

General Information	
Preliminary title of the European Partnerships	Safe and Sustainable Food Systems for People, Planet & Climate
Short description of the partnership	Building the Safe and Sustainable Food Systems of tomorrow is central to the transition to a ‘Sustainable Europe by 2030’, and key to meeting the IPCC climate targets and operating within planetary boundaries.
Services directly involved	RTD.F.3 and SANTE, Associated: AGRI and MARE
Context and problem definition	<p>This partnership will focus on R&I focus areas that address systemic issues and that accelerate high impact transition pathways to sustainable and healthy food systems: (a) supporting the food safety system of the future to boost consumer trust, foster food safety and food quality; (b) supporting the shift to more sustainable and healthy diets, (c) cutting food system-related waste; and (d) valorising new insights in our food system’s microbiome.</p> <p>This Partnership provides a process via which different partners will address these four R&I focus areas, connecting land and sea. It will mobilise partners (e.g. Member States, private sector) and resources beyond Horizon Europe to implement the European Commission’s (EC) FOOD 2030 R&I policy framework to future-proof our food systems by supporting the food safety system of the future and by delivering co-benefits on the four FOOD 2030 priorities of ‘nutrition’, ‘climate’, ‘circularity’ and ‘place-based innovation’.</p> <p>Past European R&I (FP7 & Horizon 2020) achievements advanced scientific insights and innovations relevant to the FOOD 2030 priorities^{1,1}. They also confirmed the need to implement a new and systemic approach to R&I, problem-solving and programming that is multi and trans-disciplinary and participatory – prioritising the engagement and expertise of all stakeholders within the food system.²³</p> <p>Four R&I focus areas are envisaged:</p> <p>a) ‘Food safety of the future’: food safety continues to be a priority for EU and global food policies. Although the food supply in the EU was never so safe as today, the World Health Organisation estimates that food-borne bacteria, parasites, toxins and allergens are still cause about 23 million cases of illnesses and 5 000 deaths in Europe every year⁴. Furthermore, the European citizen is not fully confident or trusting the food supply systems^{5,6}. There is also a need to be prepared to anticipate and be prepared for unknown/emerging risks that may arise because of environmental, economic (e.g. trade) and societal changes. The recent Commission Proposal that has led to an amendment of the General Food Law⁷, which addresses the transparency and sustainability of the EU risk assessment in the food chain and highlights citizens’ will to foster independent/publicly funded research on food safety. EU and national food safety agencies and regulatory bodies have acknowledged the need for greater EU cooperation, coordination and integration in this area⁸. This focus area will deliver solutions to support improved risk assessment and risk management to</p>

¹ [SWD\(2016\)319](#)

² [Food 2030 Expert Group report, “Recipe for change: An agenda for a climate-smart and sustainable food system for a healthy Europe” \(2018\), page 38-40](#)

³ Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems

⁴ WHO (2015) Estimates of the global burden of foodborne diseases, p. 255; https://apps.who.int/iris/bitstream/handle/10665/199350/9789241565165_eng.pdf;jsessionid=8B2AC517A05A7B81BE04E3AF4FC2EAA0?sequence=1

⁵ <https://www.sciencedirect.com/science/article/pii/S0924224418305557>

⁶ https://ec.europa.eu/info/consultations/public-consultation-transparency-and-sustainability-eu-risk-assessment-food-chain_en

⁷ https://ec.europa.eu/food/safety/general_food_law/transparency-and-sustainability-eu-risk-assessment-food-chain_en

