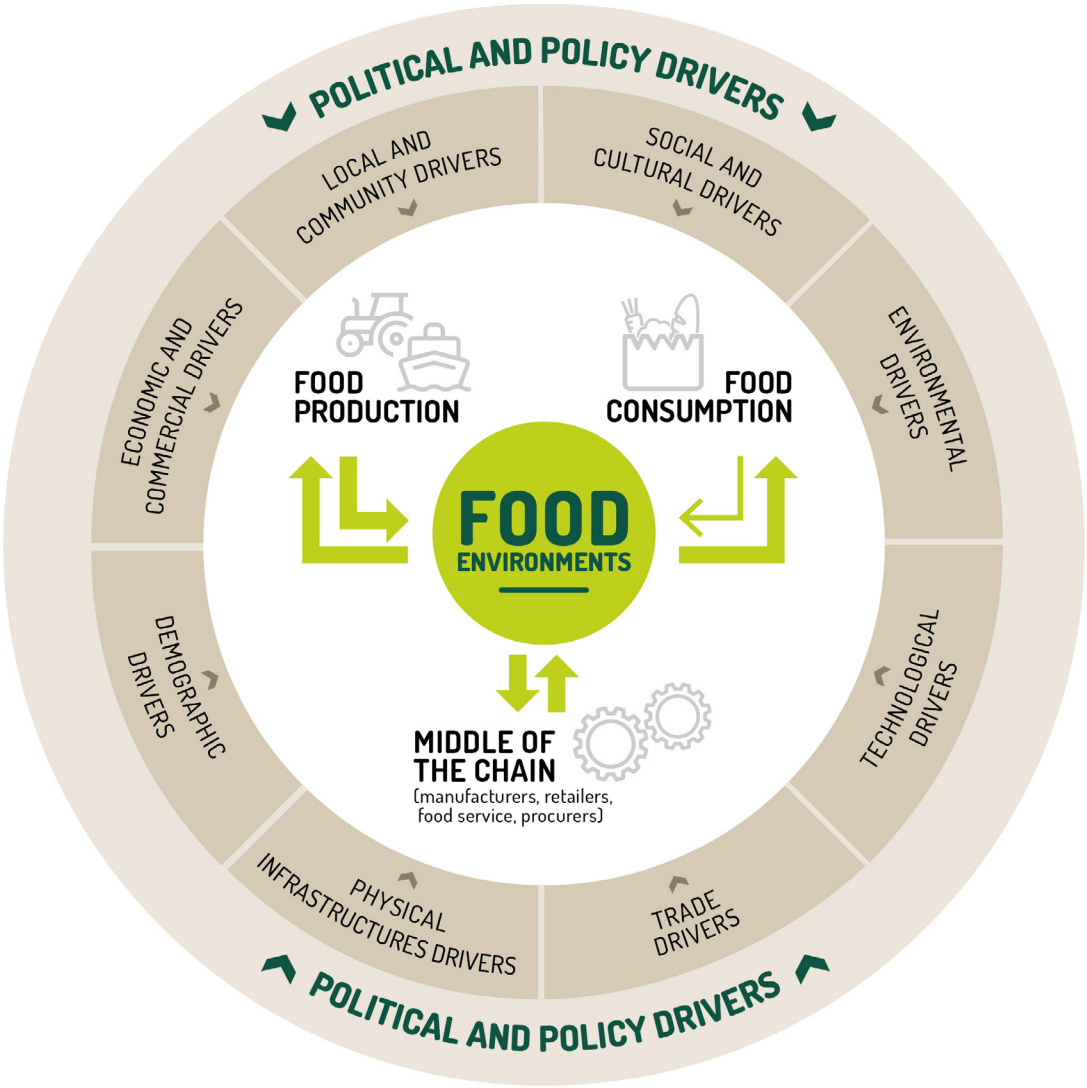
[32] Turner et al. (2018). Concepts and critical perspectives for food environment research: A global framework with implications for action in low- and middle-income countries. *Global food security, 18*, 93-101

[33] Raza et al (2020). Conceptual framework of food systems for children and adolescents. *Global Food Security, 27*, 100436.

