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THE ROLE OF CERTIFICATION SCHEMES (RSPO, ISPO, MSPO) IN SHAPING GLOBAL PALM OIL MARKET ACCESS

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Abstract

This study explores the role of palm oil certification schemes Roundtable on Sustainable Palm Oil (RSPO), Indonesian Sustainable Palm Oil (ISPO), and Malaysian Sustainable Palm Oil (MSPO) in shaping global market access for palm oil products. Using a literature review method, this research analyzes scholarly articles, policy papers, and industry reports to examine how sustainability certifications influence trade opportunities, supply chain governance, and international perceptions of environmental responsibility. The findings reveal that certification schemes function as both market entry mechanisms and instruments of environmental diplomacy. RSPO, as a voluntary global standard, often dominates international trade preferences, particularly in Europe and North America. Meanwhile, ISPO and MSPO represent national policy responses aimed at asserting sovereignty over sustainability governance and enhancing competitiveness in the global market. However, challenges remain in aligning these schemes with international expectations, particularly regarding traceability, compliance costs, and the inclusion of smallholders. The study concludes that harmonizing certification standards and strengthening transparency across supply chains are essential to improving the global acceptance of certified palm oil. Furthermore, literature suggests that future policy integration between public and private standards could enhance mutual recognition and promote sustainable trade practices globally.

Keywords: RSPO, ISPO, MSPO, sustainable palm oil, market access, certification schemes, trade governance

INTRODUCTION

The palm oil industry has long been at the center of global debates about sustainability, deforestation, and trade fairness. As one of the world's most widely used vegetable oils, palm oil plays a crucial role in industries ranging from food, cosmetics, and bioenergy (de Vos et al., 2023a). For major producing countries like Indonesia and Malaysia, this commodity contributes significantly to foreign exchange exports, employment, and rural economic development. However, despite its significant economic contribution, the industry is often in the spotlight due to environmental issues such as forest destruction,

greenhouse gas emissions, biodiversity loss, and human rights and labor abuses. In response to growing global pressure for sustainable production practices, various certification schemes have been developed to promote responsible palm oil governance throughout the supply chain. Among the most prominent are the Roundtable on Sustainable Palm Oil (RSPO), Indonesian Sustainable Palm Oil (ISPO), and Malaysian Sustainable Palm Oil (MSPO), which aim to balance economic, social, and environmental aspects while maintaining competitiveness in the global market (Abdul Majid et al., 2021a).

The emergence of these certification schemes marked a major shift in sustainability governance in the palm oil sector. Established in 2004 as a multi-stakeholder initiative involving producers, traders, retailers, NGOs, and investors, the RSPO became the first voluntary framework to ensure sustainable palm oil production practices. Its principles and criteria cover key aspects such as environmental protection, transparency, fair labor practices, and local community involvement. However, despite its global recognition, the RSPO is often criticized for being too oriented towards Western standards and favoring large multinational corporations. In response to this and to assert national sovereignty in sustainability governance, the Indonesian and Malaysian governments developed their own mandatory certification systems, namely ISPO in 2011 and MSPO in 2015. Both schemes were designed to align with national regulations and environmental policies, while demonstrating to the international market that their palm oil industries were also committed to sustainability without having to rely entirely on standards developed by external parties (Zainal Abidin et al., 2024a).

The interplay between RSPO, ISPO, and MSPO creates a complex landscape in the global palm oil market. RSPO remains the most internationally recognized scheme, particularly in the European Union and North America, while ISPO and MSPO are more widely implemented in Asian markets and for domestic policy purposes. However, the existence of multiple certification systems raises questions about their effectiveness, equity, and impact on market access. Many producers face difficulties in meeting the overlapping requirements between schemes, particularly smallholders with limited capital and technical knowledge (Unachukwu, 2024). In this context, certification, originally intended to increase inclusiveness and sustainability, sometimes becomes a barrier to accessing premium markets that demand high sustainability standards.

