The University of Chicago

At the End of the Chain: The Implications of the EU Deforestation Regulation on Smallholders in the Indonesian Palm Oil Trade

By Gianina Flegueras

A project essay submitted for partial fulfillment of the requirements for a Bachelor of Arts degree in Public Policy

Paper presented to:

Instructional Professor, Chad Broughton

Instructional Assistant, Saliem Shehadeh

Undergraduate Program in Public Policy

28 February, 2025

Abstract

As supply chains become increasingly globalized, unilaterally imposed regulations raise tensions between national sovereignty and their extraterritorial consequences on economic development. While the European Union has the right to regulate its supply chains, such policies can have severe implications for smallholders in commodity-producing countries who are often underrepresented in the policy-making process. Through a case study on the impact of the EU Deforestation Regulation (EUDR) on Indonesia's palm oil industry, this paper explores how supply chain regulations can reinforce existing inequalities in transnational trade at the industry and international level. By analyzing the responses and actions taken by industry stakeholders and government actors following the introduction of the EUDR in 2023 – drawing on secondary interviews and reports – this study reveals how unilateral supply chain regulations can disproportionately impede smallholder market access and deepen asymmetries between the Global North and commodity-producing nations.

At the End of the Chain: The Implications of the EU Deforestation Regulation on Smallholders in the Indonesian Palm Oil Trade

I. Introduction

At the close of 2024, the US$61 billion Indonesian palm oil industry would have been thrown into turmoil due to an environmental regulation enacted over 7000 miles away, in the European Union (EU). Yet, many of the 2.6 million smallholder farmers who toil to grow around 40% of the country's oil palm[1], were unaware of this critical change as late as two months before the end of 2024, and even fewer are prepared for its implications (European Forest Institute (EFI) 2025a; Badan Pusat Statistik Indonesia 2024; Gabay 2024).

The EU Deforestation Regulation (EUDR), approved in June 2023 and initially slated to take effect December 2024[2], is the most recent of a string of environmental regulations aimed at reducing the EU's environmental footprint in trade. The EUDR, specifically targeted at reducing the EU's contribution to global deforestation, requires companies importing seven commodities – coffee, cocoa, soy, oil palm, cattle, rubber and wood – and their derivatives into the EU, to prove that their products are "deforestation-free." Products that are produced using land that has been converted from forest to agricultural use, whether human-induced or not, after December 31, 2020, will no longer be allowed on the EU market after the EUDR comes into effect on December 30, 2025 (European Commission, n.d.-a). As the world's largest palm oil exporter (supplying 54% of global palm oil exports), the EUDR has immense implications for Indonesia,

[1] Oil palm is the fruit from which palm oil is extracted
[2] The enforcement deadline for the EUDR was delayed by one year in early December 2024. The new enforcement deadline is December 30, 2025.

whose palm oil industry contributes to approximately 4.5% of its GDP (Benedict and Heilmayr 2024).

The EUDR mandates that companies submit due diligence statements with documents and data that trace imported products throughout their supply chains, down to the precise geolocation coordinates of the plots of land that they were cultivated on. Given palm oil's notorious role in large-scale deforestation, environmental activists in the EU and all over the world have lauded the regulation as an environmental victory. However, for the thousands of independent smallholders[3] – those who are not directly contracted by palm oil companies and therefore rely on informal networks to sell their oil palm fruits – the EUDR further raises the barrier to participation in the EU market.

Using the impact of the EUDR on the Indonesian palm oil industry as a case study, this paper explores how unilateral supply chain regulations **can reinforce existing developmental inequalities in transnational trade by limiting smallholder participation, consolidating power among large-scale producers, and deepening asymmetries between the Global North and commodity-producing nations.** It is important to note that though the EUDR was delayed and will only be officially enforced on December 30, 2025 due to public backlash, this delay was proposed in October 2024 and only finalized in early December 2024 – the very same month that the regulation was initially set to take effect. Thus, though this paper's analysis of the impacts of the EUDR on producer countries is limited, since the full extent of the EUDR's effects on

[3] This is in contrast to plasma smallholders, who typically have contractual agreements with "large private companies and receive financial and technical support for harvesting". (Hasan et al. 2021, 3) Approximately 80% of the land managed by smallholders are managed by independent smallholders. (Raharja 2020)

smallholders and producer countries is still uncertain, the paper is based on the concrete responses and actions taken by industry stakeholders and governments in preparation to comply with the EUDR, beginning in June 2023 (following the EUDR's initial approval), and up until the announcement of the delay. However, whether or not the EUDR will be revised before the 2025 deadline to address some of the challenges facing smallholders and producer countries remains unknown.

II. From Colonial Roots to Global Commodity: The Intertwined History of Indonesia and the EU

Elaeis guineensis, the oil palm, is an invisible yet highly versatile commodity. Though it is a fruit, it is almost entirely processed for its oil, which is estimated to be found in half of all packaged products in our supermarkets (Jadhav 2024). If you ate packaged food today, chances are you ingested palm oil. Its neutral flavor profile makes it the perfect ingredient to enhance the shelf life and texture of our Oreo cookies, Snickers bars, Kellogg's breakfast cereals, and Nutella. Beyond its role in food, palm oil also serves as a foaming and cleaning agent in Tide pods, Dove soap bars, Head & Shoulders shampoo, and many other personal care items. Its utility extends even further, however – palm oil-based biofuels power cars and trucks, and even homes across the EU, fueling the global appetite for this red fruit.