[34] Downs et al. (2020) Food environment typology: advancing an expanded definition, framework, and methodological approach for improved characterization of wild, cultivated, and built food environments toward sustainable diets. *Foods*

FIGURE 1

THE FOOD ENVIRONMENT AS AN INTERFACE BETWEEN PEOPLE AND FOOD SYSTEMS



Food environments encompass both the personal characteristics and preferences that people bring to food systems, which may or may not result from personal choice, and the wider contexts within which food decisions are made. The individual factors are sometimes referred to as 'personal food environments', while the wider contexts as 'external food environments'.[35,36] While all people engage with food systems bringing their own personal backgrounds, **food decisions are ultimately taken within a much more limited set of common contexts, which are strongly shaped by dynamics in food chains**.

Food environments may differ depending on country, region and urban or rural setting, and different people within one city or neighbourhood can be exposed to different environments depending, for instance, on socio-economic status.[37]

[35] Raza et al (2020). Conceptual framework of food systems for children and adolescents. *Global Food Security, 27*, 100436.

[36] Global Panel (2017) Improving nutrition through enhanced food environments. Policy Brief No. 7. London, UK: Global Panel on Agriculture and Food Systems for Nutrition

[37] Costa et al. (2019) Does access to healthy food vary according to socioeconomic status and to food store type? an ecologic study. *BMC Public Health 19*, 775

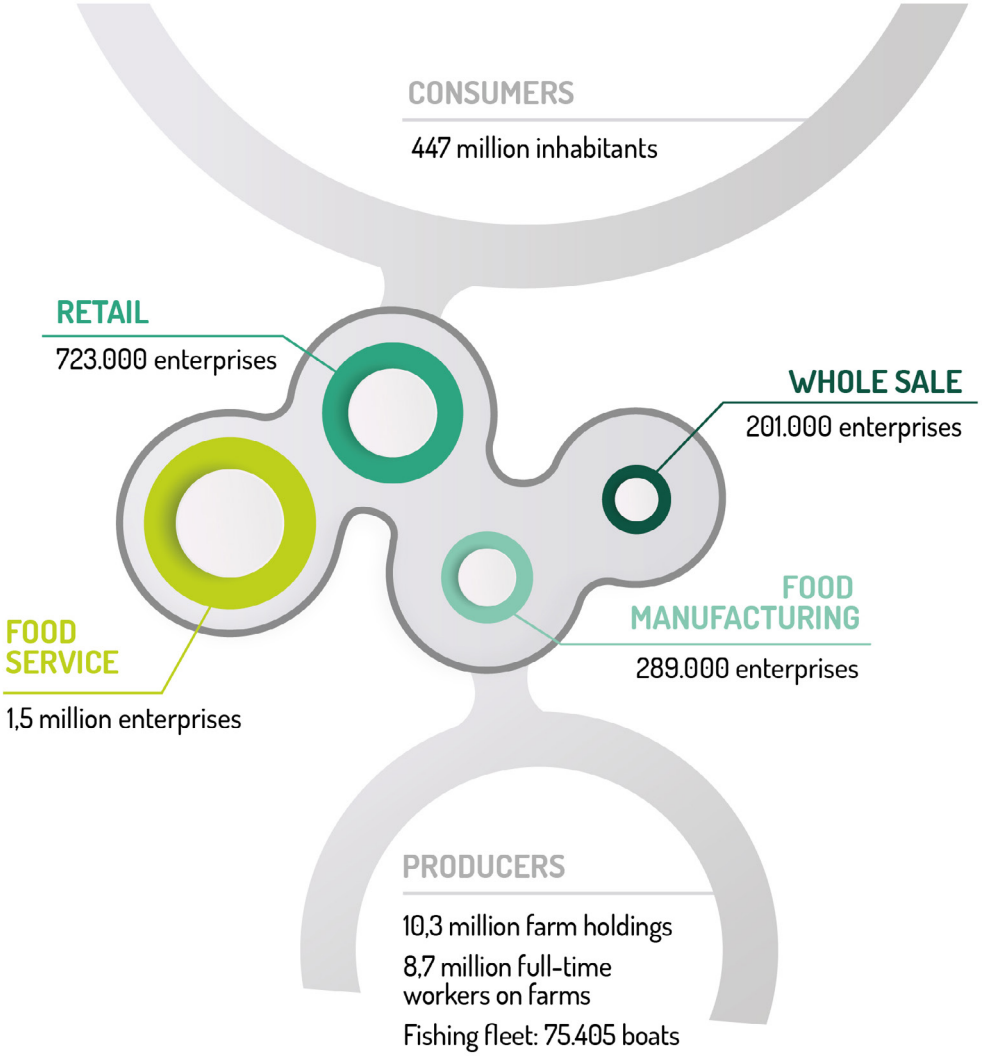
At the same time, **food environments create key common spaces, underlining their importance as strategic points of intervention**.