From a trade perspective, certification schemes have evolved into a form of non-tariff barrier affecting global market access for palm oil. The European

Union, for example, applies increasingly stringent sustainability criteria to biofuels and palm-based products, which indirectly favors RSPO-certified palm oil over other certifications. This situation places Indonesia and Malaysia, which account for more than 80 percent of global palm oil production, in a difficult strategic position (Judijanto, 2025a). On the one hand, they need to adapt to global sustainability demands to continue to penetrate key export markets, but on the other, they want to protect national interests and the welfare of smallholder farmers through state-controlled certification schemes. This dynamic reflects a broader tension between global environmental governance and national economic sovereignty. Therefore, the role of certification schemes is not merely a matter of technical compliance, but is also closely linked to the direction of trade policy, international relations, and the bargaining position of producing countries in the global market.

The effectiveness of certification in improving sustainability practices is also a matter of debate (Judijanto, 2025b). On the one hand, certification has increased transparency and traceability in the supply chain; on the other hand, many believe that certification has not been fully successful in reducing deforestation or addressing social issues such as land conflicts and labor exploitation. The phenomenon of "greenwashing" has also emerged, where certification is used more as a marketing tool than as a genuine commitment to sustainable change. In this context, understanding how the RSPO, ISPO, and MSPO affect global market access is crucial for assessing whether these schemes truly serve as instruments of sustainable development or simply serve as a means of complying with international trade regulations. Comparing voluntary schemes like the RSPO with mandatory schemes like ISPO and MSPO can also provide valuable insights into the effectiveness of different governance models in achieving sustainability goals while maintaining economic competitiveness (Judijanto, 2025b).

Furthermore, the growing global discourse on sustainability, influenced by initiatives like the Sustainable Development Goals (SDGs) and the European Union Deforestation Regulation (EUDR), adds complexity for producing countries. These regulations require proof that palm oil products entering the international market are not derived from environmentally damaging practices. In this context, certification schemes serve as a bridge between local production practices and global sustainability demands. The design, implementation, and international recognition of the RSPO, ISPO, and MSPO are determining factors in the extent to which producing countries can maintain market access and their competitive position in global trade.

Therefore, studies on the role of certification schemes in shaping global market access are not only relevant for industry players, but also for policy makers, academics, and development organizations that seek to balance economic growth and environmental sustainability (Suhardjo & Suparman, 2025a).

Furthermore, the interplay between the RSPO, ISPO, and MSPO also reflects broader debates about power, legitimacy, and fairness in global commodity governance. The RSPO's dominance in the international market gives it significant influence over production practices in countries in the Global South, even though the majority of consumers of these products are in countries in the Global North. Conversely, ISPO and MSPO represent efforts by producer countries to reclaim sovereignty and define sustainability within their national contexts. However, global recognition of these two national schemes remains limited due to perceived weaknesses in enforcement, transparency, and stakeholder engagement. Consequently, despite increasing certification coverage, the global palm oil market structure remains characterized by unequal recognition and unequal distribution of benefits. This situation has direct implications for producers' ability to access global value chains and the long-term sustainability of the palm oil industry.

Given this complexity, research into the role of the RSPO, ISPO, and MSPO in shaping global market access for palm oil is crucial. This study aims to analyze how certification schemes influence international trade flows, producer behavior, and national policy responses. This research also seeks to identify the opportunities and challenges arising from the coexistence of multiple certification systems and evaluate their implications for sustainability governance and economic inclusion. Understanding these dynamics is crucial amid the increasing role of sustainability criteria and consumer awareness in shaping global trade patterns. By examining the effectiveness and market influence of these three schemes, this research is expected to contribute to the discourse on sustainable palm oil production and offer insights into building a more harmonized, inclusive, and equitable certification framework to support the environmental goals and economic resilience of producing countries.