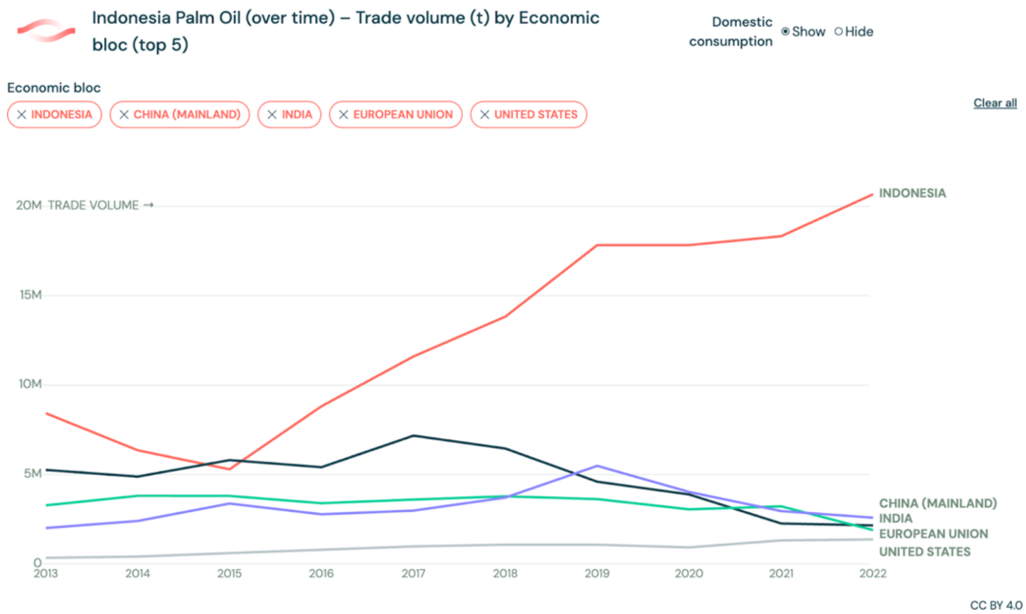

Figure 1: Line Graph of Indonesia Palm Oil Trade Volumes by Economic Bloc from 2013 to 2022

Source: Trase

In 2022, Indonesia produced 47 million tonnes of crude palm oil[4], using 44% in either local consumption or downstream manufacturing (Benedict and Heilmayr 2024). China (14% of exports in 2022), India (12%), and the EU (10%), have been, and continue to be, Indonesia's three largest export markets, together constituting 36% of exports in 2022, and 47% of all exports since 2013 (Figure 1)[5] (Benedict and Heilmayr 2024). Despite being increasingly used for domestic consumption, the demand for Indonesian palm oil was historically driven by its export markets.

The curious relationship between Indonesian palm oil and Europe dates back to the 19th century, when the oil palm was first introduced by Dutch botanists who planted four seedlings in

[4] Indonesia also produced 47 million tonnes of crude palm oil in 2023.

[5] Note that these percentages have been calculated after excluding the palm oil missing from trade data, which constitutes 31.5% of the total trade volume, pre-exclusion.

the botanical gardens of Java (Phillips 2021). Initially grown as an ornamental tree under their colonial rule, the oil palm's decorative role soon gave way to industrial cultivation upon a Belgian entrepreneur's realization that Indonesia's tropical climate yielded larger fruits than those in Africa (Phillips 2021). The first Indonesian oil palm plantation, established in Sumatra under Dutch colonial rule in 1911, thus became the foundation of a sprawling plantation complex that would ultimately elevate Indonesia as a global titan in the palm oil trade (Phillips 2021).

The developing industry's ties to Europe strengthened in the 21st century. In 2009, the EU introduced the Renewable Energy Directive (RED), a biofuel incentive program that aimed to increase the proportion of energy use from renewable sources to 20% by 2020 in order to transition away from fossil fuels and reduce the EU's carbon footprint (European Commission, n.d.-b). Leading up to this, palm oil exports from Indonesia to the EU almost doubled from around 1.5 million tonnes in 2007, to just under 3 million tonnes in 2009 (Figure 2). Correspondingly, land use from palm oil production in Indonesia increased from around 5 million to 8 million hectares between 2009 and 2010 (Figure 3).

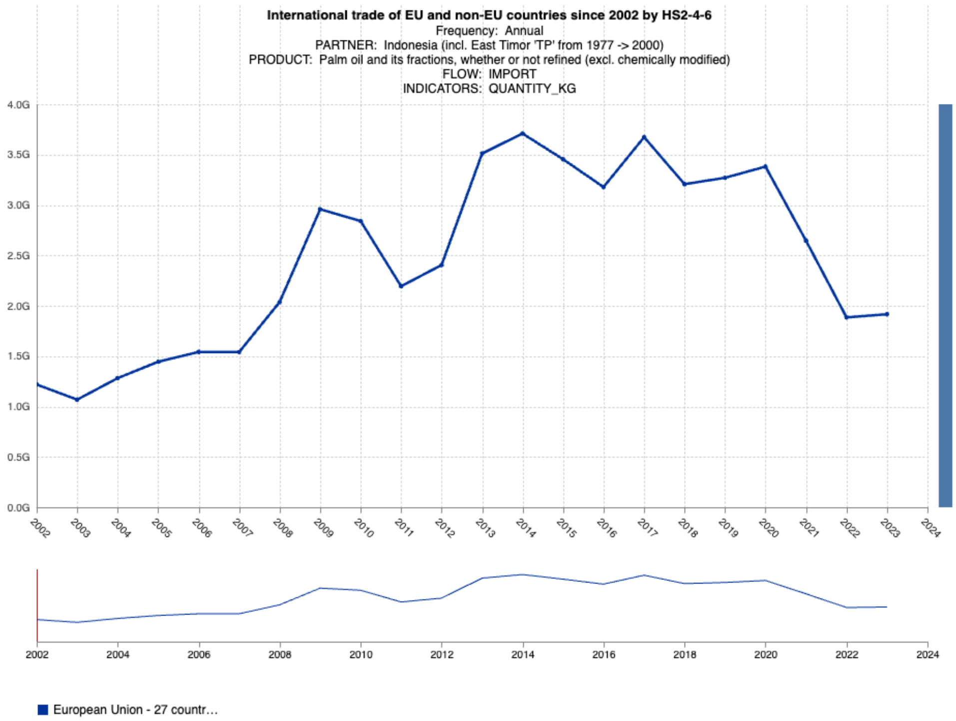

Figure 2: Line Graph of Indonesia Palm Oil Exports to EU27 from 2002 to 2023

Source: [Eurostat Database]

