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Optimizing Public Fund to Finance Smallholder Plantations for Sustainable Palm Oil in Indonesia

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Abstract

Considering the significant impact, but vulnerable position occupied by the smallholder farmers within the Indonesian palm oil industry, ensuring their access to a reliable source of finance is crucial to ensure the sustainability of palm oil in Indonesia. Public funds are one of the resources that can be used to provide this kind of financial support for palm smallholders. Therefore, it is important to ensure accessibility of smallholder's farmers to public funds. However, the government has not been able to effectively leverage available public financing tools and programs in ways that generate meaningful impact to address productivity and environmental sustainability challenges. This study identifies major gaps in available public financing tools through certain common palm oil industry cases, followed by a deep analysis on the implications of the gap over institutional public financing strategies and major beneficiaries, particularly to address smallholder farmers. To address these challenges, this study also tries to propose three actionable solutions such as better enforcement of land certification and use permit, maximizing ISPO as an industry sustainability standard, and developing a more consistent smallholders typology that can refocus public financing strategies effectively to achieve Indonesia's sustainable palm oil industry goals in the long run.

Keywords: Palm oil; Smallholders; Public Fund; Sustainability

1. Introduction

Palm oil has been played major contribution to the Indonesian economy for decades. A versatile plant that grows best in tropical environment, the size of Indonesia's palm oil plantation area reached 14.6 million hectares (Dey *et al.,* 2021). Indonesia palm oil plant produced 45.8 million tons of crude palm oil (CPO) in 2019 (Ministry of Agriculture, 2019), which was equivalent to 4.5 percent of the country's gross domestic products (GDP) (Higgins and Richards, 2019). Indonesia is also the primary global exporter of palm oil products, followed by Malaysia, with both countries making up to total 90 percent of global productions of palm oil, while the rest are spread out across other Southeast Asian, African, and South American regions (Pacheco *et al.,* 2020; Wright *et al.,* 2019).

The Indonesian palm oil industry is made up of many complicated networks of stakeholders in various sizes. Different stakeholders have their own perspectives and industry agenda (Rival and Levang, 2014). From the upstream side, major players include unattached smallholder farmers, plasma farmers, as well as producers and sellers of CPO. Being a labor-intensive industry, Indonesian palm oil had also significantly

contributed to economic empowerment and poverty alleviation through creation of formal and informal jobs (Basiron, 2007; Coxhead and Shrestha, 2016), particularly in areas where major plantations are located, such as the islands of Sumatra and Kalimantan.

Unfortunately, the significant Indonesian palm oil industry's contribution to the GDP and job creation does not make the industry biggest driver of the country's economic growth (McCarthy *et al.,* 2012). Palm oil industry contribution to the Indonesia economy is not big enough as a main driver to economic growth (Pacheco *et al.,* 2020). Revenue from the palm oil industry is not well invested in the education and health sector to boost economic growth and people prosperity (Syahza and Asnit, 2020).

The palm oil industry also constantly received criticism for its negative impact on the environment (Geibler, 2013). Industry exploitations and unsustainable industry practices have generated in major deforestation and land degradation that have not only threatened Indonesian forest, ecosystem biodiversity, and livability (Higgins ans Rhicards, 2019; Wright *et al.,* 2019), but also disastrous to neighboring Singapore and Malaysia, both countries being victims of extreme hazing in 2015 due to forest fires in Sumatra and Kalimantan (Kusumaningtyas and Van Gelder, 2017; Wright *et al.,* 2019). Furthermore, prevalent land-related issues, as well as difficulties in upholding stakeholders' accountability on sustainable palm oil practices have also generated many challenges to the Indonesian palm oil industry (Tang *et al.,* 2020; Pacheco *et al.,* 2020). Land conflict between local community and palm oil plantation frequently arise in the form of case of palm oil plantation expansion (Ayompe *et al.,* 2021).

