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The Sustainability of Palm Oil

Mohd Ikbal Mohd Huda, Dhenada

Strategy and Diplomacy Programme, Centre for Research in History, Politics, and International Affairs

Faculty of Social Sciences & Humanities, The National University of Malaysia, Malaysia

E-mail: ibahuda@ukm.edu.my

Mohd Ikbal Mohd Huda (Corresponding author)

Strategy and Diplomacy Programme, Centre for Research in History, Politics, and International Affairs

Faculty of Social Sciences & Humanities, The National University of Malaysia, Malaysia

E-mail: ibahuda@ukm.edu.my, dhenadanizar10@gmail.com

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Abstract

The most significant environmental issue associated with palm oil that is accused by the European Union is deforestation, particularly in Indonesia and Malaysia. The tension arose after the EU established Renewable Energy Directive II. EU considered palm oil-producing countries have ignored environmental issues by expanding palm oil plantations which has resulted in deforestation. This made palm oil plantations included in the high-risk Indirect Land Use Change (ILUC) category. Therefore, this article presents a comparison of the sustainability between palm oil and other vegetable oils such as sunflower oil, rapeseed oil, etc**.** The findings of this article contextualize the comparative advantage of palm oil over other similar resources. The reasons why palm oil is more sustainable are it needs less land to produce the same amount of oil, its sustainability certification at the international level such as RSPO which is also connected to SDGs, and at the domestic level such as ISPO and MSPO. One strategy proposed in this article is instead of boycotting palm oil, the government and stakeholders should prioritize the implementation of sustainable practices, enhance the monitoring and enforcement of RSPO scheme standards, and tackle social concerns and deforestation that are always linked to palm oil.

Keywords: Environmental, European Union, Palm oil, Renewable energy, Sustainability

1. Introduction

European Union, Indonesia, Malaysia, and the other palm oil producing countries recorded good track of international trade relations. To develop renewable energy sources, the European Union must import palm oil from palm oil-producing countries such as Indonesia and Malaysia because their oil production such as rapeseed oil is low (Wahyudi, 2019). European Union is one of the largest markets for the Indonesian palm oil sector. In 2016 the European Union was recorded as the second-largest Indonesian palm oil export destination after India (Suwarno, 2019). Netherlands, Italy, and Spain are the 3 largest importing countries of Indonesian crude palm oil in the European Union (Widyaningtyas & Widodo, 2016). However, the good trade relations between the European Union and Indonesia-Malaysia have changed. In the implementation to reach the sustainability environmental goals, the European Union and palm oil-producing countries, in particular Indonesia and Malaysia, have soured over underwhelming trade relations since the European Union amended the Renewable Energy Directive to Renewable Energy Directive II (RED II).

RED II is an amendment to the European Union's Renewable Energy Directive which was ratified in 2009. RED II became the focus of discussion after the European Union published the Clean Energy for all Europeans package agreement in November 2016. The Clean Energy for all Europeans package is an agreement issued by the European Union to demonstrate the EU's significant steps towards implementing the transition from fossil fuels to renewable energy and to support the European Union's commitment to Paris in reducing greenhouse gas emissions (European Commission, 2017). Renewable Energy Directive II was finally ratified in June 2018. Subsequently, this policy came into effect in December 2018. In general, some of the criteria in RED II are the same as in RED 2009. However, in its implementation, the EU raised the target from 20% to at least 32% of the total energy needed by 2030 (EU Science Hub, 2019). In 2022, the European Commission proposed to raise the total target for 2030 to 45% (European Commission, 2022). European Union states that in the process of biofuel production, the expansion of agricultural land will also increase. This has resulted in the clearing of non-agricultural land (forest, wetlands, and peatlands) into biofuel agricultural land. Therefore, Renewable Energy Directive II categorizes Indirect Land Use Change (ILUC) into 2, high-risk ILUC and low-risk ILUC based on the estimated emissions produced by agricultural land.

Subsequently, the European Union considers Indonesia and Malaysia's palm oil plantations not sustainable. European Union states that Indonesia and the others have contributed to massive greenhouse gas emissions and endangered animal ecosystems. This statement contradicts the Renewable Energy Directive policy which requires European Union member countries to reduce greenhouse gas emissions from the use of biofuels and bioliquids. As regulated in Article 17 of Directive 2009/28/EC which contains biofuels that should not be made from raw materials obtained from forests with high biodiversity value and used for nature conservation such as the protection area of endangered species or ecosystem (European Union, 2009)

European Union considered Indonesia, Malaysia, and other palm oil-producing countries

have ignored environmental issues by continuing to expand the area and production of palm oil which has resulted in deforestation. This made palm oil plantations included in the high-risk Indirect Land Use Change (ILUC) category. ILUC is an act of converting forests into biofuel agricultural land. This policy was then stated by the European Union into the ILUC high-risk and ILUC low-risk categories based on the Renewable Energy Directive II. Determination of this category is done by estimating the emissions produced using agricultural land (EU Science Hub, 2019).

This article is structured into several sections. The first section contextualizes environmental concerns associated with palm oil. The following section will discuss the comparison of palm oil and other vegetable oils, the sustainability of Palm Oil based on the RSPO standard certification, and how it links to SDGs, sustainable certification at the domestic level such as Indonesian Sustainable Palm Oil and Malaysian Sustainable Palm Oil, and the Cooperation Council of Palm Oil between Indonesia and Malaysia through CPOPC.

2. Methodology

In this article, qualitative methods and secondary data collection will be applied to examine the sustainability of palm oil. This method was employed by gathering information and data from prior research to conduct a comprehensive analysis. First, the researchers will explain the environmental concerns associated with palm oil plantations in Indonesia, Malaysia, and other palm oil-producing countries. Furthermore, the researchers will conduct an analysis and compare palm oil to other vegetable oils in terms of sustainability to determine the best alternative for supporting the green transition from fossil fuels to renewable energy.

3. Results and Discussion

3.1 The Productivity of Palm Oil and Other Vegetable Oils

Figure 1 is an overview that indicates to produce the same amount of oil as palm oil, other vegetable oils must require 5-8 times more land than palm oil plantations. However, the production land demand for sunflower oil and rapeseed oil is more than palm oil production land. This means the more land needed, the more it can lead to an increase in the possibility of deforestation and also can endanger the animal ecosystems. If environmental issues are the main reason for the European Union to restrict imports of palm oil, other vegetable products including their local product should be given the same standards and certification.