RESEARCH METHOD

This study uses a literature review to analyze the role of sustainable palm oil certification schemes such as the Roundtable on Sustainable Palm Oil (RSPO), Indonesian Sustainable Palm Oil (ISPO), and Malaysian Sustainable Palm Oil (MSPO) in shaping global market access for palm oil commodities. This literature review was conducted by examining various scientific sources, such

as international journals, policy reports, certification body publications, and documents from global trade organizations relevant to the issue of sustainability and palm oil trade. The primary focus of this method is to identify how each certification scheme contributes to improving sustainability standards, strengthening export competitiveness, and influencing consumer and importing countries' perceptions of palm oil from Indonesia and Malaysia.

The data collection process was conducted through a systematic literature review technique, covering publications between 2010 and 2025 to obtain a comprehensive picture of the development, effectiveness, and challenges of the three certification schemes. Data were analyzed using a descriptive qualitative approach, integrating findings from various sources to generate a comprehensive understanding of the relationship between sustainability certification and global market access. Data validity is maintained by comparing study results from various independent research institutions and international bodies such as UNEP, WTO, and FAO. Through this approach, the research is expected to provide a conceptual contribution to strengthening sustainable palm oil certification policies that can increase competitiveness in the global market while supporting more ethical and environmentally friendly trade practices.

RESULT AND DISCUSSION

Overview of Certification Schemes: RSPO, ISPO, and MSPO

Sustainable palm oil certification has emerged as a crucial tool for addressing the various environmental, social, and economic issues inherent in the global palm oil industry. As global demand for palm oil and consumer awareness of environmentally friendly production practices increase, the need for transparent and credible verification mechanisms becomes increasingly urgent (Abdul Majid et al., 2021b). In this context, three major certification schemes have played a central role in shaping the sustainability direction of the palm oil industry: the international, voluntary Roundtable on Sustainable Palm Oil (RSPO), and two mandatory national certification schemes: the Indonesian Sustainable Palm Oil (ISPO) in Indonesia and the Malaysian Sustainable Palm Oil (MSPO) in Malaysia. While all three share the same goal of ensuring that palm oil production is carried out responsibly towards the environment and society, their approaches, principles, and implementation systems differ depending on the political, economic, and social contexts of each country (Judijanto, 2025c).

The Roundtable on Sustainable Palm Oil (RSPO) was established in 2004 as a multi-stakeholder initiative involving producers, processors, traders,

financial institutions, NGOs, and consumers. The RSPO was driven by growing international pressure on deforestation, peatland degradation, and social conflicts stemming from the uncontrolled expansion of oil palm plantations (de Vos et al., 2023b). The RSPO developed principles and criteria that serve as the basis for sustainable palm oil production, covering environmental aspects such as the protection of high conservation value forests, waste management, and greenhouse gas emission reduction, as well as social aspects such as workers' rights, local community engagement, and respect for indigenous rights. As a voluntary certification scheme, the RSPO seeks to promote best practices through a market mechanism where consumers and companies purchase certified products to demonstrate their commitment to sustainability. However, this approach has faced criticism, particularly due to its reliance on market incentives and its limitations in enforcing compliance throughout the supply chain (Abdul Majid et al., 2021b).

In response to international pressure and to strengthen national sovereignty in managing the palm oil sector, the Indonesian government launched the Indonesian Sustainable Palm Oil (ISPO) in 2011. Unlike the voluntary RSPO, ISPO is designed as a mandatory certification scheme for all palm oil plantation businesses in Indonesia. The primary objective of ISPO is to ensure that national palm oil production meets legal and government regulatory standards related to the environment, labor, and business governance. ISPO principles include compliance with laws and regulations, implementation of good agricultural practices, environmental and natural resource management, responsibility towards workers and communities, and sustainable economic development. Due to its mandatory nature, ISPO serves not only as a certification tool but also as a public policy instrument that strengthens the country's legitimacy in the face of international criticism regarding palm oil production practices deemed unsustainable. However, challenges to ISPO implementation include limited technical capacity of smallholders, high certification costs, and a perception gap between national standards and global market expectations (Zainal Abidin et al., 2024b).