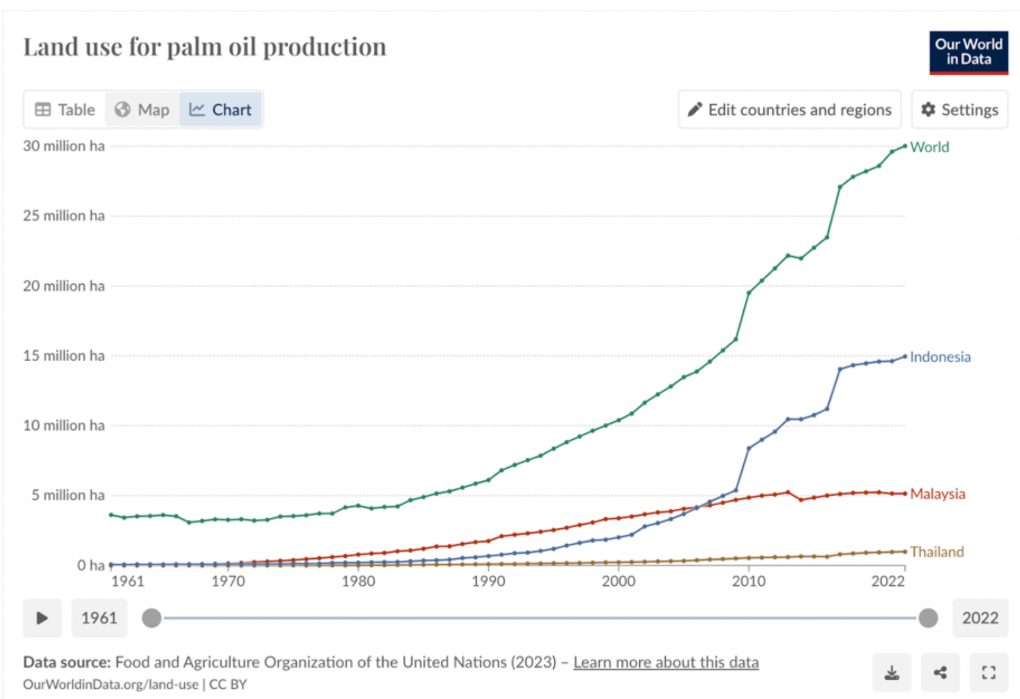

Figure 3: Line Graph of Land use for Palm Oil Production by Country

Source: Food and Agriculture Organization of the United Nations, [Our World in Data]

The rapid export-driven expansion of the industry, however, was not without consequences. Vast stretches of pristine rainforests were cleared as palm oil plantations proliferated across the country. At the peak of palm oil-driven deforestation from 2008 to 2012, 180,000 hectares of forest were cleared per year – three times the area of the City of Chicago. This rapid and extensive shift in land use had severe ecological consequences. The clearing of rainforest in the Leuser ecosystem in northern Sumatra – "the *last place* on Earth where Sumatran orangutans, elephants, tigers, and rhinos coexist in the wild [and] home to more than 200 mammal and 500 bird species" – is just one of the many injuries to the region due to the palm oil expansion (Piñeda 2017).

Clearing of the Leuser ecosystem in Sumatra for an oil palm plantation

(Image © Rhett Butler/Mongabay)

Palm oil industry facility in the midst of palm oil plantations in Riau, Indonesia
(Image © John Novis/Greenpeace)

By 2024, the total size of Indonesia's palm oil plantations reached 17.3 million hectares, an area nearly 15% larger than Illinois, and about a quarter of the size of Texas (Christina 2024). As palm oil became an increasingly important component of the EU's energy consumption due to the RED, it also became the subject of intense environmental scrutiny. From a viral 2010 KitKat spoof video denouncing Nestlé's involvement in palm oil-driven deforestation to mock protests against fictitious palm oil plantations in Dublin in 2023, conservation groups and media campaigns have decried and publicized the EU's involvement in habitat destruction, biodiversity loss, and forest fires in Indonesia. Concerns over the lack of corporate accountability and the severity of EU consumption-driven environmental destruction paved the way for a revised EU RED II in 2018, which restricted palm-oil based biofuels from contributing to renewable energy targets (Heimann 2023). This was later followed by the EUDR, which aims to enhance transparency in commodity supply chains linked to deforestation, and reduce the EU's contribution to such environmental damage.

Protestors outside Nestlés Croydon headquarters in London denounce Nestlés involvement in deforestation for palm oil
(Image by [Greenpeace](#))

Greenpeace activists unfold a banner in a deforested orangutan habitat inside a concession owned by Musim Mas, a palm oil suppliers to Procter and Gamble in Central Kalimantan, Indonesia
(Image © Ulet Infansasti / [Greenpeace](#))

III. Environmental Villain… and Economic Lifeline?

Owing to these environmental regulations, the EU's annual exposure[6] to palm oil-driven deforestation in Indonesia has been on the decline (Benedict and Heilmayr 2024). While the EUDR advances much-needed forest conservation efforts, its implementation may have profound, albeit unintended, repercussions for the millions of smallholder farmers who rely on palm oil cultivation for their livelihoods. Although independent smallholders account for only a small share of the EU palm oil supply chain, they are deeply integrated into Indonesia's palm oil production and distribution network, which is not segregated on the basis of EUDR compliance (Gregory & Ozinga 2025). By mandating the strict separation of compliant and non-compliant

[6] Annual oil palm deforestation exposure refers to the industrial "oil palm production area that overlaps with [the land that was deforested in that target year]" (Trase n.d.).

palm oil throughout the supply chain, the EUDR increases the risk to palm oil companies of sourcing palm oil from independent smallholders and mills, creating an incentive for them to simplify their supply chains in a way that encourages industry consolidation around larger businesses. Thus, despite the fact that these large palm oil companies are responsible for majority of large-scale, palm oil-driven deforestation, independent smallholders face the threat of being squeezed out of the industry, thus perpetuating the power imbalance between industrial plantations and smallholders.

Yet, despite their importance to the industry, smallholder farmers are often excluded from discussions about regulations that directly impact them. Although smallholders that hope to supply to the EU must now prepare to comply with the EUDR, some smallholders in Indonesia's North Aceh province, interviewed by Mongabay in the North Aceh province in September 2024 – just two months before the EUDR was initially slated to take effect – did not even know what the EUDR was (Gabay 2024).

“If [the EUDR] really happens, I hope the government helps us to get prepared,” says Jaharuddin, a 50 year old farmer who grows oil palm and other crops on his 8 hectare plot in the North Aceh province (Gabay 2024).

Farmer Jaharuddin, smallholder oil palm farmer in North Aceh, Indonesia. (Image © Dyna Rochmyaningsih/Mongabay)

The EUDR’s traceability requirements would require smallholders with farms more than 4 hectares in size, to use polygon mapping to provide the geo-location data for their plots. For independent smallholders manually mapping their farms, they must “walk around [...] their land boundaries with a smartphone equipped with apps like Google Maps” (Arshad 2024). While this may seem like a trivial task, the fragmented nature of these plots and their close proximity to other farms – sometimes even overlapping with each other – can make this requirement tedious. Moreover, many farmers, especially those in more rural areas, may lack the knowledge, the resources, and the technological support, to map and document their farm’s geo-location coordinates.

However, even if they succeed in mapping out their farms, the lack of formal land documentation and the fragmented nature of the smallholder palm oil supply chain further impede the ability of smallholders to prove that their harvests are deforestation-free. Due to the incompatibility of the EUDR with these local conditions, smallholders risk continued exclusion from global markets unless they are brought into the policy-making process and supported in navigating the regulation's traceability requirements.