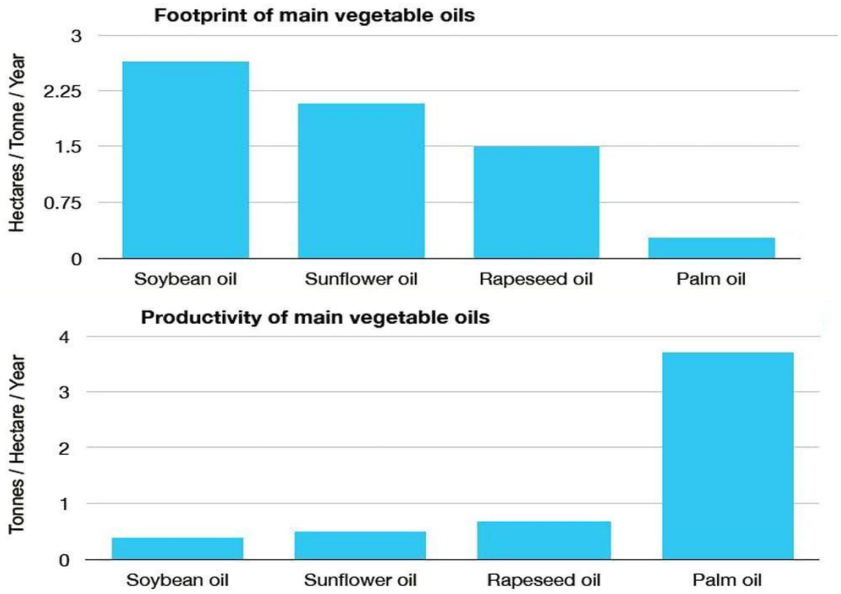

Figure 1. Overview of comparison of palm oil productivity and other vegetable oils

Source: The Palm Scribe (2020)

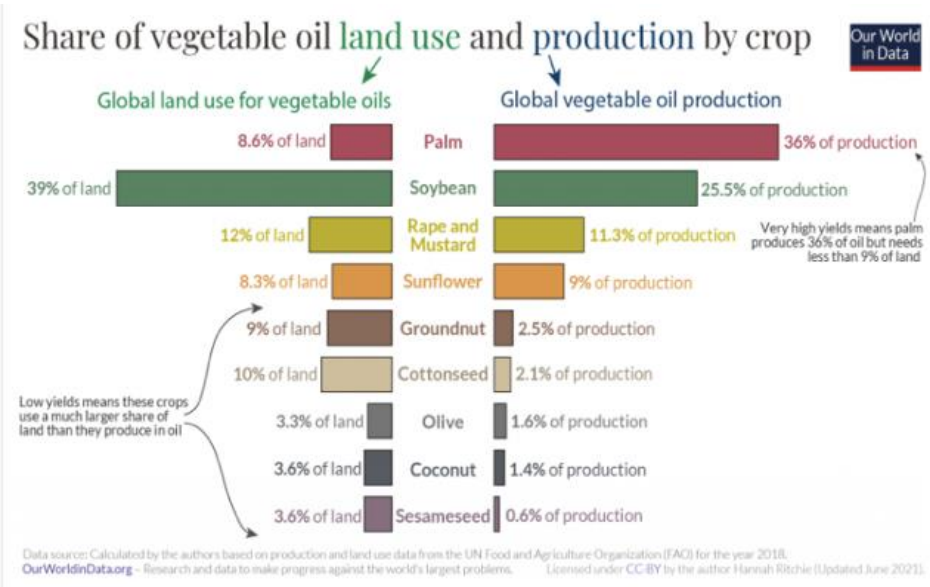

Figure 2. Vegetable Oil Land Use and Production by Crop 2018

Source: Hanah and Max (2020)

On the left side of Figure 2, you can observe the proportion of land used by each crop for vegetable oils, while on the other side, you can see how much oil each crop contributes to the overall production. Based on the graph, palm oil requires less than 9% of the land dedicated to oil production, yet it produces 36% of the world's oil. Furthermore, we can see that

sunflower oil had a nearly equal ratio of oil production to land use. It required 8.3% of land to produce 9% of the plantation. A similar proportion was shown by Rapeseed and mustard-seed oil. However, other crops besides palm oil and sunflower, needed more land than the oil they produced. For instance, coconut oil needs 3.6% of the land for only 1.4% of global oil. In addition, certain crops serve purposes beyond oil production. For example, soybeans have a part that is not oil but can be used as nutritious animal feed. Therefore, growing soybeans on the land serves multiple food demands at once. However, the most important factor remains the amount of oil each crop produces per unit of land, regardless of other by-products generated. This is crucial when the world needs a specific quantity of vegetable oil (Hannah & Max, 2020).

If we look at the other data on palm oil production and the other vegetable oil production on the chart below, we can conclude that palm oil is a highly efficient crop among the other vegetable oil resources. Figure 3 and Figure 4 below indicate the comparative advantage in terms of production that palm oil has if we compare it to other vegetable oils. However, regardless of all the environmental concerns that are always associated with palm oil, shifting to alternative vegetable oils, such as sunflower, rapeseed, and soy, would not mitigate these harmful impacts. Moreover, numerous farmers and their families rely on oil palm plantations and smallholdings for income, which sustains their access to basic necessities like food, clean water, and housing. Additionally, the palm oil industry enables many workers to send their children to school (RSPO, 2023).

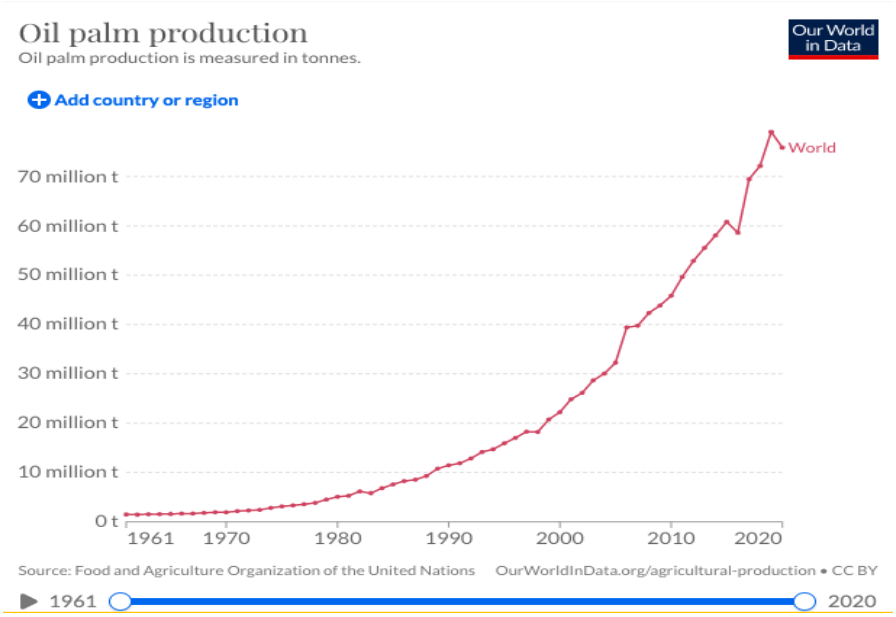

Figure 3. Palm Oil World's Production

Source: Hannah and Max (2020)

