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REGULAR RESEARCH ARTICLE

Accelerating Certification of Oil Palm Smallholders through Institutionalization of Various Incentives

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ABSTRACT

Sustainable palm oil certification has become a global demand, particularly in the market. However, the implementation of both Roundtable of Sustainable Palm Oli (RSPO) and Indonesian Sustainable Palm Oil (ISPO) certification schemes is relatively slow. This study aims to analyze to what extent incentives can accelerate sustainable palm oil certification, from what sources those incentives can be arranged, and types of incentives are appropriate for palm oil smallholders. The research uses quantitative and qualitative methods based on literature reviews, in-depth interviews with key stakeholders, and a survey of 455 farmers in two Indonesian provinces (Riau and West Kalimantan). Based on quantitative analysis, the reasons behind more progressive certification achievements in Riau remain unrevealed while in West Kalimantan, Fresh Fruit Bunches (FFB) price, easiness to obtaining loans with low interest, and easiness of selling FFB have a significant influence on accelerating certification. Using a qualitative approach, smallholders show their expectation of having incentives. In Riau, incentives expected are higher FFB prices and a simpler procedure to get the Environmental Management Statement (SPPL) document. In West Kalimantan, higher FFB prices and availability of low interest loans are expected to become incentives. These incentives can be mobilized from intergovernmental fiscal transfer mechanisms such as revenue-sharing mechanisms, export levies, and environmental funds. Smallholders also expect clarity of incentives generated from ISPO certification, particularly in price and market access, which requires the government's initiative to develop synergy with various stakeholders. To be practical, incentives were not only for smallholders but also for the government officials at the province, district, and village levels, as the position of the local government is very important in preparing, encouraging, and mobilizing farmers, as well as in strengthening institutions for improving palm oil governance. In the implementation of RSPO certification, the collaboration between the Indonesian government (through the Ministry of Cooperatives and Small and Medium Enterprises) and the RSPO becomes clear evidence of central government support. At the sub-national level, the Riau and West Kalimantan Provinces have developed the Regional Action Plans (RAD) for sustainable palm oil as a policy commitment to accelerate both RSPO and ISPO certification.

KEYWORDS

Sustainable palm oil; Certification; Smallholders; Incentives; Acceleration of certification

1. INTRODUCTION

Sustainable palm oil certification has become a global demand. Despite perceived and observed ignorance of certification to persisting primary forest logging, violations of community rights, threats to extinct large mammals and lacking of solution for better

access of smallholders to value chain, as well as reliance to market approach that links sustainability improvement to market access and sales increase (Gatti & Velichevskaya, 2020; Kusumaningtyas, 2018; Ogahara, 2022), the pressure for certifying commodities have become market norms that still need to be met.

Since the initiation of RSPO in 2004 and ISPO in 2011, the progress for the smallholders is considerably sluggish. For example, the number of independent smallholders certified by the RSPO has steadily increased over the past four years. In 2018, only 2,091 RSPO-certified farmers. Meanwhile, in 2019 the number of certified farmers rose by more than 100 percent to 5,130 farmers. In 2020 RSPO certified farmers also increased to 6,520 farmers. This number increased to 8,442 in 2021 (Andriarsi, 2021). In 2018, the area of RSPO-certified plantations from independent smallholders was 4,600 ha and then increased by 13,200 ha in 2019, then increased to 16,700 ha. As of June 2021, there is 20,014 ha of plantations from independent farmers belonging to 32 farmer groups (Nurhayati, 2021). Although it has increased, this increase has not been significant. Likewise, referring ISPO achievement data as of December 2020 shows that only 17 farmer cooperatives covering an area of 12,809 hectares (0.19% of the total community plantation area) are certified. This situation contrasts with companies where the achievement of private company plantation certification covers 610 certificates with an area of 5.45 million hectares (62.76% of the entire plantation area of private companies). On the other side, for state-owned plantations, 55 certificates covering an area of 318,776 hectares (22.53% of state-owned enterprise plantations) were issued.

There are still significant challenges to the certification of smallholders in Indonesia, especially independent smallholders, where they are generally not integrated with any company. Failure to encourage accelerated certification will make independent smallholders, who make up 40.8% of the total oil palm plantation area, considered illegal (Dikin et al., 2019). At the level of ISPO certification, there are still many challenges ahead. Independent smallholders face more obstacles compared to plasma farmers. It is because plasma farmers generally receive facilitation, and their products are integrated into the company's supply chain. With the increasing number of independent smallholders, various incentives need to be developed to provide better facilitation of regulatory compliance and financial support (Pramudya et al., 2022). Another problem faced by farmers, according to the records of the Directorate General of Cultivation (2018), is that generally (76%) smallholders still need to be better organized, and they still need to gain knowledge about good agricultural practices (GAP). In social categorization, they belong to the classification of novice planters. They have many limitations, such as mortgaged land letters, no collateral, and long supply chains. Meanwhile, Minister of Agriculture Regulation Number 38 of 2020 Article 62 paragraph (1) obliges all smallholders to have ISPO certification within five years after this regulation is promulgated.

Much research related to certification incentives has been carried out. In economic theory, incentives can drive someone to act, change behavior, and make decisions in anticipation of desired rewards from that behavior (Krugman & Wells, 2015; Mankiw, 2000; Utomo et al., 2023). Incentives can play an important role in promoting sustainable palm oil production in smallholder plantations by providing financial support, certification programs, technical assistance, and market access, incentives can help smallholders adopt sustainable practices, improve their livelihoods, and contribute to a more sustainable palm oil industry. Piñeiro et al. (2020) observed that there are incentives offered by the state, market and non-market regulations. In palm oil certification, RSPO provides incentives for smallholders to adopt sustainable palm oil practices including by linking to off-takers and financial institutions, and providing

of RSPO credit where buyers can purchase credit for supporting inclusion smallholders in the supply chain and sellers (including smallholders) can sell RSPO credits to gain a premium for any efforts made for sustainability improvements.[1]

