



Young Think Tankers

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AZIZAH FAUZI
REGEAN MUGUME





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Azizah Fauzi

Azizah Fauzi is a programme officer at Southern Voice. Previously she was a researcher at the Center for Indonesian Policy Studies (CIPS) where she currently maintains an associate researcher position. She has a strong interest in ASEAN's food security framework and regional cooperation. In 2023, Azizah was recognised as one of the winners of the Southern Voice Young Think Tankers Competition.

Regean Mugume

Regean Mugume is a research analyst at the Economic Policy Research Centre (EPRC), Uganda. He specialises in financial inclusion, trade, food security, monitoring and evaluation, and quantitative survey analysis. In 2023, Regean was recognised as one of the winners of the Southern Voice Young Think Tankers Competition.

Abstract

This article examines the potential impact of the European Union Regulation on Deforestation Free Products (EUDR) on the livelihoods of smallholder coffee farmers in Indonesia and Uganda, two of the world's leading coffee producers. The coffee sector makes a significant contribution to employment and foreign exchange revenues in both countries. Set to take effect in December 2024, the EUDR requires certain products—including coffee—to be produced on deforestation-free land. Using a mixed-methods approach, which includes household survey data, trade flow analysis and regulation review, we examine each country's preparedness to implement the EUDR, and its likely impact on the livelihoods of smallholder coffee farmers. The study finds that such farmers, who account for over 90 percent of the coffee production in Indonesia and Uganda, are already facing stagnating or declining yields due to limited access to inputs like fertilisers and credit, which reduces their output and household income. It is likely that the anticipated high costs of implementing EUDR traceability requirements will make it even more difficult for these farmers to invest in practices to improve productivity. To mitigate the impact of the EUDR on smallholder coffee farmers, this article recommends partnerships with the private sector in relation to (i) productivity-enhancing agronomic practices, and (ii) the establishment of coffee traceability systems.

Keywords

European Union Regulation on Deforestation Free Products; smallholder coffee farmers; traceability; sustainability; livelihoods; compliance



Evidence for decision-making

1. EUDR requirements risk jeopardising the livelihoods of around 98% of smallholder coffee farmers in both Uganda and Indonesia.
2. Existing government subsidies and interventions in Indonesia and Uganda are not enough to improve the productivity and income of smallholder coffee farmers.
3. Private sector programs offering comprehensive training and close monitoring can improve productivity, income, and compliance with sustainability standards among farmers.
4. EU support for private sector innovation and phased EUDR implementation could ensure the achievement of EUDR goals, without negatively impacting smallholder coffee farmers.

Introduction

In December 2023, the European Parliament and European Council passed the European Union Regulation on Deforestation-free Products (EUDR) law as part of its efforts to mitigate the region's environmental impacts and become the first climate-neutral continent by 2050 (European Union [EU], 2023). The EUDR stems from the region's substantial imports of unsustainably produced, high-value cash crops that drive deforestation in developing countries (Wolvekamp, 2024; FAO, 2022). According to the UN, deforestation accounts for approximately 19% of global emissions (United Nations, 2020).



Small-scale farming is vital for global food production, but climate change, limited training, and poor technology access threaten food security and livelihoods.

High levels of deforestation for agricultural production have been reported in many Global South countries, including Uganda and Indonesia, exacerbated by lax enforcement of regulations (Cuaresma, & Heger, 2019). In Uganda, the agricultural sector contributes up to 40% of Uganda's total GDP and over 90% of foreign exchange earnings (FAO, 2023), with coffee being the country's second biggest export (Observatory of Economic Complexity [OEC], 2023). While in Indonesia, coffee ranks only as the 46th most exported product (OEC, 2024), but it remains a key agricultural commodity and a major contributor to foreign exchange. In 2022, Indonesia's coffee exports generated USD 1.15 billion, accounting for 2.73% of total plantation commodity exports (Ministry of Agriculture, 2023a).

