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Sustainability or Selective Policy? A Political Economy Analysis of the European Union's Regulatory Approach to Indonesian Palm Oil

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Abstract

This study offers a critical political economy analysis of the European Union's regulatory stance on Indonesian palm oil, examining the complex interplay of environmental sustainability, international trade, and labour issues within the global vegetable oil market. As the largest global producer and exporter, Indonesia's palm oil sector has faced significant challenges following the EU's implementation of the Renewable Energy Directive II (RED II) in 2020. RED II enforces stringent sustainability criteria targeting the phase-out of palm oil-based biofuels by 2030, motivated by concerns over deforestation, biodiversity loss, and labour rights violations, including child labour. Our findings reveal a sharp decline in Indonesia's palm oil exports to the EU after RED II, alongside a rise in imports of alternative oils such as soybean and sunflower, which generally require more land and generate greater environmental impact despite palm oil's superior land-use efficiency. Labour issues in the palm oil industry remain contentious; ongoing child labour concerns are exacerbated by divergent legal standards and enforcement inconsistencies between Indonesia and the EU, complicating regulatory compliance. Furthermore, while RED II is presented as a climate and sustainability measure, its selective enforcement appears to shield EU domestic oilseed producers, such as rapeseed and sunflower growers, suggesting protectionist motives that conflict with the EU's sustainability leadership claims. This research contributes to debates on sustainable development and trade fairness by questioning whether EU policies genuinely serve global environmental goals or primarily protect regional economic interests at the expense of emerging economies. Highlighting Indonesia's sustainability efforts via the Indonesian Sustainable Palm Oil (ISPO) certification, the study underscores the multifaceted trade-offs inherent in global regulatory regimes. Aligned with key UN Sustainable Development Goals, the paper calls for balanced, inclusive policies and multilateral dialogue to harmonize environmental objectives with equitable trade in the vegetable oil sector.

Keywords: *Palm Oil; Renewable Energy; Sustainability; Trade Protectionism; Consumer Behaviour.*

Introduction

This research was prompted by the first author's direct experience during an internship at an Indonesian Customs and Excise office, where the task involved formulating and delivering a proposal on "green office" initiatives aimed at fostering environmental awareness within public sector institutions. This initiative formed part of a broader governmental agenda to integrate sustainability into bureaucratic operations. Subsequent discussions with customs officials highlighted the increasing importance of environmental compliance in international trade, particularly in relation to the heightened scrutiny applied by European countries toward Indonesian export commodities. One notable case referenced was the rejection of a crude palm oil (CPO) shipment by a European Union (EU) member state due to its failure to meet

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established environmental regulations. These conversations underscored the growing complexity of regulatory requirements that Indonesian palm oil exporters must satisfy, particularly the obligation to adhere to EU-defined sustainability standards and certification schemes such as the Roundtable on Sustainable Palm Oil (RSPO), many of which are conceptualized and administered by institutions based in Europe.

What emerged most prominently from these discussions was the significant economic burden imposed by these sustainability compliance requirements. Despite the relatively low market value of CPO, the administrative and certification costs required to access the EU market are substantial, often making the trade unviable for smallholder producers. Furthermore, the conversation highlighted the prevalence of negative narratives surrounding palm oil in European markets, where it is frequently linked to deforestation, climate change, health hazards, and unethical labour practices. These allegations have damaged the global reputation and economic value of Indonesian palm oil, despite its position as one of the country's most important export commodities.

These preliminary insights prompted a series of critical research questions:

- Why is Indonesian palm oil as an abundant natural resource and a cornerstone of rural economic development could be a subject to persistent negative perceptions, particularly within the European Union?
- What empirical evidence underpins the environmental and health-related concerns frequently associated with palm oil production and consumption?
- To what extent do report labour issues in the palm oil sector reflect systemic exploitation, as opposed to being manifestations of broader socioeconomic conditions prevalent in rural Indonesia?

These questions serve as the conceptual foundation for the present study.

Accordingly, this study investigates the environmental, economic, and social dimensions of the EU's regulatory campaign against Indonesian palm oil. It critically engages with the dominant discourses on sustainability and trade within the broader context of EU–Indonesia relations. By doing so, the study aims to contribute to a more nuanced understanding of palm oil's role in global sustainability debates and its potential as a responsibly managed resource that supports both ecological goals and socioeconomic development.

Background of the Problem

The European Union has positioned itself as a global leader in promoting environmental sustainability, enacting comprehensive legislation to minimize the ecological impact of imported goods. Among these initiatives, the Renewable Energy Directive II (RED II) mandates the gradual phase-out of palm oil-based biofuels by 2030, citing concerns over deforestation, biodiversity loss, and labour rights violations as issues often associated with palm oil plantations. These claims are supported by various environmental NGOs and academic studies emphasizing the environmental and ethical risks tied to unsustainable palm oil practices.

Indonesia, the world's largest producer and exporter of palm oil, views this policy as disproportionately punitive and economically harmful. The government and industry stakeholders argue that such critiques often overlook Indonesia's significant progress in promoting sustainability through mechanisms such as the Indonesian Sustainable Palm Oil (ISPO) certification scheme. Additionally, critics point to an apparent double standard in the EU's policy: while palm oil is targeted for elimination, alternative vegetable oils like rapeseed,

sunflower, and soybean - often linked to greater land-use intensity and carbon emissions - continue to be accepted in the European market. This raises questions about the underlying motivations of the EU's policy approach. Is it genuinely aimed at promoting global environmental goals, or does it serve as a protectionist strategy to shield domestic oilseed industries from international competition?