For example, a study by Pramudya et al. (2022) focuses more on the aspects of the role of incentives and their options in supporting the acceleration of ISPO implementation to ensure and improve the market access of smallholders. Hutabarat (2018) focused on the costs and benefits of certification of independent oil palm smallholders in Indonesia. (Emilia et al., 2014) researched factors influencing the interest of smallholder oil palm farmers participating in product certification in the Kampar Regency. They concluded that education and land area are the factors that influence plasma farmers participating in certification, while education, land area and employment affect independent smallholders. Hutabarat (2018) researched smallholders' challenges toward ISPO certification. He concluded that the farmers' knowledge of agricultural practices, business legality, household income, and land size affected the certification adoption. Unlike previous studies, this study will examine the extent to which the provision of incentives has contributed to the acceleration of certification. Second, this study will also examine which entities or actors should receive the incentive, considering that the most involved in the oil palm plantation industry are not only farmers. Finally, this study will also examine the appropriate sources and forms of incentives for these entities or actors. The analysis provided in this article considers conceptual and practical limitations of certification by including practical issues beyond normative discussion.

2. CONTEXT

Oil palm is produced in humid and sub-humid regions (Jezeer et al., 2019). Palm oil production has grown rapidly in Southeast Asia in recent decades and, more recently, in South Africa and Latin America, with growth as expected (Rival & Levang, 2014). Therefore, palm oil has become a very attractive vegetable oil commodity to trade worldwide (McCarthy, 2010; Tan et al., 2009). One year from 2017-2018, global production increased by about 7%, from 65 to 70 million tons, with more than 20 million ha of new oil palm plantations developing worldwide. Indonesia and Malaysia are the largest producers (40 and 20 million tons, respectively), followed by Thailand and Columbia (3 and 2 million tons, respectively) (USDA-FAS, 2018). Southeast Asia represents 89% of global production at the regional level, while Latin America produces 6% and Africa 5% (Pacheco et al., 2017).

At this time, Indonesia is the world's largest global producer and exporter of crude palm oil (CPO). More than half of the total global palm oil production, amounting to 33 million tons in 2014, came from Indonesia, producing more than 10% of the total export output (Wright & Wiyono, 2014). In 2019, global palm oil production reached 75.81 million tons, and exports reached 54.57 million tons. Indonesia and Malaysia control the share of palm oil exports, with a total export share of around 83.83% in 2019 (Amalia et al., 2020). The development of palm oil production is inseparable from the development of the increasing area of oil palm plantations. In 2011 the area of oil palm plantations in Indonesia reached more than 8.9 million hectares, consisting of state-owned plantations at 7.1 percent, private plantations at 52.2 percent and smallholder's 40.7 percent (Fuady et al., 2014). Currently, the area of oil palm plantations has reached 16.38 million ha. Of this area, 8.68 million ha (53%) is controlled by the private sector, 6.72 million ha (41%) by farmers, and 0.98 million ha (6%) are state plantations (Ministry of Agriculture, 2019).

[1] https://rspo.org/as-an-organisation/rspo-credits/

Undeniably, there are still various challenges in developing the palm oil industry in Indonesia. Those are problems of land status and legality, low productivity in the upstream sector, underdevelopment of the downstream industry, dependence on CPO on the export market, environmental issues, governance of smallholder oil palm plantations, and commodity price volatility (Amalia et al., 2020). One of the challenges in developing Indonesia's palm oil industry is the issue of production governance that can ensure social and environmental sustainability (Fuady et al., 2014). The cultivation and production of oil palm plantations can have serious negative impacts on environmental sustainability, including reduced biodiversity and massive emissions of greenhouse gasses, particularly when forests and peatlands are converted (Danielsen et al., 2009).

In response to the increasing concern about sustainability issues, several standard certification scheme initiatives have evolved in recent years (Erman, 2017). Compared to other commodities such as coffee or cocoa, oil palm sustainability is difficult to incentivize end consumers because it often consists of a small percentage of the final product. However, growing concerns about sustainability and increasing public pressure on companies and governments have led to the emergence of standard schemes and certifications in the palm oil sector (Brandi et al., 2015). These certification schemes are the most innovative policy designs of this century (Erman, 2017). However, the effectiveness of various certification schemes still needs to be improved. Several factors hamper the effectiveness, such as environmental issues and the social justice of the global trade chain, which is driven by a variety of strategic coalitions inherent at the local level and reflects on the interest of the ruling regime, state capacity, and business agendas (McCarthy, 2010).

Currently, the certification system is the existing mechanism that becomes the parameter of sustainable palm oil. The challenge in sustainable palm oil management is producing the highest production with minimum environmental impact. It is because oil palm expansion that implements unsustainable practices has created various environmental impacts, such as deforestation, loss of biodiversity, invasion conflicts, and land conflicts (Geibler, 2010; Hanifa & Pramudya, 2018; Pramudya et al., 2015). In response to international criticism of the palm oil industry, several certification schemes have been established and implemented in recent years (Erman, 2017; McCarthy, 2010). The purpose of this certification scheme is to realize more sustainable palm oil management by applying a certain set of standards and criteria (Hutabarat, 2017), such as those related to the principles of protection of primary natural forests and peatlands, monitoring environmental conditions, labour protection, ensuring the implementation of GAP, empowering surrounding communities, and so forth.

Certification of palm oil production and trade governance is a demand of the global community, especially consumers of various palm-based products, and an effort to overcome these governance issues (Erman, 2017; Hutabarat, 2017). At the global level, there is a palm oil RSPO scheme initiated by various stakeholders, such as producers or smallholders, processors, distributors, manufacturing industries, investors, academics, and non-governmental organizations (NGOs) (Erman, 2017; Fuady et al., 2014; Geibler, 2010). At the national level, the Indonesian government has established ISPO since 2009 (Erman, 2017; Harsono et al., 2012). This scheme is mandatory that must be owned by all palm oil companies in Indonesia (Fuady et al., 2014). According to the Presidential Regulation (No.44/2020), all plantations, including independent smallholder plantations, must be fully certified by 2025.

