TRADE4SD
Fostering the positive linkages between trade and sustainable development

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Deliverable 6.4: Policy briefs by country, value chain and WTO issues

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About TRADE4SD Project

Trade policy is a central factor in shaping global, regional and local development. It has an especially important part to play in achieving the UN Sustainable Development Goals (SDGs). The starting point of the TRADE4SD project is that trade has the power to produce positive and sustainable outcomes when the policies, which define the rules of the game, are framed and designed in a way to promote access to markets, fair prices and standards of living for farmers, as well as alleviating rural poverty and ensuring sustainable farming practices. Addressing the relation between trade and SDGs requires an integrated approach to policy-making and inclusive governance.

The main objective of the TRADE4SD project is to contribute to build new opportunities for fostering the positive sustainability impacts of trade supported by improved design and framing of trade policy at national, EU and global level, including WTO modernisation, increased policy coherence at different domains including agricultural, energy, climate, environmental and nutritional policies.

To meet this objective, the project develops an integrated and systematic approach that combines quantitative models from different perspectives, and several qualitative methods recognising that SDGs and trade are highly context-related. On the one hand, a robust analysis of economic, social and environmental impacts is given by using diverse but integrated modelling techniques and qualitative case studies. On the other hand, a wide consultation process is implemented involving stakeholders both in the EU and in partner countries as well as those with a wide international scope of activity, providing opportunities for improved understanding, human capital building, knowledge transfer and dissemination of results. To this extent, the consortium involves, as co-producers of knowledge, a number of decision-making, research and stakeholder participants with different backgrounds who will use their networks to facilitate the civil society dialogue and build consensus on the subject of gains from trade in view of sustainability.

Project Consortium

No.	Participant Organisation Name	Country
1	Corvinus University of Budapest (CORVINUS)	HU
2	University of Kent (UNIKENT)	UK
3	Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria (CREA)	IT
4	Johann Heinrich von Thünen-Institut, Bundesforschungsinstitut für ländliche Räume, Wald und Fischerei (THUENEN)	DE
5	The University of Sussex (UOS)	UK
6	University of Ghana (UG)	GH
7	Luonnonvarakeskus (LUKE)	FI
8	Centrum Analiz Spoleczno-Ekonomicznych-Fundacja Naukowa (CASE)	PL
9	Food and Agriculture Organization of the United Nations (FAO)	IT
10	Institut national de recherche pour l'agriculture, l'alimentation et l'environnement (INRAE)	FR
11	Confederazione Generale Dell'Agricoltura Italiana (CONFAGRICOLTURA)	IT
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INTRODUCTION

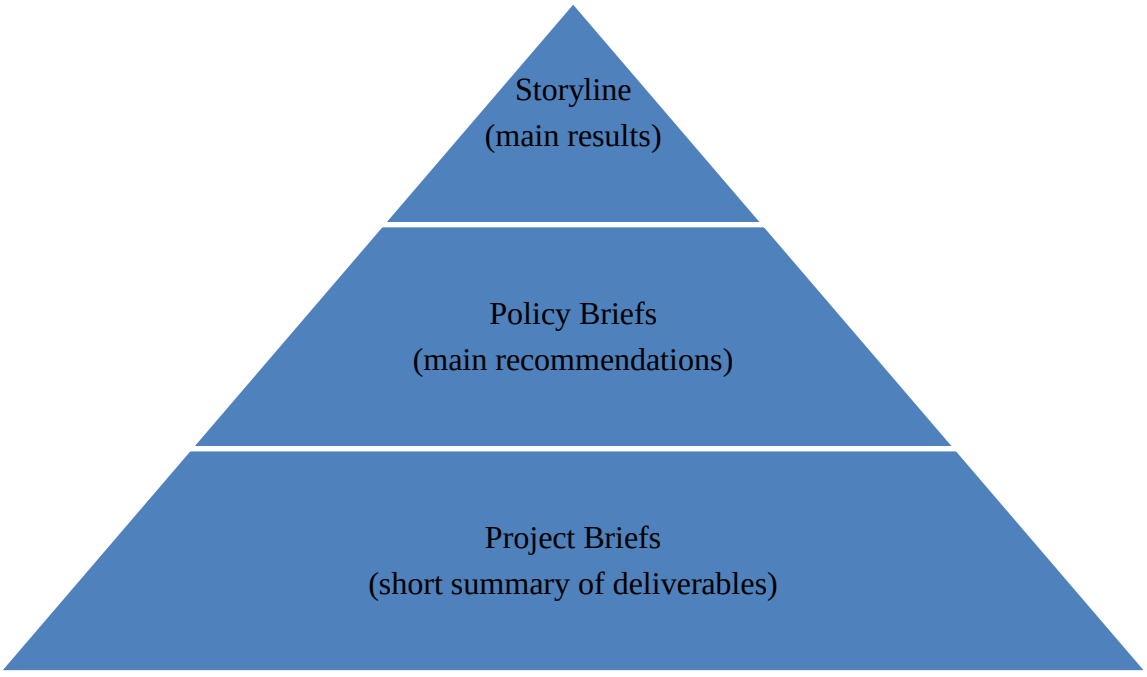
Global trade plays a pivotal role in shaping economic growth, food security, and sustainable development. However, trade policies must be carefully designed to balance economic, environmental, and social sustainability objectives. The TRADE4SD project has explored these linkages, emphasising how well-structured trade policies can foster sustainability while mitigating risks such as market inequalities, environmental degradation, and geopolitical disruptions.

This deliverable (D6.4) aims to synthesise and communicate the project's key findings by organizing insights into a structured framework for policy impact. The document follows a three-layered structure, ensuring that research findings are translated into actionable policy recommendations (Figure 1):

1. **The Storyline** provides an overarching narrative that connects major insights from the TRADE4SD project, setting the stage for evidence-based policy recommendations.
2. **Policy Briefss** focus on three critical areas where policy interventions can improve trade's sustainability impacts.
3. **Project Briefs** summarise key findings from various deliverables, showcasing empirical evidence, modeling results, and case study insights that support the policy briefs.

By following this approach, D6.4 aims to bridge research and policymaking, offering a structured, evidence-based foundation for shaping sustainable trade policies at the EU and global levels.

Figure 1: Structure of this deliverable



Source: own composition.

OUR STORYLINE

The TRADE4SD project has shed light on the connections between agri-food trade and sustainability, emphasising the urgent need for coherent and inclusive policies. The narrative below delves into the project's main lessons learned, policy recommendations, and the broader policy context to chart a path toward a sustainable trade future.

The world has changed a lot recently, including trade trends. On the one hand, global trade has undergone significant changes, transitioning from globalisation to "slowbalisation", with a continuous rise in the role and share of regional trade agreements, and a reduced global supply chain resilience. On the other hand, due to recent geopolitical tensions like the COVID-19 pandemic and the war in Ukraine, preferences of citizens have significantly changed. During times of instability and insecurity, economic sustainability has emerged as a dominant concern, requiring focused and strategic policy efforts.

Despite crisis periods, **European citizens still believe in trade liberalisation**, perceiving it as a driver of economic and agricultural sustainability. However, European citizens need to be aware that while trade liberalisation has tangible benefits, such as improved food availability and affordability, these are not shared equitable for all stakeholders in the value chains.

However, our project found **that trade liberalisation per se was not enough for the world to become more sustainable**. Trade liberalisation alone does not bring the world significantly closer to meeting the SDG targets. As our modelling results suggest, however, combined with yield improvements and dietary changes, trade liberalisation helps to improve food availability, affordability and stability. Moreover, substantial reduction in trade-related GHG emissions were found to be only possible with a CO_2 tariffs imposed on all goods. Furthermore, our stakeholders found modernisation of the WTO could significantly contribute to supporting trade-led global sustainability.

Despite efforts to integrate sustainability into trade policies, the European Union's approaches have often been inefficient. On the one hand, incoherent strategies and conflicting objectives have limited the impact of policies such as the Carbon Border Adjustment Mechanism (CBAM) and deforestation regulations. Challenges in enforcement, complexity in implementation, and unintended consequences, such as trade diversion, have further hindered progress. Moreover, our project found that one-size-fits-all policies would never work in the fields of trade and sustainability as linkages are overly complex and case-specific (Project Brief 1).

To address these challenges and enhance the sustainability of trade policies, the following recommendations are proposed.

Policy Recommendation 1: Strengthening Local Contexts in Agri-Food Trade Policy

a. Trade agreements should help the integration of local smallholders to markets by giving better access conditions.

b. Comprehensive training programs and technical assistance are essential for building local human capital, enabling compliance with EU standards, and fostering sustainability.
c. Engaging local stakeholders in consultation and co-creation processes can improve the design and implementation of trade agreements, ensuring they address on-the-ground realities effectively.

Policy Recommendation 2: Redesign Trade Agreements

a. Future agreements must explicitly include sustainable trade and development (TSD) provisions, aligning them with SDG targets and ensuring a balance of economic, environmental, and social impacts.
b. SDG proofing of trade agreements is advised to increase the sustainability components of EU trade agreements
c. Future trade agreements should focus on the entire value chain and integration mechanisms should be developed at this level.
d. Future trade agreements need much more follow-up on implementation.

Policy Recommendation 3: Build coherent policies

a. Enhanced coordination within the EU is crucial to align trade policies with sustainability objectives, ensuring coherence across sectors and policy domains as well as governance levels - applying the whole-of-government approach.
b. Agri-food trade should be positioned as a central component of the EU's sustainability agenda, integrated horizontally to maximise synergies and impact.
c. The EU must transition from isolated initiatives to a comprehensive framework of coordinated actions to address the multifaceted challenges of trade and sustainability - with an enhanced food systems policy (F2F 2.0).

These recommendations are well in line with the current European policy context. Just to name a few documents, the Draghi Report underscores that the era of rapid global trade growth has passed, calling for a cohesive foreign economic policy that aligns trade agreements with strategic goals is critical to navigating these challenges effectively. The EU strategic dialogue, calling for enhanced cooperation and dialogue across the whole food supply chain, has recently concluded that greater coherence between European trade and sustainability policies are needed together with a comprehensive review of the negotiation strategies and its method of conducting impact assessments prior to trade negotiations are needed. Last but not least, the Political Guidelines for the next Commission talks about deepening free and fair trade links and developing a new range of „Clean Trade and Investment Partnerships".

The lessons from TRADE4SD highlight the critical need for tailored, coherent, and inclusive approaches to trade and sustainability. By focusing on local contexts, redesigning trade agreements with sustainability at their core, and strengthening internal governance, the EU can lead the way in crafting trade systems that are economically viable, environmentally responsible, and socially inclusive. This vision demands coordinated efforts, participatory policymaking, and a commitment to aligning trade policies with the broader objectives of the Sustainable Development Goals.

POLICY BRIEF 1: STRENGTHENING LOCAL CONTEXTS IN AGRI-FOOD TRADE POLICY

Executive Summary

Trade policies often overlook local realities. While international agri-food trade is crucial for economic development, its impacts vary significantly across regions, sectors, and socio-economic groups. Current trade agreements and policies tend to prioritise global competitiveness over localized sustainability concerns.

One-size-fits-all policies are ineffective. Trade's contribution to sustainability is highly context-dependent. Policies must account for regional differences in production systems, social structures, and environmental conditions.

Localization strengthens resilience and inclusivity. By integrating local contexts into trade policy, the EU can promote sustainable rural development, enhance food security, and ensure trade benefits are equitably distributed.

EU trade and CAP reforms should be more locally adaptive. This requires adjusting trade rules, designing flexible CAP instruments, and fostering stakeholder engagement at local levels to align trade policies with sustainability goals.

Introduction

International agri-food trade is essential for ensuring food availability, economic growth, and global cooperation. However, trade policies often fail to consider the **diverse and localised impacts** they have on different communities, production systems, and ecosystems. In practice, the benefits and challenges of trade liberalisation vary across regions due to differences in agricultural structures, market access, and environmental vulnerabilities.

For the European Union (EU), ensuring that agri-food trade supports **sustainable development at local levels** is key to aligning trade policy with the Sustainable Development Goals (SDGs). The Common Agricultural Policy (CAP), trade agreements, and sustainability provisions must **incorporate local perspectives** to maximize trade's positive impacts and mitigate negative consequences. This policy brief highlights the need for **context-sensitive trade policies** and outlines recommendations for a more localized approach to EU trade and agricultural policy.

Key Findings

1. Trade's Impacts on Sustainability Depend on Local Conditions

The effects of international trade on sustainability vary widely across regions due to differences in:

- **Production Systems:** Some regions have intensive, high-yield agricultural models, while others rely on smallholder farming.
- **Infrastructure & Market Access:** Farmers in well-connected areas benefit more from trade liberalisation than those in remote regions.

- **Environmental Vulnerabilities:** Climate change, water scarcity, and biodiversity loss impact how trade policies affect local sustainability.

Without considering these local variations, trade policies risk creating winners and losers rather than fostering balanced development. For example, while trade agreements may increase exports for competitive producers, they can also expose small farmers to volatile markets, forcing them out of business or leading to unsustainable intensification.

2. The Role of Localized Policies in Sustainable Agri-Food Trade

A localized approach to trade policy helps ensure fairer distribution of trade benefits while reducing adverse social and environmental impacts. Key advantages include:

- **Strengthening Rural Economies:** Supporting locally adapted value chains enhances job creation and economic resilience.
- **Enhancing Food Security:** Policies that account for local food systems ensure stability in food supply and accessibility.
- **Supporting Environmental Sustainability:** Locally tailored trade measures can incentivize climate-smart agriculture and protect biodiversity.

3. Case Study Evidence: Local Adaptation Leads to Better Trade Outcomes

Studies show that trade policies incorporating local sustainability concerns lead to better long-term outcomes. For instance:

- EU Rural Development Programs that prioritise **locally driven projects** have shown higher rates of adoption of sustainable farming practices.
- **Regional trade policies** in Africa integrating smallholder support mechanisms have improved income stability and environmental conservation.
- **Differentiated CAP Payments** based on environmental sensitivity have helped align trade incentives with ecological priorities.

These examples illustrate that a locally informed trade policy framework is more effective in balancing economic, environmental, and social sustainability goals.

Policy Implications & Recommendations

1. Tailor Trade Agreements to Local Needs

- **Introduce flexibility mechanisms** in trade agreements that allow regions to adapt trade rules based on their specific sustainability priorities.
- **Promote regional value chains and local processing industries** to retain more economic benefits within local economies.
- Establish impact assessment tools that **evaluate trade policy effects at a local level** before finalizing agreements.

2. Foster Stakeholder Engagement and Local Adaptation in Trade Agreements

- **Enhance consultation and co-creation** processes with local stakeholders to adapt trade policies to real-world conditions and improve the efficiency of Free Trade Agreements (FTAs).
- **Establish regional trade platforms** where policymakers, farmers, and businesses collaborate on shaping trade agreements that align with local sustainability priorities.

3. Strengthen Multi-Level Governance and Stakeholder Involvement

- Foster dialogues between local authorities, farmers, and policymakers to **incorporate local perspectives into trade decisions**.
- Support knowledge-sharing platforms where **local communities can share best practices** and lessons learned from trade's impact on sustainability.
- Encourage partnerships between EU institutions and local actors to ensure trade-related **policies reflect on-the-ground realities**.

Conclusion

For EU agri-food trade to be truly sustainable, **policies must be adaptable to local contexts**. A localized trade approach ensures that trade benefits reach all communities while mitigating risks associated with liberalization. This requires reforms in trade agreements, CAP instruments, and governance mechanisms to better account for regional and sector-specific sustainability concerns. By prioritising local adaptation, inclusive policymaking, and sustainability-driven trade frameworks, the EU can strengthen the resilience of agri-food systems while advancing its global leadership in sustainable trade.

POLICY BRIEF 2: REDESIGN TRADE AGREEMENTS FOR SUSTAINABILITY

Executive Summary

Current EU trade agreements lack sufficient sustainability integration. While trade liberalisation boosts food availability and economic growth, it alone does not significantly advance the UN Sustainable Development Goals (SDGs). Without complementary measures, trade liberalisation can contribute to environmental degradation and socio-economic inequalities.

Policy coherence is critical. Many EU trade policies are fragmented, with overlapping or contradictory measures reducing their effectiveness. Aligning trade agreements with sustainability goals requires a structured and harmonized approach.

Unequal distribution of trade benefits. The benefits of trade are not equitably shared among stakeholders, particularly in agri-food value chains, where smallholders and vulnerable groups often remain disadvantaged.

Future trade agreements should be SDG-proofed. Sustainability provisions in EU trade agreements must be strengthened, with clear implementation, monitoring, and enforcement mechanisms to ensure trade fosters sustainable development across economic, social, and environmental dimensions.

Introduction

The European Union (EU) has a **longstanding commitment** to fostering international trade while promoting sustainable development. However, findings from the TRADE4SD project reveal that **current trade agreements often fail to fully align with sustainability objectives**, particularly in relation to agriculture and food systems.