Agricultural development is crucial to alleviate extreme poverty, boost shared prosperity, and address food insecurity in developing countries (World Bank, 2015). Estimates show that in 2014, about 78% of the world's poor households (800 million people) relied heavily on agriculture (World Bank, 2014). Notably, growth in agriculture is twice as effective in addressing poverty in developing countries compared to services and industry (Ivanic & Martin, 2018). Small-scale farming is also essential for global food production, yet challenges such as climate change (closely linked to reduced production), lack of training in modern practices, and inadequate access to technologies (Dhillon & Monchur, 2023) threaten food security and farmers' livelihoods.

Given the significance of agriculture for Global South economies, and the fact that smallholdings make up an estimated 84% of the world's farms

(Ritchie, 2021), this article seeks to explore the potential impact of the EUDR on smallholder coffee farmers, addressing the following research questions:

1. What are the likely effects of the policies and initiatives to be implemented under the EUDR on: a) smallholder coffee farmers in Uganda and Indonesia, and b) agricultural export earnings of coffee grown by smallholder coffee farmers?
2. What measures are being taken to mitigate these likely impacts?

While the EUDR aims to reduce deforestation and contribute to achieving the SDGs, it poses serious challenges for smallholder coffee farmers in Indonesia and Uganda. Already burdened by stagnating or even declining productivity, smallholder coffee farmers in both countries face challenges in improving farm productivity and livelihoods amid pressure to meet global sustainability standards, which could potentially limit their access to global markets. Compliance with the EUDR is likely to place a disproportionate burden on smallholder coffee farmers, further worsening productivity, lowering farm incomes, and pushing them deeper into poverty (Baffoe, 2024; Bledi et al., 2024).

The article aims to investigate the potential negative effects of the EUDR on the livelihoods of smallholder coffee farmers in these countries, and to provide recommendations for mitigating these impacts. Relatedly, the article seeks to discuss ways to bridge the gap between agricultural sustainability efforts in the Global North and the challenges faced by smallholder coffee farmers in the Global South. Through this analysis, the article aims to inform policymakers and key stakeholders about the interconnections between agricultural sustainability policies in the EU and the livelihoods of smallholder coffee farmers in Indonesia and Uganda, contributing to a more comprehensive understanding of global sustainable development in the agricultural sector. The available evidence shows that the EUDR is likely to have an impact on the welfare of smallholder farmers in developing nations (Iryna & Shane, 2025; Melati et al., 2024; Sinkevičius, 2023). Existing studies are explanatory in nature and do not empirically articulate the ways in which regulation affects smallholder farmers in developing countries. Also, the available evidence examines the EUDR's impact on the seven affected commodities, with limited focus on coffee, despite its unique and globally distinctive value chain.

This article contributes to the existing body of literature through an in-depth analysis of the likely effects of the EUDR on coffee smallholders' export and productivity potential. Employing mixed methods, we combine quantitative and qualitative desk reviews to assess its impacts.

Methods

To address the research questions, we used a mixed-methods approach, combining quantitative and qualitative desk review methods to investigate the likely impacts of the EUDR. The approach enabled us to triangulate the different kinds of data on the EUDR with quantitative data on trade flows and productivity of the coffee industry, which was critical to gain insights into the likely impact of the regulation. Further, Indonesia and Uganda are relevant case studies as they heavily rely on the agricultural commodities covered by the EUDR—including coffee—both for livelihoods and foreign exchange earnings. Moreover, coffee production in both countries is dominated by smallholder farmers, who face challenges such as stagnating or declining productivity, linked to land degradation and deforestation, and poor market linkages that force farmers to sell at low farm gate prices.

Qualitative methods comprised a literature review to explore the likely effects of the EUDR on smallholder coffee farmers in Uganda and Indonesia, and investigate possible mitigation measures for such effects. The literature search included a range of relevant policy and academic documents, including EUDR policy, government reports, relevant national-level policies, peer-reviewed journal articles, and project reports, all related to the coffee sectors in both countries. This review process first enabled understanding of the context in which the EUDR will be implemented, exploring existing challenges faced by smallholder coffee farmers, and assessing the existing regulations and policy context in each country prior to implementation of the EUDR. Based on this contextual understanding, it then provided analysis of the anticipated impacts of the regulation.