The establishment of the ISPO certification scheme in 2011 was a response to dissatisfaction with the RSPO scheme. The RSPO scheme sparked debate about the legitimacy of private governance models initiated by non-governmental organizations

and companies in Europe (Choiruzzad et al., 2021). The Table 1, illustrates the differences between RSPO and ISPO. Essentially there are several real differences between the two certification schemes, especially in terms of the focus of objectives, orientation, the nature of implementation, the process of building certification, international recognition and the driving factors. For example, in terms of driving factor, RSPO scheme driven by global market, while ISPO driven by the Government of Indonesia (State) (LP2M Untan, 2021). So, Wulandari & Nasution (2021) concluded that the RSPO has higher level of detail and requirements comprehensive compared to ISPO based on aspects of the certification system, chain system supply, social and environmental protection, treatment of small/plasma farmers, peatlands and land acquisition.

Table 1. The Differences between RSPO and ISPO

Items	RSPO	ISPO
Focus	Compliance	Legality
Orientation	End consumers	Producers
Implementation	Voluntary	Mandatory
Building process	Multi-stakeholders	Limited stakeholders
Internasional recognition	Recognized	Not recognized yet
Driven by	Market	State

[Source: (LP2M Untan, 2021)]

This article does not intend to force readers to agree that certification is the best option, which must be adopted. Certification as an instrument for measuring the quality of sustainable palm oil management, however, is still open to be a subject for academic debate and certification, both RSPO and ISPO, are not taking for granted instruments that must be accepted. Of course, these two instruments still have many limitations and will continue to evolve according to the dynamics of market demands, especially in relation to encouraging sustainable palm oil management. The purpose of this article is to discuss the extent to which the government's commitment at multi-layers to accelerating certification, which is carried out in the field. This paper also discusses technical-administrative and institutional problems encountered in the field and mainly discusses the potential contribution of incentive instruments in accelerating sustainable palm oil certification for smallholders, both the RSPO and ISPO schemes.

3. THEORETICAL FRAMEWORK

3.1 Incentive Definition and typology

In the early 1990s, many political leaders paid increased attention to a set of new promising policies that recognized the potential role of market power in achieving sustainable environmental progress. The policy community now seems fascinated by the possibility of using markets and other incentive-based approaches, such as state-based incentives to achieve certain goals (Hahn & Stavins, 1992; Pareira, 2023), as illustrated in the Figure 1. There has been a huge interest from various policy communities over the past two years in market-based approaches to environmental protection. The policy communities among them are government, private industry, environmental organizations, and academia (Hahn & Stavins, 1991). Market-based incentive approaches shift control and command approaches that lack space for the role of private entities (Hahn & Stavins, 1992).

UNCTAD (2003) defines incentives as 'any measurable benefit given specifically by a company or category of companies by or at the direction of a government'. Incentives are everything that motivates a person to act, change his behaviour and make choices in exchange for those actions (Krugman & Wells, 2015; Mankiw, 2000). Theoretically,

incentives relate to the principal-agent issue, where the principal wants to ensure that the agent has fulfilled the principal's wishes (Lipsey & Chrystal, 2015; Sloman et al., 2019).

Incentives can be classified into two categories: positive incentives (incentives) and negative ones (disincentives). Incentives seek to motivate others by promising rewards, while disincentives aim to avoid certain behaviours by punishment. Many factors can incentivize the private sector to manage natural resources sustainably, including prices, subsidies, interest rates, market access, the certainty of property rights, technology, and difficulties in maintaining effective collective action (Kuyvenhoven et al., 2004). Meanwhile, according to Easter & McCann (2010), implementing factors as incentives in a development program requires prerequisites for institutional settings to be implemented effectively.

Most incentive approaches can be in one or five categories: (i) Pollution costs; (ii) Permission to be able to market if there is an entity able to keep emissions below the allocated level; (iii) Deposit refund system. It means that additional costs are charged to consumers who buy products that have the potential to cause pollution, but when the consumer later recycles the bottle, the consumer can get a refund; (iv) Reduction of market barriers; (v) Exemption of government subsidies to control the exploitation of natural resources. Incentive-based schemes can promote environmental protection at low price levels from a command-and-control approach (Hahn & Stavins, 1991). Slightly different refer to Jordaan (2012), incentives can be differentiated into direct and indirect incentives. Direct incentives can be: (i) Cash payments; and (ii) Payment in kind (such as providing land or infrastructure for a particular enterprise).

In comparison, indirect incentives can be (i) Reduction of direct tax rates, both permanent and temporary. It can be in the form of a tax holiday with a reduction in the Corporate Income Tax rate, accelerated depreciation allowance, investment tax credit, investment tax allowance or reduction in qualification fees; (ii) Indirect tax deductions either permanently or temporarily (e.g., reduction in import rates or value-added tax (VAT) on capital inputs or equipment). It can be a reduction in import duties in advance or managed through a reduction in duties; and (iii) Protection against competition from rival companies through tariff increases. Whereas other non-fiscal incentives include:

- Special agreements for input prices from parastatals (e.g., electricity, oil)
- Simplified administrative procedures or exemptions from certain laws
- Export Processing Zones (EPZs) that offer a combination of fiscal and non-fiscal incentives within a specific geographic area, usually near a port
- Legislation and/or policies promoting investment in certain sectors or by certain investors
- Subsidized financing through parastatal or equity loans

In addition to market incentives, there are nonmarket and regulatory incentives (Piñeiro et al., 2020).

3.2 Sustainable and intensive production for palm oil certification

Incentives can be a potential instrument to support sustainable palm oil production (Jordaan, 2012). However, incentives must be carefully designed to achieve a specific policy goal (Jordaan, 2012). In the market system, incentives are governed by price mechanisms (Tietenberg & Lewis, 2009). It is common in agricultural commodity trading, where commodities produced sustainably will receive better prices. Consumers believe these commodities are healthier and do not damage the environment (Piñeiro et al., 2020). Commodity certification is practiced to ensure that incentives are given to those who work to improve their methods or ways of production (Schouten & Glasbergen, 2011).