While trade agreements contribute to economic growth and global food security, they also have significant environmental and social implications. The unequal distribution of benefits, lack of enforceability in sustainability commitments, and limited impact assessments weaken their role in achieving the UN SDGs. The EU's Farm to Fork Strategy and Green Deal call for greater policy coherence, yet **trade agreements remain largely focused on economic liberalisation rather than a holistic integration of sustainability principles.**

This policy brief highlights the key challenges in current EU trade agreements and provides recommendations for redesigning them to enhance their role in achieving sustainability goals.

Key Findings

1. Trade Liberalisation Alone Does Not Ensure Sustainability

- While trade liberalisation improves food availability and affordability, **it does not inherently lead to more sustainable food systems.**
- **Without additional measures**—such as investments in sustainable farming practices, carbon pricing, and labour rights protections—trade can contribute to environmental degradation and social inequality.
- Carbon tariffs applied selectively to agricultural goods **show limited effectiveness** in reducing emissions unless accompanied by broader mitigation policies.

2. Current Trade Agreements Lack Strong Sustainability Provisions

- Sustainability chapters in trade agreements remain **weakly enforced**, with vague commitments and limited accountability mechanisms.
- Environmental provisions in Free Trade Agreements (FTAs) **vary significantly** in scope and enforceability, with some agreements containing non-binding sustainability clauses.
- The **inclusion of sustainability chapters** does not necessarily lead to positive environmental or social outcomes if enforcement mechanisms are not in place.

3. Policy Fragmentation Weakens the Impact of Trade Agreements

- Current EU trade policies **lack internal consistency**, leading to inefficiencies and unintended trade-offs.
- There is **insufficient coordination** between trade policies and parallel initiatives, such as climate policies, CAP reform, and development aid programs.
- A more integrated approach is needed to **maximize synergies** between trade, environmental, and social policies.

Policy Implications & Recommendations

1. Redesign EU Trade Agreements Towards Sustainable Trade Agreements

- Incorporate **sustainable development into all trade agreements** by creating a specific section referencing all **Trade and Sustainable Development (TSD) provisions**.
- Ensure **SDG-proofing** of trade agreements by systematically evaluating their economic, environmental, and social sustainability impacts before ratification.
- Improve **harmonisation of existing agreements** to ensure consistency in sustainability commitments across different trade deals.

2. Strengthen the Value Chain Approach in Trade Agreements

- Future EU trade agreements should **take a value chain approach**, integrating mechanisms that support sustainability across entire supply chains rather than focusing only on trade flows.
- **Facilitate local and regional value chains**, ensuring that trade benefits smallholders and SMEs alongside larger agricultural exporters.
- **Support fair and sustainable sourcing practices**, reinforcing sustainability certification systems within trade agreements.

3. Improve Implementation and Follow-Up Mechanisms

- Establish **stronger follow-up processes** to monitor compliance with sustainability provisions in trade agreements.
- Create **binding enforcement measures** for sustainability standards, including penalties for non-compliance and dispute settlement mechanisms.
- Involve **civil society, businesses, and local stakeholders** in the monitoring and evaluation of sustainability provisions within trade agreements.

4. Increase Training and Technical Assistance in Sustainability Compliance

- Implement **training programs** for policymakers, industry leaders, and trade negotiators on integrating sustainability into trade agreements.
- Provide **technical assistance** for partner countries to build institutional capacity in environmental and labour rights compliance.
- Encourage **public-private partnerships** to facilitate sustainable innovation and investment in value chains.

Conclusion

EU trade agreements must evolve to fully align with the Sustainable Development Goals (SDGs). While trade liberalization contributes to economic growth and food security, its environmental and social impacts must be proactively addressed through **stronger sustainability provisions, improved enforcement, and better policy coherence.**

By adopting **SDG-proofing mechanisms, legally binding sustainability commitments, and structured follow-up processes**, the EU can transform trade agreements into tools that drive sustainable development. Integrating trade, agriculture, and climate policies will ensure that EU trade **remains a force for positive change**, balancing economic growth with social inclusion and environmental responsibility.

POLICY BRIEF 3: BUILD COHERENT POLICIES FOR SUSTAINABLE TRADE

Executive Summary

Policy fragmentation undermines sustainability efforts. The EU's trade policies often lack coherence across sectors, limiting their effectiveness in achieving Sustainable Development Goals (SDGs).
Greater alignment and coordination are needed within Europe. Agri-food trade should be positioned as a key driver of sustainability, integrated horizontally across relevant EU policy domains with better coordination between existing and future trade agreements.
Incoherent policies create trade-offs. Policies promoting sustainability in agriculture may conflict with trade objectives, requiring a holistic, whole-of government approach.
The EU must transition from isolated initiatives to an integrated framework. A well-coordinated system will maximize the positive impacts of trade on economic, social, and environmental sustainability.

Introduction

As the world's largest trading bloc, the European Union (EU) has a responsibility to ensure that trade policies actively contribute to sustainability objectives. However, **policy fragmentation and misalignment between trade, agriculture, and environmental strategies** pose challenges to achieving coherent and effective sustainability outcomes.

Policy Coherence for Development (PCD) is a principle that seeks to reduce contradictions and enhance synergies between EU policies and SDGs. The EU's **Farm to Fork Strategy (F2F), Common Agricultural Policy (CAP), Green Deal, and trade agreements must be harmonised** to ensure that sustainability objectives are not undermined by conflicting priorities. More coordination across European institutions is essential to avoid isolated policymaking and instead implement integrated, well-aligned trade and sustainability strategies.

This policy brief highlights key challenges and presents recommendations for enhancing policy coherence in EU trade and sustainability strategies.

Key Findings

1. Fragmentation in EU Trade and Sustainability Policies

- **Lack of integration across governance levels and sectors** leads to inefficiencies and conflicting objectives.
- **Disjointed policymaking processes** often fail to address trade-offs between economic, social, and environmental sustainability.
- **EU trade policy is largely driven by economic liberalization**, while sustainability policies often remain secondary considerations.

2. Conflicting Policy Priorities Weaken Sustainability Efforts

- **Environmental regulations under the Green Deal** sometimes contradict market liberalization goals in trade agreements.
- **CAP subsidies do not always align with sustainability criteria**, creating distortions that hinder progress towards SDG objectives.
- **Trade policies supporting economic growth** may inadvertently contribute to social inequalities, especially in developing economies.

3. Policy Incoherence Hinders Implementation of Sustainable Trade Measures

- **Siloed decision-making** within EU institutions limits the effectiveness of trade agreements in promoting sustainability.
- **Insufficient enforcement mechanisms** in Free Trade Agreements (FTAs) reduce accountability for sustainability commitments.
- **Diverging national policies** among EU Member States create challenges in harmonizing sustainability objectives across borders.
- **Existing and future trade agreements lack coordination**, reducing their ability to effectively promote sustainability goals.

Policy Implications & Recommendations

1. Strengthen Coordination Across EU Institutions and Policy Domains

- **Enhance inter-agency cooperation** by creating a cross-sectoral sustainability task force linking trade, agriculture, climate, and development policies.
- **Ensure consistency in sustainability objectives** across CAP, F2F, the Green Deal, and trade agreements.
- **Implement policy reconciliation mechanisms** to resolve contradictions between trade liberalization and sustainability commitments.
- **Increase coordination between existing and future trade agreements** to ensure policy coherence and avoid contradictory sustainability approaches.

2. Align Trade Policy with the EU Sustainability Agenda

- **Agri-food trade should be positioned as a core sustainability driver**, ensuring trade policies complement rather than contradict environmental and social goals.
- **SDG-proofing mechanisms should be systematically applied** to all trade agreements to align them with sustainability commitments.
- **Harmonization of sustainability regulations across EU trade agreement**s will enhance consistency and effectiveness.

3. Increase Transparency and Stakeholder Involvement

- **Foster inclusive dialogue** with civil society, businesses, and sustainability experts to ensure well-balanced trade policies.
- **Strengthen participatory policymaking processes** by engaging stakeholders at all stages of trade negotiations.
- **Encourage transparency in decision-making** to build public trust and ensure accountability in implementing sustainability commitments.

4. Move Beyond Isolated Policies Towards Coordinated Action

- **Replace siloed policymaking** with coordinated actions that reflect the interconnected nature of trade, sustainability, and agriculture with enhanced food systems and whole-of-government approaches.
- **Ensure new trade agreements are aligned with existing sustainability commitments** to maintain consistency across EU policies.
- **Encourage collaboration** between national governments, EU institutions, and trade partners to enhance policy coherence.

Conclusion

Ensuring policy coherence is essential for making EU trade policies truly sustainable. Without an integrated approach, conflicting priorities across trade, agriculture, and environmental strategies will continue to undermine sustainability goals. **By enhancing coordination within Europe, aligning trade policy with sustainability agendas, improving enforcement, and increasing stakeholder engagement**, the EU can transition towards a **more coherent and effective policy framework** that supports economic growth while safeguarding environmental and social sustainability. A **more integrated and well-coordinated** approach to trade and sustainability will strengthen the EU's global leadership in fostering inclusive and sustainable trade systems.

PROJECT BRIEF 1: STRUCTURED REVIEW ON THE RELATIONSHIPS BETWEEN INTERNATIONAL AGRI-FOOD TRADE AND SUSTAINABILITY

1. Main Messages

Economic sustainability dominates trade research. Most studies emphasise economic aspects, followed by social and environmental dimensions, reflecting the prevailing policy focus.

Trade can contribute to sustainability, but outcomes vary. While trade enhances income and employment (SDG 8), it can also lead to environmental degradation and social inequalities if not properly governed.

Trade liberalisation does not automatically lead to sustainability. Research highlights the need for complementary measures such as environmental standards, labour protections, and inclusive policies.

Smallholders face major trade barriers. The review finds that access constraints, compliance costs, and market power imbalances limit smallholder participation in international trade.

Policy coherence is crucial. Trade policies must align with agricultural, climate, and sustainability strategies to avoid unintended negative effects.

2. Research Scope & Methodology

To provide a comprehensive evidence base, this structured literature review covered:

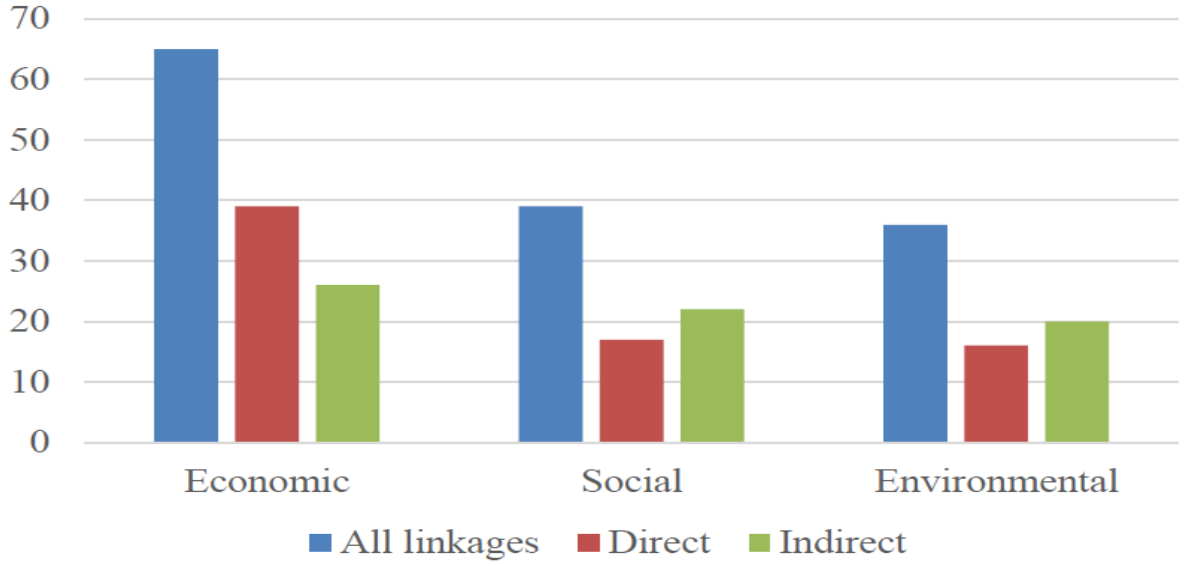
- **Systematic literature review with 224 academic journal articles** covering trade and sustainability linkages.
- **Key thematic areas**: trade liberalisation, food security, climate change, social equity, and global value chains.
- **Sustainable Development Goals (SDGs) framework:** assessing economic, environmental, and social impacts.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Unequal Research Focus on Sustainability Dimensions

The literature review confirms that economic sustainability is the most researched, followed by social and environmental aspects (Figure 1.1). Studies on trade's environmental impacts, such as carbon emissions, deforestation, and biodiversity loss, are limited. Social aspects such as labour rights and gender equity remain underexplored.

Figure 1.1: Linkages between agri-food trade and the SDGs identified in the literature



Source: own composition.

Implication: Trade policies must incorporate balanced sustainability provisions to ensure economic gains do not undermine environmental and social objectives.

3.2. Trade and SDG Linkages: Positive and Negative Outcomes

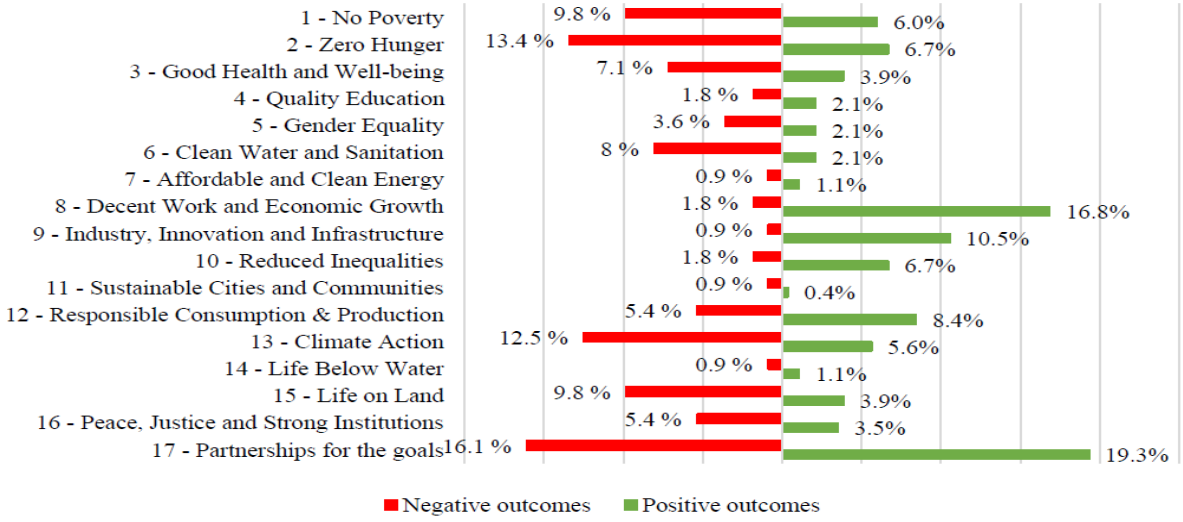
The review identifies both synergies and trade-offs between trade and SDGs:

Positive outcomes of trade:
Expands job opportunities and income growth (SDG 8).
Supports innovation and technology transfer for sustainable agriculture (SDG 9).
Facilitates cooperation on sustainability standards (SDG 17).

Negative outcomes of trade:
Increases environmental degradation through deforestation, emissions, and water depletion (SDG 13 & 15).
Creates market vulnerabilities, affecting food security and smallholder resilience (SDG 2).
Favors large-scale agribusinesses over smallholders, worsening inequality (SDG 10).

Figure 1.2 shows linkages by SDGs.

Figure 1.2: Positive and negative outcomes of trade on the SDGs: shares of different SDGs in positive and negative outcomes (%)



Source: own composition.

Implication: Policymakers should adopt context-specific trade measures to mitigate sustainability risks while leveraging trade's potential for positive impacts.

3.3. Smallholder Farmers and Market Access Barriers

- **Smallholders struggle to compete in global trade**, with only 20% of reviewed studies focusing on their inclusion.
- **Barriers include** high compliance costs, price volatility, and limited access to credit and technology.
- Fair-trade certification and preferential access policies **can improve smallholder participation.**

Implication: Trade policies should promote inclusive value chains and fairer market conditions for small farmers.

4. Implications for EU Policy & Trade Governance

- Trade agreements should be **supported by impact assessments** covering economic, social, and environmental effects.
- Sustainability provisions **must be enforced**, not just included in agreements.
- **More research is needed** on trade's environmental and social impacts
- **Improved indicators and data collection** can enhance policy effectiveness.
- **Trade, climate, and agricultural policies must be aligned** to prevent sustainability trade-offs.
- **The EU should integrate trade and sustainability commitments** into CAP and the Green Deal.

