

# TOWARDS AN EU SUSTAINABLE FOOD SYSTEM

## DRAFT Specification of work (January 2019)

### 1. Background

SAM's Group of Chief Scientific Advisors have identified the development of 'An EU sustainable food system' as a high priority topic. The Scientific Advisors recognise the critical importance of the food system at the nexus of human health, climate change and environmental degradation. Further, the design of our food system has widespread implications for employment and incomes, food safety, animal welfare, trade and development. The Scientific Advisors believe that a new and holistic systems approach to food is essential for the future well-being of people, the environment and the future security of supply in a changing world.

The Scientific Advisors note the existence of a rich array of scientific reports and advice, and EU-level policy statements and initiatives that are relevant to this topic. As a first step, the SAM is therefore undertaking (since Oct 2018) a 'stock-take' in the form of a quick scoping review of major, relevant work in this area. The exercise will ensure that SAM identifies any gaps in scientific advice and avoids any unnecessary duplication of existing analysis and advice. It is therefore helping SAM to identify questions that the Scientific Advisors might most usefully address to contribute to the development of a sustainable food system in Europe. The 'stock-taking' exercise is based upon a review of existing major reports and initiatives; meetings with scientific experts; and discussions with expert practitioners (in the European Commission and beyond). The culmination of the exercise will be a quick scoping review summary report, which is due for completion in February 2019. This note is largely informed by the initial findings of this quick scoping review, the preliminary results of which are summarised below.

#### 1.1 Preliminary quick scoping review findings

From the literature, scientific meetings and consultations, SAM finds that there is already an established, large body of high quality scientific reports and evidence based policy relevant recommendations on this topic. There are also on-going initiatives in the European Commission, most notably FOOD 2030 that includes a series of policy relevant recommendations and associated R&I requirements - all with associated on-going actions involving multiple stakeholders. Other major reports under review include outputs from the EEA (European Environment Agency), IPCC (Intergovernmental Panel on Climate Change), FAO (Food and Agriculture Organization of the United Nations), JRC (Joint Research Centre), STOA (Science and Technology Options Assessment), WRR (Netherlands Scientific Council for Government Policy), IPES-Food (International Panel of Experts on Sustainable Food Systems), TEEB (The Economics of Ecosystems and Biodiversity), EASAC (European Academies Science Advisory Council), GOScience (UK Government Office for Science), the Agrimonde foresight study, IIASA (International Institute for Applied Systems Analysis) and the existing Opinion of the EESC (European Economic and Social Committee).

The summary report will describe the characteristics of these major reports and other findings in more detail, but in summary, the major reports vary in how they 'frame the topic'. For example, they differ in how broadly they define a food system i.e. which aspects they include in their analysis. Some focus mostly on the production of food, most include dietary choices, food waste and losses, some focus just on agriculture, whilst others include food from the oceans and possible novel forms of protein production such as in vitro meat and insects as food.

The major reports also differ in how they define sustainability. Some define sustainability only as achieving food security within environmental limits, whereas other reports consider additional aspects

such as inequalities in access to food, viability of local producers and the maintenance of regional specific foods. Some link explicitly to the UN's Sustainable Development Goals (SDGs) to help to define the characteristics of a sustainable food system.

Summary of preliminary conclusions from the draft quick scoping review summary report:

- There exists in the literature a variety of definitions of a sustainable food system. One or more of which might be suitable to help to define a sustainable food system for the EU.
- The risks and issues posed by our existing, unsustainable food system are well understood and clearly documented in the literature, with a high degree of consensus also on the scale and urgency of the problem. In brief these are: **expanding global population; demographic transformations; climate change; unhealthy and unsustainable food consumption; depletion of natural resources and exploitation beyond environmental limits; and geo-political events/shocks.**
- A wide range of recommended responses to these risks and issues are well defined and at different scales (involving different 'actors'), ranging from local community schemes to global initiatives.
- In brief, these recommendations can be grouped as follows: **promote sustainable intensification; reduce food loss and waste; stimulate dietary changes towards more plant-based diets; improve the resilience and robustness of the food system; and increase the awareness, accountability and stewardship of producers and consumers.** Each group has a range of specific recommendations therein.
- There is also growing evidence that multiple co-benefits can arise from some of the main recommendations, most notably a change in diet – which could deliver improvements in food security, health, the environment (including so called 'green-house gasses') and local incomes/livelihoods.
- Where the recommended actions are already 'in play', they are being pursued mostly in isolation and in parallel, and generally in the absence of strategic coordination or governance between the different actions. For example, community-scale sustainable food schemes and national programmes.
- 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 **remains gaps in scientific advice** 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 seems lacking with respect to the specific actions (at the various scales) that can facilitate the expansion, uptake, replication and/or implementation of these recommendations.