Land Insecurity: a Lack of Legal Recognition

Apart from the deforestation-free standards, the EUDR imposes a legal production requirement, which mandates that products exported by the EU must be produced in accordance with the relevant legislation of the originating country (Li et al. 2024). In order to comply with the EUDR, smallholders must thus provide proof of their land-use rights, which involves obtaining land certificates or cultivation registration certificates, locally known as STD-B (EFI 2025a). However, even though smallholders may be growing oil palm legally on their land, "getting these documents is challenging due to bureaucracy, lack of staff, lack of clarity on the function of STD-Bs, land conflicts, corruption and more" (Gregory & Ozinga 2025, 9). According to former smallholder group managers who worked to get more farmers to join the Roundtable on Sustainable Palm Oil's (RSPO) internationally-recognized sustainability certification,

> it was very difficult to convince them. The reason was that people regarded the requirements related to legality to be very difficult. [...] For the smallholders who have non-[plasma]-scheme land (i.e., independent smallholders), they have problems with their documents such as an STD-B and SPPL, because it takes time to sort out their location permit (de Vos et al. 2023).

On top of this tedious and overly bureaucratic process, applying and maintaining the STD-B registration is expensive, "[involving] upfront costs and recurring payments while offering limited incentives for smallholders" (EFI 2025a, 14). Since this documentation is often a prerequisite for government aid, the disproportionate difficulty independent smallholders face in obtaining it creates a significant barrier to accessing resources and support from the Indonesian government to navigate the EUDR.

This issue is even more pronounced with Indigenous smallholders, who "traditionally reside [and establish oil palm plantations] within the state forest zone," where plantations are generally considered illegal under Indonesian statutory law (EFI 2025b, 1). However, Indigenous communities "hold their lands in accordance with customary law," and therefore have the rights to grow oil palm within state forests (Gregory & Ozinga 2025, 10). Yet, as regulatory changes to recognize the land rights of customary communities is still underway, current solutions to legally and rightfully recognize customary oil palm plantations under Indonesian law are still "partial and temporary in nature" (EFI 2025b, 8). As it currently stands, oil palm plantations under customary management are still not able to legally obtain the STD-Bs required to comply with the EUDR and may face even more complex bureaucratic processes to demonstrate legality. As a result, Indigenous communities – who are often victims of palm oil-driven deforestation and land grabs on their customary lands – may be further excluded from participating in the EU palm oil supply chain, even if they are "deforestation-free".

Muddled with Middlemen: the Hidden Barrier to Transparency

In addition to the legal issues surrounding land documentation, the fragmented and largely informal nature of the Indonesian palm oil supply chain – as is characteristic of several other commodity chains impacted by the EUDR – further complicates the ability of independent smallholder farmers to be a safe and practical source of oil palm for importers looking to export to the EU.

The palm oil supply chain is characterized by multi-layered personal relationships between smallholder farmers and mill intermediaries that collect harvested oil palm bunches from farms within a fifty-kilometre radius[7]. The produce from dozens of different farmers is collected and loaded onto the same delivery truck, and then supplied to different palm oil extraction mills according to its price and quality, as decided by the mill intermediaries (Gregory & Ozinga 2025).

[7] This is "the distance […] set by the practicalities of needing to start processing within 24-48 hours of harvesting before the fruit starts to deteriorate". (Gregory & Ozinga 2025, 8)

A smallholder loads oil palm fruits onto a truck for delivery to a nearby mill in Sumatra, Indonesia. (Image © John Novis/Greenpeace)

Since mill intermediaries are typically unregistered and uncertified, "they are not required to pass relevant information on the area of […] production [and thus the smallholders that supply them] to the mill" (EFI and Indonesian Sustainable Palm Oil 2024, 18). Guarded against competition, they are also hesitant and unlikely to reveal their sources to the mills that they supply to, who require this information to comply with the EUDR. Fierce competition between mills further enable the middlemen to "frequently switch between mills to get a better price," further obscuring the origins of their produce from palm oil mills (Gregory & Ozinga 2025, 9). The undocumented nature of transactions with independent smallholders is prevalent. Researchers from Madani Berkelanjutan, an Indonesian environmental NGO, who conducted a survey of independent smallholders in four palm oil-producing districts across Sumatra and Indonesian Borneo, found that "only 0.17% of respondents were able to sell their palm fruit to mills directly or through cooperatives" (Jong 2023). The rest relied on a network of middlemen. Moreover, "only 12.82% of respondents [kept] sales records of every transaction" (Jong 2023).

This virtually exclusive reliance of independent smallholders on informal and undocumented transactions with middlemen therefore makes it costly for independent mills to trace the oil palm fruits back to their origins. This creates implementation bottlenecks that amplify the difficulty for palm oil extraction mills sourcing from independent smallholders to comply with the EUDR.

The "Green Squeeze": the Perils of Industry Consolidation

The challenges that independent mills thus face in meeting the EUDR's traceability requirements may push the industry to consolidate around larger agribusinesses, which primarily source from plasma smallholders[8] directly contracted to their plantations, making traceability easier to enforce. According to Olivier Tichit, director of sustainability for Indonesia's Musim Mas Group, one of the largest integrated palm oil companies in the world, the group initially "bought fruit from up to a million smallholders" (Cohen 2024). However, with the deadline to comply with the EUDR looming, and the potential of steep penalties and exclusion from the EU market if found to be noncompliant, Tichit noted that large agribusinesses like Musim Mas will "take no risks," and "if one [smallholder] is not compliant, [they] have to exclude the entire mill" (Cohen 2024). This is because the EUDR requires that "deforestation-free and legal commodities must be kept separate from [non-compliant] goods while being [stored], traded, and shipped" (European Commission, n.d.-c). Failure to comply with this would render the whole shipment ineligible for access into the EU market (European Commission, n.d.-c). As a result, the risk for palm oil companies supplying the EU to source from independent smallholders and mills is heightened, correspondingly increasing the incentive to simplify supply chains and rely on smallholders and mills that are owned by them. Thus, the EUDR's segregation requirement

[8] Note that plasma smallholders differ from independent smallholders.

means that even smallholders that are not involved in EU supply chains may face exclusion if they do not comply with the EUDR, since palm oil derived from their harvests cannot be mixed with EUDR-compliant palm oil.

This strong incentive to avoid purchasing from smallholders was further affirmed in an interview with Arief Havas Oegroseno, the Indonesian Ambassador to Germany,

> So what's going to happen is that because of the segregation system[9] that [the] EU put on the EUDR, [is that] the big companies are going to say, 'I'm sorry smallholder farmers, I'm not going to take your products. I want to be sure this is coming from my own property and I'm sorry [for] you. It's not my problem because I'm going to sell to the EU' (Oegroseno 2024).