5. Conclusion

This structured review highlights critical evidence gaps and opportunities to improve trade's contribution to sustainability. Key insights include:

- Trade should be assessed across **economic, social, and environmental dimensions**.
- Trade agreements should **integrate robust sustainability safeguards**.
- **Monitoring, enforcement, and stakeholder engagement** are crucial for sustainable trade policies.

This Project Brief is based on Deliverable 1.1. of the TRADE4SD project.

PROJECT BRIEF 2: NETWORK ANALYSIS OF GLOBAL AGRI-FOOD TRADE FLOWS

1. Main Messages

Agri-food Global Value Chains (GVCs) are evolving. Over the past decades, GVCs have become more complex, yet recent global crises have led to shifts towards regionalisation.
Trade flows in agri-food products remain highly interconnected. Network analysis highlights key trade hubs and dependencies, showing that agri-food GVCs are increasingly driven by regional clusters.
Participation in GVCs is highly uneven. Developed countries benefit from strong backward and forward linkages, while developing nations face structural barriers to full integration.
Resilience and sustainability require diversification. Global shocks such as the COVID-19 pandemic and geopolitical tensions have exposed vulnerabilities in concentrated trade networks.
Policy coherence is necessary for sustainable trade integration. The EU must align its trade agreements with sustainability commitments while supporting more inclusive agri-food trade structures.

2. Research Scope & Methodology

This deliverable employs network analysis to examine agri-food trade flows, using inter-country input-output (ICIO) tables from global trade databases, including EXIOBASE, OECD TiVA, and WIOD. The analysis focuses on:

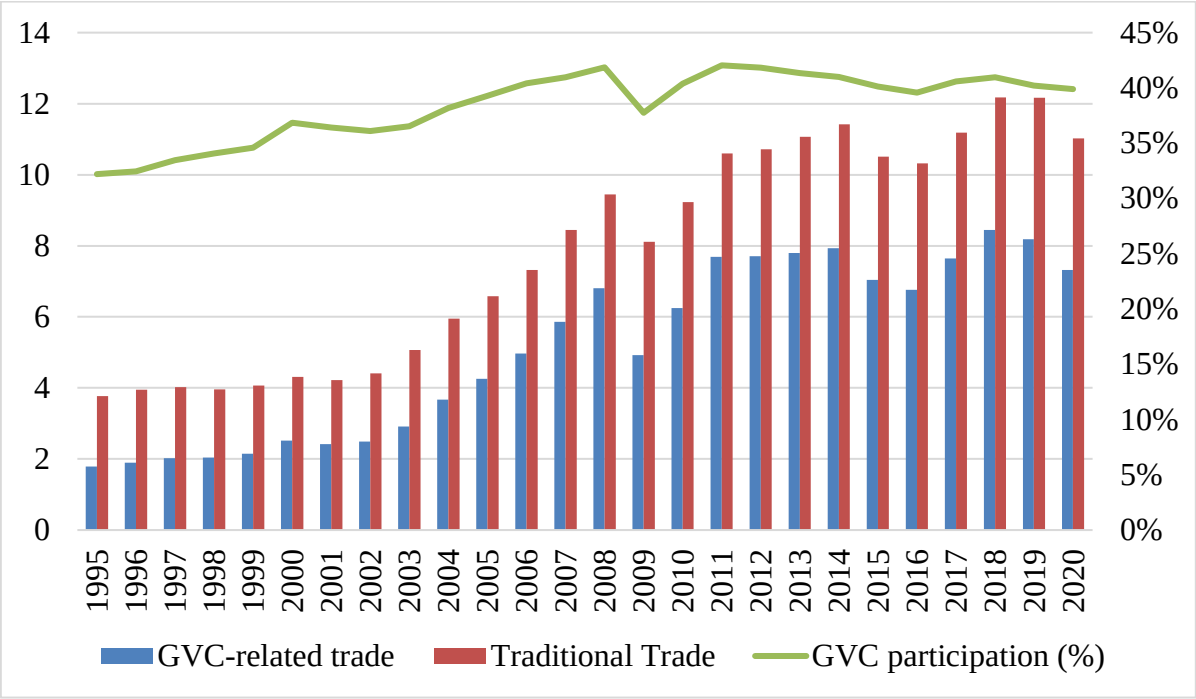
- GVC participation trends across different regions and product groups.
- Structural changes in trade networks, particularly shifts towards regionalisation.
- The role of key trade hubs and intermediaries in global food systems.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Changing Trends in Agri-Food GVCs

As evident from Figure 2.1, GVC participation has stagnated since 2008, reflecting a shift from hyperglobalisation to slowbalisation. The length of GVC production stages has shortened, suggesting a move towards regional supply chains. Trade conflicts, COVID-19 disruptions, and supply chain vulnerabilities have reinforced the trend of regionalisation and nearshoring.

Figure 2.1: GVC trade and participation, 1995-2020, trillion USD and %



Source: Own composition from WITS (2023) data (based on TIVA).

Implication: Policies should encourage balanced trade networks to enhance resilience against global disruptions.

3.2. Trade Network Interdependencies

Europe and Asia remain dominant in GVCs, with strong intra-regional trade ties. North America exhibits a high degree of backward participation, indicating reliance on imported inputs. Africa and Latin America maintain high forward participation, exporting raw materials with limited value-added processing.

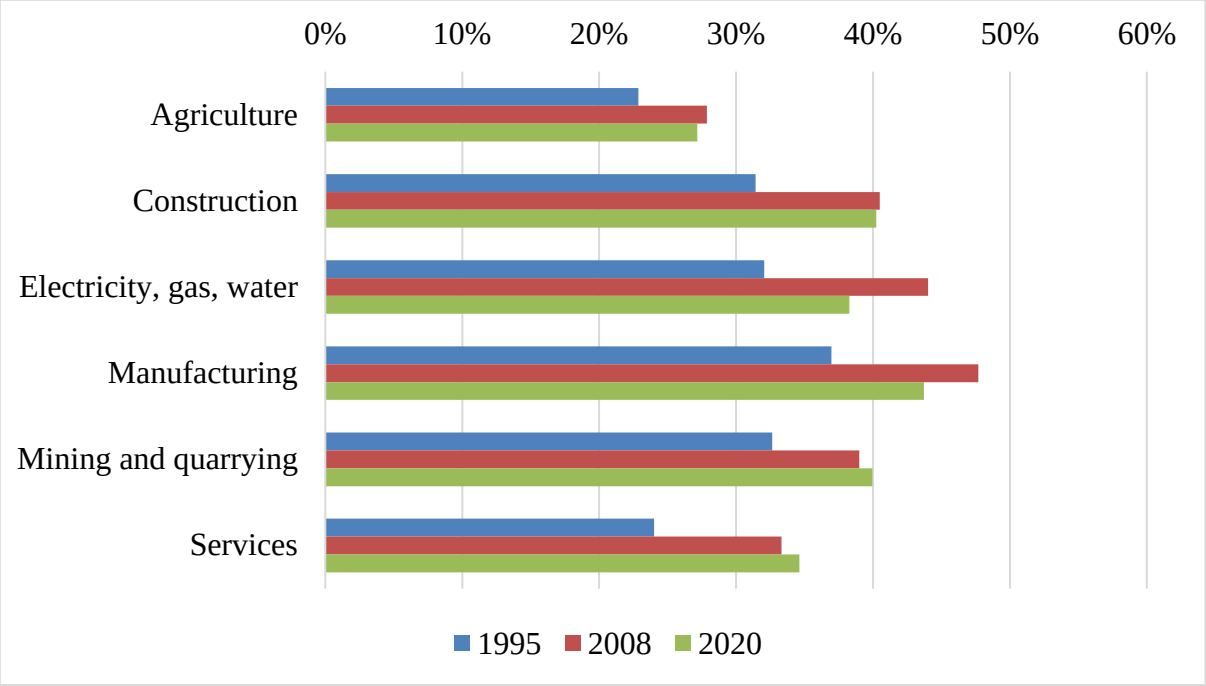
Implication: There is a need to support value-added processing in developing regions to enhance trade benefits.

3.3. Vulnerabilities in Agri-Food Trade Networks

Supply chains have become more fragile (Figure 2.2), with key hubs highly dependent on a few major suppliers. Shocks such as COVID-19 and the war in Ukraine disrupted food trade, exposing the risks of over-concentrated supply chains. Climate-related disruptions pose further risks, particularly for developing countries reliant on agriculture.

Implication: Diversification and investment in climate-resilient trade policies are crucial.

Figure 2.2: Global GVC participation rates, 1995 and 2020, percentage



Source: WITS (2023) data visualisation (based on TIVA).

4. Implications for EU Policy & Trade Governance

- **Strengthen regional trade agreements** to reduce dependency on a few major suppliers.
- **Encourage diversification** of sourcing strategies for essential food products.
- **Develop food security strategies** that integrate trade resilience mechanisms.
- Facilitate **greater involvement of smallholder farmers** in value chains through targeted trade policies.
- **Increase support for regional processing industries** to reduce reliance on raw commodity exports.
- Ensure trade agreements **align with environmental and social sustainability goals**
- Improve coordination between trade, climate, and food security policies.
- **Enhance monitoring of sustainability impacts** in trade agreements
- Encourage WTO modernisation to integrate sustainability into global trade rules.

5. Conclusion

Network analysis reveals that agri-food GVCs are undergoing structural shifts in response to global economic, environmental, and geopolitical changes. While trade remains a powerful tool for development, it requires strategic governance to enhance resilience, sustainability, and inclusiveness.

Key takeaways:

- Trade networks must be **more resilient** to withstand future global disruptions.
- Sustainability and equity **should be integrated into trade policies** to ensure broad-based benefits.
- **Regional trade cooperation is essential** for balancing economic efficiency with sustainability goals.

This Project Brief is based on Deliverable 1.4. of the TRADE4SD project.

PROJECT BRIEF 3: TAXONOMY OF GVCS

1. Main Messages

GVC participation varies across countries and sectors. Developed nations tend to have higher engagement, while developing economies face structural barriers.
Trade openness is a key driver of GVC participation. Countries with more open trade policies are better integrated into global markets.
Economic development, logistics, and ease of doing business impact participation. High logistics performance and supportive regulatory environments foster deeper GVC integration.
Market size alone does not determine GVC integration. Smaller economies can still be key players in GVCs through targeted policies.
Trade policy interventions have mixed effects. Liberal interventions can enhance participation, but overall, market-related factors play a bigger role.

2. Research Scope & Methodology

This taxonomy is based on quantitative analysis of agri-food GVCs, using:

- OECD TiVA dataset for trade flows and GVC participation indicators.
- Econometric models assessing structural determinants of participation.
- Principal Component Analysis (PCA) to categorise countries based on GVC engagement.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. The Role of Trade Openness in GVC Integration

- **Trade openness is a significant determinant** of GVC participation in all models.
- **Liberal trade policies encourage higher** backward and forward **linkages in production networks.**
- **Protectionist policies limit engagement,** particularly in developing economies.

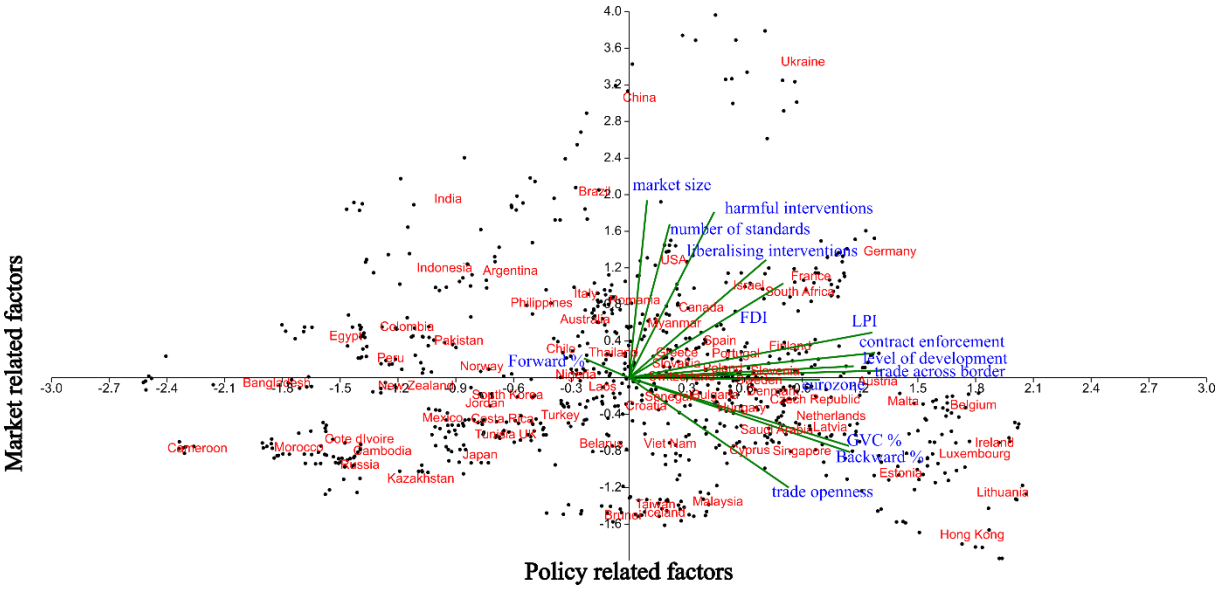
Implication: Policymakers should focus on reducing trade barriers while ensuring sustainability safeguards.

3.2. Market-Related vs Trade Policy-Related Determinants

- **Market size, economic development, and logistics performance** are more influential than trade policy measures**.**
- **Eurozone membership facilitates backward GVC participation** but does not strongly impact forward linkages.
- **Ease of doing business and contract enforcement** positively correlate with GVC integration.

Figure 3.1. shows a biplot of main country-sector pairs.

Figure 0.1: PCA biplot of the studied factors and countries



Source: own composition based on OECD (2023) data.

Implication: Governments should focus on improving business environments and infrastructure to boost GVC participation.

3.3. Categorisation of GVC Participation

- **Countries were categorised based on GVC engagement levels:**
- **High-engagement countries:** Primarily developed economies with strong intra-regional trade (e.g., EU members).
- **Medium-engagement countries:** Emerging markets with growing participation but structural challenges.
- **Low-engagement countries:** Developing economies with minimal integration due to weak logistics, infrastructure, or restrictive trade policies.

Implication: Policies should be tailored to different country groups, ensuring inclusive trade integration.

4. Implications for EU Policy & Trade Governance

- **Invest in logistics and infrastructure** to facilitate smoother trade flows.
- **Support business-friendly regulatory environments** to improve ease of doing business.
- **Encourage targeted policies for smaller economies** to integrate them effectively into GVCs.
- Ensure that EU trade agreements account for **structural barriers faced by developing countries.**

- **Promote fair and sustainable trade policies** that enhance participation without harming local industries.
- **Enhance monitoring mechanisms for sustainability provisions** within trade agreements.
- **Encourage sustainable sourcing practices** to minimise environmental impact.
- **Integrate labour and social protections** into trade policies to ensure fair participation.
- **Develop resilience strategies for supply chains to withstand economic shocks**.

5. Conclusion

This taxonomy provides a structured framework for understanding GVC participation in agri-food trade. The findings suggest that market conditions are more critical than trade policies alone in determining integration levels. **Key takeaways:**

- **Trade openness and business-friendly environments are essential for GVC participation.**
- **Tailored policies are needed for different country groups to address structural challenges.**
- **Sustainability considerations must be integrated into GVC strategies to align trade with development goals.**

This Project Brief is based on Deliverable 1.5. of the TRADE4SD project.

PROJECT BRIEF 4: THE EFFECT OF ENVIRONMENTAL PROVISIONS IN PREFERENTIAL TRADE AGREEMENTS ON SUSTAINABLE DEVELOPMENT GOALS

1. Main Messages

Environmental provisions in Preferential Trade Agreements (PTAs) have grown in scope and complexity. Over time, PTAs have incorporated more detailed environmental commitments, particularly on issues such as climate change, renewable energy, and biodiversity conservation.

The impact of environmental provisions on Sustainable Development Goals (SDGs) varies widely. Provisions related to greenhouse gas (GHG) emissions reduction, renewable energy use, and fisheries protection are particularly effective, while others show no significant impact.

Binding vs. non-binding provisions yield different effects. Surprisingly, non-binding provisions are sometimes more effective than binding ones, suggesting that cooperation-based approaches may work better than sanction-based mechanisms.

Older PTAs are less effective in achieving environmental SDG targets. More recent agreements tend to include stronger environmental provisions and produce better sustainability outcomes.

Technical and financial assistance provisions improve outcomes. PTAs that include support mechanisms for capacity-building and environmental governance tend to achieve better SDG-related results.