## 2. Addressing the gaps in scientific advice

### 2.1 Overview of work

To address the gaps in scientific advice identified in the first and final bullet of 1.2 above, SAM aims to first:

**A) Identify or propose a detailed definition of a sustainable food system that is best suited for the EU,** and thereafter:

**B) Identify ways by which a ‘just’ (fair) and timely transition to a sustainable EU food system can be achieved.** These should be in the form of specific, concrete, actionable suggestions based in mainly social science literature and existing examples on how best to achieve uptake, implementation and impact of the recommendations/types of recommendations already identified in the quick scoping review conducted by the SAM secretariat. This would require both a broad understanding of the present policy system and how it has developed to the present state (including what options are most possible to shift or reach change in), as well as a good understanding of change already underway, at lower levels but also at EU and global level. The work should be informed by an analysis of evidence from socio-policy studies and consultations with experts.

The tasks required to address the gaps are set out in 2.2.

## 2.2 Tasks

**A) Identify or propose a detailed working definition of an EU sustainable food system and its key parameters**

Including: What is a sustainable and healthy diet?

*The Group of Chief Scientific Advisors asks that this task is carried out by the SAM secretariat. Once complete, it will provide a reference point for the other proposed areas of work, described under B below.*

*As a preliminary indication, the recent report of the InterAcademy Partnership (IAP)<sup>1</sup> already describes most of the main aspects of a ‘sustainable food system’, although aspects of inclusivity and livelihoods likely need to be given more emphasis in the working definition: “We define the desired outcome for food and nutrition security as access for all to a healthy and affordable diet that is environmentally sustainable and culturally acceptable. [...] We examine issues for resource efficiency, environmental sustainability, resilience and the public health agenda, while also taking account of the local–global interconnectedness of systems.”*

**B) Identify ways by which a ‘just’ (fair) and timely transition to a sustainable EU food system can be achieved.**

Using the definition of an EU sustainable food system developed under A), the next step is to describe, summarize and identify specific, concrete, actionable suggestions (based on in particular existing studies of the policy system and potential limitations, development paths and as a result of that options) on workable paths to achieve uptake, replication, implementation and impact of the recommendations/types of recommendations already identified in the quick scoping review conducted by the SAM secretariat. The analysis should focus on what is within the sphere of influence of the European Commission and be based on scientific evidence. Evidence, in addition to that reported in the SAM’s quick scoping review summary report (planned February 2019), will predominantly come from the social sciences including policy sciences, and should include expert elicitation.

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<sup>1</sup> IAP, 2018: “Opportunities for future research and innovation on food and nutrition security and agriculture: The InterAcademy Partnership’s global perspective” (<http://www.interacademies.org/File.aspx?id=49085>)

The analysis should consider the existing recommendations/types of recommendations at three different scales as set out in i, ii & iii below. These reflect the scales associated with the already identified recommendations, which generally involve different types of actions and different actors.

The three scales:

- i. EU and Global;
- ii. Member state level; and
- iii. Level of Communities/Businesses/Regions/Cities and Rural Areas:

The work on scale i. 'EU and Global' will benefit from analysis of EU and global policies that have evolved over time to become increasingly holistic. For example, the EU's Common Agricultural Policy (CAP), which has progressively incorporated broader environmental objectives over time. Lessons may also be learned from studies of the development of programmes and policies over time or transitions associated with the establishment of cross-cutting (horizontal) policies such as the EU-wide common energy policy, and from the development of international initiatives related to the UN's IPPC and SDG programmes. The basic assumption here is that existing studies in the numerous policy fields of change over time may be able to point towards options that are more or less easy to shift towards a more holistic system, and help us identify workable paths towards transition rather than only more general recommendations for what transitions should be taking place.