Quantitative analysis included first, analysis of trends in annual coffee exports from Uganda and Indonesia to EU countries, using import and export data from the ITC Trade Map¹, UN Comtrade², and OEC World³ to estimate the likely impact of the EUDR on exports from smallholder coffee farmers in Indonesia and Uganda. This enabled us to highlight the significance of the EU market for the coffee sector in both countries. Second, the study analysed production and productivity based on the FAO's FAOSTAT database⁴, including an examination of the link between coffee production (crop area harvested) and deforestation, to understand whether increased coffee

1. See: <https://www.trademap.org/Index.aspx>.

2. See: <https://comtradeplus.un.org/>.

3. See: <https://oec.world/en>.

4. See: <https://www.fao.org/statistics/en>.

cultivation in both countries could be associated with increased rates of deforestation. We also examined production capacities and productivity in both countries.

To further contextualise the analysis, this study utilises data on the production capacities of both countries based on the number of smallholder coffee farmers. In line with the FAO definition, this study defines smallholder farmers as those managing areas up to 10 hectares (FAO, 2013). For Uganda, the number of smallholder coffee farmers is based on the 2019/20 Uganda National Panel Survey (UNPS) (Uganda Bureau of Statistics [UBOS], 2021). For Indonesia, the number is drawn from Ministry of Agriculture publications. These figures are needed to estimate the share of smallholder coffee farmers likely to be affected by EUDR implementation.

Results

The European Deforestation Regulation: Key highlights

The EUDR, set to take effect in December 2024, is expected to contribute to multiple development goals⁵ by reducing global deforestation linked to agricultural production (European Union, 2023). While the EUDR promotes fair prices for smallholders to support a living income and effectively address poverty—a root cause of deforestation (European Union, 2023)—it mainly focuses on EU traders and operators without clearly specifying the reporting of compliance obligations for producers, including smallholder farmers.

Under the EUDR, operators or traders⁶ bringing agricultural commodities such as coffee to the EU market must prove that the products do not originate from land deforested⁷ after 31 December 2020, or contribute to forest degradation (see Appendix 1 for details; EU Commission, 2023). They must establish a system of due diligence providing information on sources and suppliers of products, including smallholder coffee farmers. They also need to show proof

5. SDG 15 (Life on Land), SDG 13 (Climate Action), SDG 12 (Responsible Consumption and Production), SDG 2 (Zero Hunger), and SDG 3 (Good Health and Well-Being) (European Union, 2023)

6. An 'operator' is any natural or legal person who places or exports products on the market, while a 'trader' is any other person in the supply chain making products available on the market (European Union, 2023)

7. Deforestation means converting forest land into agricultural land, whether human-induced or not. Meanwhile forest degradation means structural changes to forest cover, converting primary forests or naturally regenerating forests into plantation forests or into other wooded land, or primary forests into planted forests (European Union, 2023).

that the products meet deforestation-free and legal standards through geolocation data if necessary, along with risk assessment and mitigation measures. Geolocation enables the use of satellite imagery to tell whether the production area was recently a forested area (Sielski, 2023). If any risks are identified, operators must mitigate these to achieve no or only negligible risk before the products can enter the EU market.

Coffee production trends in Indonesia and Uganda

Estimates from Uganda Panel Survey 2019–2020 (UBOS, 2020) show that about 1.91 million households in Uganda, are involved in coffee production, with 97.7% being smallholders (see Table 1). Similarly, in Indonesia there are 1.9 million households involved in coffee production, 98.4% of whom are smallholders, contributing to 99.3% of its total coffee production (Ministry of Agriculture, 2023c).

