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**Global Institute for
Agri-Tech Economics**



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Sustainable food value chains in the European Union: Linking policies and multi-stakeholders' initiatives

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Abstract

This paper undertakes a systematic review of EU policies, regulations, food standards, financial mechanisms, and industrial and consumers initiatives aiming to achieve a sustainable food value chain (FVC) in Europe. We map priorities of different initiatives and link them to the food-related Sustainable Development Goals (SDGs) and their corresponding targets. This enables spotting potential interactions and political gaps in the EU green agenda, while strengthening integrated action to build a resilient and sustainable FVC. The results reveal the existence of overall synergies with the food-related SDGs, but also political gaps concerning solid a sustainable framework as proposed by SDG 12.1, chemical management, and sustainable public procurement at the national level. Furthermore, political action comprises mostly proposals and voluntary actions related to the Farm to Fork Strategy, which remains non-legally binding. This suggests high relevance of multi-stakeholders' integrated efforts to promote tangible actions spurring a sustainable transition. Lastly, most measures are not directly related to the food sector, which could possibly underrepresent the efforts to build a resilient and sustainable FVC in Europe.

Keywords

Food value chain, sustainability, multi-stakeholders, food production, European policy, Eco-label, standard, decarbonisation, carbon footprint, GHG emissions

Presenter Profile

The presenter is a research associate at the Ibero-America Institute for Economic Research at University of Göttingen involved in the EU project ENOUGH.

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Introduction

In recent years, climate change has become a global challenge. Rising temperatures are triggering enormous disruptions in natural cycles worldwide (Naumann et al., 2018) and increasing social vulnerability (Otto et al., 2017). Meanwhile, international agreements have proposed guidelines, setting the path to a sustainable transformation. To succeed in doing this, governmental actions are at foremost priority as they can regulate markets, as well as the use of natural resources (Keskitalo and Kulyasova, 2009), and support innovation and development at a macroeconomic level. In addition, collective initiatives from multi-stakeholders open up a set of possibilities to propel sustainable pathways (Lambin and Thorlakson, 2018).

The food sector is central to sustainability debates, since a third of the global anthropogenic greenhouse gas (GHG) emissions originate along the food value chain (FVC) (Crippa et al., 2021). Moreover, it encompasses issues regarding food security, distribution and production to feed the growing world population. With the European Green Deal, the European Union (EU) approved stricter emission regulations and set forward ambitious measures to become a green economy. Under the Farm to Fork strategy, the food sector is especially addressed underscoring the need for a “fair, healthy and environmentally-friendly food system”. This is only achievable if the EU and neighbouring economies integrate public, industrial, and consumers sustainability-driven efforts (Schebesta and Candel, 2020).

At a global level, the Sustainable Development Goals (SDG) represent the main framework to guide society towards a sustainable transition, in which the food sector is central and directly addressed by SDG 2, 12, and 13. Despite political aspirations to sustainable FVC in Europe, the extent to which European policies and multi-stakeholders’ actions are conforming with the food-related SDG targets remains an open question. To give an answer to it, this paper systematically reviews European policies and regulations, financial mechanisms, and industrial and consumers initiatives that aim at achieving a sustainable FVC and link the initiatives’ priorities to the FVC-related SDG targets. The presented analysis allows us to identify potential synergies and political gaps in the EU green agenda, while offering some insights about how to improve integrated action to support sustainable FVC.

Methods

The methods consist of a systematic collection of EU policies and regulations and specific initiatives aiming to achieve sustainability in the FVC. The procedure is based on four steps: We start by defining the initiative categories, next setting the period covered, followed by the identifying the sources, and finally defining keywords. Five initiative categories are defined: (1) Policies and regulations, (2) food standards and ecolabels, (3) financial, (4) industrial and (5) consumer initiatives. More specifically, first EU policies collected are related to sustainability aspects in the food sector (1). Food standards and ecolabels aim at provide consumers with information about the carbon footprint of the food products available. Financial initiatives refer to public or private investments, whose main objective is to reduce environmental impacts in the FVC. Industry initiatives comprise all industry specific collective actions coming from associations, private or public actors, aiming to spur sustainability into their operations. Finally, consumer initiatives comprise collective efforts by consumer associations, NGOs, and civil associations to promote sustainable food consumption in Europe. The period covered goes mainly from 2000 until 2022, including also some important initiatives taken in the 1980s and 1990s.

We utilize the Google search engine to search for policies and initiatives, using the following keywords, among others: Policies and regulations (EU climate policies and regulations, EU food climate policies, GHG emission policies and regulations, EU food GHG policies and regulations); food standards and ecolabels (Ecolabel, standard, decarbonisation, carbon footprint, carbon emissions, GHG emissions); financial (financial decarbonization, sustainable fund, food sustainability fund, emission investments, reduce emissions food supply chain); Industry (sustainable industry, food industry initiative, industrial food supply chain, sustainable food industry, decarbonizing food industry); Consumer (food waste, food security, awareness, decarbonization, food supply, along with “consumers”). Additional sources consulted are the European Commission and the Climate Initiative Association to obtain a broader range of active policy measures, investment funds and projects active in climate action. Having the search concluded, we mapped the main policy priorities and initiatives to link them with food-related SDGs, namely SDG 2, 12, and 13.

