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An Outline of the Links between the Sustainable Development Goals and the Transformative Elements of Formulating a Fair Agri-Food Trade Policy – A Measurable EU Achievement

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Abstract. *The article examines the links between the Sustainable Development Goals (SDGs) and the transformative aspects of establishing an encompassing agri-food trade policy in the European Union (EU). Starting with a review of the Sustainable Development Goals, this article focuses on the goal of sustainable agriculture and food security. The paper then investigates the transformative aspects of building a fair agri-food trade policy, including the significance of international trade agreements and the need for effective monitoring and enforcement. Research also includes a quantitative analysis of the scientific community's interest in the EU's effectiveness in implementing its agri-food trade policy, with a focus on the policy's impact on global food security. The findings indicate that the EU is making progress toward achieving its objective of boosting global food security, but significant impediments remain to be surmounted.*

Keywords: agri-trade, policy, sustainable development, agri-food sector, competitiveness

Introduction

Significant to the economy of the European Union (EU), agri-food exports totaled 20.9 billion EUR in September 2022. The majority of the growth in the total value of EU exports is due to price increases in wine and mixed food preparations (Istudor et al., 2022). EU imports increased moderately, hitting EUR 15.2 billion (a 3% increase from August to September 2022). The greatest monthly trade volume for the EU was recorded in September 2022, with 36,2 billion EUR, the report was highlighting the fact that agri-food trade balance remained stable at EUR 5.8 billion, which was the highest level registered in 2022 (European Commission, 2022). The majority of the EU's agri-food exports go to non-EU nations, such as the United States, China, and Russia

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(Gombkötő, 2019). Trade in agri-food products increases the EU's competitiveness and ensures that its citizens have access to safe, nutritious, and affordable food (Chatellier, 2021; Constantin et al., 2022). Agri-food commerce is also essential for the EU's capacity to accomplish its environmental and climate change objectives, as it reduces the carbon footprint of food production by allowing the EU to import food produced in a more efficient and sustainable manner (Galli et al., 2020; Matkovski et al., 2022; Pawlak, 2022). In addition, agri-food commerce contributes to the competitiveness of the EU's agricultural industry on the worldwide market (Constantin et al., 2023). It grants the EU access to new markets and technologies, enabling EU farmers to remain competitive and produce foods of superior quality at competitive rates. Overall, agri-food trade is a significant component of the EU's economy and is critical to the bloc's ability to remain competitive and supply its residents' demands (Arita et al., 2017; Muscio & Sisto, 2020).

Thus, it's importance is well known for the EU economy, the agri-food trade policies needs to be aligned with the Sustainable Development Goals (SDG's) presented by the UN document "Agenda 2030". In 2015, the United Nations established 2030 Agenda, which includes 17 Sustainable Development Goals (SDGs).

The SDGs are a call to action for all nations to enhance prosperity through environmental protection. The goals are intended to serve as a plan for a better and more sustainable future for everyone by addressing the most urgent global concerns, such as poverty, inequality, climate change, environmental degradation, peace, and justice (United Nations, 2015). The interest of EU to achieve the SDG's in all sector including agriculture, is well known, the European Commission among with the EU institutions and Member States (SM) are attributing the most importance to the sustainable development as the economy and the evolution of societies, starts to relay more on the environmental aspects with the need to preserve nature and consolidate a safe environment for the future generations (Galli et al., 2020). Simultaneously with the release of the UN 2030 Agenda, EU concerns for integrating sustainable aspects of global commerce, reflected in the European Commission (EC) trade and investment policy entitled "Trade for all" published in 2015, which included a sustainability chapter (European Commission, 2015). Thus, highlighted that the European bloc has a wide vison acknowledging trough it's policies that sustainable development contributes to the economic, environmental, and social viability of the EU's agricultural trade activity (Pietrzyck et al., 2021; Popescu et al., 2022).

The importance of transposing the SDG's and consolidation of a sustainable trade policy in regard with the agricultural goods, also ensures long-term that the EU's agricultural production is safe, healthy, and sustainable, in addition to being effective and efficient. Sustainable development ensures that EU agri-trade is beneficial not just for the environment, but also for the people and communities involved in agricultural production and commerce, thus viewing the SDGs as catalyst elements for achieving EU goals in regard with "Agenda 2030".

In addition, as part of the EU's efforts to shape the current economic climate while considering environmental concerns and the possibility of addressing the sustainable development goals in fields such as the agri-food industry, the EU has drafted a new set of policy initiatives to make Europe climate-neutral by 2050 in support of addressing the SDGs. It intends to do this by implementing initiatives such as energy efficiency, renewable energy, circular economy, and sustainable transportation: The Green Deal, an initiative that also includes programs to promote social, economic, and environmental justice and to achieve a fair and equitable transition to a green economy (European Commission, 2019).

The EU Green Deal includes the Farm to Fork Strategy, which provides a more detailed and comprehensive perspective on the actions of the Green Deal. The strategy is all together a call

to action outlining the roles and responsibilities of the various stakeholders involved, including farmers, food producers, policymakers, and citizens (European Commission, 2020). The EU Green Deal, the Farm-to-Fork Strategy, and the UN 2030 Agenda are interconnected since they all aim to achieve the same objective: global sustainability. The Green Deal and Farm-to-Fork Strategy provide the policy framework and rules that can aid European nations in achieving the United Nations' Sustainable Development Goals. In a similar manner, the SDGs offer the global context and objectives towards which the EU's initiatives are directly linked (Muscio & Sisto, 2020; Chiripuci et al., 2022; Constantin et al., 2021). The research investigates the connection between the Sustainable Development Goals (SDGs) and the transformative aspects of creating a fair agri-food trade policy in the European Union (EU).