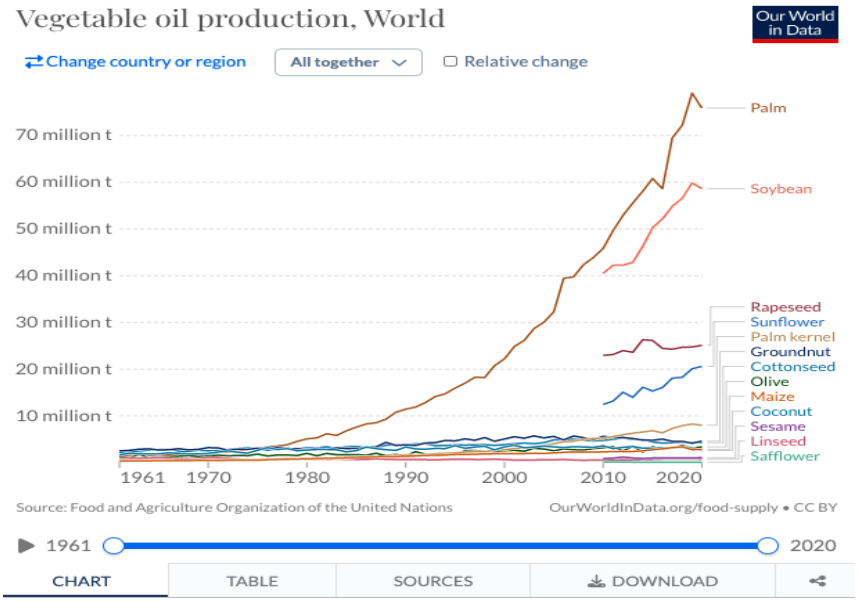

Figure 4. Vegetable Oils World's Production

Source: Hannah and Max (2020)

Palm oil's bad reputation is tarnished due to its production's ongoing and historical negative impact on the environment, communities, and wildlife. Nevertheless, when considering the production process including the plantation and the product itself, palm oil serves as a preferable alternative to comparable resources. Palm oil production is much more efficient in terms of land usage compared to other vegetable oil crops such as soybean oil, sunflower oil, and rapeseed oil which need more land to produce the same amount of palm oil. If palm oil were to be replaced by other alternative vegetable oils, significantly larger areas would need to be converted. This could lead to a counterproductive situation, where a widespread boycott of palm oil might exacerbate deforestation. Moreover, discontinuing palm oil production could result in reduced incomes for millions of individuals, which would have consequences for a low-income country like Indonesia. Lastly, if European markets were to boycott palm oil, it may simply lead to increased purchases of palm oil from other markets where sustainability is not a priority (Save the Orangutan, 2021).

The sustainability of palm oil has been a topic of concern due to its association with deforestation and endangered animal ecosystems. However, efforts have been made to address these challenges and promote sustainable practices within the palm oil industry. The Roundtable on Sustainable Palm Oil (RSPO) plays a significant role in promoting sustainability in the palm oil sector. RSPO indicators are connected to all other Sustainable Development Goals (SDGs). Not only at the international level but, at the domestic level, the biggest palm oil producers' countries such as Indonesia and Malaysia have their own sustainability certification of palm oil.

3.2 The Roundtable on Sustainable Palm Oil (RSPO)

The Roundtable on Sustainable Palm Oil (RSPO) was founded in 2004 by environmental organizations such as WWF, in response to the harmful environmental effects of palm oil the deforestation in Indonesia and Malaysia as the biggest palm oil producer. As a non- profit membership organization and certification scheme, RSPO brings together a diverse range of stakeholders including NGOs, institutions, purchasers, and manufacturers. Collaboratively, they have developed a certification standard to produce palm oil, ensuring adherence to sustainability principles and criteria. On a global scale, the adoption of RSPO standards for certification, including by smallholder plantations, has made significant progress for 19% of total production in 2020. The widespread adoption of RSPO certification is particularly notable in Indonesia and Malaysia, the largest palm oil production markets, where RSPO has established itself as a reliable and globally recognized standard. However, substantial efforts are still needed to establish a new sustainable norm for the palm oil industry (Save the Orangutan, 2021).

Table 1. Global distribution of CSPO

No	Country	Total distribution of CSPO
1	Indonesia	45.3 million MT
2	Malaysia	18.1 million MT
3	Latin America	4.98 million MT
4	Africa	3.37 million MT
5	Others	4.17 million MT

Source: RSPO (2022)

Certified sustainable palm oil (CSPO) is produced in accordance with RSPO standards, and it aims to reduce the negative impacts associated with palm oil cultivation. The production of CSPO reached a record high of 14.7 MT marking a 6.3% increase compared to the previous year in 2021. This represents an annual growth of almost 900,000 MT. When considering the estimated global production of 75.9 million MT, CSPO accounts for over 19% of the total palm oil production. The largest contributors to CSPO volumes are Indonesia and Malaysia, which together make up more than 80% of the total distribution (Table 1). With the exception of Malaysia, where labour shortages led to a decline in total palm oil and CSPO production in 2021, all other producing regions experienced an increase in CSPO volumes. Notably, in 2020, Latin America surpassed the milestone of a million MT, while in 2021Africa reached 300,000 MT (RSPO, 2022).

Since its establishment, the Roundtable on Sustainable Palm Oil (RSPO) has undergone three revisions of its principles, definitions, guidelines, and licensing criteria, collectively known as the 'RSPO P&C'. These revisions took place in 2007, 2013, and 2018. The latest version, the RSPO P&C 2018, went through an extensive development and consultation process and was adopted with a strong majority during the general assembly. While further development is still needed within the industry, the revised RSPO P&C 2018 was received positively. It introduced reinforced criteria, particularly in areas such as 'no deforestation of areas worthy of preservation', 'no new development of peat forest', and 'increased focus on the rights of

smallholders' and requirements of consent from local communities. These positive elements strengthen the sustainability standards set by the RSPO (Save the Orangutan, 2021).

Regardless of all the efforts and progress that has been made, there are still ongoing challenges in palm oil industry. Subsequently, the need for broader adoption of sustainable practices on palm oil, improved monitoring, and enforcement of RSPO standards, and addressing social issues such as labour rights and deforestation that are always associated with palm oil still have to get more attention. Continuous collaboration and commitment among stakeholders, including palm oil producers, governments, NGOs, and consumers, are crucial in achieving a truly sustainable palm oil industry in the future.