Another common feature of food environments is that they are, **to a significant degree, commercially determined, especially by actors in the 'middle' of the food chain**. Such actors include retailers, manufacturers, food service companies (e.g. restaurants, fast food chains, catering services), advertisers and other economic operators (e.g. delivery services), but also public procurers. A focus should therefore be placed on these actors when designing strategies for reshaping food environments.

Here it should be noted that measures such as marketing regulations or pricing policies, which are important components of effective change strategies, are about setting the 'rules of the game' for food business operators, targeting food environments, not consumers.

FIGURE 2

THE MIDDLE OF THE FOOD CHAIN AS A STRATEGIC INTERVENTION POINT [38,39,40] (FIGURES FOR EU-27)



[38] Eurostat (2021) Population and population change statistics, Inhabitants: EU27 (2021)

[39] Eurostat (2020) Agriculture, forestry and fishery statistics: 2020 edition. Data refers to EU27: retail and whole sale (2018), manufacturing (2018), food service (2018), farm holdings (2016), farm workers (2019), fishing fleet (2019).

[40] European Commission (2015) You are part of the food chain. Key facts and figures on the food supply chain in the European Union. EU Agricultural Markets Briefs No 4

Food environments are not only critical in shaping people's food choices. **Food environments mediate between consumers and producers, translating demand patterns into production signals**. They affect which products are demanded, to what standard they should be produced and what the sales price should be.

In turn, **food environments are also shaped by food production, which determines the broad availability of foods and their environmental, social, health and animal welfare characteristics**. However, orienting agricultural, fisheries and trade policies to support healthy and sustainable food production alone will not be sufficient to ensure sustainable consumption patterns if food environments do not make access to this food easy and affordable, as well as culturally appropriate and pleasurable.[41]

Food environments mediate between consumers and producers, translating demand patterns into production signals

4 A VISION FOR ENABLING FOOD ENVIRONMENTS

ESCAPING THE NEGATIVE SPIRAL

It is widely understood that **current food environments are not making sustainable food choices easy**.[42] On the contrary, today's food environments are said to "*exploit people's biological, psychological, social, and economic vulnerabilities*"[43] making it easier to adopt unhealthy and unsustainable diets. This in turn reinforces preferences for nutritionally poor foods and entrenches unsustainable supply chains (see Appendix for a description of the multiple dimensions of food sustainability).

For example, increasingly sophisticated and manipulative ways are used to **promote and market foods** across multiple channels, including through their packaging, in-store environments, social media and television. Today's proliferation of digital marketing, based on the gathering of extensive personal data, is enabling ever more tailored and persuasive approaches. Techniques made possible by evolving technologies include food brands engaging young people through immersive experiences and encouraging them to share their campaigns with friends. Peer-to-peer sharing enhances the effectiveness of underlying messages that mostly link to the creation of demand for nutritionally poor food.[44,45]

Current food environments are not making sustainable food choises easy

Another example of unhealthy food environments is the existence of **'food deserts'** – areas where healthy foods are insufficiently available and accessible, and **'food swamps'** – areas where food is abundant, but dominated by foods and beverages whose excessive consumption is