⁸ <https://www.efsa.europa.eu/en/events/event/180207>

	<p>ensure food stays safe at every stage of the food system.</p> <p>b) ‘Dietary shift’: a shift to more sustainable and healthy diets will be key to mitigating climate change and meeting the increase in global protein demand in view of a rising population⁹. Consumption-based measures, such as changes in diet or a reduction in food loss and waste, offer a substantial mitigation potential (1.5– 15.6 GtCO₂-eq/y on a global scale), greater than supply-side measures. Changes in diet may be associated with valuable co-benefits such as improving human health¹⁰¹¹, bringing what we eat closer to what is recommended to eat¹²¹³. This R&I focus area will bring together a wide diversity of partners from both the public and private sectors to foster healthy and sustainable food, diets and nutrition for all.</p> <p>c) ‘Food-related waste’: reducing our food system waste streams and losses (currently 20% of EU total food produced¹⁴, food wastage is the 3rd GHG emitter after USA and China¹⁵) will deliver on both sustainability and climate targets¹⁶. It will significantly improve water, energy, and resource efficiencies, alleviate pressures on agricultural land, reduce food waste management costs (estimated at EUR 595 per household per year), and reduce food insecurity among the most vulnerable. At the same time, R&I needs to step up to deliver on the commitment to ban single use plastic packaging in food¹⁷. This R&I focus area will bring together a wide diversity of partners from both the public and private sectors to foster climate smart and sustainable R&I driven solutions.</p> <p>d) ‘Microbiome’: by harnessing the potential of the microbiome across different parts of the food system - from land and sea, we can decrease use of pesticides and fertilizers, and of water and energy in primary production, reduce antibiotics in animal feed, develop novel food and feed ingredients, pave the way for personalised nutrition, and restore biodiversity. This R&I focus area will bring together a wide diversity of partners from both the public and private sectors to foster health-centric, climate smart and sustainable R&I driven solutions.</p>
Objectives and expected impacts	<p>The overarching objectives of the Partnership will be to deliver high impact results in the 4 R&I focus areas (a) food safety system of the future; (b) dietary shift, (c) food related waste; (d) microbiome.</p> <p>Specific Objectives:</p> <ul style="list-style-type: none"> ▪ Prevention of, and preparedness for, crises situations and emerging risks related to food safety. ▪ Supporting effective evidence-based food safety policy frameworks. ▪ Boosting responsible research and innovation for safe, sustainable and inclusive food systems. ▪ Aligning research and innovation agendas and leveraging investments on European and National level on future-proofed food systems, including food safety¹⁸. ▪ Implementing the FOOD 2030 strategic research and innovation agenda and contributing to building healthy, safe, sustainable and inclusive food systems.

⁹ Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems

¹⁰ [Final Report of the High-Level Panel of the European Decarbonisation Pathways Initiative \(2018\)](#)

¹¹ Smart food policies for obesity prevention - <https://www.sciencedirect.com/science/article/pii/S0140673614617451>

¹² Evaluating the environmental impacts of dietary recommendations <https://www.pnas.org/content/114/51/13412>

¹³ <http://risefoundation.eu/projects/livestock>

¹⁴ [Conclusions of EU project FUSIONS](#)

¹⁵ [EU Fusion project](#)

¹⁶ Among others SDG 12/ goal 12.3 and climate change commitments

¹⁷ https://ec.europa.eu/commission/news/single-use-plastics-2018-may-28_en

¹⁸ Synergies with the HE C1 proposal for a Partnership on Chemical Risk Assessment will be sought.

	<p>Expected impacts:</p> <ul style="list-style-type: none"> ▪ Protecting consumers by speeding up response to food safety crises and proactively tackle emerging risks. ▪ Enhancing food safety risk assessment and risk management frameworks by developing new data, methodologies and tools. ▪ Contributing to carbon neutral food systems by leveraging its substantial mitigation potential (1.5– 15.6 GtCO₂-eq/y on a global scale), ▪ Healthy and sustainable diets to become the new norm and result in reduced obesity, malnutrition and diet-related premature mortality in Europe. ▪ Contributing to half food waste in Europe by 2030 (SDG 12.3) and decrease plastics used in food packaging, ▪ Contributing to achieving the SDGs and COP Climate commitments.
Necessity test: rationale for a European Partnership	<ul style="list-style-type: none"> ▪ A recent report of the Standing Committee on Agriculture Research (SCAR) on Food Systems research by European MSs has signalled that food safety is of particular interest in MS research policies. A conference on food safety research organised by the European Food Safety Authority concluded on the need for increased public funding of food safety research, with a call to foster coordination, cohesion and cooperation among research actors. Former EU R&I Framework Programmes have addressed food safety research in a disentangled manner and only sectoral Partnerships have been articulated (i.e. H2020 EJP One Health). The forthcoming H2020 CSA on food safety, and the existing maturity level of food safety R&I communities, contribute to the necessity for a Partnership tackling the food safety focus area. ▪ The coordination, alignment and leveraging of European and national R&I efforts is essential for tackling the challenges associated with safe and sustainable food systems through a transnational, integrated and transdisciplinary approach. This will provide the necessary scientific evidence to help civil society, policymakers, businesses and farmers to take concerted action on European, national, regional and local levels, that deliver co-benefits on nutrition, climate, circularity and place-based innovation. ▪ Citizens' concerns on safety, healthiness, and sustainability of food systems are further emphasised by lack of trust in science and innovation in the food system. For example, increasing transparency of the EU food safety system, as brought forward by the Commission proposal amending the EU General food Law, contributes to meeting citizens' expectations. ▪ A Partnership in this area is therefore the most suitable tool to support future long-term EU coordination, cooperation and capacity building of R&I in these areas.
Relevant for the following parts of Horizon Europe	<p>Pillar II 'Global Challenges and European Industrial Competitiveness'</p> <p><input checked="" type="checkbox"/> Cluster Health</p> <p><input type="checkbox"/> Cluster Culture, creativity and inclusive society</p> <p><input type="checkbox"/> Cluster Civil Security for Society</p> <p><input type="checkbox"/> Cluster Digital, Industry and Space</p> <p><input type="checkbox"/> Cluster Climate, Energy and Mobility</p> <p><input checked="" type="checkbox"/> Cluster Food, Bioeconomy Natural Resources, Agriculture and Environment</p> <p><input checked="" type="checkbox"/> Cross-cluster</p> <p><input type="checkbox"/> Pillar III 'Innovative Europe'</p>