Preliminary Results and remarks

We classified a total of 28 policies and regulations, 20 food standards and ecolabels, 27 financial mechanisms, 18 industrial and 13 consumer initiatives at the EU level that are related to stages of the FSC. In general, multi-stakeholders’ initiatives and policies might have a broader character, leading to overlapping objectives. We identified eight underscoring political and eight stakeholders’ priorities (Figure 1).

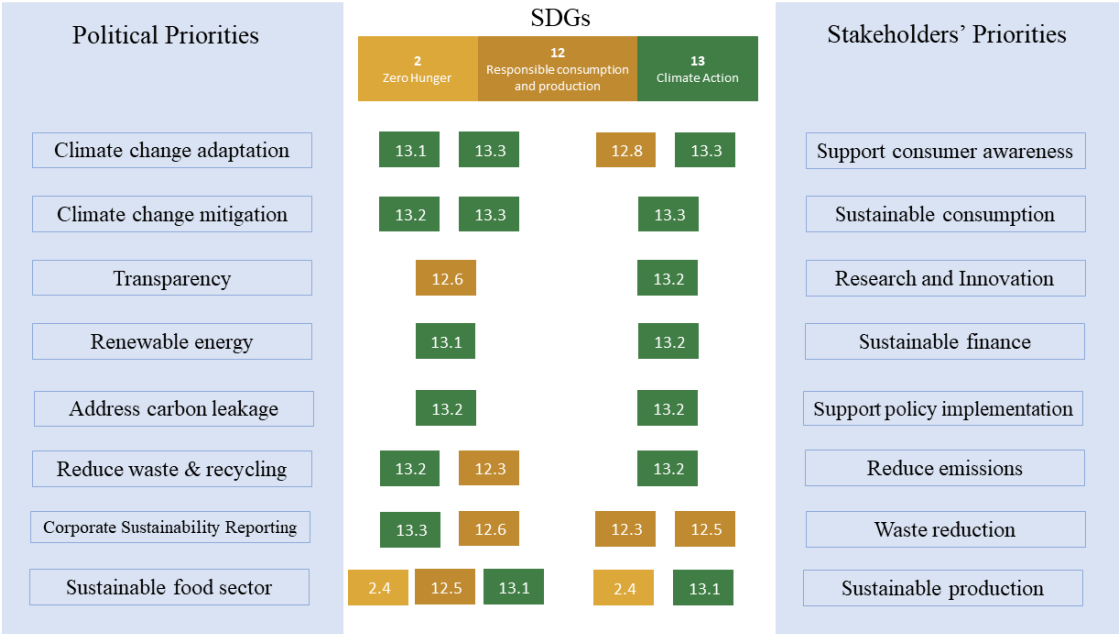


Figure 1: Linking priorities of policies and multi-stakeholders’ initiatives to food-related SDG targets.

The EU political agenda has pointed to the need to reduce GHG emissions by supporting the use of renewable resources and alternative means of transport for logistics. Policies also capture the importance of border regulations to prevent carbon leakage into territories with lax climate measures. In parallel, climate change adaptation measures target especially food production and land use systems. The EU highlights the relevance of reporting carbon emissions as well as actions taken related to biodiversity preservation and other sustainability elements. Waste management and recycling are also acknowledged and important to reduce

GHGs and sustain biodiversity. In this case, regulations refer to the Farm to Fork strategy as setting a blueprint for sustainable FVC. Nevertheless, the strategy remains non-legally binding, presenting proposals still to be revised and approved. In fact, most priorities classified here comprise a list of proposals and voluntary actions depending on private efforts from firms, consumers, and local organizations.

Similarly, multi-stakeholders' initiatives prioritize emission reduction (not related to target 13.1 because it is not a political measure), sustainable food production, and waste management. Furthermore, stakeholders are strongly engaged in awareness and education, which potentially spur consumption patterns towards organic food and sustainable production. Stakeholders' initiatives also support Small and medium enterprises and research and development (and innovation) to the development of more competitive, smarter, and environmentally friendly companies.

All aforementioned priorities are, to some extent, synergic to SDG targets. Nevertheless, we spot political gaps in terms of a solid sustainable framework (12.1), which could be consolidated with the farm to fork strategy in the future. A concise plan to halt chemical management and pollution is needed (12.4), national policies to sustainable public procurement (12.7), and higher political emphasis on education and awareness (12.8). Furthermore, most measures are not directly or solely related to the food sector, which could possibly underrepresent the endeavor needed to build a resilient and sustainable food sector in Europe.

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