Malaysia then introduced the Malaysian Sustainable Palm Oil (MSPO) in 2013 with a similar goal of upholding sustainability in the national palm oil industry. The MSPO was initiated by the Malaysian government through the Malaysian Palm Oil Certification Council (MPOCC) and was initially voluntary, but since 2020 has become mandatory for all industry players. Like the ISPO, the MSPO emphasizes compliance with national regulations, environmental protection, and corporate social responsibility. The MSPO adopts principles

focused on transparency, biodiversity conservation, and the well-being of workers and communities surrounding plantations. Compared to the RSPO, the MSPO's approach is more pragmatic and nationalistic, with the primary goal of enhancing the competitiveness of Malaysian palm oil in the international market while maintaining control over the sustainability narrative domestically. The Malaysian government views the MSPO as a strategic tool to strengthen the reputation of the palm oil industry amidst increasing pressure and negative campaigns from Western countries (Suhardjo & Suparman, 2025b).

A comparison of the RSPO, ISPO, and MSPO reveals fundamental differences in approach, governance, and implementation mechanisms. The RSPO relies on voluntary participation and market mechanisms to drive change, with governance involving multiple international stakeholders. This approach allows for flexibility and global adoption, but on the other hand, it can create a power imbalance between industry players in producing countries and those in more dominant consuming countries. Meanwhile, ISPO and MSPO adopt a mandatory, nationally regulated approach, granting governments the legal authority to enforce sustainability standards (Nupueng et al., 2023). While this strengthens control and consistency of implementation at the domestic level, national schemes often face challenges in gaining global recognition due to perceived independence and less stringent third-party verification and auditing than the RSPO. Therefore, integration and harmonization between national and international schemes are important issues that continue to be discussed in global forums on palm oil sustainability.

These three schemes essentially complement each other in forming the sustainability framework for the global palm oil industry. The RSPO provides legitimacy and market access internationally through a market-based system and multi-stakeholder governance, while ISPO and MSPO strengthen the domestic regulatory framework tailored to the socio-economic conditions of each country. Efforts to bridge the gap between global and national standards continue through various harmonization initiatives, such as dialogue between certification bodies and alignment of core sustainability principles. Going forward, the success of each scheme will depend not only on the rigor of its principles and audit mechanisms, but also on its ability to build trust, transparency, and inclusivity by involving smallholders as an integral part of the supply chain. Thus, the evolution of the RSPO, ISPO, and MSPO reflects the dynamic between global market demands and national sovereignty, which together shape a new landscape for sustainable palm oil governance globally (Rahutomo et al., 2025).

Sustainability Standards and Compliance Mechanisms

Discussions on Sustainability Standards and Compliance Mechanisms in the context of palm oil certification schemes such as the RSPO, ISPO, and MSPO not only reflect formal efforts to ensure sustainable production but also reveal the complex dynamics between global standards, national regulations, and actual practices on the ground. Sustainability standards serve as the primary instrument for assessing the extent to which palm oil production aligns with environmental, social, and economic principles (Depoorter & Marx, 2024). Through certification mechanisms, various actors along the supply chain, from smallholder farmers to large processing industries, are required to comply with established criteria to ensure their products are accepted in the global market. In this context, certification serves not only as a means of trade legitimacy but also as a governance system that shapes the behavior of industry players toward sustainability principles.

The RSPO (Roundtable on Sustainable Palm Oil), as an international voluntary scheme, sets relatively stringent sustainability standards emphasizing the principles of transparency, legal compliance, biodiversity conservation, and social responsibility towards workers and local communities. In practice, implementing the RSPO standard encourages companies to conduct regular environmental and social audits, systematically manage production waste, and ensure there is no deforestation or new peatland clearing. Its impact at the plantation level is evident in the increased awareness of the importance of sustainable agronomic practices, such as crop rotation, the use of organic fertilizers, and the use of environmentally friendly land management technologies. However, compliance with the RSPO standard often requires significant investment, especially for smallholders with limited resources and access to technology. This imbalance has led some industry players to view the RSPO as an instrument that favors larger companies that can afford the costs of certification and audits (Loibl, 2021).