Scales ii & iii – which are rich in examples of already successful and emerging schemes – here 'factors for success' should be readily discernable from the literature and/or expert consultation. To illustrate these, case studies should be included. (For already identified case studies, see SAM's quick scoping review summary report – February 2019)

SAPEA is asked to carry out analysis of B) for all scales (i, ii, and iii), in the form of an evidence review (see section 3 for principles and guidelines). It is expected that the evidence review will have at least two components, each with a dedicated Working Group, the findings of which will subsequently be combined into a single SAPEA evidence review report. The content and conclusions from the SAPEA evidence review will help to inform the Group of Chief Scientific Advisor's 'Scientific Opinion' on this topic.

It is suggested that one Working Group works at scale i, and a second (or potentially two) Working Group(s) works at scale ii and iii (i.e. combined or not). It is anticipated that the majority of effort will be focussed on scale i, which at least requires a thorough structured literature review, which may benefit from a specialist review team (possibly subcontracted).

All reported findings should be well-evidenced (i.e. referenced), in particular any statement therein. Literature review should be supplemented by information from expert consultation (e.g. through workshops and other meetings). Some 'grey' literature can be supplied by the SAM secretariat, who will also help with liaison with relevant European Commission and EU Agencies' expert staff, if required.

This task is described in more detail as follows (and in section 3 below):

#### i. EU and global

This component of the evidence review should be viewed as a study of policy and policy transformations, identifying what is possible within a 'policy ecosystem' or an individual policy

instrument, all from a social sciences point of view. It should build on existing recommendations, including for improved policy cohesion, to explore factors that might facilitate or speed up a desirable 'just' transition towards an EU sustainable food policy. It should include consideration of factors that might accelerate valuable changes at the global scale too, for example changes to the trade system such as World Trade Organisation (WTO) policies or policy instruments. All actions considered at scale i, can be considered as 'top-down'.

To this end, a meta-level analysis of literature in multiple fields is required that mainly addresses/includes:

- Identifiable in or across the literature, what are the main institutions/organisations supporting/carrying the main relevant policy instruments (listed below)?
- What are the main interest and lobbies involved (either in support of in opposition), and what is their respective power/influence? This would include political interest and lobbies, and from policy making bodies, but also from the broader food value chain.
- What are the incentives built into these instruments?
- How are shifts/transitions herein (potentially) achieved (in the terms of changing policies, politics, actors)? What/who initiates these shifts/transitions (e.g. following agenda setting theory by Kingdon and others) and what determines successful delivery? How is resistance overcome? Here it is important to take account of the specificities of the EU system and any links to relevant global policies. Hence, it is useful to identify and assess solutions for shifts/transitions that have already been developed and/or used in the EU context (e.g. energy transition).
- What is required to achieve a 'just' (fair) shift/transition? This refers to the likely 'winners' and 'losers' of a shift/transition towards an EU sustainable food system (taking account of socio-economics of primary food producers and consumers, urban-rural divide, etc.)?
- What evidence exists with respect to the (potential) pace of change that might be achieved for a transition to an EU sustainable food system and what factors determine this?

This is expected to require both reviews of any transition that occur/occurred in specific food system relevant policy instruments (as outlines below) plus an overarching review of sustainable transitions specifically in any EU policy. The work will predominantly entail a structured literature review (see section 3), using mainly social science databases, in particular in the area of policy sciences. Considering the requirements for structured literature reviews, it is suggested that this work is carried out by an organisation specialised in this, which has an academic focus on the agri-food and rural sector as well as social sciences capacity.