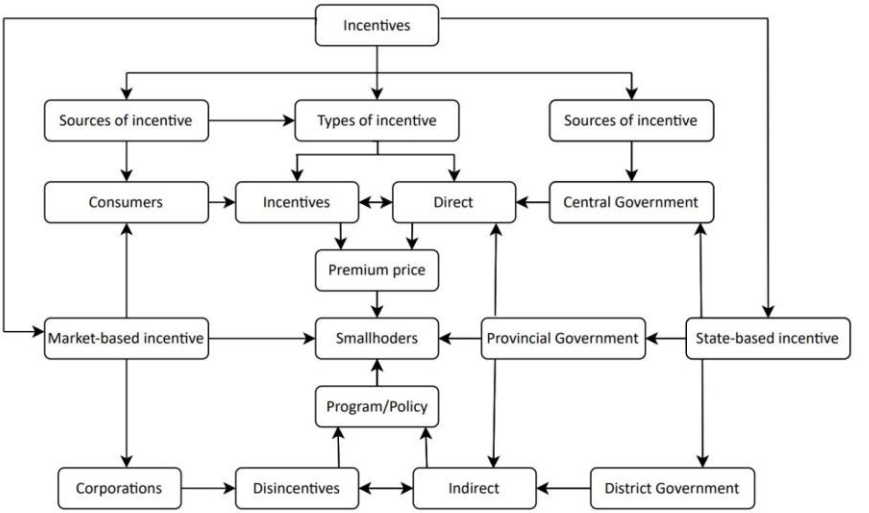

Figure 1. Theoretical framework of institutional setting of the combination of market-based incentives and state-based incentives for accelerating palm oil certification

Particularly in Indonesia, incentives can help smallholders to increase sustainable production. However, in practice, these incentives are not specifically targeted at smallholders. Meanwhile, government regulations (for example, Presidential Regulation No. 44/2020 and Minister of Agriculture Regulation No. 38/2020) tend to be too strict, ignoring the challenges of smallholder farmers and the various limitations they face (Pramudya et al., 2022). Essentially, smallholders who are organized into groups or cooperatives can apply for financial assistance to cover the costs of the ISPO certification process. These incentive funds can come from funds from the National Expenditure Budget (APBN), provincial/regional Budget (APBD), or other legal sources, including the Oil Palm Fund Management Agency (BPDPKS) (Pareira, 2023). In addition, the provision of incentives for the acceleration of certification can be built based on the framework of Government Regulation (PP) No. 46 in the year 2017 concerning Environmental Economic Instruments. The lack of institutionalization of the development of innovative policies to accelerate certification for oil palm smallholders is related to the low contribution of palm oil commodities to palm oil-producing regions. For example, the Profit-Sharing Funds (DBH) of Riau Province in 2021 is only IDR 1,205,183,684,000, while West Kalimantan Province is IDR 232,083,480,000 (Ministry of Finance, 2022). The low contribution of oil palm to regional development, according to (Rudiyanto, 2021), can be seen from the absence of a correlation between the high value of palm oil exports in a province and the GRDP of the province. Until now, there is no regulation on sharing fund mechanism from oil palm (currently sharing fund mechanism only from forestry, oil and gas, mineral and coal, geothermal and fisheries).

Meanwhile, the Regional Budget sourced from palm oil only comes from taxes (PBB plantation, income tax, VAT and exit duty) (Savitri, 2021). Meanwhile, the largest revenue from palm oil comes from export levies managed by the BPDPKS and utilized for (Presidential Regulation 61 of 2015): (i) Human Resource Development (HRD); (ii) Research and development of oil palm plantations; (iii) Promotion of oil palm plantations; (iv) Oil palm plantations replanting; (v) Oil palm plantation facilities and infrastructure; (vi) Development of biodiesels (Saputra, 2020). As illustrated in Figure 1, the sources of incentives are numerous, particularly from intergovernmental fiscal

transfer mechanisms ranging from the Regional Incentive Fund (DID), Special Allocation Fund (DAK), General Allocation Fund (DAU), Village Allocation Fund (DAD), and Environmental Fund (DLH), Palm Oil Fund (DSW).

The Figure above illustrates that accelerating certification can be done through a combination of market-based incentives and state-based incentives. Sources of market-based incentives can come from consumers and corporations or a network of actors in supply chains, such as mills or palm-derived processing industries. Meanwhile, sources of incentives from the government (state-based incentives) can come from the central government through the APBN, provincial governments through the APBD or even from palm oil funds and environmental funds. Incentives can be in the form of premium prices or disincentives. These incentives can be direct, such as premium prices and financial assistance for land certificates, or indirectly, such as policies or programs for providing fertilizer subsidies, construction of plantation roads and others.

4. MATERIALS AND METHODS

4.1 Research location and respondent

The study was conducted in two provinces covering six regencies. In Riau province, there are three regencies selected: Pelalawan, Rokan Hulu, and Siak as well as in West Kalimantan: Sanggau, Kubu Raya, and Ketapang. The justifications for choosing the two provinces are: (i) The two provinces are the areas that have the largest area of oil palm plantations on each island; (ii) Both provinces have rapid and relatively complex developmental trajectories with various field problems; (iii) In both provinces, certification programs are already underway and are consolidating within the framework of developing sustainable palm oil and accelerating certification. There are 16 selected palm oil smallholders at 15 villages in Riau and West Kalimantan, totaling 455 respondents that belong to several cooperatives and small holder associations and independent smallholders. This unit of analysis includes RSPO and ISPO certified recipients, particularly smallholders and independent smallholders. Population of this study is smallholders (plasma and independent) in three districts within the West Kalimantan Province such as Kubu Raya, Ketapang and Sanggau and three districts within the Riau Province, namely Pelalawan, Rokan Hulu and Siak. We used multistage stratified random sampling with a sample of each unit (farmer group) consisting of 30-35 respondents (551 respondents). However, after going through the screening process of data collected from respondents through semi-structured questionnaires, it was only 455 completely filled out and could be analyzed. The 16 selected palm oil smallholders are illustrated in Table 2. Only some of the respondents have obtained certification. Two hundred sixty-one (261) respondents do not have a sustainable palm oil certificate. Those already have certificates consisting of 90 ISPO-certified respondents and 124 RSPO-certified respondents. Most respondents were male (379) and female (76). Most respondents were ethnic Javanese (57%) and Malay (29%), and the rest were from other tribes. They were 17-60 years old and had dependents of 4 household members (32%). Most respondents were oil palm planters (69%) and other farmers (12%), while the rest were labourers, tenants, and others.