2. Research Scope & Methodology

This deliverable employs quantitative analysis to assess the effect of environmental provisions in PTAs on selected SDG indicators. The approach includes:

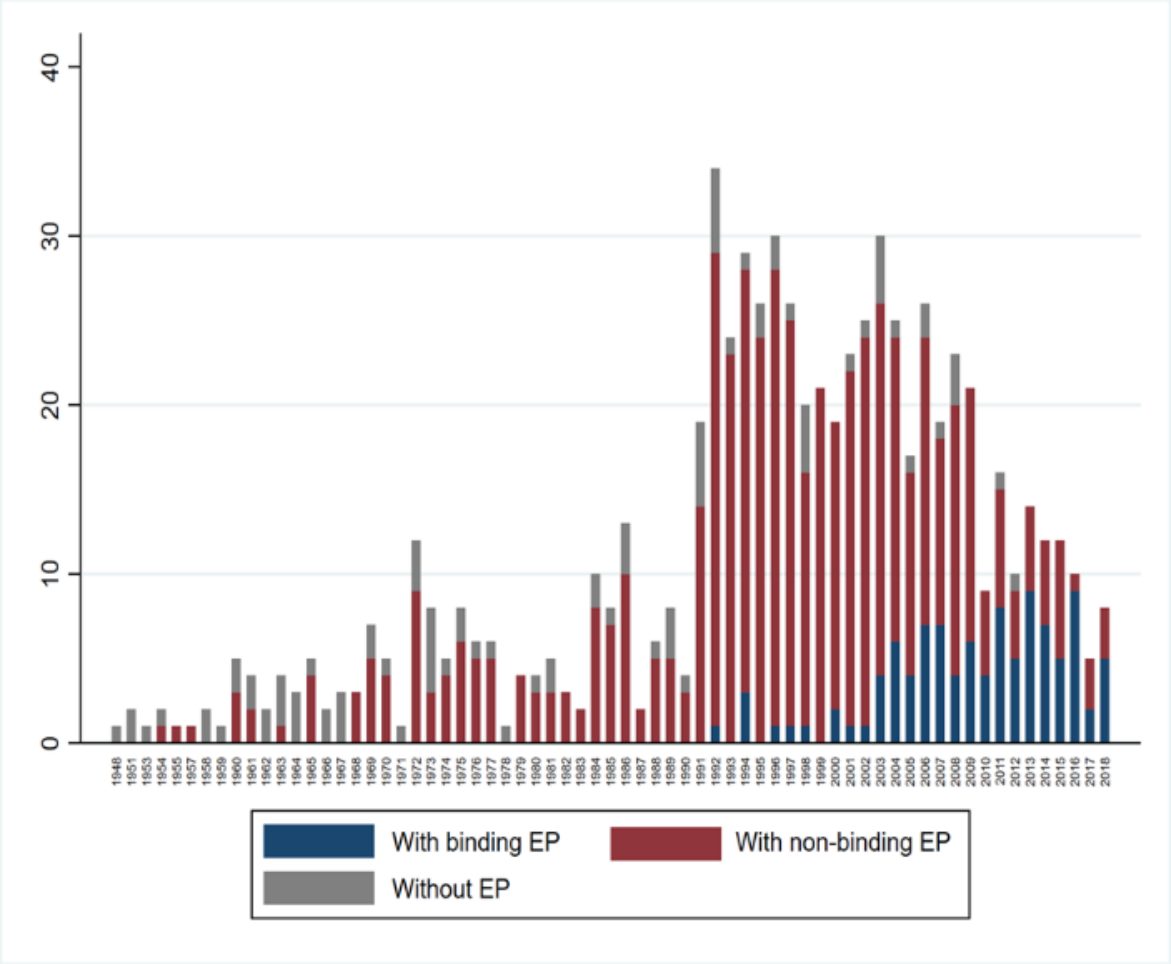
- Comprehensive **dataset from TREND** (Trade and Environment Database) covering 630 PTAs.
- Use of synthetic difference-in-differences **(SDID) estimation** to account for staggered PTA implementation and endogeneity issues.
- **Focus on five SDGs** (6, 7, 13, 14, 15) with eight environmental indicators linked to specific PTA provisions.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Environmental Provisions in PTAs and Their Effectiveness

- The **number of PTAs with environmental provisions has surged** since the early 2000s, moving from general clauses to highly specific norms (Figure 4.1).
- Provisions on **renewable energy production, GHG reduction, and fisheries protection** are among the most effective in supporting SDG targets.
- **Older PTAs are less impactful**, suggesting that more recent agreements incorporate improved enforcement mechanisms.

Figure 4.1: Number of Trade Agreements with and without Environmental Provisions (EP)



Source: Authors' elaboration with data from TREND.

Implication: Future trade agreements should include stronger, well-defined, and enforceable environmental commitments.

3.2. The Role of Binding vs. Non-Binding Environmental Provisions

- **Non-binding provisions often perform better** than binding ones, particularly in areas like illegal fishing and protected areas.
- Binding provisions work better for GHG reduction, but for other areas, **cooperative frameworks yield better results.**

Implication: A hybrid approach combining cooperative measures with targeted enforcement could be more effective.

3.3. PTAs and SDG Outcomes: Evidence by Sector

Water Management (SDG 6: Clean Water and Sanitation)

- Provisions on water efficiency and transboundary water governance show mixed results.
- Only binding provisions on river management significantly reduce water stress, while non-binding ones may lead to unintended negative outcomes.

Renewable Energy & Climate Action (SDGs 7 & 13)

- Renewable energy provisions increase the share of clean energy in the mix.
- **GHG reduction provisions significantly lower emissions**, particularly in PTAs with binding commitments.

Fisheries & Biodiversity Conservation (SDGs 14 & 15)

- PTAs with **anti-illegal fishing clauses improve fish stock sustainability**.
- Provisions on **protected areas and biodiversity conservation show positive effects**, particularly when technical assistance is included.

4. Implications for EU Policy & Trade Governance

- Ensure provisions are **specific, enforceable, and linked to SDG indicators**.
- Encourage a **combination of binding and cooperative approaches** to maximise effectiveness.
- **Support mechanisms for implementation**, including technical and financial assistance.
- Trade agreements should be **SDG-proofed** to assess sustainability impacts before implementation.
- Include **environmental dispute settlement mechanisms** with clear follow-up measures.
- Encourage **knowledge transfer and capacity-building** to help partner countries meet sustainability goals.
- **Coordinate trade agreements** with EU climate, energy, and biodiversity strategies.
- **Ensure alignment** with the European Green Deal and CAP reforms.
- **Improve data collection and monitoring** to track sustainability outcomes.

5. Conclusion

This deliverable provides strong evidence that **well-designed environmental provisions in PTAs can support sustainability goals**, but their effectiveness depends on specific design choices. **Key takeaways include:**

- Trade agreements must incorporate **detailed and targeted environmental provisions.**
- **A hybrid approach** combining cooperative and binding measures **is recommended.**
- Technical and financial **support improves compliance and effectiveness.**

This Project Brief is based on Deliverable 2.1. of the TRADE4SD project.

PROJECT BRIEF 5: SUSTAINABILITY WITHIN EU TRADE AGREEMENTS – INSIGHTS FROM GHANA, VIETNAM AND TUNISIA

1. Main Messages

EU trade agreements increasingly integrate sustainability provisions, yet their effectiveness varies significantly across countries and sectors.
Stakeholder engagement remains a challenge, with limited participation from local actors in shaping sustainability provisions.
Deforestation, biodiversity loss, and labour rights remain critical concerns, requiring stronger enforcement mechanisms and capacity-building initiatives.
Sustainability provisions need clearer enforcement mechanisms to avoid becoming mere symbolic commitments.

2. Research Scope & Methodology

This study examines **how Trade and Sustainable Development (TSD) provisions operate** in the EU's trade agreements with Ghana, Vietnam, and Tunisia. The analysis is based on:

- **A review of TSD provisions** in different EU trade agreements.
- **Qualitative stakeholder interviews** in Ghana, Vietnam, and Tunisia.
- **Analysis of sustainability challenges and compliance mechanisms** in each country.

To review how SDGs are included in the EU trade agreements, three strategic products' value chains (cocoa, coffee and olive oil) have been analysed in three countries: Ghana, Vietnam and Tunisia, having different agreements, at different stages of development (Figure 5.1).

Figure 5.1: Main features of EU trade agreements with Vietnam, Ghana and Tunisia.

	Vietnam	Ghana	Tunisia
Type of Agreement	'New generation' Free Trade Agreement	Economic Partnership Agreement	Association Agreement (Deep and Comprehensive Free Trade Agreement under negotiation)
Entry into force	1st August **2020**	Provisionally applied since 1st December **2016**	1st March **1998**, ongoing negotiations on modernization since **2015**
Was a SIA conducted?	✓	Not specifically for Ghana (one for ECOWAS region)	✓
Is a TSD Chapter included in the agreement?	✓	×	Proposal under negotiation

Source: Authors' elaboration based on case study reports.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Ghana: Sustainability in the Cocoa Value Chain

- **The EU-Ghana Economic Partnership Agreement (EPA) promotes sustainability,** but implementation gaps persist.
- **Cocoa production faces deforestation and social issues**, including child labour and poor working conditions.
- **Market access is dependent on compliance with EU sustainability standards**, but smallholder farmers struggle to meet requirements.

Implication: Technical assistance and financial support are needed to help smallholders comply with EU standards.

3.2. Vietnam: Trade, Sustainability, and Coffee Production

- The EU-Vietnam Free Trade Agreement (EVFTA) includes strong sustainability provisions, **yet enforcement remains weak.**
- **Compliance with EU environmental regulations**, such as deforestation-free commodity standards, **poses challenges for coffee producers**.
- **Stakeholder participation in sustainability dialogues is low**, limiting the effectiveness of TSD chapters.

Implication: The EU should use cooperation mechanisms within the TSD chapter to improve sustainability compliance through training and technical support.

3.3. Tunisia: Challenges in the Olive Oil Sector

- The EU-Tunisia Association Agreement includes sustainability commitments, but **implementation remains uneven**.
- **Water scarcity and climate change impact olive oil production**, raising concerns about long-term sustainability.
- **Producers favour liberalisation**, but sustainability regulations may marginalise small-scale farmers.

Implication: The EU should prioritise water management strategies and sustainability investments in future agreements.

Stakeholders' opinion on FTAs impacts on the three value chains foresee opportunities and challenges (Figure 5.2).

Figure 5.2: Opportunities and challenges of FTAs according to stakeholders' interviews

	Opportunities	Challenges
Ghana	Duty free access to EU market of cocoa and overall economic growth.	Export of cocoa beans means lack of value added; Low cooperation with the EU; Does not pay enough attention to the environment.
Vietnam	Increase in coffee exports and investments; product quality, value-added and welfare.	Market access difficulties due to limited capacity of small farmers; Small farmers issues in meeting compliance with EU standards; limited use of cooperation mechanism.
Tunisia	Greater market opportunities and economic growth; modernisation of the olive oil sector.	Risk of marginalisation of small producers; difficulties in compliance with EU standards; Environmental concerns due to production intensifications.

Source: Authors' elaboration based on case study reports.

4. Implications for EU Policy & Trade Governance

- **Ensure that TSD provisions are enforceable**, with clear compliance benchmarks.
- **Improve monitoring and reporting** on sustainability outcomes within trade agreements.
- **Provide technical support and training** for smallholder farmers to meet sustainability standards.
- **Encourage knowledge transfer and technology sharing** for sustainable agricultural practices.
- **Involve civil society and local stakeholders** in trade negotiations and sustainability monitoring.
- **Create structured dialogue platforms** to address sustainability challenges at the local level.

5. Conclusion

This analysis highlights the need for stronger enforcement, stakeholder engagement, and capacity-building measures within EU trade agreements to enhance sustainability outcomes.
Key takeaways:

- **TSD provisions need clearer enforcement mechanisms** to ensure real impact.
- **Local stakeholder engagement must be strengthened** to tailor sustainability policies to on-the-ground realities.
- **Technical assistance and knowledge-sharing are crucial** for helping partner countries meet EU sustainability standards.

This Project Brief is based on Deliverable 2.2. of the TRADE4SD project.

PROJECT BRIEF 6: TRADE AND FOOD STANDARDS: MEASURING DISTANCE IN MAXIMUM RESIDUE LEVELS OF PESTICIDES

1. Main messages

Maximum Residue Levels (MRLs) play a crucial role in shaping agricultural trade. Differences in MRLs across countries act as non-tariff measures, influencing global trade flows and market access.
The EU follows a stringent regulatory approach, often exceeding international standards such as those set by the Codex Alimentarius.
Regulatory divergence in MRLs creates trade barriers, particularly for developing countries exporting to the EU.
A new index measures the 'distance' between MRL regulations to assess the alignment or divergence between the EU and its trading partners.
Harmonisation efforts could enhance trade efficiency, reduce compliance costs, and promote sustainable agricultural practices.

2. Research Scope & Methodology

This study provides a **quantitative assessment of regulatory differences in MRLs**, focusing on:

- EU MRL regulations versus those of key trading partners.
- The role of toxicity levels in pesticide regulation.
- Specific Trade Concerns (STCs) raised at the WTO.

Development of an index measuring the 'distance' between MRL standards. Data sources include:

- Homologa and BCGlobal Veterinary Drugs Database for pesticide and antibiotic MRLs.
- WTO STC database for trade concerns related to pesticide regulations.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Regulatory Divergence in MRLs and Its Impact on Trade

- **The EU applies some of the strictest MRLs globally**, often more stringent than Codex standards.
- **Developing countries struggle with compliance**, particularly in pesticide-intensive crops such as cocoa and coffee.
- **MRL stringency affects trade flows**, with lower-income countries facing higher adaptation costs.

Implication: Improved technical assistance and regulatory convergence could lower trade barriers while maintaining safety standards.

3.2. Measuring Regulatory 'Distance' in Pesticide and Antibiotic MRLs

A new index quantifies the difference between EU and partner country MRLs.

- Toxicity-weighted analysis shows that **some regulations disproportionately impact certain commodities**.
- **Regulatory gaps persist** between developed and developing nations, leading to trade distortions.

Implication: Aligning MRLs where possible, or offering targeted exemptions, could enhance trade facilitation without compromising safety.

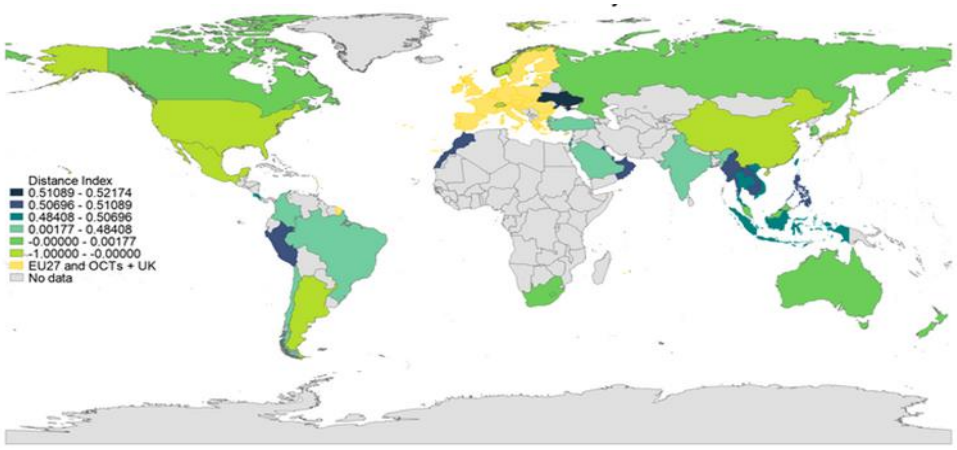
3.3. WTO Specific Trade Concerns (STCs) Related to MRLs

- **STCs related to MRLs are increasing**, indicating growing trade frictions.
- **Disputes often arise from differences** between EU and Codex MRL standards.
- **Countries with higher pesticide use frequently challenge EU restrictions**, citing trade discrimination.

Implication: A more structured approach to resolving STCs could help avoid trade conflicts and enhance regulatory transparency.