Consequently, independent mills face growing pressure to either make costly investments in implementing traceability systems, or merge with larger company-owned mills. According to Reza Azmi, executive director of Wild Asia, a Malaysian-based environmental nonprofit that works with palm oil smallholders across Asia, "What we're hearing in Sabah [Malaysia] is that independent mills are looking to sell to big corporate guys because they don't have resources to make sure of compliance" (Cohen 2024).

Considering that the palm oil supply chains in Indonesia and Malaysia are similarly characterized by fragmented and informal supply chain networks, it would not be unreasonable

[9] This segregation system refers to the one described in an earlier paragraph, in which "compliant commodities must be stored separately to those that are of unknown origin or are not compliant" (European Commission, n.d.-c).

to expect similar behavior in Indonesia. Such industry consolidation is further fuelled by mistrust between companies and oil palm smallholders "over [the role of the company] in collecting data, providing support, [and] promoting sustainability/zero deforestation" due to "frequent company-community conflicts," and the "low commitment [from mills] to support smallholder capacity building" (Eggen et al. 2024).

Given that 90% of EU-bound palm oil is RSPO-certified and less than 1% of independent smallholders in Indonesia are RSPO-certified, the proportion of independent smallholders currently involved in the EU supply chain is low (Gregory & Ozinga 2025; Roundtable on Sustainable Palm Oil (RSPO) 2023). With the requirements for RSPO certification being less robust and less strict compared to the EUDR[10], the already limited participation of smallholders in the EU supply chain is unlikely to improve – and may be even further diminished – with this added incentive to exclude independent smallholders, and the still insufficient support provided to smallholders in navigating the EUDR (Gregory & Ozinga 2025). Existing literature on the implementation of zero-deforestation supply chains corroborate that "larger landholders or those who already meet compliance criteria are more likely to participate in international value chains with deforestation standards, while smallholders tend to be excluded and shift production to local markets, often at lower prices" (Muradian et al. 2024). Further, "trading firms adhering to RSPO certification in Indonesia end up purchasing less from smallholders." (Muradian et al. 2024)

[10] The RSPO certification has similar requirements to the EUDR, though being RSPO-certified alone does not equate to EUDR compliance.

Thus, although smallholders accounted for only 24% of oil palm-associated deforestation in Indonesia between 2000 and 2019, while 76% was driven by large oil palm plantations[11], the unintended consequences of the EUDR, if left unaddressed, could further squeeze smallholders out of the EU supply chain, exacerbating power imbalances between industrial plantations and smallholders (Eggen et al. 2024).

IV. The Path Forward

The EUDR was met with resistance from oil palm farmers who learnt about the EUDR and the governments of commodity-producing countries alike, contesting the EU's decision to unilaterally dictate the environmental standards of their countries. Mr F.X. Damsuki, a 65 year old farmer who owns more than 100 hectares of oil palm land in West Kalimantan, Indonesia, demanded, "How dare EU countries dictate to us when they were the first to destroy their own forests?" (Arshad 2024)

Indonesia's chief economic minister, Airlangga Hartarto, described the EUDR and other recent environmental regulations imposed by the EU as "regulatory imperialism," contending that such regulations encroach on the country's sovereignty and fail to recognize national efforts to balance environmental conservation with economic development (Suroyo et al. 2023). The Indonesian government has already developed its own sustainability standard for palm oil – the Indonesian Sustainable Palm Oil (ISPO) certification, which all palm oil plantation companies and smallholders must obtain by November 2025. Though the ISPO has a more narrow focus on compliance with national law and a lesser degree of supply chain transparency compared to the

[11] These statistics come from a study that interpreted satellite remote sensing data.

EUDR (EFI and Indonesian Sustainable Palm Oil 2024), Chairman Eddy Martono of the Indonesian Palm Oil Association, locally abbreviated as GAPKI, urged for a compromise between the demands of the ISPO and the EUDR. He stated,

> We've determined ISPO as mandatory for all industry players, and we hope the EU can accept the certifications. There should be mutual understanding and respect for the regulations of respective countries (Indonesian Palm Oil Association (IPOA) 2024).

This sentiment was echoed by the ambassadors of 16 other countries, who wrote a letter to the EU in September 2023. The ambassadors state that:

> This legislation [the EUDR] disregards local circumstances and capabilities, national legislations and certification mechanisms of developing producer countries, their efforts to fight deforestation, and multilateral commitments, including the principle of common but differentiated responsibilities. It also establishes a unilateral benchmarking system that is inherently discriminatory and punitive, which is potentially inconsistent with WTO obligations.
>
> The EU should work to repair this legislation, or, at a minimum, aim to mitigate its more harmful impacts through implementation guidelines that adequately value the current, as well as developing local sustainable practices in agricultural value chains, and avoid trade disruption. (Hueda et al. 2023)

The letter further supports the idea that “smallholders may end up being excluded from international value chains not because they have deforested their land but due to their inability to show compliance with the stringent requirements imposed by the EUDR” (Hueda et al. 2023).

Tensions with the EU continued to grow as Indonesia, as well as other producer countries, threatened to stop exporting their commodities to the EU altogether and redirect trade towards countries like India and China. Indonesian President Prabowo Subianto, criticized the recent EU environmental regulations like the EUDR, claiming that Indonesia does not “really need Europe anymore,” and that Indonesia was “better off learning ‘from other countries in the East such as Japan, [South] Korea, China and India’” (Starcevic 2023). Commodity-producing countries like Indonesia “have been eyeing alternative large-scale markets for palm oil,” implying the “risk of ‘leakage’ – when exporters relocate to markets with fewer or no environmental restrictions” (Savic 2024; Walker 2023). However, such a shift towards more weakly regulated markets may lower the incentive for smallholders and larger agribusinesses in Indonesia to remain sustainability- and ethically-certified, thus failing to achieve the initial environmental goals of the EUDR and reducing the impact of past EU environmental regulations. This reduced incentive for smallholders further impedes their ability to benefit from sustainable farming practices as well as better economic and labor protections that come with the increased supply chain transparency associated with certification.

In response to this immense backlash from the EU’s trading partners, as well as concerns from EU lawmakers themselves, the EU Commission proposed to delay the enforcement of the EUDR in early October 2024, just three months before the initial deadline of December 30, 2024

(Krukowska 2024; Ainger et al. 2024). Though the proposal to postpone the enforcement deadline to December 30, 2025 was ultimately accepted in early December 2024, no material changes were made to the EUDR as of February 2025.

