



Existing sustainability efforts and policies in the food systems in the EU and worldwide

Barbero Vignola G., Listorti G., Borchardt S., Fronza V., Maroni M., Guerrieri V., Acs S., Buscaglia D., Marelli L.

2024



This document is a publication by the Joint Research Centre (JRC), the European Commission's science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The contents of this publication do not necessarily reflect the position or opinion of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication. For information on the methodology and quality underlying the data used in this publication for which the source is neither Eurostat nor other Commission services, users should contact the referenced source. The designations employed and the presentation of material on the maps do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Contact information

Name: Luisa Marelli
Address: Via E. Fermi, 2417, Ispra (VA), Italy
Email: luisa.marelli@ec.europa.eu

EU Science Hub

<https://joint-research-centre.ec.europa.eu>

JRC137534

EUR 40069

PDF ISBN 978-92-68-20968-4 ISSN 1831-9424 doi:10.2760/1278262 KJ-01-24-072-EN-N

Luxembourg: Publications Office of the European Union, 2024

© European Union, 2024



The reuse policy of the European Commission documents is implemented by the Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Unless otherwise noted, the reuse of this document is authorised under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

For any use or reproduction of photos or other material that is not owned by the European Union permission must be sought directly from the copyright holders. The European Union does not own the copyright in relation to the following elements:

- Cover page, from the right clockwise: © wikipedia.org; © _KUBE_ / stock.adobe.com; © Anh Nguyen / unsplash.com.

How to cite this report: European Commission, Joint Research Centre, Barbero Vignola, G., Listorti, G., Borchardt, S., Fronza, V., Maroni, M., Guerrieri, V., Acs, S., Buscaglia, D. and Marelli, L., *Existing sustainability efforts and policies in the food systems in the EU and worldwide*, Publications Office of the European Union, Luxembourg, 2024, JRC137534. <https://data.europa.eu/doi/10.2760/1278262>

Contents

- Abstract 1
- Acknowledgements 2
- 1 Introduction 3
- 2 Initiatives by international organisations 5
 - 2.1 United Nations 5
 - 2.2 Food and Agriculture Organization (FAO) 9
 - 2.3 World Health Organization (WHO) 9
 - 2.4 Organization for Economic Cooperation and Development (OECD) 10
 - 2.5 World Bank 10
 - 2.6 Regional Fisheries Management Organisations (RFMOs) 11
 - 2.7 Main messages 11
- 3 Policy initiatives in third countries 13
 - 3.1 Canada 13
 - 3.2 Japan 14
 - 3.3 The United States 15
 - 3.4 Norway 17
 - 3.5 Other significant examples worldwide 18
 - 3.6 Main messages 24
- 4 Policy initiatives at EU level 25
 - 4.1 Mapping EU policy initiatives to sustainability elements of the food system 25
 - 4.2 EU legislation addressing sustainability of the food system 29
 - 4.3 Main messages 34
- 5 Policy initiatives at EU Member States level 35
 - 5.1 National framework initiatives in EU 36
 - 5.2 Sectorial national initiatives on food system components 39
 - 5.3 Main messages 44
- 6 Conclusions 46
- References 48
- List of boxes 50
- List of figures 51
- List of tables 52
- Annexes 53
 - Annex I: Policy initiatives at EU level 53
 - Annex II: Policy initiatives at Member States level 66

Abstract

Ensuring everyone in the EU and the world has access to a nutritious diet in a sustainable way is one of the greatest challenges we face, and one of the most ambitious targets of the Sustainable Development Goals framework. The need for a transformation of food systems towards sustainability is increasingly being recognised, as demonstrated by the growing number of initiatives implemented worldwide.

This report presents an overview of existing initiatives that aim to address the sustainability of food systems in the EU and globally. It first describes the initiatives proposed by international organizations, followed by the most relevant policy framework initiatives in non-EU countries that consider the sustainability in the food systems as a whole, mainly in Canada, Japan, United States and Norway. Subsequently, the assessment focuses on the EU initiatives, providing examples of current policy initiatives in place, both at the EU and its Member States levels. Finally, key messages and recommendations are provided to foster a fair and just transition towards a European sustainable food system. The analysis revealed the importance to embrace sustainable food systems as a whole, looking at the environmental, economic, and social dimensions and their complex interactions, along the whole food value chain.

Acknowledgements

The authors thank all colleagues who contributed to this report and reviewers with their valuable feedback and suggestions. Their insights and expertise have been essential in refining the content and ensuring its quality. We appreciate their contributions and support.

The authors are solely responsible for the content of the report. The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.

*Authors*¹

Barbero Vignola Giulia (JRC D.6)

Listorti Giulia (JRC D.3)

Borchardt Steve (University of Bologna)

Fronza Verdiana (JRC D.1)

Maroni Michele (Unisystems S.A.)

Guerrieri Valentina (JRC D.1)

Acs Szvetlana (Unisystems S.A.)

Daniela Buscaglia (JRC.D6)

Marelli Luisa (JRC D.1)

¹ Borchardt Steve is PhD student at University of Bologna, working as consultant for the JRC. Maroni Michele and Acs Szvetlana (Unisystems S.A.) are working as consultant for the JRC. Guerrieri Valentina was visiting scientist at JRC, PhD student at University of Bologna.

1 Introduction

Food system conceptualisations have been elaborated by different expert groups both at the global and European levels (Borchardt Steve et al., 2024). These include the **Food and Agriculture Organization (FAO)** (FAO, 2018, 2019), the **United Nations Food System Summit (UNFSS)** in 2021 (United Nations, 2021), the **High Level Panel of Experts on Food Security and Nutrition (HLPE)** (HLPE, 2020) at global level and the **Science Advice for Policy by European Academies (SAPEA)** at the EU level (SAPEA, 2020, 2023). In summary, the food system is the conjunction of actors and activities involved in the production and consumption of food products from agriculture, fisheries and forestry, including food governance actors and institutions and the interactions with connecting systems (such as economic, ecological, social). Food systems are thus context-dependent, operate at various scales, are shaped by external forces and, in turn, have various impacts on the surrounding systems. It follows that food systems are not static but can change and evolve, including towards increased sustainability. The **interactions of food system elements** can lead to a sustainable food system with the goal to ensure food security (including nutrition) for all through affordable products in the market and without the current threats to the environment and the people. This ultimate goal should be achieved while safeguarding future generations and people within the EU and beyond, as well as ecosystem conservation, social fairness and justice, and economic viability (SAPEA, 2023).

The ongoing cross-cutting societal challenges affecting food systems (Moragues-Faus et al., 2017; Notarnicola et al., 2017; Penne & Goedemé, 2021) have prompted a reconsideration of how food systems are conceptualized. The notion of food systems has undergone evolution over time, acknowledging its interplay with global environmental shifts (Ericksen, 2008) and its pivotal role in the pursuit of sustainable development (Rockström et al., 2016) until the development of holistic frameworks capable of capturing the systemic complexities inherent within these systems (Eakin et al., 2017; Béné et al., 2019).

There is **urgent need to make the food system fair, healthy and environmentally-friendly** at the EU and global levels (Bock et al., 2022). Looking at the current trends, feeding a fast-growing world population remains a challenge with current production patterns and supply chains (Adam, 2022). The costs of inaction are tremendous. Food production results in air, water and soil pollution, contributes to the loss of biodiversity and climate change, and consumes excessive amounts of natural resources, while an important part of food is wasted (Crippa et al., 2021; European Environment Agency, 2021; Jeanneret et al., 2021; Sala et al., 2023; Sala & Sanyé-Mengual, 2023). At the same time, unhealthy diets contribute to obesity and non-communicable diseases, such as cancer (Chan et al., 2011; SAPEA, 2023). In addition, globally, food prices have risen to record levels and different regions in the world are facing acute food insecurity problems (FAO et al., 2022).

The **Farm to Fork Strategy** (F2F, European Commission, 2020), adopted in May 2020 by the European Commission, aims at comprehensively addressing the challenges of sustainable food systems. This strategy is central to the Commission's **European Green Deal** and wider agenda to achieve the United Nations' **Sustainable Development Goals** (SDGs). The F2F Strategy recognises that a **system approach** is needed and sets a direction of travel bringing together various sectoral policies that affect food production, processing, distribution and consumption, and refocusing all action on the transition to sustainability.

The need for a transformation of food systems towards sustainability is increasingly being recognised **worldwide**, as demonstrated by the **growing number of initiatives** implemented by international organizations. This need has also been emphasised at the most recent COP (COP28)

where world leaders acknowledged the importance of food systems in tackling climate change as they constitute a major source of global greenhouse gas emissions and drive environmental degradation globally ('Food Systems at COP28', 2024). Initiatives embracing a systemic perspective of food sustainability and addressing several of the key sustainability elements are also increasingly implemented in countries outside the EU.

At EU level, the analysis of existing **EU policy initiatives** addressing food system sustainability is essential to have an overview of the current EU policy landscape fostering sustainability transformation of the European food system, and to understand how different sustainability elements of the food system are covered by EU policies. Legislative and non-legislative measures are also in place in EU **Member States** (MS), including examples of national framework initiatives that holistically address the sustainability of the food system.

An overview of **the elements of a sustainable food system**, the connection between the system and SDGs, the breadth and scope of existing sustainability efforts is essential to understand the current policy landscape and the potential future developments to unlock sustainability transformation in the food system. To this purpose, in 2021 the Joint Research Centre (JRC) of the European Commission collected reflections from a broad international group of experts with in-depth knowledge of different aspects of the EU food system and identified the general elements that characterise a sustainability assessment framework (Bock, Bontoux and Rudkin, 2022).

More recently, the analysis of a large body of literature and relevant policy documents was supported by discussions with European Commission services, extensive desk research and literature screening, surveys with National experts, as well as the analyses performed by the scientific experts at the JRC. The analysis builds upon the key elements of a sustainable food system, as identified in (Borchardt et al., 2024).

The aim of this report is to highlight **key insights of existing initiatives that address the sustainability of food systems at EU and globally**. The report presents first the initiatives proposed by international organizations (chapter 2), followed by an overview of sustainable food system frameworks in third countries (chapter 3). The analysis then focuses on policy initiatives at EU (chapter 4), and MS level (chapter 5). Chapter 6 concludes.

2 Initiatives by international organisations

At the global level, international organisations recognise the importance of shifting towards more sustainable food systems and are implementing a growing number of initiatives supporting such a transition (Bizzo et al., 2023; European Environment Agency, 2021, 2023; SAPEA, 2023). Gaining a deeper insight into the sustainable practices put into action or suggested is vital for bolstering a sustainable food system transition within Europe.

A total of 158 initiatives of international organisations have been identified through an online keywords-based search on the international organisation websites. The search focused on initiatives from organisations particularly active in the field of agriculture, economic development, health, and nutrition. These include, amongst others, the United Nations and its Food and Agriculture Organization (FAO) and World Health Organization (WHO), the Organisation for Economic Co-operation and Development (OECD), and the World Bank. (European Environment Agency, 2023)

The findings indicate a growing global consciousness and an encouraging international climate for **amplifying efforts toward sustainability** in the realm of food production and consumption. However, there is a varying level of activity and attention across different areas. Many initiatives focus on health and nutrition, food security, sustainable resource management, and agriculture, with considerable attention also given to biodiversity, ecosystem services, and overall food systems. Nonetheless, **there is a notable shortage of initiatives substantially addressing animal welfare, equitable access to natural resources, and the intersection of gender issues with nutrition, among others**. Additionally, the assessment of global efforts underscores the importance of tailoring these initiatives to the unique local contexts, taking into account specific local production and consumption patterns which are influenced by dietary and nutritional practices, as well as the complex interplay of socio-economic factors and environmental interactions.

As international organizations often align their efforts and actions with their own agendas, missions, core principles and objectives, the majority of initiatives identified tend to concentrate on specific sectors or topics only. For instance, the FAO is primarily concerned with the sustainability of the agricultural sector, while the WHO focuses on the relationship between food and health. Nonetheless, there is a pressing need for cohesive action and cooperation among these international entities to encourage a holistic shift to sustainable food systems. An **integrated strategy is essential** to navigate the complex web of interactions within the food system and to leverage synergies whilst managing trade-offs effectively. Such a unified approach can also be exemplary for initiatives at the European level. Consequently, this chapter provides a detailed exploration of global initiatives that address food sustainability in a comprehensive manner.

2.1 United Nations

The United Nations (UN) programmes and agencies are involved in areas covering several elements and sectors related to sustainable food system, as outlined below.

United Nations Food System Summit (UNFSS)

The UN Food System Summit (UNFSS) is the flagship initiative approaching the sustainable food system as a whole. It took place in September 2021 as part of the Decade of Action to achieve the 2030 Agenda and its SDGs (United Nations, 2021). The goal of the UNFSS is to create collective action to deliver on the SDGs, with cross-sectoral multiscale measurable action on the food system,

to raise awareness on **the role of food systems for the achievement of the SDGs**, to support food system actors in developing sustainable food systems, and create a system for follow-up and review.

As a far-reaching global initiative, the UNFSS can be of inspiration worldwide, because of its comprehensive content, process, and mobilization of actors and resources. Indeed, the UNFSS approaches food system sustainability from interconnected environmental, social, and economic perspectives, it identifies cross-cutting issues, and encourages participation from all food stakeholders to reach food system sustainability.

Five Action Areas have emerged during the Summit, that focus on nourishing all people, boosting nature-based solutions of production, advancing equitable livelihoods, building resilience to vulnerabilities and shocks, supporting means of implementation. Linked to these areas of actions, the UNFSS envisages five Action Tracks:

1. **Ensure access to safe and nutritious food for all**, i.e., end hunger, malnutrition, reduce inequalities and improve health, and nutritious food availability, accessibility, affordability, and safety.
2. **Shift to sustainable consumption patterns**, i.e., working with consumer demand and more sustainable diets, strengthening local value chains and reuse and recycle attitudes, and reducing waste.
3. **Boost nature-positive production**, i.e., well-managing environmental resources along the food value chain to reduce biodiversity losses, pollution, water depletion, emissions, and land degradation, as well as focussing on food system governance and smallholders.
4. **Advance equitable livelihoods**, i.e., eliminating poverty and guaranteeing decent working condition for food-related jobs, through a reduction of inequalities and an enhancement of social protection.
5. **Build resilience to vulnerabilities**, shocks, and stress, i.e., working to strengthen the resilience of food systems and their actors vis à vis conflict, natural disasters, pandemics, and other instabilities, while always allowing for broad participation and food system functionality.

It must be highlighted that these Action Tracks are designed to be implemented simultaneously and not in-silo, in a coherent and efficient way. Moreover, **crosscutting levers of change** have been identified as focus areas with potential for wide-reaching benefit for the achievement of sustainable food systems and SDGs. They include:

1. **Gender equality**, women's empowerment and engagement, looking at issues of women's rights to land, labour conditions and unpaid labour, access to leadership, technologies and institutions, and gender-sensitive food-related policies.
2. **Human Rights**, granting an understanding of the relevant legislation that can favour their action and implementation.
3. **Finance**: focus on the investments and incentives needed for sustainable food systems, as well as how to leverage resources including private capital and de-risk innovations.
4. **Innovation** as enabler for food systems transformation and SDGs achievement, especially when focussing on building innovation ecosystems for science and technology at the national and regional level, as well as innovation models for societies and institutions (also inclusive of traditional and Indigenous knowledge).

Additionally, the UNFSS proposes a multiscale collaborative approach to decision-making on food systems that can inform action in the EU. Starting from a global level, it requires and enables coherent action across sectors. Indeed, the process and outcomes of the Summit are grounded on

the work of stakeholders, including international and national policymakers, scientists, businesses, academics, healthcare professionals, farmers, consumer groups, activists, youth organizations, and indigenous people². These stakeholders kick-started several initiatives, alliances and coalitions to facilitate access to expertise, mobilize resources and promote collective action and coordination on different issues related to more sustainable food systems.

In general, the UNFSS provides a snapshot of the complexity of policymaking on sustainable food systems and is a concrete example of overarching action establishing the grounds for further specific sustainability measures and initiatives. The way in which the UNFSS was established and delivered can guide European action as well. At the same time, the Commission has joined 8 UNFSS coalitions for action and follow-up work is ongoing, to assist partner countries in their efforts to transform food systems³.

United Nations Environment Programme (UNEP) - One Planet Network

Another UN initiative that embraces food system sustainability in a comprehensive manner is the United Nations Environment Programme (UNEP) **One Planet Network programme on Sustainable Food Systems**⁴. It responds to the economic, social, and environmental challenges of food systems by enhancing a system-based approach, cooperation and synergies across stakeholders.

The working areas of the programme include raising awareness and increasing implementation of tools on sustainable production and consumption, enabling sustainable food systems, and enhancing cooperation across stakeholders. The programme contributes to food system governance by promoting multi-stakeholder partnership, which entail formal and informal participatory mechanisms or arrangements among food actors from across the value chain (Alliance of biodiversity et al., 2021), recognizing the need for cross-sectoral participation to create coherent and systemic food policies. Moreover, the programme supports the shift towards sustainable food systems by providing tools and resources for private and public partners.

Collaboration among all actors to achieve a transition towards systemic food sustainability clearly emerges as a cornerstone of the Programme, as does the necessity to mainstream sustainable consumption and production through a diversified array of tools and strategies (knowledge, education, networks, etc.). This approach shows an understanding of the need for concrete actions for achieving sustainable food systems. Moreover, the UNEP programme creates space for EU action at the international scale.

Other UN initiatives

In addition to these overarching framework initiatives, the United Nations are involved in a variety of actions that related to sustainable food system.

Regarding long-term initiatives, the **UN Decade of Action on Nutrition** (2016-2025) and the **UN Decade on Ecosystem Restoration** (2021-2030) provide space for strengthened commitment, collaboration, networking, and initiatives for, respectively, the achievement of global nutrition and targets for diet-related non-communicable diseases and the protection and enhancement of all

² <https://www.un.org/en/food-systems-summit/take-action>

³ Press release (23 March 2022) "Food security: Commission steps up support for global action to transform food systems via eight Global Coalitions". https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1971

⁴ More information on the programme <https://www.oneplanetnetwork.org/programmes/sustainable-food-systems/about>

ecosystems. The UN General Assembly also issued a resolution on the ways and means to achieve and implement the right to food, a declaration on the rights of peasants and rural workers and, in general, all its activities aim at sustainable development – as exemplified by the UN 2030 Agenda.

Specifically on nutrition, the UN has established several committees and programmes. The **United Nations System Standing Committee on Nutrition (UNSCN)**, for example, is a platform of dialogue on nutrition strategies and initiatives for UN agencies, as well as a place to align and coordinate action when facing nutrition challenges. The UNSCN addresses the food availability, accessibility, safety, and nutrient quality aspects of a Sustainable Food Systems for all⁵. The **United Nations International Children's Emergency Fund (UNICEF)** also works with several programmes to improve nutrition for children and their mothers, as well as partnership on the topic. All these programmes include several resources and data.

The **World Food Program (WFP)** is also involved with food system initiatives in the context of food security with two programmes, namely *Energy for food security* and *Food Assistance for Assets*, tackling immediate food needs while promoting long-term food resilience, for example, putting degraded land into productive use. The WFP focus on food systems also includes attention to gender issues, smallholders' credit, school meals programmes, nutritious food initiatives, and interventions in refugee camps.

Regarding food security for refugees, the **United Nations High Commissioner for Refugees (UNHCR)** Agriculture and Food security work aims at aiding refugee farmers' access to markets and resilience to shocks, also in partnership with WFP, FAO, and WB. UNHCR addresses principally climate-smartness, market accessibility and thus equality, and nutrition in the Sustainable Food System⁶.

Besides the One Planet Network, the **UNEP** is working with **Sustainable Food Systems** under the area of Food and Food Waste, through a series of programme and activities at various levels, principally focussing on food systems delivering food security and nutrition for current and future generations in an environmentally, economically, and socially viable way⁷. For example, the Sustainable Food Systems - Regional SCP Roadmap wants to promote sustainable food systems within the Asia Pacific region. In partnership with the European Union and United Nations Industrial Development Organisation (UNIDO), UNEP supports initiatives for achieving a transition towards circular economy, and resource efficiency and sustainable consumption and production models.

The UN also established conventions on transversal areas that affect the food system. For example, the organisation is involved in the control of hazardous waste movement, as well as with climate change, exemplified by the **UN Framework Convention on Climate (UNFCCC)**, and the **UN Convention to combat desertification (UNCCD)**. UNEP promotes the **Convention on Biodiversity** (CBD, in year 1993), prior informed consent for hazardous chemicals and pesticides (Rotterdam convention, 1998) and the Stockholm Convention on persistent organic pollutants signed in 2001.

Finally, related to “blue food” and oceans health, the UN created an Atlas of the Oceans for sustainable development of the Oceans and, between 2014 and 2015, met the ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. In relation to seas and oceans, also the **UN Convention on the Law of Sea (UNCLOS)** shall be mentioned.

⁵ <https://www.unscn.org/en/topics/sustainable-food-systems>

⁶ <https://www.unhcr.org/agriculture-and-food-security.html>

⁷ <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/sustainable-lifestyles/food-and-food-waste>

2.2 Food and Agriculture Organization (FAO)

Among the various UN agencies, the Food and Agriculture Organization (FAO) contributes to the transition towards sustainable food systems with actions on food security and ending hunger. As the leading international organization addressing food security and ending hunger, since 1945, FAO has kick-started, supported, and partnered in a series of initiatives, frameworks and programmes that address areas of sustainable food systems.

FAO initiatives approach sustainable food system elements spanning from sustainable management of natural resources (such as land, soil, water, forests, including related fields of sustainable agriculture, biodiversity conservation, genetic resources), to sustainable food value chain, food security, and health. Moreover, FAO pays attention to rural development and farmers livelihoods, and it also works with trade and markets – especially in the Global South. The organisation has also contributed to the UNFSS with the Hand in Hand initiative to eradicate poverty and hunger simultaneously by accelerating sustainable agricultural and rural development. Specifically, the FAO Investment Centre systemically assesses food system interactions in several developing countries⁸, focussing on food security, economic well-being, territorial equity, and environmental protection.

Hosted at FAO, the **Committee on World Food Security (CFS)** offers an international platform for stakeholders to improve food security and nutrition for all. It develops and approves evidence-based policies, recommendations, and guidelines on the issue of food security and nutrition, based on the work and analysis carried out by the **High-Level Panel of Experts on Food Security and Nutrition (HLPE)**. In particular, the 2021 Voluntary Guidelines on Food Systems and Nutrition⁹ address hunger and malnutrition and promote sustainable food systems by focussing on good governance, sustainable supply chains for healthy diets considering climate change, equality in access to healthy diets, food safety, increased nutrition education and information, attention to women's empowerment and food resilience in humanitarian circumstances.

2.3 World Health Organization (WHO)

The World Health Organization (WHO) is the UN agency in charge of granting healthy life and lifestyles worldwide, with the objective of achieving good health for all. Given the interrelation between food and health, the WHO works expansively with food- and nutrition-related programmes, also in collaboration with other UN agencies and programmes, including the **WHO Global database on the Implementation of Nutrition Action**, providing a repository of nutrition-related policies and actions from around the world.

With regards to sustainable food systems, the WHO especially targets health and healthy dietary behaviours by addressing the nutritional, environmental, and cultural aspects of diets¹⁰. The work of WHO thus provides a good overview of the interconnections between nutrition and health outcomes.

At WHO, an entire unit is dedicated to **Actions in Food Systems**. The unit promotes and monitors tools and policies for reaching safe, sustainable, healthy, and quality food, for example, through engagement with food chain stakeholders and WHO's Member States. Moreover, the **Food Systems for Health Programme** looks at the entirety of food systems to guarantee health and end cycles

⁸ <https://www.fao.org/support-to-investment/our-work/projects/fsa2021/en/>

⁹ <https://www.fao.org/family-farming/detail/fr/c/1430471/>

¹⁰ <https://www.unscn.org/en/topics/sustainable-food-systems>

of disease and malnutrition. The organisation was also active in the context of the UNFSS, hosting an independent dialogue on healthy food systems.

Moreover, the WHO is involved with programmes on maternal and child nutrition, food fortification and safety and foodborne diseases, as well as nutrition and malnutrition, and healthy diets. The organisation also provides guidelines on the safe use of waste and greywater in agriculture, on packaging and labelling for the promotion of healthy diets, an action package on elimination of trans fat, and a code on Marketing of Breast-milk Substitutes. The Technical Advisory Group guides and supports WHO's work in food safety, including current and future challenges and innovation for health.