Currently identified links with other partnership candidates / Union programmes	Collaboration on the food safety focus area can be pursued with the partnership candidates on ‘Chemical Risk Assessment’ (Cluster 1 of HE), on ‘Animals and Health’ (Cluster 6). The partnership focus area on food-related waste will tackle reduction and avoidance of waste, while the partnership candidate ‘Biobased Solutions’ will provide solutions for valorisation of otherwise unavoidable food waste.
Does the proposed partnership build on currently active ones?	Existing networks to be brought in: <ul style="list-style-type: none"> • The Food Safety focus area will build on existing R&I activities (EFFORT) and Partnerships (EJP One Health) • Joint Programming Initiatives: FACCE, HDHL and Oceans, JPI Urban ERA-NETS: Surplus, ICT Agri2, Core-Organic, ERA GAS, SUSAN, ERA HDL, SusFood2, EU-Africa HLPD FNSSA pillar 2 • Standing Committee for Agricultural Research (SCAR) • Existing and future preparatory CSAs: microbiome, food safety, Fit4Food • EIT KICs: Food & Climate; Food Nexus, several ETPs • DG SANTE platforms (eg: Food Losses and Waste, etc, Health Promotion and Disease Prevention) • Other non-EU: WEF, WHO, FAO, EASAC, IPCC, IPES-FOOD, etc.
Expected type and composition of partners	The food safety focus area will bring together public bodies including research centres, EU and National Food Safety Agencies and regulatory bodies including risk assessment bodies. The dietary shift, food waste and microbiome focus areas will bring together a wide variety of actors, including the public and private sectors, and other stakeholders across the food system from food production to food consumption and back, and linking the land and sea aspects.
Contributions and commitments expected from partners	Since mid-2015 FOOD 2030 has been mobilising and engaging with multiple actors on the urgency to transform our food system. There is now wide agreement amongst the stakeholders listed above (and beyond) on the need to act. In the SCAR report on Food Systems assessing MSs research and innovation activities in Food Systems shows that ten MSs dedicate altogether an estimated EUR 217 million per year to food safety research and similar amounts to processing. Nutrition and Health is considered as their main future interest. Public institutions of MSs have shown during 2018 and through different fora initial commitment to foster collaboration and cooperation in research in the area of food safety. Similar buy-in has been expressed for the other focus areas.
Currently envisaged implementation mode(s).	<input checked="" type="checkbox"/> Co-programmed European Partnership <input checked="" type="checkbox"/> Co-funded European Partnership <input type="checkbox"/> Institutionalised European Partnership
Justification of the implementation mode	The Co-funded/Co-programmed European Partnerships offer most flexibility in addressing the relevant components to transform European food systems, in particular addressing food safety, dietary shift, food waste reduction, and microbiome. <i>If the public-public Partnership envisaged with a Co-funded governance model would not enable appropriate funding, a Co-programmed partnership would be considered</i>
Proposed starting year	2022-2023