Table 1. Share of households and smallholder farming households involved in coffee production in Uganda and Indonesia

	Uganda (2019)	Indonesia (2022)
Total number of households involved in coffee production (including farmers and plantation workers)	1,900,000	1,905,499
Smallholder farming households growing coffee	1,870,092	1,875,379
Share (%)	(97.7)	98.4

Note. Authors' computation based on UNPS survey data (2020), FAO (2018), and Ministry of Agriculture (2023c)

Indonesia's coffee yields are relatively low compared to other major producers, with production projected to drop by 18% to 9.7 million bags in 2023/2024 due to excessive rainfall (United States Department of Agriculture [USDA], 2023). The country's average coffee yield stands at 0.55 tonnes per hectare, ranking 14th globally by yield (National Research and Innovation Agency, 2023). Relatedly, from 2010 to 2022, coffee production in Indonesia fluctuated, becoming more volatile due to decreases in available land as a result of land use change, together with weather-related challenges, plant pests, ageing coffee plants, and unsustainable practices (Supardi, 2020; see Figure 1).

Notably, Uganda's coffee productivity is declining despite growth in total production. Total coffee production increased by 136% from 166,968 metric

tonnes in 2010 to 393,900 metric tonnes in 2022 (Figure 1). However, productivity declined from 620 Kg/Ha (0.62 tonnes/ha) to 540 Kg/Ha (0.54 tonnes/ha) over the same period. This suggests that the production increases are likely driven by land expansion rather than improved productivity. This decline in productivity is attributed to production-side constraints such as climate change, poor agronomic practices, pests and diseases, ageing trees, and limited access to land and inputs (Agaba et al., 2023; Mulinde et al., 2023).

Figure 1. Coffee Production in Indonesia and Uganda, 2010–2022



Note. Authors' own based on FAOSTAT database (2024)

Both countries are aiming to improve coffee productivity through a range of programs. In Indonesia, smallholder farmers in North Sumatra—a major coffee-producing area—receive seed assistance and participate in coffee planting programs (Ministry of Agriculture, 2023b). However, government assistance in the form of subsidised fertilisers and seeds, access to financial services, and land expansion programs are considered ineffective as they fail to account for regional differences, provide effective training, or ensure adequate on-the-ground supervision (Glorya & Nugraha, 2019).