2.4 Organization for Economic Cooperation and Development (OECD)

The Organisation for Economic Co-operation and Development (OECD) has been active in the area of food systems in connection with the UNFSS, producing an analysis focussed on how to achieve better policies for food systems. The focus of OECD action is on fostering a shift in consumption patterns, informing and designing coherent policies. The outcomes include a dedicated web page with a database of resources, data on agriculture and fisheries, and various reports, among which **“Making Better Policies for Food Systems”** (OECD, 2021). The OECD has also published reports and studies on agricultural resilience, food security, healthy diets, sustainable land management and rural wellbeing. Moreover, it publishes an annual report on monitoring and evaluation of agricultural policy, and it has worked in cooperation with FAO on guidance for responsible agriculture supply chain. These resources are a source of inspiration for Union action by providing advice on how to develop efficient policies for a transition towards sustainable food systems.

2.5 World Bank

The World Bank (WB) provides financial products and technical assistance for development. In relation to sustainable food systems, the WB works in the areas of “Food and Agriculture” with the focus areas of food security, climate-smart agriculture, food system jobs and agribusiness value chains. The aim is to achieve healthy, sustainable, and inclusive food systems through the provision of knowledge, advice as well as financial resources. Moreover, the WB is active in the areas of sustainability of livestock.

With the goal to support countries in rethinking their food systems “from farm to fork”¹¹, the World Bank developed the **Food Systems 2030 Trust Fund**. The Fund aims at building the foundation for a sustainable food system, starting from the understanding that food systems are essential but compromised due to the pressure put on resources. It also aims at promoting new ways of doing business to deliver improved livelihoods and safe, affordable, and nutritious diets for all. In particular, Food Systems 2030 supports activities along nine pathways: better diets; health and prevention of zoonotic diseases; improved food safety; reduction in GHGs; reduction in pollution; improved land, water and food loss and waste management; promotion of productivity growth; increased job creation; maintaining trade flows. Providing advice and analytical products to underpin

¹¹ <https://www.worldbank.org/en/programs/food-systems-2030/overview>

policy options, the Trust Fund targets policymakers, organizations, private sector as well as civil society, and represents a relevant pilot for change also for European context.

Additionally, the World Bank is active in the framework of the UNFSS, working within the Global Finance Dialogue¹² to promote a sustainable food finance. In the general context of food, the WB hosts the PROGREEN global partnership on sustainable landscapes, and it leads the Food Systems, Land use and Restoration (FOLUR) Global Platform. Additionally, the WB also plays a role in the Consultative Group on International Agricultural Research (CGIAR) and in the G20 Global Agriculture and Food Security Program (GAFSP).

Focussing on business and investments, the initiatives of the World Bank can inspire Union policymaking to include the economic perspective and leverage financial resources for the transformation towards food system sustainability. The European Commission, through the Directorate-General for International Partnerships (DG INTPA), is already making a significant contribution to the Food Systems 2030 Trust Fund and its objectives, providing 5 million EUR to support it. The partnership aims to leverage the expertise and resources of both organizations to achieve greater impact and promote sustainable development in partner countries.

2.6 Regional Fisheries Management Organisations (RFMOs)

In the domain of marine food systems, Regional Fisheries Management Organisations (RFMOs) are international organisations that promote the sustainable management of stocks under their purview through the establishment of binding measures for their members. These organisations can manage highly migratory species (e.g., tuna) or straddling stocks (e.g., mackerel) and, although they mainly cover the high seas, some of them also extend to the exclusive economic zones. They play a key role in establishing measures to counteract illegal, unreported, and unregulated (IUU) fishing and contribute to sustainable oceans worldwide. The European Union represents one of the most relevant actors in RFMOs, playing an active role in 18 of these organisations.

2.7 Main messages

The main messages from the analysis of the initiatives by international organisations are summarised in the Box 1 below.

¹² <https://www.worldbank.org/en/events/2021/06/14/un-food-systems-summit-global-finance-dialogue>

Box 1. Key messages from countries worldwide with frameworks on sustainable food systems

- Embrace sustainable food systems as a whole, looking at the environmental, economic, and social dimensions and their interactions, the entirety of the food value chain and terrestrial and aquatic systems.
- Pay attention to cross-cutting issues, such as gender, finance, resilience to external shocks, innovation, as well as the impacts and interactions with food systems in countries worldwide (Global South).
- Adopt a comprehensive approach to the process of policy making and governance, including all food system stakeholders at all scales, and encouraging their participation, collaboration and networking (e.g., multi-stakeholder partnership).
- Ground decision making on scientific evidence and measurable data.
- Provide an overarching framework applicable to the different Union contexts and food systems.
- Embed action within existing international initiatives, primarily, developing policies that are aligned and coherent with the Agenda 2030 and its SDGs.

3 Policy initiatives in third countries

This chapter presents sustainability initiatives implemented in countries outside the EU. These have been extracted from the FAOLex database¹³, which collects information on food and agriculture related initiatives. The database contains more than 16 000 documents that have been selected and analysed through a keyword-based search and qualitative review¹⁴.

All the three dimensions of sustainability are addressed by the identified initiatives, especially environmental and social aspects. Many initiatives deal with sustainable use and management of natural resources, climate change mitigation and adaptation, GHG emissions, affordability of healthy diets, nutrient adequacy, food safety and economic viability of businesses respecting sustainability criteria.

Additionally, **many initiatives target more than one sustainability dimension**. Those ‘cross-cutting’ initiatives concern sustainable food systems, fisheries and aquaculture, and agriculture in general, as well as farmers, energy, livestock, and food sovereignty.

Similar to what happens for international organizations, the analysis of FAOLex database suggests that most legislative and non-legislative actions in third countries tend to focus on one or more elements of food system sustainability rather than on the whole system.

Although most of the actions remains sectorial, **in recent years** and in some cases as a response to the action, **frameworks have been created moving beyond segmentation and focussing on sustainable food systems as a whole**. The chapter focuses on these framework initiatives, meant as embracing a systemic perspective of food sustainability and addressing several of the identified key sustainability elements (Borchardt Steve et al., 2024).

These frameworks, their goals and roadmaps to action are presented in the following pages. For this purpose, additional research was carried out in government websites, the FAO “Transforming agri-food system” Report (FAO, 2021) and the Voluntary National Reviews¹⁵. The analysis starts focusing on relevant examples of overarching initiatives at national level, such as in Canada, Japan, US and Norway, and then it provides examples of more sectorial initiatives related to the sustainability of food systems in other third countries.

3.1 Canada

The 2019 “**Food Policy for Canada: Everyone at the Table**”¹⁶ addresses the connections within food systems and helps in making decisions about food consumption. The vision is to grant access to safe, nutritious, culturally diverse food for all Canadians in adequate quantities. To this end, **four priority areas** exist, namely, to help Canadian communities’ access healthy food; make Canadian food the top choice at home and abroad; support food security in Northern and indigenous communities; and reduce food waste.

¹³ FAOLEX Database. [Complete Collection]. License: CC BY-NC-SA 3.0 IGO. Extracted from: www.fao.org/faolex/opaendata. Date of Access: February – March 2022.

¹⁴ The FAOLEX datasets were downloaded, extracting only information for non-European Union countries, including international communities (e.g., ASEAN), for the time span 2000 – 2022. The datasets were filtered considering the keyword “food” in “Primary Subject” and “Domain”. The resulting set consists of 16 742 initiatives related to food. This set was further filtered through a keyword-based search in the title of the document (“food”, OR “sustainable”, OR, “agriculture”, OR “climate”).

¹⁵ <https://sustainabledevelopment.un.org/vnrs/>

¹⁶ <https://agriculture.canada.ca/en/about-our-department/key-departmental-initiatives/food-policy/everyone-table-investing-food-policy-canada>

Progress on these areas should deliver on **six long-term outcomes**, i.e.:

- Increased community capacities and resilience in the face of food-related challenges;
- Heightened connections within food systems, through governance and partnerships that link multiple sectors and actors;
- Improved food-related health outcomes and reduction of diet-related diseases;
- Strong Indigenous food systems co-developed in partnership with Indigenous communities;
- Sustainable food practices along the food value chain to reduce environmental impact, improve climate resilience, and maintain natural resources for future generations;
- Inclusive economic growth through access to food sector opportunities for all Canadians within a diversified, economically viable, and sustainable food system.

The Food Policy for Canada adheres to the UNFSS and SAPEA visions of food system sustainability: guaranteeing current and future access to food to all, in light of the economic, environmental, and social dimensions of food. The focus on resilience for long-term sustainability address all stakeholders on the food value chain and it pays attention to cultural diversity, which is also relevant at the EU level, where different needs and concerns exist when it comes to food production and consumption. In Canada, the contextualisation of food system sustainability efforts is exemplified also by many initiatives on local food systems¹⁷.

In addition, Canada is active in the context of the 2021 UN Food Systems Summit, where it has led various National Dialogues. Topics covered include resilience of regional food systems; sustainable production and consumption (including waste) and agri-food value chains; food security, its measurement and connection to climate change; integrated approaches to food systems; and the role of food environments for equitable and sustainable food systems. Canada also works on animal welfare (“Regulations Respecting the Health of Animals”, 2020).

3.2 Japan

The “**Strategy for Sustainable Food Systems (MeaDRI)**”¹⁸ (2021) is the Japanese approach for achieving SDGs, sustainable food systems (agriculture, fisheries, forestry) and increased productivity in the Asian monsoon region. The strategy is presented as part of Japan’s commitment to the UNFSS. The strategy comprehensively targets sustainable food systems with the objectives to:

- **Reduce chemical pesticides and chemical fertilizers** to ensure the sustainability of agriculture, forestry, and fisheries, to be achieved by introducing sustainable alternatives;
- **Promote organic farming**, to be achieved through technological innovation and approaches tailored to different regional characteristics;
- **Reduce greenhouse gas emissions** for carbon neutrality, to be achieved, for example, through renewable energies, electrification and hydrogenation of machinery and vessels, conservation of forests as carbon sinks, reduction in illegal logging, and Integrated Pest Management;
- Achieve sustainable sourcing of raw materials in food industry corporate activities;

¹⁷ Examples include “[A Healthy Community Food System Plan for Waterloo Region](#)”, “[Local Food Act](#)”, “[Farm and Food Awareness Act](#)”, “[Montreal Food System](#)”.

¹⁸ <https://summitdialogues.org/wp-content/uploads/2021/09/Japans-Vision-for-Sustainable-Food-Systems-and-Commitments-from-Japanese-Stakeholders.pdf> <https://summitdialogues.org/wp-content/uploads/2021/09/Japans-Vision-for-Sustainable-Food-Systems-and-Commitments-from-Japanese-Stakeholders.pdf>

- **Reduce food loss and waste** at the household and business level, also in light of the SDGs;
- **Promote a balanced diet** to realize sustainable consumption considering nutritional, environmental and cultural aspects, to be achieved through the incorporation of these aspects in the “food and nutrition” education curriculum, and the dissemination of scientific knowledge on diet and health;
- **Enhance sustainable production systems for fisheries** through resource management, control, and eradication of IUU, fishing and trade, and the minimization of environmental impact of aquaculture;
- **Promote innovation in rural areas** to create local income, employment opportunities, and increase the resilience of local supply chains, also including youth and women;
- **Promote private investment**, to be achieved through Environmental Social and Governance investments and impact investments;
- Strengthen food supply chains with **free and fair trade**, also in cooperation with third countries;
- Contribute to the improvement of nutrition internationally.

These objectives should enable long-term goals for the food system in the entire region, e.g., by 2030, at least a 30% improvement in the productivity of food manufacturers and the achievement of sustainable sourcing for import materials; by 2050, zero CO₂ emissions from fossil fuel combustion, 50% reduction in chemical pesticides and 30% in chemical fertilizer, and an increase in organic farming to 25% of the total farmland. Targets are set also for forestry and fisheries.

MeaDRI exemplifies a comprehensive food system sustainability strategy at the regional level. The long-term targets to be achieved through a set of objectives suggest the relevance of measurable goals and short- and long-term thinking when addressing food systems. Indeed, the strategy thoroughly addresses all sectors of food production establishing targets for all areas and it considers the whole supply chain, from local to global, and the financial and innovation dimensions of the food system. Interestingly, the strategy highlights the topic of education for food system sustainability, which can also be inspirational at the European level.

In addition, other actions are led by Japan and connected to the UNFSS. These include the **2021 Tokyo Nutrition for Growth Summit** and the commitments from non-governmental actors. The UN and Tokyo Summits joined action to advance answers to malnutrition, recognised as a major challenge to health, resilience, and prosperity, including solutions like healthy diets from sustainable food systems.

Japan is also involved in promoting climate resilient agriculture (i.e., the “Climate Change Adaptation Plan of Ministry of Agriculture, Forestry and Fisheries”¹⁹ in 2015), together with food and nutrition education (“Promotion of Shokuiku”²⁰).

3.3 The United States

In the United States, the national cross-sectoral plan “**Strategic Plan FY 2018 – 2022**”²¹ provides leadership on agriculture, food, natural resources, rural wellbeing and infrastructure, and nutrition with the main objective to eliminate hunger, food insecurity and malnutrition. This is to be achieved

¹⁹ <http://faolex.fao.org/docs/pdf/jap182428.pdf>

²⁰ https://www.maff.go.jp/e/policies/tech_res/shokuiku.html

²¹ <http://faolex.fao.org/docs/pdf/us202203.pdf>

by granting access to safe and nutritious food for all citizens, preventing foodborne illness and protecting public health, promoting healthy dietary choices, and fostering sustainable and productive agriculture, forestry, and fisheries.

Examples of measures to combat rural poverty include improving business opportunity, quality of life, infrastructure and broadband access, and providing food with the long-term goal of supporting self-sufficiency. The plan also focuses on food systems efficiency and inclusivity, for example, through the provision of financial safety-nets for farmers, the support of rural jobs, and the establishment of prevention and mitigation measures for pests and disease. Besides their overarching nature, the objectives stress the relevance of science and data to measure and foster progress on food system sustainability while also considering its deep social implications. The plan considers long-term resilience of the system by catering towards self-sufficiency, rural wellbeing, and health. It foresees science-based tools and data-driven action, which can serve as an example at the European level while also considering the deep social implications of food systems.

Moreover, in the context of the UNFSS, the United States published the “**Pathways to more sustainable, resilient, and inclusive U.S. food systems**”²². This document represents the commitment to food systems that support citizens’ health while combatting climate change and addressing the needs of the vulnerable by empowering youth, women, and disadvantaged communities. The initiative illustrates the pathways to transition towards sustainable food systems through actions that:

- Boost the access to safe and healthy diets for all, addressing shortcomings in food assistance programmes and investing in information, education, and nutrition;
- Address the climate crisis by investing in rural infrastructure and clean energy, science and programmes for conservation and climate smart practices while reducing food loss and waste through consumer awareness, recycling, and upcycling;
- Address equity and inclusion in food systems, supporting food system actors and communities by building resilient food supply chains and strengthening local and regional food systems while creating a fair marketplace for all producers.

The attention to fairness, equity, and empowerment of marginalised communities, together with attention to issues of gender, youth empowerment, and vulnerable communities with investments in energy and science can inspire policymaking on sustainable food systems in the EU.

Other actions²³ led by the United States within the UNFSS framework include the “**Agriculture Innovation Mission for Climate**” to invest in climate-smart agriculture and food systems innovation and the formation of the “**Coalition of Action on Sustainable Productivity Growth for Food Security and Resource Conservation**”.

In addition, other initiatives are in place in the country. The “**Agricultural Research Service (ARS) Strategic Plan**”²⁴ aims at delivering scientific solutions to agricultural challenges to end hunger, food insecurity and malnutrition. To this end, ARS focus on the role of food for health; develop tests and processes for food safety; reduce and control pathogens and toxins in agricultural products; improve the quality of agricultural products to the benefit of competitiveness and consumers; and provide scientific information to national agri-food industries. Additionally, the plan wants to make agriculture, forestry, and fisheries more productive and sustainable, through sustainable management of natural resources, sustainable agricultural production, and reduced environmental impacts. Priorities and measures include the use of degraded water for crop production; crop

²² <https://www.usda.gov/sites/default/files/documents/US-Food-Systems-Pathways.pdf>

²³ <https://www.usda.gov/sites/default/files/documents/usda-fss-fact-sheet.pdf>

²⁴ <http://faolex.fao.org/docs/pdf/us202205.pdf>

management; conservation and enhancement of ecosystem services; climate change mitigation and adaptation in the agricultural sectors; development of energy crops and efficient and sustainable production practices for different geographic regions and climatic conditions; safe use of waste and by-products (e.g., for energy, fuel, fertilizers); data and information. The plan also addresses resilience to disasters, through the eradication of diseases, the implementation of research on antimicrobial resistance and antibiotics, and the development of sustainable production systems attentive to animal health and wellbeing.

The United States also promote initiatives targeting aspects of food system sustainability related to: security and resilience of food and agricultural (“Food and Agriculture Sector-Specific Plan (FA SSP)”²⁵, 2015); food standards (“U.S. Codex Program Strategic Plan 2019-2023”²⁶, 2018); food security in foreign policy (“Food for Peace Act”²⁷).

3.4 Norway

Norway has established a cross-sectoral strategy addressing the entire sustainable food system. The 2021 “**Food Nation Norway**”²⁸ aims at positioning the country as a Food Nation globally by 2030, making food “*a source of joy, pride, good health and bonding*”. Four areas support this vision and refer to the production of sustainable, safe, healthy, high-quality food; growth and value creation all-over the country; innovation and diversity; and the building of competence, recruitment, and reputation.

Examples of sustainable food production include policies emphasizing sustainability, safe and healthy food, antibiotic resistance, and the collaboration with the private sector for promoting healthier diets. Growth and value creation prioritize improved policy for agriculture and seafood, strengthened supply-sector for technologies and services, and the creation of food and tourism regions using food-labelling schemes. As regards innovation and diversity, measures address food and tourism, innovative food systems and public procurement. Finally, measures promote knowledge creation on healthy and sustainable diets among the youth, sustainable urban food production, better competences for the food and catering industry, and the creation of a food culture.

The valorisation of a culture of food inclusive of sustainability considerations can support the transition towards a sustainable food system in Europe, also in light of the variety of systems and behaviours around food present in the EU. This process can also benefit from a focus on improving skills among the youth and in food industries, and from innovative actions amplifying the economic sustainability potential by coupling food with other sectors like tourism.

Another relevant policy for Norway relates to urban agriculture and food production (“Cultivate cities and towns: National strategy for urban agriculture”²⁹, 2021, also as part of Food Nation Norway).

Norway promotes sustainable food systems also in foreign and development policy, granting sustainability in globally interconnected food systems, for example, by embedding sustainability in trade and development policies. The 2019 “**Food, People and the Environment**”³⁰ framework targets small-scale farmers and fishermen and links climate, environmental, infrastructural and

²⁵ <http://faolex.fao.org/docs/pdf/us197075.pdf>

²⁶ <http://faolex.fao.org/docs/pdf/us202201.pdf>

²⁷ <http://extwprlegs1.fao.org/docs/pdf/USA184291.pdf>

²⁸ <http://extwprlegs1.fao.org/docs/pdf/nor202978.pdf>

²⁹ <http://extwprlegs1.fao.org/docs/pdf/nor202978.pdf>

³⁰ <http://extwprlegs1.fao.org/docs/pdf/nor202956.pdf>

governance issues to the food value chain. The framework supports sustainability in food production, nutrition and markets, and it fosters capacity building and good governance.

Specifically on food production, the objectives relate to increasingly sustainable, resilient food and productive agriculture, fisheries, and aquaculture. Additionally, sustainable value creation and private sector development will support constant access to healthy and safe food and food waste reduction. In terms of nutrition and diet, increased knowledge and access to healthy diets, safe food and clean drinking water will improve nutrition and sustainable consumption patterns. Finally, concerning policy and governance, the framework promotes strong and sustainable food systems at the national, regional, and global level.

Besides these two main strategies, other initiatives exist on food systems exist in Norway, which are linked to climate and sustainability, both in the country and abroad. For example, Norway has developed two strategies for third countries receiving Norwegian aid and development assistance. The 2021 “Climate, hunger and vulnerability: **Strategy for climate adaptation, prevention of climate-related disasters and fight against hunger**”³¹ sets the priorities and measures for climate adaptation, including actions to fight hunger, achieve food security, and enhance nutrition. In this regard, the strategy promotes sustainable food systems based on agriculture, aquaculture, and fishing, with sustainable climate-smart food production and food security as a priority. Two focus areas of the strategy concern nature-based solutions and climate-adapted food production. Among others, measures proposed support efficient weather and climate services for climate adaptation and risk reduction for agriculture, fisheries, and aquaculture. The strategy also foresees contributions to long-term sustainable land management and good agricultural practices for soil health, safeguards for local rights, and landscape restoration through climate-smart agriculture and nature-based solutions. Additionally, the strategy envisages integrated fisheries and marine management, and innovation and digitization for climate-smart productivity in agriculture, fisheries, and aquaculture.

3.5 Other significant examples worldwide

Association of Southeast Asian Nations (ASEAN)

For the Association of Southeast Asian Nations (ASEAN), the “**2016–2025 Vision and Strategic Plan for Cooperation in Food, Agriculture and Forestry**”³² envisages a competitive, inclusive, resilient, and sustainable Food, Agriculture, and Forestry sector to contribute to food and nutrition security. Actions towards food security include strengthening the quality and variety of food production, improving food value chains, establishing healthy nutrition standards, promoting nutrition education, paying attention to the role of women. Measures include efficient resource management, the use of technologies, sustainable land-use intensification, and forest protection.

Poverty alleviation, gender and social equity are central to the strategy. Inclusive and efficient food systems are fostered through market access, assistance to small producers and SMEs, and technology and product quality. Moreover, resilience to shock and mitigation and adaptation to climate change are addressed by promoting good agricultural practices, giving access to financial resources and training, and enhancing regional and international collaboration. The integration of gender issues is proposed to reduce the higher vulnerability of women to risk and disaster. In light of the social dimension of sustainable food systems, the Plan is particularly inspiring, especially

³¹ <http://extwprlegs1.fao.org/docs/pdf/nor202946.pdf>

³² The full text can be consulted at <http://faolex.fao.org/docs/pdf/asean197569.pdf>

when it addresses the interconnections between gender, vulnerability to food scarcity and other shocks, and the advancement of sustainable consumption and production practices.

ASEAN also provides guidance on **food security** through the “ASEAN Integrated Food Security Framework and Strategic Plan of Action on Food Security in the ASEAN Region 2015-2020”³³.

Australia

Since 1996, Australia and New Zealand regulate matters of food and food standards through the joint **food regulation system**. The system aims at protecting consumers’ health and safety and it includes the various stakeholders of the food supply chain. Through this joint system, policies are developed cooperatively by a forum of ministers from Australian and New Zealand governments, food standards are developed by independent bodies, agencies from both countries monitor and enforce food laws and provide emergency response as the first point of contact for food recalls and incidents. The food regulation system, which is undergoing a process of reform since 2019, has three main objectives for the 2017-2021 period. These relate to health, namely the reduction of foodborne illness, overweight and obesity related disease, and the continuation of a solid, resilient, and responsive food regulation system.

Moreover, **local initiatives** on healthy, sustainable, and equitable food systems are in place at the local level from the governments of New South Wales and Victoria³⁴.

Australia is also active in the framework of the 2021 UN Food Systems Summit³⁵ and organised the National Food Systems Summit Dialogues, on the topics of sustainable food production in and for a healthy environment; resilience of food systems (towards environmental, socio-economic vulnerabilities); nutrition, sustainability, and healthy diets; the synergies and trade-offs of food security and nutrition, strong livelihoods, and environmental sustainability; and agricultural innovation and multi-stakeholder Partnerships; and food labelling for sustainability.

Additionally, Australia provided a strategy on Food waste (“**National Food Waste Strategy**”³⁶, 2017).

Bolivia

For Bolivia, two significant comprehensive strategies were identified. Firstly, the 2018 “**Plurinational Policy and Strategy for the Integrated and Sustainable Management of Biodiversity**”³⁷ includes various elements feeding into food system sustainability. Principles underpinning the strategy include the “*buen vivir*” (i.e., living well, in harmony with nature); water for life; a plural economy; integrity; gender and generational justice; ecological and climate Justice; social justice; communication and free access to information. Additionally, the guidelines of the policy include contribution to food security and sovereignty through environmentally and socially sustainable and biodiverse agri-food systems.

Moreover, the 2013 “Law on peasant and indigenous economic organisations and community economic organisations for the **integration of sustainable family farming and food sovereignty**”³⁸ regulates sustainable family agriculture and aims to contribute to food sovereignty.