This issue carries substantial implications for Indonesia. Palm oil plays a central role in the nation's economic development, providing employment for millions, particularly among rural smallholders who often lack alternative livelihoods. EU restrictions not only affect trade volumes but also have broader impacts on poverty alleviation, food security, and rural sustainability.

This research seeks to examine the broader political economy of the EU's campaign against Indonesian palm oil by exploring several key dimensions:

- The impact of EU sustainability regulations on Indonesia's palm oil exports, both to Europe and to alternative global markets
- Shifting public perceptions shaped by environmental discourses and international media narratives
- Labor dynamics within the palm oil industry, especially the experiences of smallholder farmers and concerns over social justice
- The EU's substitution of palm oil with other vegetable oils, and whether such shifts contribute to genuine environmental gains or merely relocate ecological burdens

By integrating these dimensions, this thesis provides a critical analysis of whether the EU's approach aligns with its stated sustainability objectives or reflects a more complex entanglement of environmental rhetoric and economic self-interest. Ultimately, the study contributes to ongoing debates surrounding sustainable trade practices, global environmental governance, and the future of palm oil in a rapidly evolving international landscape.

Historical Background of Palm Oil in Indonesia

The cultivation of oil palm (Elaeis guineensis) in Indonesia traces back to the late 19th century during the Dutch colonial period. Originally introduced from West Africa as an ornamental species in botanical gardens, the plant's commercial potential was soon recognized. By the early 1900s, large-scale plantations had been established in Sumatra under Dutch governance, laying the foundation for Indonesia's emergence as a key player in global palm oil production.

Following Indonesia's independence, the palm oil sector retained its strategic importance. However, it was during the 1970s that the government began actively positioning palm oil as a critical commodity for national economic development. A central policy initiative during this period was the implementation of the Nucleus Estate and Smallholder (NES) scheme. This model encouraged partnerships between large plantation companies - responsible for managing central estates and providing technical and financial support - and smallholder farmers, who cultivated satellite plots as contract growers. This inclusive model played a transformative role in shifting palm oil from a colonial export legacy to a driver of rural development and poverty alleviation (Ruml et al., 2022).

The expansion of Indonesia's palm oil industry accelerated in the 1980s and 1990s, spurred by rising global demand for an affordable and versatile vegetable oil used in food products, cosmetics, industrial lubricants, and, more recently, biofuels (Qaim et al., 2025). Among its comparative advantages, palm oil stands out for its high yield per hectare relative to alternative

crops such as soybean, sunflower, and rapeseed. Indonesia's favourable tropical climate, extended harvest periods, and low production costs further reinforced its competitive position in the international market.

By the early 2000s, palm oil had become one of Indonesia's most valuable export commodities, contributing significantly to national GDP, foreign exchange earnings, and employment generation. The industry attracted large-scale domestic and foreign investments, and by 2021, Indonesia accounted for approximately 55% of global palm oil production, followed by Malaysia. Together, the two countries have established a near-duopoly in the international palm oil trade.

The rapid development of the palm oil sector has brought profound structural changes to Indonesia's rural economy. Today, more than 40% of oil palm cultivation areas are managed by smallholder farmers, many of whom depend on palm oil as their primary livelihood. This underscores the sector's importance not only as a foreign exchange earner but also as a vital instrument for socioeconomic development in provinces such as Riau, North Sumatra, Kalimantan, and West Papua.

However, the sector's rapid growth has also generated considerable controversy. International concerns have emerged regarding its role in deforestation, peatland degradation, biodiversity loss, greenhouse gas emissions, and labour conditions. In response to mounting criticism, the Indonesian government introduced national sustainability initiatives, most notably the Indonesian Sustainable Palm Oil (ISPO) certification, aimed at improving regulatory oversight and environmental performance.

Despite these efforts, scepticism from Western stakeholders - particularly the European Union - has intensified in recent years. The EU's increasingly restrictive policies and sustainability requirements have raised barriers for Indonesian exports, threatening market access and economic stability in rural regions. These developments underscore the need to contextualize the current EU-Indonesia palm oil tensions within their historical trajectory.

Understanding the evolution of the palm oil sector from a colonial import to a pillar of Indonesia's contemporary economic framework is crucial for interpreting the broader implications of the ongoing disputes. The EU's critique of palm oil production must be viewed not only through the lens of environmental governance and trade policy, but also in terms of national development priorities, rural equity, and global commodity politics. The historical perspective highlights the multifaceted nature of palm oil as both a symbol of opportunity and a focal point of international contestation.

Justification for the Study

A critical examination of the European Union's (EU) palm oil related regulatory frameworks is essential to understanding their implications for global trade dynamics and sustainable development discourse. While the EU's legislative measures, including the Renewable Energy Directive II (RED II), are framed within a climate and ethical sourcing agenda, these policies raise several controversial issues that warrant rigorous scholarly inquiry.