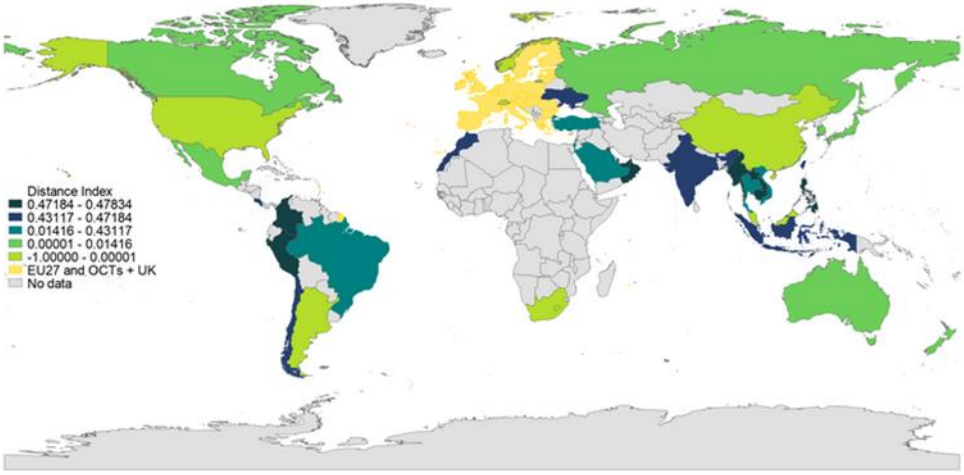
The two maps below compare regulation differences for slightly and highly toxic substances. The mean and distribution of the synthetic distance index indicate that as toxicity decreases, country heterogeneity slightly increases. Figure 6.1 illustrates the distance in MRL regulation from the EU for highly toxic substances, while Figure 6.2 shows this distance for slightly toxic substances.

Figure 1: country's distance in MRL regulation from the EU for highly toxic substances



Source: Authors' elaboration on data Homologa 2020.

Figure 2: Country's distance in MRL regulation from the EU for slightly toxic substances



Source: Authors' elaboration on data Homologa 2020.

4. Implications for EU Policy & Trade Governance

- **Encourage harmonisation** of MRL standards at the global level.
- **Develop science-based thresholds** that balance safety and trade facilitation.
- **Improve regulatory transparency** to reduce compliance uncertainties for exporters.
- **Increase funding for technical assistance** to help exporters meet EU standards.
- **Facilitate training programmes** for sustainable pesticide use.
- **Consider mutual recognition** agreements for low-risk pesticides.
- **Enhance dispute resolution** mechanisms for MRL-related STCs.
- Ensure that MRL-setting processes are **transparent and evidence-based**.
- **Encourage Codex-aligned standards** where feasible to reduce regulatory fragmentation.

5. Conclusion

This analysis underscores the importance of harmonising pesticide and antibiotic MRL regulations to reduce trade barriers while maintaining high food safety standards. **Key takeaways:**

- **Regulatory divergence in MRLs acts as a non-tariff barrier**, disproportionately affecting developing country exporters.
- **A structured approach to regulatory convergence** could improve trade facilitation while ensuring safety.
- **Stronger WTO mechanisms** for resolving MRL-related STCs are needed to reduce trade tensions.

This Project Brief is based on Deliverable 2.3. of the TRADE4SD project.

PROJECT BRIEF 7: STRENGTHENING MULTILATERAL TRADE RULES FOR SUSTAINABILITY

1. Main Messages

Multilateral trade rules play a crucial role in advancing the UN Sustainable Development Goals (SDGs), but **current frameworks lack sufficient alignment with sustainability objectives.**
The World Trade Organization (WTO) and other multilateral **agreements have indirect but significant impacts** on sustainability by shaping global trade norms and market access**.**
Trade agreements could better contribute to sustainability **by incorporating SDG-proofing mechanisms, stronger enforcement, and enhanced coherence with environmental, social, and labour standards.**
Specific Trade Concerns (STCs) serve as a valuable mechanism to address sustainability-related disputes in multilateral trade, but **their effectiveness remains limited.**
Stakeholder consultation and cooperation mechanisms should be strengthened to improve the governance of sustainability in multilateral trade.

2. Research Scope & Methodology

This deliverable examines the **role of WTO agreements and other multilateral trade frameworks** in supporting sustainability objectives. The approach includes:

- **Analysis of 20 key multilateral trade agreements** and their linkages to SDGs.
- **Development of a Trade-SDG Matrix** to assess the alignment of trade provisions with sustainability goals.
- **Case studies of Specific Trade Concerns (STCs)** to evaluate the practical role of WTO mechanisms in addressing sustainability-related trade issues.
- **Stakeholder consultations** with policymakers, industry representatives, and civil society organisations.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. The Role of Multilateral Agreements in Sustainability

- Multilateral trade agreements influence sustainability outcomes, but **their impact is often indirect and uncoordinated**.
- **The WTO lacks a dedicated sustainability mechanism,** making it difficult to systematically integrate environmental and social goals into trade rules.
- **Agreements** such as the Convention on Biological Diversity (CBD) and the Paris Agreement provide complementary sustainability frameworks but **lack direct enforcement through trade rules.**

Implication: A structured sustainability mechanism within WTO agreements could strengthen trade's contribution to SDGs.

3.2. Specific Trade Concerns (STCs) as a Sustainability Tool

- **STCs provide a formal mechanism for addressing sustainability-related trade issues,** including disputes over environmental and labour standards.
- **However, STCs are reactive rather than proactive** and lack binding enforcement, limiting their effectiveness.

Implication: Reforming STCs to include stronger dispute resolution elements could enhance their role in sustainability governance.

3.3. Aligning Trade Agreements with Sustainability Priorities

- A Trade-SDG Matrix analysis reveals that **most agreements prioritise economic over environmental or social sustainability goals**.
- Certain agreements, such as the Agreement on Agriculture, contain sustainability-relevant provisions, but **enforcement remains weak**.

Implication: Future trade agreements should explicitly integrate sustainability indicators and compliance mechanisms.

4. Implications for EU Policy & Trade Governance

- **Integrate sustainability commitments explicitly** into WTO agreements.
- **Develop a dedicated dispute resolution process** for sustainability-related trade concerns.
- **Enhance regulatory cooperation** between WTO, the Paris Agreement, and the CBD.
- **Expand the scope of STCs** to include proactive sustainability discussions.
- **Introduce binding arbitration mechanisms** for unresolved sustainability disputes.
- **Ensure broader participation** from civil society, private sector, and academia in trade negotiations.
- **Develop public-private partnerships** to implement sustainability provisions in trade agreements.

5. Conclusion

This deliverable highlights the need for stronger sustainability integration in multilateral trade frameworks to enhance their contribution to the UN Sustainable Development Goals. **Key takeaways:**

- Multilateral trade agreements must **systematically integrate sustainability considerations.**
- **Specific Trade Concerns (STCs) should be reformed** to include sustainability enforcement mechanisms.
- **Stakeholder engagement must be strengthened** to improve trade governance and sustainability outcomes.

This Project Brief is based on Deliverable 2.4. of the TRADE4SD project.

PROJECT BRIEF 8: MODELLING SOCIAL AND DISTRIBUTIONAL IMPACTS OF TRADE AND SUSTAINABILITY POLICIES

1. Main Messages

Trade and sustainability policies have significant social and distributional impacts, but their effects vary across different socio-economic groups.
Household Budget Surveys (HBS) and micro-level data were integrated into the modelling framework to **assess the social and regional disparities of trade policy outcomes**.
Trade liberalisation impacts employment, income distribution, and poverty levels differently in high-income versus low-income households.
Results suggest that **targeted policies are needed** to mitigate adverse effects and ensure an equitable distribution of trade benefits.

2. Research Scope & Methodology

This study explores the social and distributional impacts of trade and sustainability policies using **quantitative modelling approaches**. The research methodology includes:

- The **MAGNET CGE model**, which integrates economic, environmental, and social variables.
- Use of **Household Budget Surveys (HBS)** to provide disaggregated insights into household-level economic impacts.
- **Comparison of different trade policy scenarios**, including full liberalisation and sustainability-focused trade frameworks.
- **Assessment of labour market changes**, income distribution, and poverty reduction across socio-economic groups.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Trade and Social Inequality: Winners and Losers

- **Trade liberalisation can lead to income gains** in some sectors while marginalising vulnerable groups.
- **Lower-income households face greater economic uncertainty,** particularly in regions with high employment dependency on agriculture.
- Targeted compensation mechanisms (e.g., income support or retraining) **can help mitigate distributional disparities**.

Implication: Policymakers should adopt redistributive measures to balance the social effects of trade policies.

3.2. The Role of Household Budget Surveys in Trade Modelling

- **Household Budget Surveys provide granular insights** into how different income groups experience trade policy changes.
- The integration of household-level data into CGE models enhances policy relevance**, enabling assessments of inequality and poverty dynamics.**

Implication: Trade impact assessments must include disaggregated household data to improve equity in policy decisions.

3.3. Trade and Employment: Sectoral Shifts and Vulnerabilities

- **Trade policies affect job creation and job displacement differently** across industries.
- Employment shifts towards high-productivity sectors can improve overall income levels, but **low-skilled workers may struggle to transition**.
- **Social safety nets and active labour market policies are needed** to support workers at risk of losing jobs.

Implication: Labour market policies should be aligned with trade reforms to ensure inclusivity and economic resilience.

4. Implications for EU Policy & Trade Governance

- **Social impact assessments should be integrated into trade negotiations.**
- Trade agreements should include specific provisions **addressing income inequality.**
- **Stronger monitoring frameworks are needed** to assess social outcomes of trade liberalisation.
- **Introduce compensation schemes for vulnerable workers** affected by trade policies**.**
- **Expand access to vocational training and upskilling initiatives.**
- **Ensure targeted social assistance programs** for low-income households**.**
- **Trade policies should be aligned with the European Green Deal's social fairness objectives.**
- **Sustainability-focused trade strategies must include social safeguards** to prevent exacerbating inequalities.
- **Greater coordination between trade and labour market policies** is essential for inclusive growth.

5. Conclusion

This study highlights the need for more integrated approaches to trade, sustainability, and social equity. **Key takeaways:**

- Trade liberalisation can generate economic benefits, but **social disparities must be addressed.**
- **Household-level data is crucial for designing equitable trade policies.**
- **Stronger social protection and active labour market policies** are needed to support vulnerable groups.

This Project Brief is based on Deliverable 3.2. of the TRADE4SD project.

PROJECT BRIEF 9: MODELLING THE ENVIRONMENTAL IMPACT OF TRADER AND SUSTAINABILITY POLICIES

1. Main Messages

Trade and sustainability policies significantly impact global greenhouse gas (GHG) emissions and environmental degradation, but effects differ across countries and sectors.
Trade agreements such as the EU-Ghana Economic Partnership Agreement (EPA) and the EU-Vietnam Free Trade Agreement (EVFTA) **have marginal global environmental effects but could contribute to regional carbon leakage**.
Carbon border adjustment mechanisms (CBAMs) could help mitigate emissions displacement but require careful calibration to avoid trade distortions.
Comprehensive CO_2 tariffs result in significant economic decline both globally and in the EU. While these tariffs lead to substantial emission reductions in the EU, they have no significant impact on global emissions.
Full trade liberalisation combined with carbon tariffs significantly reduces global water pollution.

2. Research Scope & Methodology

This study employs CGEBox, an advanced computable general equilibrium (CGE) model, to evaluate the environmental impact of trade policies. The methodology includes:

- Analysis of trade agreements (EU-Ghana EPA, EVFTA) and full EU trade liberalisation scenarios.
- **Assessment of CO_2-based tariffs and production taxes** as potential mechanisms to reduce trade-induced emissions.
- **Integration of sector-specific emissions data** to evaluate impacts on GHG emissions and water pollution.
- **Stakeholder consultations with policymakers**, industry representatives, and NGOs to validate policy implications.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Trade and Environmental Externalities

- **Trade liberalisation has complex environmental impacts**, improving efficiency in some sectors while increasing emissions in others.
- **CO_2-based tariffs can reduce carbon leakage** but may also shift emissions to other pollutants (e.g., methane, nitrous oxide).
- **Water pollution remains an overlooked externality**, requiring further integration into trade sustainability assessments.

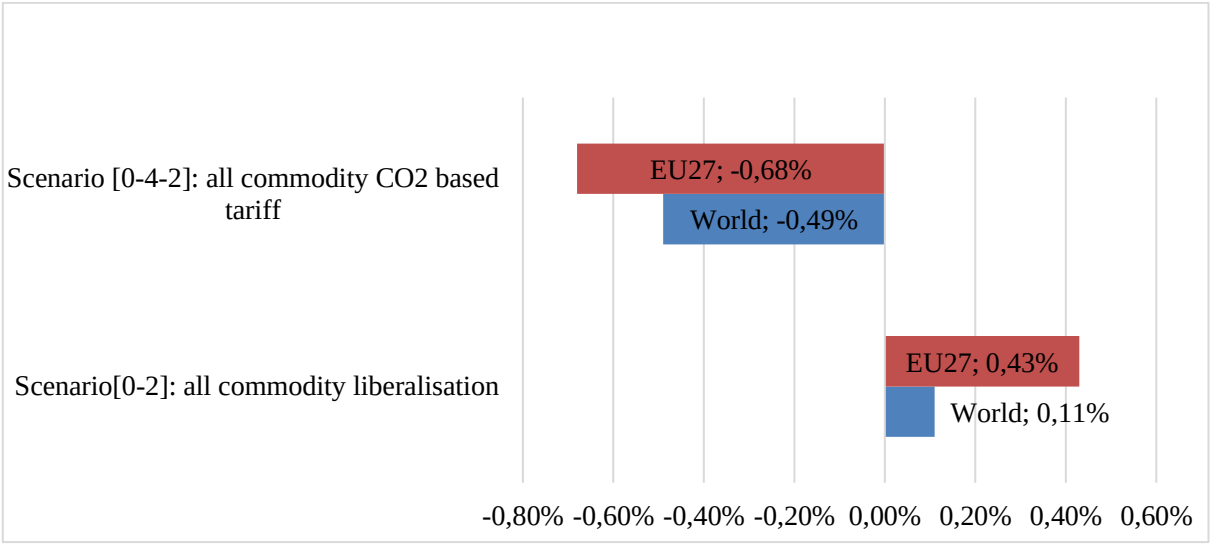
Implication: Future trade policies should include broader environmental criteria beyond CO_2 emissions. Table 9.1 shows brief results for scenario runs, while Figure 9.1 shows water related results.

Table 9.1. Scenario results for liberalisation and CO_2 based tariff

	Scenario[0-2]: all commodity liberalisation				Scenario [0-4-2]: all commodity CO_2 based tariff			
	GDP		Emissions		GDP		Emissions	
	2024	2040	2024	2040	2024	2040	2024	2040
World	0.04%	0.07%	-0.07%	-0.12%	-0.07%	-0.23%	0.12%	0.12%
EU27	0.23%	0.66%	-0.24%	0.46%	-0.40%	-1.08%	-9.93%	-14.63%

Source: own composition.

Figure 9.1: Water pollution % change projected (baseline 2040 -> scenarios 2040)



Source: own composition.

3.2. Trade Agreements and Carbon Leakage Risks

- **The EU-Ghana EPA shows mixed environmental effects**, with temporary emissions reductions in Ghana but long-term increases post-2030.
- **The EVFTA leads to rising emissions in Vietnam**, suggesting that trade growth may accelerate carbon-intensive industrialisation.
- **Full EU trade liberalisation scenarios indicate that removing tariffs alone does not lead to significant environmental benefits unless combined with sustainability measures.**

Implication: Stronger environmental safeguards are needed within FTAs to prevent carbon leakage and unintended environmental consequences.

3.3. Effectiveness of Carbon Border Adjustment Mechanisms (CBAMs)

- **CBAMs can partially offset emissions displacement risks** but may create trade tensions if not designed carefully.
- **CO_2-based import tariffs alone do not lead to significant global emissions reductions** unless combined with broader climate policies.
- **Retaliatory measures by trade partners could counteract** the intended climate benefits of CBAMs.

Implication: Carbon pricing mechanisms must be designed in coordination with international partners to maximise effectiveness.

4. Implications for EU Policy & Trade Governance

- **Expand the scope of EU sustainability impact assessments** (SIAs) to include non-CO_2 emissions and water pollution.
- **Develop sector-specific environmental thresholds** for trade agreements.
- **Enhance regulatory cooperation** between trade and climate policy frameworks.
- **Introduce binding environmental clauses** in EU trade agreements.
- **Ensure compliance** with the European Green Deal's climate neutrality objectives.
- **Enhance enforcement mechanisms** for sustainability commitments in FTAs.
- **Align CBAMs with WTO rules** to prevent trade disputes.
- **Introduce exemptions or transition periods** for low-income countries.
- **Ensure transparency and stakeholder engagement** in CBAM policymaking.

5. Conclusion

This study highlights the need for **stronger environmental integration** in trade policy to align with climate and sustainability goals. **Key takeaways:**

- Trade agreements must incorporate **stronger environmental safeguards** to prevent emissions displacement.
- Carbon pricing mechanisms like CBAMs **require careful calibration** to avoid trade conflicts.
- **Water pollution and non-CO_2 emissions should be integrated** into future sustainability assessments.

This Project Brief is based on Deliverable 3.3. of the TRADE4SD project.

PROJECT BRIEF 10: TRADE LIBERALISATION AND ITS IMPACT ON SDGS 2 & 13

1. Main Messages

Trade liberalization alone does not bring the world significantly closer to meeting the SDG2 and SDG13 targets.
Combined with yield improvements and dietary changes, trade liberalisation helps to improve food availability, affordability and stability.
The EU biodiversity target of expanding fallow land **reduces crop production and increases crop prices** but also contributes to climate change mitigation.
Global trade liberalisation increases the **production of milk and dairy products** in the EU and can reduce the negative economic effects of environmental policies (i.e., fallow land expansion).