³³ <http://faolex.fao.org/docs/pdf/asean197734.pdf>

³⁴ <https://law-food-systems.sydney.edu.au/policy-database/>

³⁵ <https://www.awe.gov.au/biosecurity-trade/market-access-trade/un-food-systems-summit-2021>

³⁶ <http://faolex.fao.org/docs/pdf/aus178781.pdf>

³⁷ <http://faolex.fao.org/docs/pdf/bol205599.pdf>

³⁸ <http://faolex.fao.org/docs/pdf/bol120900.pdf>

Relevant principles include diversified production; education for good nutrition; solidarity economy; gender and generational equity; recognition of the productive contribution of rural women; and sustainability.

Brazil

In Brazil, the 2017 “Law No. 22.806” lays out the State **Policy on Sustainable Food and Nutrition Security** (PESANS) and organizing the National System of Food and Nutrition Security (SISAN). PESANS, seen as a strategic component of sustainable development, strives to promote inter-sectoral and integrated governmental and civil society actions to ensure the right to food. PESANS follows the principles of the human right to adequate and healthy food and water; universal and equitable access to satisfactory food; decentralization and participatory management; and conservation and sustainable use of socio-biodiversity and natural resources in biomes and other related ecosystems.

Additionally, Brazil produced legislation at the regional level on: sustainable fisheries (Law No. 15.223 establishing the State Policy for the Sustainable Development of Fisheries and creating the State Fisheries Fund within the State of Rio Grande do Sul, 2018³⁹); sustainable food and nutrition security (Law No. 5.594 creating the State System and Policy on Sustainable Food and Nutrition Security of Rio de Janeiro, 2009⁴⁰; Complementary Law No. 609 creating the State System of Sustainable Food and Nutritional Security of Espírito Santo (SISAN-ES), aimed to ensure the Human Right to Adequate Food (DHAA)⁴¹, 2011).

Chile

Sustainable food system elements are found in the 2017 Chilean “**National Sustainable Consumption and Production Action Plan 2017-2022**”⁴² under the action track on Sustainable Food Systems. The objective is to promote sustainable food systems at the local, regional, and national level, including agricultural production, fisheries, and aquaculture. In this respect, the plan wants to help eliminate hunger, food insecurity and malnutrition, as well as to make agriculture more productive and sustainable. Actions foreseen include the development and implementation of sustainability indicators for food systems; increased incorporation of sustainable practices in food value chain processes, products, and services; the reduction of the environmental footprint and negative social impacts of food products; information and transparency on food value chain sustainability; improvement of fisheries and aquaculture sustainability; and reduction of food loss and waste. The document also promotes sustainable management of water resources, including increasing the efficiency in industrial and agricultural water consumption and minimizing water pollution. Finally, energy and waste are also addressed.

Indonesia

The 2019 law on “**Sustainable Agriculture Cultivation System**”⁴³ addresses the production aspect of food systems in its social, economic, and environmental facets and impacts. The law promotes sustainable and environmentally friendly agricultural production and management of

³⁹ <http://faolex.fao.org/docs/pdf/bra184154.pdf>

⁴⁰ <http://faolex.fao.org/docs/pdf/bra184523.pdf>

⁴¹ <http://faolex.fao.org/docs/pdf/bra185014.pdf>

⁴² <http://faolex.fao.org/docs/pdf/chi190112.pdf>

⁴³ <http://faolex.fao.org/docs/pdf/ins195060.pdf>

natural resources meeting human needs. The implementation of the system has three goals: diversifying production to meet internal needs and exports, increasing farmers' income and standard of living, and expanding on equitable business and employment opportunities. All these objectives are to be achieved considering the carrying capacity of ecosystems, climate change mitigation and adaptation, and environmental sustainability. Measures include extension, improvement, and diversification in agribusiness systems, from land use to seedling, planting materials, water management, harvesting, animal welfare, etc., always considering climate change. Monitoring of quality and negative environmental impacts of cultivation facilities, infrastructures, and products are also part of the law, as well as community involvement.

Jordan

In Jordan, elements of food system sustainability are identified in the 2016 **"National Strategy and Action Plan for Sustainable Consumption and Production (SCP)"**⁴⁴. The strategy aims to achieve a shift to sustainability in three priority areas: agriculture/food production, transport, and waste management. All the areas include three phases: (i) the development of regulatory frameworks for sustainability in the sector; (ii) infrastructural and technological interventions to reduce environmental impacts; and (iii) raising awareness and following a life-cycle approach. On food, to address hunger, food insecurity and malnutrition, the plan aims to decrease resource and food waste, and promote sustainable and healthy diets. On agriculture, to increase efficiency and sustainability, the plan aims to improve standards of living and agricultural productivity, include SCP in public land-use policy, and favour sustainable agriculture and food manufacturing practices (e.g., by incentivising Integrated Pest Management and organic farming). Other measures include traceability and certification schemes for sustainability, proper water management and the use of renewable energies on field. Enablers of this transition should be "Green Financing" for sustainable agriculture, consumption, and production, and labelling of sustainable products.

Kenya

In Kenya, the 2018 **"Climate Smart Agriculture Implementation Framework"**⁴⁵ envisions a climate resilient and low carbon sustainable agriculture that ensures food security. Key points include climate smart practices for sustainable intensification of crops, agro-forestry, livestock, and fisheries production; efficient management of agricultural commodity value chains; climate finance; knowledge sharing and effective learning; and institutional strengthening. Moreover, poverty and vulnerability reduction are addressed. Measures for sustainability include diversified and improved crop varieties, wastewater management, integrated soil fertility management, gene banks, sustainable fish harvesting, cooperatives and producer organizations, sustainable programs to for smallholders' certifications, community management, awareness and capacity building for women and youth, amongst others.

Kenya also promoted specific policy on food security with provisions on sustainability in the **"National Food and Nutrition Security Policy Implementation Framework 2017-2022"**⁴⁶.

Mauritius

⁴⁴ <http://faolex.fao.org/docs/pdf/jor178828.pdf>

⁴⁵ <http://faolex.fao.org/docs/pdf/ken189345.pdf>

⁴⁶ <http://faolex.fao.org/docs/pdf/ken170761.pdf>

Mexico

Mexico's "**Special Concurrent Programme for Sustainable Rural Development 2014-2018**" includes actions on education, health and food for sustainable rural development, and provisions for care of the rural environment and sustainability of socio-economic activities. Gender equity, labour conditions and disaster reduction are part of the programme.

Laws on sustainable rural development also exist at the regional level, for example the "Sustainable Rural Development Law for the State of Baja California Sur"⁴⁷ of 2016.

Myanmar

With its 2015 "**Climate-Smart Agriculture Strategy**"⁴⁸ Myanmar strives to maximise synergies and minimise the trade-offs across food security, agricultural development and climate change adaptation and mitigation. Essential elements to this are food security by increased agricultural productivity, agricultural systems resilience through adaptation, and mitigation by reducing GHG emission or enhancing carbon sequestration. To this end, technology, policy, and investment are envisaged to achieve sustainable agricultural development for food security and nutrition through climate-resilient and smart agriculture. The strategy emphasises women participation, rural development, and measures of conservation agriculture, integrated soil management, pest and disease management, agro-forestry, intercropping practices, improved water management and integrated crop-livestock management.

With the "**National Plan of Action for Food and Nutrition (2011-2015)**"⁴⁹, the country is also targeting food security at the intersection with human and environmental health.

South Africa

Concerning sustainability aspects, the "**Agricultural policy**"⁵⁰ in South Africa addresses food and nutrition security and resilience, agro-ecosystems, sustainable natural resources management (water, land, forest), and increased productivity in agriculture on a cost-effective and sustainable basis. Moreover, in its 2013 "**Bio-Economy Strategy**"⁵¹, South Africa identifies agriculture as a crucial sector for increased productivity and sustainability. Objectives include food security, nutrition and health, and job creation through sustainable agricultural production and processing. Enabling measures include agro-innovation hubs, energy crop initiatives, soil conservation, and capacity building.

Sri Lanka

The sustainability of agricultural production is addressed in the "**National Policy and Strategy on Cleaner Production for Agriculture Sector 2012**"⁵², an integrated environmental strategy to agricultural processes, products, and services, to increase efficiency in the utilization of natural resources and inputs for food production and reduce risks to humans and the environment (e.g., related to the use of pesticides and other chemicals). The mission is to achieve food security through ecologically sound, economically viable and socially acceptable agricultural systems,

⁴⁷ <http://faolex.fao.org/docs/pdf/mex188042.pdf>

⁴⁸ <http://faolex.fao.org/docs/pdf/mya169583.pdf>

⁴⁹ <http://faolex.fao.org/docs/pdf/mya145314.pdf>

⁵⁰ <http://faolex.fao.org/docs/pdf/saf178047.pdf>

⁵¹ <http://faolex.fao.org/docs/pdf/saf191512.pdf>

⁵² <http://faolex.fao.org/docs/pdf/srl179744.pdf>

including sustainable management of resource and cleaner production practices. Measures include efficient use of water; soil conservation; life cycle approaches to resources and waste (with eco-packaging, storage, and transportation); market-based instruments to improve sustainable productivity; and prevention in the usage of persistent organic pollutants pesticides. The strategy also wants to raise awareness and create knowledge on sustainable food production, and promote high-quality value chain management and integrated farming system management. Monitoring and evaluation mechanisms and measures to address policy failures are foreseen.

United Kingdom

In Scotland, two initiatives were identified addressing elements of food system sustainability. The 2021 **“Strategy for Environment, Natural Resources and Agriculture Research”** focuses on renewal and innovation in research. The strategy sets five research themes, one addressing specifically “Sustainable Food System and Supply”. The others are directly and indirectly linked to sustainable food systems, namely “Plant and Animal Health”, “Human Impacts on the Environment”, “Natural Resources”, “and Rural Futures”. Concerning “Sustainable Food System and Supply”, one goal refers to the creation of resilient, sustainable, high-quality crop production systems supporting the rural and circular economy, climate change mitigation and adaptation, and food security. Another commitment regards change to Scotland’s food supply chains to meet food security needs, improving on its efficiency, value, sustainability, and resilience. At the same time, change in consumers’ behaviour towards healthier diets and food safety is envisaged. Measures are foreseen to make agriculture, forestry, and fisheries more productive and sustainable, including, for instance, crop improvement research (crop breeding, selection of traits for high-quality crops), farmers adaptation to challenges, thriving rural economy, and research focused on producing change in policies, businesses, and the supply chain (sustainability, productivity, emission reduction). Interventions for inclusive and efficient agri-food systems include support mechanisms for rural businesses, also improving on their equality and inclusion. Finally, evidence to support policies on community ownership and engagement, and an understanding of how land ownership can help in achieving net zero emissions and biodiversity enhancement is foreseen to increase the resilience of livelihoods to disasters.

Moreover, Scotland’s 2018 **“Climate Change Plan 2018 – 2032”** and its update⁵³ also include crosscutting measures to make agriculture, forestry, and fisheries more productive and sustainable. For high-quality agricultural production with high environmental standards and low emissions, a roadmap for agricultural transformation introduces environmental conditionality, testing of novel support mechanisms, and increasing farmers, crofters, and land managers advice for sustainable food production. Rural poverty and land use change are addressed, for instance, through green economy and employment, public health, and social benefits, including for the youth and rural population. Options explore land use beyond traditional farming and food production, such as forestry, peatland restoration, and biomass production. In these regards, farmers wishing to exist business and consider alternative land uses are also supported, and interventions cater towards inclusive and efficient agri-food systems, for example through new farming equipment.

In the UK, other measures refer to food waste (for example “Our waste, our resources: a Strategy for England”⁵⁴).

⁵³ <http://faolex.fao.org/docs/pdf/uk206310.pdf>

⁵⁴ <http://faolex.fao.org/docs/pdf/gbr183315.pdf>

Yemen

The role of women empowerment in agriculture for food security, sustainable resources management, equitable and efficient agriculture and resilience to risk is addressed in the "**National Strategy on Women in Agriculture**"⁵⁵ of 2015. The sectoral plan aims at increasing productivity of women as farmers, improving women's access to food, land, production credit, agricultural inputs, technology, technical information on new agricultural practices, training, and markets, as well as promoting a better understanding of women's farming systems.

3.6 Main messages

The main messages from the analysis of framework initiatives in third countries are summarised in Box 2 below.

Box 2. Key messages from framework initiatives in third countries

- Establish coherent and measurable short- and long-term objectives for sustainable food systems.
- Craft policies targeting both the production and consumption sides of sustainable food systems, investing in education, knowledge and skills creation.
- Pay attention to context-specific sub-systems like local hubs of food production and empower more marginalised voices (e.g. women, the youth).
- Address thoroughly the social and economic implications of a transition towards sustainable food systems, considering rural livelihoods and infrastructure, and fair employment.
- Promote a culture of sustainable food and sustainable food experiences, linking sustainable food systems to other sectors and systems.
- Embed food systems sustainability in trade, foreign and development policy.

⁵⁵ <http://extwprlegs1.fao.org/docs/pdf/yem152531.pdf>

4 Policy initiatives at EU level

This chapter provides an analysis of **EU policy initiatives which are relevant to the sustainability of the food system**. Such an analysis is crucial for understanding the current EU policy landscape addressing the food system. It offers insights on the way the sustainability transformation of the European food system is fostered and how different sustainability aspects of the food system are covered by policy initiatives. The way in which the various sustainability aspects are addressed by EU policy initiatives also reveals deeper trends in policy making processes that indicate the level of policy coherence in the food system policy landscape.

The analysis was conducted in 2022, extracting relevant policy initiatives (both legal acts and preparatory documents) from the EUR-Lex database. The initial set of documents was then discussed and validated by European Commission's services, and a final set of **234 policy documents (142 legal acts and 92 preparatory documents)** was selected and analysed semantically to assess the extent to which different sustainability elements are addressed in the underlying policy documents. More details on the methodology and the full list of EU policy initiatives assessed can be found in Annex 1.

4.1 Mapping EU policy initiatives to sustainability elements of the food system

The selected policy initiatives (legal acts and preparatory documents) have been analysed to identify the sustainability elements of the EU food system more frequently addressed, and to highlight possible gaps.

The definition of the elements for a sustainable food system is challenging. Our analysis capitalized on the work of Borchardt and colleagues (2024) focusing on EU-related SAPEA definitions, as well as of Bock and colleagues (2022) that collected reflections on a sustainability assessment framework for the EU, based on a participatory process that involved JRC scientists and a broad international group of stakeholders with in-depth knowledge of different aspects of the EU food system.

Based on the work of Borchardt and colleagues (2024), Table 1 represents the identified general elements that characterise sustainability for the EU food system. These range inside the three dimensions of sustainability, looking at the environmental, economic, social and health-related elements for a sustainable food system.

This analysis provides a first overview of how EU food system-related policies are linked to the different sustainability dimensions and elements relevant for a sustainable food system. The high number of initiatives required the use of semi-automatic text mining techniques combined with experts' evaluation (details are explained in Annex 1).

Table 1. Sustainability elements for an EU sustainable food system

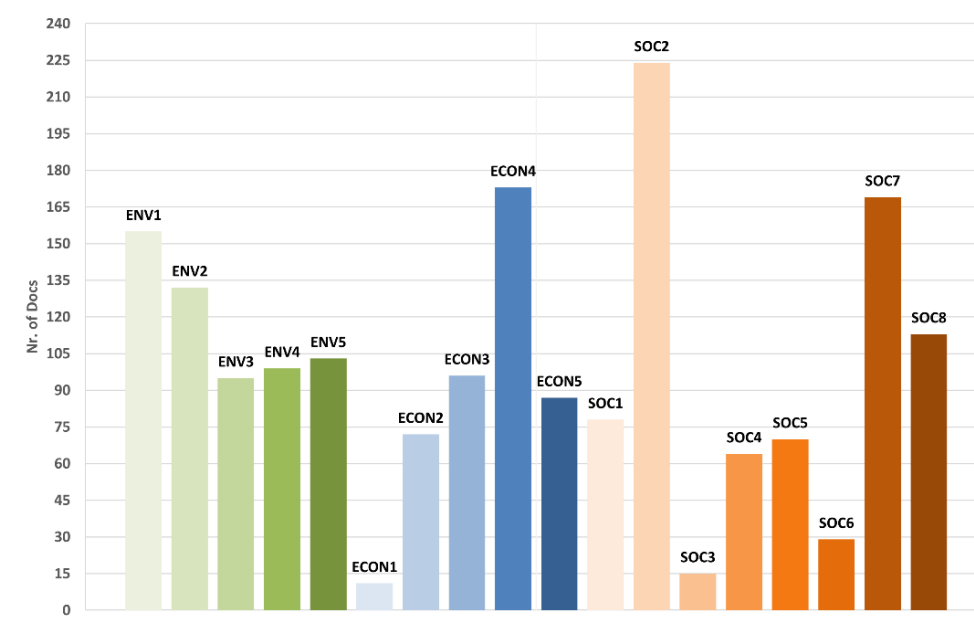
Element	Description
Environmental	
ENV 1	Sustainable use, management – land, sea, soil, water, minerals, forests, air
ENV 2	Biodiversity conservation and restoration of natural resources and ecosystem services
ENV 3	Climate change adaptation & mitigation, GHG emissions
ENV 4	Reduction of other emissions, pollution (reactive nitrogen, pesticides, fertilisers, particulate matter)
ENV 5	Food loss and waste reduction
Economic	
ECON 1	Fair distribution of added value along food value chain
ECON 2	Equitable access to capital, technology, land, vessels, and markets
ECON 3	Economic viability of businesses respecting sustainability criteria
ECON 4	Transparency and accountability across the food value chain, responsible business and marketing
ECON 5	Sustainable and fair trade (rules for food imports and exports other than food safety)
Social (including health)	
SOC 1	Fair employment & working conditions in food value chain
SOC 2	Consumer food education and literacy
SOC 3	Food marketing and information to consumers
SOC 4	Affordability of healthy diets from sustainable food systems
SOC 5	Nutrient adequacy/healthy diets (EU, global)
SOC 6	Use of antimicrobials in primary production
SOC 7	Food safety
SOC 8	Animal welfare

Source: (Borchardt et al., 2024).

The results of this screening indicate that in general legal acts tend to be more focused in their scope and field of application, providing a more specific perspective on parts of the food system, rather than addressing the food system as a whole. On the contrary, preparatory documents have a tendency to be broader in scope and provide more context and background information on the respective subject matter. This difference between the two document groups is also reflected in the average scripts length, which is significantly higher in preparatory documents than in legal ones. However, when looking at the range of detected keywords, the integrated and systemic perspective is often not fully captured also in preparatory initiatives.

Among the set of food system-relevant EU initiatives, preliminary analysis shows that the three sustainability dimensions (environmental, economic and social) are covered (see Figure 1). Differences in the extent to which the building elements are addressed exist. The textual analysis for specific sustainability elements indicated that the environmental dimension is more evenly addressed than the social and economic ones, where some elements are much more prevalent than others. Sustainable natural resource use and management and biodiversity conservation are among the most frequently detected elements in the environmental dimension; for what concerns the economic dimension, aspects of transparency and accountability in the food value chain are often addressed, whereas the social dimension primarily focuses on food safety, consumer food education and the use of anti-microbials.

Figure 1. Number of legal acts and preparatory documents covering each element of the food system



Source: Authors' elaboration.

Note: the colours and the names in the bars refer to the sustainability elements in Table 1.

Although the analysis showed that all sustainability dimensions are addressed within food system-related initiatives, it is also important to analyse the way in which those dimensions were actually covered by the considered initiatives.

To tackle the transformation towards a sustainable food system, economic, social and environmental aspects across the food system need to be considered in an integrated way. The assessment of the EU initiatives currently in place suggests that an **integrated policy perspective** is increasingly applied in the European policy making processes with the majority of both legal and preparatory initiatives addressing economic, environmental and social aspects of sustainability simultaneously. However, looking at the underlying subcategories of sustainability elements, significant gaps within many initiatives are evident. In fact, the analysis showed that only the **Farm to Fork Strategy** semantically addresses all the 18 identified sustainability elements. Other initiatives are addressing several sustainability elements within their underlying documents.

- Among the others, the Council Decision on the **Horizon Europe Framework Programme**⁵⁶ (which is highly relevant for the food system, but not limited to it and rather broad and cross-cutting in nature), refers mainly to sustainability of research infrastructures, of the supply chains (namely of the food value chain) and of health care and social protection systems.
- The Regulation on the **Rules for the Common Agricultural Policy (CAP) strategic plans**⁵⁷, that regulates the types of intervention and common requirements for Member States as well as the related financial arrangements, addresses ten objectives covering the three dimensions of sustainability: ensure a fair income for farmers; increase their

⁵⁶ [Council Decision \(EU\) 2021/764](#) of 10 May 2021 establishing the Specific Programme implementing Horizon Europe – the Framework Programme for Research and Innovation, and repealing Decision 2013/743/EU.

⁵⁷ [Regulation \(EU\) 2021/2115](#) establishing rules on support for strategic plans to be drawn up by Member States under the Common Agricultural Policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD).

competitiveness; improve the position of farmers in the food chain; climate change action; environmental care; preserve landscapes and biodiversity; support generational renewal; vibrant rural areas; protect food and health quality; foster knowledge and innovation.

- The Communication on the **Future of Food and Farming**⁵⁸, that highlights the challenges that agriculture and rural areas are facing, shows how cooperation on research and innovation at EU level will help to develop better knowledge and adopt innovation faster to overcome these challenges. The document also highlights the relevance of addressing societal expectations regarding sustainable food production, namely food safety and quality as well as environmental and animal quality standards.
- The **Common Fisheries Policy (CFP)**⁵⁹, which is the first legal framework simultaneously addressing main aspects of economic, environmental and social sustainability dimensions of fisheries, consists of a set of rules covering the conservation of marine biological resources and the management of fisheries and fleet exploiting such resources. It also includes aquaculture and measures on markets and financial measures in support to the implementation.

Another important initiative along with its amending acts is the **Regulation on the common organisation of the markets in agricultural products**⁶⁰ as it serves as a cornerstone for the policy framework governing agricultural markets within the European Union. It consolidates the rules for the production and marketing of agricultural products, aiming to stabilize markets, ensure a fair standard of living for agricultural producers, and increase the competitiveness and sustainability of EU agriculture, thereby shaping various aspects of the food system from production to distribution. The **Regulation on support for rural development by the European Agricultural Fund for Rural Development**⁶¹ is another cross-cutting policy initiative, focusing on strengthening the agricultural sector, enhancing environmental management and efficiency, and improving the quality of life and economic diversification in rural areas, thus addressing key aspects of sustainability and development in the EU's rural and agricultural landscapes. Another example of a policy initiative with more transversal implications on food production and consumption is the **Regulation on organic production and labelling of organic products**⁶² which establishes a comprehensive framework for the sustainable development of organic production in the EU, ensuring fair competition for farmers and operators, preventing fraud and maintaining consumer trust in organic products. It covers various aspects of the food system including production, processing, distribution, and labelling requirements to ensure the integrity of organic products from farm to fork.

On the contrary, many initiatives have a highly specific scope and are therefore inevitably narrower in addressing sustainability aspects within the food system like legislation on food hygiene⁶³,

⁵⁸ [COM\(2017\) 713 final](#), Communication "The Future of Food and Farming".

⁵⁹ [Regulation \(EU\) 1380/2013](#) on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC.

⁶⁰ [Regulation \(EU\) No 1308/2013](#) establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007.

⁶¹ [Regulation \(EU\) No 1305/2013](#) on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005.

⁶² [Regulation \(EU\) 2018/848](#) on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007.

⁶³ Commission Delegated [Regulation \(EU\) 2021/1374](#) amending Annex III to Regulation (EC) No 853/2004 on specific hygiene requirements for food of animal origin.

consumer information⁶⁴, food safety⁶⁵, genetically modified organisms⁶⁶, maximum residue levels for pesticides⁶⁷, food waste⁶⁸ or on quality schemes for agricultural products and foodstuffs⁶⁹.

When comparing the two different groups of initiatives, legal acts cover on average only ≈6 out of 18 sustainability elements, compared to ≈11 out of 18 covered by preparatory documents. Although it is clear that initiatives do not necessarily have to account for every sustainability aspect of the food system, it is important that they are designed and implemented in a coherent manner.