3.3 The Roundtable on Sustainable Palm Oil (RSPO) to SDGs

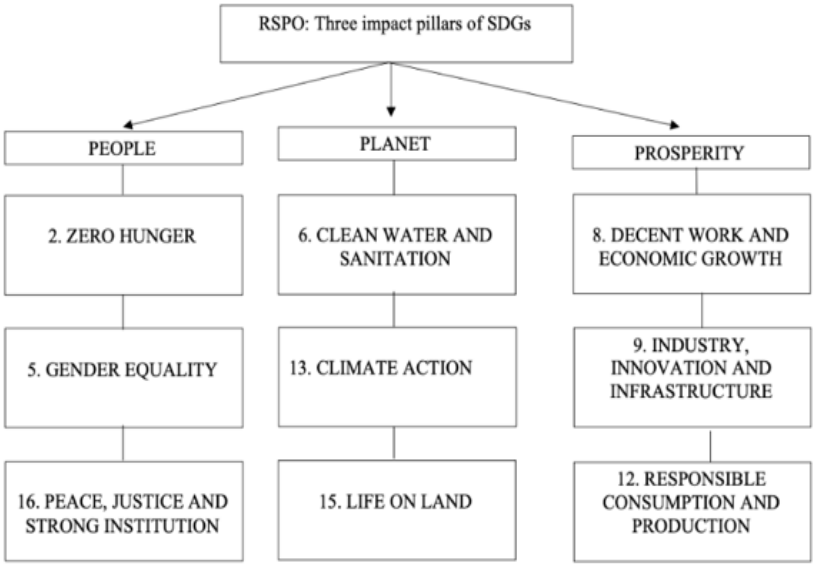

Figure 5. RSPO Contribution to SDGs

Source: RSPO (2022)

The Roundtable on Sustainable Palm Oil (RSPO) is connected to all other Sustainable Development Goals (SDGs). These connections vary, with some being direct and others indirect. While RSPO aims to showcase its contributions and attributions to all SDG linkages, it has identified 9 priorities of SDGs. In the implementation, its impact is most direct and strategically aligned with its 3 impact pillars: People, Planet, and Prosperity (Figure 5). Interestingly, each impact pillar corresponds to the priority of SDGs. This approach allows RSPO to focus its efforts and demonstrate its commitment to these specific goals (RSPO, 2022). However, SDGs #14 (Life below water), and #17 (Partnerships for the goals) are not directly addressed by the RSPO scheme, as they fall outside the scope of its primary focus and activities. Consequently, these goals have minimal or no direct impact on the actions undertaken by the RSPO (Copenhagen Business School, 2020).

3.3.1 Zero Hunger/SDGs #2

RSPO recognizes the significance of safeguarding the food security of current workers and future generations. This perspective is stated in over 25 RSPO indicators, reflecting the organization's commitment to ensuring a sustainable and secure food supply for all. In order to enhance the income of workers involved in the palm oil supply chain, RSPO principle 7 emphasizes the implementation of practices that maintain and improve soil fertility, leading to sustained yield and increased economic opportunities for workers (Copenhagen Business School, 2020).

3.3.2 Gender Equality/SDGs #5

RSPO upholds the principle of respecting the human rights of all individuals, including women, throughout the palm oil supply chain. The organization ensures that everyone involved in palm oil production has equal opportunities for the protection of their human rights. RSPO ensures the reduction of discrimination within the palm oil industry. The principles of RSPO, such as Principle 4, address fair compensation and equal opportunities for obtaining land titles, ensuring that discriminatory practices are eliminated. Principle 5 emphasizes equal opportunities for all in the decision- making process, understanding contracts, and receiving support to improve livelihoods. Additionally, Principle 6 requires the establishment of policies and evidence of non-discrimination and equal opportunities, including the formation of a gender committee (Copenhagen Business School, 2020).

3.3.3 Clean Water and Sanitation/SDGs #6

One of RSPO's objectives is to conserve, protect, and enhance the ecosystem that sustains future generations. RSPO is dedicated to preventing water pollution and ensuring that all workers have access to safe water and adequate sanitation facilities. In accordance with RSPO principles 6 and 7, it is necessary to establish an effective water management plan that mitigates any adverse effects on other water uses and ensures access to clean water for workers. RSPO emphasizes the importance of responsible water management practices to safeguard both the environment and the well-being of individuals involved in palm oil production (Copenhagen Business School, 2020).

3.3.4 Decent Work and Economic Growth/ SDGs #8

The RSPO certification also supports goal #8 and supports four specific targets related to promoting decent employment, empowering young workers, eradicating child labour, and ensuring worker safety. RSPO indicators strictly prohibit child labour, forced labour, and human trafficking. The certification ensures comprehensive protection for workers, including the implementation of health and safety procedures, risk assessments, secure contractual arrangements, and a safe working environment. Additionally, RSPO promotes the establishment of collective unions and enables workers to choose their own representatives. Adequate training, including first aid training and provision of necessary equipment, is provided to employees to ensure their safety while working with pesticides (Copenhagen Business School, 2020).

3.3.5 Industry, Innovation, and Infrastructure/ SDGs #9

RSPO guarantees access to land and land rights while ensuring fair and transparent pricing. The certification process includes comprehensive services for all parties involved, facilitating a clear understanding of contracts, and payment receipts specifying prices, deductions, and weights. It is crucial for the well-being of workers that their livelihoods continuously improve, accompanied by the development of their management skills. Indicators 7.10.1 and 7.10.2 of RSPO have the objective of reducing greenhouse gas emissions from development areas within the palm oil industry. This is accomplished through the utilization of the Palm Oil GHG calculator and the publication of corresponding reports to monitor and control emissions. The RSPO emphasizes the importance of minimizing the environmental impact of palm oil production and actively works towards achieving sustainable practices (Copenhagen Business School, 2020).

3.3.6 Responsible Consumption and Production/ SDGs #12

RSPO demonstrates its commitment to environmental conservation through the implementation of a waste management plan that focuses on reducing, recycling, and reusing resources. The organization considers both social and environmental impacts when formulating an action plan for improvement, which includes annual monitoring, reporting, and record-keeping processes. RSPO actively engages with stakeholders affected by the social and environmental impact assessment (SEIA), involving them in the development, implementation, and regular review of social and environmental management and monitoring plans. This collaborative approach ensures that all parties have a voice in fostering sustainable practices and promoting positive outcomes for the environment and communities involved (Copenhagen Business School, 2020).

3.3.7 Climate Action/ SDGs #13

SDG #13 (Climate Action) is addressed indirectly by the RSPO scheme. As we know, fossil fuels contribute the most greenhouse gas emissions on a global scale. Meanwhile, palm oil is one of the best alternatives for renewable energy. The green transition from fossil fuels to biodiesel will reduce greenhouse gas emissions and prevent an increase in global temperature. In other words, palm oil plantations that run based on RSPO certification will ensure the sustainability of renewable energy such as biodiesel in the future. Reduce the dependence on fossil fuels to support the green transition to renewable energy that has sustainable production processes will have an impact on climate action.

3.3.8 Life on Land/SDGs #15

The objective of RSPO certification is to establish explicit boundaries for planting on peatland areas, prohibiting any construction of infrastructure. RSPO implements measures for fire prevention and control to preserve and safeguard land areas. The certification process includes monitoring rare, threatened, and endangered species, as well as the conservation of natural ecosystems and peatland areas. Under Principle 7, RSPO demonstrates its commitment to protecting endangered species through indicator 7.12.6. The workforce receives regular education on the importance of preserving these species, and any instances of

capturing, harming, or killing them by a company's personnel are taken seriously. The certification program maintains vigilant oversight of rare, threatened, and endangered species, natural ecosystems, and peatland conservation areas (Copenhagen Business School, 2020).