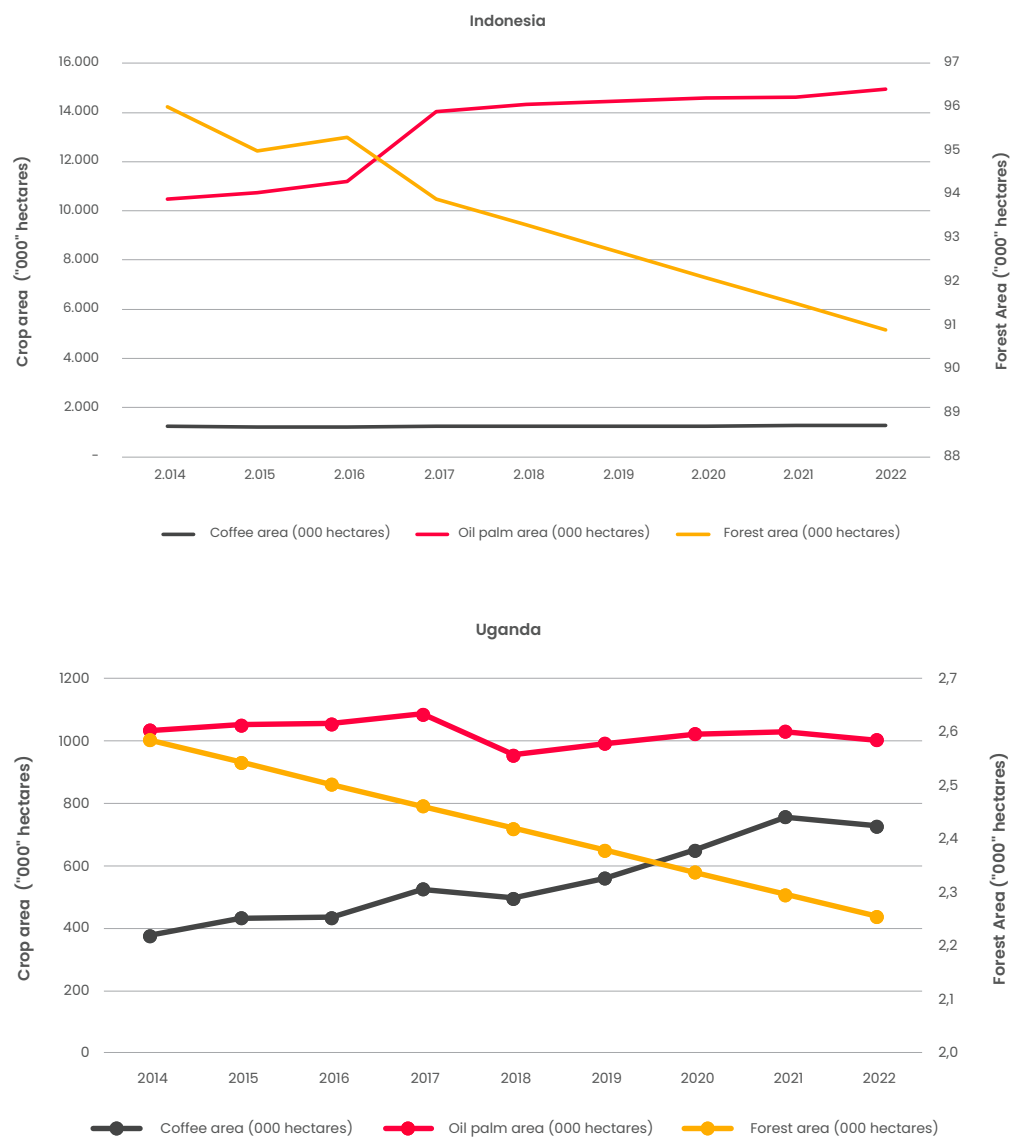


Between 2014 and 2022, Uganda's forest cover decreased by 12% and Indonesia's by 5%, while coffee cultivation expanded by 92% in Uganda and 5% in Indonesia.

Similarly, the Ugandan government provides subsidised fertilisers, improved seedlings, irrigation, pest and disease control, pruning, and affordable credit (UCDA, 2021). However, about 36% of Ugandan coffee farmers adopt none of the practices, while fewer than 50% use at least one, and only 3% adopt all the recommended practices (Asindu et al., 2023). Low adoption of inputs like organic fertilisers (15%) and pesticides (10%) among smallholder farmers in Uganda stems from limited financing and labour (UBOS, 2020).

Figure 2 shows the link between agricultural production and deforestation. The area under cultivation for coffee and palm oil has increased alongside a substantial reduction in forest cover in both countries. Between 2014 and 2022, as forest cover declined in Uganda and Indonesia by 12% and 5% respectively, land used for coffee cultivation increased by 92% in Uganda and 5% in Indonesia, with Indonesia also registering a 43% rise in land used for oil palm. Given the predominance of smallholder production in the coffee sector, this would suggest that smallholder coffee farmers are expanding cultivation into previously forested areas, particularly in Uganda.

Figure 2. Land used for cultivation of coffee and oil palm, and forested land, in Uganda and Indonesia, 2014–2022, in hectares



Note. Authors' own based on FAOSTAT database (2024)

Export trade of coffee in Uganda and Indonesia

Uganda's coffee exports increased from USD 372 million in 2012 to USD 900 million in 2023, with EU market share rising from 42% to 61% over the same period (Figure 3). This was largely a result of increased demand for Ugandan coffee in the EU market due to its high quality (Mumbere, 2024). Meanwhile, earnings from coffee exports in Indonesia peaked at 1.2 billion in

2012, but have since been fluctuating and declined to USD 929 million in 2023, with the EU share falling from 25% to 16% over the same period. Indonesia maintains diverse export destinations including the US and Egypt, as well as Germany, Italy, and Belgium (OEC, 2024), while Uganda is more reliant on EU markets for coffee exports.

Figure 3. Coffee exports and export share to EU from Indonesia and Uganda, 2012–2023



Note. Authors' own based on ITC Trade Map (2024)

Assessment of existing policy and regulatory efforts relating to EUDR compliance and sustainability in Indonesia and Uganda

Both Indonesia and Uganda have regulations and initiatives relevant to deforestation, environmental sustainability and EUDR compliance, which are outlined in Table 2.