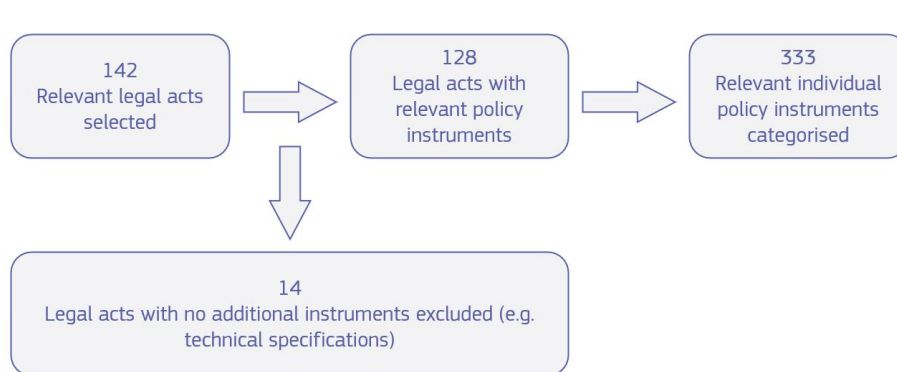
4.2 EU legislation addressing sustainability of the food system

In order to better understand how the existing EU policy landscape applies to the food system, the existing EU legislation has been **screened in detail with respect to the specific policy measures** utilised within each policy acts. The **142 legal acts** identified have been reviewed to extract the policy instruments defined in each of them. This screening produced a database of **333 specific policy instruments** (Figure 2).

The individual policy instruments have then been mapped according to: 1) the policy field treated in the respective legal document, i.e macro topic based on EurLex Directory Code, 2) the type of policy instrument, and 3) the supply chain actors to which the policy measure applies to.

Firstly, the 333 specific policy instruments have been grouped into 20 categories (see third column of Table 2). Secondly, these 20 categories have been assigned to the four broader categories of policy instruments as defined in the Better Regulation (Tool 17, (European Commission, 2021); see first two columns in Table 2).

Figure 2. Schematic illustration of the steps of the analysis, with the number of relevant legal acts and policy instruments screened



Source: Authors' elaboration.

⁶⁴ [Regulation \(EU\) 1169/2011](#) on the provision of food information to consumers, amending Regulations (EC) 1924/2006 and (EC) 1925/2006, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004.

⁶⁵ [Regulation \(EC\) No 178/2002](#) laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety.

⁶⁶ [Directive \(EU\) 2015/412](#) amending Directive 2001/18/EC as regards the possibility for the Member States to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory. [Directive 2009/41/EC](#) on the contained use of genetically modified micro-organisms. [Regulation \(EC\) No 1829/2003](#) on genetically modified food and feed.

⁶⁷ [Regulation \(EC\) No 396/2005](#) on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC.

⁶⁸ [Decision \(EU\) 2019/1597](#) supplementing Directive 2008/98/EC as regards a common methodology and minimum quality requirements for the uniform measurement of levels of food waste.

⁶⁹ [Regulation \(EU\) No 1151/2012](#) on quality schemes for agricultural products and foodstuffs.

Table 2. Types of EU policy instruments and their definition, by macro category

Macro categories	Definition	Policy instruments
"Hard", legally binding rules	Binding legal rules are used to specify the behaviour of organisations or individuals to address activities with serious risks of impacts for the economy, environment or individuals. In the EU there are three types of binding acts: Regulations, Directives and Decisions.	Prescriptive legislation Mandatory performance standards Derogations & exemptions Legal simplifications
"Soft" regulation	Soft and more flexible approach, with non-binding rules for the MS. Including Recommendations, technical standards, voluntary agreements (self-regulation), legislation induced co-regulatory actions (e.g. Communications), open method of coordination between MS (e.g. defining objectives; measuring instrument such as statistics, indicators, guidelines; benchmarking, exchange of best practices)	Codes of good practice Covenants Benchmarking Certification & Accreditation (Guidelines**)
Economic instruments	Market-based instruments used in form of "hard" regulation. Including taxes, charges, fees and fines, penalties, liability and compensation schemes, subsidies and incentives, deposit-refund systems, labelling schemes, tradable permit schemes	Duties & Levies Subsidies Taxation Quotas Permits Producer responsibility Labelling schemes* Public investment
Education and information	Used to ensure that citizens, consumers and producers are better informed. Includes information and publicity campaigns, trainings, guidelines, disclosure requirements, introduction of standardised testing or rating systems.	Audits Education & Training Labels* Awareness campaigns
Other measures	These are policy instruments that could not be classified in any of the other categories (e.g. definition of Action Plans or of pollutants' monitoring systems)	

Source: Authors' elaboration.

* Note: 'Labelling schemes' are meant as a requirement prescribed by EU legislations for input providers, producers, processors, distributors, while 'Labels' refers to the information related to the product aimed at consumers of the product or other actors of the food chain that purchase the product and use labels for information.

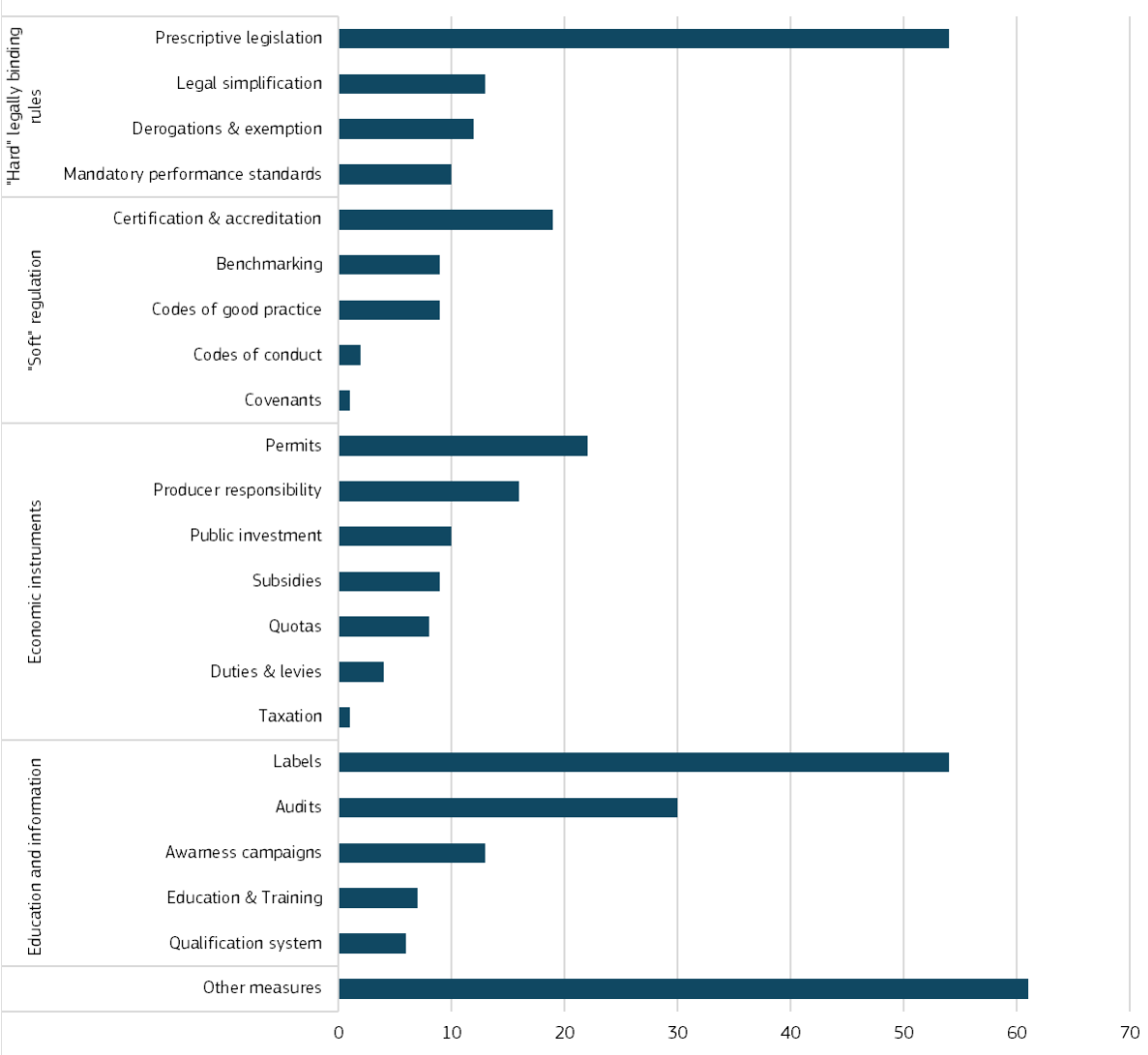
** Note: the selected relevant legal acts do not include EU Guidelines. However, those could play important role in policy implementation at MS level.⁷⁰

The following figure provides an overview of the distribution of policy measures identified within the set of 142 legal acts showing a higher prevalence of measures related to "hard" legally binding rules on one side (especially prescriptive legislation) and measures linked to education and information on the other side (in particular labels and audits), while soft regulation measures and economic instruments were utilised less frequently in those policy acts. Examples of acts utilising prescriptive legislation can be found in the multiannual plans for fish stocks (e.g. Regulation (EU) 2016/1139; Regulation (EU) 2019/472) or Regulation (EC) 1831/2003 on the use of additives in

⁷⁰ e.g. EU strategic guidelines for sustainable aquaculture (Ref: COM/2021/236 final Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030).

animal feed. For what concerns labels, prominent policy examples are the Regulations on organic production and labelling of organic products (see for instance Regulation (EU) 2018/848).

Figure 3. Number of policy instruments identified in the EU food system legislation, by macro category



Source: Authors' elaboration.

Each policy instrument has been further assessed with respect to the **actors of the supply chain** the measure addresses: input providers (such as of seeds, fertilisers, feed, additives), primary producers (agriculture and fisheries), processors (food manufacturers), distributors (transporters, wholesalers, retailers and food service operators), consumers (households, restaurants, institutions) and traders (export and import) with third countries. In addition, **umbrella initiatives** have also been identified. These are more overarching initiatives within a specific sector or across sectors, usually addressing several if not all the actors of the food supply chain like the Regulation (EU) 2021/2115 on the CAP Strategic Plans, Regulation (EU) 2021/2116 on the financing, management and monitoring of the common agricultural policy or the Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products (see Annex 1 for the full list of "umbrella" initiatives).

Figure 4 shows whether the existing EU policy measures related to the food system (rows) address the actors of each specific step in the supply chain (columns). Hard legally binding rules are found to address all actors in the supply chain. On the contrary, yellow cells highlight the lack of measures targeting a specific actor in the supply chain. The measures analysed appear to focus more on actors related to food production, processing and distribution rather than consumers. In fact, the primary producers are largely targeted by all types of measures. However, certain measures are applied more often to specific types of actors exclusively, e.g.:

- primary producers are mostly targeted by hard legally binding rules, but also economic instruments such as subsidies and permits;
- input providers are targeted mainly by prescriptive legislation and by economic instruments, especially labelling schemes for their products and permits to access the market;
- food processors are mainly subject to mandatory standards, as well as labelling schemes;
- food distributors have mainly requirements for labelling schemes;
- consumers are mainly targeted by labels and awareness campaigns;
- traders are mainly targeted by requirements for certification and accreditation, but also by several economic instruments, such as duties and levies.

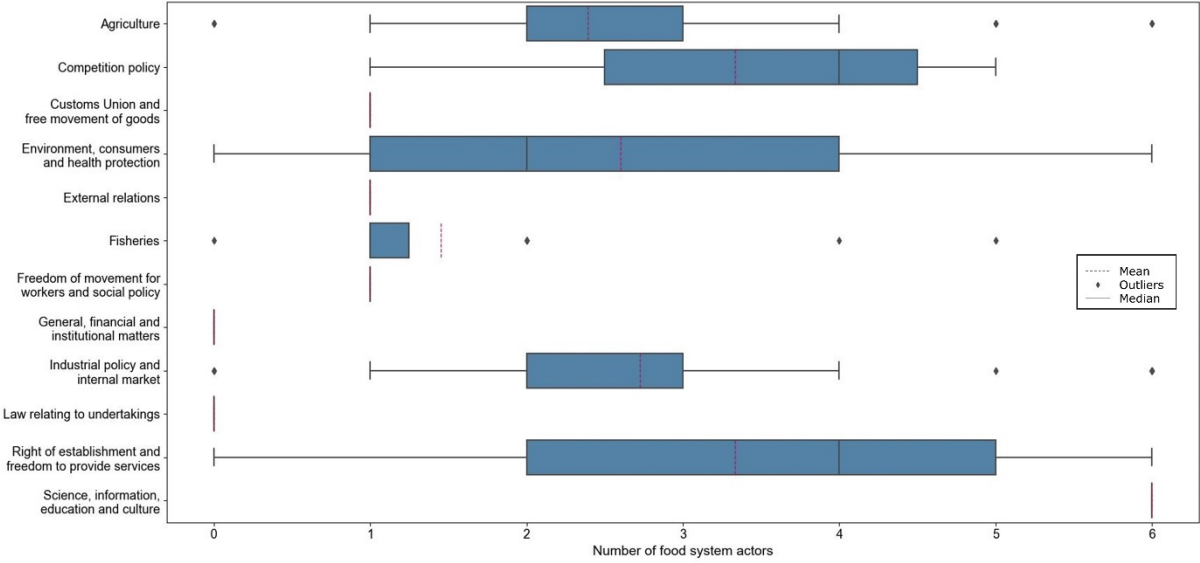
Figure 4. EU Policy instruments, by macro category, addressing the main actors of the food system

		Input providers	Primary producers	Processors	Distributors	Consumers	Traders
Hard legally binding rules	Prescriptive legislation	✓	✓	✓	✓	✓	✓
	Mandatory performance standards	✓	✓	✓	✓	✓	✓
	Derogations & exemption	✓	✓	✓	✓	✓	✓
	Legal simplification	✓	✓	✓	✓	✓	✓
Soft regulation	Benchmarking	x	✓	✓	x	x	x
	Codes of good practice	✓	✓	✓	✓	x	x
	Covenants	x	✓	✓	✓	x	✓
Economic instruments	Certification & accreditation	✓	✓	✓	✓	x	✓
	Labelling schemes	✓	✓	✓	✓	x	✓
	Quotas	x	✓	x	x	x	✓
	Permits	✓	✓	✓	✓	x	✓
	Producer responsibility	✓	✓	✓	✓	✓	✓
	Duties & levies	✓	✓	✓	✓	x	✓
	Subsidies	✓	✓	✓	✓	✓	✓
Education and information	Taxation	x	x	x	✓	x	x
	Public investment	✓	✓	✓	✓	✓	✓
	Audits	✓	✓	✓	✓	✓	✓
	Awareness campaigns	✓	✓	✓	✓	✓	✓
	Education & Training	✓	x	✓	✓	x	✓
Other measures	Labels	✓	✓	✓	✓	✓	✓
	Other measures	✓	✓	✓	✓	✓	✓

Source: Authors' elaboration.

To further contextualise the European food system policy landscape and to better understand how policies address the food system, Figure 5 illustrates the average number of supply chain actors addressed by legal acts, divided by the different policy fields (as classified in EurLex).

Figure 5. Box plot for the number of supply chain actors addressed by EU legislation, by policy area



Source: Authors' elaboration.

This figure shows that, on average, there are no policy fields where measures address the whole supply chain. For example, measures in agriculture, environment, consumers and health protection, industrial policy and internal market tend to target on average 2-3 actors at a time; measures in fisheries between 1 and 2; for free movement of goods, free movement of workers and social policy, and external relations, only one actor is addressed in the selected legislative acts. The fields of competition policy, together with the right of establishment and freedom to provide services, address on average the highest number of actors (between 3 and 4) at once.

However, only few examples of policies can be found where their measures address the whole supply chain like the Regulation (EC) No 1830/2003 “concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms” which is associated with various policy fields (environment, consumers and health protection, right of establishment and freedom to provide services).

In general, and while it is clear that further insights are needed (as, for example, the analysis does not provide information on how the actors are addressed, or whether there is a specific need for this) the data shows that existing food system related policies and measures lack coherence in targeting the supply chain actors, and horizontal fragmentation exist across policy fields. Depending on the policy field examined, more or less actors are addressed on average, and, with few exceptions, the entire supply chain is rarely considered. These findings are aligned with a recent EEA report (European Environment Agency, 2023) where the analysis shows that consumers and other key actors are addressed in an uneven way.

4.3 Main messages

The two boxes below summarise the main messages from the analysis of EU policies (both legal acts and preparatory documents) and from the EU policy instruments addressing food sustainability in EU legislation.

Box 3. Key messages from the analysis of EU policies

- There are already a number of initiatives in place targeting sustainability aspects of the food system.
- There are no legislative documents addressing the food system holistically and in a systemic way.
- Few initiatives do apply an integrated perspective through which multiple sustainability aspects of the food system are targeted.
- Many initiatives tend to have a sector-specific focus, increasing the risk of missing relevant sustainability aspects that are needed for a successful comprehensive transformation towards a sustainable food system.
- The nature of European policymaking processes leads to differences in the narratives developed under legal acts and preparatory documents, with preparatory documents being more cross-cutting in their scope and legal acts being more focused in their policy objectives.

Box 4. Key messages from the analysis of EU policy instruments addressing food sustainability in EU legislation

- All types of policy measures are currently used, although soft regulatory measures appear to be the least frequently applied.
- All measures belonging to hard legally binding rules address all actors in the supply chain at least once.
- The policy measures analysed appear to focus more on actors related to food production, processing and distribution rather than consumers.
- Different types of measures are applied to different actors (e.g. primary producers are largely targeted by hard legally binding rules; food processors by mandatory standards and labelling schemes; traders by requirements for certification, accreditation and several economic instruments; consumers by labels and awareness campaigns).
- Existing food system related policies and measures lack coherence in targeting the supply chain actors, and horizontal fragmentation exist across policy fields.

5 Policy initiatives at EU Member States level

This chapter provides an analysis of relevant legislative and non-legislative measures in place in EU Member States (MS), identified through consultation with experts, and complemented with additional analysis of databases from EU and international organisations.

Firstly, the “**Member States experts group on general food law and sustainability of food systems**”⁷¹ was consulted through a survey to provide information on both legislative and non-legislative measures targeting the sustainability of food systems in place at national level. In response to this survey, the MS experts provided information on more than **600 initiatives**, with a brief description of each measure, their sustainability dimensions (environment, economic, social or cross-cutting) and the main topics addressed. The survey was conducted in May 2022, by means of a structured questionnaire, as further explained in the methodology in Annex 2.

For the national legislative measures, the experts provided the correspondence to the EU legislation, when available, for example in the case of the national initiative implementing an EU Directive. For example, this is the case of Regulation (EU) 2021/2115 to support the CAP strategic plans to be drawn up by Member States, or Directive (EU) 2019/633 on unfair trading practices in the agricultural and food supply chain, already implemented in many legal acts across the MS. More information on the survey, and the list of national initiatives provided by each country is available in Annex 2, together with relevant examples of EU legislations and corresponding measures implemented at national level.

In a second step, to identify and assess the existing sustainability initiatives at EU Member State level, the information collected from the MS national experts was complemented by a detailed analysis of **databases from EU and international organisations**, namely the:

- Food and Agriculture Organization (FAO)’s comprehensive repository (**FAOLex**⁷²) of national laws, regulations, policies and bilateral agreements on food, agriculture and natural resources management;
- World Health Organisation Global database on the Implementation of Nutrition Action (**WHO GINA**)⁷³, launched in 2012 and collecting policies, actions and mechanisms on the topics of nutrition and education, healthy diets and dietary guidelines, amongst others;
- World Cancer Research Fund (**WCRF NOURISHING** database⁷⁴ providing an overview of policy actions implemented by governments for obesity reduction and healthy diets promotion, including labels, taxes, actions at the school level and marketing restrictions;
- **EU Semester - National Reform Programmes**⁷⁵, a collection of actions on sustainable food system contained in National Reform Programmes 2021, forward-looking policy documents on reforms implementation and initiatives reflecting national priorities released by Member States.

⁷¹ The expert group on general food law monitors the application of Regulation (EC) No 178/2002 on general food law (and future revisions) in the Member States. Since 2021, expertise was broadened to include health/nutrition, environment/climate, and agriculture/fisheries-related areas. See more at: https://ec.europa.eu/food/horizontal-topics/general-food-law/expert-group-general-food-law_en.

⁷² <https://www.fao.org/faolex/en/>

⁷³ <https://extranet.who.int/nutrition/gina/en/policies/summary>

⁷⁴ <https://policydatabase.wcrf.org>

⁷⁵ https://commission.europa.eu/content/2021-european-semester-national-reform-programmes-and-stabilityconvergence-programmes_en

From the international databases, only the documents related to EU MS were selected. In total, **more than 6000 initiatives were identified addressing different areas relevant for food system sustainability**. The list was further complemented by the national initiatives listed in the FAO Report “Transforming agri-food systems Legislative interventions for improved nutrition and sustainability” (FAO, 2021).

The analysis of all these rich sources of information lead to the identification of two important set of initiatives in place at national level that are described in the next pages. On one side, there are relevant examples of framework initiatives regarding the food system as a whole (section 5.1), while on the other side, many examples of sectorial initiatives at MS level focus on specific elements of sustainability of the food system (section 5.2).

5.1 National framework initiatives in EU

The information collected from MS experts' group and international databases allowed to identify some examples of national framework initiatives that address the sustainability of the food system holistically. Most of these policies are non-legislative documents, such as strategies, guidelines, roadmaps, national policy documents, programmes. Only in a few cases they are complemented by legislative acts.

Sweden

The “**National Food Strategy for Sweden**”⁷⁶ is a non-legislative policy published in 2016 with the goal to achieve a food supply chain that is productive, competitive and environmentally friendly, and that supports sustainable development throughout Sweden. Specifically, rules and regulations are designed to support the overall objective of a competitive and sustainable food supply chain in which production increases. This should be achieved by means of appropriate taxes and charges, regulatory simplification, a reduced administrative burden and other measures to strengthen competitiveness and profitability. The policy underlines the linkages between agriculture, forestry and fisheries and climate action.

After two years, a regulation⁷⁷ was adopted supporting financial contributions to enterprises for measures within the framework of the Swedish food strategy. In addition, the “**Swedish National Pathway for Sustainable Food Systems**” were developed during the dialogues leading up to UN Food Systems Summit in 2021.

Ireland

In 2021, the Irish government launched the “**Food Vision 2030**”⁷⁸. It is a nationwide strategic document (non-legislative), providing a landmark for the Irish agri-food sector, with the potential to transform the agriculture, food, forestry and marine sectors in the period to 2030, with sustainability at its core. Ireland aims to become a world leader in Sustainable Food Systems over the next decade, meeting the highest standards of sustainability – economic, environmental, and social – and producing safe, nutritious, and high-value food, while protecting and enhancing the natural and cultural resources and contributing to vibrant rural and coastal communities and the national economy. The Strategy consists of 22 Goals which are aligned with the UN Sustainable

⁷⁶ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC178046>

⁷⁷ <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC187850>

⁷⁸ <http://faolex.fao.org/docs/pdf/ire205013.pdf>

Development Goals (SDGs) and it focuses on food system resilience, climate-friendly production, and nutrition and food safety, amongst others.

Romany

Another relevant example is the Romanian "**National strategic framework for the sustainable development of agri-food sector and rural development**" to 2030⁷⁹. The strategy is multi-sectoral nationwide policy document (non-legislative), aimed at the development of rural economy, agriculture and ensuring food security through sustainable ecological balance in rural areas, public private partnership, poverty reduction, and increasing rural employment, mainly in young active rural population. The scope of the National Strategic Framework is to set guidelines for the sustainable development of the agri-food system and the rural areas as key for economic growth in Romania. The Framework has the following objectives: national food security and guarantee nutrition of the Romanian population; efficient use of natural, material and human resources of Romanian agriculture; and efficient use of Romania's agricultural resources to supply high quality agri-food products on the domestic and international markets.

Additionally, "**Romania's Sustainable Development Strategy 2030**"⁸⁰, focuses on SDG 2 "End hunger, achieve food security and improved nutrition and promote sustainable agriculture". The Strategy aims to develop a sustainable and competitive agri-food sector, so as to improve quality of life in rural areas and ensure living conditions like those in urban areas, to encourage local and ecologically friendly production, and to promote traditional and mountain products.

Finland

In Finland, the "**Climate Programme for Finnish Agriculture – Steps towards Climate Friendly Food**" grounds on profitable food production and responsible consumption to further food system sustainability in the country, including objectives on energy and material efficiency, reduced emissions, climate mitigation and adaptation of food production and consumption. The measures identified span from plant and animal health to reduced food loss and enhanced plant-based diet.