3.3.9 Peace, Justice, and Strong Institution/SDGs #16

The certification scheme plays a crucial role in combatting child abuse, safeguarding human rights, and fostering inclusiv decision-making. It strictly prohibits any instance of harassment, violence, child labour, forced labour, human trafficking, and discrimination. These regulations are effectively governed by a comprehensive policy that is communicated across all levels of the organization. The certification unit maintains a firm stance against the use of child, forced, and trafficked labour, as well as any form of discrimination. The policy specifically addresses the protection of children and the prevention of child labour, with active communication to all stakeholders to raise awareness about the detrimental impacts. Indicator 6.6.1 promotes the importance of voluntary work, ensuring workers have the freedom to resign without facing any penalties. Furthermore, the certification scheme implements specific labor policies to govern the employment of temporary migrant workers (6.6.2). By adhering to these principles and policies, the certification scheme strives to create a safe and inclusive working environment where the rights and well-being of all individuals are upheld (Copenhagen Business School, 2020).

3.4 The Sustainability of Palm Oil in ASEAN

The leading palm oil producers in ASEAN are Indonesia, Malaysia, and Thailand. This made ASEAN responsible for approximately 87-89 percent of global palm oil production. Given that palm oil is the largest vegetable oil worldwide, ASEAN countries together have the potential to have a greater influence on the global palm oil market (Palmoilina Asia, 2023). In order to ensure the sustainability of palm oil in ASEAN, efforts at the international level and domestic level are being taken. Indonesia and Malaysia together make up more than 80% of the total distribution of certified sustainable palm oil (CSPO) that is produced in accordance with the Roundtable on Sustainable Palm Oil (RSPO) standards (RSPO, 2022). This attempt aims to reduce the negative impacts that are always associated with palm oil plantations in particular some countries in ASEAN. At the domestic level, the biggest palm oil-producing countries such as Indonesia, Malaysia, and Thailand have their own sustainability certification of palm oil.

3.4.1 Indonesia Sustainable Palm Oil (ISPO)

Indonesia established the Indonesian Sustainable Palm Oil (ISPO) certification system in 2011 under Susilo Bambang Yudhoyono’s presidency. This is a significant response to solve the sustainability and environmental issues associated with Indonesia’s palm oil. This certification aims to achieve sustainability standards within the Indonesian palm oil plantation industry and encourage trust in Indonesian palm oil within the international market. The Indonesian Sustainable Palm Oil (ISPO) certification is compulsory for large-scale palm oil plantations operated by major companies. But it is a voluntary system for smallholders and plantations involved in bioenergy production (EFECA, 2020).

However, ISPO got criticism and debate from many parties regarding its implementation. ISPO was considered a non-transparent certification that has weak enforcement and insufficient monitoring. Therefore, the government strengthens the regulation to ensure the sustainability of palm oil plantations. The strengthening of the ISPO certification system has been done since 2016. Furthermore, it was stated through "Presidential regulation No. 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation System" (BPK RI, 2020).

3.4.2 Malaysian Sustainable Palm Oil (MSPO)

Therefore, Malaysia has MSPO (Malaysia Sustainable Palm Oil) as a national certification scheme to promote sustainable practices in the palm oil industry. It was introduced by the Malaysian government as part of its commitment to environmental conservation and social responsibility in the palm oil production (MSPO, 2016). The MSPO certification sets standards and guidelines for various aspects of palm oil production, including land management, worker welfare, environmental protection, and community engagement. It aims to ensure that palm oil in Malaysia is produced in a sustainable principle (MPOCC, 2023).

Starting from the end of 2019, it became mandatory for Malaysian palm oil stakeholder businesses to follow the Malaysian Sustainable Palm Oil (MSPO) standard. The implementation of MSPO was divided into three stages. By December 31, 2018, plantation industries that were already certified by RSPO had to ensure compliance with the standards. However, those without RSPO certification were given until June 30, 2019, to meet the requirements. Smallholders, on the other hand, were granted an extended period and required to meet the MSPO standard by December 31, 2019 (Controlunion Certification, 2018). By adopting the MSPO certification, the Malaysian government aims to improve the sustainability of its palm oil industry, address environmental concerns, and enhance the reputation of Malaysian palm oil in the global market. The MSPO certification scheme is seen as an important policy to achieve and align with international sustainability standards.

3.4.3 Thailand Sustainable Palm Oil Alliance (TSPOA)

Thailand doesn't have much control over global palm oil like Indonesia and Malaysia. Its contribution to global production is only 3.9%. In 2020, only 2.8% of palm oil production had the RSPO certification. Encouraging sustainable palm oil production in Thailand is a difficult task that requires support from the relevant sectors to be successful. The government should provide funding and support for implementing the sustainability principles of RSPO, particularly for smallholder farmers (RSPO, 2022).

As a result, to ensure the sustainability of palm oil, Thailand has established The Thailand Sustainable Palm Oil Alliance (TSPOA). This was created through a collaboration between the Roundtable on Sustainable Palm Oil (RSPO) and the Thailand Environment Institute (TEI). The purpose of TSPOA is to establish a platform where stakeholders in the palm oil supply chain in Thailand can work together and promote sustainable palm oil practices (RSPO, 2022). During the launch ceremony, there are representatives from RSPO, TEI, and five other partner organizations were present.: National Farmers Council, Palm Oil Crushing Mills Association, Palm Oil Refinery Association, Thai Biodiesel Producer Association, and

Oleochemical Association

3.4.4 Joint Working Group ASEAN-EU Regarding Palm Oil Sustainability

On 27th January 2021, the first meeting of the Joint Working Group on Palm Oil between the European Union (EU) and relevant member countries of the Association of Southeast Asian Nations (ASEAN) took place online. The establishment of the Joint Working Group was a result of the commitment made during the 23rd ASEAN-EU Ministerial Meeting held on 1st December 2020, which elevated the relationship between the EU and ASEAN to a Strategic Partnership. The meeting was inaugurated by Mr. Mahendra Siregar, the Vice-Minister of Foreign Affairs of Indonesia, and Mr. Stefano Sannino, the Secretary-General of the European External Action Service. Participating in the meeting were representatives from Indonesia, Malaysia, Cambodia, Thailand, Laos, Vietnam, the European Commission, and the European External Action Service (EEAS, 2021).

The virtual Second Joint Working Group (JWG) Meeting on Palm Oil between the European Union and the relevant ASEAN Member States took place on 28th June 2022. The meeting was co- chaired by H.E. Dato' Zanariah Zainal Abidin, the Director-General of ASEAN-Malaysia National Secretariat, and H.E. Paola Pampaloni, the Deputy Managing Director for Asia and the Pacific at the European External Action Service (EEAS). Constructive discussions were held on the trends and challenges related to ensuring sustainable vegetable oils. The disruptions in global vegetable oil supply chains and their impact on rising prices and food security were highlighted. The importance of promoting mutual understanding regarding economic, social, and environmental challenges in the vegetable oil sector was emphasized, aiming to address them comprehensively and transparently. Relevant information was shared to establish a mutual understanding of sustainability criteria, compliance procedures, certification processes, and monitoring and enforcement of certification standards. The participants agreed that sustainability criteria should align with the overarching framework of the Agenda 2030 and its Sustainable Development Goals, as well as consider the Paris Agreement. Further discussions on sustainability criteria were planned through initiatives like studies, webinars, seminars, or expert exchanges. The third meeting of the Joint Working Group was scheduled to be held in Brussels in the first half of 2023. The participants reaffirmed the significance of continuous engagement to promote sustainability efforts and practices in the vegetable oil sector, including palm oil (Ministry of Foreign Affairs of Indonesia, 2022).