2. Research Scope & Methodology

This study models the economic, social, and environmental impacts of trade liberalisation using:

- **Aglink-Cosimo:** A global agricultural market model assessing trade policy impacts on food availability, prices, and emissions.
- **AGMEMOD:** A detailed EU-focused model evaluating trade effects on agricultural production and emissions.
- **Three trade liberalisation scenarios**: (A) tariff and non-tariff barrier reductions, (B) productivity improvements, and (C) dietary shifts.
- **Sector-specific emissions estimates** using IPCC methodologies to quantify climate impacts.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Trade Liberalisation and Food Security (SDG 2)

- **Trade liberalisation generally lowers food prices** in high-income countries (HICs), increasing food availability.
- **Low-income countries (LICs) may face food security risks** as world price increases make imports more expensive.
- **Trade shifts lead to higher meat and dairy consumption** in LICs and lower in high-income countries, with mixed nutritional impacts.

Implication: Policymakers must consider complementary policies to mitigate food insecurity risks in vulnerable regions.

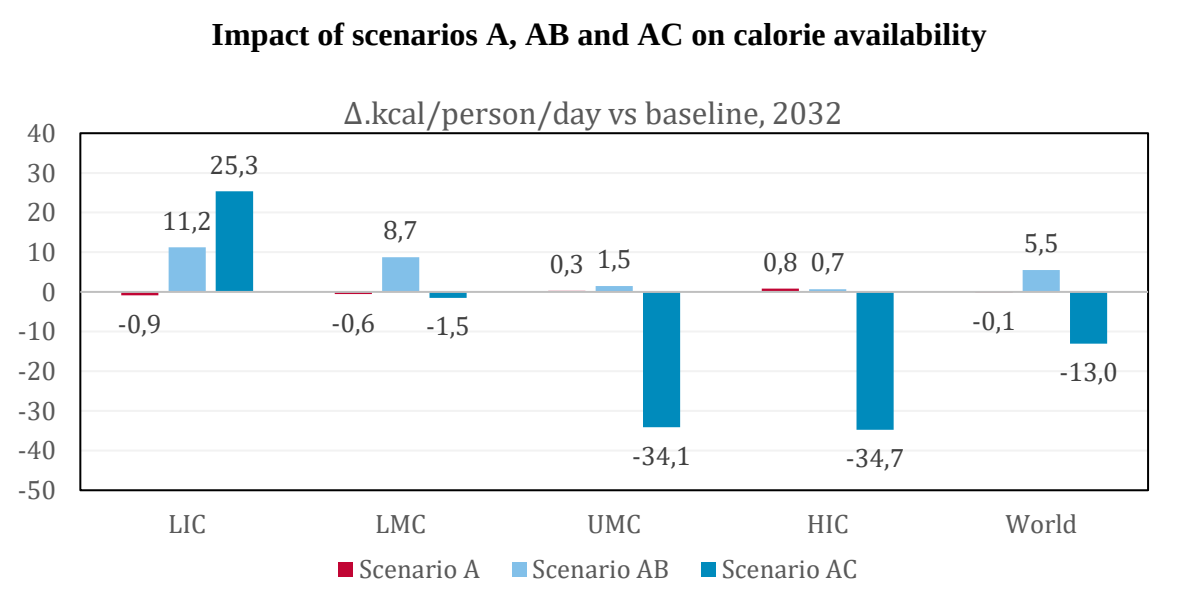
3.2. Environmental Consequences of Trade Liberalisation (SDG 13)

- **Global agricultural GHG emissions increase slightly**, mainly from livestock expansion in HICs.
- Productivity-driven scenarios reduce land-use expansion and mitigate emissions, but **trade alone does not ensure sustainability**.
- Dietary shifts (reduced meat consumption in HICs, increased in LICs) lower emissions but **require additional policies to be effective**.

Implication: Sustainability-focused trade agreements should include mitigation measures for emissions and land use changes.

Figure 10.1 shows results of caloric availability in more detail, while Figure 10.2 depicts production changes in different countries.

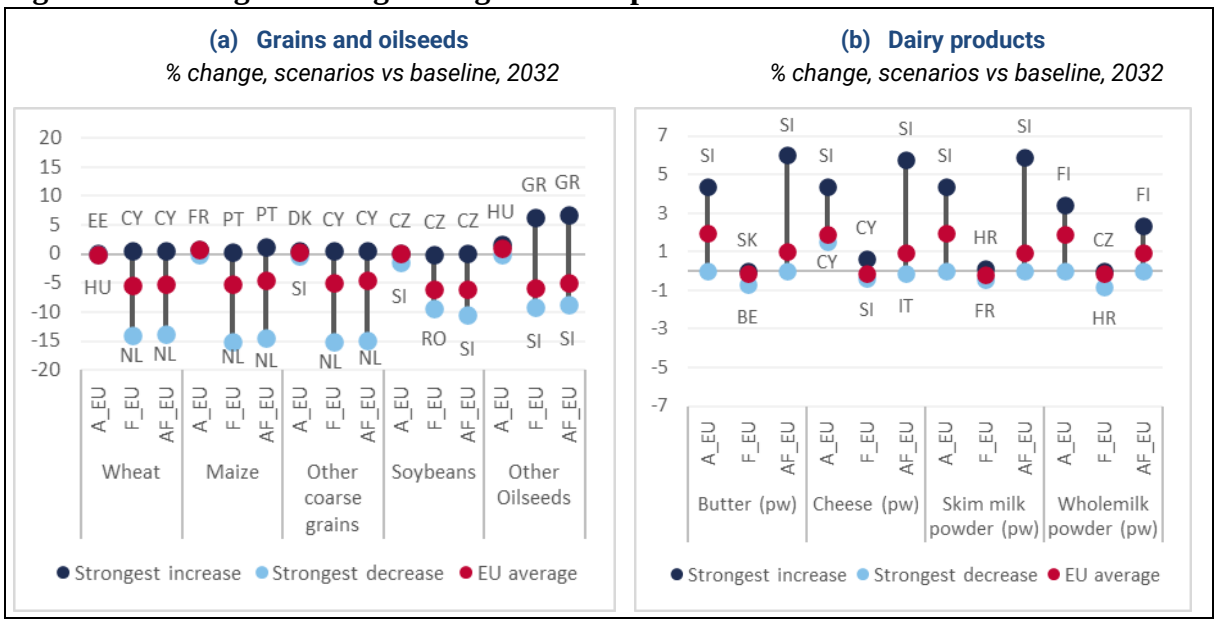
Figure 10.1: Effect on caloric availability



Note: LIC – Low-income countries; LMC – Lower-middle-income countries; UMC – Upper-middle-income countries; HIC – High-income countries.

Source: Authors' simulations, based on an extended version of the Aglink-Cosimo model and the OECD-FAO Agricultural Outlook 2023-2032 (OECD/FAO 2023).

Figure 10.2: Range of changes in agricultural production in EU Member States



Source: authors' calculations.

4. Implications for EU Policy & Trade Governance

- **Introduce trade safeguards** for food-insecure regions.
- Ensure that EU trade agreements include food security impact assessments.
- Promote **regional food production** to mitigate trade-induced supply risks.
- **Integrate binding sustainability provisions** in trade agreements.
- **Support low-emission** agricultural practices in partner countries.
- Align trade policy with the EU's Green Deal and climate objectives.
- **Promote dietary shifts** in trade policy to encourage sustainable food systems.
- **Incentivise plant-based diets** in high-income markets while ensuring nutritional balance.
- **Support alternative proteins** and sustainable livestock production in global trade.

5. Conclusion

This study highlights the trade-offs between food security and environmental sustainability under trade liberalisation scenarios. **Key takeaways:**

- **Trade liberalisation must be complemented** by food security policies to protect vulnerable populations.
- **Environmental safeguards are necessary** to prevent unintended emissions increases.
- **Sustainable dietary policies should be integrated** into trade negotiations.

This Project Brief is based on Deliverable 3.4. of the TRADE4SD project.

PROJECT BRIEF 11: INTEGRATING STAKEHOLDER VIEWS INTO TRADE POLICY MODELLING

1. Main Messages

Stakeholder engagement enhances the relevance and legitimacy of trade policy models, improving their applicability for sustainable development.
Participatory modelling fosters a balanced approach to trade and sustainability policies, incorporating economic, social, and environmental considerations.
Insights from stakeholders reveal key concerns about the effects of trade liberalisation and sustainability policies **on food security, economic growth, and environmental degradation**.
The study identifies the need for structured stakeholder participation to ensure trade models align with real-world policy challenges.

2. Research Scope & Methodology

This study examines how stakeholder engagement can improve trade policy modelling by incorporating diverse perspectives. **Key elements include:**

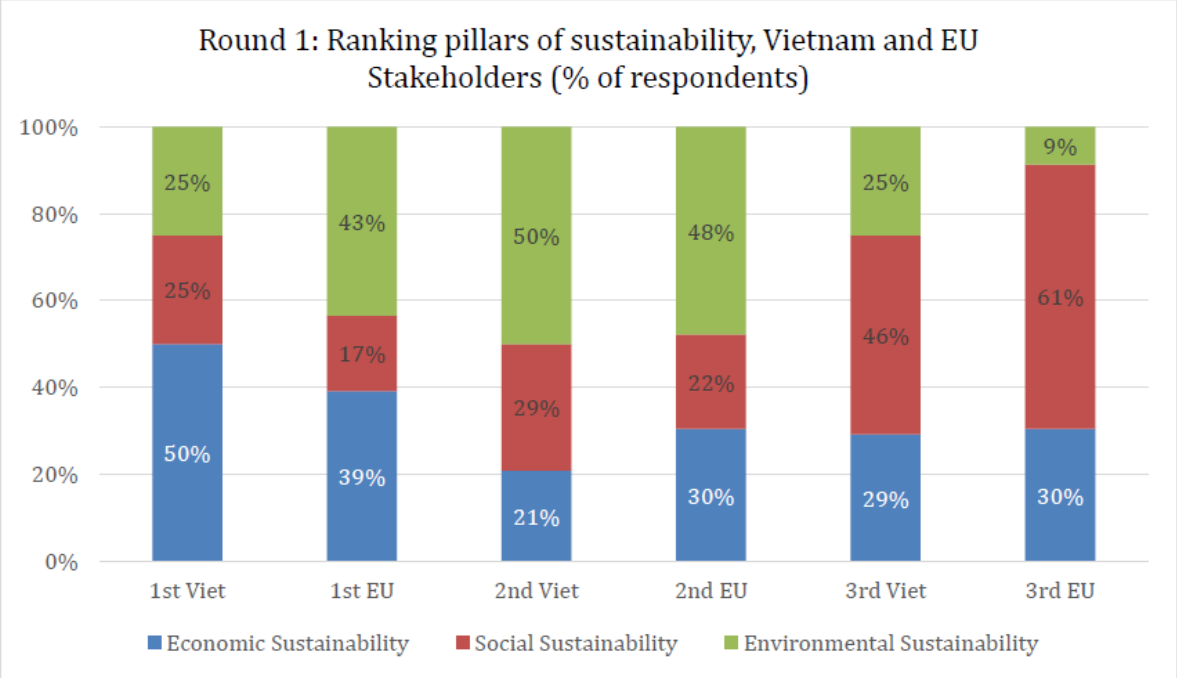
- **Structured stakeholder survey** across different sectors, including policymakers, businesses, NGOs, and researchers in Ghana and Vietnam.
- **General public survey** implemented in Hungary, Germany and the United Kingdom with 3000 citizens.

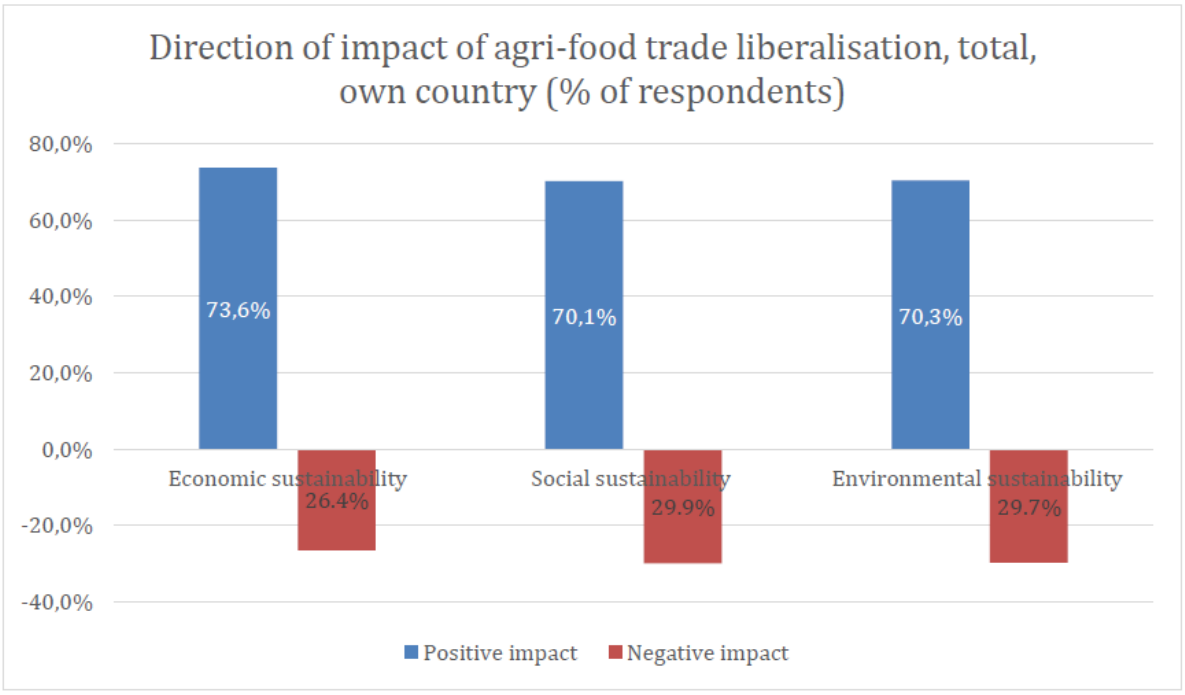
3. Key Findings: Evidence Supporting Policy Discussions

3.1. The Importance of Stakeholder Engagement in Trade Policy Modelling

- **Stakeholder engagement improves the accuracy and legitimacy of trade models**, making them more useful for policy decisions.
- **Integrating diverse perspectives** ensures that trade models capture the real-world implications of policy changes.
- **Structured consultations help identify trade-offs** between economic growth, environmental sustainability, and social equity.

Implication: Future trade policy models should incorporate participatory approaches to enhance relevance and impact.





3.2. Trade Liberalisation, Sustainability, and Stakeholder Perceptions

- **Economic concerns dominate stakeholder discussions**, with a strong focus on job security and income distribution.

- **Environmental and social concerns vary by region**, with EU stakeholders prioritising climate and biodiversity, while developing country stakeholders emphasise poverty reduction.
- **Trade liberalisation is generally seen as positive for sustainability** but requires safeguards to mitigate negative social and environmental effects.

Implication: Trade models should integrate differentiated policy responses to account for regional disparities in priorities.

3.3. Changes in Sustainability Preferences

- **COVID-19 and the war in Ukraine has significantly impacted stakeholders' views** on the different dimensions of sustainability.
- **Prices, resilience of supply chains and secured food security** were considered to be the most important elements of economic sustainability.
- The main priorities in the social pillar were **societal stability, employment level and income distribution.**
- **Water quality and water waste** have been put at the centre of environmental sustainability

Implication: Trade models and policy implications should consider real world situations and recent geopolitical context changes.

4. Implications for EU Policy & Trade Governance

- **The general public appear to believe in the sustainability benefits of trade liberalisation.**
- **A balanced approach is necessary** calculating with trade-offs among pillars.
- It is necessary to **investigate the income distribution under different scenarios** for agri-food trade.
- Concerning future policy, the priorities in the EU should be to **ensure structural changes in the agri-food sector** that comply with sustainability objectives.

5. Conclusions

This study highlights the importance of integrating stakeholder perspectives into trade policy modelling to enhance policy relevance and legitimacy. **Key takeaways:**

- Stakeholder engagement improves the **accuracy, legitimacy, and applicability** of trade models.
- Trade models should account for **regional differences in sustainability concerns** and economic priorities.
- **Transparent communication** of trade model results enhances their policy impact.

This Project Brief is based on Deliverable 4.1. of the TRADE4SD project.

PROJECT BRIEF 12: CONTEXT HETEROGENEITY AND TRADE-SUSTAINABILITY LINKAGES

1. Main Messages

Context heterogeneity significantly shapes the sustainability outcomes of trade policies, with different socio-economic and environmental conditions influencing results.