In Finland, in 2014, the Ministry of Agriculture and Forestry put forward the "**Climate Programme for Finnish Agriculture. Steps towards Climate Friendly Food**"⁸¹. The Programme aims to further enhance the sustainability of the Finnish food system, which is founded on profitable food production and responsible consumption. The objective is to improve energy and material efficiency and reduce emissions. The initiative presents a total of 76 measures to facilitate the adaptation of food production and consumption to climate change and/ or to mitigate the change. The eight key measures identified in the Climate Programme for Finnish Agriculture are: 1. Carbon sequestration into soil; 2. Measures relating to the use of peatlands; 3. Plant breeding; 4. Plant and animal health and preventing the spread of invasive alien species; 5. Handling and treatment of manure and more accurate nitrogen fertilization; 6. Energy efficiency and production and consumption of renewable energy; 7. Reducing food loss all through the food system; 8. Changes towards a more plant-based diet.

France

In the last decade, France has produced relevant legislative and non-legislative measures addressing the food system in a comprehensive way. Especially when considered altogether, these

⁷⁹ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC202401>

⁸⁰ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC195029>

⁸¹ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC165298>

create a favourable environment for the transition towards sustainable food systems. These initiatives include:

- The **Future of Agriculture, Food and Forestry Law** (2014)⁸² aims at meeting competitiveness challenges for the agri-food sector while respecting environmental standards. Another goal is to ensure quality food production to cope with the increase in the world's population.
- The **National Health Plan** (2015)⁸³ and the **National Health Strategy** (2017)⁸⁴, directly address food systems. The strategy tackles the elimination of hunger, food insecurity and malnutrition by proposing adequate dietary guidelines; ensuring access to healthy, sustainable, affordable, nutritious, tasty diets, in sufficient quantity; developing clear and simple nutritional labelling on food products (nutriscore); reducing the influence of food advertising and marketing on children; promoting adequate nutrition and physical activity; preventing eating disorder; limiting the added sugar content of everyday foodstuffs; and reducing exposure to water supply of inadequate quality. This strategy also includes actions to make agriculture, forestry and fisheries more productive and sustainable, for example, by reducing emissions and exposure to pollution, and promoting nature in the city and sustainable agriculture.
- The agricultural and fishing sectors are addressed in the **Law on the modernization of agriculture and fishing**⁸⁵, and the **Rural and Maritime Fishing code**⁸⁶, where emphasis is placed on competitive yet responsible production, food security and safety, fair employment, granting high levels of social, environmental and health protection.
- The **European and international strategy**⁸⁷ of the Agriculture and Food Ministry outlines the vision to promote the transition to sustainable systems worldwide in coordination with European and international stakeholders – touching on issues of food security, sustainable management of resources, trade policy coherence, youth employment, rural development, health, amongst others. The strategy specifically mentions European food sovereignty and food-related health of European citizens as primary objectives. The strategy also wants to lead to sustainable production and consumption systems, and promote the bio-economy, environmental conservation, the SDGs, trade policy coherence, youth employment and mobility, and rural development.

Malta

In Malta, the “**National Agricultural Policy for the Maltese Islands**”⁸⁸ sets sustainability at its cornerstone and presents the vision for a more lucrative, attractive, environmentally friendly agri-food sector. The document presents a total of 70 measures organised into economic objectives, social regeneration, resources and governance. These include, for example, diversification of agricultural products, the use of integrated pest management, a circular approach to waste, the development of novel business processes and technologies, farmer cooperation, the promotion of research and education.

Additionally, the **National Strategy for the Environment 2050** is a strategic far-sighted governance document that sets the policy framework for plans, policies and programs related to the protection and sustainable management of the environment, including in terms of the environmental sustainability of food systems such as agriculture and fisheries. The requirement

⁸² <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC143035>

⁸³ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC198424>

⁸⁴ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC200101>

⁸⁵ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC107567>

⁸⁶ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC178778>

⁸⁷ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC197077>

⁸⁸ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC191677>

arises from the **Environment Protection Act** (EPA), the main overarching legal framework for the protection of the environment in Maltese legislation.

Slovenia

As a final example, the “**Resolution: Our food, rural areas and natural resources after 2021**”⁸⁹ is a legal act that defines the strategic framework for agriculture, food and rural areas. It shapes the future Slovenian agricultural policy in terms of sustainability, with specific objectives including safe and quality food, efficient use of resources, strong agri-food value chains, reduced negative impacts on water, soil and air, climate change mitigation and adaptation, and biodiversity conservation.

5.2 Sectorial national initiatives on food system components

Besides the initiatives addressing holistically the food system which have been described in the previous section, most of the measures analysed at MS level refer to more “sectorial” instruments in place at national level. These can support the transition towards sustainable food systems addressing some specific elements, as presented below: climate change, sustainable development, biodiversity, circular economy, fisheries and aquaculture, food production and waste, nutrition and healthy diets, amongst others.

Climate change

Concerning climate change, Cyprus (2017), Estonia (2017), Finland (2014), Greece (2016), Ireland (2019), Italy (2015), Lithuania (2015), the Netherlands (2016), and Poland (2013) all present non-legislative national strategies and plans for **climate change mitigation and adaptation**, and environmental protection. These plans can support the achievement of sustainable food system because they include objectives relevant for that context. For example, for **Cyprus**, sustainable use of ecosystem services and natural resources is promoted and, concerning agriculture, special attention is given to the over exploitation of groundwater and the improvement of irrigation management, as well as sound use of chemical pesticides, herbicides and fertilizers to avoid soil and water resources pollution and degradation. In **Estonia**, the plan wants to enable more inclusive and efficient agricultural and food systems via productive, viable and sustainably use forests, as well as ensure the sustainability of fish resources and the well-being (income) of the people that earn a living through fishing. And the **Polish strategy** targets adaptation to climate change in rural areas, through monitoring and early warning of possible consequences of climate change for plant and animal production; improved management of food reserves, seed material and feed, the protection of biodiversity and the management of forests and coastal zones in the context of climate change.

Sustainable development

Similarly, also France (2015), Ireland (2018), Italy (2017), Lithuania (2009), Slovakia (2001) and Sweden (2003) have non-legislative strategies on sustainable development. For instance, the **Italian** strategy includes references to halting the loss of biodiversity and safeguarding terrestrial and aquatic ecosystems, genetic and natural resources in relation to agriculture, forestry and aquaculture, as well as stopping soil consumption and soil and water pollution. For **Ireland**, attention is paid to hunger and food insecurity elimination. Interventions are directed to maintain

⁸⁹ <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC192737>

the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through seed and plant banks. Moreover, to make agriculture more productive and sustainable, the country plans to work on the efficient use of nutrients, water quality, agricultural research and technology development.

Biodiversity

Biodiversity, in particular, is the focus of legislative and non-legislative measures in Austria (2014), France (2016), Italy (2010, 2015, 2018), Romania (2014) and Spain (2011), also in response to the Convention on Biological Diversity. For example, the Italian “Decree No. 1862 of 18 January 2018 on the Mode of operation of the national register of biodiversity of agricultural and food interest” aims at assuring protecting the significant varieties or species of plant, animal and microbial origin that are subject to risk of extinction or of genetic erosion.

Circular economy

Other significant strategies that connect to the food system are those on circular economy, in place in Spain (2019) and Denmark (2018). The **Spanish** “España Circular 2030”, for instance, wants to reduce food waste generation throughout the food chain, aiming at a 50% reduction at the household and retail consumption level, and a 20% reduction in the production and supply chains from 2020 onwards, also in light of implementing the SDG. In **Denmark**, there is a focus on taking into account the economic and environmental potential for circular economy in the food industry, in on the production of biomass through the creation of adequate framework conditions for utilising the value of biomass as much as possible.

According to 2021 National Reform Programmes, in **Austria** the “Circular Economy Strategy” and the “RTI Innovative Circular Economy” represent big interventions to benefit innovative enterprises to redefine growth. **Cyprus** and **Hungary** adopt their National Circular Economy Action Plan as well, while **Latvia** propose its Action Plan for the Circular Economy 2020-2027. Similarly, a proposal of measures for ensuring Romania’s transition from a linear to a circular economy has been advanced.

Fisheries and aquaculture

Croatia is active on fisheries and aquaculture, together with Estonia and Portugal, amongst others. For example, the 2019 “Regulation on the traceability of Bluefin tuna and igloos” aims at implementing traceability systems in Croatia. Moreover, the “The **Estonian** Agricultural, Food and Fisheries Science and Knowledge Transfer Development Plan for 2015-2021” is a national cross-sectoral plan on how to coordinate and plan the measures necessary for the development of agricultural, food and fisheries science that enable more inclusive and efficient agricultural and food systems. Also in Estonia, the 2007 “Estonian Fisheries Strategy 2007-2013” addressed malnutrition and food safety, also in light of more inclusive and efficient agricultural and food systems. In addition, the Strategy aimed at more productive and sustainable fisheries. To this end, the initiative focused on environmental risk management in fish processing and waste management, avoiding eutrophication and protecting the aquatic environment. Furthermore, with the goal of reducing rural poverty, the documented worked for maintaining diverse socio-economic structure, increasing the quality of life in fisheries regions, increasing job opportunities and women’s involvement in fisheries.

In **Portugal**, among the various initiatives on fisheries, the “National Strategy for the Sea 2021-2030” recognizes the importance of a healthy ocean for the Portuguese society. Hence, the documents calls for sustainable blue development also by fostering employment and circular and sustainable blue economy, and investing in ensuring sustainability and food security. Portugal also

focuses on youth the agricultural sector in its 2018 order “Young farmers investment on the agricultural holding”, which fosters the renewal and rejuvenation of agricultural enterprises and production structure, enhancing innovation, food quality and safety and also preserving the environment, health and safety at work.

Sustainable fishing and farming have been part of the **Danish** legislative corpus for over a decade. The 2009 “Act on Green Development and Demonstration Program (GUDP)” wants to ensure food, agriculture, fisheries and aquaculture regulations through research and innovation by subsidizing projects which contribute to a competitive and sustainable food and non-food production - including contributions to business potential, growth, employment, health and development of a market-driven organic sector securing climate, aquaculture, environment and nature conservation; animal welfare; and food safety and health. Similarly, the 2010 “Order No. 1065 on subsidy for projects related to the investment in new agricultural processes and technologies (The Green Investment Pool)” also invests in projects related to new processes and technologies that contribute to environmental, climate and economically sustainable farming.

Food production and waste

Regarding food production, strategies and plans for the sustainable use of **pesticides** and plant protection products are recorded for many EU Member States (Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Malta, Poland, Portugal, Slovenia, Spain, Sweden). The same happens for **antibiotics resistance**: for example, in its “Swedish Strategy to Combat Antibiotic Resistance 2020–2023”, Sweden declares a commitment towards more sustainable agriculture and production systems, also in support of global phase-out of the use of antibiotics as growth promoters in animal production. Additionally, several countries have legislation in place on **food packaging**, including producer responsibility for packaging (Sweden, 2018), packaging production, composition, recycling and reuse (Denmark, 2020), organic (Germany, 2021) and eco-labelling (Sweden, 2013).

Especially concerning **food waste**, the 2018 **Portuguese** approval of the “National Strategy and Action Plan to Combat Food Waste” implies an integrated and multidisciplinary approach in combating food waste. The National Commission for Combating Food Waste is tasked, amongst others, with monitoring of food waste, identifying good practices, promoting the involvement of civil society entities, and proposing measures to reduce food waste that include food security objectives, school education, public health, poverty reduction and good practices in production, agri-food industry, distribution and consumption. Also on the topic, the **Croatian** 2019 “Plan for the prevention and reduction of food waste” highlights the need to prevent and reduce food waste along the entire food chain while ensuring food security, with a focus on food donation and in light of the UN 2030 Agenda. Key measure to achieve these objectives include education and guidance, communication among stakeholders, coordinated action towards food producers, distributors, traders, hospitality sector and institutional kitchens through the development of sector guides, voluntary agreements on food waste reduction.

According to 2021 National Reform Programmes, **Cyprus** adopts several initiatives toward **waste management**. Together with the Waste Management Policy, the establishment of a Separate Collection System for Municipal Waste Source and Implementation of a Pay-As-You-Throw Scheme aims to support local authorities in relation to the establishment of systems for the sorting at source and separate collection, of municipal waste, particularly organic waste. The Waste Law aims at reducing the generation of waste and increasing reuse and recycling and the Packaging and Waste Packaging Law lays down measures aimed at preventing the production of packaging waste and increasing reuse and recycling. Austria’ amendment of the Environmental Support Act is

promoted to develop and expand waste heat and biogenic local heat networks. Similarly, **Hungary** has also set its National Waste Management Plan, **Luxembourg** proposes its National Waste and Resource Management Plan (PNGDR), **Romania** has its Programme of Waste Management together with Large Infrastructure Operational Programme 2014-2020 to finance projects for consolidation and extension of integrated waste management systems and with many local initiatives. **Latvia** adopts the National Waste Management Plan for 2021-2028 and Waste recycling measures and Beverage deposit packaging system and separate collection system for biodegradable waste. Finally, also **Spain** implements its waste and circular economy policy under reform seven of the national recovery and resilience plan.

Addressing various elements of (sustainable) food system is also the 2019 Italian Decree on “Criteria, form and procedures for the implementation of interventions for the creation and consolidation of food districts”. In the country, **food districts** are intended to promote development, territorial cohesion and social inclusion, as well as food security. Their objective is also to decrease the environmental impact of food production, for example through food waste reduction and increased protection of the rural landscape during agricultural and food activities. It is thus envisioned that food districts encourage processes of reorganization between different subjects of the food supply chains operating in the specific district, also to promote collaboration and integration between all participants.

Interestingly, relevant initiatives on sustainable food systems emerged as a **response to the Covid-19 pandemics**. For example, in 2020, **Croatia** passed the “Decision on the conditions and criteria to be met by agricultural and food products in public procurement”. It declares that, especially during the period of pandemics, particular attention should be given to the fact that food products are in season, eco-friendly produced, with a lower environmental burden concerning transport, regardless of the type of procurement procedure. **Slovenia**, in 2020, also passed the “Law on intervention measures in the field of agriculture, forestry and food” for the provision of adequate food supply to the population during Covid-19 and the “Regulation on financial compensation for loss of income in wine production due to the COVID-19 epidemic”.

Nutrition and healthy diets

Addressing the specific topic of healthy diets, **Ireland** developed the non-legislative plan “A Healthy Weight for Ireland – Obesity Policy and Action Plan 2016-2025” within the Framework for Improved Health and Wellbeing 2013-2025. The plan promotes healthy lifestyles and diets in schools through a whole-school approach, for the general population through legislation, also favouring intervention at the food industry level, for example, with codes of conduct. Similarly, in 2015, **Slovenia** passed the “Resolution on the National Nutrition and Physical Activity Programme 2015-2025”, which declares healthy eating and regular physical activity as key factors for health and the sustainability of health systems. In light of this, all citizens should not only develop good eating habits, but also have access to healthy eating choices. Some of the measures of the programme are thus aimed at improving the supply of healthy choices in cooperation with stakeholders (food, trade, catering), as well as ensuring the availability of healthy choices to socio-economically disadvantaged groups and providing safe, wholesome, local, sustainable food. Other measures regard labelling, presentation and marketing of food, education, training and research, and providing information to raise awareness. Reduction of health inequalities and sustainable development are two principles adopted by the programme.

Regarding the general domain of (good) nutrition, the WHO GINA database contains many examples of relevant actions. **School health and nutrition programmes** are commonly spread among EU MS and were reported by countries for the 2nd WHO Global Nutrition Policy Review (World Health

Organization, 2018). They have the objectives to reduce child undernutrition, prevent childhood overweight, foster healthy diet and lifestyle habits, educate children and improve knowledge about healthy diet and lifestyle habits, support the agriculture sector by creating farm to school linkages. Components of the school health and nutrition programme include: training of school staff on nutrition; standards or rules for foods and beverages available in schools, safe drinking water available free of charge; adequate sanitation and hygiene facilities in schools. Depending on the countries the objectives and the components can differ, but the programmes are widely spread across EU MS.

Dietary guidelines are also common in all the EU countries, they can be addressed to the whole population, or only a target age group, for example “Dietary guidelines for the adult population in Hungary”⁹⁰ or the Irish “Guide to healthy eating using the food pyramid” addressed to adolescents and school age children⁹¹.

The WCRF NOURISHING database is another important source of information for measures on nutrition and healthy. It collects actions at school level, dietary guidelines formulation, limitation on certain food elements (salt, sugar, trans fatty acids), nutrient contents in food, food labelling. The majority of the initiatives directly target children and the youth in the years of childcare and formal and vocational education.

Relevant to a move towards sustainable food systems is, for example, the “Sustainable Canteens Label” in **Belgium**, in the Walloon region. This action wants to support the transition towards to a more sustainable food offer targeting environments offering collective catering in Wallonia, public and private, such as nurseries, schools, universities, recreation centres, hospitals, care facilities, nursing homes, companies, administrations. These facilities are awarded the sustainability based on considerations of healthy nutrition and provision of seasonal and locally produced fruits and vegetables, which are produced locally. The label covers the “Set incentives and rules to create a healthy retail and food service environment” by increasing the availability of healthier food in stores and out-of-home venues.

In the same region, the “Walloon College for Sustainable Food” is a multi-stakeholder group that wants to group together all food system players to accelerate the transition to a more sustainable agro-food system, for example, by funding food provision through short chains. This non-legislative initiative focuses on the “Harness supply chain and actions across sectors to ensure coherence with health” area by providing governance structures for multi-stakeholder engagement. Also, on the policy area “Harness supply chain and actions across sectors to ensure coherence with health”, the “Finnish National Nutrition Council” is worth mentioning. The inter-governmental expert body under the Ministry of Agriculture and Forestry has advisory, coordinating and monitoring functions and deals with nutrition, food safety, health promotion, catering, food industry, trade and agriculture.

On nutrients and healthy diets, in **Germany**, through the non-legislative action “Voluntary food reformulation”, the food industry supports the policy area “Improve nutritional quality of the whole food supply” through a commitment on concrete reduction targets by 2025. The food reformulation targets a reduction in sugar, fat and salt levels in ready-made products, for example, reducing the amount of sugar in breakfast cereals for children by at least 20%, and 15% in sweetened dairy products and drinks containing fruit and added sugar.

Concerning dietary guidelines, in 2019, **Italy** published the revised “Dietary Guidelines for Healthy Eating” directed at the general public. The food-based non-legislative guidelines aim at increased weight control, fruit, vegetables, whole grains and pulses intake, and they wish to reduce sugar, salt

⁹⁰ <http://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/hungary/en>

⁹¹ <http://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/ireland/en>

and fats intake. Importantly, amongst the various indications, the document promotes following a sustainable diet. Through the guidelines and their communication, the country supports the policy area “Inform people about food and nutrition through public awareness”.

On nutrition education, the **Netherlands** have several non-legislative initiatives active. Amongst these, the “Healthy Lifestyle Curriculum Framework” of 2019 and the “The Learning to Eat Young Programme” of 2018 sustain the policy area “Give nutrition education and skills”. The curriculum framework integrates nutrition in education from pre-schools to upper-secondary education. Indeed, the framework offers structure and building blocks for schools and childcare institutions to include relevant topic in their own curriculum. The Netherlands Nutrition Centre, which developed the framework, also works with learning scheme for developing the knowledge, attitude and skills in the field of healthy and sustainable food for students from 4 to 18 years old. Whereas the Learning to Eat Young has the objective of introducing sustainable and healthy food in practice to primary, secondary and vocational education school students, as well as in childcare. Moreover, a funding scheme is devoted to vegetable gardening.

Regarding legislative measures, the **Portuguese** Law 32/2019 on public procurement rules establishes the criteria for selecting and buying food products in cafeterias and restaurants of public institutions, with a focus on locally produced foods and sustainable consumption. This measure also supports the area “Harness supply chain and actions across sectors to ensure coherence with health” by favouring short-chain public procurement. Concerning mandatory standards for food in schools, the Slovenian “The Law on School Nutrition” is an example of legislative measure on dietary guidelines to follow in schools, integrated with cross-curriculum nutrition education and food procurement standards. The law supports the policy area “Offer healthy food and set standards in public institutions and other specific settings”.

Finally, back to non-binding measures, it is significant to highlight the **Spanish** “Collaboration Plan for the Improvement of Food and Beverage Composition and other Measures” for the period 2017-2020. The plan targeted a progressive reduction of the sugar, salt and fat content in several food categories through agreements with manufacturers, caterers and vending machine providers. The plan, monitored and evaluated, supports the policy area “Improve nutritional quality of the whole food supply” through voluntary commitment.

5.3 Main messages

The main messages from the analysis of the policy initiatives at MS level are summarised in Box 5.

Box 5. Key messages from the analysis of policy initiatives at Member States level

- Most of the national policies addressing the food system in a comprehensive way are non-legislative documents, such as strategies, guidelines, roadmaps, national policy documents, programmes.
- In a few cases, they are complemented also by legislative acts.
- Most of the national measures are sectorial ones, addressing singular elements related to the sustainability of the food system, such as food production, food waste, circular economy, use of pesticides, nutrition and healthy diets, among others.
- Many differences emerge among the 27 Member States. In some countries there are already strategic documents considering economic, environmental and social-health aspects holistically. In other countries only sectorial legal acts and non-legislative measures are in place. Finally, some Member States do not have specific national legislation, and they apply EU-level measures and relevant EU guidelines.

6 Conclusions

When planning interventions to govern the food system, policy making is confronted with a **high degree of complexity inside the food system**, as it features numerous elements which engage a broad range of supply chain actors to address various dimensions of sustainability. Therefore, it is challenging to find effective strategies for successfully managing the complex interactions (especially trade-offs) inside the system. New policy interventions need to carefully consider the existing policy landscape in which the European food system is embedded to avoid conflicts between different policy objectives, while simultaneously trying to stimulate a transition towards more sustainable food system outcomes.

The lack of a common understanding how a sustainable food system should be conceptualised leads to different perspectives and approaches implemented in different initiatives. **A holistic approach towards food system sustainability is necessary** for overcoming sectorial perspectives and claims for enhanced integration and coherence among the current policy frameworks in place.

The complexity of effective food system governance becomes even more evident when considering the interplay of different governance levels: different geographic, socio-cultural and economic contexts constitute a strong heterogeneity among Member States and beyond, which complicates applicability, scalability and ultimately also the translation and implementation processes of initiatives from the European to the Member State as well as regional and local level.

The analysis of current initiatives worldwide stressed the importance to **embrace sustainable food systems as a whole, looking at the environmental, economic, and social dimensions and their interactions, along the whole food value chain**. Consider cross-cutting issues is also essential, such as gender, finance, resilience to external shocks, innovation, as well as the impacts and interactions with food systems in countries outside the EU. At global level, a comprehensive approach is needed, involving all food system stakeholders at all scales, and encouraging their participation, collaboration and networking (e.g., multi-stakeholder partnership). It must embed within existing international initiatives, as well as aligned with the Agenda 2030 and its SDGs.

The study of the most relevant examples of **frameworks initiatives in third countries** highlights the need to establish short and long-term objectives for sustainable food systems, which are coherent and measurable. Policies should target both the production and consumption sides of sustainable food systems, investing in education, knowledge and skills creation. Moreover, to sustain a just and fair transition, a particular attention is due to context-specific sub-systems, like local hubs of food production, and to the marginalised voices (e.g. women, the youth). It should be addressed thoroughly the social and economic implications of a transition towards sustainable food systems, considering rural livelihoods and infrastructure, and fair employment. For this reason, it is also crucial to promote a culture of sustainable food experiences, linking sustainable food systems to other sectors, in trade, foreign and development policy.

In the EU there are already a number of initiatives in place targeting sustainability aspects of the food system, both legal acts and preparatory documents, but there are not yet legislative documents addressing the food system holistically and in a systemic way. Few initiatives apply an integrated perspective through which multiple sustainability aspects of the food system are targeted. Many initiatives tend to have a sector-specific focus, increasing the risk of missing relevant sustainability aspects that are needed for a successful comprehensive transformation towards a sustainable food system. In particular, the preparatory documents are more cross-cutting in their scope, while the legal acts are more focused in specific policy objectives.