Table 2. Existing government and private sector policies and initiatives relating to deforestation, environmental sustainability and EUDR compliance

Policies or initiatives on EUDR compliance and environmental sustainability	Approach	Link to EUDR
Uganda		
Public-private partnership for farmer registration	Uganda Coffee Development Authority (UCDA) partners with private companies such as JDE Peet's & Enveritas to achieve EUDR compliance by 2024 through identifying and fixing non-compliant coffee plots (UCDA, 2023).	Supports EUDR compliance.
National Coffee Traceability System	Long term plan to meet EUDR and EU Corporate Sustainability Due Diligence Directive (CSDDD) requirements while supporting small producers (UCDA, 2023).	Supports EUDR and CSDDD compliance.
Uganda Climate Change Policy (2015) and Uganda Forestry Policy (2001)	Promotes climate-smart agriculture and forest management.	Aligns with EUDR deforestation-free goals, but weak enforcement.
Indonesia		
REDD+ ⁸ (Reducing Emissions from Deforestation and Forest Degradation) & Net-zero Target	International and national commitment to reduce deforestation and achieve net zero emissions by 2060 or sooner.	Aligns with EUDR deforestation-free goals.
Social Forestry Program	The government of Indonesia grants legal access to forest areas for local communities to support community welfare, prevent deforestation, and promote environmentally-friendly agricultural practices through sustainable forest management (MOEF, 2016; Amri & Susanto, 2020).	Aligns with EUDR deforestation-free goals and development goals.
Coffee standards and sustainability certifications	Coffee sustainability certifications are voluntary. Current national coffee standards (Standar Nasional Indonesia) focus instead on bean quality, including moisture content, pest absence, and impurity levels (Association of Indonesian Coffee Exporters and Industries, n.d.).	Has not aligned with EUDR requirements due to its lack of emphasis on traceability and deforestation-free practices.

8. REDD+ (Reducing Emissions from Deforestation and Forest Degradation) is a UNFCCC process that supports countries in reducing deforestation-related emissions and enhancing forest carbon stocks (Green Climate Fund, n.d.).

Company-led partnership program	Private companies like Nestlé employ coffee expert extension officers to assist farmers in cultivating coffee. The program doubled yields to 1.2 tonnes per hectare—twice the national average (Glorya & Nugraha, 2019). It also ensures supply chain traceability through mapping, assessments, and satellite monitoring (Nestlé, 2024).	Aligns with EUDR deforestation-free goals and development goals.
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Note. Elaborated by authors.

Discussion

This discussion focuses on the potential impacts of EUDR implementation on smallholder coffee farmers in Indonesia and Uganda. It examines challenges these farmers face, particularly in complying with deforestation-free requirements, and the implications for their livelihoods. Measures currently available that may be helpful to mitigate these impacts, including sustainability certifications, government support programs, and private sector partnerships, are also analysed. By addressing these elements, we aim to provide a comprehensive overview of the potential socio-economic and environmental consequences of the EUDR implementation.

Our analysis reveals that the EUDR's deforestation-free requirements could potentially threaten the livelihoods of smallholder coffee farmers. Uncertainty over who will bear the costs of compliance with the EUDR, such as certification, geolocation, and additional labour data, presents a challenge for EUDR implementation among smallholder farmers (Melati et al., 2024).

Currently, sustainability certifications for coffee remain voluntary and are led by private organisations such as the Rainforest Alliance (RA),⁹ and are not yet widely distributed in coffee producing countries. These certifications are designed to promote sustainable agricultural practices and prevent deforestation. However, smallholder coffee farmers in Indonesia face challenges in gaining sustainability certifications due to challenges in accessing information, managing farms, securing capital, and resolving land ownership issues (Wahyudi et al., 2020), together with a lack of motivation arising from the negligible price difference between certified and non-certified coffee (Ibnu & Marlina, 2019).

