POLICY BRIEF 3

RESEARCH AND INNOVATION SUPPORTING THE FARM TO FORK STRATEGY OF THE EUROPEAN COMMISSION

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KEY MESSAGES

The EU Think Tank (as part of the FIT4FOOD2030 Coordination and Support Action) strongly supports the development of the Farm to Fork Strategy as a key component of the European Green Deal, recognising the need to transform the food system as a whole.

This policy brief calls for innovative approaches to the Farm to Fork Strategy to provide practical answers to two central questions: i) how can a shift towards healthier and more sustainable diets be facilitated?; and ii) how can all actors in the food system be empowered to adopt more sustainable practices?

Answers to these questions raise the need for new transdisciplinary, multi-actor and participatory Research and Innovation (R&I) approaches that enable citizens, farmers, fishers, food processors, distributors, retailers and consumers to contribute to more coherent, cross policy-sector food initiatives that leverage on European food systems to deliver a balance of public goods (including food security and environmental integrity).

A SYSTEM APPROACH TO RESEARCH AND INNOVATION FOR FOOD SYSTEM CHANGE

Our food systems face severe, urgent and persistent challenges, such as climate change, resource scarcity, high levels of waste, obesity and malnutrition. These problems are strictly interrelated and can only be well understood through R&I that focuses on key interactions between actors, processes and policies that often cut across food production, consumption and distribution activities. Involving stakeholders in the co-creation of knowledge about such interactions will help to find sustainable pathways for a positive food system transformation.

See "A systems approach to research and innovation for food system transformation" (Gill et al., 2018)

On 11th of December 2019, the European Commission presented the European Green Deal. This policy, which aims to transition towards a fair and prosperous society with a climate-neutral agricultural economy by 2050 (EC, 2019), is embedded in the 2030 Agenda to achieve the Sustainable Development Goals (SDGs) and contributes to the Paris Climate Agreement. The Farm to Fork Strategy, an integral part of the European Green Deal, aims to stimulate healthy, sustainable and affordable food while tackling climate change, protecting the environment, preserving biodiversity and providing business opportunities for all actors in the food system.

The Think Tank of the EU project FIT4FOOD2030 supports these objectives. It endorses the idea that there is now an urgent need to radically change our food systems (IPBES, 2018, Caron et al., 2018) and make them more resilient, sustainable, responsible, diverse, competitive and inclusive. The starting point towards this change is the increasing recognition of the failure of single-issue strategies to enhance the sustainability of the food system. The Common Agricultural Policy (CAP), for example, is shifting its focus from a "productivity first and sustainability as a way of reducing environmental impacts" approach to a policy that recognises the importance of our environment and emphasizes "the provision of public goods, such as safe and healthy food, nutrient management, response to climate change, protection of the environment and its contribution to the circular economy" (EC, 2017). Similarly, experts are increasingly calling for research that expands its focus beyond food production and consumption to account for the "missing middle" – the wide range of activities (wholesaling, processing, packaging, transport, etc.) that connect the supply and demand ends of food systems (Sonnino et al., 2014; Gill et al., 2018).

More than ever, complex problems such as those that affect our food system will only be solved if all actors that operate within it (e.g., farmers and fishers, the food industry, retailers, the hospitality sector,

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policy-makers and consumers) fully engage with the challenges at hand and cooperate to transform the functioning of the food system. For this to happen, new governance structures, collaborative analyses and concerted activities across different disciplines, sectors and interests need to be developed. Consumers, in their role as citizens, are vital to facilitate the necessary cultural shift, to find solutions that mediate between conflicting goals and to prevent the risk of unintended effects. Hence, there is a need for new transdisciplinary research that brings together social and natural sciences with the practical and experiential knowledge of all stakeholders (Gill et al., 2018, Gill et al., 2019; Kok et al., 2019).

Policy coherence for the European food system

What and how we eat is determined not just by individuals' deliberate decisions or by their socio-economic position, but also by macro-structural (economic, cultural and power-related) factors that affect the production, processing, distribution, accessibility, purchasing and preparation of food (Zurek et al., 2018). Technological innovation to improve these activities will not be able to address this complex interplay or eliminate the socio-ecological harms that are embedded within an uneven political and economic landscape. In the coming 10 years, solutions will have to come from changes at all levels of food systems -- including management, governance and institutional and consumer behaviour. Tackling challenges such as multiple forms of malnutrition entails the adoption of a synergistic approach that pursues "double duty actions" (Branca et al., 2019).