As it shows in Table 1, regarding the impact of SDGs and the EU's plans and strategies to achieve global sustainability, which may influence and shape agri-food trade policies within the European Union, we identified four SDGs that contributed significantly to advancing the agri-food trade toward a more sustainable approach.

Table 1. The most significant SDGs to research study

Sustainable Development Goal 2	Zero Hunger
Sustainable Development Goal 3	Ensure healthy lives and promote well-being for all at all ages
Sustainable Development Goal 9	Build resilient infrastructure, promote sustainable industrialization, and foster innovation
Sustainable Development Goal 12	Ensure sustainable consumption and production patterns

Source: Authors' development.

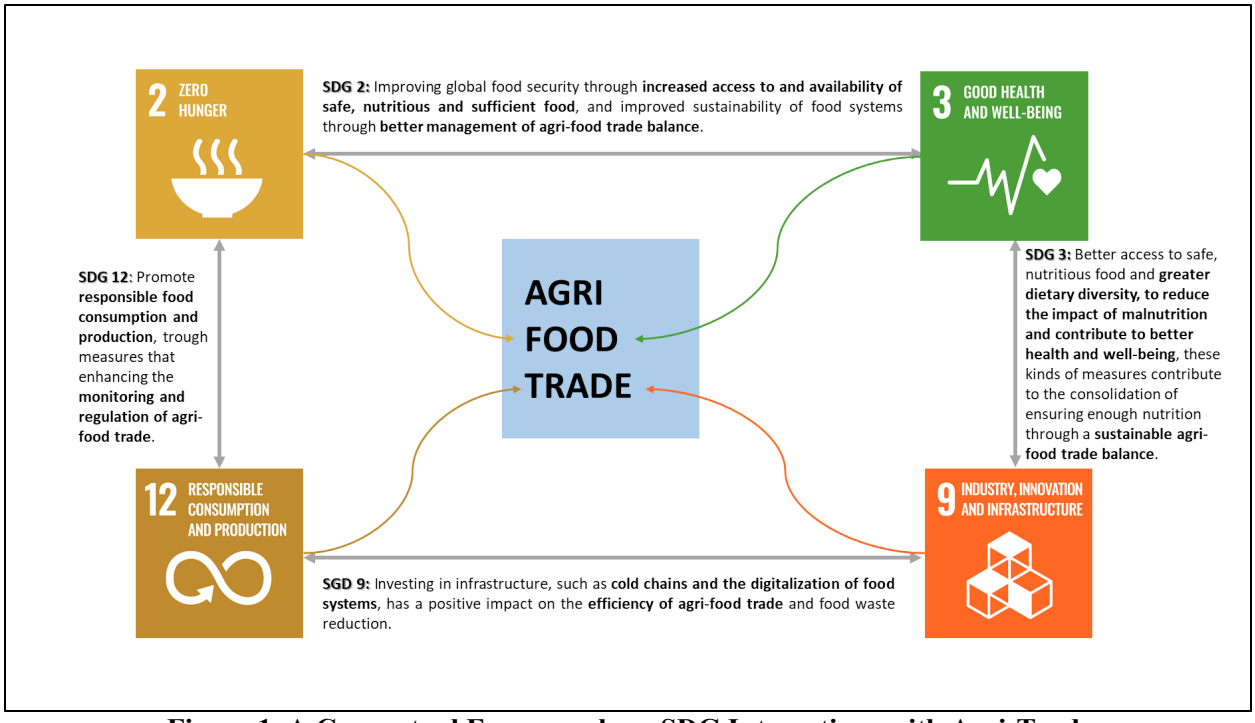


Figure 1. A Conceptual Framework on SDG Interactions with Agri-Trade

Source: Author's own development.

As illustrated by Figure 1, their assigned actions contribute to the shaping the sustainability of the agri-food trade policy through: (i) actions within SDG 2 are intended to help improve global food security by increasing access to and availability of safe, nutritious, and sufficient food; consequently, actions toward an improved sustainability of food systems through better management of agri-food trade balance will ensure that through a more sustainable trade and supply chain, global food security will be enhanced by increasing access and availability; (ii) approaches to SDG 3 that propose improved access to safe, nutritious food and greater dietary diversity to reduce the impact of malnutrition and contribute to improved health and well-being may result in new agri-food trade measures that contribute to the consolidation of ensuring adequate, nutritious food while simultaneously pursuing global food safety and security; (iii) notwithstanding, one of the most impactful SDGs identified that has the potential to have a greater impact on the agri-trade sector is SDG 9, because investing in infrastructure, such as cold chains and food system digitization, has a positive impact on agri-food trade efficiency and food waste reduction; thus, actions taken by the EU as a whole or individual member states to achieve progress within this specific SDG are potentially catalytic elements for scaling agri-trade; (iv) similarly, SDGS 12 actions that are directly linked to preserving natural resources through sustainable management and efficient use of those resources, while promoting responsible food consumption and production, may lead to measures that improve the monitoring and regulation of agri-food trade in the validity of land use, fertilizer use, and pesticide use that transfer to agricultural products, thus shaping a sustainable façade of the agri-food sector and trade policy.