Suggested main relevant policy instruments as a starting point<sup>2</sup>:

- EU-Blue Growth Strategy
- EU-Common Agricultural Policy
- EU-Common Fisheries Policy
- EU-Conservation policies
- EU-Development Cooperation
- EU-Environment Policies (Marine Strategy Framework Directive, Water Framework Directive, Circular Economy Package)
- EU-European Fund for Strategic Investment
- EU-European Structural and Investment Funds
- EU-Food Safety Policy
- EU-Global Food Security Policy
- EU-Health Policy

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<sup>2</sup> Identified in the FOOD 2030 High-level Conference background document (doi: 10.2777/2065)

- EU-Rural Development Fund
- UN SDGs 1, 2, 3, 6, 7, 8, 9, 11, 12, 13 & 14
- COP21 Climate Change
- WHO Health policies

Other relevant policy instruments should also be included, such as global scale WTO policies. The SAPEA evidence review might also comment on apparent gaps in EU policies that might be considered important in the transition to an EU sustainable food system (e.g. missing EU policy on the protection of soils has already been identified in the literature).

## ii. Member states:

This component of the evidence review should start with Member State or pan-Member State policies and initiatives that contribute towards an EU sustainable food system, as identified in the SAM's quick scoping review summary report (February 2019). Analysis should be aimed at assessing if and where a European (policy) layer is needed to enable, support or synergise successful Member State initiatives/policies and their potential spread through the EU (given EU single market, trade and procurement rules, etc.) (i.e. top-down and middle-out). Towards this end, the following should be addressed:

- What is the scope and impact within the Member State?
- What are/were the success factors?
- What is the evidence and prospect for replicating/upscaling this to other Member States, taking account of their other contexts and systems? Basically: can it be spread in the EU and how can this be achieved?

The SAM's quick scoping review already identified a number of such initiatives/policies in the Netherlands, France and by the Nordic Council, which could serve as a starting point.

This task will likely be based more on 'grey' literature and expert elicitation, although such policies and initiatives may well have been described and assessed in social sciences literature. It is suggested that the Working Group includes an expert who has knowledge of different national examples, perhaps with a background in human geography.

## iii. Level of Communities/Businesses/Regions/Cities and Rural Areas:

This component of the evidence might start with a number of good examples of ('grass-root' or industry) initiatives at a sub-state level, including regions, collaborating rural communities, multinational city networks, businesses, etc. (i.e. bottom-up and middle-out). The main aim is to assess if such initiatives can be actively stimulated and supported from an EU-level, allowing these to spread further within the EU. The following should be addressed:

- What were the enabling factors of the initiative to start?
- What are/were the success factors?
- What is the evidence and prospect for replicating/upscaling them?
- How can this be done?
- What is the likely scale of their impact?

Some examples that may serve as a starting point are the Milan Urban Food Policy Pact and the FAO Urban Food Actions Platform. The SAM secretariat is also aware that JRC and DG SANTE are undertaking steps to develop databases on good case practices.

This task will mostly consist of analysing the potential to replicate good practices as identified by existing case studies. This task will likely be based mostly on 'grey' literature, case studies and expert elicitation. A Working Group expert with good knowledge of such initiatives is recommended, perhaps a planner.

### 3. Principles and guidelines for evidence reviews

To be able to provide sound scientific advice to policy makers, the underlying evidence used to develop the recommendations has to be robust, tailored to the needs and as unbiased as possible. The statement on 'principles for good evidence synthesis for policy' by the Royal Society and the Academy of Medical Sciences provides an excellent overview of high-level principles for this<sup>3</sup>. More specifically, this requires evidence reviews that follow good practices and a solid methodology.

In the context of the Scientific Advice Mechanism, evidence reviews consist of a combination of one or more structured literature review(s) and expert elicitation, for which brief guidelines are provided below. Good general references are the dedicated report of the EKLIPSE project<sup>4</sup>, providing a wide range of techniques, and a guide developed by the Joint Water Evidence Group (JWEG)<sup>5</sup>, providing a step-by-step approach to conducting quick scoping reviews and rapid evidence assessments.