Indonesia's palm oil sector is a cornerstone of its rural economy, directly supporting the livelihoods of over 4.5 million smallholder farmers. Approximately 40% of the country's 17 million hectares of oil palm plantations are cultivated by smallholders, with organizations such

as *Serikat Petani Kelapa Sawit* (SPKS) representing over 76,000 farmers operating on plots generally smaller than 10 hectares. The Indonesian government legally classifies any plantation under 25 hectares as a smallholding (Gregory & Ozinga, 2025), reflecting the difficulty of standardizing smallholder definitions. Despite such definitional variances, the sector's socioeconomic relevance remains unambiguous. Palm oil production functions as a primary income source for millions, making any restrictive policy measures potentially destabilizing for rural economies with limited alternative livelihoods. Reduced exports due to the EU's exclusionary policies could result in rising unemployment, lower household incomes, and increased rural poverty.

From a trade perspective, the EU's exclusion of palm oil from the sustainable biofuel feedstock list - while continuing to support domestically produced rapeseed and sunflower oils - has been perceived by Indonesia as an act of "green protectionism." These European crops are often subsidized and benefit from favourable regulatory conditions, creating asymmetrical market advantages. As such, the EU's regulatory stance invites scrutiny regarding its adherence to the principles of fair competition and transparency under World Trade Organization (WTO) frameworks.

Environmental arguments used to justify the EU's policies are also contested. Palm oil is widely acknowledged for its superior land-use efficiency, yielding four to ten times more oil per hectare than rapeseed, soybean, or sunflower oil. Replacing palm oil with these less efficient crops may increase total land conversion and associated greenhouse gas emissions, shifting the ecological burden to other regions such as South America and Eastern Europe. Thus, the EU's current strategy may inadvertently exacerbate global environmental degradation rather than mitigate it.

This research is therefore crucial in unpacking the multidimensional impacts of the EU's restrictive palm oil policies on Indonesia. It interrogates whether these regulations are genuinely aligned with global sustainability goals or whether they serve regional economic interests to the detriment of emerging economies. The study contributes to more equitable and informed policymaking by assessing the economic, environmental, and social trade-offs that underpin contemporary regulatory discourses.

This study aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 17 (Partnerships for the Goals). By contextualizing palm oil within broader issues of global equity, environmental responsibility, and trade justice, the research contributes to developing balanced, inclusive, and sustainability-oriented policy solutions.

Literature Review

Positioning Palm Oil in the Global Context

Palm oil, as the most consumed vegetable oil globally, has become a focal point in discussions on food security, environmental sustainability, global trade, and economic development. Its ascendancy in the global oil market stems from its high productivity, economic value, and multifunctionality across diverse industries. Yet, this prominence is interwoven with contentious debates on environmental degradation, biodiversity loss, and human rights concerns.

The following literature review provides a comprehensive synthesis of recent academic contributions, tracing the trajectory of palm oil from its role in global value chains to its embeddedness in national economies and its entanglement in international policy discourses, particularly vis-à-vis European Union (EU) regulation:

- *Global Dominance and Efficiency*
  Recent data place palm oil at the forefront of the global vegetable oil industry, accounting for over 39% of total vegetable oil production while occupying less than 10% of the total land area allocated for oil crops (FAO, 2025). Its productivity significantly surpasses that of alternative oils. Palm oil yields average 3.06 tons per hectare, in stark contrast to soybeans (0.43 tons/ha), rapeseed (0.67 tons/ha), and sunflower (0.70 tons/ha) (FAO, 2025). These yield differentials underscore palm oil's land-use efficiency, which has become a central argument in defence of its continued utilization.

  As global demand for vegetable oils surpasses 217 million metric tons annually (USDA, 2025), debates intensify around which oils offer the most sustainable solution to balancing human consumption needs with ecological integrity. The efficiency of palm oil production, particularly in terms of land use, has been consistently emphasized in literature as a factor mitigating broader environmental impacts at least when compared to less efficient oil crops (Jackson et al., 2019; Parsons et al., 2020).

- *Environmental and Social Trade-offs*
  Despite its advantages in efficiency, palm oil production is closely associated with environmental externalities. Numerous studies have explored the impact of palm oil expansion on tropical deforestation, habitat loss, and greenhouse gas emissions. Meijaard et al. (2018) and Murphy et al. (2021) document how the expansion of oil palm plantations, particularly in Indonesia and Malaysia—has contributed significantly to deforestation and the decline of biodiversity hotspots, including critical orangutan habitats.

  However, a comparative perspective, as discussed by Parsons et al. (2020), suggests that alternative vegetable oils, if scaled up to meet global demand in place of palm oil, would likely cause more extensive deforestation due to their lower yield per hectare. Jackson et al. (2019) similarly warn of a paradox: replacing palm oil with supposedly 'greener' crops could increase global land-use pressures and thereby worsen environmental outcomes. This reinforces the complexity of evaluating sustainability, where not only the crop but the context of its cultivation - such as the type of land converted - matters significantly.

  In this vein, some scholars advocate for a more nuanced framing. For instance, Jackson et al. (2019) emphasize the potential of utilizing degraded lands for oil palm expansion as a way to decouple palm oil production from direct rainforest destruction. This proposition challenges overly simplistic narratives that equate palm oil with environmental harm and invite a shift toward more site-specific policy and land-use strategies.