The study hypothesizes that by incorporating SDGs into agri-food trade policy, the EU may achieve significant improvements in the social, economic, and environmental sectors. To test this hypothesis, a quantitative analysis of the current literature on the topic is presented in the Literature review section and is detailed in the Methods part of the paper. Following the IMRAD format and combining the results of the conducted analysis, the report asserts that there is a substantial interest in investigating the SDGs in relation to agri-food commerce, which is elaborated upon in the Findings and Discussions section. The paper concludes that the EU may achieve positive social, economic, and environmental outcomes by incorporating the SDGs into its agri-food trade strategy, while acknowledging that, in order to make progress, the EU must focus its efforts on supporting the ambitions of the Green Deal, the Farm to Fork strategy, and trade-related initiatives as outlined in the "Trade for all" policy document.

Literature review

Incorporating the Sustainable Development Goals (SDGs) into the public policy-making process mandates a combination of holistic and systematic approaches. According to academic research, greater recognition of the key governance challenges influencing the implementation of the SDGs can lead to improved policy decision-making processes; thus, enabling collective action, recognizing trade-offs in SDG processes and outcomes, and expanding equitable outcomes may be able to ensure a sustainable future for upcoming generations (Weigelt et al., 2015; Bowen et al., 2017; Mancini et al., 2023).

More regularly in the academic field, approaches to sustainability and agri-food commerce address the food supply chain or the management of supply networks associated with the agri-food industry (Ivo de Carvalho et al., 2022). Recent research is addressing not only the governmental responsibility for enhancing the strategic measures towards achieving sustainability within the interconnected targets of the SDGs (Keller et al., 2022), but also the primary measures that private stakeholders involved in the agricultural value chain can take to further assess the challenges of the

food supply chain (FSC) and shape their economic actions toward the implementation of sustainable policies that could help each stakeholder in the agri-food value chain get a fair economic outcome (Rueda et al., 2017; Deprá et al., 2022). Regarding the current state of social sustainability assessment in food supply chains, (Palazzo & Vollero, 2021) systemic approach discusses a number of publications that assess the academic interest in this area. According to the findings of their study, the number of published publications on the topic of supply chain sustainability in connection to attaining the SDGs has increased threefold from 2015-2016 to 2017-2020. Moreover, their findings imply that the increased interest in exploring the sustainability features of FSC was due to the increased awareness of environmental issues and the need to alleviate world hunger, both of which are directly related to SDG 2: Zero Hunger and SDG 12: Ensure sustainable consumption and production patterns. Scholars have previously analyzed the status of the SDG targets' direct influence on agri-food trade policy as well as their mirror consequences.

A study published in 2021 focused on global commerce within agri-food quality standards, highlighting the significance of the food supply chain as a crucial component of global agri-trade. Despite linking agri-food SDGs with SDGs 4: Quality Education; SDG 8: Decent Work and Economic Growth; SDG 9: Build Resilient Infrastructure; Promote Sustainable Industrial Innovation; and SDG 12: Ensure Sustainable Consumption and Production Patterns, the study investigated the feasible business practices and impact of SDGs within the European Union and the United States. The findings of the study indicate that the selected sustainability criteria have a major impact on the explored elements and that successful global trading of agri-food commodities via food supply chains can only be achieved through the integration of quality management and sustainability considerations (Pietrzyck et al., 2021). Furthermore, addressing the issue of imbalances within the EU, other studies that investigated the economic impact of the UK's agri-trade agreements, deals, and policies enforced by the Brexit process (Belke & Gros, 2017) uncovered connections to the sustainable development goals in strong correlation with the agri-trade in modeled scenarios based on the negotiations between the UK and EU in resolving the issue (Thomas et al., 2021). In addressing the predicament of comprehensiveness of governance and policy-decision making, the Food and Agriculture Organization of the United Nations (FAO) developed a set of principles and strategies to transform the agricultural and food sectors in accordance with the UN 2030 Agenda in order to achieve the Sustainable Development Goals (SDGs). Some of them stress social aspects, such as action 9 "Empower people and combat inequities", which proposes programs to aid smallholders, indigenous peoples, gender equality, land access, and decent rural jobs (FAO, 2018).

Nonetheless, several researchers have emphasized the necessity for sustainable human growth to occur within a secure and equitable environment, urging immediate policy action to address these problems (Steffen et al., 2015). Simulaniously, austrian researchers have demonstrated that economic ambitions conflict with the preservation of the ecological underpinnings upon which our society rely. As long as human development is predominantly characterized by economic expansion, Earth's resources will continue to be depleted (Urban & Hametner, 2022). Thus, in view of the interdependencies between the agricultural, economic, and environmental sectors, researchers made a convincing case that decision-makers must examine the interdependencies between economic and environmental SDGs when designing policies to achieve a more equitable economic outcome (Wang et al., 2022).

Methodology

Bibliometric analysis, a scientometric approach, was utilized for this research. Scientometrics and bibliometrics have gained significance as methodologies for assessing the productivity, growth, and interconnections of scientific publications (Hood and Wilson 2001). Given the goal of this study, this quantitative method is an appropriate instrument for examining the scientific interest in the influence of SDGs on agri-food trade policies in terms of the production of high-quality scientific resources.

The bibliometric study is contingent upon the use of the VOSviewer assessment, as defined in (van Eck & Waltman, 2010, 2019)'s work, VOSviewer emphasizes the relationships between the metadata in the analysis database. Throughout this investigation, we utilized VOSviewer version 1.16.16, which permits the creation of maps based on network metadata as well as their exploration and viewing. A consistent set of raw data, or metadata, is required in order to design and generate such bibliometric networks graphically. The use of bibliometric indicators is required for the development of quantitative (e.g., number of publications) and quantitative and qualitative (e.g., number of publications and their associated citations or author's connection) inventories of publishing activity at various levels: country, institution, and author. VOSviewer facilitates not only this type of analysis, but also research efficiency by assessing keywords in the titles and abstracts of the scientific papers under consideration.