Unlike the RSPO, ISPO (Indonesian Sustainable Palm Oil) is a mandatory certification scheme designed to assert national regulatory sovereignty and strengthen Indonesia's position in the face of international pressure on the palm oil industry. The ISPO standard integrates sustainability principles with the national legal framework, so compliance with ISPO also implies compliance with various government regulations, such as environmental management, workers' rights, and corporate social responsibility. The implementation of ISPO at the plantation and processing industry levels requires high levels of

administrative compliance, such as obtaining business permits, environmental documents (EIA), and annual sustainability reports. However, the main challenges in ISPO implementation lie in weak oversight capacity and limited technical support for independent smallholders. Many smallholders lack the ability to meet land legality requirements or other formal documentation, making it difficult for them to obtain ISPO certification. This creates a gap between the government's sustainability vision and the socio-economic realities on the ground (Garbely & Steiner, 2022).

Meanwhile, the Malaysian Sustainable Palm Oil (MSPO) in Malaysia adopts a similar approach to ISPO, but places greater emphasis on enhancing international reputation and fairness for smallholders. MSPO requires all palm oil industry players in Malaysia to comply with national sustainability standards covering legality, social responsibility, resource efficiency, and environmental protection. One of the MSPO's key strengths lies in its active government support in providing certification subsidies and training to smallholders. Through this approach, Malaysia strives to ensure that its entire palm oil supply chain meets global market demands without compromising the well-being of smallholder producers (Dietz et al., 2021). The impact is evident in increased transparency in plantation management practices and significant improvements in the palm oil product traceability system. However, the effectiveness of compliance mechanisms remains challenging, particularly in ensuring that audits are conducted independently and free from conflicts of interest (Pererva et al., 2021).

Compliance mechanisms within these three certification schemes are key elements in ensuring the reliability and credibility of sustainability claims. External audit processes, periodic evaluations, and public complaint mechanisms serve as control tools to ensure that standards are implemented not only on paper but also in practice. The RSPO, for example, has a Complaint System that allows third parties to report violations, thus providing a platform for civil society oversight. On the other hand, ISPO and MSPO tend to place greater emphasis on government oversight through official institutions tasked with verifying compliance by industry players. While this approach strengthens state authority, its effectiveness depends on the integrity of the supervisory institutions and their technical capacity at the field level. In many cases, limited human resources and information gaps between authorities and industry players result in suboptimal compliance mechanisms (Delabre et al., 2021).

The direct impact of implementing these sustainability standards on production practices is significant. At the plantation level, companies and

farmers are encouraged to adopt more efficient and environmentally friendly cultivation practices, such as wastewater management, greenhouse gas emission reduction, and degraded land rehabilitation. At the processing industry level, certification encourages the implementation of traceability systems to ensure the legal and sustainable origin of raw materials. However, the success of sustainability standards in changing industry behavior is heavily influenced by market incentives. Certified products typically command premium prices and easier access to European or North American markets, creating economic incentives for companies to comply (Alexander, 2020). Conversely, in domestic and regional markets where certification is less demanding, these incentives are relatively weak, and compliance is often a formality.

Overall, sustainability standards and compliance mechanisms implemented through the RSPO, ISPO, and MSPO play a crucial role in driving the palm oil industry's transformation toward more responsible practices. While each scheme differs in its approach, ranging from voluntary to mandatory, all seek to address global challenges related to deforestation, human rights, and climate change. The greatest challenge remains the implementation gap between policies and practices, particularly among smallholder farmers who form the backbone of palm oil production in Southeast Asia. Therefore, true sustainability cannot be achieved through standards and certification alone but requires collaboration between governments, companies, international institutions, and civil society to build an inclusive, transparent, and equitable production ecosystem. In this context, certification should be viewed not as an end in itself, but as a tool for transformation towards truly sustainable palm oil industry governance.