Focussing on the EU policy instruments addressing food sustainability in EU legislation, most of them relate to “hard” legally binding rules on one side (especially prescriptive legislation) and measures linked to education and information on the other side (in particular labels and audits), while soft regulation measures and economic instruments are utilised less frequently. Different types of measures are applied to different actors, for example primary producers are largely targeted by hard legally binding rules; food processors by mandatory standards and labelling schemes; traders by requirements for certification, accreditation and several economic instruments; consumers by labels and awareness campaigns. Overall, it must be noted that existing food system related policies and measures lack coherence in targeting the supply chain actors, and horizontal fragmentation exist across policy fields.

Many differences emerge also among the **27 Member States**. Some countries envisage strategic documents holistically considering economic, environmental and social aspects. In other countries only sectorial legal acts and non-legislative measures are in place. Finally, some Member States do not have specific national legislation, and they apply EU-level measures and relevant EU guidelines.

Most of the national measures are sectorial ones, addressing singular elements related to the sustainability of the food system, such as food production, food waste, circular economy, use of pesticides, nutrition and healthy diets, information to consumers. The national policies addressing the food system in a comprehensive way are usually non-legislative documents, such as strategies, guidelines, roadmaps, programmes. In a few cases, they are complemented by legislative acts.

These results suggest the need to **develop an integrated approach for the sustainability of the food system in Europe**, to facilitate the transition across the food system and support the mainstreaming of sustainability in all food-related policies. Sustainability requires a holistic approach, and an inclusive governance able to integrate all the food system elements, paying specific attention to implications for all actors, but also cross-cutting issues and granting the overall progress on the 2030 Agenda and SDGs.

References

- Adam, D. (2022). World population hits eight billion — here's how researchers predict it will grow. *Nature*. <https://doi.org/10.1038/d41586-022-03720-6>
- Alliance of biodiversity, CIAT, UNEP, & WWF. (2021). *National and Subnational Food Systems Multi-Stakeholder Mechanisms: an assessment of experiences*.
- Béné, C., Oosterveer, P., Lamotte, L., Brouwer, I. D., de Haan, S., Prager, S. D., Talsma, E. F., & Khoury, C. K. (2019). When food systems meet sustainability – Current narratives and implications for actions. *World Development*, 113, 116–130. <https://doi.org/10.1016/J.WORLDDEV.2018.08.011>
- Bizzo, G., Fabbri, K., Gajdzinska, M., Haentjens, W., Lueth, D., Lutzeyer, H., Luvarà, G., Meloni, G., Molina Villanueva, J., Sainz Lopez, N., Schoumacher, C., & Zampoukas, N. (2023). *Food 2030 – Pathways for action 2.0 – R&I policy as a driver for sustainable, healthy, climate resilient and inclusive food systems*. Publications Office of the European Union. <https://doi.org/doi/10.2777/365011>
- Bock, A., Bontoux, L., & Rudkin, J. (2022). *Concepts for a sustainable EU food system*. Publications Office of the European Union.
- Borchardt Steve, Barbero Vignola Giulia, Listorti Giulia, Fronza Verdiana, Guerrieri Valentina, Acs Szvetlana, Buscaglia Daniela, Maroni Michele, & Marelli Luisa. (2024). *Cultivating sustainability: the role of European Food Systems in advancing the SDGs*.
- Chan, D. S. M., Lau, R., Aune, D., Vieira, R., Greenwood, D. C., Kampman, E., & Norat, T. (2011). Red and processed meat and colorectal cancer incidence: meta-analysis of prospective studies. *PLoS ONE*, 6(6). <https://doi.org/10.1371/journal.pone.0020456>
- Crippa, M., Solazzo, E., Guizzardi, D., Monforti-Ferrario, F., Tubiello, F. N., & Leip, A. (2021). Food systems are responsible for a third of global anthropogenic GHG emissions. *Nature Food*, 2(3), 198–209. <https://doi.org/10.1038/s43016-021-00225-9>
- Eakin, H., Connors, J. P., Wharton, C., Bertmann, F., Xiong, A., & Stoltzfus, J. (2017). Identifying attributes of food system sustainability: emerging themes and consensus. *Agriculture and Human Values*, 34(3), 757–773. <https://doi.org/10.1007/S10460-016-9754-8/METRICS>
- Ericksen, P. J. (2008). Conceptualizing food systems for global environmental change research. *Global Environmental Change*, 18(1), 234–245. <https://doi.org/10.1016/j.gloenvcha.2007.09.002>
- European Commission. (2020). *COM(2020) 381 final. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and Social Committee and the Committee of the Regions, A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system*.
- European Commission. (2021). *Better Regulation Guidelines and associated 'Toolbox', SWD(2021) 305 final*.
- European Environment Agency. (2021). *Knowledge for Action. Empowering the transition to a sustainable Europe*. <https://doi.org/10.2800/713905>
- European Environment Agency. (2023). *Transforming Europe's food system — Assessing the EU policy mix*. <https://www.eea.europa.eu/publications/transforming-europes-food-system>
- FAO. (2018). *Sustainable food systems Concept and framework WHAT IS A SUSTAINABLE FOOD SYSTEM? WHY TAKE A FOOD SYSTEMS APPROACH? CHANGING FOOD SYSTEMS*. <https://www.fao.org/3/ca2079en/CA2079EN.pdf>

- FAO. (2019). *Regional Overview of Food Security and Nutrition in Europe and Central Asia 2019. Structural Transformations of Agriculture for Improved Food Security, Nutrition and Environment*. <https://www.fao.org/3/ca7153en/ca7153en.pdf>
- FAO. (2021). *Transforming agri-food systems. Legislative interventions for improved nutrition and sustainability*.
- FAO, IFAD, UNICEF, WFP, & WHO. (2022). *The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable*. <https://doi.org/10.4060/cc0639en>
- Food systems at COP28. (2024). *Nature Food 2024 5:1, 5(1), 1–1*. <https://doi.org/10.1038/s43016-024-00923-0>
- 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*.
- Jeanneret, P., Lüscher, G., Schneider, M. K., Pointereau, P., Arndorfer, M., Bailey, D., Balázs, K., Báldi, A., Choisis, J.-P., Dennis, P., Diaz, M., Eiter, S., Elek, Z., Fjellstad, W., Frank, T., Friedel, J. K., Geijzendorffer, I. R., Gillingham, P., Gomiero, T., ... Herzog, F. (2021). An increase in food production in Europe could dramatically affect farmland biodiversity. *Communications Earth & Environment*, 2(1), 183. <https://doi.org/10.1038/s43247-021-00256-x>
- Moragues-Faus, A., Sonnino, R., & Marsden, T. (2017). Exploring European food system vulnerabilities: Towards integrated food security governance. *Environmental Science & Policy*, 75, 184–215. <https://doi.org/10.1016/j.envsci.2017.05.015>
- Notarnicola, B., Tassielli, G., Renzulli, P. A., Castellani, V., & Sala, S. (2017). Environmental impacts of food consumption in Europe. *Journal of Cleaner Production*, 140, 753–765. <https://doi.org/10.1016/j.jclepro.2016.06.080>
- OECD. (2021). Making Better Policies for Food Systems. In *Making Better Policies for Food Systems*. OECD. <https://doi.org/10.1787/ddfba4de-en>
- Penne, T., & Goedemé, T. (2021). Can low-income households afford a healthy diet? Insufficient income as a driver of food insecurity in Europe. *Food Policy*, 99, 101978. <https://doi.org/10.1016/j.foodpol.2020.101978>
- Rockström, J., Stordalen, G. A., & Horton, R. (2016). Acting in the Anthropocene: the EAT–Lancet Commission. *The Lancet*, 387(10036), 2364–2365. [https://doi.org/10.1016/S0140-6736\(16\)30681-X](https://doi.org/10.1016/S0140-6736(16)30681-X)
- Sala, S., Laurentiis, D., V., & Sanyé Mengual, E. (2023). *Food consumption and waste: environmental impacts from a supply chain perspective*. European Commission, JRC129245. <https://publications.jrc.ec.europa.eu/repository/handle/JRC129245>
- Sala, S., & Sanyé-Mengual, E. (2023). *Consumption Footprint: assessing the environmental impacts of EU consumption*. European Commission. <https://publications.jrc.ec.europa.eu/repository/handle/JRC126257>
- SAPEA. (2020). *A Sustainable Food System For the EU*. <https://doi.org/10.26356/sustainablefood>
- SAPEA. (2023). *Towards sustainable food consumption*. Berlin: SAPEA. <https://doi.org/doi:10.5281/zenodo.8031939>
- United Nations. (2021). *United Nations Food Systems Summit 2021. Science and Innovations for Food Systems Transformation and Summit Actions* (J. von Braun, K. Afsana, L. O. Fresco, & M. Hassan, Eds.).
- World Health Organization. (2018). *Global nutrition policy review 2016-2017: country progress in creating enabling policy environments for promoting healthy diets and nutrition*.

List of boxes

Box 1. Key messages from countries worldwide with frameworks on sustainable food systems..... 12

Box 2. Key messages from framework initiatives in third countries..... 24

Box 3. Key messages from the analysis of EU policies..... 34

Box 4. Key messages from EU policy instruments addressing food sustainability in EU legislation 34

Box 5. Key messages from the analysis of policy initiatives at Member States level..... 45

List of figures

Figure 1. Number of legal acts and preparatory documents covering each element of the food system..... 27

Figure 2. Schematic illustration of the steps of the analysis..... 29

Figure 3. Number of policy instruments identified in the EU food system legislation, by macro category..... 31

Figure 4. EU Policy instruments addressing the main actors of the food system 32

Figure 5. Box plot for the number of supply chain actors addressed by EU legislation 33

Figure 6 Overview of WHO GINA initiatives by EU MS and population group..... 77

Figure 7 Overview of WHO GINA initiatives by EU MS and topic..... 77

Figure 8 NOURISHING Policy Areas by EU MS..... 79

List of tables

Table 1. Sustainability elements for an EU sustainable food system..... 26

Table 2. Types of EU policy instruments and their definition, by macro category 30

Table 3 List of EU legislation considered for the analysis of existing sustainability measures and policy instruments 54

Table 4 List of relevant umbrella initiatives for EU food systems by policy field..... 63

Table 5 National legislative measures addressing the sustainability of the food system..... 67

Table 6 Main examples of EU legislation implemented at national level..... 69

Table 7 National non-legislative measures addressing the sustainability of the food system..... 73

Table 8 Number of MS national initiatives and major topics, by source..... 75

Table 9 NOURISHING Policy Areas explained 78

Table 10 Initiatives and topics in the European Semester database, by country..... 79

Annexes

Annex I: Policy initiatives at EU level

Methodology for the analysis of EU policy initiatives

EU initiatives relevant to the food system were first identified through a semi-automatic text mining approach. This approach can provide a reliable screening tool to assess the sustainability aspects and dimensions tackled, and to make a first evaluation on the coherence across the various policy documents. EU policy documents accessible on the EUR-Lex platform and organised in the underlying cellar database were collected and screened for keywords related to the food system.

The considered policy initiatives are divided into legal acts and preparatory documents. Once keywords are mapped to the EU policies, initiatives can be filtered by those keywords and their frequencies to retain only the most pertinent policy documents linked to the food system. Choosing documents based solely on the frequency of detected keyword could be misleading since frequency is highly influenced by length and type of the document. Therefore, a “manual” validation of the policies and their detected keywords was necessary to arrive at a meaningful selection of initiatives directly linked to the food system. **This preliminary selection was confirmed and complemented by the respective Commission's services in charge of the specific policies identified.**

The initial set of policies obtained by extracting from EUR-Lex relevant legal acts and preparatory documents comprises EU legislation from 1993 until 2021, in force at the time of the query (February 2022). The preparatory documents comprise initiatives from 2014 until 2021. From this initial set of 47943 policy documents (39962 legal acts and 7981 preparatory documents), 351 were linked to the food system through the keywords detected within their underlying documents. After validation and complementation of the respective Commission's services, **the final list of policy initiatives identified was refined to 234, of which 142 legal acts and 92 preparatory documents.**

Mapping EU policy initiatives (legal acts and preparatory documents) to sustainability elements of the food system

The selected policy initiatives (legal acts and preparatory documents) have been analysed to search for specific sustainability efforts in line with the elements presented in (Borchardt et al., 2024) and in Table 1 of the main report, to identify the sustainability components more frequently addressed by EU policies and highlight possible gaps. The high number of initiatives required the use of additional semi-automatic text mining techniques, and consequently the definition of a second list of keywords set by a group of JRC experts to detect sustainability elements addressed by the policies.

Capitalising on the JRC SDG Mapper tool⁹² with its list of more than 3500 keywords, the keywords for the sustainability dimensions were complemented by relevant SDG keywords, for those SDGs that could be linked to those dimensions. The definition of keywords was carried out in an iterative process involving numerous JRC experts with various expertise to define the set of keywords suitable to identify different sustainability dimensions of food system addressed by the policy document. Furthermore, a qualitative validation was carried out by checking to what extent

⁹² <https://knowsdgs.jrc.ec.europa.eu/sdgmapper>

identified sustainability aspects are covered by an initiative and how initiatives are linked with each other.

It must be acknowledged that, despite the iterative process of keywords definition and the involvement of several experts with varying expertise, the final list of keywords might still not be perfectly exhaustive and this needs to be factored into any analysis or interpretation of the mapping outcomes and results.

This analysis provides a first overview of how food system-related policies are linked to the different sustainability dimensions identified for a sustainable food system.

List of EU policy documents analysed

The Table below shows the list of EU legal acts taken into consideration for the analysis of existing sustainability measures and policy instruments in place. The policies are extracted from EUR-Lex repository, initially identified with a textual keywords-based analysis, and then validated by JRC in agreement with relevant EC services.

Table 3 List of EU legislation considered for the analysis of existing sustainability measures and policy instruments in place (May 2022)

N	Title
1	Council Directive 66/402/EEC of 14 June 1966 on the marketing of cereal seed
2	COUNCIL DIRECTIVE of 14 June 1966 on the marketing of fodder plant seed (66/401/EEC)
3	Council Directive 68/193/EEC of 9 April 1968 on the marketing of material for the vegetative propagation of the vine
4	Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources
5	Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC - Commission Declaration
6	Council Resolution of 14 December 2000 on health and nutrition
7	Council Directive 2002/53/EC of 13 June 2002 on the common catalogue of varieties of agricultural plant species
8	Council Directive 2002/54/EC of 13 June 2002 on the marketing of beet seed
9	Council Directive 2002/55/EC of 13 June 2002 on the marketing of vegetable seed
10	Council Directive 2002/56/EC of 13 June 2002 on the marketing of seed potatoes
11	Council Directive 2002/57/EC of 13 June 2002 on the marketing of seed of oil and fibre plants
12	Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety
13	Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition (Text with EEA relevance)
14	Regulation (EC) No 2160/2003 of the European Parliament and of the Council of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agents
15	Council Regulation (EC) No 870/2004 of 24 April 2004 establishing a Community programme on the conservation, characterisation, collection and utilisation of genetic resources in agriculture and repealing Regulation (EC) No 1467/94 (Text with EEA relevance)

16	Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC
17	Regulation (EC) No 183/2005 of the European Parliament and of the Council of 12 January 2005 laying down requirements for feed hygiene (Text with EEA relevance)
18	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
19	Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods
20	Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) N. 2092/91
21	2008/914/EC: Commission Decision of 11 June 2008 on the confirmation of measures proposed by the Netherlands for the conservation of marine eco-systems in the Voordelta area (notified under document number C(2008) 2415)
22	Council Directive 2008/72/EC of 15 July 2008 on the marketing of vegetable propagating and planting material, other than seed (Codified version) (Text with EEA relevance)
23	Council Directive 2008/90/EC of 29 September 2008 on the marketing of fruit plant propagating material and fruit plants intended for fruit production (Recast version)
24	Council Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance)
25	Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) N. 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control
26	Commission Regulation (EC) N. 1235/2008 of 8 December 2008 laying down detailed rules for implementation of Council Regulation (EC) N. 834/2007 as regards the arrangements for imports of organic products from third countries
27	Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives (Text with EEA relevance)
28	Regulation (EC) No 767/2009 of the European Parliament and of the Council of 13 July 2009 on the placing on the market and use of feed, amending European Parliament and Council Regulation (EC) No 1831/2003 and repealing Council Directive 79/373/EEC, Commission Directive 80/511/EEC, Council Directives 82/471/EEC, 83/228/EEC, 93/74/EEC, 93/113/EC and 96/25/EC and Commission Decision 2004/217/EC (Text with EEA relevance)
29	Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) N. 1774/2002 (Animal by-products Regulation)
30	Council Regulation (EC) No 1099/2009 of 24 September 2009 on the protection of animals at the time of killing (Text with EEA relevance)
31	Regulation (EC) N. 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC
32	Commission Regulation (EU) N. 578/2010 of 29 June 2010 on the implementation of Council Regulation (EC) N. 1216/2009 as regards the system of granting export refunds for certain agricultural products exported in the form of goods not covered by Annex I to the Treaty, and the criteria for fixing the amount of such refunds
33	Regulation (EU) N. 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) N. 1924/2006 and

	(EC) N. 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) N. 608/2004 Text with EEA relevance
34	2012/738/EU: Council Decision of 13th November 2012 on the conclusion, on behalf of the European Union, of the Food Assistance Convention
35	Regulation (EU) N. 121/2012 of the European Parliament and of the Council of 15th February 2012 amending Council Regulations (EC) N. 1290/2005 and (EC) N. 1234/2007 as regards distribution of food products to the most deprived persons in the Union
36	Regulation (EU) N. 1151/2012 of the European Parliament and of the Council of 21st November 2012 on quality schemes for agricultural products and foodstuffs
37	Commission Regulation (EU) N. 519/2013 of 21st February 2013 adapting certain regulations and decisions in the fields of free movement of goods, freedom of movement for persons, right of establishment and freedom to provide services, company law, competition policy, agriculture, food safety, veterinary and phytosanitary policy, fisheries, transport policy, energy, taxation, statistics, social policy and employment, environment, customs union, external relations, and foreign, security and defence policy, by reason of the accession of Croatia
38	Regulation (EU) N. 609/2013 of the European Parliament and of the Council of 12th June 2013 on food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control and repealing Council Directive 92/52/EEC, Commission Directives 96/8/EC, 1999/21/EC, 2006/125/EC and 2006/141/EC, Directive 2009/39/EC of the European Parliament and of the Council and Commission Regulations (EC) N. 41/2009 and (EC) N. 953/2009 Text with EEA relevance
39	Regulation (EU) No 1379/2013 of the European Parliament and of the Council of 11 December 2013 on the common organisation of the markets in fishery and aquaculture products, amending Council Regulations (EC) No 1184/2006 and (EC) No 1224/2009 and repealing Council Regulation (EC) No 104/2000
40	Regulation (EU) N. 1380/2013 of the European Parliament and of the Council of 11th December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) N. 1954/2003 and (EC) N. 1224/2009 and repealing Council Regulations (EC) N. 2371/2002 and (EC) N. 639/2004 and Council Decision 2004/585/EC
41	Regulation (EU) N. 508/2014 of the European Parliament and of the Council of 15th May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) N. 2328/2003, (EC) N. 861/2006, (EC) N. 1198/2006 and (EC) N. 791/2007 and Regulation (EU) N. 1255/2011 of the European Parliament and of the Council
42	Regulation (EU) N. 510/2014 of the European Parliament and of the Council of 16th April 2014 laying down the trade arrangements applicable to certain goods resulting from the processing of agricultural products and repealing Council Regulations (EC) N. 1216/2009 and (EC) N. 614/2009
43	Regulation (EU) N. 1144/2014 of the European Parliament and of the Council of 22nd October 2014 on information provision and promotion measures concerning agricultural products implemented in the internal market and in third countries and repealing Council Regulation (EC) N. 3/2008
44	Commission Implementing Regulation (EU) 2015/220 of 3 February 2015 laying down rules for the application of Council Regulation (EC) No 1217/2009 setting up a network for the collection of accountancy data on the incomes and business operation of agricultural holdings in the European Union
45	Regulation (EU) 2015/2283 of the European Parliament and of the Council of 25 November 2015 on novel foods, amending Regulation (EU) No 1169/2011 of the European Parliament and of the Council and repealing Regulation (EC) No 258/97 of the European Parliament and of the Council and Commission Regulation (EC) No 1852/2001 (Text with EEA relevance)
46	Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (Text with EEA relevance)

47	Regulation (EU) 2016/429 of the European Parliament and of the Council of 9 March 2016 on transmissible animal diseases and amending and repealing certain acts in the area of animal health (‘Animal Health Law’) (Text with EEA relevance)
48	Regulation (EU) 2016/791 of the European Parliament and of the Council of 11 May 2016 amending Regulations (EU) No 1308/2013 and (EU) No 1306/2013 as regards the aid scheme for the supply of fruit and vegetables, bananas and milk in educational establishments
49	Commission Decision (EU) 2017/1508 of 28 August 2017 on the reference document on best environmental management practice, sector environmental performance indicators and benchmarks of excellence for the food and beverage manufacturing sector under Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (Text with EEA relevance.)
50	Commission Decision (EU) 2017/2337 of 29 May 2017 on the amounts allocated to the provision of technical support in the agricultural sector as well as to the production and marketing of quality agricultural products pursuant to the Milk and Fat Law under State aid SA.35484 (2013/C) (ex SA.35484 (2012/NN)) (notified under document C(2017) 3487)
51	Regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, amending Regulations (EC) No 999/2001, (EC) No 396/2005, (EC) No 1069/2009, (EC) No 1107/2009, (EU) No 1151/2012, (EU) No 652/2014, (EU) 2016/429 and (EU) 2016/2031 of the European Parliament and of the Council, Council Regulations (EC) No 1/2005 and (EC) No 1099/2009 and Council Directives 98/58/EC, 1999/74/EC, 2007/43/EC, 2008/119/EC and 2008/120/EC, and repealing Regulations (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council, Council Directives 89/608/EEC, 89/662/EEC, 90/425/EEC, 91/496/EEC, 96/23/EC, 96/93/EC and 97/78/EC and Council Decision 92/438/EEC (Official Controls Regulation)Text with EEA relevance.
52	Commission Implementing Regulation (EU) 2017/892 of 13 March 2017 laying down rules for the application of Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors
53	Regulation (EU) 2017/2393 of the European Parliament and of the Council of 13 December 2017 amending Regulations (EU) No 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), (EU) No 1306/2013 on the financing, management and monitoring of the common agricultural policy, (EU) No 1307/2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy, (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products and (EU) No 652/2014 laying down provisions for the management of expenditure relating to the food chain, animal health and animal welfare, and relating to plant health and plant reproductive material
54	Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (Text with EEA relevance)
55	Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (Text with EEA relevance)
56	Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (Text with EEA relevance)
57	Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007
58	Regulation (EU) 2018/1091 of the European Parliament and of the Council of 18 July 2018 on integrated farm statistics and repealing Regulations (EC) No 1166/2008 and (EU) No 1337/2011 (Text with EEA relevance.)