Shortfalls in Governmental Action

Though efforts were made by the EU Commission to support producer countries in complying with the EUDR and promote coordination to address the constraints facing producer countries, these efforts are lacking and still continue to exclude independent smallholders from the decision-making process.

Notably, the EU-Indonesia-Malaysia Ad Hoc Joint Task Force (JTF) on the EUDR was established following a Joint Ministerial Mission by Malaysia and Indonesia to Brussels in May 2023 and a follow-up visit by the EU Commission to Malaysia and Indonesia in June 2023 (European External Action Service 2023). The JTF would involve forums with officials from the three economic blocs, as well as representatives and stakeholders of the commodities subject to the EUDR. However, following the third and most recent forum in September 2024, twelve observing (but not participating[12]) stakeholders released a report detailing several reservations about the JTF discussions, as well as recommendations on how to move forward. These participants include Serikat Petani Kelapa Sawit (SPKS), an Indonesian palm oil smallholder association; Madani Berkelanjutan[13], an Indonesian environmental non-profit; Fern, an EU- and

[12] Observers were allowed to watch the JTF discussions, but were not allowed to be physically present at the meeting.
[13] This is the non-profit that had conducted surveys on the EUDR with independent palm oil smallholders, as referenced on page 10.

UK-based environmental and social justice NGO focused on the impacts of EU policy; and the Human Rights Watch.

The observers noted that there was a "failure to enter a real dialogue," stating that "the EU's outlook was overly optimistic, claiming that the guidelines and information system [to support EUDR compliance] would soon be ready, while ignoring the fact that exporting companies need them be functional now" (Fern 2024, 2; Fern 2024, 3). This lack of progress on guidelines development puts palm oil companies in a difficult position regarding compliance with the EUDR. But crucially, it further underscores the lack of information and support that the smallholders – who are even further removed from such policy discussions – ultimately receive.

Moreover, the report noted the lack of inclusive representation in these discussions, stating that "NGOs, Indigenous Peoples organisations and smallholder organisations were not allowed to be physically present, despite the fact that palm oil companies, some smallholders associations[14] and the Indonesian Palm Oil Association (GAPKI) were allowed to join in person" (Fern 2024, 2). By excluding NGOs and such organisations, the forum excludes the perspectives of experts who are more likely to have access to extensive research, and therefore a more comprehensive understanding of the broader economic and social impacts of the EUDR. While the smallholder associations can provide insight into how EUDR compliance may be implemented in farms at the ground level, they may lack the data and resources to effectively advocate for themselves in such a setting and recommend changes at the policy level. This is in

[14] On the distinction between smallholder association and smallholder organization, a smallholder association refers to a group of small-scale farmers themselves who collectively manage their plantations, while a smallholder organization refers to a group that represents and supports smallholder farmers.

line with another key issue that the report highlights – the forum's failure to address the core issues facing smallholders:

> There was no serious discussion of important issues such as how to increase and support smallholder participation in EU supply chains, how to create a transparent and workable traceability system, and how to agree on deforestation data and privacy. […] For there to be a meaningful implementation plan, all stakeholders, especially civil society and affected communities, need to be part of the discussion and accepted as equal partners. The EUDR could be an important tool, but only if it is implemented collaboratively and with sufficient and well targeted technical and financial support from the EU (Fern 2024, 3).

Thus, although such initiatives attempt to address the challenges with adapting the EUDR to the local conditions in the Indonesian palm oil industry, these efforts remain severely insufficient, especially on the issues faced by smallholders. Greater inclusion of smallholders in such discussions is still needed in order to ensure that the financial and technical resources that are provided to all affected industry stakeholders are substantive and implementable.

On the Ground Efforts from Smallholders

Despite the heightened barriers to access the EU market that the EUDR presents, some independent smallholders have been organizing to help each other prepare for compliance with the EUDR, pointing to the possibility that smallholders can participate in the EU supply chain if provided support. SPKS has been helping independent smallholders not only adopt sustainable agricultural practices that boost yields and reduce the need to clear forests for replanting, but also learn how to use the geolocation technology needed to map their farms in compliance with the EUDR (Arshad 2024).

Books on sustainable farming practices distributed by SPKS to farmers.
(Image: Ariffin Jamar, The Straits Times)

SPKS advocacy head Marselinus Andri noted that "traceability isn't an issue for smallholders who are members of the association, numbering around 72,000," having built a database of its members that maps each farm to its owner by name, address, and geolocation coordinates (Jong 2023). Nevertheless, according to Valens Andi, head of SPKS in the Sanggau regency, "Quite frankly, farmers can't manage this alone. SPKS can send people to provide technical support, but funding is a challenge for us" (Arshad 2024).

While the SPKS believes that the EUDR "could be a great opportunity for millions of Indonesian palm oil farmers to benefit from the EU market by providing deforestation-free and traceable palm oil products," increased support from the EU and Indonesian governments by "providing incentives to farmers" is still needed to promote the inclusion of smallholders in EU and global supply chains (Serikat Petani Kelapa Sawit (SPKS) 2025). Specifically, the SPKS urges the EU to require "importing companies to trace and ensure at least 30% of their palm oil supply originates from independent smallholders," in order to ensure demand for smallholder palm oil as they prepare to comply with the EUDR (Serikat Petani Kelapa Sawit (SPKS) 2025).

Thus, although the EUDR may be currently maladapted to certain features of the Indonesian palm oil supply chain, hence raising the barriers for independent smallholders to access the EU market, its potential to drive positive change for those at the bottom of the supply chain can still be realized through greater inclusion of smallholders in the decision-making processes – a crucial component in the success of such sweeping, unilateral regulatory changes.

V. Conclusion

In the wake of the January 2025 ruling by the World Trade Organization (WTO) on a 2019 dispute between Indonesia and the EU – centered on claims that the EU's RED II imposed protectionist restrictions on the use of palm oil in biofuels (AFP 2025) – the EUDR has further heightened tensions over national sovereignty and the extraterritorial impact of environmental trade policy.

Though this paper focuses on the EUDR's impact on Indonesia's palm oil industry, the broader climate justice concerns that it highlights, regarding the EU's ability to dictate environmental standards in other countries through supply chain regulations, are not unique to this country or industry. Lacking greater coordination between the EU and its affected trade partners, the EUDR's unilateral imposition can overlook existing national sustainability efforts and the local conditions that may impede its successful implementation. The EUDR's "one-size-fits-all" approach to deforestation standards reinforces existing developmental and power imbalances at both the national and the international level. The responses from industry and governmental actors examined in this paper point to the EUDR's risk of deepening existing disparities between the smallholders at the bottom of the supply chain and industry giants, as well as exacerbating the developmental inequalities between the EU and its developing trade partners, where economic dependencies shape power dynamics.