One distinct feature of the Indonesian palm oil industry is that independent smallholder farmers play a dominant role in the upstream sector (McCarthy *et al.,* 2012). Although CPO production is still dominated by large corporation, who own more than 55 percent of oil palm plantation area in Indonesia, independent smallholder farmers own a considerable amount of plantation area by dominating 40 percent of oil palm plantation ownership in the country, the second largest group in the industry, and the remaining 5 percent is owned by state-owned enterprises (SOEs) (Kusumaningtyas and Van Gelder, 2017). Unfortunately, smallholders' dominant role in terms of plantation area ownership does not translate to their position in the industry. Smallholders' productivity and market bargaining power remain low due to various reasons, including lack of access to fertilizer, irrigation, certified seeds to produce quality fresh fruit bunches (FFB) and implement good agricultural practices (GAP), as well as unfavorable FFB market-based pricing mechanism (Osei, 2021). Furthermore, with many smallholder plantations located in conservation or state forest areas and no legal proof of ownership and business use, further, limited smallholders' access to reliable sources of public and private funding (Nurfatriani *et al.,* 2019).

Considering smallholders' major but vulnerable position in the Indonesian palm oil industry, ensuring their access to reliable sources of finance is extremely pivotal to improve their welfare through economic empowerment, as well as increasing overall industry productivity while ensuring no further damage is created to the environment. Public finance is an instrument that may be leveraged by the Indonesian government as industry regulator and market supervisor with direct access to smallholder farmers to provide support in ways that generate inclusivity and balance between economic productivity and environmental sustainability (Hanig and Jansen, 2010). Therefore, it is important to ensure that public financing strategies for the palm oil industry are aimed to achieve economic and environmental objectives that are in line with Indonesia's sustainability goals.

Currently, there are three public financing sources that are available in Indonesian palm oil industry:

1. Crude Palm Oil (CPO) Funds – managed by the CPO Fund Management Agency (BPDPKS), The agency is under the authority of the Indonesian Ministry of Finance. CPO Funds are collected from the export fee of Indonesia CPO exporter. The funds are utilized to support various government programs,

including the smallholders' plantation rejuvenation program, industry training and development, as well as Indonesia's biodiesel sectoral agenda.

2. People's Business Credit (KUR) – a credit scheme sourced from the central government budget established by the Coordinating Ministry of Economic Affairs to ensure that micro, small and medium enterprises (MSMEs) in all sectors have access to a reliable credit source. The credits are channeled through state-owned enterprises (SOEs) and private banks, village consultative body, credit institutions and cooperatives throughout Indonesia (Temenggung *et al.,* 2021).

3.Village-Owned Enterprises (BUMDes) – a public financing option sourced from village funds and the local community that can be obtained through the establishment of business entities through partnerships between village government and the local/village community (Ministry of Finance, 2020)

Unfortunately, all those three available public financing tools do not seem to be high enough in generating meaningful impact to ensure socioeconomic and environmental sustainability of the Indonesian palm oil industry especially for the smallholder farmers. Independent smallholder farmers still find it very difficult to access those funds and standardize their business sustainably. Based on this hypothesis, this paper will focus on identifying some major issues behind the ineffectiveness of public financing programs and their implications on the Indonesian palm oil industry, followed by proposing some solutions to address these issues. This study aims to examine the effectiveness of public financing in promoting smallholder sustainable palm oil in Indonesia.

2. Materials and Methods

This study only focuses on the inability of independent smallholders to access public funds and the ineffectiveness of public funds to elevate sustainability standard of smallholders' farmers. On the term of independent smallholder farmers - referred onwards as 'smallholders' or 'smallholder farmers' and excludes smallholder farmers under the plasma scheme or bound to certain management agreements (rented land) with large corporations.