Case studies from Ghana and Vietnam highlight diverse value chain structures, policy environments, and sustainability challenges, affecting how trade impacts livelihoods, environmental conservation, and market access.

The EU-Vietnam Free Trade Agreement (EVFTA) **promotes sustainability but faces enforcement gaps, while the** EU-Ghana Economic Partnership Agreement (EPA) **improves market access but lacks strong sustainability measures**

Smallholder farmers in both countries struggle with market integration, certification barriers, and resource constraints, limiting their ability to benefit from trade agreements.

Sustainability challenges, including environmental degradation, labour conditions, and gender inequality, persist despite trade liberalisation efforts, requiring targeted policy interventions.

2. Research Scope & Methodology

This study examines how contextual differences shape trade and sustainability linkages, using:

- **Case studies of Ghana (cocoa, cashew) and Vietnam (rice, tea, dragon fruit)** to explore trade's role in sustainable development.
- **Mixed-methods approach**, combining qualitative and quantitative data, including literature reviews, stakeholder consultations, and surveys.
- **Analysis of EU trade agreements** (EPA and EVFTA) to assess sustainability provisions and their effectiveness.
- **Comparative framework to identify commonalities and differences** in sustainability outcomes across the two countries.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Trade and Sustainability Challenges in Ghana

- Cocoa farming contributes significantly to **deforestation and biodiversity loss**, while cashew offers **a more sustainable alternative**.
- **Weak institutional support** for cashew farmers limits their market access and economic viability, in contrast to the stronger government intervention in the cocoa sector.
- **Smallholder farmers struggle with price volatility, low incomes, and limited bargaining power**, impacting their ability to invest in sustainable practices.

Implication: Ghana's trade policies should prioritise local processing and certification adoption to enhance sustainability outcomes.

3.2. Trade and Sustainability Challenges in Vietnam

- **Rice production is highly water-intensive and contributes to greenhouse gas emissions**, requiring climate-smart agricultural practices.
- **The tea and dragon fruit sectors lack robust government support**, leading to challenges in productivity and international competitiveness.
- **Trade liberalisation has increased Vietnam's market opportunities**, but smallholder farmers face certification barriers and reliance on intermediary traders.

Implication: Vietnam should invest in value-added processing and certification programs to improve smallholder competitiveness in global markets.

3.3. Cross-Country Comparative Insights

- **Both Ghana and Vietnam exhibit market access challenges, weak labour protections, and environmental risks**, though the specific drivers differ.
- **Gender inequality remains a significant barrier in both countries**, limiting women's access to land, training, and financial resources.
- **The role of voluntary sustainability standards (VSSs) varies**, with Ghana focusing more on Fairtrade/UTZ certification and Vietnam on GlobalGAP.

Implication: Trade agreements should integrate more comprehensive social and environmental safeguards to address country-specific sustainability concerns.

Table 12.1. shows cross-country differences in more detail, while Table 12.2. provides recommendations on how to make more sustainable based on case study evidence.

Table 12.1: Common features and challenges across supply chains in Ghana and Vietnam

Issues	Ghana	Vietnam
Income	Farmers earn below poverty thresholds	Farmers earn low incomes, with limited profitability in value chains.
Market access & certificatio n	The challenges with adopting certification schemes like Fair Trade due high costs and low awareness.	Barriers to certification (e.g., GlobalGAP) due to high costs and fragmented farms.
Enviroment	Environmental issues, such as deforestation and biodiversity loss from monoculture.	Overuse of chemical inputs leads to soil degradation and water pollution.
Climate change	Cocoa and cashews are sensitive to climate change, water scarcity and soil erosion.	Rice, tea, and dragon fruit are affected by water scarcity, salinity, and extreme weather.
Gender	Women face limited land inheritance rights, lower income, and fewer opportunities in higher-value tasks.	Women have smaller farm sizes, lower incomes, and limited access to credit and training.
Health	Farmers lack protective equipment and face exposure to hazardous tasks like pesticide application.	Farmers often lack protective equipment, increasing health risks from chemicals.

Land tenure	Complex traditional systems (Abuna, Abusa) limit land access and productivity.	Land fragmentation reduces productivity and market efficiency.
Policy	Integrated policies required to address environmental and economic challenges.	Policies needed to support sustainable practices, market access, and equity.
Child labour	Child labour persists in hazardous tasks, though efforts are being made to reduce it.	Reports of child labour in agriculture, with ongoing concerns in certain sectors.
Cooperative	Need for stronger cooperatives to improve farmers' market power and compliance with standards.	Limited number of cooperatives in dragon fruit; need for stronger organizations to support farmers.

Source: own composition.

4. Implications for EU Policy & Trade Governance

- Ensure sustainability impact assessments **(SIAs) are tailored to country-specific challenges.**
- **Expand support for voluntary sustainability standards** (VSSs) to facilitate smallholder certification.
- Introduce mechanisms to **monitor and enforce** environmental and social clauses in EU trade agreements.
- **Enhance access to credit and financial instruments** for sustainability investments.
- **Develop trade capacity-building programs** to assist smallholders in meeting export standards.
- **Strengthen producer cooperatives** to improve value chain integration and bargaining power.
- **Support agroecological practices** to mitigate deforestation and land degradation.
- **Align EU trade policies with global climate commitments** to ensure long-term sustainability.

Table 12.2: Trade and sustainability recommendations for implementing the agreements

Issues	Ghana	Vietnam
Trade	- Improved access to EU markets through the EPA.	- Tariff reductions and privileged market access via EVFTA.
	- Need to meet higher quality and sustainability standards to enhance international competitiveness.	- Requirement to comply with stringent EU standards for quality and traceability.
	- Challenges in increasing crop profitability under the EPA framework.	- Encourage the adoption of VSSs to meet EU standards and market demands.
Sustainability	- Emphasis on eco-friendly farming practices to align with EPA sustainability standards.	- Promotion of sustainable agricultural practices as a key aspect of the EVFTA.
	- Focus on reducing environmental impact, especially in cocoa and cashew farming.	- Elevation of working conditions and encouragement of sustainable practices through certifications.
	- Addressing gender equality and enhancing the roles of women in agricultural sectors.	- Addressing gender imbalances, empowering small farmers, and strengthening agricultural cooperatives.
	- Aligning national policies with EPA commitments to overcome environmental and social challenges.	- Aligning national strategies with EVFTA to promote sustainable growth.

Source: own composition.

5. Conclusion

This study highlights the importance of recognising context heterogeneity in trade policy formulation, ensuring sustainability interventions are tailored to country-specific realities. **Key takeaways:**

- **Trade agreements must integrate stronger sustainability safeguards** to address regional disparities.
- **Smallholder farmers require targeted support** to improve market access and adopt sustainability standards.
- **Future trade policies should balance** economic growth with social and environmental sustainability.

This Project Brief is based on Deliverable 4.2. of the TRADE4SD project.

PROJECT BRIEF 13: SUSTAINABILITY EFFECTS OF VOLUNTARY AND ETHICAL TRADE STANDARDS

1. Main Messages

Voluntary Sustainability Standards (VSS) play a significant role in promoting sustainability in global value chains, but their effectiveness varies by region, sector, and governance structures.
Governance challenges and coordination issues limit the efficiency of VSS in addressing sustainability concerns.
Smallholder farmers struggle to meet certification requirements, limiting their ability to participate in sustainable trade initiatives.
Stronger integration of VSS into public policies is required to enhance their impact on trade and sustainability objectives
The main challenge associated with VSSs is **compliance with sustainable production standards.**

2. Research Scope & Methodology

This study evaluates the sustainability effects of Voluntary Sustainability Standards (VSS) using:

- **Literature review on the role of VSS in trade and sustainability,** assessing their governance models and effectiveness.
- Empirical evidence from key agricultural sectors, **focusing on Ghana's cocoa and Vietnam's coffee value chains**.
- **Assessment of global trade policies,** including interactions between VSS and WTO regulations.
- **Stakeholder analysis,** incorporating perspectives from policymakers, businesses, and producers.

3. Key Findings: Evidence Supporting Policy Discussions

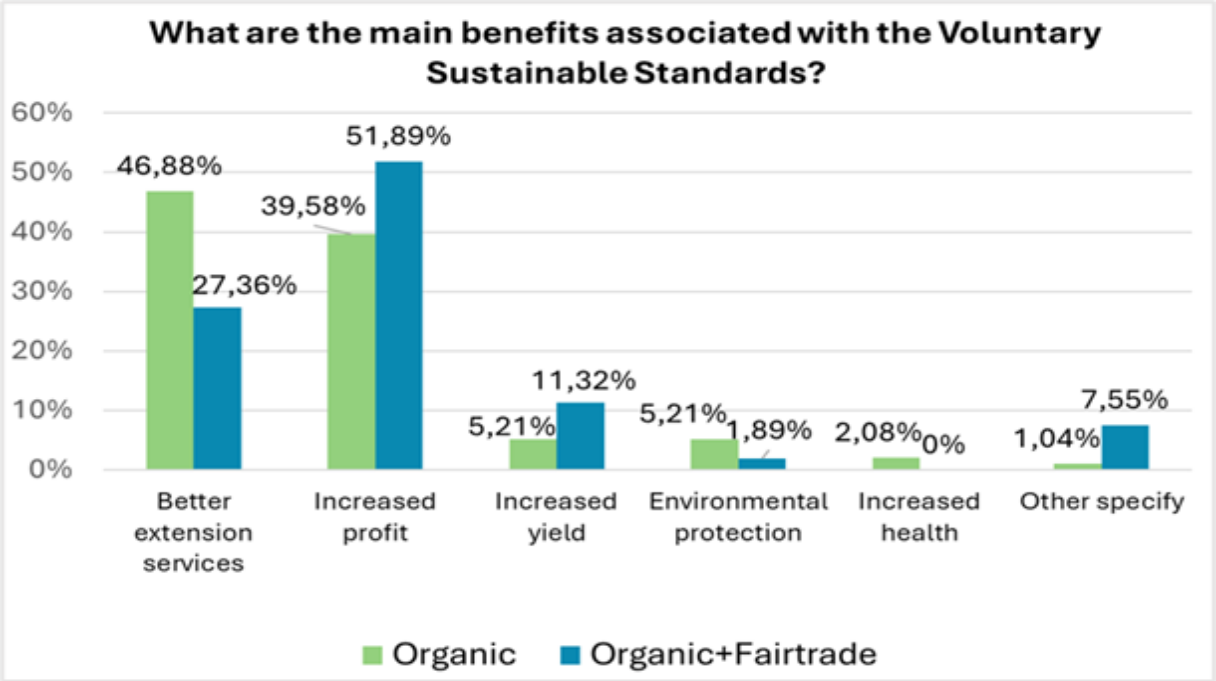
3.1. The Role of Voluntary Sustainability Standards in Trade Governance

- VSS provide mechanisms for improving sustainability in global value chains, **addressing labour rights, environmental protection, and social welfare.**
- **They serve as an alternative governance tool** in the absence of strong public regulations, but their effectiveness depends on enforcement mechanisms.
- **The proliferation of VSS creates coordination challenges,** with overlapping and competing standards reducing overall impact.

Implication: Stronger harmonisation efforts are needed to improve VSS effectiveness and prevent regulatory fragmentation.

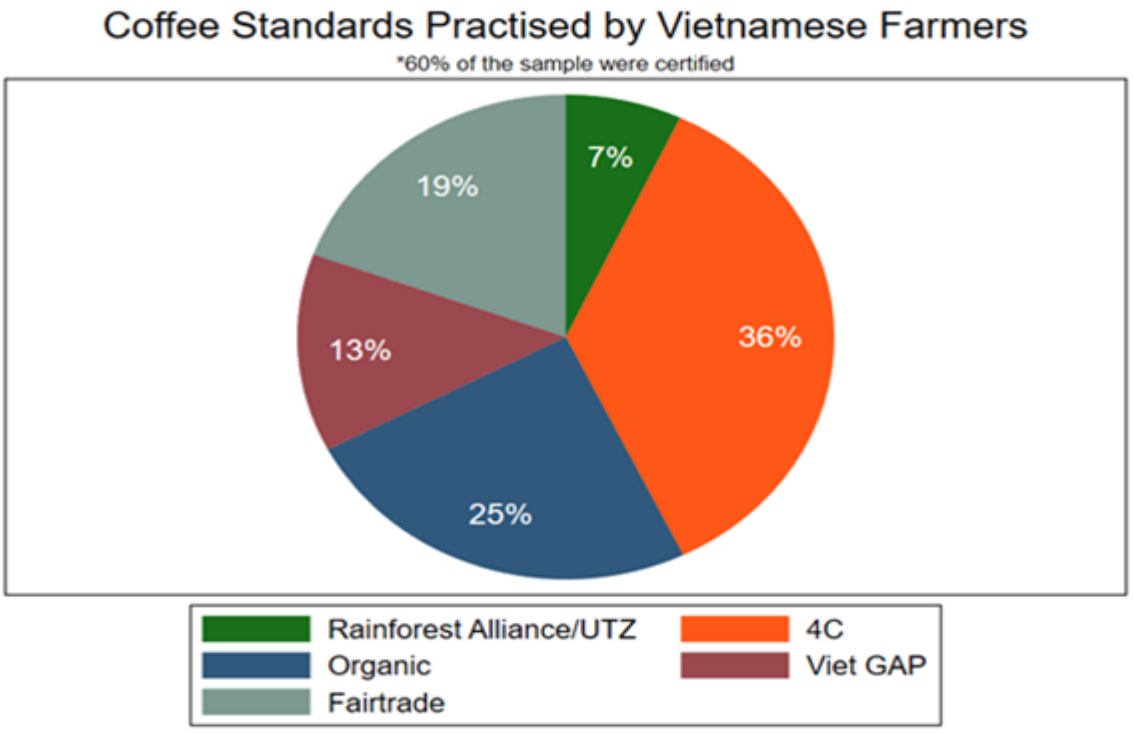
Figure 13.1. and 13.2 provides some more insights to our results.

Figure 13.1: Main benefits associated with VSS in Ghana cocoa value chain



Source: own composition.

Figure 13.2: Coffee standards practiced by Vietnamese farmers



Source: own composition.

3.2. Sustainability Impacts of VSS in Agricultural Trade

- VSS have had mixed results in improving livelihoods for smallholder farmers, **often due to high certification costs and limited market access**.
- **Environmental benefits of VSS,** such as reduced deforestation and improved biodiversity conservation, **depend on enforcement and monitoring capacity**.
- **Social impacts,** including fair wages and improved labour conditions, **vary widely across sectors and regions.**

Implication: Policymakers must ensure that sustainability standards are accessible and beneficial for smallholder farmers while strengthening enforcement mechanisms.

3.3. Challenges in the Implementation of Voluntary Standards

- **The complexity of certification processes** makes it difficult for smallholders to comply, leading to exclusion from sustainable trade initiatives.
- **The credibility of VSS is sometimes questioned,** with concerns over transparency, effectiveness, and potential for greenwashing.
- **Public-private partnerships can enhance VSS credibility,** ensuring alignment with broader trade and sustainability goals.

Implication: Trade agreements should incorporate VSS as part of a broader regulatory framework to improve compliance and effectiveness.

4. Implications for EU Policy & Trade Governance

- **Embed sustainability provisions in trade agreements** to support smallholder compliance with VSS.
- **Ensure better alignment** between EU trade policies and private standards.
- **Expand technical and financial support** to facilitate VSS adoption in developing countries.
- **Encourage harmonisation of VSS** to reduce duplication and improve credibility.
- **Introduce monitoring mechanisms** to assess the effectiveness of sustainability certifications.
- **Promote multi-stakeholder dialogue** to strengthen the legitimacy of VSS.
- **Provide financial incentives for smallholder participation** in sustainable certification schemes.
- **Improve access to sustainability training and market opportunities** for certified products.
- **Ensure fair trade policies** that address socio-economic inequalities in global markets.

5. Conclusion

This study highlights the potential and limitations of Voluntary Sustainability Standards in promoting sustainable trade. **Key takeaways:**

- VSS can support sustainability goals, but **stronger enforcement and coordination are needed.**
- **Harmonisation of standards and improved governance** will enhance their effectiveness.
- **Smallholder farmers require targeted support** to ensure they benefit from sustainability initiatives.

This Project Brief is based on Deliverable 4.3. of the TRADE4SD project.

PROJECT BRIEF 14: FARMERS, TRADERS AND SUSTAINABILITY: BEHAVIOURAL INSIGHTS FROM EXPERIMENTAL EVIDENCE

1. Main Messages

To increase the **willingness of farmers to invest in sustainability, they must be more informed** about the importance of such investment.
Providing targeted sustainability information increases farmers' willingness to invest in sustainability, particularly when coupled with peer discussions**.**
Lower cost and positive framing of the need of sustainable investments increase traders' willingness to invest in sustainability of the farms they purchase produce from.
Farmers respond differently to sustainability messages depending on the source, with non-governmental organisations (NGOs) and private buyers appearing to have greater influence than government entities.
Policy measures should focus on strengthening sustainability education, facilitating peer discussions, and ensuring that trade policies incorporate behavioural insights from local supply chain actors.