In January 2023, a query was performed on the Web of Science database. Thus, the raw metadata gathered and processed for this quantitative research evaluation comprises only the scientific works currently published and indexed in Web of Science. The inquiry focuses on agricultural commerce in regard to EU's policies on sustainable development. Web of Science immediately implemented the subsequent search restriction "Timespan: all years. Indexes: SCI-EXPANDED, SSCI, A & HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC".

In accordance with the goal of this study, Web of Science is an extremely valuable database, as it provides the framework for establishing an effective research assessment in the fields of sustainable policies in agri-food trade, using all publications on these topics as the basis for the analysis. Among the terms used in the search were "agricultural" AND "trade" AND "sustainable development" AND "policy" AND "EU." According to the query results, there were a total of 151 publications that dealt with agricultural trade in relation to the EU's policies on sustainable development.

Results and discussions

The Web of Science categories commonly associated with the 151 identified publications are Environmental Sciences (49 publications; 32.45%), Environmental Studies (38 publications; 25.17%), and Green Sustainable Science Technology (30 publications; 19.87%), according to bibliometric findings based on the results of the performed query, the 151 indexed documents were related with a total of 42 Web of Science categories, which is typical: one publication might be associated with multiple categories (Zhu & Liu, 2020).

Figures 4 illustrate the rise in interest among researchers in agricultural trade in relation to the EU's policies on sustainable development beginning in 2015, particularly in light of the 2015 publication of the 2030 Agenda for Sustainable Development and the "Trade for all" policy, which was the first trade-related initiative to ever consider sustainability and had an entire chapter devoted to the subject of sustainability of trade. As a result, the initial scientific response to the paradigm shift toward considering sustainable development as a key element in policy formulation can be

observed in the various studies that elaborate on the current need for considering environmental elements when formulating policies by empowering all stakeholders, including farmers and civil society, and which places an emphasis on both essential elements, economic growth, and sustainable development. Germany (46 publications; 30.26%), Netherlands (43 publications; 28.28%), and England (37 publications; 24.34%) are the three countries with the greatest interest in researching sustainable agri-food trade policies, according to an analysis of 151 documents from the Web of Science database (Figure 3).

The United States of America appears in the ranking of countries that examined the sustainability areas of agri-food trade policies, and studies that compare EU and US knowledge and progress toward achieving the SDGs are frequently conducted by researchers (Lozano et al., 2018; Pietrzyck et al., 2021).

As shown in Figure 4 the evolution from 2012 to 2022 reveals that, between 2012 and 2018, the following were the most prevalent terms in publications related with agri-trade policy and sustainable development: "water", "productivity", "greenhouse gas emissions", "biofuels", "impact assessment", "ecological footprint", "sustainable agriculture", "resources", "efficiency", "policy", "common agricultural policy", "management", "land use change", "food safety" and "food security" whereas, between 2019 and 2022, the issue's focus shifted from an integrative approach to agricultural trade policies and sustainable development as a strategic plan to the advancement of a regulatory framework, to consolidate the transition toward more sustainable consumption and production models, as suggested by the following identified keywords: "decision-making", "technical efficiency", "sustainable intensification", "governance", "markets", "bioeconomy", "resilience", "competitiveness" and "land use change" term that explicitly relates to the paradigm shift of the process by which human activities affect the natural landscape, emphasizing the functional importance of land for economic activities while including a circular approach.



Figure 2. Treemap showing the top 10 WoS categories connected with the 151 publications that were detected.

Source: Web of Science.