In terms of methodology, this study employs a qualitative descriptive-analysis research method through review and analysis of existing literature and secondary data, followed by a focus group discussion (FGD) with relevant stakeholders to discuss initial findings. The research team conducted extensive literature research to understand different challenges faced by the Indonesian palm oil industry, particularly related to independent smallholder farmers and their ability to gain access to support they need to adopt good agriculture practices (GAP) and how these smallholder farmers' presence in the supply chain impact industry's sustainability. The research team also conducted a mapping of public and private financing options currently available in the Indonesian palm oil industry to better understand industry financing pathways and identify loopholes that need to be addressed to achieve a sustainable palm oil industry. The early draft of this study was then shared with some relevant industry stakeholders and experts in a FGD to evaluate the direction of this research and better understand stakeholders' perspectives on the challenges faced in financing smallholder farmers that can encourage a more sustainable palm oil industry.

Following the in-depth discussion with industry and experts regarding smallholders' financing in the Indonesian palm oil, the research researcher selected two cases to be analyzed further in order to better understand financing challenges for smallholders. Two cases were chosen due to their frequent appearance in palm oil literature and during discussions related to smallholders' financing. The two cases are:

Case I: Legality of Land Use and Ownership

Land issue has been a longstanding controversy due to political implications, clashing interests from various influential parties, as well as overlapping regulations and rampant corruption at central and regional levels (Sahide and Giessen, 2015; Pacheco *et al.,* 2020). These land-related issues

are not limited to palm oil, but also to other agricultural sector, where land is an important commodity (Pichler, 2015). In the context of the palm oil industry, studies found that many of these legal issues have translated into unclear land use and ownership. Majority of "smallholders" plantations in some parts of Riau province, one of Indonesia's primary palm oil areas, are owned by conglomerates with an average plantation size of 217.8 ha. A significant part of these plantations illegally occupies peatlands and state forests areas that are supposedly dedicated for conservation (Jelsma and Schoneveld, 2016). Interestingly, these plantation owners were somewhat able to obtain legal documentation of the lands from the sub-district government, usually through the help of local land mafia. The same study also found that many local government civil servants in the area owned 6 to 7 ha plantations, a significant number of them also located in the State Forest areas.

Further complicating land issues in Indonesia is the unique existence of customary, ancestral, and tribal lands within Indonesia's agriculture supply chain commodity. Most native smallholders whose families have been "guardians" of these lands only have Customary Land Statement Letter (SKTA) issued by local community leaders, which is not deemed sufficient by law to obtain Land Certificate (SHM) which requires Land Ownership Letter (SKT) issued by Sub district or Village Head as one of the prerequisites (Sirait, 2009; Watts *et al.,* 2021). In addition to insufficient legal documentation, many of these smallholders are also reluctant to pursue legalization of land ownership due to various reasons, such as tax avoidance, as well as complicated and costly administrative process to obtain the legality proof (Jelsma and Schoneveld, 2016; Schoneveld *et al.,* 2017; Watts *et al.,* 2021). These customary/ancestral/tribal land ownership issues and the lack of legal proofs to resolve disputes have been one of the main driving forces of land conflicts in oil palm plantations across the country (McCarthy *et al.,* 2012). That kind of land ownership also hinders smallholders' access to legal sources of financing.

Case II: The Lack of Adaptable Sustainability Standard or Best Practices as a Basis for Sustainable Palm Oil Industry Strategy

Sustainability is one of the most critical issues that need to be addressed by the Indonesian palm oil industry. Recognizing rising global demands for sustainable palm oil production, several industry stakeholders established the Roundtable of Sustainable Palm Oil (RSPO) in 2004. As the internationally recognized sustainability initiative for the palm oil industry, RSPO issued a comprehensive list of criteria aimed to push a socioeconomically and environmentally sustainable palm oil production. To be certified by the Body, members of RSPO are required to comply with the criteria, which govern almost all aspects of palm oil production, including but not limited to plantation sites, land clearing procedure, new planting procedure (NPP), use of pesticides, legality of business operations, transparency requirements, as well as human and labor rights (Tey *et al,* 2019; RSPO, 2021). RSPO certification criteria are subject to revision every 5 years, with the latest revision done in 2018. Participation in RSPO certification is voluntary and the certificate is valid for 5 years. Even though the participation in RSPO is voluntary, nevertheless it will be essential in enabling palm oil products to access the global market.