Table 2. Selected Palm oil smallholders at Riau and West Kalimantan Provinces

No.	Palm oil smallholders	Address (Riau Province)	Frequency
1	Asosisasi Amanah Ukui	Trimulya jaya Village, Ukui, Pelalawan, Riau Province	29
2	KUD Gemah Ripah	Rimba Jaya Village, Pagarantapah, Rokan Hulu District, Riau Province	29

No.	Palm oil smallholders	Address (Riau Province)	Frequency
3	KUD Sawit Jaya	Benteng Hulu Village, Mempura, Siak District, Riau Province	30
4	KUD Tinera Jaya	Teluk Masjid Village, Dayun, Siak District, Riau Province	30
5	Petani Desa Air Emas Riau	Trimulya Jaya Village, Ukui, Pelalawan, Riau Province	2
6	Poktan Setia Rukun	Teluk Merbau Village, Dayun, Siak District, Riau Province	30
7	PPSKS Rambah Hilir	Pasir Jaya Village, Rambah Hilir, Rokan Hulu District, Riau Province	35
8	Gapoktan Tirta Kencana	Jangkang Satu Village, Kubu Raya, Kubu Raya District, West Kalimantan Province	30
9	Koperasi Bawal Sejahtera Mandiri	Kendawangan Kiri Village, Kendawangan, Ketapang District, West Kalimantan Province	30
10	Koperasi Perkebunan Bersama	Mekar Utama Village, Kendawangan, Ketapang District, West Kalimantan	30
11	Koperasi Produsen Binsa Sari	Banjar Sari Village, Kendawangan, Ketapang District, West Kalimantan Province	30
12	KUD Himado	Dosan Village, Parindu, Sanggau District, West Kalimantan Province	30
13	KUD Jaya Usaha Sampurna	Mega Timur Village, Sungai Ambawang, Kuburaya District, West Kalimantan Povince	30
14	KUD Tuah Buno	Kasromego Village, Beduai, Sanggau District, West Kalimantan Province	30
15	Pekebun Swadaya Desa Penyeladi	Penyeladi Village, Kapuas, Sanggau District, West Kalimantan Province	30
16	Pekebun Swadaya Desa Rasau	Rasau Jaya 1 Village, Rasau Jaya, Kubu Raya District, West Kalimantan Province	30
		Total	**455**

4.2 Data collection and analysis

This research used a triangulation method, combining qualitative and quantitative methods (Edlund & Nichols, 2019; Leavy, 2018; Strijker et al., 2020). The main data collection instrument in qualitative research is key informant interviews. In-depth interviews were conducted using an open questionnaire with purposive sampling. The in-depth interview aimed to explore key issues related to policy and implementation of certification and incentive systems and sustainable palm oil plantation management practices. This in-depth interview involved a total of 30 key informants from the Directorate General of Plantation-Ministry of Agriculture, the plantation office at the provincial and district level, the agriculture office at the district level, field facilitators of NGOs, as well as the management board of farmer groups, farmers, and field assistants both in Riau and West Kalimantan.

We also conducted focus group discussions (FGDs) to discuss key issues at the micro and policy levels. The FGD was conducted at the Riau provincial level involving around 35 participants, and in West Kalimantan, involving more than 100 participants by combining online and offline methods. The FGD discussed key issues for efforts to strengthen the implementation of various certification schemes, such as RSPO and ISPO. At the provincial level, we organized FGDs at the farmer level involving around 30 farmers in Siak and Pelalawan Regencies.

Data analysis is carried out qualitatively and quantitatively. Qualitative data analysis focuses on the fundamental reasons farmers are willing to participate in the certification program. In addition, it is also to find out the fundamental reasons that

cause farmers to be reluctant to participate in the certification program, the obstacles faced by following the certification, and the factors needed to encourage participation in certification.

Meanwhile, quantitative data analysis was carried out using probit regression, where respondents' participation in the certification program was a dependent variable tested. The probit regression method is a method that uses the normal distribution link function with model interpretation using the marginal effect value which is an advantage of probit regression, while the logistic regression method uses the logistic distribution link function and model interpretation uses the odds ratio value (Masitoh & Ratnasari, 2016). We use binary probit regression because this regression method is used to analyze the dependent variable which is qualitative and several independent variables which are qualitative, quantitative, or a combination of qualitative and quantitative. This analysis uses the cumulative distribution function normal distribution approach (Gujarati, 2003). The interpretation of the binary probit regression model is not based on the model coefficient values but uses marginal effects. The marginal effect states the magnitude of the influence of each significant independent variable on the probability of each category on the response variable (Nur'eni & Handayani, 2020). Because the response variable is not an interval or ratio scale, linear regression is not used (Gujarati, 2003).

From this analysis, we tried to determine what variables are the main incentives of oil palm farmers in certification. We rated respondents who participated in the certification program with the number 1 and respondents who were not certified with the number 0. The independent variables used in this study are FFB prices, ease of obtaining subsidies, ease of obtaining soft loans (0% interest), ease of selling FFB, and the availability of land legality (SHM), as mentioned by Kuyvenhoven et al. (2004). These factors are remaining impactful independent variables for smallholders in getting certification, especially ISPO scheme. According to Veriasa et al. (2022), at least there were three main challenges, when an NGOs (WWF) Indonesia started the processes of assisting independent smallholders getting sustainable certification, such as weak the land legality, Register Letter of Plantation Cultivation (STDB), Statement Letter of Environmental Management (SPPL), weak plantation practices, and lack of market access. The relationship between these variables can be described in Table 3 below.