Research by Zhunusova et al. (2022) finds that the increase in compliance costs related to voluntary sustainability schemes does not automatically

8. RA provides training and certification to combat deforestation by encouraging tree planting on RA-certified farms (Rainforest Alliance, 2022).

lead to higher incomes for smallholder coffee farmers, as seen in Nicaragua and Indonesia. Similarly, a recent study in Rwanda finds that sustainability certification is not necessarily associated with household income (Gather & Wollni, 2022). In Honduras, traceable products do not command a high price based on traceability alone (Melo-Velasco, 2023). These findings suggest that the costs of EUDR compliance, particularly related to traceability and sustainability, would not necessarily lead to higher prices or incomes for farmers. Given the already low productivity levels, the potential increase in costs and uncertainty over price increases could increase the burden for smallholder coffee farmers.

While the Indonesian and Ugandan governments are trying to boost smallholder coffee farmers' productivity through subsidies for fertilisers, seeds, and access to financing, neither government has really succeeded. In Indonesia, relatively low coffee yields and vulnerability to climate impacts, combined with the additional burden of EUDR compliance, are likely to reduce the agricultural export earnings of smallholder coffee farmers. Moreover, the income of coffee farmers remains far from a living wage. For instance, in Aceh, Sumatra (Indonesia), farmers earn on average only 40% of a living income (Fairtrade, 2022).

The EUDR aims to support SDG 2 on zero hunger (European Union, 2023), but tighter requirements without adequate dissemination and partnership programs could further exacerbate poverty and deprivation among smallholder farmers. Evidence indicates that stricter export standards have reduced smallholder participation (Zhunusova et al., 2022). In Kenya, smallholder contributions to green bean production dropped as exporters complied with EU retailers' food safety requirements (Okello et al., 2011). Similarly, in Senegal, smallholder procurement declined as major companies established their own farms to comply with EurepGAP certification (Maertens et al., 2009). Exclusion from the supply chain can lead to reduced rural income, and in some cases, increased inequality (Zhunusova et al., 2022). If the EUDR results in similar outcomes, achieving the SDG targets, especially those related to poverty reduction, becomes increasingly challenging.

EUDR compliance also requires extra time and resources to ensure traceability, specifically to provide geolocation of coffee cultivation. Ensuring traceability requires digital technology tools to allow for the timely capture and submission of plot geo-coordinates. However, farmers often have limited access to smartphones, hindering the generation of this information. Consequently, there is a high risk that implementation costs of the EUDR—in this case obtaining the necessary digital tools and knowledge—

will lead to reduced earnings for smallholder farmers and welfare losses (Ssenyonga, 2024; Martey et al., 2023).

Furthermore, most coffee is traded through multiple middlemen (IDH, 2019). In Indonesia, the robusta coffee supply chain involves farmers, village collectors, district traders, processors, and exporters (Romdhon et al., 2021). Indonesian coffee farmers also typically sell their coffee to cooperatives (Sucafina, 2019), a pattern similar to that in Uganda. This highlights the complexity of implementing effective traceability measures across these actors to meet EUDR requirements.

Another challenge may also arise from the definitions outlined in the EUDR text itself. For instance, the EUDR defines deforestation as the conversion of forest land to agricultural use, whether human-induced or not. However, social forestry regulations in countries like Indonesia legally permit agricultural land within forests to be managed by local communities (see Table 2). This approach also includes an initiative to reduce deforestation through smallholder involvement. Such social forestry programmes are also present in other coffee-producing countries, such as Vietnam, where it has become part of the solution for reducing deforestation (RECOFTC, 2020). Therefore, local context, including the existing regulations in producing countries, should also be highlighted and clarified before EUDR implementation.

Table 2 also highlights programs initiated by companies like Nestlé, which helped farmers improve yields through sustainable agriculture support, showing the potential for private sector collaboration with smallholders to help meet deforestation-free standards. Company-led programs utilising modern technologies such as mapping and satellite monitoring also demonstrate the potential for private sector collaboration with smallholders coffee farmers to support the achievement of deforestation-free standards.