- *Governance and Certification Mechanisms*
  Certification schemes such as the Roundtable on Sustainable Palm Oil (RSPO) and the Indonesian Sustainable Palm Oil (ISPO) standard have emerged as tools for mediating the tension between economic development and environmental protection. According to Santika et al. (2021), these mechanisms though imperfect, offer pathways to more responsible production practices.

Murphy et al. (2021), Parsons et al. (2020), and Zachlod et al. (2025) underscore the potential of certified palm oil in reducing adverse environmental and social impacts. However, challenges remain regarding inconsistent enforcement, limited adoption among smallholders, and credibility concerns. The literature agrees that certification cannot be seen as a panacea but rather as one component within a broader governance architecture.

Notably, certification schemes are also embedded in the geopolitics of trade. As Zachlod et al. (2025) argue, certification increasingly functions as a gatekeeping mechanism in international markets, particularly in jurisdictions like the EU, where compliance with sustainability standards is a prerequisite for market access.

- *Indonesia's Palm Oil Sector: Historical and Structural Dimensions*
  Palm oil's integration into the Indonesian economy is deeply rooted in historical policy frameworks. During the 1970s, the Indonesian government strategically promoted palm oil as a vehicle for rural development and export diversification through the Nucleus Estate and Smallholder (NES) scheme (Ruml et al., 2022). This model established cooperative partnerships between large estate companies (nucleus) and smallholder farmers (plasma), with the latter receiving access to land, inputs, and technical support in exchange for selling their produce back to the nucleus firms.

  The NES program supported by multilateral institutions such as the World Bank and the Asian Development Bank and enabled widespread participation of rural communities in palm oil cultivation. It is estimated that smallholders now account for over 40% of Indonesia's palm oil output (BPS, 2022). Despite criticism concerning asymmetrical power relations, debt burdens, and environmental mismanagement, the program has played a pivotal role in poverty reduction and rural employment.

  Crucially, this historical embeddedness makes palm oil a cornerstone of Indonesia's development strategy. Critics of palm oil must therefore contend not only with ecological imperatives but also with socio-economic realities wherein millions rely on the commodity for their livelihoods. As such, policy approaches must strike a balance between sustainability and equity, particularly in view of global environmental regulations that risk disproportionately impacting smallholder producers.

- *EU Regulatory Frameworks and Trade Tensions*
  The European Union's Renewable Energy Directives, namely RED I (2009) and RED II (2018) that have significantly influenced the trajectory of palm oil in global biofuel markets. While neither directive explicitly bans palm oil, they impose stringent sustainability and land-use criteria that effectively curtail its use in meeting renewable energy targets.

  RED I mandated minimum greenhouse gas (GHG) savings and disallowed biofuels derived from high-biodiversity or high-carbon-stock land. RED II introduced the concept of Indirect Land Use Change (ILUC), classifying feedstocks like palm oil as "high ILUC-risk" based on their historical expansion into carbon-rich ecosystems. This classification led to a cap on palm-based biofuels at 2019 levels, with a scheduled phase-out by 2030 (European Commission, 2019).

  The operationalization of this policy through Delegated Regulation (EU) 2019/807 formally identified palm oil as high ILUC-risk, citing data that more than 10% of global expansion since 2008 occurred in forested or peatland areas. Although exceptions exist for palm oil

cultivated on degraded lands (designated "low ILUC-risk"), the administrative burden of verification renders this pathway difficult for many producers, especially smallholders.

- *Trade Disputes and Global Governance*
  These EU regulatory measures have sparked diplomatic tensions and trade disputes. In 2021, Malaysia filed a complaint with the World Trade Organization (WTO), alleging that the EU's biofuel rules were discriminatory. A 2024 WTO ruling found certain EU measures inconsistent with trade rules, though it acknowledged the legitimacy of environmental concerns.

  This dispute reflects a broader trend wherein environmental regulations intersect with economic nationalism and protectionism. Scholars such as Schuster et al. (2021) interpret EU actions not only as environmental governance but also as a form of non-tariff trade barrier that reshapes global commodity flows. For Indonesia, the regulatory squeeze on palm oil represents a challenge to national sovereignty over natural resources and rural development agendas.

  The situation underscores the centrality of palm oil in international economic diplomacy. As the global climate regime intensifies, the politics of biofuel sustainability will continue to influence North–South trade dynamics raising questions about fairness, scientific objectivity, and the equitable distribution of regulatory burdens.

The literature clearly indicates that palm oil occupies a complex position at the intersection of global trade, sustainable development, and geopolitical strategy. Its role as the most land-efficient vegetable oil makes it indispensable in meeting future food and energy demands. At the same time, its production raises critical concerns around environmental degradation and social justice.

The historical and structural significance of palm oil in countries like Indonesia must be carefully considered in the formulation of international policy. Regulatory regimes such as the EU's RED I and RED II have demonstrated considerable power in shaping production incentives, yet they must evolve to accommodate the nuanced realities of producing nations.

In synthesizing these diverse perspectives, this literature review reaffirms the necessity of a balanced, evidence-based discourse on palm oil—one that transcends binary narratives of 'good' or 'bad' and instead embraces complexity, cooperation, and context-specific solutions. This integrative perspective is essential for informing more just and effective policy frameworks in the global governance of palm oil.