Impact of Certification on Global Market Access

Palm oil certification plays a strategic role in determining producers' ability to penetrate global markets, particularly in regions with high sustainability standards such as the European Union, the United States, and other developed countries. In the context of modern international trade, certification is no longer simply a voluntary instrument to demonstrate environmental commitment or social responsibility, but has become a key prerequisite for determining the eligibility of palm oil products to enter the global supply chain. Schemes such as the Roundtable on Sustainable Palm Oil (RSPO), Indonesian Sustainable Palm Oil (ISPO), and Malaysian Sustainable Palm Oil (MSPO) serve as mechanisms to ensure that palm oil production is

carried out sustainably, respects human rights, and minimizes negative environmental impacts. The introduction of these certifications marks a fundamental transformation in the dynamics of the palm oil trade, where reputation, sustainability, and compliance with global standards are key factors determining market access and export competitiveness (Schleifer & Sun, 2020).

The European Union market is one of the clearest examples of how certification has become a decisive instrument in trade policy. The EU has very strict regulations regarding the import of agricultural products, particularly those related to issues of deforestation and human rights violations. Through policies such as the EU Deforestation Regulation (EUDR), only products that can demonstrate traceability and adherence to sustainability principles are allowed into their markets (Ikram et al., 2020). In this context, the internationally recognized RSPO certification is a crucial tool for palm oil exporters to meet these requirements. RSPO-certified companies are more readily accepted by major European buyers because the certificate demonstrates that their palm oil is sourced responsibly. Conversely, uncertified producers often face tariff and non-tariff barriers that hinder their access to European markets. Thus, certification not only enhances product credibility but also serves as a trade passport, opening the door to sustainable exports.

The United States exhibits a similar pattern in the acceptance of palm oil products. Although the US market does not directly implement regulations as stringent as those in the European Union, consumers and corporations in the country are increasingly demanding transparency and sustainability in supply chains. Large companies such as Unilever, Procter & Gamble, and Nestlé, operating in the American market, have internally established certified palm oil procurement policies as part of their global environmental commitments. Thus, while certification is not formally a legal requirement, it has become a practical economic and reputational imperative. Producers who fail to obtain certification risk losing access to major contracts and key trading partners committed to sustainability standards. Consequently, certification serves not only as a compliance instrument but also as a competitive advantage that determines producers' position in a global market that is increasingly sensitive to ethical and environmental issues (Ikram et al., 2020).

Developed countries in other regions, such as Japan, Australia, and Canada, are also showing a similar trend. They are beginning to tighten import requirements for agricultural products that have the potential to cause environmental damage or social violations. In this context, ISPO and MSPO certification are crucial as they represent the national commitment of each

palm oil-producing country to adapt to global demands. While both schemes still focus on domestic and regional markets, international recognition of ISPO and MSPO continues to be enhanced, enabling them to serve as credible alternatives to the RSPO (Fiankor et al., n.d.). The process of harmonization and increased transparency in the implementation of national standards is a crucial step to ensure that palm oil producers from Indonesia and Malaysia remain competitive in an increasingly selective global market. By strengthening this credibility, domestic certification is expected to not only improve compliance but also strengthen the bargaining position of palm oil-producing countries with international buyers (Gichuki et al., 2020).

The impact of certification on palm oil producers' exports and competitiveness can be observed through increased access to premium markets, increased product sales value, and expanded trading networks with multinational companies. Producers with sustainable certification can sell their palm oil at a higher price than non-certified producers because the certified market offers a sustainability premium (Furumo et al., 2020). Furthermore, certification promotes increased efficiency and transparency in the supply chain through the implementation of independent tracking and auditing systems. This not only strengthens producers' reputations but also reduces the risk of market loss due to negative campaigns against unsustainable palm oil (Arton et al., 2020). With growing global awareness of climate change and deforestation, international markets will increasingly prioritize products that can demonstrate responsible origin. Therefore, certification serves as a bridge connecting producers' economic interests with the social and ecological expectations of the global market.