Evaluations on the effectiveness of RSPO in different palm oil-producing countries have generated mixed outcomes. Some studies discovered positive correlation between RSPO certification and production yield (Tey *et al.,* 2019) and CPO export price (Shahida *et al.,* 2018). However, studies on Indonesia and several other countries, where smallholders play a dominant role, discovered mixed-negative results on the impact of the certification towards overall sustainability (Garrett *et al.,* 2016; Morgans *et al.,* 2018), although some studies also recorded better environmental outcomes from certified companies (Schmidt and De Rosa, 2020). RSPO's lackluster outcomes in Indonesia might stem from smallholders' lack of knowledge on sustainable farming practices, as well as capacity to adopt and comply with RSPO's stringent criteria (Innocenti and Oosterveer, 2020).

Meanwhile, government effort in socializing RSPO to smallholders is still very limited. Therefore, the capacity of smallholders to adopt and implement RSPO is still lacking. It will degenerate smallholder competitiveness in the global market.

3. Results and Discussion

The study cases discussed in the previous section highlight some challenges faced in the Indonesian palm oil industry, which seem to have negatively influenced Indonesian government's ability to provide the necessary financial support to drive productivity while ensuring good agricultural practices are being properly implemented for sustainability purposes. Some negative implications identified in from the study cases on government's palm oil public funding programs are:

1.Legal Barriers Limiting Smallholders' Access to Public Funding Supports

Many governments' public funding support programs for the palm oil industry, such as PRP subsidy, *KUR Sawit*, as well as subsidized certified seeds and fertilizers require land certification or proof of land ownership letter. Unfortunately, this requirement creates some legal barriers for smallholders to access these funding supports and resources, since many of them have no legal proof over their land ownership and right to use due to various reasons, including complex bureaucracy and costly administrative processes, legal disputes over land location or entitlement of use (in the case of customary lands) and tax evasion (Nurfatriani *et al.,* 2019; Watts *et al.,* 2021,). On the other hand, BPDPKS as the government agency in charge of managing the CPO Funds have also mentioned difficulties in realizing government funding support for various public palm oil programs since they often discovered through further technical verification that many plantations recommended by the Ministry of Agriculture are located in illegal forest areas, or are not able to satisfy the legal documentation requirements, which make them ineligible to receive public subsidies (Nurfatriani *et al.,* 2019).

From the financial perspective, the lack of legal proof also greatly reduces the bankability of smallholder farmers due to the risks attached to the group. Therefore, there is a need to improve smallholders' land and business legality, to increase their attractiveness in the eyes of investors.

2.Inequitable Distribution of Public Funds to Smallholders to Implement Sustainability Practices

By mandate stipulated in Presidential Regulation no. 66 Year 2018 regarding the Second Amendment of Presidential Regulation no. 61 Year 2015 on the Collection and Use of the CPO Funds, as well as Minister of Finance Regulation no. 113 Year 2015 regarding the Organization and Work Procedure of the CPO Fund Management Agency (BPDPKS), BPDPKS main tasks are to collect CPO Funds from Indonesian palm oil industry stakeholders and manage them, along with additional funding allocated from the central government budget to finance several palm oil industry-related tasks, including (Nurfatriani *et al.* 2019):

1. Research and development of palm oil products and production functions
2. Business promotion
3. Palm oil industry infrastructure
4. Development of biodiesel
5. Oil palm plantation replanting program
6. Increasing the number of business partners and palm oil product distribution through exports and education
7. Human resource development

However, the total CPO Funds available for programs from BPDPKS' initial balance, reserved funds, dues collected from the industry and supporting expenditure in 2021 are not enough to cover all seven mandated activities. In terms of allocations of the funds, only 30 percent of the available funds are allocated to support BPDPKS' major responsibilities, such as providing oil palm plantation rejuvenation program (PRP) subsidies and other industry development programs for smallholders. There is no adequate fund that allocate to incentives smallholders in implementing sustainability practices through adoption of ISPO and RSPO.