The policy context has a crucial role to play in initiating and sustaining these changes. At present, the European food system is shaped by a combination of different policies and legislations at different levels, which are not always coherent with one another. These range from more 'obvious' policies, such as the CAP and the Common Fisheries Policy (CFP), to food safety and animal welfare standards, environmental regulations (such as the Nitrate and Bird and Habitat directives), regulations regarding the single market (such as competition rules and trade agreements), R&I strategies, and national food and nutrition policies (where they exist).

To progress the vision of a healthier, more sustainable and more inclusive food system for all, there is a need to overcome the current fragmentation through substantial changes in EU legislation. For example, single market and internal competition regulations have hampered the sustainable development potential of public food procurement. Unlike most other food policy instruments, which focus on either supply or demand, public procurement is, by its very nature, systemic; in other words, it implicates all different stages and actors of the food system, with a particular focus on social groups (e.g., patients in hospitals, the elderly in care homes and children in schools) that are at high risk of nutrition insecurity (Morgan & Sonnino, 2013). An enabling regulatory context at the European level is urgently needed to ensure that, at the national level, public procurement policies foster, rather than frustrate, the creation and consolidation of markets that provide healthy and nutritious food for all European citizens.

Single market and internal competition rules have also prevented Member States from banning unhealthy foods. The EU should not just concentrate on its own borders; it also has the responsibility to shape its food policies in a way that ensures co-benefits globally. A European Green Deal needs to contribute to the achievement of the SDGs globally (such as "No poverty", "Zero hunger and malnutrition" and "Climate action" and the protection, restoration and sustainable use of ecosystems).

To date, the promotion of healthy and sustainable diets has largely relied on providing consumers with information about better choices. On its own, enhanced information does not necessarily translate into the adoption of healthier diets or more sustainable food purchasing, consumption and waste management practices. Indeed, eating habits and food behaviour are rooted in cultures and traditions and may need long periods of time to change. As the High Level Panel of Experts (HLPE) report on Food and Nutrition Systems pointed out, *"…regulation, information and education can orient consumers towards healthier and more sustainable food choices. Mass media campaigns, social and behavior change communication, social protection programs and food-based dietary guidelines all serve to increase awareness, but without opportunity, ability and motivation information and education campaigns alone may not trigger significant changes and that communication programs must incorporate insight on actionable steps to change habits to be more effective."* (HLPE, 2017). Citizens will only change consumption patterns when the **food environment** -- described as the "interface" between food systems and diets (FAO, 2016) -- provides norms, opportunities and incentives to change behaviour and facilitates an equitable access to affordable, sustainable and healthy food and supporting infrastructures.

To realise its systemic vision, the Farm to Fork strategy needs to actively intervene to reconfigure the food environments of different geographical areas (cities, rural and coastal areas) in ways that reflect communities' needs and desires, increasing access to land and water and developing and supporting food-growing projects, community cafes and food hubs (FAO, 2019). Indeed, in a sustainable food system, citizens are not just consumers; they need to be recognised and empowered as co-creators of innovative solutions to context-dependent challenges regarding public health, environmental sustainability and social justice.

Central to this endeavour should be more investment in trans-disciplinary research and innovation strategies that foster a **place-based approach** (Sonnino et al., 2016) that brings to the fore a nuanced emphasis on the socio-environmental and cultural specificities of food and agriculture across diverse histories and geographical scales (Lever et al., 2019). For the case of cities in practical terms, a place-based approach would transform cities into more self-reliant urban-centered regions that produce, store, process, consume and dispose of food locally to the maximum extent possible (Rees, 2019).

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Interventions across the value chain (through regulations, taxes, subsidies, trade policies, labelling, nudging and advertising) can also contribute to healthier diets (HLPE, 2017). Food networks, short value chains, information and specifications from retailers and hospitality sector are all settings that can be utilized to trigger or sustain changes in consumption patterns. Greater investment in transdisciplinary R&I is, again, key here, given the paucity of data currently available to understand the effectiveness of combining information, market interventions and regulation with a focus on bottom-up initiatives that attempt to change the food environment to shift consumer diets towards healthier and more sustainable options (Latka et al., 2018).

Policies that progress fairness and justice in the food system raise the need for a collaborative, multi-actor approach to intervention design, implementation and monitoring. Food producers would also benefit from the adoption of this type of approach. At present, many farmers see cost-reduction, upscaling and further intensification as the only way to run their business, given the low prices they receive for their products. Many are aware of the negative impacts of this approach on the environment, animal welfare and even their own health and would be keen to farm more sustainably. To achieve this, enabling policies and market conditions need to be in place. A broader framework, such as that proposed by the CAP reform (e.g., decreased use of pesticides, support for agro-biodiversity and responsible water use, etc.), moves away from the search for narrow technical solutions (EEA, 2019) and rewards farmers for their contribution to public health and to the management and conservation of public goods -- including carbon sequestration and the conservation of natural resources, landscapes and biodiversity (IPES Food, 2019).