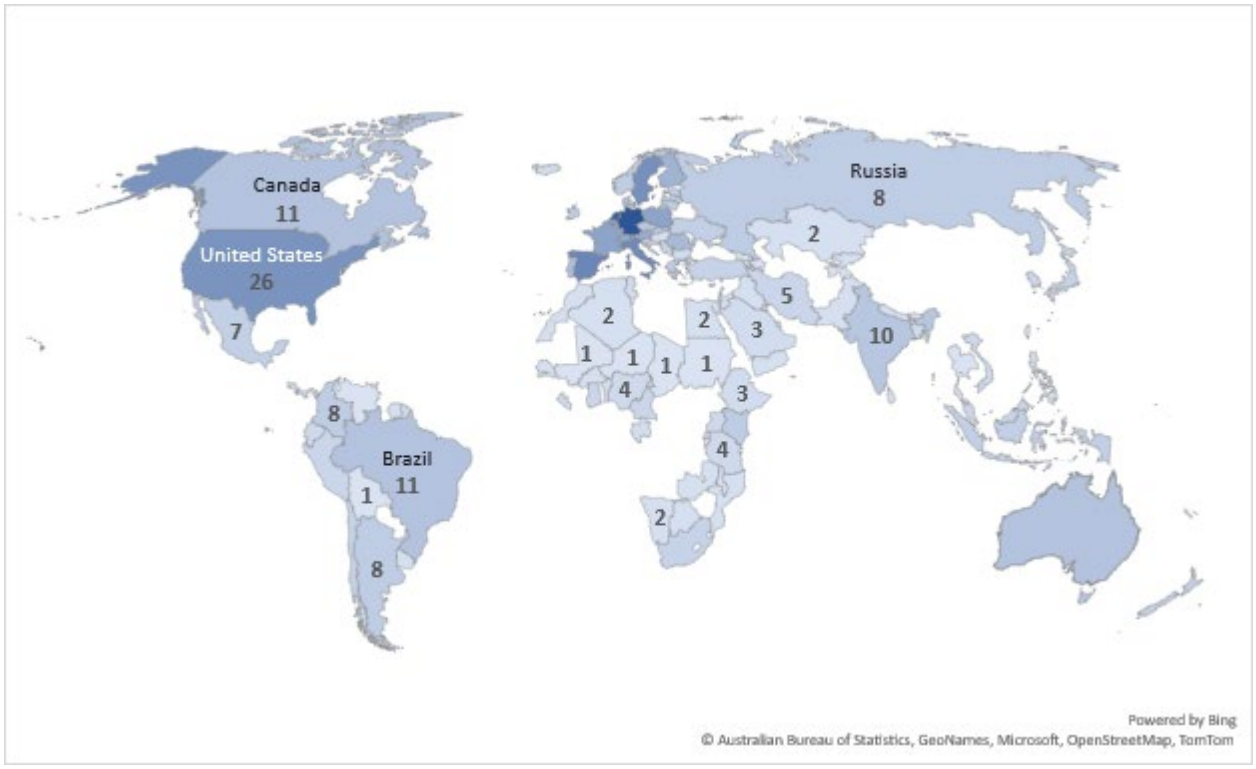


Figure 3. The origin countries of writers who have published scientific findings on the themes specified by the study's query.

Source: Author's design based on the Web of Science Data.

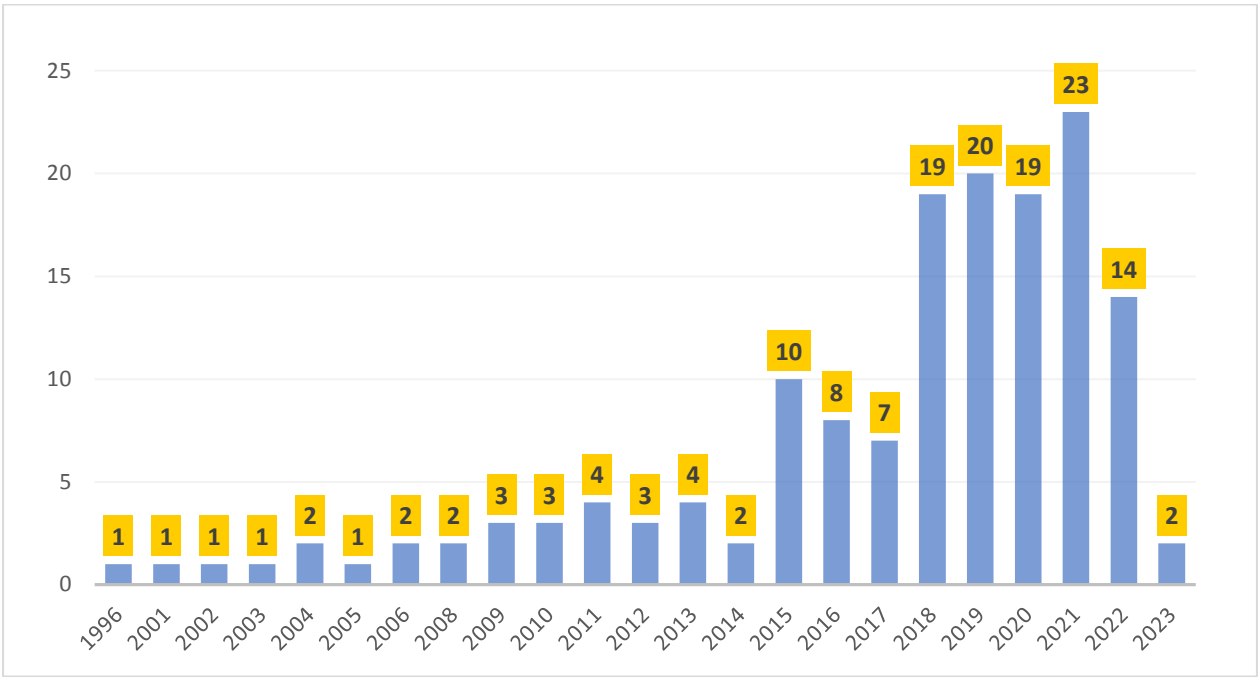


Figure 4. The evolution of the published and indexed scientific papers approaching the topics specified by the study's query.

Source: Author's design based on the Web of Science Data.

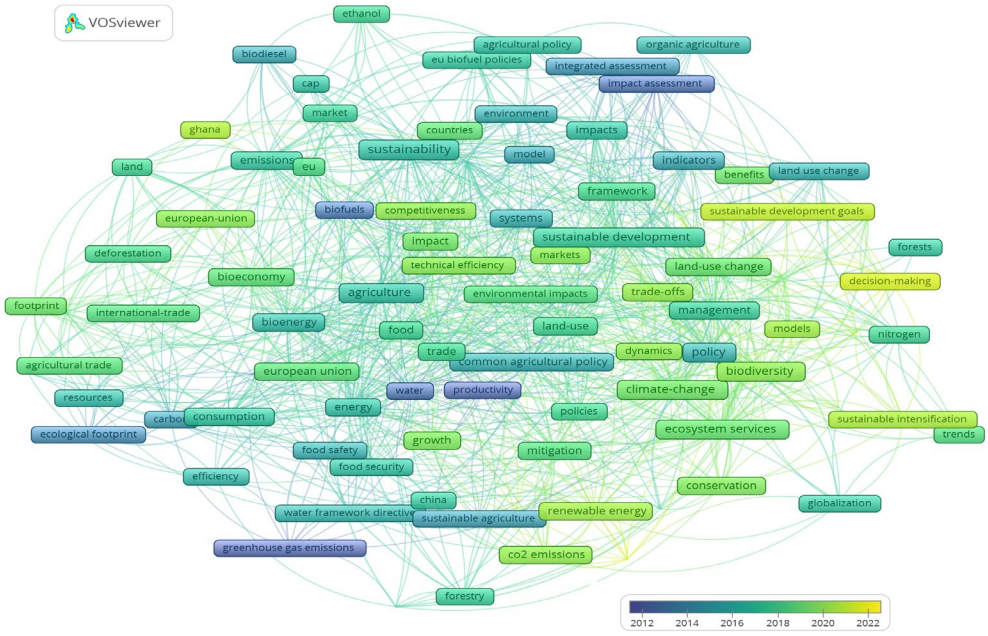


Figure 4. The evolution of the use of the keywords connected to the 152 publications found by the Web of Science query's specific keywords.