[41] Garnett et al (2015). Policies and actions to shift eating patterns: what works. *Food Climate Research Network. Foresight, 515*(7528), 518-522

[42] SAPEA, Science Advice for Policy by European Academies. (2020). A sustainable food system for the European Union. *Berlin: SAPEA.*

[43] Swinburn et al. (2015). Strengthening of accountability systems to create healthy food environments and reduce global obesity. *The Lancet*, 385(9986), 2534-2545

[44] Tatlow-Golden et al, (2016) Tackling food marketing to children in a digital world: trans-disciplinary perspectives. *World Health Organization* (WHO)

[45] Tatlow-Golden, M., Tracey, L., & Dolphin, L. (2016). Who's Feeding the Kids Online? Digital food marketing to children in Ireland: Advertisers' tactics, children's exposure and parents' awareness. *Irish Heart Foundation*

detrimental to health and other sustainability dimensions.[46] Imploring people living in such settings to 'make healthy and sustainable choices' is totally missing the point.

> Turning this negative spiral into a virtuous cycle requires firm and dedicated action to reshape food environments so they enable the uptake of sustainable diets

These considerations attest to the **vulnerability of citizen-consumers in the face of powerful forces in the food system and their low ability to actually influence them**.[47] This especially holds true for children and adolescents, for whom good nutrition is critical for determining their future well-being and life-chances, and whose right to a healthy food environment requires special protection.[48,49]

Turning this negative spiral into a virtuous cycle requires firm and dedicated action to reshape food environments so they enable the uptake of sustainable diets. Sustainable diets are defined as those diets "*with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations*."[50] This comprehensive understanding of sustainable diets means it is important to consider the multiple dimensions of food sustainability,[51] some of which are further addressed in the Appendix below.

A VISION FOR ENABLING FOOD ENVIRONMENTS

Creating enabling food environments means ensuring that foods, beverages and meals that contribute to sustainable healthy diets are the most available, accessible, affordable, pleasurable and widely promoted.

Such environments make the healthy and sustainable choice the default and most desirable choice, while limiting the availability and promotional opportunities for foods associated with unhealthy and unsustainable diets.

Sustainable food environments, furthermore, drive demand for socially just supply chains and production models that work with nature, rather than against it, that are climate-proof, and that take high levels of animal welfare as their starting point.

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[46] Surfood Foodscape research project (2021-2027) Sustainable Urban Food Practices

[47] SAPEA, Science Advice for Policy by European Academies. (2020). A sustainable food system for the European Union. *Berlin: SAPEA*.

[48] United Nations Children's Fund and United Nations Special Rapporteur on the Right to Food, (2019) Protecting Children's Right to a Healthy Food Environment, *UNICEF and United Nations Human Rights Council, Geneva*.

[49] Garde et al, (2018) A Child Rights-Based Approach to Food Marketing: A Guide for Policy Makers. UNICEF

[50] The definition continues that "Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources". Burlingame & Dernini (2012). Sustainable diets and biodiversity directions and solutions for policy, research and action. *FAO Headquarters, Rome*.

[51] Garnett et al. (2014). What is a sustainable healthy diet? A discussion paper. *Food Climate Research Network*.

5 HOW TO CREATE ENABLING FOOD ENVIRONMENTS?

SEVEN ENTRY POINTS TO RESHAPE FOOD ENVIRONMENTS

Food environments can be directly re-shaped by food policies and actions that address 'food entry points', and the availability, affordability, accessibility and desirability of foods. The table below identifies seven action areas for the creation of sustainable food environments, accompanied by several examples of associated policies.[52]