Table 3. Variables used in the study of incentives/disincentives

Variables	Variable type	Information
Y	Dependent	Status of participation in the certification program (binary variable; 1=participate, 0=not participate)
X1	Independent	Palm Fresh Fruit Bunches Price (Rp/Kg)
X2	Independent	Ease of obtaining soft interest loans (binary variable; 1=easy, 0=difficult)
X3	Independent	Ease of selling FFB (binary variable; 1=easy, 0=not easy)
X4	Independent	Already have SHM or HGU (binary variable; 1= already have SHM or HGU certificate, 0= do not have SHM or HGU)

The tool for its analysis uses the application device SPSS 15. The formula of the variable test is as follows:

Survey of 455 farmers in West Kalimantan and Riau, Multivariate regression analysis with models:

$$Y = \text{constant} + ax1 + bx2 + cx3 + dx4 \quad (1)$$

Where Y: status of participation; a, b, c, d: constant; x1: FFB price; x2: ease of

obtaining loan; x3: ease of selling FFB; and x4: land status.

5. RESULTS

5.1 Novice farmers and their problems

The national target of accelerating certification, especially ISPO, which is only three years from the deadline, provides public pessimism while seeing the many problems farmers face in the field and limited policy support at the sub-national and local levels. In order to accelerate certification for independent smallholders, the limiting factors of certification must be identified according to resource persons from international NGOs based in the Netherlands. As illustrated in the Figure 3, one of limiting factors, based on the type of farmer based on their performance, is 76% of farmers are still in the novice classification, while the advanced is only 24% and the intermediate is 10%. Novice farmers have many limitations, such as not being in groups, not having the legality of land and business and low productivity and have not partnered as depicted in the Figure 2. Salam (2022) asserted that assistance, promotion and education are still minimal for farmer groups or cooperatives.

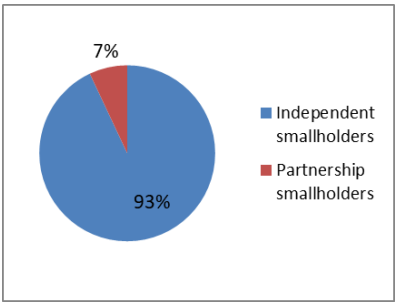

Figure 2. Composition of smallholder oil palm plantations (partnered) vs Independent

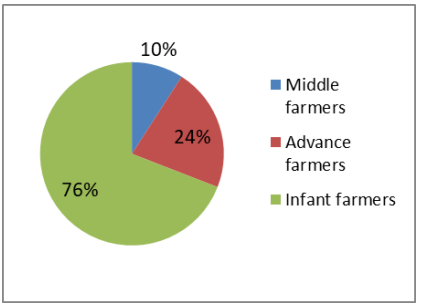

Figure 3. Types of Farmers Based on Their Performance

Figure 2 above illustrates the composition of most farmers who have yet to partner with third parties or categorized as independent farmers. Figure 3 shows that based on the type of farmer based on their performance, 76% of farmers are still in the novice classification, while the advanced is only 24% and the intermediate is 10%. Novice farmers have many limitations, such as not being in groups, not having the legality of land and business and low productivity and have not partnered.

Another limiting factor is that few oil palm smallholders are in forest areas, either production, protection, or conservation forests.

> *"A small percentage of independent farmers operate within forest areas. However, it is necessary to say that there are not many oil palm farmers of less than 25 ha whose land overlaps in forest areas. The figure is less than 7%",* added a source from the Palm Oil Farmers Union.

Based on research in Riau, Jelsma et al., (2017) found that only 26.4% of smallholder oil palm plantations are located in non-state forest area (APL), while most of the rest are potential overlapping with the forest area. Wibowo et al. (2019) the overlapping of palm oil plantation was happened due to changes in spatial planning policies at national and sub-national level, and forest areas and forest encroachment. Diantoro (2011) noted that there are several smallholder cooperatives that have obtained land certificates from the National Land Agency, but it turns out that they

overlap with the Tesso Nillo National Park. Palm oil plantations located in forest areas are generally carried out by local farmers whose economic conditions are not good. However, some actors from outside the village have also encroached on forest areas by establishing oil palm plantations, such as in Tesso Nillo Riau. The encroachment has started in 2002-2009 involving 14 groups covering 28,606 ha. In addition to economic problems, encroachment on oil palm plantations in forest areas is also triggered by the rising prices for fresh fruit bunches. Wibowo et al. (2019) reported communities' practices and strategies in controlling land generally begin with clearing land, they cleared the trees on their own land or forest land, which was followed by planting palm oil. The community was moved to open land in in forest areas usually after hearing information about the establishment of a company Palm plantations. This was also happened not only in Riau but also in West Kalimantan.

The source, a former ISPO Committee official, confirmed that some of the independent smallholders' oil palm land is in forest areas, so it does not have a land certificate and does not have a Cultivation Registration Certificate (STD-B). According to him, there are also the lands of planters still in dispute with other parties. Meanwhile, there are farmers' lands whose land release permits from forest areas still need to be completed. A facilitator for the Palm Oil Farmers Union (SPKS) asserted that the main obstacles in the process of obtaining sustainable certification, such as the RSPO in Rokan Hulu Riau, included land certificates and business legality (STDM) and a Statement of Ability to Manage and Monitor the Environment (SPPL). In fact, many farmers' lands are located in forest areas, such as Convertible Production Forests and Production Forests (Wibowo et al., 2019). This land legality problem also seems to exist in other areas such as North Labuhanbatu where only 18% of farmers who have land certificates (SHM), since for them, obtaining land certification is considered expensive and complicated (Yulianto, 2022). Right now, of the total area of Indonesian oil palm plantations, it is around 16.8 million hectares, approximately 3.47 million hectares (20.2%) in forest areas. Oil palm plantations in forest areas in Riau Province reached 1,231,470 ha and West Kalimantan reached 114,731 ha (Ma'ruf et al., 2019).

> *"Even, many smallholders whose plantation area in Non-State Forest Areas (Area Penggunaan Lain-APL) does not have a clear legal basis. They do not have a land certificate (SHM), a Certificate of Cultivation Registration (STD-B), and a Statement of Ability to Manage and Monitor the Environment (SPPL)."* The former ISPO Committee official said.