Source: Authors' development in VOSviewer 1.16.16.

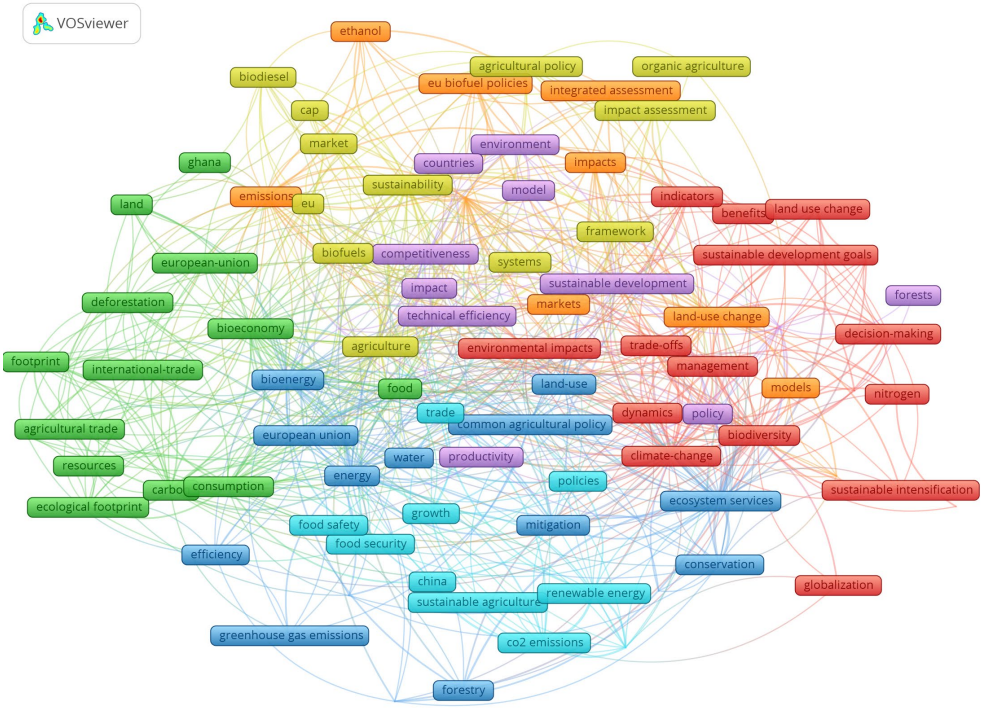


Figure 5. Cluster-map analysis of keywords linked to 152 documents identified in Web of Science database.

Source: Authors' development in VOSviewer 1.16.16.

Green cluster: “footprint”, “agricultural trade”, “deforestation”, “land”, “European-Union”, “bioeconomy”, “international trade”, “Ghana”, “resources” “carbon”, “consumption”, “ecological footprint” Since all the terms have direct implications for climate change, biodiversity loss, and environmental degradation, the appearance of keywords such as footprint, land use, and consumption focus attention on the essential factors for attaining the SDGs. A fair agri-food trade strategy must contain bioeconomy characteristics as a critical element for improving the agri-food trade policy on social aspects, given that the attainment of fair pricing by farmers is a pertinent concern when addressing trade policies. The European Union and Ghana are important players in addressing the commercial relationship of agri-food trade (Manyise & Dentoni, 2021). By improving their trade policy on agri-food goods, they can affect change by reducing deforestation and promoting sustainable agricultural practices, thereby making a quantifiable contribution to the SDGs (Faichuk et al., 2022).

Blue cluster: “bioenergy”, “European union”, “greenhouse gas emissions”, “efficiency”, “mitigation”, “forestry”, “water”, “land-use”, “common agricultural policy”, “ecosystem services”, “conservation”, “efficiency” relates to the use of bioenergy, its efficiency and mitigation strategies, the European Union's Common Agricultural Policy, and other land-use and water-related ecosystem services. This cluster highlights the importance of conservation efforts and the need to reduce greenhouse gas emissions.

Light blue cluster: “trade”, “food safety”, “food security”, “growth”, “policies”, “renewable energy”, “sustainable agriculture”, “China”, “co2 emissions” focuses on multiple areas of the agriculture - based economy, emphasizing the necessity to preserve food safety and food security – strongly tied to SDG 2 Zero Hunger and SDG 3 Good Health and Well-Being; through agri-trade policy that ensures sustainable growth.

Orange cluster: “emissions”, “ethanol”, “EU biofuel policies”, “impacts”, “markets”, “land-use change”, “models”, “integrated assessment” specializes on ethanol, EU biofuel regulations, impacts, markets, land-use change, models, and integrated assessment.