Sustainable production practices also need to be closely connected with market opportunities. Farmers and fishers need an adequate remuneration for their safe and nutritious products to be able to react to changing consumer and societal demands (Jongeneel et al., 2020). Indeed, healthy and sustainable diets entail changes in food quantities and qualities (e.g., less meat consumption, increased consumption of fresh fish, fruit and vegetables) that require public support to facilitate a structural adjustment of the sector.

The food system also needs changes at the level of the food industry. It is important to keep in mind that food system actors engaged in storing, processing and especially retailing activities not only respond to consumer wishes but also shape their preferences. A major trend that will drive the food industry is transparency. Increasingly, consumers want to know where and how their food has been produced. This will influence food labelling, as well as the composition of food products and food marketing claims.

In addition to empowering consumers, a coherent food policy (which the Farm to Fork Strategy would facilitate) will also create an enabling regulatory context (e.g., labelling regulations, taxes, and subsidies) for food producers, helping them to take concrete steps to reduce their impact on the environment while offering healthier options to consumers.

To conclude: successful policy approaches must combine interventions on consumer behaviour with interventions on food environments and food supply chains to address the root causes of inequality, unhealthy diets and environmental degradation. We need, in other words, **integrated food policies** that build on the interdependencies (synergies, feedback loops and trade-offs) between environmental, socio-economic and health issues, targeting the whole population -- from average consumers to vulnerable groups (e.g., families on low-income, socially excluded individuals, migrants, refugees, vulnerable children, the elderly), whose needs require special consideration (Moragues-Faus et al., 2017). Such food policies require multi-actor and multi-stakeholder engagement to achieve vertical coordination (among different levels of governance) at the stage of policy design and horizontal coordination (the integration of food within and across different sectors) during policy implementation (EC, 2018).

New research and innovation approaches

The current policy landscape for commissioning R&I does not adequately address the issues we have raised, since research programme and project objectives are scattered across different sectors and disciplines. To realize the ambitious goals of Farm to Fork, there is a need for a radical rethinking of how research is commissioned. The new R&I needs to transcend sectors and disciplinary boundaries and increase the engagement of researchers with communities all along the value chain. We envision innovation projects that recognise the importance of local context (i.e. place-based knowledge) while applying evidence from multidisciplinary and multi-sectorial research. Special attention needs to be placed on the role of innovation brokers -- as catalysts of innovation that have the capacity to bring together multiple actors, to form networks and to facilitate their interaction (Klerx & Gildemacher, 2012; Gill et al., 2018).

New governance contexts are also urgently needed to accelerate the creation and uptake of new knowledge and technology along impact pathways. This will require targeted investment to enhance dialogue between sectors and between actors within sectors, and enable them to build on past research findings, identify their synergies, negotiate potential trade-offs and co-create shared visions, goals and action plans – at the national, regional and local levels. Transdisciplinary R&I aiming to create synergies between different food system actors should focus both on technological and social innovations as potential facilitators of the required change.

This new R&I approach depends on complementary investment in education and training to build capacity around food and nutrition challenges and improve the individual, institutional and national levels of knowledge and skills (Gurinovic et al., 2020). More financial resources should therefore be invested to support learning not just in schools and other educational institutions but also within communities of practice at all levels to enhance theoretical and practical understanding of the complex nature and dynamics that characterize the food systems.

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In summary, the EU Think Tank very much welcomes the Farm-to-Fork Strategy as a vital step towards the creation of a more coherent policy and governance context that uses food as a leverage point to facilitate synergistic interventions on environmental, socio-economic and health issues, which consider the whole European population -- including vulnerable groups (e.g., families on low-income, socially excluded individuals, migrants, refugees, vulnerable children, the elderly). Researchers can play a key role in the identification of those synergies and the formulation of shared visions around them, but to be able to play such role they need active support from different communities of stakeholders. **What we are advocating for is a new R&I context that fosters active interactions between different actors, sectors, governance scales and academic and policy fields to uncover the different uncertainties, complexities and negotiations associated with food system transformation.** Transdisciplinarity, in a word, needs to be embedded into the design and delivery of all strategies and policies for a more sustainable food future – in Europe and beyond.

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