However, implementing certification also presents challenges, particularly for smallholder farmers who face constraints in terms of cost, technical capacity, and access to information. The complex and expensive certification process often leaves them behind in their efforts to achieve international recognition. In this context, support from governments and private institutions is crucial to ensure that certification is not solely a tool for large corporations but is also accessible to small businesses to prevent them from losing out on export opportunities. Mentoring programs, certification cost subsidies, and strengthening farmer cooperatives are important steps to expand the benefits of certification in a more inclusive manner. Thus, certification can serve a dual purpose: as an instrument for quality and sustainability control, and as an economic empowerment tool that enhances

the bargaining position of smallholder producers in the global market (Apriani et al., 2020).

Overall, certification plays a crucial role in determining the future of international palm oil trade. On the one hand, it guarantees compliance with globally recognized environmental and social standards, while on the other, it serves as a strategic mechanism for establishing national reputation and competitiveness in an increasingly competitive global market. Producing countries such as Indonesia and Malaysia must continue to strengthen their domestic certification policy frameworks to align with international expectations, while protecting the economic interests of the millions of smallholder farmers who form the backbone of the palm oil industry. In the long term, the ability to meet globally recognized certification standards will be a key differentiating factor between producers who are able to maintain access to premium markets and those left behind in lower-value markets. Certification, therefore, is not simply an administrative mechanism, but a strategic foundation that determines the direction and sustainability of the palm oil industry in the era of sustainability-based global trade.

Economic and Environmental Implications of Certification

Sustainable palm oil certifications such as the RSPO, ISPO, and MSPO are important instruments that seek to balance economic and environmental interests in the global palm oil industry supply chain. On the one hand, this certification is expected to increase the competitiveness and export value of palm oil products from producing countries like Indonesia and Malaysia in the international market (Rossi et al., 2024). On the other hand, certification also requires the implementation of sustainable practices that include forest conservation, carbon emission reduction, and biodiversity protection. This relationship between economic and environmental aspects creates a complex dynamic because each objective has priorities and interests that sometimes conflict. Nevertheless, certification acts as a mechanism that attempts to bridge these interests so that palm oil production is not only financially profitable but also ecologically responsible.

From an economic perspective, sustainable palm oil certification has become a crucial factor in expanding market access and enhancing the positive image of palm oil commodities among global consumers. Developed countries such as the European Union, the United States, and Japan demand assurance that the agricultural products they import come from sources that do not cause environmental damage or human rights violations. Therefore, for palm oil

producers in developing countries, certification is a prerequisite for maintaining a competitive position in the international market. Large companies that have obtained RSPO, ISPO, or MSPO certification tend to have better access to global buyer networks, more stable selling prices, and a better reputation among investors and consumers. Furthermore, certification also promotes plantation management efficiency through the implementation of best practices that can reduce long-term costs and increase productivity (Jena et al., 2022).

However, these economic benefits are not always felt equally by all actors in the palm oil value chain. Smallholders, who are significant contributors to palm oil production in Indonesia and Malaysia, often face barriers to certification due to implementation costs, technical limitations, and a lack of institutional support. The certification process requires additional investment in audits, training, and compliance with environmental and social standards set by certification bodies. This situation creates an economic gap between large companies and smallholders. If not addressed through inclusive policies, certification can actually reinforce structural inequalities in the palm oil industry, where large players benefit from global market access while smallholders are left behind due to financial and capacity constraints. Thus, the balance between economic efficiency and social justice is integral to the discourse on the economic impact of certification.

From an environmental perspective, palm oil certification plays a strategic role in reducing deforestation and land degradation, which have long been major issues that have plagued the palm oil industry. The standards set by the RSPO, ISPO, and MSPO require companies to implement biodiversity conservation principles, protect High Conservation Value (HCV) areas, and avoid clearing peatlands, which contribute significantly to greenhouse gas emissions. Certification implementation encourages behavioral changes in production practices, including attention to waste management, responsible pesticide use, and increased energy efficiency (Camilleri, 2022). Globally, palm oil certification is also considered part of climate change mitigation efforts because it helps reduce the carbon footprint of this highly land-intensive commodity supply chain. In other words, certification serves as a non-governmental policy instrument that encourages the adoption of green economy principles in the agribusiness sector.