TABLE 1

7 ENTRY POINTS FOR ACTION ON FOOD ENVIRONMENTS

7 DIMENSIONS OF FOOD ENVIRONMENTS	SOME OF THE MAIN QUESTIONS ADDRESSED	EXAMPLES OF POLICIES AND ACTIONS (indicative and non-exhaustive)
FOOD CHARACTERISTICS	What is the nutritional composition of foods? What specific (regulatory) standards exist to ensure the safety, environmental, social and animal welfare credentials of food products? How is food packaged?	• Marketing standards • Environmental product-specific regulations and standards • Regulatory standards on the levels of certain nutrients in food • Product reformulation policies • Antibiotics use regulations • Legislation to end the use of cages in animal agriculture • Fisheries regulations • Pesticides regulations • Minimum wage and labour regulations for food workers • Food safety regulatory standards, including on food contact materials • Actions to promote bulk purchasing for retail
FOOD LABELLING	Are foods labelled in a way to make better choices easily and transparently identifiable? Does it make the better and more sustainable choice more appealing?	• Simplified nutrition labelling • Labels highlighting socio-economic, climate and environmental sustainability throughout the value chain • Origin labelling • Animal welfare 'tiered' method of production labelling

[52] Adapted from: Swinburn et al. (2013) "INFORMAS (International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support): overview and key principles." *Obesity reviews*

7 DIMENSIONS OF FOOD ENVIRONMENTS	SOME OF THE MAIN QUESTIONS ADDRESSED	EXAMPLES OF POLICIES AND ACTIONS (indicative and non-exhaustive)
FOOD PROMOTION	How are foods marketed and advertised? Are foods that drive ill health and undermine other sustainability objectives freely and widely promoted, or are restrictions in place? Are systems in place to ensure healthy and sustainable options are promoted?	• Rules restricting the marketing, advertising and sales promotion, including online, of nutritionally poor food • Rules against misleading advertising and claims, including 'greenwashing' • Criteria to ensure public money is only spent on promoting foods associated with sustainable diets, excluding foods with high negative environmental and animal welfare footprints
FOOD PROVISION	What are the characteristics of the menus and foods on offer through public procurement, including in schools, canteens, hospitals, and in restaurants and other out-of-home or home delivery settings? How is urban planning organised, for instance in terms of the density of fast food outlets and the availability of spaces that build community through eating food?	• Minimum sustainability criteria for public food procurement, including with a view to promote more healthy, plant-rich and less meat-heavy menus • Target for organic food in schools • Quick service restaurants apply nutrition and sustainability labels • More healthy plant-based options in take-away meals • Commercial urban planning strategies to reduce the density of fast food outlets • Support for social restaurants for vulnerable groups
FOOD RETAIL	How is the availability of foods associated with sustainable healthy diets in retail outlets? How are in-store environments organised? Is food retailed in a way that adds further value to the socio-cultural experience of food? Are short food supply chains and direct producer to consumer distribution systems available, accessible and affordable?	• Policies supporting mission-led food business models, to achieve social as well as economic impacts, such as through community supported agriculture initiatives and short supply chains • Store layouts improve positioning of food associated with sustainable healthy diets, such as healthy and environmentally-friendly plant-based foods • Policies to support local market infrastructures • Nutritionally poor foods are removed from sale near check-out counters

7 DIMENSIONS OF FOOD ENVIRONMENTS	SOME OF THE MAIN QUESTIONS ADDRESSED	EXAMPLES OF POLICIES AND ACTIONS (indicative and non-exhaustive)
FOOD PRICES	Do relative prices favour foods that contribute to sustainable healthy diets, while reducing the attractiveness of nutritionally poor food and food with a heavy climate and environmental burden? Do non-stigmatising fiscal interventions exist to support access to good food for people in low-income groups? Do food prices support decent incomes for producers who employ methods that are better for consumers, climate, the environment and animals?	• Pricing policies to align food prices with the true cost of food and to lower the relative price of the more sustainable food options • Fiscal incentives for people living on low incomes • Minimal VAT for fruit and vegetables, pulses and nuts
FOOD TRADE AND INTERNATIONAL AGREEMENTS	Do international trade and investment agreements have provisions in place to protect and foster enabling food environments? Are there international agreements to improve the sustainability of food? Do EU internal market trade rules enable sustainable food systems?	• Import standards at the same level as EU environmental, social and animal welfare standards, coupled with assistance to non-EU producers from lower income countries to fulfil these standards • A food sustainability chapter in trade agreements that is binding and enforceable • Food sustainability impact assessment before negotiations • Action to tackle dual quality of food within the EU • Allowing public food procurers to purchase from local suppliers within the EU