References

AFP. 2025. “WTO favours EU over Indonesia on palm oil restrictions.” *The Jakarta Post*, January 11. https://www.thejakartapost.com/business/2025/01/11/wto-favours-eu-over-indonesia-on-palm-oil-restrictions.html.

Ainger, John, Alberto Nardelli, and Ewa Krukowska. 2024. “EU Moves to Delay Deforestation Rule After Huge Pushback.” *Bloomberg*, October 2. https://www.bloomberg.com/news/articles/2024-10-02/eu-poised-to-delay-landmark-deforestation-rule-for-one-year?embedded-checkout=true.

Arshad, Arlina. 2024. “Guardians of the Forest: How Looming New EU Rules on Palm Oil Could Wipe out Small Farmers.” *The Straits Times*, August 24. https://www.straitstimes.com/multimedia/graphics/2024/08/palm-oil-asia/index.html.

Badan Pusat Statistik/BPS–Statistics Indonesia. 2024. *Statistik Kelapa Sawit Indonesia 2023: Indonesia Oil Palm Statistics 2023*. Badan Pusat Statistik/BPS–Statistics Indonesia, November 2024. https://web-api.bps.go.id/download.php?f=ZrryQ9wpkWvBXIg6VMpkDVljSnRseDVVWWpOM3ZNampyMDkwK1poRXFOWG1waXNEQWZFS3hzcy9qOFU4VjZ3b3VLWk9WNU5kK2ZrQ3N3dXM3bk8vOUNmOHUxcHpRVFVlTFg4TUZlUE1uT2N1TmZ1enA1eXJOY2dQRUNhS2xlOE4yUk50b1c3cTdBRVYyY1VZeWdmeE43eEh1OHA2SXllMXVTU2N3WjVJbHF0cHFMU0dlL0FZRmRmTXRCZ00wSlRoRCtiN284MzltclE4QmFxOENoSDVNbGFyVFFjS1R1WUlHbkhCTmo2NXdRdmlyU1BkMmZYK0o4bVl2M2VYcnU2TEIyT2dQa1cvd2N6K2hjQTE=&_gl=1*1mupgii*_ga*MTM2ODU0MTc4Mi4xNzM5NzY2Njk4*_ga_XXTTVXWHDB*MTczOTc2NjY5Ny4xLjAuMTczOTc2NjY5Ny4wLjAuMA.

Benedict, Jon J., and Robert Heilmayr. 2024. “Trase: Indonesian palm oil exports and deforestation.” *Stockholm Environment Institute*, October 8. https://www.sei.org/features/indonesian-palm-oil-exports-and-deforestation/#:~:text=In%202023%2C%20Indonesia%20produced%2047,becoming%20an%20increasingly%20important%20buyer.

Christina, Bernadette. 2024. “Explainer: How Indonesia’s deforestation persists despite moratorium.” *Reuters*, June 20. https://www.reuters.com/business/environment/how-indonesias-deforestation-persists-despite-moratorium-2024-06-20/#:~:text=The%20total%20size%20of%20Indonesia's,expansion%20in%20palm%20oil%20plantations.

Cohen, Patricia. 2024. “Can Europe Save Forests Without Killing Jobs in Malaysia?” *The New York Times*, March 14. https://www.nytimes.com/2024/03/14/business/economy/malaysia-palm-oil-european-union.html.

de Vos, Rosanne E., Aritta Suwarno, Maja Slingerland, Peter J. van der Meer, and Jennifer M. Lucey. 2023. “Pre-certification conditions of independent oil palm smallholders in Indonesia. Assessing prospects for RSPO certification.” *Land Use Policy* 130 (July 2023). https://doi.org/10.1016/j.landusepol.2023.106660.

Eggen, Michael, Robert Heilmayr, Patrick Anderson, et al. 2024. "Smallholder participation in zero-deforestation supply chain initiatives in the Indonesian palm oil sector: Challenges, opportunities, and limitations." *Elementa: Science of the Anthropocene* 12 (1). https://doi.org/10.1525/elementa.2023.00099.

European Commission. n.d.-a "Implementation of the EU Deforestation Regulation." Accessed February 23, 2025. https://green-business.ec.europa.eu/deforestation-regulation-implementation_en.

European Commission. n.d.-b "Renewable energy targets." Accessed February 23, 2025. https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-targets_en#:~:text=With%20its%20Energy%202020%20strategy,20%25%20or%20more%20by%202020.

European Commission. n.d.-c "Traceability and geolocation of commodities subject to the EUDR." Accessed February 23, 2025. https://green-business.ec.europa.eu/deforestation-regulation-implementation/traceability-and-geolocation-commodities-subject-eudr_en.

European Forest Institute and Indonesian Sustainable Palm Oil. 2024. *Joint gap assessment of the EUDR information needs and information availability from the Indonesian Sustainable Palm Oil (ISPO) certification.* KAMI, 2024. https://efi.int/sites/default/files/files/flegtredd/Terpercaya/Other%20resources/ISPO_Joint_Gap_Assessment.pdf.

European Forest Institute. 2025a. *Inclusion of Indonesian Smallholders in European Union Supply Chains under the EU Deforestation Regulation: Challenges and Potential Mitigation Measures*. European Forest Institute, January 20. https://efi.int/sites/default/files/files/flegtredd/KAMI/Resources/Smallholder_challenges.pdf.

European Forest Institute. 2025b. *Indigenous Oil Palm Smallholders in Indonesia's State Forest and the EU Deforestation Regulation.* European Forest Institute, January 20. https://efi.int/sites/default/files/files/flegtredd/KAMI/Resources/Indigenous_oil_palm.pdf.

European External Action Service. 2023. "Kick-off Meeting of the Ad Hoc Joint Task Force between Indonesia, Malaysia and the EU." News release, August 4. https://www.eeas.europa.eu/delegations/indonesia/kick-meeting-ad-hoc-joint-task-force-between-indonesia-malaysia-and-eu_en?s=168.

Fern. 2024. *Stakeholders agree with von der Leyen that EUDR partnerships are crucial – that's why EU-Indonesia-Malaysia Joint Task Force must step up its game.* Fern, October 7. https://www.fern.org/fileadmin/uploads/fern/Documents/2024/Stakeholders_agree_with_von_der_Leyen_that_EUDR_partnerships_are_crucial.pdf.