Another weakness of farmers, according to the source from the Farmers' Union, is that much data related to oil palm smallholders are not yet available at the district and national levels. Moreover, independent smallholders are generally not associated with cooperatives or farmer groups. There has not been much mapping related to the profile and condition of farmers. Most farmers' plantation productivity is still low, below 14 tons/ha/year on average. Lestari et al. (2015) found that the average productivity of oil palm smallholders under partnership scheme (Plasma) is 20,587 kg/hectare/year, while the average productivity of independent smallholders is 16,474 kg/hectare/year in Riau. Slightly difference, Irawan & Purwanto (2020) stated the productivity of palm oil plantation in Ketapang, West Kalimantan, especially the Production of aged oil palm FFB more than 5 years are: (i) pure independent smallholders (8.3 tons/ha/year), (ii) smallholders cooperative-based self-help (13.2 tonnes/ha/year), and (iii) plasma smallholders (20.9 ton/ha/year).

Molenaar et al. (2013) found that farmers who have ties with companies, for example through schemes PIR and get technical inputs tend to be more productive than smallholders independent. Yield differences are estimated at around 10-15%.

According to a respondent from farmer, it is due to a lack of farmers' capacity for GAP that impacted their plantation management. Irawan & Purwanto (2020) confirmed there is still limited application of good agricultural practices. Lestari et al. (2015) added that plasma farmers generally receive guidance and facilities provided by the company. Zen et al. (2016) confirmed that the difference is due to low usage fertilizers and the lack of access that farmers have to sources of fertilizers and pesticides, use low quality seeds and the application of poor production practices (Donough et al., 2010).

Another problem is the independent smallholders live in various areas, such as villages, cities, and some live in villages and cities. Independent farmers who live in villages alone are generally oil palm farmers with an area of 8 ha. This residential position will also be an obstacle in encouraging the acceleration of certification. Wibowo et al. (2019) argued that independent smallholders are generally very dependent on land with unclear legal rights. This is different from plasma smallholders, whose land status is clear, because they were acquired together with (become part of) the land requested by the company through the procedures of applicable laws and regulations regarding permits location, release of area and business rights permit (HGU). Some independent smallholders have cleared lands in forest areas involve a wide network, not only local people but also many migrants. Some of them buy palm oil plantation from the local people. Semedi & Bakker (2014) confirmed that many investors from cities interested in investing in oil palm plantations in remote areas such as in Buayan, Sanggau Regency, West Kalimantan. The ease of clearing land in forest areas and the attractiveness of the benefits derived from the oil palm plantation business have triggered migration flows like the Sumatran and Javanese people who generally have power extraordinary survival despite having to live in rural areas.

Key informants from the Siak Regency Government, Riau Province added, that the problem of smallholder oil palm plantations is that a large part of community-owned oil palm seeds come from non-superior seeds. This was also happened in research sites in West Kalimantan. Jelsma & Schoneveld (2016) asserted that the quality of the seeds of this group's farmers is often below standard. Tenera varieties are only found in about 24% of all palms. These farmers are most likely getting their seeds from unregistered sources. The other problems are mostly farmers were not yet implementing GAP and BMP (Best Management Practice) well, a large part has not been incorporated in the planter's institution, the budget for improving the ability and technical guidance of smallholders is still tiny. Irawan & Purwanto (2020) asserted there is lack of knowledge farmers about the control of pests and diseases of oil palm plantation. and limited financial support from financial institution. In addition, a respondent from farmer added that farmers mostly sell their FFB to middlemen at low prices (70-80% of the government's set price). Irawan & Purwanto (2020) said mostly farmers sell their FFB through intermediaries, consequently the price become low.

5.2 Fragmentation of farmers' gardens

Based on the FGD in West Kalimantan, one of the speakers stated that currently, there are groups of former plasma smallholders who can get ISPO/RSPO certificates. They can be assisted by NGOs/corporations, which is different from independent smallholders who cannot independently gain it. Former plasma farmers (Nucleus Estate Crop/NES) generally have received formal legality. Meanwhile, smallholders of former transmigration participants initially had the right to own (SHM) but were later considered to be in forest areas, so they were considered invalid. On average, they have

land legality (Letter Statement of Land ownership or SKT / SKGR and Letter C).[2] Irawan & Purwanto (2020) in their studies in Ketapang, West Kalimantan, found that local communities generally do not have land certificates, land certificates are generally owned by transmigration communities. They also found in his studies in some villages in West Kalimantan, that in general palm oil without land certificates (61.3%) than land with a certificate (35.9%). Even in Pelalawan, head of Amanah Independent Farmers Association also stated few of his member have also not owned yet land certificate.

As in Riau, and West Kalimantan the location of independent smallholders is scattered. The head of palm oil smallholder union (SPKS), in general, independent smallholders have oil palm plantations on a small scale and the locations are scattered. In addition to their scattered locations, they are also not organized in a group. So that this condition will make it difficult for farmers in the process of obtaining certification, both ISPO and RSPO (KumparanBISNIS, 2021). One of the points of both ISPO and RSPO certification is how small-scale farmers must be organized in one farmer organization. It is also difficult to confirm whether the location is in accordance with the local government's spatial planning. Hadi et al. (2022) asserted that the unique characteristics of independent smallholders are, namely (i) independent smallholders who are mostly (80%) not in groups, (ii) the location of the plantations are scattered, and (iii) they mostly do not have STDB. The Directorate General of Processing and Marketing of Agricultural Products (2003) reported that the patterns of development of independent smallholder oil palm plantations are generally scattered and on a relatively small size of lands. Such conditions will make it difficult for large private plantations to organize the collection and transportation of FFB to processing units owned by large private companies and state own companies. Hutabarat (2018) expansion oil palm plantations by smallholders in general do not complete with land ownership documents business registration and does not pay attention to sustainability factors, such as land certificate, and STDB.

Moreover, many independent smallholders' oil palm lands are in dispute. Another resource person said that many smallholders are not yet in groups in farmer organizations, making it difficult to facilitate certification. It means that many smallholders have not formed cooperatives and there is no Internal Control System (ICS), and do not have sufficient funds for pre-conditions and costs of ISPO Audit and Surveillance. Dewi (2007) reported that before the first oil palm plantation opened times in Sanggau Regency in the early 1980s, every Dayak family working on an average of 40 ha of land to get food and non-food food such as rattan, honey, tengkawang and others. This area includes land being worked on as fields and medium agricultural land rest for a certain time. Besides land owned by each family, in each customary community there are communal lands that are controlled collectively commonly called customary land or land communal. Therefore, the layout mapping land use must be taken into account perspective of citizens. However, after the development of palm oil, most of the control less than before and increasing land reclaiming.