Analysis and Discussion of Findings

Impact of the EU Renewable Energy Directives (RED I & RED II)

The EU Renewable Energy Directives have played a pivotal role in shaping palm oil demand. RED I, introduced in 2009, established sustainability criteria for biofuels, while RED II, enacted in 2018, designated palm oil as a "high ILUC-risk" (Indirect Land Use Change) feedstock due to its perceived environmental impact. Under Delegated Regulation (EU) 2019/807, the contribution of high ILUC-risk feedstocks to renewable energy targets was capped at 2019 levels and mandated to be phased out by 2030. Although these directives are framed as environmental policy, RED II in particular has faced criticism from palm oil-producing

countries such as Indonesia and Malaysia, who argue that the regulation serves as a form of disguised trade protectionism under the guise of sustainability.

Trends in Indonesia's Palm Oil Exports to the European Union

- *Export Volume and Trade Value (2008–2022)*

This section provides a longitudinal analysis of palm oil export trends, with a specific focus on Indonesia's performance in global and EU markets between 2008 and 2022. Import volume data is derived from the Food and Agriculture Organization (FAO), while trade value data is sourced from the Observatory of Economic Complexity (OEC). This dual-source approach enables a robust assessment of evolving trade dynamics, particularly in response to regulatory developments such as the EU's RED I and RED II, as well as broader sustainability frameworks.

The year-by-year evaluation highlights the multifaceted influences, namely economic, political, and environmental on trade performance. For instance, the global financial crisis of 2008–2009 led to a significant decline in trade value, dropping from USD 32.1 billion in 2008 to USD 25.1 billion in 2009, despite an increase in volume. This was attributed to weakened global demand and lower commodity prices.

In 2010, global palm oil imports declined from 38.77 to 33.85 million tonnes, reflecting residual economic uncertainty and the nascent impact of RED I, which introduced sustainability criteria that prompted caution among EU importers.

Table 1.
Palm Oil Imports and Trade Value (2008–2022)

Year	World Import (Mt)	EU Import (Mt)	World Trade Value (B USD)	Indonesia Trade Value (B USD)
2008	36.69	7.82	32.1	12.9
2009	38.77	8.84	25.1	10.8
2010	33.85	6.76	31.3	13.4
2011	35.74	6.32	43.3	17.9
2012	39.16	7.23	42.4	19.2
2013	43.42	8.84	38.8	18.1
2014	42.09	8.55	37.4	18.6
2015	46.33	8.40	32.3	17.0
2016	41.49	8.51	29.9	14.9
2017	46.55	8.89	35.5	19.2
2018	47.56	8.66	33.2	17.0
2019	52.10	9.10	32.2	16.3
2020	47.62	9.02	35.3	18.2
2021	48.34	7.69	52.1	26.8
2022	46.04	6.56	59.7	29.1

Source: Food and Agriculture Organization

Between 2012 and 2016, trade value steadily decreased from USD 43.3 billion in 2011 to USD 29.9 billion in 2016. This period coincided with overproduction, price volatility, and intensified environmental campaigns led by NGOs, which linked palm oil to deforestation and biodiversity loss. In response, European companies increasingly labelled products as "palm oil-free", while the EU Parliament advocated for a unified certification scheme, criticizing the effectiveness of

voluntary mechanisms like RSPO. In 2014, both volume and value experienced declines. While the drop in trade value from USD 38.8 billion in 2013 to USD 37.4 billion, was moderate, it reflected growing environmental and consumer pressures, particularly in countries like France and Italy. The year 2016 marked another inflection point, as both global volume and Indonesia's export value fell. A resolution from the EU Parliament proposed a single certification system, signalling a shift towards stricter import requirements. Anticipating tighter regulations, European buyers began reducing palm oil imports.

The COVID-19 pandemic in 2020 further disrupted trade flows. Global imports declined from 52.10 to 47.62 million tonnes, due to lockdowns and supply chain interruptions. Despite fluctuating prices, RED II implementation continued to influence EU policy on biofuels. A striking development occurred in 2022, when EU palm oil imports fell to 6.56 million tonnes - the lowest in the observed period - despite global trade value peaking at USD 59.7 billion and Indonesia's export value reaching USD 29.1 billion. This divergence was largely attributed to the EU's impending Deforestation Regulation (effective 2024), which prompted importers to pre-emptively reduce procurement in anticipation of more rigorous traceability and compliance requirements. Concurrently, the Russia–Ukraine conflict disrupted global supply chains for alternative oils such as sunflower and soybean, leading to price surges.
In short, while global demand for palm oil remained stable - driven by large importers such as India, China, and Middle Eastern nations - the EU's declining imports are primarily attributable to policy-driven factors rather than economic inefficiency or diminished competitiveness of palm oil.

- *Shifting Patterns in EU Vegetable Oil Imports (2018–2022)*

According to Eurostat (2024), the composition and volume of the EU's vegetable oil imports have shifted significantly in recent years, shaped by environmental regulations, geopolitical pressures, and changing consumer preferences. Among all vegetable oils, palm oil experienced the most pronounced transformation. From 2008 to 2019, palm oil imports rose steadily, reaching a peak of 9.11 million tonnes. However, following the introduction of RED II and Delegated Regulation 2019/807, which restricted palm oil's eligibility for biofuel use, imports declined substantially - dropping to an estimated 5.15 million tonnes by 2024, representing a 44% reduction from the peak. This trend was less a reflection of market demand and more a consequence of policy interventions and sustainability narratives that portrayed palm oil as ecologically damaging. As a result, EU industries increasingly substituted palm oil with alternatives such as sunflower, soybean, and rapeseed oils.