3.4.5 Council of Palm Oil Producing Countries (CPOPC)

CPOPC stands for the Council of Palm Oil Producing Countries, which is a collaborative organization formed by the palm oil-producing countries of Indonesia and Malaysia. The council was established on the 21st of November 2015 with the goal of promoting cooperation, coordination, and harmonization in the palm oil industry between the two biggest palm oil countries. Indonesia and Malaysia are the two largest producers of palm oil in the world, accounting for a significant portion of global palm oil production. The establishment of CPOPC aimed to address common challenges faced by the two countries in the palm oil industry, such as market access, sustainability, and addressing negative

perceptions associated with palm oil production. CPOPC works towards advancing the interests of palm oil producers through various initiatives. These include promoting sustainable palm oil production practices, addressing environmental concerns, supporting smallholders, and improving market access for palm oil products (CPOPC, 2022).

The council also engages in advocacy efforts to enhance the image and perception of palm oil globally. Today, there are 3 member countries of CPOPC, such as Indonesia, Malaysia, and Honduras. The other palm oil-producing countries, such as Colombia, Ghana, and Papua New Guinea are part of the organization as observer countries (CPOPC, 2022). The involvement of these countries expands the council's scope and allows for a more comprehensive approach to addressing the challenges and opportunities in the palm oil industry. This council's scope and functions encompass the following:

i. Facilitating discussions among stakeholders in oil palm cultivating nations to foster the growth of the palm oil industry;

ii. Improving the well-being of small- scale oil palm farmers;

iii. Creating and implementing a global set of principles for sustainable palm oil;

iv. Encouraging collaboration and investments in the development of environmentally sustainable oil palm areas, including green economic zones;

v. Addressing obstacles that hinder the trade of palm oil;

vi. Collaborating on research development, and training initiatives; and

vii. Undertaking activities and functions as deemed necessary for the benefit of the palm oil industry (Devjobs Indo, n.d.)

According to Dr. Ir. Musdhalifah Machmud, the Deputy for Food and Agribusiness Coordination, CPOPC provides a platform for Indonesia and Malaysia to counter the negative campaign of palm oil. One of the platforms that are used by CPOPC is to use media platforms (including ads, electronic and social media). A positive narrative of palm oil is needed as a counter-narrative against the negative campaign by the European Union. In this case, Indonesia cooperates with relevant partners through the CPOPC.

3.4.6 Case Study: The Sustainability of Indonesia's Palm Oil

Indonesia's palm oil plantations are consistently linked to environmental concerns, particularly deforestation, illegal land clearing, and extensive peatland burning that leads to haze pollution problems in some ASEAN member states. This not only harms the environment but also adversely affects human health in impacted countries like Indonesia, Malaysia, and Thailand. In response to these issues, Indonesia implemented various programs to mitigate the environmental issues associated with its palm oil and enhance its sustainability. This program aims to accelerate the green transition energy program from fossil fuels to renewable energy.

a. The Biodiesel Mandatory Program

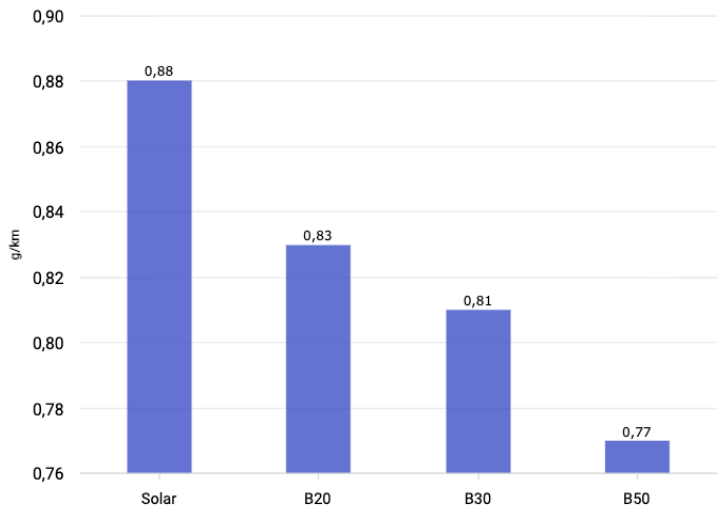

Figure 6. Overview of Carbon Monoxide Emissions between Diesel and Biodiesel

Source: Katadata (2021)

Under President Jokowi, Indonesia intensified the Biodiesel Mandatory Program as a key policy for achieving energy and economic independence. Executed through biofuel initiatives like B30, B100 (green fuel), and D100 (green diesel), the development aims to facilitate the production of green gasoline (G100) and green Jet Avtur (J100) from palm oil (Ministry of Energy and Mineral Resources, 2020). Figure 6 provides a comparative overview of Carbon Monoxide (CO) emissions, illustrating that B30 reduces emissions by at least half compared to diesel. The potential production of B50 or B100 holds promise for substantial emission reduction, contributing to greenhouse gas mitigation in the future.

According to informant C (Chandra) from the Directorate General of Renewable Energy and Energy Conservation of the Republic of Indonesia, the Mandatory Biodiesel Program significantly impacts the country's energy security. In 2022, Biodiesel 30% or B30 constituted 35% of the total National Renewable Energy, contributing 10.5 million KL from palm oil.

In 2023, the government has initiated the implementation of B35 program. This project is asserted to serve as an exemplary model for other nations in the advancement of biodiesel technology (Nano, 2023). The B35 program will increase the biodiesel blend in solar fuel from 30% to 35%, requiring an estimated 13.148.594 KL of biodiesel. Trial production, encompassing laboratory and road tests, has been ongoing since July 2022, considering palm oil stock availability, distribution willingness, and infrastructure. As per the December 15, 2022, Decree of the Minister of Energy and Mineral Resources No. 205.K/EK.05/DJE/2022, 21 Biofuel Business Entities are designated to support biodiesel in 2023, with a total capacity of

16.653.821 KL. Despite a presumed 3% increase in biosolar demand, reaching 36.475.050 KL in 2022, the government predicts biosolar energy production to reach 37.567.411 KL in 2023 (Ministry of Energy and Mineral Resources, 2022).

b. Moratorium on land clearing permits

The moratorium on land clearing permits was initiated during the precidency of Soesilo Bambang Yudhoyono in 2010. President Yudhoyono introduced a policy halting new licenses for converting primary forests and peatlands for two years through Presidential Instruction No. 10 of 2011. This policy was later prolonged through Presidential Instruction No. 6 of 2013 (Walhi, 2017). However, it was perceived as inefficient in achieving sustainability goals. Despite the regulations, violations persisted, attributed partly to the lack of stringent laws to enforce compliance. Peatland burning and illegal land clearing for palm oil plantations, especially in Sumatra, Kalimantan, and Papua, continued, leading to significant financial losses in 2015, with 2.6 hectares of palm oil plantation burning causing losses of up to 221 trillion Rupiah (Aji, 2019).