59	Commission Decision (EU) 2019/1732 of 6 June 2019 on SA.33159 (2015/C) â€” Taxation of saturated fat in certain food products sold in Denmark (notified under document C(2019) 3926) (Only the Danish text is authentic) (Text with EEA relevance)
60	Directive (EU) 2019/633 of the European Parliament and of the Council of 17 April 2019 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain
61	Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009 and repealing Regulation (EC) No 2003/2003 (Text with EEA relevance)
62	Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005
63	Commission Implementing Regulation (EU) 2020/464 of 26 March 2020 laying down certain rules for the application of Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the documents needed for the retroactive recognition of periods for the purpose of conversion, the production of organic products and information to be provided by Member States (Text with EEA relevance)
64	Commission Implementing Regulation (EU) 2020/1652 of 4 November 2020 amending Implementing Regulation (EU) 2015/220 laying down rules for the application of Council Regulation (EC) No 1217/2009 setting up a network for the collection of accountancy data on the incomes and business operation of agricultural holdings in the European Union
65	Commission Decision of 12Â November 2021 setting up the group of experts on the European Food Security Crisis Preparedness and Response Mechanism 2021/C 461 I/01
66	Regulation (EU) 2021/690 of the European Parliament and of the Council of 28Â April 2021 establishing a programme for the internal market, competitiveness of enterprises, including small and medium-sized enterprises, the area of plants, animals, food and feed, and European statistics (Single Market Programme) and repealing Regulations (EU) N. 99/2013, (EU) N. 1287/2013, (EU) N. 254/2014 and (EU) N. 652/2014 (Text with EEA relevance)
67	Regulation (EU)Â 2021/1139 of the European Parliament and of the Council of 7Â July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU)Â 2017/1004
68	Commission Implementing Regulation (EU) 2021/1165 of 15Â July 2021 authorising certain products and substances for use in organic production and establishing their lists (Text with EEA relevance)
69	Commission Delegated Regulation (EU) 2021/1374 of 12Â April 2021 amending Annex III to Regulation (EC) N. 853/2004 of the European Parliament and of the Council on specific hygiene requirements for food of animal origin (Text with EEA relevance)
70	Commission Implementing Regulation (EU) 2021/1378 of 19Â August 2021 laying down certain rules concerning the certificate issued to operators, groups of operators and exporters in third countries involved in the imports of organic and in-conversion products into the Union and establishing the list of recognised control authorities and control bodies in accordance with Regulation (EU) 2018/848 of the European Parliament and of the Council (Text with EEA relevance)
71	Commission Delegated Regulation (EU) 2021/1691 of 12Â July 2021 amending Annex II to Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the requirements for record-keeping for operators in organic production (Text with EEA relevance)
72	Commission Delegated Regulation (EU) 2021/1698 of 13Â July 2021 supplementing Regulation (EU) 2018/848 of the European Parliament and of the Council with procedural requirements for the recognition of control authorities and control bodies that are competent to carry out controls on operators and groups of operators certified organic and on organic products in third countries and

	with rules on their supervision and the controls and other actions to be performed by those control authorities and control bodies (Text with EEA relevance)
73	Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) N. 1305/2013 and (EU) N. 1307/2013
74	Regulation (EU) 2021/2116 of the European Parliament and of the Council of 2 December 2021 on the financing, management and monitoring of the common agricultural policy and repealing Regulation (EU) No 1306/2013
75	Regulation (EU) 2021/2117 of the European Parliament and of the Council of 2 December 2021 amending Regulations (EU) N. 1308/2013 establishing a common organisation of the markets in agricultural products, (EU) N. 1151/2012 on quality schemes for agricultural products and foodstuffs, (EU) N. 251/2014 on the definition, description, presentation, labelling and the protection of geographical indications of aromatised wine products and (EU) N. 228/2013 laying down specific measures for agriculture in the outermost regions of the Union
76	Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products Text with EEA relevance
77	Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides (Text with EEA relevance)
78	Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC Text with EEA relevance
79	Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC Text with EEA relevance
80	Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilisers (Text with EEA relevance)
81	Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC
82	Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC Text with EEA relevance.
83	Commission Implementing Regulation (EU) 2021/2325 of 16 December 2021 establishing, pursuant to Regulation (EU) 2018/848 of the European Parliament and of the Council, the list of third countries and the list of control authorities and control bodies that have been recognised under Article 33(2) and (3) of Council Regulation (EC) No 834/2007 for the purpose of importing organic products into the Union
84	REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')
85	DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting
86	Council Decision (EU) 2021/764 of 10 May 2021 establishing the Specific Programme implementing Horizon Europe – the Framework Programme for Research and Innovation, and repealing Decision 2013/743/EU (Text with EEA relevance)
87	Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC)

	No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006
88	Regulation (EC) No 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 1626/94
89	Regulation (EU) 2016/1139 of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007
90	Regulation (EU) 2018/973 of the European Parliament and of the Council of 4 July 2018 establishing a multiannual plan for demersal stocks in the North Sea and the fisheries exploiting those stocks, specifying details of the implementation of the landing obligation in the North Sea and repealing Council Regulations (EC) No 676/2007 and (EC) No 1342/2008
91	Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008
92	Regulation (EU) 2019/1022 of the European Parliament and of the Council of 20 June 2019 establishing a multiannual plan for the fisheries exploiting demersal stocks in the western Mediterranean Sea and amending Regulation (EU) No 508/2014
93	Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)
94	Regulation (EU) No 1026/2012 of the European Parliament and of the Council of 25 October 2012 on certain measures for the purpose of the conservation of fish stocks in relation to countries allowing non-sustainable fishing
95	Council Regulation (EU) 2020/1706 of 13 November 2020 opening and providing for the management of autonomous Union tariff quotas for certain fishery products for the 2021–2023 period
96	Regulation (EU) 2017/2403 of the European Parliament and of the Council of 12 December 2017 on the sustainable management of external fishing fleets, and repealing Council Regulation (EC) No 1006/2008
97	Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning
98	Council Regulation (EC) No 1100/2007 of 18 September 2007 establishing measures for the recovery of the stock of European eel
99	Regulation (EU) No 605/2013 of the European Parliament and of the Council of 12 June 2013 amending Council Regulation (EC) No 1185/2003 on the removal of fins of sharks on board vessels
100	Council Regulation (EC) No 734/2008 of 15 July 2008 on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears
101	Regulation (EU) 2016/2336 of the European Parliament and of the Council of 14 December 2016 establishing specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions for fishing in international waters of the north-east Atlantic and repealing Council Regulation (EC) No 2347/2002
102	Council Regulation (EC) No 1954/2003 of 4 November 2003 on the management of the fishing effort relating to certain Community fishing areas and resources and modifying Regulation (EC) No 2847/93 and repealing Regulations (EC) No 685/95 and (EC) No 2027/95
103	Commission Regulation (EU) No 1388/2014 of 16 December 2014 declaring certain categories of aid to undertakings active in the production, processing and marketing of fishery and aquaculture

	products compatible with the internal market in application of Articles 107 and 108 of the Treaty on the Functioning of the European Union
104	Annual Fishing opportunities regulations based on art 16 and 17 CFP Regulation
105	COMMISSION DELEGATED REGULATION (EU) 2018/273 of 11 December 2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council as regards the scheme of authorisations for vine plantings, the vineyard register, accompanying documents and certification, the inward and outward register, compulsory declarations, notifications and publication of notified information, and supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council as regards the relevant checks and penalties, amending Commission Regulations (EC) No 555/2008, (EC) No 606/2009 and (EC) No 607/2009 and repealing Commission Regulation (EC) No 436/2009 and Commission Delegated Regulation (EU) 2015/560
106	Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy
107	Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)
108	Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
109	Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for water reuse
110	Commission Decision (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs
111	Commission Implementing Decision (EU) 2019/2031 of 12 November 2019 establishing best available techniques (BAT) conclusions for the food, drink and milk industries, under Directive 2010/75/EU of the European Parliament and of the Council
112	European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste
113	Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment
114	Commission Decision (EU) 2018/813 of 14 May 2018 on the sectoral reference document on best environmental management practices, sector environmental performance indicators and benchmarks of excellence for the agriculture sector under Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)Text with EEA relevance.
115	Commission Recommendation of 16.12.2021 on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations, C(2021) 9332 final
116	Regulation (EU) 2020/1693 of the European Parliament and of the Council of 11 November 2020 amending Regulation (EU) 2018/848 on organic production and labelling of organic products as regards its date of application and certain other dates referred to in that Regulation (OJ L 381, 13.11.2020, p. 1–3)
117	COMMISSION DELEGATED REGULATION (EU) 2021/1189 of 7 May 2021 supplementing Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the production and marketing of plant reproductive material of organic heterogeneous material of particular genera or species (OJ L 258, 20.7.2021, p. 18–27)
118	COMMISSION DELEGATED REGULATION (EU) 2021/716 of 9 February 2021 amending Annex II to Regulation (EU) 2018/848 of the European Parliament and of the Council as regards organic production rules on sprouted seeds and chicory heads, on feed for certain aquaculture animals and on aquaculture parasite treatments (OJ L 151, 3.5.2021, p. 5–7)
119	COMMISSION DELEGATED REGULATION (EU) 2021/269 of 4 December 2020 amending Delegated Regulation (EU) 2020/427 as regards the date of application of the amendments to certain detailed

	production rules for organic products in Annex II to Regulation (EU) 2018/848 of the European Parliament and of the Council (OJ L 60, 22.2.2021, p. 24–25)
120	COMMISSION DELEGATED REGULATION (EU) 2021/642 of 30 October 2020 amending Annex III to Regulation (EU) 2018/848 of the European Parliament and of the Council as regards certain information to be provided on the labelling of organic products (OJ L 133, 20.4.2021, p. 1–4)
121	COMMISSION DELEGATED REGULATION (EU)2020/2146 of 24 September 2020 supplementing Regulation (EU) 2018/848 of the European Parliament and of the Council as regards exceptional production rules in organic production (OJ L 428, 18.12.2020, p. 5–8)
122	COMMISSION DELEGATED REGULATION (EU) 2020/1794 of 16 September 2020 amending Part I of Annex II to Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the use of in-conversion and non-organic plant reproductive material (OJ L 402, 1.12.2020, p. 23–26)
123	COMMISSION DELEGATED REGULATION (EU)2020/427 of 13 January 2020 amending Annex II to Regulation (EU) 2018/848 of the European Parliament and of the Council as regards certain detailed production rules for organic products (OJ L 87, 23.3.2020, p. 1–3)
124	Commission Delegated Regulation (EU) 2022/474 of 17 January 2022 amending Annex II to Regulation (EU) 2018/848 of the European Parliament and of the Council as regards specific requirements for the production and use of non-organic, in-conversion and organic seedlings and other plant reproductive material (Text with EEA relevance)
125	COMMISSION IMPLEMENTING REGULATION (EU) 2020/2042 of 11 December 2020 amending Implementing Regulation (EU) 2020/464 as regards its date of application and certain other dates that are relevant for the application of Regulation (EU) 2018/848 of the European Parliament and of the Council on organic production (OJ L 420, 14.12.2020, p. 9–10)
126	COMMISSION IMPLEMENTING REGULATION (EU) 2021/2119 of 1 December 2021 laying down detailed rules on certain records and declarations required from operators and groups of operators and on the technical means for the issuance of certificates in accordance with Regulation (EU) 2018/848 of the European Parliament and of the Council and amending Commission Implementing Regulation (EU) 2021/1378 as regards the issuance of the certificate for operators, groups of operators and exporters in third countries (OJ L 430, 2.12.2021, p. 24–27)
127	COMMISSION DELEGATED REGULATION (EU) 2021/1006 of 12 April 2021 amending Regulation (EU) No 2018/848 of the European Parliament and of the Council as regards the model of certificate attesting compliance with the rules on organic production (OJ L 222, 22.6.2021, p. 3–7)
128	COMMISSION DELEGATED REGULATION (EU) 2021/771 of 21 January 2021 supplementing Regulation (EU) 2018/848 of the European Parliament and of the Council by laying down specific criteria and conditions for the checks of documentary accounts in the framework of official controls in organic production and the official controls of groups of operators (OJ L 165, 11.5.2021, p. 25–27)
129	COMMISSION DELEGATED REGULATION (EU) 2021/715 of 20 January 2021 amending Regulation (EU) No 2018/848 of the European Parliament and of the Council as regards the requirements for groups of operators (OJ L 151, 3.5.2021, p. 1–4)
130	COMMISSION DELEGATED REGULATION (EU) 2021/2304 of 18 October 2021 supplementing Regulation (EU) 2018/848 of the European Parliament and of the Council with rules on the issuance of complementary certificates certifying the non-use of antibiotics in organic production of animal products for the purpose of export (OJ L 461, 27.12.2021, p. 2–4)
131	COMMISSION IMPLEMENTING REGULATION (EU)2021/279 of 22 February 2021 laying down detailed rules for implementation of Regulation (EU) 2018/848 of the European Parliament and of the Council on controls and other measures ensuring traceability and compliance in organic production (OJ L 62, 23.2.2021, p. 6–23)
132	COMMISSION IMPLEMENTING REGULATION (EU) 2021/1935 of 8 November 2021 amending Implementing Regulation (EU) 2019/723 as regards the information and data on organic production and labelling of organic products to be submitted by means of the standard model form (OJ L396, 10.11.2021, p.17–21)
133	Commission Delegated Regulation (EU) 2021/1697 of 13 July 2021 amending Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the criteria for the recognition

	of control authorities and control bodies that are competent to carry out controls on organic products in third countries, and for the withdrawal of their recognition (OJ L 336, 23.9.2021, p. 3–6)
134	COMMISSION DELEGATED REGULATION (EU) 2021/2305 of 21 October 2021 supplementing Regulation (EU) 2017/625 of the European Parliament and of the Council with rules on the cases where and conditions under which organic products and in-conversion products are exempted from official controls at border control posts, the place of official controls for such products and amending Commission Delegated Regulations (EU) 2019/2123 and (EU) 2019/2124 (OJ L 461, 27.12.2021, p. 5–12)
135	COMMISSION DELEGATED REGULATION (EU) 2021/2306 of 21 October 2021 supplementing Regulation (EU) 2018/848 of the European Parliament and of the Council with rules on the official controls in respect of consignments of organic products and in-conversion products intended for import into the Union and on the certificate of inspection (OJ L 461, 27.12.2021, p. 13–29)
136	COMMISSION IMPLEMENTING REGULATION (EU) 2021/2307 of 21 October 2021 laying down rules on documents and notifications required for organic and in-conversion products intended for import into the Union (OJ L 461, 27.12.2021, p. 30–39)
137	Regulation (EU) 2019/787 of the European Parliament and of the Council of 17 April 2019 on the definition, description, presentation and labelling of spirit drinks, the use of the names of spirit drinks in the presentation and labelling of other foodstuffs, the protection of geographical indications for spirit drinks, the use of ethyl alcohol and distillates of agricultural origin in alcoholic beverages, and repealing Regulation (EC) No 110/2008
138	Council Directive 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes
139	Council Directive 1999/74/EC of 19 July 1999 laying down minimum standards for the protection of laying hens
140	Council Directive 2007/43/EC of 28 June 2007 laying down minimum rules for the protection of chickens kept for meat production (Text with EEA relevance)
141	Council Directive 2008/120/EC of 18 December 2008 laying down minimum standards for the protection of pigs
142	Council Directive 2008/119/EC of 18 December 2008 laying down minimum standards for the protection of calves
143	Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97

Source: Authors' elaboration

List of relevant umbrella initiatives for EU food systems

Umbrella initiatives that are relevant for the EU food system are a subset of the full list of legal acts in Table 3, but more overarching initiatives within a specific sector or across sectors, usually addressing several if not all the actors of the food supply chain.

Table 4 List of relevant umbrella initiatives for EU food systems by policy field

Agriculture
Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 laying down requirements for feed hygiene
Regulation (EU) 2016/429 of the European Parliament and of the Council of 9 March 2016 on transmissible animal diseases and amending and repealing certain acts in the area of animal health
Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy

(CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013

Regulation (EU) 2021/2116 of the European Parliament and of the Council of 2 December 2021 on the financing, management and monitoring of the common agricultural policy and repealing Regulation (EU) No 1306/2013

Competition Policy

Regulation (EU) 2016/429 of the European Parliament and of the Council of 9 March 2016 on transmissible animal diseases and amending and repealing certain acts in the area of animal health

Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013

Environment, consumers and health protection

Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC - Commission Declaration

Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety

Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control

Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004

Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC

Regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, amending Regulations (EC) No 999/2001, (EC) No 396/2005, (EC) No 1069/2009, (EC) No 1107/2009, (EU) No 1151/2012, (EU) No 652/2014, (EU) 2016/429 and (EU) 2016/2031 of the European Parliament and of the Council, Council Regulations (EC) No 1/2005 and (EC) No 1099/2009 and Council Directives 98/58/EC, 1999/74/EC, 2007/43/EC, 2008/119/EC and 2008/120/EC, and repealing Regulations (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council, Council Directives 89/608/EEC, 89/662/EEC, 90/425/EEC, 91/496/EEC, 96/23/EC, 96/93/EC and 97/78/EC and Council Decision 92/438/EEC (Official Controls Regulation)

Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste

Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013

Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007

Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides

Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC

REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste

Fisheries

Regulation (EU) No 1379/2013 of the European Parliament and of the Council of 11 December 2013 on the common organisation of the markets in fishery and aquaculture products, amending Council Regulations (EC) No 1184/2006 and (EC) No 1224/2009 and repealing Council Regulation (EC) No 104/2000

Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC

Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council

Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004

Industrial policy and internal market

Regulation (EU) 2021/690 of the European Parliament and of the Council of 28 April 2021 establishing a programme for the internal market, competitiveness of enterprises, including small and medium-sized enterprises, the area of plants, animals, food and feed, and European statistics (Single Market Programme) and repealing Regulations (EU) No 99/2013, (EU) No 1287/2013, (EU) No 254/2014 and (EU) No 652/2014

Right of establishment and freedom to provide services

Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC

Source: Authors' elaboration. Note: the policy field derives from the EurLex Directory Code.

Annex II: Policy initiatives at Member States level

Survey of the Member States experts' group for the identification of national initiatives

To support the identification of relevant measures at national level, a survey was conducted in May 2022, by means of a structured questionnaire, involving the “Member States experts group on general food law and sustainability of food systems”. The survey aimed at collecting evidence of existing national legislative and non-legislative measures targeting the sustainability of food systems.

In line with the SAPEA working definition of a sustainable food system for the EU, experts were asked to provide information on legislative and non-legislative measures (such as guidelines, action programmes, information/awareness raising campaigns etc) in place in each country, providing the following information:

- Title (both in original language and translated in English);
- Brief description;
- Type of initiative;
- Sustainability dimension to which it refers (environmental, social, health, economic or cross-cutting);
- Scope of the initiative (only food or other aspects);
- Year;
- Link to the initiative.

Additionally, for legislative measures, experts were asked to provide the following information:

- Whether the initiative is a legal act already into force, or a preparatory document, for example a proposal;
- Whether the initiative originated in response to EU legislation (e.g. implementation of EU Directive);
- If Yes, the title of EU legislation (with the link to the corresponding EU directive or regulation).

For non-legislative measures, the experts were asked to state:

- Who is responsible for implementing the action (such as public/private partnerships).

The experts have been asked to list initiatives which are already in place as well as which have been put forward as a proposal and are in the national decision-making process.

Table 5 below gives an overview of the legislative measures (legal acts and preparatory documents) collected by country, with information regarding the three sustainability dimensions (environment, economic, social or all), the main topics addressed, and whether the initiatives are designed to implement specific EU legislation. Table 7 provides the same information for non-legislative national measures.

For the national legislative measures, the experts have provided the link to the corresponding EU legislation, when available, for example in the case of the national initiative implementing an EU Directive. Based on the results from the survey, offers relevant examples of EU legislations and corresponding measures implemented at national level.

Table 5 National legislative measures addressing the sustainability of the food system, by country*

Country	N° Legal acts	N° preparatory	ENV	EC	SOC	All	Topics	Implementing EU legislation
Austria	19	0	18	19	18	17	Food, Animal welfare, Information to consumer, use of resources	5
Belgium *	-	-						
Bulgaria	2	1			3	0	Animal Health and VMPs (veterinary medicinal products), Zoonoses	3
Croatia	5	1	4	4	3	0	Food loss and waste, healthy lifestyle, Animal welfare, animal genetic resources, GMO free food	2
Cyprus *	-	-	<i>Only EU-level measures taken</i>					
Czech Republic *	-	-	<i>No national legislative measures</i>					
Denmark	13	0	2		12	0	Agriculture, food production, Animal welfare, Antimicrobial resistance	3
Estonia	15	3	15	7	8	5	Agriculture, food security, climate action, natural resources, health, environment protection, genetic diversity, Animal welfare, Bio-economy, forestry	15
Finland	2	0	2	2	2	2	Food, information to consumer	0
France	20	0	13	5	11		Food, Animal welfare, Plant protection products, Phytopharmacovigilance, Phytopharmaceutical products, Environmental certification, Food waste, Circular economy, Food chain trade, Information to consumer, Health, Climate risk coverage	3
Germany	3	1	3	2	3	1	Food, information to consumer, Fair trade in supply chain, Agriculture	3
Greece	3	0	3	1	1	1	Food waste, health	1
Hungary	6	0	38	17	37	12	Fisheries and aquaculture, Food waste, health, Plant protection products, food and catering	4
Ireland	3	0	3			0	Agriculture, environmental protection, Food waste	2
Italy	3	2	5		3	0	Food waste, Plant protection products, food, health, environmental protection	1
Latvia	7	0	6	2	3	2	Green public procurement, food quality, health, food waste	6
Lithuania	10	0	7	9	7	6	Food hygiene, child nutrition, health, food loss and waste reduction, Animal welfare, food supply chain, Fisheries and aquaculture	6
Luxembourg	0	2	2	2	2	2	Food, Quality schemes and certification	1

Country	N° Legal acts	N° preparatory	ENV	EC	SOC	All	Topics	Implementing EU legislation
Malta	13	0	13			0	Environment protection, food waste, GMO	11
Netherlands	2	4	4	2	3	0	Food, agriculture, environment protection, water quality, financial sector loans and investments, Animal welfare	7
Norway	2	0	1	1	2	2	Food, GMO	1
Poland	-	-	<i>No national legislative measures</i>					
Portugal	9	0	7	9	4	3	Agriculture, environment protection, social wellbeing, circular economy, efficient use of water, carbon neutrality, climate action, food waste, food chain, fair trade practices, food interprofessionalism, producer organizations	3
Romania	23	2	16	17	20	13	Food, safe use of pesticides, fertilizers contamination, food safety, organic food, food waste, wine products, spirit drinks, environment protection, social	11
Slovak Republic *	-	-	<i>Only EU-level measures taken</i>					
Slovenia	11	0	8	1	2	0	Green public procurement, health and wellbeing, energy and climate, food loss and food waste, agriculture, food and rural areas, animal welfare, livestock biodiversity	2
Spain	39	25	48	36	37	21	Agriculture, Fisheries and aquaculture, Food chain, Food retail, livestock, health, climate change in food safety and diet, natural heritage and biodiversity, Slaughterhouses, dietary recommendations, use of natural resources, food loss and waste	20
Sweden	85	1	58	52	76	49	Food and agriculture, organic production, Fisheries, animal welfare, environmental protection, climate action, food marketing, GMO, pesticides, school meals, sustainable consumption	9

Source: Authors' elaboration, based on the consultation of the "Member States experts group on general food law and sustainability of food systems", in 2022. Legend: * The country expert group has not provided a list of national legislative measures in place. Cyprus and Slovak Republic specified that they only implemented and adopted EU measures in national legislation.