Red cluster: “indicators”, “land use change”, “benefits”, “sustainable development goals”, “environmental impacts”, “trade-offs”, “management”, “dynamics”, “decision-making”, “biodiversity”, “climate change”, “sustainable intensification”, “biodiversity”, “globalization” The red cluster examines the interconnections between indicators related to land-use change and environmental impacts, addressing the paradigm shift in changing the dynamics of decision-making factors in a global context of the various aspects required to be formulated in an agricultural trade policy when addressing the need to transition to a model of circular economy.

Purple cluster: “environment”, “countries”, “model”, “competitiveness”, “sustainable development”, “productivity”, “policy”, “forests”, “technical efficiency” In addition to shedding light on various production patterns, such as organic agriculture, which is viewed as a catalyst for the paradigm shift explored when discussing a comprehensive framework, purple cluster gives insight on the productivity factor that should be considered as a major importance factor in formulating sustainable policy.

Yellow cluster: “biodiesel”, “cap”, “market”, “EU”, “sustainability”, “biofuels”, “agriculture”, “impact assessment”, “system”, “organic agriculture”, “framework” emphasizes the necessity for an agri-food trade policy that considers the EU's sustainable development goals and the possible ramifications of biofuel use. In addition, it highlights the importance of organic agriculture in accomplishing sustainability objectives and the impact evaluation methods used to measure its influence.

Each of the aforementioned clusters relate to the overarching goal of implementing a fair agri-food trade policy that achieves the Sustainable Development Goals and is a quantifiable EU achievement. The diverse clusters provide the necessary components for achieving this objective, as they concentrate on several areas of the agricultural industry, including bioenergy, commerce, food security, and sustainability.

Conclusion

The Sustainable Development Goals (SDGs) are a set of 17 objectives designed to improve the world by 2030. They prioritize eradicating poverty, preserving the environment, and giving access to quality education, healthcare, and other essential services. One of the objectives is to ensure that everyone has access to inexpensive, nutritious, and safe food, and this is especially pertinent to agri-food trade. Agricultural trade is essential to ensure that food is accessible, inexpensive, and readily available for everybody. As stated in SDG 12, the need to design a more sustainable trade policy for agri-food goods in the EU could make significant contributions to environmental protection and ensure a sustainable pattern of production and consumption, which could lead to significant socioeconomic improvements, particularly among developing nations (Nazar et al., 2022). By adopting fair and equitable trade policies, the EU is ensuring that everyone has access to safe, nutritious, and affordable food. Also, by creating safety and quality standards, it reduces poverty, as farmers and producers in disadvantaged nations are more likely to earn a fair price for their products due to more equal trade restrictions (Kroll et al., 2019).

Throughout this paper, the significance of agri-trade policy in relation to the Sustainable Development Goals has been described clearly and concisely. Evidently, the scientific community has a vested interest in addressing this issue; one way to indicate this interest is by focusing on the transformative features of building a fair agri-food trade policy. In terms of agri-trade policy, it has been demonstrated that the EU is making significant strides toward achieving its Sustainable Development Goals, and this development is highly commendable.

The study demonstrated the relevance of agri-trade policy to the Sustainable Development Goals, resulting to the following conclusion: It has also shed light on the transformative character of fair agri-food trade policies and the EU's success in realizing these policies' goals. To ensure the accomplishment of the Sustainable Development Goals, the scientific community must maintain its focus on this issue and work toward the construction of fairer and more sustainable agri-trade policies.

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References

Belke, A., & Gros, D. (2017). The Economic Impact of Brexit: Evidence from Modelling Free Trade Agreements. *Atlantic Economic Journal*, *45*(3), 317–331. https://doi.org/10.1007/s11293-017-9553-7

Bowen, K. J., Cradock-Henry, N. A., Koch, F., Patterson, J., Häyhä, T., Vogt, J., & Barbi, F. (2017). Implementing the “Sustainable Development Goals”: Towards addressing three key

governance challenges – collective action, trade-offs, and accountability. *Current Opinion in Environmental Sustainability*, *26–27*, 90–96. https://doi.org/10.1016/j.cosust.2017.05.002

Chiripuci, B., Popescu, M.-F., & Constantin, M. (2022). The European Consumers' Preferences for Organic Food in the Context of the European Green Deal. *Amfiteatru Economic*, *24*(60), 361. https://doi.org/10.24818/EA/2022/60/361

Constantin, M., Dinu, M., Pătărlăgeanu, S. R., & Chelariu, C. (2021). Sustainable Development Disparities in the EU-27 Based on R&D and Innovation Factors. *Amfiteatru Economic*, *23*(15), Article 15.

Constantin, M., Sacală, M., Dinu, M., Pistalu, M., Pătărlăgeanu, S., & Munteanu, I.-D. (2022). Vegetable Trade Flows and Chain Competitiveness Linkage Analysis Based on Spatial Panel Econometric Modelling and Porter's Diamond Model. *Agronomy*, *12*, 411. https://doi.org/10.3390/agronomy12020411

Constantin, M., Sapena, J., Apetrei, A., & Pătărlăgeanu, S. R. (2023). Deliver Smart, Not More! Building Economically Sustainable Competitiveness on the Ground of High Agri-Food Trade Specialization in the EU. *Foods*, *12*(2), Article 2. https://doi.org/10.3390/foods12020232

Deprá, M. C., Dias, R. R., Zepka, L. Q., & Jacob-Lopes, E. (2022). Building cleaner production: How to anchor sustainability in the food production chain? *Environmental Advances*, *9*. Scopus. https://doi.org/10.1016/j.envadv.2022.100295

Faichuk, O., Voliak, L., Hutsol, T., Glowacki, S., Pantsyr, Y., Slobodian, S., Szeląg-Sikora, A., & Gródek-Szostak, Z. (2022). European Green Deal: Threats Assessment for Agri-Food Exporting Countries to the EU. *Sustainability*, *14*(7), Article 7. https://doi.org/10.3390/su14073712