The seven dimensions above have been adapted from the INFORMAS network to include wider food sustainability components beyond nutrition.[53] For the nutritional component of sustainability, these seven dimensions are being used to analyse the achievements and gaps in food policies through the Food Environment Policy Index (Food-EPI). Several European countries and the EU have already been benchmarked based on this methodology, with all analyses showing significant room for improvement in both national and European policies.[54]

[53] Adapted from: Swinburn et al. (2013) "INFORMAS (International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support): overview and key principles." *Obesity reviews*

[54] Djojosoeparto et al. (2020). The Healthy Food Environment Policy Index (Food-EPI): European Union. An overview of EU-level policies influencing food environments in EU Member States. *Policy Evaluation Network.*

While providing a comprehensive framework for action on food environments, the Food-EPI is not exhaustive. **Actions in these seven dimensions should be accompanied by other systemic policies**, especially in relation to social, economic and infrastructure factors, to ensure citizen-consumers can fully access the benefits of enabling food environments and that producers can participate in them.

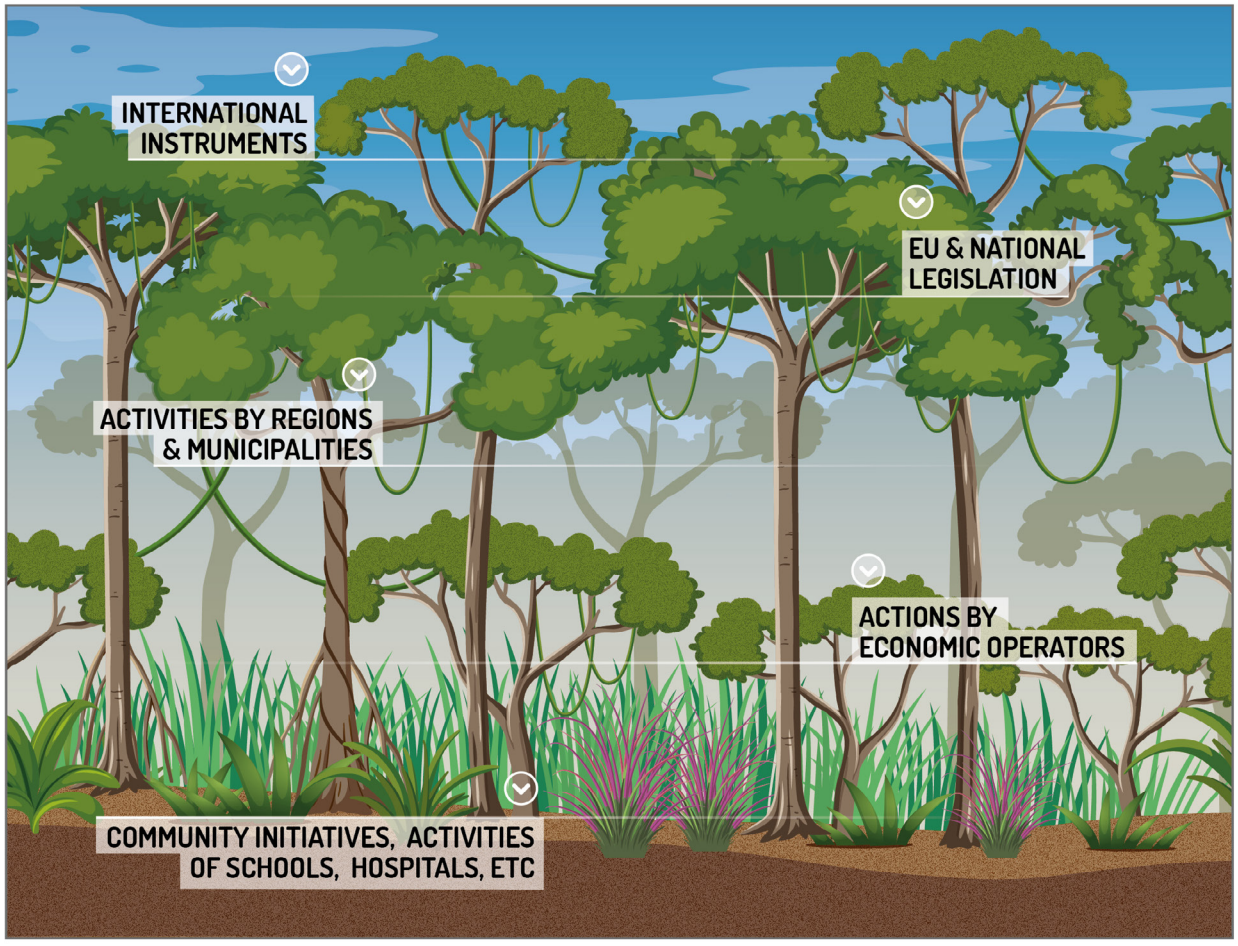
MULTI-LEVEL ACTION DRIVEN BY BINDING POLICIES