Sunflower oil imports grew markedly, from 2.35 million tonnes in 2008 to approximately 6.3 million tonnes by 2024 - largely driven by reformulation efforts and reinforced by supply disruptions stemming from the Russia–Ukraine war. Soybean oil imports also increased, from 0.84 million tonnes in 2013 to 1.39 million tonnes in 2024, due to its favourable perception among EU stakeholders. Rapeseed oil, benefiting from stable domestic production, maintained consistent import levels between 2.5 and 3.5 million tonnes annually.

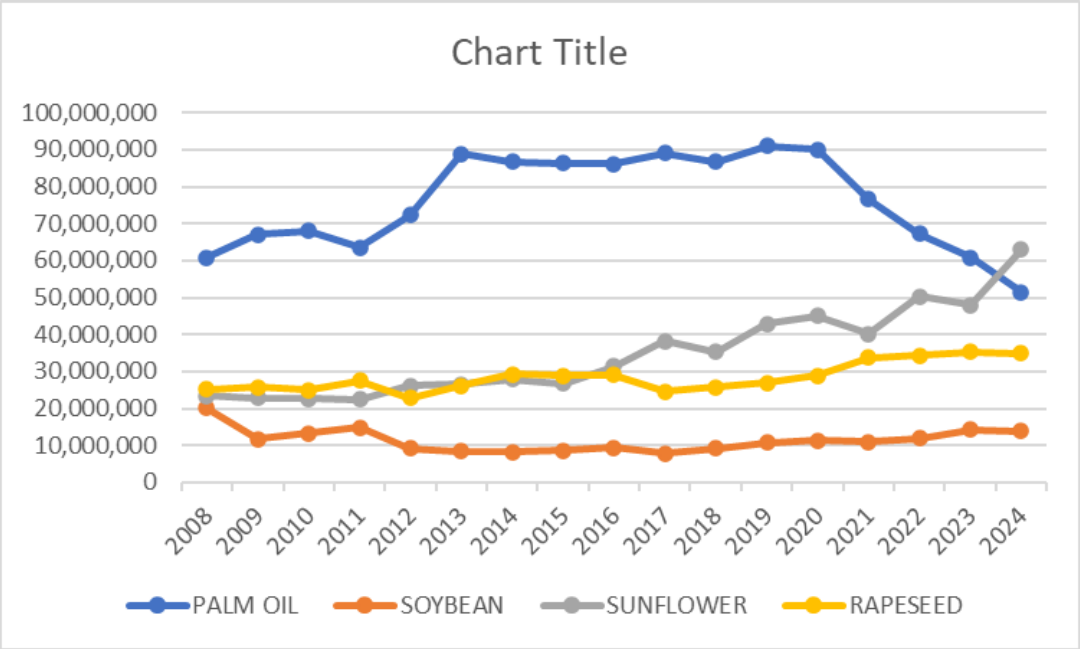

Figure 1.
Global and EU Palm Oil Imports and Trade Value (2008–2022)
Trends in Volume and Export Value with Focus on Indonesia
Sources: Food and Agriculture Organization (FAO) – Food Balance Sheets and trade statistics.
Trade Values: The Observatory of Economic Complexity (OEC) – Palm Oil Trade Data.

Collectively, these developments reveal a strategic pivot in EU vegetable oil sourcing - favouring feedstocks that are locally produced or politically uncontroversial, despite palm oil's superior land-use efficiency. This shift presents significant challenges for palm oil-exporting countries such as Indonesia, who must navigate restrictive trade regimes while maintaining global market relevance.

- *Land-Use Efficiency and Global Sustainability Implications*

Replacing palm oil with alternatives such as soybean or sunflower oil has considerable implications for global land use and environmental sustainability. Data from the FAO (2018–2023) underscores that palm oil is the most land-efficient vegetable oil crop. On average, oil palm yields between 3.8 and 4.0 tons of oil per hectare annually - substantially higher than soybean (0.45–0.5 tons/ha) and sunflower (0.6–0.8 tons/ha).

Although palm oil production has been criticized for contributing to deforestation and biodiversity loss, these concerns must be weighed against its higher yield efficiency. Replacing palm oil with less efficient crops could lead to the expansion of agricultural frontiers, potentially accelerating deforestation elsewhere and undermining global climate objectives. Therefore, any sustainability strategy that seeks to reduce palm oil consumption must consider not only environmental externalities in producer countries but also the broader ecological cost of increased land use associated with alternative oils.