Subsequently, President Jokowi introduced a new moratorium that not only monitors land clearing permits but also adopts a broader approach with solutions such as a replanting program. Jokowi extended the moratorium on palm oil plantation expansion through Presidential Instruction No. 8/2015 and established a new moratorium in 2018 (Aji, 2019). The objective of these moratoriums is to prevent illegal land clearing, address haze pollution affecting other ASEAN countries, and promote the development of sustainable palm oil plantations.

c. Presidential Regulation No. 44 of 2020

President Joko Widodo has undertaken measures to enhance the Indonesian Sustainable Palm Oil Plantation System (ISPO) certification system since 2016, as articulated in "Presidential Regulation No. 44 of 2020 on the Indonesian Sustainable Palm Oil Plantation System." This regulatory framework imposes mandatory compliance on large enterprises, accompanied by administrative sanctions, written warnings, suspension or revocation of ISPO certification, and temporary suspension of palm oil plantation activities (BPK RI, 2020).

The primary focus of Presidential Regulation No. 44 of 2020 centers on promoting transparency and facilitating participation to align with international standards. Noteworthy changes in institutional roles and responsibilities are highlighted in Article 7, introducing the National Accreditation Committee (KAN) as the overseeing body for the certification system. Article 23 underscores the imperative of raising awareness domestically and engaging in international diplomacy. The decree emphasizes the provision of guidance to palm oil planters to facilitate adherence to ISPO principles and criteria. Additionally, Article 6 delineates provisions for imposing administrative sanctions on entities failing to meet ISPO Certification requirements (BPK RI, 2020).

Figure 7. Total of ISPO certification holders in 2021

Source: Indonesia GO ID (2022)

In the practical execution of this initiative, as indicated by data sourced from the Ministry of Agriculture, as of March 31, 2021, a total of 755 plantations have successfully obtained ISPO certification. The distribution of these certified plantations, depicted in Figure 4.6, delineates the ownership-based breakdown, revealing that 668 plantations are under private ownership, 67 are categorized as government-owned plantations, and the remaining 20 fall within the purview of smallholder plantations (Indonesia GO ID, 2022). Despite this progress, the number of certified plantations, at 755, remains notably below the target, considering the overall count of palm oil plantations in Indonesia, which stands at 2,892 (BPS, 2021).

d. *Peremajaan Sawit Rakyat* (Replanting)

The productivity of smallholder plantations remains notably low, attributed to factors such as the prevalent use of subpar palm seeds by farmers and the existence of aging palm trees lacking rejuvenation practices. To address these challenges, President Jokowi initiated the Peremajaan Sawit Rakyat (PSR) on October 13, 2017. The PSR program, conceived to enhance productivity and sustainability, advocates the adoption of superior oil palm seeds and systematic replanting to rejuvenate aging palm trees. Its objectives include establishing sustainable, high-quality palm plantations and mitigating the risk of illegal land-clearing (BPDPKS, 2023). In its implementation, the government aims to distribute replanting programs covering 540,000 hectares of smallholder plantations by 2024. Financial support is facilitated through the People's Business Credit (KUR) scheme. The government actively streamlines participation requirements for farmers, striving to expedite program implementation.

4. Conclusion and Suggestion

This article demonstrates palm oil is a better alternative than fossil fuels and other vegetable oils such as sunflower oil, rapeseed, etc. Throughout this article, we can see the comparative advantage of palm oil over other similar resources. This is because to produce the same amount of oil as palm oil, other vegetable oils must require 5-8 times more land than palm oil plantations. This means the other vegetable oil plantations will cover larger areas which can cause more deforestation. Additionally, a boycott of palm oil production could lead to another harmful effect for incomes for millions of people, especially impacting a low-income nation such as Indonesia. Lastly, in the event of a palm oil boycott by European markets, there is a possibility of a surge in palm oil purchases from other markets that do not prioritize sustainability.

The other reason why palm oil is one of the best solutions to support the green transition from fossil fuels to renewable energy, and why palm oil is more sustainable than other vegetable oils is the sustainability certification that it has. Meanwhile, the other vegetable oil resources don't have sustainability certification. On a global scale, palm oil has the Roundtable on Sustainable Palm Oil (RSPO) that was founded in 2004 by environmental organizations such as WWF, in response to the harmful environmental effects of palm oil the deforestation in Indonesia and Malaysia as the biggest palm oil producer. At the domestic level, the biggest palm oil-producing countries such as Indonesia have established Indonesian Sustainable Palm Oil (ISPO). Malaysia as the second largest palm oil-producing country also has MSPO (Malaysia Sustainable Palm Oil) as a national certification scheme to promote sustainable practices in the palm oil industry. Not only that, the Roundtable on Sustainable Palm Oil (RSPO) is also connected to all other Sustainable Development Goals (SDGs). These connections vary, with some being direct and others indirect.

Despite the considerable efforts that have been achieved, the palm oil industry continues to face ongoing challenges. Consequently, it should prioritize the widespread implementation of sustainable practices, enhance the monitoring and enforcement of RSPO scheme standards, and tackle social concerns such as labour rights and deforestation that are always linked to palm oil production. It is essential to give greater attention to these issues. Sustained collaboration and dedication among various stakeholders, including palm oil producers, governments, non-governmental organizations (NGOs), and consumers, are vital for realizing a truly sustainable palm oil industry in the future.

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Authors contributions

Mohd Ikbal Mohd Huda and Dhenada was responsible for study design, data collection,

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No additional data is available.

References

Aji, S. B. (2019). Moratorium Sawit Jokowi dalam Perspektif Kebijakan Pembangunan Berkelanjutan ala tik Hijau. *Jurnal Hukum Lingkungan Indonesia, 5*(2), 186-207. https://doi.org/10.38011/jhli.v5i2.92

BPDPKS. (2023). *Peremajaan Sawit Rakyat.* [Online] Available: https://www.bpdp.or.id/program-peremejaan-sawit-rakyat#:~:text=PSR%20merupakan%20program%20untuk%20membantu,Perubahan%20Penggunaan%20Lahan%20dan%20Kehutanan

BPDPKS. (2023). *Tentang Program Pengembangan dan Pemanfaatan Bahan Bakar Nabati.*

[Online] Available: https://www.bpdp.or.id/tentang- program-2598

BPK RI. (2020). *Sistem Sertifikasi Perkebunan Kelapa Sawit Berkelanjutan Indonesia.* [Online] Available: https://peraturan.bpk.go.id/Home/Details/134802/perpres-no-44-tahun-2020

BPS. (2021). *Jumlah Perusahaan Perkebunan Besar Menurut Jenis Tanaman (Unit), 2019-2021*. [Online] Available: https://www.bps.go.id/indicator/54/1848/1/jumlah-perusahaan-perkebunan-besar-menurut-jenis-tanaman.html

Control Union Certification. (2018). *MSPO - Malaysia Sustainable Palm Oil.* [Online] Available: https://certifications.controlunion.com/en/certification-programs/certification-programs/mspo-malaysia-sustainable-palm-oil

Copenhagen Business School. (2020). *SDG Materiality Report Sustainable Palm Oil (RSPO) Business Guidance.* Denmark: Preferred by Nature.