While food environments are often physically close, being where we daily engage with food, both at home, at work and on the move, they are influenced by a wide range of forces, including very distant ones. This is why **creating enabling food environments is not a question of acting 'bottom-up' vs 'top-down',** rather, it is about creating a multi-layered 'ecosystem' of mutually supportive policies and activities.[55]

Creating enabling food environments is not a question of acting 'bottom-up' vs 'top-down'

FIGURE 3

A MULTI-LAYERED 'ECOSYSTEM' OF ACTIVITIES, WITH REGULATORY POLICIES AS FOUNDATIONAL PILLARS



[55] Global Alliance for the Future of Food. (2020) Systemic Solutions for Healthy Food Systems: A Guide to Government Action

A wide range of actors must be engaged in reshaping food environments across these various levels, including national governments, EU institutions, local and regional authorities, food industries, public food procurers in schools, hospitals and local canteens, community initiatives, local farmers and so on.

Binding policies, such as regulation and fiscal measures, tend to be the most effective interventions and must be the main drivers of change to healthy and sustainable food systems operating within planetary boundaries

At the same time, while recognising the need for a multi-layered approach based on a broad mix of policies and actions, it is critical not to lose the wood for the trees. As stated by the EU's group of chief scientists, **binding policies, such as regulation and fiscal measures, tend to be the most effective interventions and must be the main drivers of change to healthy and sustainable food systems operating within planetary boundaries**. Voluntary commitments and self-regulatory initiatives should only be seen as complementary drivers and never replace regulation.[56]

Creating enabling food environments is a critical public function and should be the subject of proactive engagement by public authorities

Policies that focus on reshaping food environments and introducing other enablers for a sustainable food systems transition are not only more effective, they are more equitable too, as they do not place the burden of change on individuals, especially on those who are less well-equipped to make it.[57] This point serves to emphasise that **creating enabling food environments is a critical public function and should be the subject of proactive engagement by public authorities.** In working for the public interest, authorities should have strategies in place to prevent the derailment of this agenda by (commercial) actors with competing interests.[58]

OTHER CRITICAL WAYS TO INFLUENCE FOOD ENVIRONMENTS AND FOOD CHOICES

Beyond food policies that focus on reshaping dynamics in food chains, there are other ways to change food environments and influence food choices.[59]

For instance, systemic policies to tackle **social deprivation** and improve access to good food are especially important, considering the strength by which food behaviours are influenced by socio-economic conditions.[60] In the EU, an estimated 11% of the population (49 million people, EU-27) is unable to afford a quality meal every second day[61] and over 20% of people are at risk of poverty or social exclusion.[62] At the same time, a sizeable share of food producers' livelihoods are negatively affected by low incomes and

[56] Scientific Advice Mechanism, Group of Chief Scientific Advisors (2020) Towards a sustainable food system. *Scientific Opinion Nr. 8. European Commission*

[57] Adams et al. (2016). Why are some population interventions for diet and obesity more equitable and effective than others? The role of individual agency. *PLoS medicine, 13(4), e1001990*

[58] McKee & Stuckler (2018) Revisiting the corporate and commercial determinants of health. American journal of public health

[59] European Public Health Alliance, Friends of the Earth Europe, IFOAM EU Group, Slow Food Europe (2018) Joint Briefing Transitioning towards sustainable food systems in Europe

[60] Alkerwi et al. (2015) Demographic and socioeconomic disparity in nutrition: application of a novel Correlated Component Regression approach. *BMJ open*

[61] Eurostat (last updated 18/06/2021) Inability to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day by level of activity limitation, sex and age.