Table 6 Main examples of EU legislation implemented at national level

Year	EU Regulation	Country	National measure	Type	Year
2021	Regulation (EU) 2021/2115 establishing rules on support for strategic plans to be drawn up by Member States under the Common Agricultural Policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) 1305/2013 and (EU) 1307/2013	Estonia	EU common agricultural policy strategic plan 2023-2027	Preparatory	2022
		Estonia	Support for the maintenance of ecosystem services on agricultural land, support for eco-area	Preparatory	2022
		Germany	CAP-Strategic Plan for Germany	Preparatory	2022
		Slovenia	CAP-Strategic Plan for Slovenia	Preparatory	2023
		Spain	Draft Royal Decree, for the application of intervention within the Sectoral Intervention for fruits and vegetables	Preparatory	2022
		Spain	Draft Royal Decree, for the application of intervention within the Sectoral Intervention of the Spanish Wine Sector	Preparatory	2022
		Spain	Draft Royal Decree, regulating the recognition of producer organisations in the olive sector	Preparatory	2022
2019	Directive (EU) 2019/633 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain	Germany	Agricultural Organization and Supply Chain Act	Legal act	2021
		Lithuania	Law on Prohibition of Unfair Practices of Retailers	Legal act	2021
		Lithuania	Law on Prohibition of Unfair Trade Practices in the Supply Chain of Agricultural and Food Products	Legal act	2021
		Portugal	Unfair Trade Practices	Legal act	2021
		Spain	Amendment of law 12/2013 on measures to improve the functioning of the food chain	Legal act	2021
2019	Regulation (EU) 2019/6 on veterinary medicinal products	Bulgaria	New Law on veterinary activity	Preparatory	2022
		Denmark	Order 2541 on animal owners' use of medicines for animals, etc.	Legal act	2021
		Denmark	Order 2542 on veterinarians use, dispensing and prescribing, etc. of medicines for animals	Legal act	2021
		Netherlands	AMR (Antimicrobial Resistance)	Legal act	2009
		Spain	Draft Royal Decree, which establishes the framework of action to achieve a sustainable use of antibiotics in species of livestock interest	Preparatory	2022
		Spain	Draft Royal Decree by which is regulated the distribution, prescription, dispensation and use of veterinary medicines	Preparatory	2022
		Sweden	The Swedish Board of Agriculture's regulations and general advice on obligations of keepers and animal health staff	Legal act	2019
2018		Croatia	Plan for prevention and reduction of food waste	Legal act	2019

Year	EU Regulation	Country	National measure	Type	Year
	Directive 2008/98/EC on waste, as amended by Directive 2018/851/EU		generation of the Republic of Croatia 2019 – 2022		
		Latvia	Waste Management Law	Legal act	2010
		Latvia	Regulations No.397 on state and regional waste management plans, and on state waste prevention programme	Legal act	2021
		Latvia	Regulations No.712 on separate collection, preparation for re-use, recycling and material recovery of waste	Legal act	2021
		Malta	Waste Regulations (S.L. 549.63)	Legal act	2021
2016	Regulation (EU) 2016/429 on transmissible animal diseases (Animal Health Law)	Bulgaria	Amendment of Law on veterinary activity	Legal act	2020
		Bulgaria	New Law on veterinary activity	Preparatory	2022
		Spain	Draft Of Royal Decree, which establishes the bases for the development of the European Union regulations on animal health, in relation to the surveillance obligations of the owner of the farm and the comprehensive health plan of livestock farms	Preparatory	2022
2013	Regulation (EU) 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)	Estonia	Rural Development Programme 2014-2020	Legal act	2014
		Estonia	Animal welfare support	Legal act	2015
		Estonia	Support for environmentally friendly horticulture	Legal act	2015
		Estonia	Support for environmentally friendly management	Legal act	2015
		Estonia	Support for growing local plant varieties	Legal act	2015
		Estonia	Support for keeping animals of endangered breeds	Legal act	2015
		Estonia	Support for maintaining semi-natural habitats	Legal act	2015
		Estonia	Support for the development of new products, practices, processes and technologies	Legal act	2015
		Estonia	Support for the implementation of long-term knowledge transfer programs	Legal act	2015
		Estonia	Investment aid for improving farm performance	Legal act	2017
		Estonia	Support for conversion to organic farming and maintenance	Legal act	2017
		Croatia	Animal welfare	Legal act	2014
2013	Regulation (EU) 1308/2013 establishing a Common Organisation of the Markets (CMO) in agricultural products	France	«EGAlim» and «EGAlim 2» Bills	Legal act	2018
		Latvia	Procedures for Granting, Administration and Monitoring of State and European Union Aid for the Supply of Fruit, Vegetables and Milk to Educational Institutions	Legal act	2017

Year	EU Regulation	Country	National measure	Type	Year
		Portugal	Inter-branch Organisations	Legal act	2008
		Spain	Royal Decree 1338/2018 regulating wine production potential	Legal act	2018
		Spain	Draft Royal Decree for the recognition and operation of producer organizations in the fruit and vegetable sector	Preparatory	2022
2012	Regulation (EU) 1151/2012 on quality schemes for agricultural products and foodstuffs	Austria	EU Quality Regulations Implementation Act (EU-QauDG)	Legal act	2015
		Romania	DECISION no. 152 on establishing the institutional framework and certain measures for implementing the Regulation (EU) No 1151/2012	Legal act	2015
		Romania	ORDER no. 1762 for quality scheme protection of an agricultural product and/or foodstuff	Legal act	2015
		Romania	DECISION no. 506 on institutional framework and measures for the use of the optional quality term "mountain product"	Legal act	2016
		Romania	ORDER no. 1412 for the recognition of private bodies for inspection and certification of agricultural or food products and for the supervision	Legal act	2018
		Romania	ORDER No. 174 for verifying the conformity of the data contained in the specifications in order to grant the right to use the optional quality statement "mountain product"	Legal act	2021
2011	Regulation (EU) 1169/2011 on the provision of food information to consumers	Austria	Allergen Information Regulation	Legal act	2014
		France	Front-of-pack nutrient labelling	Legal act	2016
		Germany	Nutri-Score regulation	Legal act	2020
		Sweden	Swedish Food Agency's regulations on food information	Legal act	2014
2009	Directive 2009/128/EC to achieve the sustainable use of pesticides	Estonia	Implementation of the principles of integrated pest management	Legal act	2013
		France	Phytopharmaceutical product savings certificate set-up of independent advisory services for PPP use accreditation of professional training organizations	Legal act	2016
		Hungary	Plant protection: plant doctors possessing university degree and the prescription system <i>(In Hungary, these requirements were already in place before the entry into force of EC Directive)</i>	Legal act	2000
		Italy	National Action Plan on the sustainable use of plant protection products	Legal act	2012

Year	EU Regulation	Country	National measure	Type	Year
		Spain	Royal Decree 1702/2011 on periodic inspections of plant protection application equipment	Legal act	2011
2004	Regulation (EC) 852/2004 on the hygiene of foodstuffs + Regulation (EC) 853/2004 laying down specific hygiene rules for food of animal origin	Hungary	Act XLVI of 2008 on the food chain and official control	Legal act	2022
		Lithuania	Veterinary requirements for small - scale wild game meat	Legal act	2012
		Lithuania	Veterinary requirements for the supply of small quantities of fresh meat of food-producing poultry and lagomorphs to the local market	Legal act	2012
		Lithuania	Veterinary requirements for the supply of small quantities of table poultry eggs to the local market	Legal act	2016
		Lithuania	Veterinary requirements for food of animal origin produced and supplied in small quantities to the local market	Legal act	2017
		Romania	Order no. 111/2008 of the Sanitary Veterinary and Food Safety Regulation on the procedure for sale/retail of foodstuffs of animal or non-animal origin, as well as of production activities, processing, storage, transport and marketing	Legal act	2008
		Romania	Order no. 55/2010 regarding the sanitary-veterinary conditions in which the direct sale of raw milk can be carried out by means of vending machines	Legal act	2010
		Romania	Order no. 35/2011 on the Minimum Conditions for the operation of small capacity slaughterhouses, modified and completed	Legal act	2011
		Romania	Order no. 168/2014 on veterinary and food safety conditions in which raw milk may be processed	Legal act	2014
		Sweden	Swedish Food Agency's regulations on food hygiene	Legal act	2005

Source: Authors' elaboration, based on the consultation of the "Member States experts group on general food law and sustainability of food systems", in 2022.

Table 7 National non-legislative measures addressing the sustainability of the food system, by country

Country	N°	ENV	EC	SOC	All	Initiatives	Topics
Austria	12	12	8	12	8	Guidelines, suggestions, control program, monitoring, financial support, work plan recommendations, handbook	Food and health, environment protection Antimicrobial Resistance (AMR), animal welfare
Belgium *	-						
Bulgaria	9	1		9	0	National programme, national action plan, guidelines, information/ awareness raising	Food, environment, animal health, one health, good agriculture practices, use of antimicrobials, AMR
Croatia	1	1			0	Information/awareness raising, campaigns and guidelines	food waste
Cyprus *	-						
Czech Republic *	-						
Denmark	20	11	3	13	1	Guidelines, policy tool, label, awareness activities, collaborative projects, knowledge sharing, food literacy, action programmes, political agreement, research, action plan recommendations	Food, agriculture, climate, environment, biodiversity resource efficiency of animal by-products, food-producing animals, food safety, methane reduction, insect production
Estonia	20	15	6	10	5	Development plan, Program, Action plan, Vision document, tool, Guideline, action programmes, road map information/awareness raising campaigns	Food, Agriculture, fisheries, climate change, plant protection products, low-carbon economy, health animal health, environmental pollution, Organic production, Bioeconomy, Animal Welfare
Finland	3	2		1	0	Guideline, Voluntary agreement	Food, environmental protection
France	29	28	20	23	20	Open consultation, recommendation, guidelines, Action programme, National strategy, Territorial strategy, Research program, Financial support	Food, health, environment, animal welfare, food chain, , food lost, , agriculture, pesticides, organic farming, agroecology
Germany	9	9	9	9	9	Strategy, Action programme, information/awareness raising campaigns, Dialogue process, Multi-Stakeholder-Platform	Food, organic Farming, Renewable resources, SDGs, Food loss and waste, sustainable food systems
Greece	4	1		3	0	Voluntary actions, Guidelines, Information, Proposals on future legal acts	Food, health
Hungary	14	14	11	11	11	National trademark, Strategy, Awareness raising programme, Professional stakeholder forum, Action program, Operational programme,	Food, Agriculture, water management, Fisheries, aquaculture, food waste, sustainable consumption, Climate change
Ireland	16	10	1	7	1	National strategy, Public consultation, School initiative, Action programme, Assessment, Guidelines, Roadmap, National Action Plan, Platform, Aid	sustainable food system Food, Food sector strategy, environmental sustainability, GHG emissions

Italy	8	5		2	0	Platform, Guidelines, Research project, information awareness	Food, food waste, Animal welfare
Latvia	3			3	0	Campaign, Action plan	Food safety, animal health
Lithuania	2	2	1	2	1	Guidelines	Food
Luxembourg	2	2			0	Awareness raising campaign, Action plan	Food waste, organic agriculture
Malta	13	13			0	Management Plans and Conservation Orders, Programme, Assessment, Awareness raising campaign, Permitting framework, Strategy, Action Plan, Code of Good Practice	Environmental protection, Fisheries and aquaculture, Water management, Food waste, Air emissions, Biodiversity, Invasive Alien Species, waste, Packaging
Netherlands	47	43	28	26	18	Strategic plan, Action programme, Alliance, Private-public collaboration, Community of practice, Consumer education, Covenant (voluntary), Educational program, Guidelines, Investment, Subsidies, Policy programme, Private initiative, research, Online tool, Voluntary cooperation, Working Group	Food, Agriculture, organic production, climate mitigation actions, finance Food, Urban environment, Infrastructure, Chemical sector, education Biodiversity, Land use, Forestry, Livestock
Norway	2	1		1	0	Agreement	Food and health, food waste
Poland	2	1		1	0	Awareness-raising campaign, Guidelines	Food safety, Fish farming
Portugal *	-						
Romania	10	5	4	4	4	Preparatory document, Information/awareness campaigns, Research projects, action program, Guide	Food, organic production, food waste, food safety, food security
Slovak Republic *	-						
Slovenia	8	5		3	0	National Programme, national project, web portal, guidelines, online tool, awareness raising campaign	Food, agriculture, forestry food Agriculture, environmental protection Environmental protection, biodiversity Agriculture food food waste
Spain	13	8	5	8	3	Strategic plan, action program, collaboration agreement, tool, prize, roadmap, report, information/awareness raising campaign	Food, Fisheries, Agriculture, health, Agrifood system, Hunting, climate change, Biodiversity
Sweden	69	59	34	53	31	National Strategy, Action plan, Roadmap, Document for strategic management, Funding programme, Government assignment, Guidelines, Networking, Report, Research, tools and knowledge exchange, Information/awareness raising campaign, Knowledge centre, Surveillance and control	Food, Agriculture, Fisheries, Aquaculture, Livestock, Drinking water, animal health, animal welfare, circular economy, climate action, water management, plant protection products, Reduction of losses nutrients, Food loss, food waste, AMR, health, sustainable consumption, sustainable food system

Source: Authors' elaboration, based on the consultation of the "Member States experts group on general food law and sustainability of food systems", in 2022. Legend: * The country expert group has not provided a list of national non-legislative measures in place. Cyprus and Slovak Republic specified that they only implemented the relevant EU non-legislative measures

Other datasets from EU and international organisations

As already specified in the main text, for the identification and assessment of existing sustainability initiatives at EU Member State level, relevant information was retrieved from four databases, namely the:

- Food and Agriculture Organization (FAO)'s comprehensive repository (FAOLex);
- World Health Organisation Global database on the Implementation of Nutrition Action (WHO GINA);
- World Cancer Research Fund (WCRF) NOURISHING database;
- EU Semester - National Reform Programmes⁵.

Table 8 shows an overview of the number of initiatives and major topics addressed by each of these four datasets.

Table 8 Number of MS national initiatives and major topics, by source

Source	Number of initiatives	Major Topics
FAO FAOLEX	5528	Agricultural & rural development, Climate change, Cultivated plants, Disaster risk management, Employment, Energy, Environment, Fisheries, Food & Nutrition, Forestry, Gender, General, Health, Land & soil, Livestock, Mineral resources, National development & property reduction, Private sector & entrepreneurship, Sea, Social protection, Trade, Water, Wild species & ecosystem, Youth
WHO GINA	239	Nutrition and Health
WCRF NOURISHING	348	Nutrition and Health (Food Environment, Food System, Behavioural Change Communication)
EU Semester - National Reform Programmes	92	Agriculture, Waste, Circular economy, Food production: Fisheries, Food industry

Source: Authors' elaboration

The **FAOLex database** represents a significant source of information, due to its good quality and reliability, and also the number of initiatives it collects. The database contains information on legislative acts (legislations, regulations, constitutions, agreements, decrees, laws, government resolutions) and non-legislative initiatives (policies, strategies, guidelines).

Among legislative initiatives, the subjects with broadest coverage across EU MS are those of Agricultural & rural development, Fisheries, Livestock, Health, Trade, Water, Cultivated plants, and Waste. In absolute terms, the subjects that present the highest number of measures detected are Livestock, Cultivated Plants, Agricultural & rural development, and Fisheries. These are all subjects closely related with the agricultural production elements of the food system, and in general pertain to more environmental considerations. On the contrary, the subjects of Gender and Youth, belonging

to the social aspects of sustainable food systems, appear only once and three times respectively. Climate change too is detected only twice.

The non-legislative measures are the minority (179 out of 5542). Except for Agricultural & rural development, which is well addressed by both legislative and non-legislative measures, for non-legislative initiatives other subjects emerge as most addressed: Health, Environment and Waste. Together with Climate Change and Cultivated Plants, these subjects are also those more broadly covered across European Union countries. Also for non-legislative measures the environmental areas of sustainable food systems present the highest number of initiatives detected.

Finally, regarding “Health”, many measures address the issues of antibiotic resistance and the spread of zoonotic diseases, especially concerning the outbreak of the COVID-19 pandemics. For the “Environment”, across EU Member States the attention is given to the sustainable use of plant protection products and pesticides (also addressed by “Cultivated Plants”). The subject of “Social protection” mainly targets the distribution of food to people in need and “Disaster risk management” focuses on food supply in a situation of emergency.

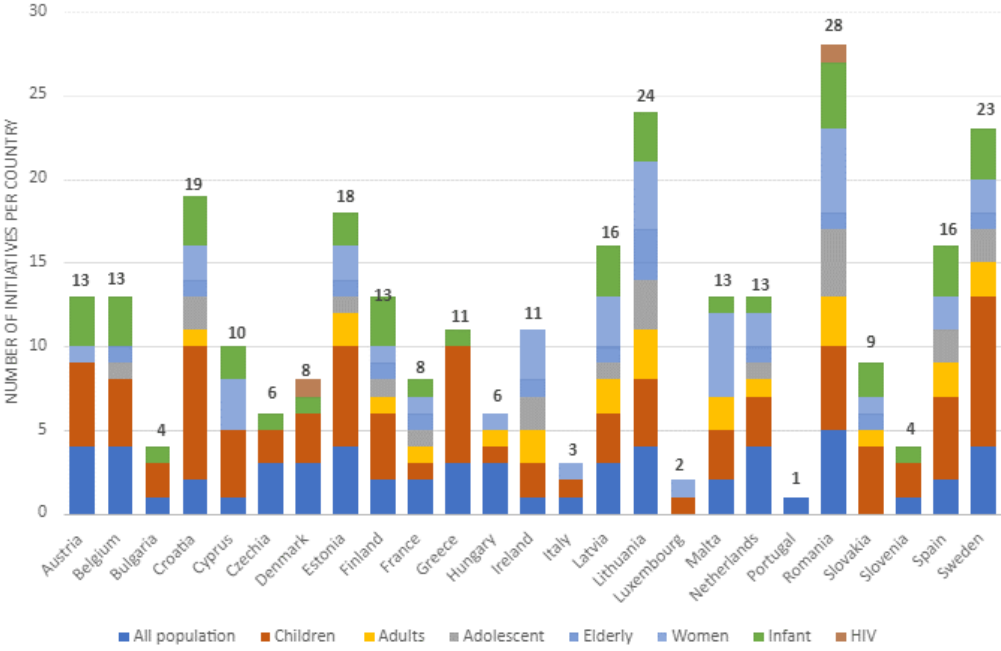
The **WHO GINA database** contains information on non-legislative programmes and actions tackling the general domain of (good) nutrition. An overview of the number of non-legislative measures by EU MS is provided, categorised by the population group (Figure 6) and the topic they target (Figure 7), both based on WHO categorisation.

The targeted populations include: All population, Children, Adults, Adolescent, Elderly, Infant, Women and people with HIV. The topics relate to school programmes, nutrients & vitamins, dietary guidelines (food- & nutrients-based), healthy diets (with relation to salt & sugar content, unhealthy food, fruit & vegetable intake, media promotion of healthy diets), infant feeding, taxation and price policies, malnutrition management and nutrition education.

Figure 7 show that the non-legislative WHO programmes and actions consider all population groups, also by country. Nevertheless, most of the actions identified, 64%, are targeted at minors (including infants, children and adolescents) and 17% relate explicitly to women. These results can be explained by the specific nutritional needs (micronutrients, vitamins, healthy diets, etc.) of children and pregnant or lactating women. Moreover, 25% tackle the population in general.

The most addressed topics across EU countries (Figure 8) are dietary guidelines, actions in schools, nutrients and vitamins fortification and supplementation, healthy diets and nutrition education (in and outside of schools). On the contrary, malnutrition management, taxation and price policies, and infant feeding are only rarely addressed, or not at all, as in the case of malnutrition. In EU Member States, based on the non-legislative actions and programmes detected, the attention is focused on areas such as the achievement of healthy and nutritious diets and the education towards, and promotion of healthy food choices.

Figure 6 Overview of WHO GINA initiatives by EU MS and population group



Source: Authors' elaboration based on WHO GINA database

Figure 7 Overview of WHO GINA initiatives by EU MS and topic



Source: Authors' elaboration based on WHO GINA database

The **WCRF NOURISHING database**⁹³ focuses on nutrition and healthy diets, both at the legislative and non-legislative level, categorized by policy areas (shown in Table 9). In total, 342 initiatives are in the database with a slight majority focusing on non-legislative measures.

⁹³ https://policydatabase.wcrf.org/level_one?page=nourishing-level-one

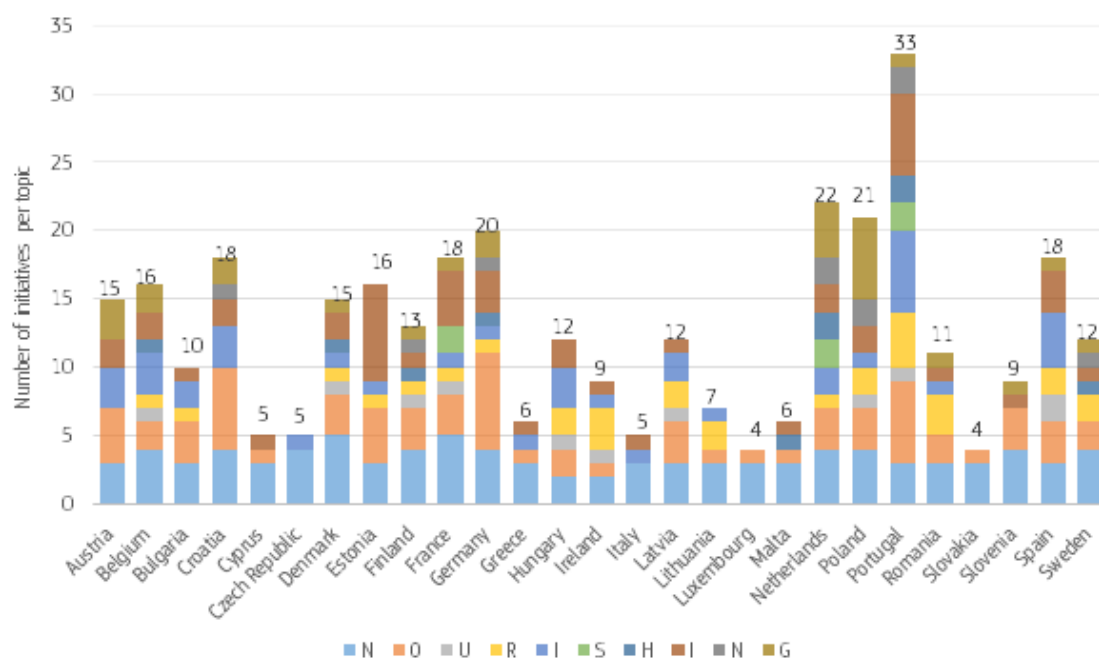
Table 9 NOURISHING Policy Areas explained

	Policy areas	N. initiatives by areas
Food Environment	N utrition label standards and regulations on the use of claims and implied claims on food	92
	O ffer healthy food and set standards in public institutions and other specific settings	69
	U se economic tools to address food affordability and purchase incentives	11
	R estrict food advertising and other forms of commercial promotion	30
	I mprove nutritional quality of the whole food supply	39
	S et incentives and rules to create a healthy retail and food service environment	7
Food System	H arness supply chain and actions across sectors to ensure coherence with health	10
Behaviour change communication	I nform people about food and nutrition through public awareness	48
	N utrition advice and counselling in healthcare settings	10
	G ive nutrition education and skills	27

Source: Authors' elaboration based on WCRF NOURISHING database

Figure 9 displays the initiatives belonging to each NOURISHING policy area by EU MS. All of the NOURISHING policy areas are covered by EU MS. Nevertheless, “**N**utrition label standards and regulations on the use of claims and implied claims on food” is the only area addressed across all EU MS, as well as the most targeted in general terms. Other well covered areas, both geographically and in absolute terms, are “**O**ffer healthy food and set standards in public institutions and other specific settings” and “**I**nform people about food and nutrition through public awareness”. This suggests a focus on food standards and labels, dietary guidelines, and nutrition awareness and education in EU MS. The least addressed, in four EU MS only, is “**S**et incentives and rules to create a healthy retail and food service environment”, followed by “**H**arness supply chain and actions across sectors to ensure coherence with health” and “**N**utrition advice and counselling in healthcare settings” (all policy areas related to health, especially the last mentioning the health sector). Finally, no country shows full coverage across the NOURISHING areas, based on the recorded data.

Figure 8 NOURISHING Policy Areas by EU MS



Source: JRC elaboration based on WCRF NOURISHING database

For the **EU Semester**, at the date of extraction of data (March 2022), ten EU MS had submitted their reports for the 2021 National Reform Programmes, namely: Austria, Cyprus, Germany, Hungary, Latvia, Luxembourg, Portugal, Romania, Spain, Sweden. The available documents were translated in English and analysed. The final list contains 92 relevant initiatives related to sustainable food, summarised in Table 10.

Table 10 Initiatives and topics in the European Semester database, by country

Country	Number of initiatives	Topics
Austria	9	Food procurement, Food aid, Bioeconomy, Circular Economy, Waste, Aquaculture and Fisheries Sector
Cyprus	22	Food health, Waste and Recycling, GHG emission, Agricultural Products, Circular Economy, Beverage Packaging, Sustainable Production, Fisheries sector
Germany	2	Nutrition and Agriculture R&D Activities, ICT for farmers
Hungary	11	Food industry, ICT for farmers, Sustainable Agriculture, Biodiversity, Generational Renewal in Family Farms, Reform Agriculture Tertiary Teaching, Waste, Circular Economy, Aquaculture and Fisheries Sector
Latvia	5	Waste, Beverage Packaging, ICT for Agriculture, Circular Economy
Luxembourg	2	Waste
Portugal	2	Agri-food Sector Sustainability, ICT for fisheries
Romania	13	Agriculture Sector, Emission reduction, Beverage and Food Processing, Fisheries, Aquaculture and the Food Sector, R&D in Agriculture, Agri-food industry, Waste, Circular Economy, Revitalizing Rural Areas

Spain	24	Agri-food and Fisheries Sector, ICT for agri-food sector, Waste, Circular Economy, Biogas, Agriculture and Livestock Farming, Water, Agri-food, Forestry and Rural Sector ICT, Sustainable Fisheries
Sweden	2	Rural enterprises, Aquaculture and Fisheries Sector

Source: Authors' elaboration based on European Semester database

Initiatives on waste management and recycling activities are broadly considered from several MS initiatives, as well as the wider actions related to circular economy. Among these reforms, certain attention is driven towards packaging in the beverages, with specific reference to the plastic ones.

Another area considered by many MSs Programmes is the digitalisation and innovation of the agricultural sector, as the importance of spreading ICT especially in rural areas is well recognised.

Getting in touch with the EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696,
- via the following form: european-union.europa.eu/contact-eu/write-us_en.

Finding information about the EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (european-union.europa.eu).

EU publications

You can view or order EU publications at op.europa.eu/en/publications. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (european-union.europa.eu/contact-eu/meet-us_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

Science for policy

The Joint Research Centre (JRC) provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society



EU Science Hub

[Joint-research-centre.ec.europa.eu](https://joint-research-centre.ec.europa.eu)