The lack of public fund allocation to smallholders generates difficulties to implement sustainability practices in their business. Public funds that are allocated to the smallholders will critically enhance the capacities of smallholders to adopt the ISPO and RSPO. By adopting ISPO and RSPO, smallholders will get benefit to access the palm oil global market.

3. The Lack of Direction in Public Funding Strategies Due to Inconsistent Typological Framework and the Absence of Reliable Data

Laws and regulations in Indonesia provide vague definitions and criteria to define smallholders, which have been interpreted and implemented differently by different government institutions at central and local levels in major palm oil regions. Furthermore, there's no universally accepted definition of "smallholder farmers," forcing industry certification and standard bodies such as RSPO, and ISPO to adopt different metrics and criteria for smallholders. One of the outcomes from these typological inconsistencies was discussed in Case I, where legal loopholes have allowed conglomerates-owned large plantations to be considered as "smallholder" plantations, which is not desirable for the purpose of targeting government subsidy programs for actual smallholder farmers. From a finance perspective, the issue also brings in complications in determining the threshold for taxable entities. Some participants during the FGD highlighted that there is no clarity yet regarding income-taxable plantation size, leaving a significant regulatory loophole which if left unresolved, may continue to add into legal confusion that increase investment risks and make smallholders even less bankable.

In addition to typological inconsistency, the lack of reliable data has also made it difficult for regulators, including BPDPKS as the CPO Fund managing institution, and line ministries, to design a robust public funding strategy and ensure good governance to support an effective program implementation.

To address the negative consequences of ineffective public financing programs, this paper would like to propose several solutions that are built upon existing government programs and regulations, which can hopefully help strengthen Indonesia's public financing mechanism while ensuring effective and responsible palm oil industry practices in the long run. These solutions are:

(1) Better Enforcement of Land Certification and Use Permit to Strengthen Industry's Legal Foundation, Improve Financial Inclusivity and as an Industry Mapping Tool

Fixing various land ownership and illegal land use issues have strong political implications in Indonesia. However, it is evident that there is an urgent need to resolve these matters for a more sustainable palm oil industry, considering the number of plantations illegally located in State Forest/ conservation areas and rampant use of low-cost but not environmentally friendly land clearing methods such as burning. In the past decade, the Indonesian government has tried to address these land management issues through several policies, such as the Presidential Instruction no. 8 Year 2018, which imposed a 3-year moratorium on oil palm plantation licensing aimed to reduce illegal and excessive land clearing. Unfortunately, after 3 years and nearing its extension due date in 2021, the program has not yielded the expected result (Pacheco *et al,* 2021). There is also the typological inconsistency issue, with different definitions of "smallholder" being used across standards and regions. These typological loopholes allowed some large plantations to be classified as "smallholders" and can even obtain legal documentations, which further add on legal complications.

Another reason why better enforcement of land certification and user permits is important to achieve a sustainable palm oil industry in Indonesia is because having certain legal proof of land use and ownership is one of the main requirements for smallholders to access most government subsidy programs, such as PRP, *KUR Sawit* and subsidized oil palm seeds and fertilizer. Improved land legality will also help increase the bankability of smallholders, which makes them more attractive from the financial sector perspective (IFA, 2021).

All these will translate into increased financial inclusivity, as it opens smallholders' access to various public and private financing resources, which is likely to translate into adoption of more sustainable planting practices.

(2) Maximizing ISPO as an Industry Sustainability Standard and Means to Collect Data on Smallholders

With the issuance of Presidential Regulation no. 44 Year 2020 Regarding Sustainable Oil Palm Plantation Certification System, all stakeholders in the palm oil industry are now required to be ISPO-certified by 2025. The regulation was issued in hopes of increasing the adoption of sustainable methods and practices within the industry's supply chain. To address administrative and financial barriers that may prevent smallholders from being certified, the government is also committed to continue aiding help satisfy the certificate requirements as part of facilities and infrastructure support to farmers' groups and cooperatives.