#### 3.1 Structured literature reviews

A structured literature review follows principles of a systematic literature review. Briefly, this includes a structured and 'unbiased' search in academic and 'grey' literature in multiple databases, with predefined keywords, followed by screening based on predefined inclusion/exclusion criteria, with all steps following a predefined protocol. All procedures and the resulting data should be clearly documented for transparency and for the purpose of future updating. Besides the references above, Haddaway *et al.* (2015)<sup>6</sup> provides specific and practical information on how to make literature reviews of all types more systematic and transparent.

#### 3.2 Expert elicitation

Similar to the literature reviews, expert workshops and report development should be structured and follow principles and guidelines of good conduct in expert elicitation, including in particular:

- 1) A rigorous and transparent selection of experts, aiming for distributed expertise with academic experts, expert practitioners and policy experts. There should be a good diversity of technical, professional, and scientific experts, ranging from highly focused specialists to generalists, from well-established to early-career career stage, and as socially, culturally and gender balanced as possible.

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<sup>3</sup> <https://royalsociety.org/~media/policy/projects/evidence-synthesis/evidence-synthesis-statement-principles.pdf>

<sup>4</sup> [http://www.eclipse-mechanism.eu/apps/Eclipse\\_data/website/EKLIPSE\\_D3-1-Report\\_FINAL\\_WithCovers\\_V6.pdf](http://www.eclipse-mechanism.eu/apps/Eclipse_data/website/EKLIPSE_D3-1-Report_FINAL_WithCovers_V6.pdf)

<sup>5</sup> <https://www.gov.uk/government/publications/the-production-of-quick-scoping-reviews-and-rapid-evidence-assessments>

<sup>6</sup> Haddaway, N. , Woodcock, P. , Macura, B. and Collins, A. (2015), Making literature reviews more reliable through application of lessons from systematic reviews. *Conservation Biology*, 29: 1596-1605. doi:[10.1111/cobi.12541](https://doi.org/10.1111/cobi.12541)

- 2) The use of transparent protocols applying structured elicitation approaches to minimise biases and heuristics (e.g. group-thinking, overconfidence, anchoring). For example, independently recording of initial answers and/or thoughts by individual experts to be shared anonymously among all experts prior to workshops and meeting, asking experts for viewpoints/ideas that are alternative/opposed to their own, and avoiding the aim of group consensus. A good reference is the piece in *Nature* by Sutherland and Burgman<sup>7</sup>, and the SAM secretariat is developing specific guidelines on expert elicitation (draft expected be finalised in Q1 of 2019).

SAM commonly uses a **combined methods approach** whereby structured literature reviews and expert consultations including workshops are used iteratively to maximise evidence gathering, to speed the process, and to reduce bias.

#### 4. Proposed Timeline (2019)

January:	Drafting of Scoping Paper (SAM secretariat)
January:	Start process of expert nomination (SAPEA)
January:	Scoping Paper approval (Group of Chief Scientific Advisors)
February:	Final report of scoping review (SAM secretariat)
(TBD):	Experts nominated and establishment of Working Groups (WGs) (SAPEA)
March:	Scoping Paper adopted, likely by written procedure (Group of Chief Scientific Advisors)
March:	Working definition of an EU Sustainable Food System (SAM secretariat)
(TBD):	WGs start work on Evidence Review Reports (ERRs) (SAPEA)
(TBD):	Draft ERRs presented to Group of Chief Scientific Advisors (SAPEA)
(TBD):	Expert Workshop(s) (SAPEA)
(TBD):	Final drafts SAPEA ERRs sent out for peer-review and endorsement (SAPEA)
(TBD):	Start drafting of Scientific Opinion (SAM secretariat with Chief Scientific Advisors)
(TBD):	Sounding Board meetings (SAM secretariat with Chief Scientific Advisors)
(TBD):	Final ERRs and Scientific Opinion ready for publishing/presentation

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<sup>7</sup> Sutherland, W.J. and Burgman, M.A. (2015), Policy advice: Use experts wisely. *Nature* 526: 317-318. doi:[10.1038/526317a](https://doi.org/10.1038/526317a)