This suggests that private initiatives may contribute to improving productivity, as well as to promoting and adopting sustainability and traceability standards. Instead of providing input subsidies, the productivity gap among farmers should be bridged through widespread training programs and partnerships that also can facilitate market access. Partnerships with key actors, including smallholders in producer countries, are encouraged in Article 30 of the EUDR, through dialogue, administrative arrangements, agreements, and joint roadmaps that aim to safeguard the interests of all involved (European Union, 2023).

Conclusions and recommendations

In conclusion, while the EUDR aims to combat deforestation and support sustainable agricultural practices, our findings reveal that EUDR requirements may create significant barriers for smallholder coffee farmers in Indonesia and Uganda, limiting their participation in global markets and potentially worsening inequality and poverty. High compliance costs pose risks to these farmers' livelihoods, which are already under threat due to productivity challenges. Although government interventions in the form of productivity improvement assistance have been implemented, these are not enough to raise incomes and prepare farmers sufficiently for the impact of the EUDR. Partnerships between private actors and smallholder farmers are necessary to improve farmers' livelihoods and achieve higher productivity through the implementation of sustainable practices.

This article recommends the Indonesian and Ugandan governments support efforts to facilitate partnerships between private sector actors such as coffee buyers, civil society organisations such as the rainforest alliance (RA), and smallholder farmers. These partnerships can focus on training for sustainable agricultural practices and certifications, as private sector-led initiatives may offer more efficient pathways to compliance, and increased productivity.

The EU, as coffee importer and EUDR implementing body, should actively support producers in the Global South in embracing green transformation, rather than relying solely on exclusionary trade measures like the EUDR. Moreover, adopting a phased implementation to allow more time for smallholder farmers with limited capacity to adapt might be useful to ensure that farmers can still meet EUDR requirements. Support for the private sector in the EU to continue innovating in their partnership programs, with an emphasis on knowledge transfer to smallholder farmers, should be highlighted within EUDR policy as crucial mechanisms of cooperation. Additionally, the EU can also address the complexities of implementation related to definitions and local contexts in producing countries by establishing a forum for exchange between the EU and producing countries in the Global South.

Areas for future research

This article has evaluated the likely impact of the EUDR by analysing coffee export data for Indonesia and Uganda, and the challenges faced by smallholder coffee farmers in both countries. We find that the costs of EUDR compliance, such as certification, geolocation, and additional labour data,

could threaten farmers' livelihoods, especially given their limited access to resources. However, since the EUDR has not yet been implemented, this paper relies solely on data available prior to its enforcement. As a result, the findings focus on the likely impact rather than actual post-implementation outcomes. Future research on EUDR implementation is needed to offer more accurate insights into the effect of the EUDR on smallholder coffee farmers.

Furthermore, this article also focuses exclusively on Indonesia and Uganda, and thus may not represent the challenges and experiences of other major coffee producing countries, such as Brazil and Vietnam, among others. Larger scale studies that can cover more coffee producing countries are imperative for better understanding of the effect of the EUDR on smallholder coffee farmers in the Global South. Also, this study focuses primarily on the socio-economic impacts of the EUDR and does not explore ecological effects, such as the regulation's actual impact on reducing deforestation. Future research could benefit from exploring the environmental impact of the EUDR to better understand whether it has successfully contributed to reducing deforestation.

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Appendix 1

The Commission is currently proposing an extension of the implementation timeline to the European Parliament and Council. If approved, large companies must comply by 30 December 2025, and micro- and small enterprises by 30 June 2026, allowing for a phased transition to ensure effective implementation (European Commission, 2024).

If an operator or trader is found to be non-compliant with the regulation, authorities require corrective actions, such as rectifying formal issues, preventing market placement or export, withdrawing or recalling the product, or disposing of it according to the EU's waste laws (European Union, 2023). The operator or trader must also address shortcomings in their due diligence system to prevent future non-compliance. If corrective actions are not taken within the specified time, authorities will enforce compliance using all available legal means (European Union, 2023). Penalties for violations under EU member states' jurisdiction, may include confiscation of products and revenues, temporary exclusion from public procurement and funding, market restrictions for serious or repeated violations, and prohibition from simplified due diligence processes (European Union, 2023).