



## **Group of Chief Scientific Advisors**

### **Scoping paper:**

## **Towards an EU Sustainable Food System** Insights from the social sciences

***Updated: 25 September 2019***

Rev. date: 25/09/2019

Research and  
Innovation

### 1. ISSUE AT STAKE

Although availability of food is not perceived as an immediate, major concern in Europe, the challenge to ensure a long-term, safe, nutritious and affordable supply of food, from both land and the oceans, remains. A portfolio of coordinated strategies is called for to address this challenge.<sup>1</sup>

Despite the overall level of economic prosperity in Europe, access to safe and nutritious food is still problematic for parts of the population, and food poverty is a concern in many European countries. Furthermore, obesity and diabetes, often related to poor dietary choices have become a major public health issue in the EU, with additional negative effects on economic productivity. Moreover, the global food system on which Europe relies faces a number of challenges concerning ecological sustainability, and robustness in the face of shocks and global change.<sup>2</sup>

Worldwide, demand for food is changing as a result of demographic trends, urbanisation, economic prosperity, and changing consumer preferences. Demographic growth means more mouths to be fed, and richer consumers demand a wider range of products including more animal proteins, driving up the demand for crops for animal feed. Population shifts from the countryside to cities, and the desire to preserve rural communities, require new models of food production and supply, while addressing the ‘rural-urban divide’. Moreover, food production is increasingly in competition with alternative purposes for crops such as the production of biofuels and other plant-based products.

Food waste is increasingly recognised as key challenge, both in the developing world where most food is wasted before it reaches consumers because of spoilage, pests, and poor storage and handling, and in the developed countries where structural oversupply leads to wastage. The FAO<sup>3</sup> estimates that a third of food produced for human consumption is currently lost or wasted.

Food systems are heavily globalised and interdependent, and the EU imports large quantities of food and feed from third countries, while also being a major exporter of food products. The wider EU agri-food sector contributes with exports worth € 137 billion (2018) and 43 million jobs to the economic viability of the EU. This means that a global outlook is needed when considering the sustainable supply of food to the EU from both land and the oceans, as changes in demand and supply across the world have global repercussions. For example, agricultural production for export to the EU can create economic opportunities abroad and contribute to reducing poverty. Moreover, food

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<sup>1</sup> GO Science 2011, *The Future of Food and Farming*. <https://www.gov.uk/government/publications/future-of-food-and-farming>

<sup>2</sup> WRR 2014, *Towards a Food Policy*. <https://english.wrr.nl/publications/reports/2016/12/13/towards-a-food-policy>

<sup>3</sup> FAO 2013, *Food wastage footprint; Impacts on natural resources*. <http://www.fao.org/docrep/018/i3347e/i3347e.pdf>

insecurity is a key factor in global geopolitics, driving instability in neighbouring regions such as North Africa and contributing to the migratory crisis facing Europe today.

Beyond production, processing, distribution and consumption of food are key parts of food systems. Europeans increasingly source their food from supermarkets and large retailers, and consume a large proportion of meals prepared outside their home. Packaged products (processed food and beverages) now account for approximately half of all consumer spending in the West.<sup>4</sup> These trends make food distributors, processors and services preparing meals increasingly important actors in shaping the food system.

Food production is also a resource-intensive activity with profound impacts on the environment.<sup>5</sup> Water is a key resource for the production of food, and according to the FAO in 2000 agriculture was responsible for 70% of worldwide water consumption and 93% of water depletion.<sup>6</sup> Modern food production and processing are energy-intensive activities, with the industrial activities related to food systems requiring an estimated 26% of the EU's energy consumption.<sup>7</sup> Food systems are also one of the leading causes of climate change, and one of the areas most affected by it.<sup>8</sup> Up to 70% of the EU's food imports come from developing world areas that will be particularly vulnerable to climate change.<sup>9</sup> Food plays a crucial role in human health, and a comprehensive approach to food policy should consider issues of food safety, health and nutrition – including food choices by consumers and the role of education and information therein.<sup>10</sup>

At the same time, EU agriculture has an important potential as a steward of the natural environment, as it is covering 48% of the EU's land. The whole food system has a duty of care for the natural resources of soil, water, air and biodiversity.

## 2. EU POLICY BACKGROUND

Within the EU, production, processing, distribution and consumption of food, and their impacts, fall under a wide range of policy areas and instruments. This includes the

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<sup>4</sup> Gehlhar and Regmi 2005: 6) cited in WRR 2014, *Towards a Food Policy*. <https://english.wrr.nl/publications/reports/2016/12/13/towards-a-food-policy>

<sup>5</sup> EEA 2015, *The European environment — state and outlook 2015 — synthesis report*. <https://www.eea.europa.eu/soer-2015/synthesis/report/0c-executivesummary>

<sup>6</sup> FAO 2006, *Livestock's long shadow. Environmental issues and options*. <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>

<sup>7</sup> JRC 2015, *Energy use in the EU food sector: State of play and opportunities for improvement*. <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/energy-use-eu-food-sector-state-play-and-opportunities-improvement>

<sup>8</sup> GO Science 2011, *The Future of Food and Farming*. <https://www.gov.uk/government/publications/future-of-food-and-farming>

<sup>9</sup> Oxfam, cited in EASAC 2017, *Opportunities and challenges for research on food and nutrition security and agriculture in Europe*. [https://easac.eu/fileadmin/PDF\\_s/reports\\_statements/Food\\_Security/EASAC\\_FNSA\\_Report\\_Complete.pdf](https://easac.eu/fileadmin/PDF_s/reports_statements/Food_Security/EASAC_FNSA_Report_Complete.pdf)