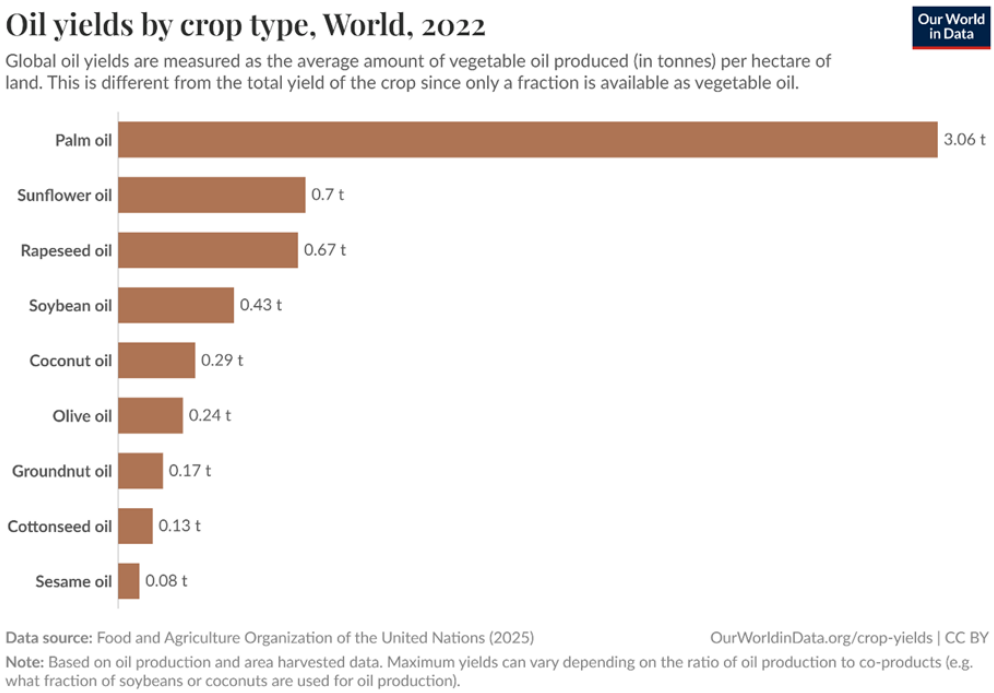

Figure 2.
Oil Yields by Crop Type, World, 2022
(Average Vegetable Oil Yield per Hectare of Land)
Source: Food and Agriculture Organization of the United Nations (2025),
compiled by Our World in Data

- *Global and EU Vegetable Oil Consumption and Production Efficiency*

In the 2023/24 marketing year, global vegetable oil consumption was estimated at approximately 217.5 million metric tons, reflecting a continued rise in demand across food, energy, and industrial sectors (Statista, Tridge). Within the European Union (EU), consumption was projected to reach 21.7 million metric tons in the same period (Statista), positioning the EU as a significant player in the global vegetable oil market.

- *Comparative Oil Yield per Hectare*

The yield efficiency of various oil crops reveals substantial differences. Palm oil demonstrates the highest productivity, with an average yield of 4.17 tons per hectare. In contrast, soybean oil yields approximately 0.39 tons per hectare, and sunflower oil produces around 0.56 tons per hectare. These disparities underscore the superior land-use efficiency of palm oil compared to its alternatives.

- *Land Requirements to Meet Global and EU Demand*

Based on yield data, the estimated land required to fulfill current global and EU vegetable oil demand is as follows:

- Global Demand (217.5 million metric tons):
  - Palm Oil: 81.54 million hectares
  - Soybean Oil: 557.7 million hectares
  - Sunflower Oil: 356.94 million hectares
- EU Demand (21.7 million metric tons):
  - Palm Oil: 5.2 million hectares
  - Soybean Oil: 55.6 million hectares

- Sunflower Oil: 38.8 million hectares

These figures emphasize the markedly lower land footprint of palm oil cultivation. Replacing palm oil with less productive alternatives such as soybean or sunflower would necessitate a significantly larger area, potentially increasing the risk of deforestation, habitat loss, and other adverse environmental outcomes.

- *Implications for Sustainability*

The data clearly demonstrate palm oil's superior yield efficiency, which is crucial for minimizing agricultural land expansion and its associated environmental impact. While legitimate concerns exist regarding the sustainability of palm oil - particularly related to deforestation, biodiversity loss, and social issues - shifting entirely to lower-yielding oils may lead to unintended negative consequences. Therefore, enhancing sustainability within the palm oil sector may offer a more pragmatic solution than substitution.

- *Labor and Underage Employment in the Palm Oil Sector*

Labor concerns, including underage employment, persist within the palm oil industry, particularly in Indonesia. Data from BPS-Statistics Indonesia report that approximately 1.5 million children aged 10–17 are engaged in agriculture, with a significant proportion involved in oil palm plantations. Indonesia's labour laws permit employment for individuals aged 15–17 under specific conditions, in alignment with the World Bank's classification of the productive age group (15–64). However, enforcement challenges remain, especially in informal and smallholder sectors where underage labour persists.

Comparatively, while the EU maintains stricter enforcement of child labour laws, similar issues have been documented in informal agricultural and hospitality sectors. EU regulations generally allow "light work" from the age of 15, highlighting that labour issues in agriculture are a global phenomenon and not unique to Indonesia.