FAO. (2018). *Transforming Food and Agriculture to Achieve the SDGs: 20 Interconnected Actions to Guide Decision-makers*. FAODocuments. https://www.fao.org/documents/card/en?details=ca1612en/

Istudor, N., Constantin, M., Ignat, R., & Petrescu, I.-E. (2022). The Complexity of Agricultural Competitiveness: Going Beyond the Balassa Index. *Journal of Competitiveness*, *14*(4), 61–77. https://doi.org/10.7441/joc.2022.04.04

Ivo de Carvalho, M., Relvas, S., & Barbosa-Póvoa, A. P. (2022). A roadmap for sustainability performance assessment in the context of Agri-Food Supply Chain. *Sustainable Production and Consumption*, *34*, 565–585. https://doi.org/10.1016/j.spc.2022.10.001

Keller, J., Jung, M., & Lasch, R. (2022). Sustainability Governance: Insights from a Cocoa Supply Chain. *Sustainability (Switzerland)*, *14*(17). Scopus. https://doi.org/10.3390/su141710763

Kroll, C., Warchold, A., & Pradhan, P. (2019). Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies? *Palgrave Communications*, *5*(1), Article 1. https://doi.org/10.1057/s41599-019-0335-5

Lozano, R., Fullman, N., Abate, D., Abay, S. M., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdel-Rahman, O., Abdi, A., Abdollahpour, I., Abdulkader, R. S., Abebe, N. D., Abebe, Z., Abejie, A. N., Abera, S. F., Abil, O. Z., …

Murray, C. J. L. (2018). Measuring progress from 1990 to 2017 and projecting attainment to 2030 of the health-related Sustainable Development Goals for 195 countries and territories: A systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, *392*(10159), 2091–2138. https://doi.org/10.1016/S0140-6736(18)32281-5

Mancini, L., Valente, A., Barbero Vignola, G., Sanyé Mengual, E., & Sala, S. (2023). Social footprint of European food production and consumption. *Sustainable Production and Consumption*, *35*, 287–299. https://doi.org/10.1016/j.spc.2022.11.005

Manyise, T., & Dentoni, D. (2021). Value chain partnerships and farmer entrepreneurship as balancing ecosystem services: Implications for agri-food systems resilience. *Ecosystem Services*, *49*, 101279. https://doi.org/10.1016/j.ecoser.2021.101279

Nazar, R., Meo, M. S., & Ali, S. (2022). Role of public health and trade for achieving sustainable development goals. *Journal of Public Affairs*, *22*(3), e2585. https://doi.org/10.1002/pa.2585

Palazzo, M., & Vollero, A. (2021). A systematic literature review of food sustainable supply chain management (FSSCM): Building blocks and research trends. *The TQM Journal*, *34*(7), 54–72. https://doi.org/10.1108/TQM-10-2021-0300

Pietrzyck, K., Jarzębowski, S., & Petersen, B. (2021). Exploring Sustainable Aspects Regarding the Food Supply Chain, Agri-Food Quality Standards, and Global Trade: An Empirical Study among Experts from the European Union and the United States. *Energies*, *14*(18), Article 18. https://doi.org/10.3390/en14185987

Popescu, M.-F., Constantin, M., & Chiripuci, B. C. (2022). Transition to a sustainable energy production and consumption model – mapping the patterns of success. *Journal of Business Economics and Management*, *23*(4), Article 4. https://doi.org/10.3846/jbem.2022.17022

Rueda, X., Garrett, R. D., & Lambin, E. F. (2017). Corporate investments in supply chain sustainability: Selecting instruments in the agri-food industry. *Journal of Cleaner Production*, *142*, 2480–2492. Scopus. https://doi.org/10.1016/j.jclepro.2016.11.026

Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, *347*(6223), 1259855. https://doi.org/10.1126/science.1259855

Thomas, A., Cosby, B. J., Gooday, R., Lyons, H., Siriwardena, G., Kettel, E., Matthews, R., Beauchamp, K., Petr, M., & Emmett, B. A. (2021). Rapid adaptive modelling for policy support towards achieving Sustainable Development Goals: Brexit and the livestock sector in Wales. *Environmental Science and Policy*, *125*, 21–31. Scopus. https://doi.org/10.1016/j.envsci.2021.08.009

Urban, P., & Hametner, M. (2022). The Economy–Environment Nexus: Sustainable Development Goals Interlinkages in Austria. *Sustainability (Switzerland)*, *14*(19). Scopus. https://doi.org/10.3390/su141912281

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), Article 2. https://doi.org/10.1007/s11192-009-0146-3

van Eck, N. J., & Waltman, L. (2019). VOSviewer Manual. *Leiden: Univeristeit Leiden*, 1–53.

Wang, G., Shi, R., Mi, L., & Hu, J. (2022). Agricultural Eco-Efficiency: Challenges and Progress. *Sustainability*, *14*(3), Article 3. https://doi.org/10.3390/su14031051

Weigelt, J., Müller, A., Janetschek, H., & Töpfer, K. (2015). Land and soil governance towards a transformational post-2015 Development Agenda: An overview. *Current Opinion in Environmental Sustainability*, *15*, 57–65. https://doi.org/10.1016/j.cosust.2015.08.005

Zhu, J., & Liu, W. (2020). A tale of two databases: The use of Web of Science and Scopus in academic papers. *Scientometrics*, *123*(1), 321–335. https://doi.org/10.1007/s11192-020-03387-8