<sup>10</sup> EUROSTAT 2016. <http://ec.europa.eu/eurostat/documents/2995521/7700898/3-20102016-BP-EN.pdf/c26b037b-d5f3-4c05-89c1-00bf0b98d646>

Common Agricultural Policy (CAP) and Common Fisheries Policy, but also policies such as environment and conservation policies, health and food safety, research and innovation, single market and competition, trade and development policies. Also highly relevant are the EU's commitments towards the UNs sustainable development goals (SDGs) and COP21. A number of calls for a more integrated and holistic EU food policy and/or a better coordination of existing policies have been made in recent years.<sup>e.g. 11,12</sup>

Also, the recent European Commission's reflection paper 'Towards a Sustainable Europe by 2030',<sup>13</sup> expresses the need for "a comprehensive approach entailing a genuine change in the way we produce, transform, consume and distribute food by accelerating the transition to a sustainable food system based on circular economy principles and making innovative, healthy, environment and animal welfare-friendly, safe and nutritious food production one of our key European trademarks." Moreover, it calls for "ensuring a socially fair transition." Similarly, President-elect Von der Leyen highlighted in her political guidelines the need for a comprehensive "new 'Farm to Fork Strategy' on sustainable food along the whole value chain" as well as "a just transition for all".

### 3. REQUEST TO THE GROUP OF CHIEF SCIENTIFIC ADVISORS

From preliminary investigations into this topic, there is already an established, large body of high quality scientific evidence and advice that both describes the challenge and recommended actions that can be taken to move to an EU sustainable food system,<sup>14</sup> including enhancing food and nutrition security.

While recommendations differ on the type of actions, approaches and scope, the following areas are widely considered to be relevant: promote sustainable intensification and/or scale up agro-ecological approaches; reduce food loss and waste; stimulate responsible consumer choices and access towards healthier and sustainable diets; improve the resilience and robustness of the food system; and increase the awareness, accountability and stewardship of producers and consumers to better inform their choices.

Whilst there is a rich body of evidence supporting the above recommendations that can be actioned at a variety of scales by citizens and leaders, there **remain gaps in scientific advice**. Natural sciences-based literature examined in previous scientific advice focuses

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<sup>11</sup> WRR 2014, *Towards a Food Policy*. <https://english.wrr.nl/publications/reports/2016/12/13/towards-a-food-policy>

<sup>12</sup> EESC 2017, *Civil society's contribution to the development of a comprehensive food policy in the EU*. <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/civil-societys-contribution-development-comprehensive-food-policy-eu>

<sup>13</sup> European Commission 2019, *Reflection Paper – Towards a sustainable Europe by 2030*. [https://ec.europa.eu/commission/sites/beta-political/files/rp\\_sustainable\\_europe\\_30-01\\_en\\_web.pdf](https://ec.europa.eu/commission/sites/beta-political/files/rp_sustainable_europe_30-01_en_web.pdf)

<sup>14</sup> SAM 2019, *A scoping review of major works relevant to scientific advice towards an EU sustainable food system*. [https://ec.europa.eu/research/sam/pdf/meetings/hlg\\_sam\\_032019\\_scoping\\_report\\_sustainable-food.pdf](https://ec.europa.eu/research/sam/pdf/meetings/hlg_sam_032019_scoping_report_sustainable-food.pdf)

primarily on the natural systems rather than on social, economic, political and behavioural institutions, incentives and systems. However, the transition to a sustainable food system is in many respects a social process. It has for instance been well established that individual consumers can hold several concurrent opinions and be aware of best knowledge in, for instance, healthy food without implementing or acting on this. A broader understanding of social science can help us understand the social and institutional context to citizen actions, the broader economic and political incentives, and limitations and possibilities for behavioural and other change.

This apparent ‘deficit’ in the uptake of social sciences insights in existing scientific advice should be addressed, particularly on ‘how’ best to ensure the transformation to a sustainable food system occurs in a ‘just’ (fair) manner and at the pace that is required. Thus, scientific advice from social sciences is sought with respect to developing an understanding of considerations for developing more holistic, system-wide approaches to sustainability challenges facing food systems.

Consequently, the main request to the Group of Chief Scientific Advisors is to:

*Use social sciences insights to map and analyse the various components of food systems and their dynamics in relation to sustainability objectives. What are workable paths to deliver an inclusive, ‘just’ and timely transition to an EU sustainable food system, considering ‘co-benefits’ for health, the environment, and socio-economic aspects, including the socio-economic situation of the farming sector, and addressing territorial imbalances, the rural-urban divide, food waste as well as responsible consumer behaviour?*

The question above would be analysed by reviewing evidence from social sciences research relevant to various scales, specifically: EU and global, member state and sub-state (consumer/community/business/regional/cities/rural areas) level. The advice should take a ‘systems approach’, thus go beyond departmental perspectives.

The main value added of the advice would be to comprehensively draw together knowledge and insights from multiple disciplines in the social sciences and relevant human sciences, to inform policy makers’ efforts to enable the transition to an EU sustainable food system. The advice would provide a better understanding of the mechanisms underlying the complexity and possible adaptability of the food system. This could include identifying the major success factors contributing to transformations in systems and changes in instruments at various scales (global-local); mapping the main barriers and enablers of change, including agents of change (e.g. consumers, retail, etc.), in the food system; and assessing policy integration challenges, behavioural interventions and models of food system governance.