- *Indonesia's Strategic Market Diversification*

In response to declining demand from the EU, Indonesia has actively diversified its export markets for palm oil. Major destinations now include India, China, Pakistan, and countries in the Middle East. According to trade data from the Observatory of Economic Complexity (OEC), India remains Indonesia's largest palm oil importer. Additionally, ASEAN trade agreements have facilitated intra-regional commerce, while Indonesia continues to explore new bilateral trade arrangements to offset reductions in EU market share. This strategic pivot illustrates the adaptability and resilience of Indonesia's palm oil sector in navigating shifting global trade dynamics.

- *Trade Protectionism Versus Environmental Policy*

Although the EU's restrictions on palm oil are officially framed within the context of climate and sustainability policies - particularly under the Renewable Energy Directive II (RED II) - several scholars have suggested alternative motivations. For instance, Schuster et al. (2021) argue that these policies also serve protectionist aims by shielding domestic rapeseed and sunflower oil industries from external competition.

This perspective was partly validated by a 2024 World Trade Organization (WTO) ruling on Malaysia's complaint against the EU. The WTO found that the EU's application of sustainability criteria was inconsistently enforced and potentially discriminatory toward palm

oil exporters, lending credence to the assertion that such regulations may function as non-tariff trade barriers under the guise of environmental stewardship.

In short, the analysis has examined the interrelated environmental, trade, and labour dimensions of the global vegetable oil industry, with a specific focus on Indonesia's palm oil sector and the implications of evolving European Union regulatory frameworks. The observed trends in Indonesia's palm oil exports to the EU underscore the complex dynamics at play. Key findings include:

1. *Export Trends:*
   Indonesia's palm oil exports to the European Union have declined significantly, particularly following the implementation of the Renewable Energy Directive II (RED II) in 2020, which imposed stricter sustainability criteria on palm oil imports.
2. *Import Substitution in the EU:*
   In response to the reduced availability of palm oil, the European Union has increased its imports of alternative vegetable oils, notably soybean and sunflower oil, to fill the supply gap.
3. *Land-Use Efficiency:*
   Among the major oil crops, palm oil continues to demonstrate the highest yield per hectare, making it the most land-efficient source of vegetable oil by a considerable margin.
4. *Labor Concerns:*
   The issue of underage labour in the palm oil sector remains a critical concern. However, interpretations and enforcement of child labour laws differ across jurisdictions, complicating the legal landscape surrounding this issue.
5. *Policy Interpretation:*
   Although RED II is officially framed as a climate policy, its selective enforcement and trade effects suggest elements of trade protectionism, particularly in favour of domestically produced vegetable oils such as rapeseed and sunflower oil.

The transition toward sustainable vegetable oil sourcing must be informed by a comprehensive understanding of yield efficiency, labour conditions, and geopolitical trade dynamics. While palm oil presents clear environmental challenges, its exceptional land-use efficiency cannot be ignored. Rather than outright replacement, improving sustainability standards within the palm oil sector - alongside equitable enforcement of labour laws - may offer a more balanced and globally responsible path forward. Furthermore, trade regulations should be transparent, consistent, and non-discriminatory to ensure they do not disproportionately burden developing economies.

Conclusion

This study has critically examined the European Union's regulatory stance toward Indonesian palm oil through the lens of political economy, revealing that the EU's policy trajectory, while rhetorically framed in sustainability, reflects a complex interplay of environmental objectives, economic interests, and geopolitical considerations. The implementation of RED I and RED II, along with Delegated Regulation 2019/807, has significantly reshaped palm oil trade flows, particularly by designating palm oil as a "high ILUC-risk" feedstock and initiating a phase-out process by 2030. These regulatory instruments have materially contributed to a 44% decline in EU palm oil imports from their 2019 peak, even as global demand and Indonesia's export value reached record highs in 2022.

The evidence underscores that this reduction in EU imports is not primarily driven by palm

oil's economic inefficiency or a decrease in global competitiveness. Instead, it stems from targeted policy decisions and normative framing of palm oil as ecologically unsustainable, a stance increasingly challenged by producer countries. The empirical data, especially concerning palm oil's unparalleled land-use efficiency compared to alternatives like soybean and sunflower oils that raises critical questions about the net environmental benefit of the EU's substitution strategy. Replacing palm oil with lower-yield crops could paradoxically increase global land conversion pressures, threatening biodiversity and undermining climate goals the policies claim to support.

Furthermore, the EU's pivot toward vegetable oils that are either locally produced or geopolitically safer - despite their greater environmental footprint - suggests a selective application of sustainability principles that may serve as a form of "green protectionism." The political economy perspective illuminates how environmental narratives can be co-opted to advance strategic economic interests, potentially at the expense of more effective, globally coordinated sustainability outcomes.

In answering the titular question *'Sustainability or Selective Policy?*' the findings point toward a nuanced conclusion: the EU's regulatory approach embodies elements of both. While genuine environmental concerns are present, the selective application of sustainability standards and the disproportionate targeting of palm oil expose underlying protectionist tendencies. For Indonesia and other producer nations, this presents both a challenge and an opportunity: to advocate for equitable sustainability frameworks and to enhance domestic governance, traceability, and certification systems that can credibly counter external critiques.

A truly sustainable path forward requires moving beyond unilateral policy instruments toward inclusive, multilateral cooperation that balances environmental imperatives with trade fairness and developmental equity. Without such recalibration, the EU's palm oil policy risks being perceived not as a beacon of global sustainability leadership, but as a case study in selectively applied environmentalism.

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