In addition to encouraging the adoption of sustainable practices, the Indonesian government should also try to utilize this mandatory ISPO certification policy to help identify and develop better smallholder farmers' databases. Since Article 18 of Presidential Regulation no. 44 Year 2020 mandated part of State, Regional Budgets, or other legitimate source of funding to be allocated to fund smallholders ISPO certification, the government will have the opportunity to collect more comprehensive information on smallholder farmers while receiving the certificate applications. The information collected can be then used to build a more reliable database of Indonesian smallholders, which will be helpful for planning and implementing future industry strategies and better address longstanding issues, such as aligning smallholder's typology.

(3) Developing a More Consistent Smallholders Typology

Previous sections have highlighted some consequences of typological inconsistency on the Indonesian palm oil industry. Different definitions and metrics for smallholders being used to justify policies and shape industry strategies have rendered implementations of programs ineffective at both central and regional levels. For instance, difficulties in identifying and targeting smallholders might have contributed to inequitable distribution of the CPO Funds that may ensure all stakeholders receive the support they need for a productive and sustainable palm oil industry. The absence of a consistent definition might have also contributed to the lack of direction and diversity in public funding strategies. Formulating robust and innovative institutional strategies requires a solid policy framework and reliable source of industry data, which can only exist when consistent typology is being used to classify and define different industry components. However, data collection and policymaking have been difficult, since no consistent classification structure is available for smallholders, which constitute a significant part of the Indonesian palm oil industry. This has resulted in different public and private institutions resorting to different metrics to build data and conduct analysis on various aspects of Indonesian palm oil, which outcomes have not been optimal. For these reasons, it is highly necessary to align industry's understanding of Indonesian smallholders' typology for more effective public funding strategies that drive sustainability of the palm oil industry in the long run.

To improve typological consistency, a holistic review of relevant regulations is required to identify and amend overlaps and inconsistencies that might exist between various Government and Ministerial Regulations. The Indonesian government should also consider including more technical details regarding smallholders on implementing regulations at central level. These details may include a specific range of land sizes that can be considered as "smallholder plantation," number of workers, range of production capacity and level of technological infrastructure.

4. Conclusion

Finding the right balance between socioeconomic productivity and environmental sustainability has been a longstanding challenge for the Indonesian palm oil industry. Public finance is one of the tools that can be leveraged by the Indonesian Government to address these challenges, especially to ensure better support and financial inclusivity for smallholders as one of the main, but most vulnerable stakeholders of the industry. Better public finance channeling will translate to higher sector productivity, improved stakeholders' welfare and allow the government to address various environmental-related issues more effectively.

This study identified two issues that have significant negative implications on the Indonesian palm oil industry such as the legality aspect and the availability of a robust smallholder database and consistent smallholder typology framework. The absence of these analytical tools seems to have various negative implications over the management of the CPO Funds, implementation of industry policies and support programs, as well as overall institutional public financing strategies. To address these "pain points" and their subsequent ramifications, the paper proposed several actionable solutions for considerations that are formulated based on current industry situations and leverage relevant existing regulations and programs. These solutions include strengthening Indonesian palm oil industry legal foundation through legalization of land use and ownership, maximizing mandatory ISPO certification policy not only as a driver for sustainable practices but also means to gather more information on smallholder farmers and streamlining smallholder's typological framework. These points can address the improvement of legality aspect and the need for a more solid smallholder farmers database and consistent typology, which are necessary to strengthen public financing strategies and support program implementations that generate meaningful impacts toward the Indonesian palm oil industry.

Legality and smallholder's database become critical for other palm oil producing countries to develop sustainability practices in palm oil supply chain. These prerequisites will enhance access to smallholders both to public and private funds. Therefore, bankability and governance of smallholders will improve.

There is a need for stronger commitment from the Indonesian government to prioritize public financing strategies that are not only economically productive, but also inclusive of all stakeholders and promote environmental best-practices to ensure a sustainable palm oil industry in the long-run.

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