2. Research Scope & Methodology

This study analyses the role of behavioural factors in shaping sustainability choices among farmers and traders, using:

- **Lab-in-the-field experiments** with 310 Vietnamese coffee farmers, 348 Ghanaian cocoa farmers, 64 Vietnamese coffee traders, and 24 Ghanaian cocoa traders.
- **Threshold Public Goods Game (TPG)** to measure farmers' willingness to contribute to sustainability investments.
- **Trader decision-making game** to analyse how market incentives and environmental risks influence sustainability investments.
- **Randomised treatment groups** receiving sustainability information from different sources (government, NGOs, private traders) to assess their relative effectiveness.

Cross-country comparisons between Ghana and Vietnam to highlight the contextual variations in sustainability preferences.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. The Role of Information in Farmers' Sustainability Choices

- **Farmers who received sustainability information were significantly more likely to invest in sustainable practices** compared to control groups.
- **Peer discussions doubled the effectiveness of sustainability messages**, highlighting the importance of community engagement in decision-making.
- Farmers were more receptive to **sustainability information provided by NGOs or private traders** than by government sources.

Implication: Policymakers should prioritise participatory sustainability education approaches that leverage trusted information sources.

3.2. Traders' Decision-Making regarding Sustainability

- Traders responded to environmental degradation **by increasing their sustainable investments when the perceived risks were higher**.
- **Those with a stronger financial link to farmers** (e.g., those who previously provided inputs) were more willing to invest in sustainable supply chains.
- **The framing of sustainability investments matters**: traders were more likely to invest when the benefits were framed positively rather than as a response to environmental damage.

Implication: Sustainability policies should incorporate risk communication strategies that highlight both the threats of inaction and the long-term benefits of sustainable investments.

3.3. Sustainability, Gender, and Child Labour

- Traders believe that **sustainability standards** would increase the overall quality and supply of the coffee/cocoa they buy.
- Most coffee farmers argue that **growing coffee in a sustainable way is time-consuming** and they have feel fatigued from the added work to produce sustainably.
- **Underlying gender equality issue:** most male farmers believe that there is gender equality however, a quarter of the female cocoa farmers believe that they do not have the same decision-making power.
- Farmers both in Ghana and Vietnam are predominantly against **the use of children working on the farm at the expense of the education.**

Implication: Policy efforts to stimulate sustainability production **should be targeted most of all at producers as they feel more pressurised by sustainability standards than traders.**

4. Implications for EU Policy & Trade Governance

4.1. Strengthening Sustainability Education and Information Campaigns

- **Use trusted intermediaries** (NGOs, private traders) to disseminate sustainability information effectively.
- **Promote peer-learning initiatives** that facilitate discussions among farmers about sustainability benefits.
- **Encourage long-term sustainability commitments** by integrating behavioural insights into capacity-building programs.
- **Embed sustainability incentives in EU trade** agreements to encourage adoption of sustainable practices.
- **Support local supply chain actors** by providing targeted financial and technical assistance.

- **Develop monitoring frameworks** to ensure that sustainability provisions in trade agreements translate into real behavioural change**.**
- **Strengthen linkages** between CAP, sustainability standards, and trade policies.
- **Ensure better coordination** between EU institutions and local governance structures to improve policy implementation.
- **Leverage experimental evidence** to inform trade negotiations and sustainability impact assessments.

5. Conclusion

This study highlights the importance of integrating behavioural insights into sustainability policy and trade governance. **Key takeaways:**

- **Farmers and traders are more likely to adopt sustainability practices when they receive information from trusted sources** and have opportunities for peer discussions.
- Environmental risks play a crucial role in shaping traders' sustainability choices, **suggesting that policies should emphasise risk communication.**
- **Transparent communication is necessary** about the benefits of investment in sustainability and the cost of non-action.

This Project Brief is based on Deliverable 4.4. of the TRADE4SD project.

PROJECT BRIEF 15: POLICY COHERENCE AND FOOD SYSTEMS APPROACH IN EU TRADE POLICY

1. Main Messages

Achieving Sustainable Development Goals (SDGs) through international agricultural trade requires greater policy coherence within the EU. Fragmented governance, conflicting policies, and limited integration across sectors hinder progress.

A food systems approach is essential for aligning EU trade policy with sustainability objectives. Trade agreements must consider the interconnectedness of agricultural production, environmental sustainability, and food security.

The EU must address both horizontal (across policy domains) and vertical (across governance levels) policy coherence gaps to ensure consistency in international agricultural trade policies.

Digitalisation, investment in sustainable value chains, and targeted financial support for smallholder farmers can enhance the effectiveness of trade policies in fostering sustainability.

Strengthening multi-stakeholder engagement and impact assessment mechanisms can improve trade policy alignment with SDGs.

2. Research Scope & Methodology

This study analyses the role of policy coherence in promoting sustainability within EU trade policy, using:

- **Mapping of over 3,700 legal acts** related to international agricultural trade to assess policy coherence and alignment with SDGs.
- **Stakeholder consultations and Delphi studies** involving EU policymakers, partner countries, and trade experts.
- **Case studies from Ghana and Vietnam** to examine how trade agreements impact sustainability at the local level.
- **Comparative analysis of EU Commission strategies** (Juncker vs. von der Leyen) to assess shifting policy priorities.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. The Role of Policy Coherence in Trade and Sustainability

- **EU trade policies increasingly incorporate sustainability objectives,** but inconsistencies between policy areas (e.g., trade vs. environmental policies) limit effectiveness.
- **A whole-of-government approach is required to bridge gaps** between the Common Agricultural Policy (CAP), Farm to Fork (F2F), and international trade frameworks.
- **Food systems policies must balance economic competitiveness with sustainability goals,** addressing trade-offs in climate, energy, and social policies.

Implication: Greater integration of sustainability principles into trade agreements and stronger coordination between EU institutions and governance levels are needed.

3.2. Food Systems Approach for Trade Policy Coherence

- **The Farm to Fork (F2F) strategy is the first EU-wide attempt at a food systems approach,** but its policy integration remains incomplete.
- **Horizontal coherence between EU policies** (e.g., agriculture, trade, climate) **is improving, but vertical coherence** (EU-Member State and other governance levels coordination) **remains a challenge**.
- **The holistic approach requires public sector innovations.** It implies new divisions of labour, new tools, new ways of implementing and evaluating policies, data for policy formation, and sufficient legal frameworks.
- **Developing countries face significant barriers in meeting EU sustainability standards,** necessitating greater capacity-building and investment.

Implication: Policymakers must enhance coherence across governance levels and improve policy coordination with trade partners.

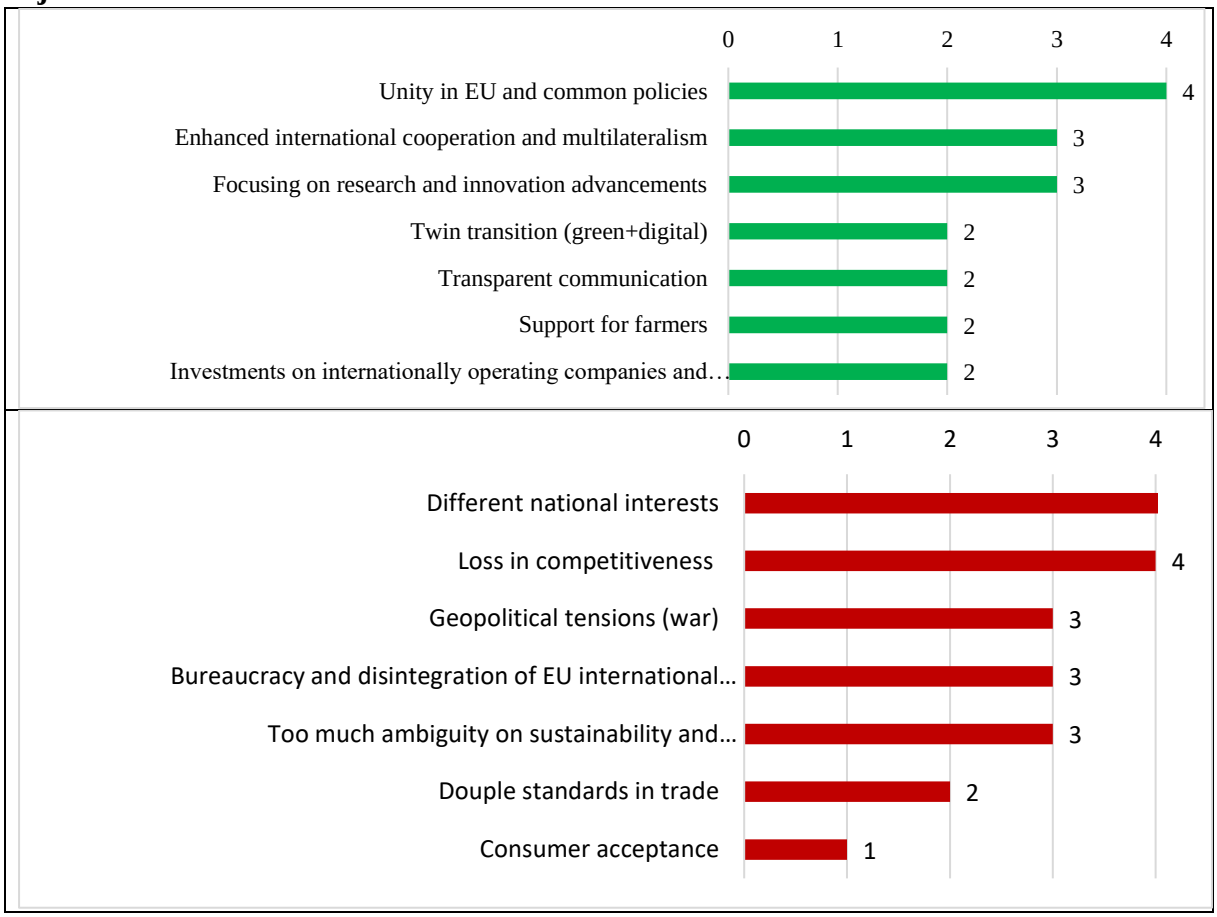
3.3. Challenges in Policy Implementation and Coordination

- **Contradictions** between EU sustainability policies and trade liberalisation objectives **create policy fragmentation**.
- Member States have autonomy in consumption policies, **making it difficult to align national policies with EU-wide sustainability objectives**.
- **The lack of clear enforcement mechanisms** within EU trade agreements **weakens sustainability commitments**.

Implication: Trade agreements should include stronger monitoring and enforcement mechanisms for sustainability provisions.

Figure 15.1 shows key enablers (up) and barriers (down) for the EU to realise its policy objectives

Figure 15.1: Key enablers (up) and barriers (down) for the EU to realise its policy objectives



Source: own composition.

4. Implications for EU Policy & Trade Governance

- **Improve horizontal policy coordination between DGs** (e.g., DG TRADE, DG AGRI, DG ENV) and vertical coordination in multi-level governance with a whole-of-government approach.
- **Develop clear sustainability indicators** to measure trade impacts on SDGs.
- **Enhance policy integration** between CAP, trade agreements and the SDGs with a **food systems approach** (F2F 2.0).
- **Expand funding for smallholder farmers** to meet EU sustainability standards.
- **Improve access to finance for sustainability initiatives** in trade partner countries.
- **Invest in digitalisation** to increase supply chain transparency and compliance with EU standards.
- **Establish stronger mechanisms for monitoring** sustainability commitments in trade agreements.
- **Ensure that sustainability clauses in trade agreements are enforceable and legally binding.**

- **Engage partner countries and stakeholders** in policy design to enhance ownership and impact.

5. Conclusion

This study highlights the need for improved policy coherence to strengthen sustainability outcomes in EU trade policy. **Key takeaways:**

- **Policy coherence in the form of a whole-of-government approach is essential** for aligning EU trade policies with sustainability objectives.
- **A food systems approach (F2F 2.0) must be fully integrated** into EU trade governance to balance economic and environmental goals.
- **Stronger monitoring, enforcement, and financial support** mechanisms are needed to achieve sustainability goals.
- **Essential to invest in capabilities to deal with the process of policy coherence**: more co-creation in EU policy formation, deliberative dialogues and wider participation are needed as well as the ability to decide together upon issues where values and interests collide.

This Project Brief is based on Deliverable 5.3. of the TRADE4SD project.

PROJECT BRIEF 16: ENHANCING THE SUSTAINABILITY IMPACT OF THE COMMON AGRICULTURAL POLICY (CAP)

1. Main Messages

The Common Agricultural Policy (CAP) must prioritise sustainability while ensuring economic viability for farmers. Stakeholder opinions on CAP's effectiveness in supporting sustainability remain divided.
Greening efforts within the CAP face challenges related to enforcement, administrative burden, and policy coherence. Weak implementation undermines environmental objectives.
The CAP must align more effectively with the UN Sustainable Development Goals (SDGs) and global trade frameworks to enhance sustainability in agriculture.
There is strong variation in stakeholder perspectives across Member States, **with farmers often prioritising economic stability over sustainability while policymakers and academics advocate for stricter environmental standards**.
A food systems approach is needed to integrate sustainability, trade, and agricultural policies, ensuring coherence across EU and national-level interventions.

2. Research Scope & Methodology

This study analyses stakeholder perspectives on CAP and its sustainability impact, using:

- **Q methodology to categorise stakeholder perspectives**, revealing five key factors shaping opinions.
- **Survey responses from 118 stakeholders** across multiple EU countries (Hungary, Poland, Finland, Germany, Italy).
- **Factor analysis to group respondents** into distinct viewpoints on CAP's sustainability, trade, and economic dimensions.
- **Comparative analysis of stakeholder views** on CAP's role in food security, environmental protection, and international trade.

3. Key Findings: Evidence Supporting Policy Discussions

3.1. Stakeholder Perspectives on CAP Sustainability Goals

- **Stakeholders are divided into five distinct groups**, ranging from strong sustainability advocates to sceptics who prioritise economic concerns.
- **Farmers and trade-oriented stakeholders express concerns over CAP greening policies**, fearing they reduce competitiveness and increase costs.
- **Environmental policymakers and researchers support a stronger sustainability focus**, arguing for stricter enforcement and greater alignment with the Green Deal.

Implication: Policy reforms should balance economic and environmental objectives to ensure broad stakeholder buy-in.

3.2. CAP Greening and Policy Coherence Challenges

- **Weak enforcement of sustainability measures undermines CAP's environmental impact**, leading to scepticism among stakeholders.
- **The CAP's complexity creates an administrative burden for farmers**, making compliance with sustainability standards difficult.
- **Lack of policy coherence** between CAP, EU trade policy, and environmental regulations **reduces the effectiveness of sustainability measures.**

Implication: Improving enforcement mechanisms and reducing administrative complexity can enhance CAP's sustainability effectiveness.

3.3. Diverging Views on CAP's Role in Trade and Food Security

- **Some stakeholders argue that CAP should focus primarily on food security and economic stability**, especially in the context of geopolitical crises (e.g. war in Ukraine).
- **Others advocate for stronger sustainability measures within CAP**, pushing for stricter environmental standards and increased climate resilience.
- **Trade-related concerns persist**, with stakeholders debating whether high EU sustainability standards create a competitive disadvantage globally.

Implication: Future CAP reforms must balance food security priorities with sustainability objectives.

4. Implications for EU Policy & Trade Governance

- **Ensure CAP aligns more closely** with the Green Deal and SDGs by enhancing the Farm to Fork Strategy (F2F 2.0).
- **Introduce stricter enforcement mechanisms** to prevent greenwashing in CAP compliance.
- **Enhance monitoring and reporting** on CAP sustainability outcomes.
- **Streamline sustainability compliance requirements** to make them more farmer-friendly.
- **Increase technical and financial support** for farmers adopting sustainable practices.
- **Improve communication of CAP sustainability benefits** to increase farmer engagement.
- **Improve coordination between DGs** (e.g., DG AGRI, DG TRADE, DG ENV) to ensure consistency.
- **Increase international collaboration on sustainability standards** to reduce trade barriers for EU farmers.

5. Conclusion

This study highlights the need for greater policy coherence and stronger enforcement of sustainability measures within CAP. **Key takeaways:**

- **Stakeholder views on CAP sustainability are highly polarised**, requiring a balanced policy approach.
- **Stronger enforcement mechanisms are needed** to improve CAP's environmental effectiveness.
- **CAP reform must integrate sustainability** without compromising economic stability for farmers.

This Project Brief is based on Deliverable 6.3. of the TRADE4SD project.