Gabay, Aimee. 2024. "Smallholders offer mixed reactions to calls for delay in EU deforestation law." *Mongabay*, November 1. https://news.mongabay.com/2024/11/smallholders-offer-mixed-reactions-to-calls-for-delay-in-eu-deforestation-law/.

Gregory, Mark, and Saskia Ozinga. 2025. *Indonesian Palm Oil Smallholders and the EUDR: Impacts and Ways Forward*. Fern, February 2025. https://www.fern.org/fileadmin/uploads/fern/Documents/2025/Fern_Indonesian_palm_oil_smallholders_and_the_EUDR_impacts_and_ways_forward.pdf.

Hasan, Fadhil, Tauhid Ahmad, Mirah M. Fahmid, and Ilma Fadhil. 2021. "Reducing Poverty, Improving Sustainability: Palm Oil Smallholders are Key to Meeting the UN SDGs." Working Paper No.1 2021. The Institute for Development of Economics and Finance, October 2021.

Heimann, Tobias, Robin Argueyrolles, Manuel Reinhardt, Franziska Schuenemann, Mareike Söder, and Ruth Delzeit. 2023. "Phasing out palm and soy oil biodiesel in the EU: What is the benefit?" *GCB Bioenergy* 16 (1). https://doi.org/10.1111/gcbb.13115.

Hueda, Atilio Berardi, Pedro Miguel da Costa e Silva, Valeria Denisse Vilaseca Chumacero, Jorge Rojas Rodríguez, Iván Emilio de Js. Ogando Lora, Hernan Ponce Aray, et al. 2023. Joint letter from Ambassadors of Argentina, Brazil, Bolivia, Colombia, Dominican Republic, Ecuador, Guatemala, Indonesia, Malaysia, Mexico, Nigeria, Paraguay, Peru, Thailand, Ghana, Ivory Coast, Honduras, to European Parliament, European Council, European Commission, September 7, 2023. https://www.atibt.org/files/upload/news/RDUE/Trading_partners_joint_letter_on_EUDR_7_September_2023.pdf.

Indonesian Palm Oil Association. 2024. "GAPKI Takes Advantage of EUDR Delay To Prepare Smallholders." *Indonesian Palm Oil Association*, October 23. https://gapki.id/en/news/2024/10/20/gapki-takes-advantage-of-eudr-delay-to-prepare-smallholders/.

Jadhav, Prachi, and Jason Chong. 2024. *Palm Oil Buyers Scorecard.* World Wide Fund for Nature, April 2024. https://palmoilscorecard.panda.org/WWF_POBS_2023_3_ONLINE.pdf

Jong, Hans Nicholas. 2023. "For Indonesian smallholders, EU deforestation rule is a threat – and an opportunity." *Mongabay*, January 4. https://news.mongabay.com/2023/01/for-indonesian-smallholders-eu-deforestation-rule-is-a-threat-and-an-opportunity/.

Krukowska, Ewa. 2024. "EU Should Delay Deforestation Regulation, Senior Lawmaker Says." *Bloomberg*, June 27. https://www.bloomberg.com/news/articles/2024-06-27/eu-should-delay-deforestation-regulation-senior-lawmaker-says?embedded-checkout=true.

Li, Bo, Mathis Freytag, Tina Schneider, and Ruth Nogueron. 2024. "Unpacking the EU Deforestation Regulation's Legal Production Requirement." *World Resources Institute*, June 10. https://www.wri.org/technical-perspectives/eu-deforestation-regulation-legal-production-requirement.

Muradian, Roldan, Raras Cahyafitri, Tomaso Ferrando, et al. 2024. "Will the EU deforestation-free products regulation (EUDR) reduce tropical forest loss? Insights from three producer countries." *Ecological Economics* 227 (January 2025). https://doi.org/10.1016/j.ecolecon.2024.108389.

Oegroseno, Arief Havas. 2024. "Why Indonesia is pushing back against EU rules | DW News." Interview by Daniel Winter. *DW News*, Youtube, May 30. https://www.youtube.com/watch?v=xwELaVU_Y1U.

Phillips, Josie. 2021. "An illustrated history of industrial palm oil." *Dialogue Earth*, February 18. https://dialogue.earth/en/forests/illustrated-history-of-industrial-palm-oil/.

Piñeda, Naomi Larsson. 2017. "'The last place on Earth': how Sumatra's rainforest is being cleared for palm oil." *The Guardian*, September 28. https://www.theguardian.com/sustainable-business/2017/sep/28/last-place-on-earth-deforestation-palm-oil-threat-leuser-rainforest.

Raharja, Sapta, Machfud Marimin, Safriyana P. Papilo, et al. 2020. "Institutional strengthening model of oil palm independent smallholder in Riau and Jambi Provinces, Indonesia." *Heliyon* 6 (5). https://doi.org/10.1016/j.heliyon.2020.e0387.

Roundtable on Sustainable Palm Oil. 2023. "RSPO, Indonesian Government To Boost Smallholder Certification." *Roundtable on Sustainable Palm Oil*, March 30. https://rspo.org/rspo-indonesian-government-to-boost-smallholder-certification/.

Savic, Bob. 2024. "EU deforestation law may push Southeast Asia toward China." *GIS*, July 18. https://www.gisreportsonline.com/r/eu-deforestation-law/.

Serikat Petani Kelapa Sawit (SPKS). 2025. "Palm Oil Farmers Believe That The EU Regulations On Products And Commodities Related To Deforestation Can Become An Opportunity And Can Contribute Benefits For Palm Oil Farmers In Indonesia." News release, February 24. https://spks.or.id/detail-sikap-palm-oil-farmers-believe-that-the-eu-regulations-on-products-and-commodities-related-to-deforestation-can-become-an-opportunity-and-can-contribute-benefits-for-palm-oil-farmers-in-indonesia#.

Starcevic, Seb. 2023. "Indonesia doesn't need Europe anymore, presidential frontrunner says." *POLITICO*, November 14. https://www.politico.eu/article/indonesia-europe-prabowo-subianto-presidential-election-palm-oil-trade-human-rights/.

Suroyo, Gayatri, Stefanno Sulaiman, and Ananda Teresia. 2023. "Indonesia accuses EU of 'regulatory imperialism' with deforestation law." *Reuters*, June 8. https://www.reuters.com/business/environment/indonesia-accuses-eu-regulatory-imperialism-with-deforestation-law-2023-06-08/.

Walker, Keith. 2023. “Malaysia: Is boosting palm oil flow to China defeat for EU?” *DW*, September 26. https://www.dw.com/en/malaysia-is-boosting-palm-oil-flow-to-china-defeat-for-eu/a-66927158.