[62] Eurostat (last updated 18/06/2021) People at risk of poverty or social exclusion

competition with other industries,[63] and food workers often face inadequate wages and sub-standard working conditions.[64]

A just transition in food will require much closer integration with social, labour and economic policies

Such social inequalities have both devastating effects on individuals and communities, and stand in the way of a sustainable food systems transition. While poverty and social exclusion have vast implications for the functioning and sustainability of food systems, food policies have only a limited role to play in addressing the underlying causes of such deprivation. **A just transition in food will require much closer integration with social, labour and economic policies**.

Food education in schools and as part of professional educational curricula, including in the field of healthcare, is another example of what is needed. **While education in itself will not deliver change at the required scale, it can be a powerful amplifier and enabler of other food environment policies**.[65,66] Education must be followed by example: by policies that change societal conditions to help make the lessons learned in schools into a social norm.

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Other policies and actions, including on climate and environment, transport, infrastructure, agriculture and fisheries, competition, rural development, labour and animal welfare may likewise shape the sustainability of food environments and eating patterns.[67]

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APPENDIX

THE MULTIPLE DIMENSIONS OF FOOD SUSTAINABILITY

A food environment approach, by considering all 7 dimensions of food environments (i.e. Food characteristics, Labelling, Promotion, Provision, Retail, Prices and Trade) can help in the design and implementation of a consistent and coherent mix of policies to maximise the co-benefits of a sustainable food systems transition.[68] Achieving co-benefits in food systems is possible because many of these food system dimensions are closely interconnected and often share similar drivers and solutions.[69]

Food has many facets, yet EU policies pertaining to food are rarely able to capture this multidimensionality, leading to instances where progress made in one area may have no or a negative impact in another, or ignore some areas altogether.[70] Sustainability is often described on the basis of three dimensions: economic, social, and ecological. These three cover vast areas of deeply interrelated issues, but sometimes leave key aspects under-emphasised. Describing food sustainability according to the following six components can overcome such insufficiencies:[71]

1 **Health** – ensuring healthy nutrition and safe food, tackling antimicrobial resistance (AMR) and the overuse of synthetic pesticides and other agrochemicals, contributing to planetary and global health, ensuring safe working conditions;

2 **Ecological** – tackling the climate and biodiversity crises and ensuring circular, regenerative and agro-ecological models;[72]

3 **Economic** – ensuring that food-related businesses that contribute to other sustainability dimensions and operate within planetary boundaries achieve healthy economies by creating well-paid jobs and sufficient income;

4 **Social** – ensuring socio-cultural needs, reducing inequalities both with consumers and producers, ensuring that small-scale food producers have adequate support, ensuring that workers benefit from decent wages and good labour conditions;

5 **Ethical** – produce food that is ethically acceptable (such as with a high degree of animal welfare), and promote responsibility among producers and consumers by fostering transparency, encouraging information disclosure and sharing, and incentivising public participation in business decisions;

6 **Resilience** - system activities should increase or maintain diversity in the food system, allocate resources to crisis management, improve knowledge about future possibilities, and improve ability to innovate and anticipate change.

While strategies for food systems change should focus on co-benefits, it should be recognised that **priorities will inevitably need to be set and that trade-offs can never be fully avoided**. However, a clearer consideration of the multidimensional nature of sustainability will enable such potential trade-offs to be better identified and managed. Resolving ambiguities around the concept of food sustainability may well be a precondition for realising the Farm to Fork Strategy's game-changing potential.[73]

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