However, the effectiveness of certification in achieving environmental goals is often questioned. Several studies have shown that the positive environmental impacts of certification are not always consistent across regions. Some companies may simply meet the minimum requirements for certification

without fundamentally transforming their production systems. This phenomenon is known as "greenwashing," where certification is used as a means of legitimacy without any real changes on the ground. Furthermore, differing certification standards across schemes (e.g., the voluntary RSPO and the mandatory ISPO by the Indonesian government) also lead to variations in levels of compliance and transparency. These differences can undermine the credibility of certification among international buyers, especially if it is perceived as lacking strict oversight or inconsistent with global sustainability principles. Therefore, the integrity and governance of certification are key factors in ensuring that environmental goals are truly achieved (Wen & Lee, 2020).

In the context of sustainable development policies, balancing economic and environmental goals through certification requires a synergistic approach that connects various actors: government, companies, civil society, and farmer communities (Younis & Sundarakani, 2019). The government has a crucial role in creating regulations that support the harmonization of national economic interests and international environmental commitments. Fiscal incentives, technical support, and mentoring programs for smallholder farmers can be effective instruments to ensure the inclusiveness and sustainability of certification implementation (Stranieri et al., 2021). Furthermore, companies need to view certification not merely as a market obligation, but as a long-term investment in reputation, operational efficiency, and business sustainability. Cross-sector collaboration and transparency in sustainability reporting will strengthen the legitimacy of certification schemes globally while ensuring tangible benefits for the environment and local communities (Ma et al., 2021).
Therefore, sustainable palm oil certification plays a strategic role in shaping a more equitable and responsible future for the global palm oil industry. Certification is not only an economic instrument for increasing export competitiveness but also a tool for ecological transformation that affirms a commitment to conservation and climate change mitigation. The challenge is ensuring that certification mechanisms effectively and sustainably balance these two objectives. If this balance can be achieved, certification will become a model of global governance that not only benefits the economy but also protects natural resources and the planet's sustainability for future generations.

CONCLUSION

Research on The Role of Certification Schemes (RSPO, ISPO, MSPO) in Shaping Global Palm Oil Market Access shows that the existence of sustainable palm oil certification schemes has a significant impact on global market access for producing countries, particularly Indonesia and Malaysia. Schemes such as the RSPO (Roundtable on Sustainable Palm Oil) have become global standards widely recognized by the international market, particularly in Europe and North America, as a guarantee that palm oil production meets the principles of environmental, social, and economic sustainability. In this context, certification plays a role not only as a technical instrument but also as a global governance mechanism that directs corporate behavior toward more ethical and transparent agribusiness practices.

On the other hand, national certifications such as ISPO (Indonesian Sustainable Palm Oil) and MSPO (Malaysian Sustainable Palm Oil) represent a government effort to strengthen its domestic position amidst the dominance of international standards that are considered too biased toward the interests of consumers in developed countries. These two schemes aim to affirm national regulatory sovereignty, increase the competitiveness of palm oil products in the global market, and reduce the pressure on environmental and social issues often used to discredit the palm oil industry. However, the main challenge lies in global acceptance of these local standards, which are still considered less than equivalent to the RSPO, both in terms of transparency and sustainability audit mechanisms.

Overall, this study confirms that the success of certification schemes in establishing global palm oil market access depends on the extent to which these standards are able to bridge the interests of global producers and consumers within an inclusive sustainability framework. Harmonization between the RSPO, ISPO, and MSPO is key to building international trust while ensuring that economic benefits continue to be felt by smallholder farmers and industry players in producing countries. Thus, certification is not merely a technical instrument of trade, but an integral part of economic and environmental diplomacy that determines the future direction of the palm oil industry in an increasingly sustainability-oriented global market system.

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