CPOPC. (2022). *Country Profiles - Member Countries.* [Online] Available: https://www.cpopc.org/main-page

CPOPC. (2022). *Our Mission*. [Online] Available: https://cpopc.org/our-mission

Devjobs Indo. (n.d.). *Council Of Palm Oil Producing Countries (CPOPC).* [Online] Available: https://devjobsindo.org/organisations/council-of-palm-oil-producing-countries-cpopc/

EEAS. (2021). *Joint Press Release Between the EU and Indonesia, Co-Chairs of The First Meeting of The Joint Working Group on Palm Oil between The EU and Relevant ASEAN Member Countries*. [Online] Available: https://www.eeas.europa.eu/eeas/joint-press-release-between-eu-and-indonesia-co-chairs-first-meeting-joint-working-group-palm_en

EFECA. (2020). *Palm Oil Certification Schemes: ISPO.* EFECA.

EU Science Hub (2019). *Renewable Energy – Recast to 2030* (RED II). [Online] Available: https://ec.europa.eu/jrc/en/jec/renewable-energy-recast-2030-red-ii

European Commission. (2017). *Clean Energy for all Europeans packages.* [Online] Available: https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en

European Commission. (2022). *Renewable energy directive.* [Online] Available: https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en

European Union. (2009). *Directive 2009/28/Ec of The European Parliament and of the Council.* [Online] Available: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:en:PDF

Hannah, R., & Max, R. (2020). *Palm Oil.* [Online] Available:

https://ourworldindata.org/palm-oil

Indonesia GO ID. (2022). *Berdaulat Melalui Sertifikasi Kelapa Sawit*. [Online] Available: https://indonesia.go.id/kategori/editorial/5573/berdaulat-melalui-sertifikasi-kelapa-sawit?lang=1

Katadata. (2021). Program B30 Bisa Turunkan Emisi Karbon Hingga 24 Juta Ton Tahun ini Artikel ini telah tayang di Katadata.co.id dengan judul "Program B30 Bisa Turunkan Emisi Karbon Hingga 24 Juta Ton Tahun ini. [Online] Available: https://katadata.co.id/happyfajrian/ekonomi-hijau/61a5ccc9

Ministry of Foreign Affairs of Indonesia. (2022). *The Second Joint Working Group on Palm Oil between EU and relevant ASEAN Member States.* [Online] Available: https://kemlu.go.id/portal/en/read/3805/berita/the-second-joint-working-group-on-palm-oil-between-eu-and-relevant-asean-member-states

Ministry of Energy and Mineral Resources . (2022). *Penetapan Alokasi Biodiesel Tahun 2023 Sebesar 13,15 Juta Kiloliter*. [Online] Available: https://ebtke.esdm.go.id/post/2022/12/16/3377/penetapan.alokasi.biodiesel.tahun.2023.sebesar.1315.juta.kiloliter

MPOCC. (2023). *Sustainable Palm Oil - Conserving Nature and Protecting Wildlife.* [Online] Available: https://www.mpocc.org.my/mspo-blogs/sustainable-palm-oil-conserving-nature-and-protecting-wildlife

MSPO. (2016). *MSPO Certification Scheme*. [Online] Available: https://www.mpocc.org.my/about-mspo

Palmoilina Asia. (2023). Palm Oil Consumption Growth In Asian Region (2023). [Online] Available: https://palmoilina.asia/jurnal-kelapa-sawit/palm-oil-consumption-2/#:~:text=Around%2087%E2%80%9389%20percent%20of%20world%20palm%20oil%20production%20is,Malaysia%2C%20Thailand%2C%20and%20Philippines

RSPO. (2022). *Facilitating the Establishment of the Thailand Sustainable Palm Oil Alliance.* [Online] Available: https://www.thaingo.org/jobs/files/ToR%20-%20Facilitating%20the%20Establishment%20of%20the%20Thailand%20Sustainable%20Palm%20Oil%20Alliance%20-%20English.pdf

RSPO. (2022). *Impact Report.* Kuala Lumpur: Roundtable on Sustainable Palm Oil. [Online] Available: https://rspo.org/wp-content/uploads/RSPO-Impact-Report-2022.pdf

RSPO. (2022). *Press Release: Rspo Launches the Thailand Sustainable Palm Oil Alliance with Five Partner Organisations.* [Online] Available: https://rspo.org/press-release-rspo-launches-the-thailand-sustainable-palm-oil-alliance-with-five-partner-organisations/

RSPO. (2023). *Why Sustainable Palm Oil? Sustainability Transforms the Impact of Palm Oil.*

[Online] Available: https://rspo.org/why-sustainable-palm-oil

Save the Orangutan. (2021). *What is RSPO?* [Online] Available: https://savetheorangutan.org/what-is-rspo/m

Suwarno, W. (2019). Kebijakan Sawit Uni Eropa dan Tantangan bagi Diplomasi Ekonomi Indonesia. *Jurnal Hubungan Internasional, 8*(1), 24. https://doi.org/10.18196/hi.81150

The Palm Scribe. (2019). *The Geopolitics of Palm oil and Deforestation.* [Online] Available: https://thepalmscribe.id/the-geopolitics-of-palm-oil-and-deforestation/

Nano, V. (2023). *Luncurkan B35, RI Jadi Contoh Sukses Kembangkan Biodiesel.* [Online] Available: https://www.cnbcindonesia.com/news/20231225134652-4-500213/luncurkan-b35-ri-jadi-contoh-sukses-kembangkan-biodiesel

Wahyudi, H. (2019). Penggunaan Renewable Energy Directive oleh Uni Eropa untuk Menekankan Penolakan Impor Crude Palm Oil Indonesia. *Jurnal Dinamika Pemerintahan, 2*(2), 93-94. https://doi.org/10.36341/jdp.v2i2.944

Walhi. (2017). *Moratorium 25 Tahun Menghentikan Deforestasi dan Menyelesaikan Konflik.* [Online] Available: https://www.walhi.or.id/index.php/moratorium-25-tahun-menghentikan-deforestasi-dan-menyelesaikan-konflik

Widyaningtyas, D., & Widodo, T. (2016). Analisis Pangsa Pasar Dan Daya Saing Cpo Indonesia di Uni Eropa. *Jurnal Ekonomi Manajemen Sumber Daya, 18*(2), 140. https://doi.org/10.23917/dayasaing.v18i2.4510