[2] SKT (Surat Keterangan Tanah) is based on customary rights, while other villagers have certificate letters of land ownership (Sertifikat Tanah) issued by the Indonesian National Land Agency (Badan Pertanahan Nasional, BPN). One government document states that many SKT documents have been issued for the Government-designated state forest area, or state forest area. As per the current government forestry policies, SKT and SKGK issued on state forest area tend not to be recognized. The village heads and camat are prohibited from issuing the SKT and SKGR. Indonesians did not then have land titles, only an excerpt from the land rent registration book (called Buku Letter C, and the excerpt was called girik or kikitir, among other names). This excerpt was considered a document demonstrating the amount of land tax owed, and identifying the payee, it was not considered a certification of land ownership. However, having a SKT letter is still thought to be better than having no letter at all (Mizuno et al., 2023).

The cultivation registration letter (STDB) requires land letters and coordinates. So, without the land's legality, it will be difficult to manage STDB. In Sanggau, West Kalimantan, they can only issue STDB as much as 500 ha per year, while the total needs are 90,000 ha. In Siak, Riau, the local government just be abble to issue 522 STDB letter covering 1,214 ha per year. The targeted area that must get STDB more than hundred thousand ha. According to a respondent from the plantation section in Siak, it needs more than 96 years without government interventions. Then what makes it difficult and makes farmers reluctant to certify is that managing STDB requires the management of a Taxpayer Identification Number (NPWP), but farmers must pay taxes owed beforehand. SPPL management also takes a long time.

Speakers from the Coordinating Ministry realized farmers would find it difficult to manage the certification if they used their costs. He sees that replanting smallholder palm oil can be an entry point for certification. Media Perkebunan (2021) reported for certifying smallholders of 1 million ha under ISPO scheme by 2025, needs IDR 4 trillion with an average land area of 2 hectares (Ha) per plot. A policy maker from the plantation office in Riau said that a smallholders group needs of about IDR 115,000,000 fore getting ISPO certification. Even, Pareira (2023) estimated that smallholders (cooperatives or farmer groups) require a certification cost of around IDR 250 million. The certified smallholders are also charged an annual surveillance costs and recertification costs after five years. Salam (2022) asserted that related to funding for ISPO certification which is considered burdensome for farmer individually, which ranges from IDR 750,000-IDR 1.2 million per hectare and must be verified by a certification body every year at a cost of IDR 400,000-IDR 500,000 per hectare.

> *"We are busy persuading farmers to rejuvenate, and then we forget the ISPO scheme. The entry process of ISPO is not easy, and BPDPKS does not have the capacity for it, and the ministry is busy with the Replanting of the Community's Oil Palm (PSR), with a target of 180,000 ha a year, and it is not easy,"* a policy maker from the plantation office in Riau said.

The process of assisting oil palm smallholders in obtaining ISPO and RSPO, according to Veriasa et al. (2022) have to face some challenges includes weak smallholder organization (including plantation legality), poor plantation practices including environmental issues and lack of market access. Prior to organizing the community, the first step that should be taken by field facilitators is to identify the smallholders, regarding the name of the smallholder, the area of the oil palm plantation, the location of the oil palm plantation and land status and so on. Based on experiences of an International NGOs working in Riau, the facilitation of five Farmer Groups took 4-5 years. KEHATI (2019) noted since the oil palm plantation was developed in three decades ago, until now, the government do not have data and information (by name, by address, by spatial) palm oil plantation land management by the people.

5.3 Certification management bureaucracy

Generally, farmers are not used to facing bureaucracy. For participants from the Farmers' Union, the need for sustainable smallholder palm oil requires long stages and processes, as shown in Figure 4. It starts from the need for land legality, training on applying good agricultural cultivation, data identification and verification, having a diversity and internal control system, HCV / HCS protection, having standard operating procedures, and audits and partnerships. Farmers are barely assisted, and smallholders are not well informed about the palm oil program. Oil palm extension workers as companions have limitations in some ways, including (i) financing; (ii) the plantation's

location is far; and (iii) Limited human resources. According to him, farmers need facilitation, data collection, strengthening human resources and institutions, and building partnerships. The resource funds from BPDP-KS are available, and what is awaited is real action.

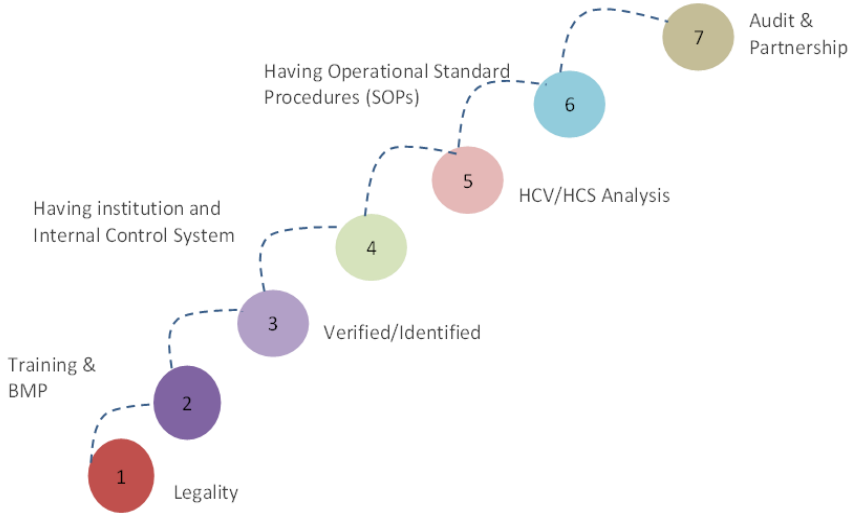

Figure 4. Stages and processes towards sustainable palm oil (certified)
[Source: FGD with SPKS speakers (2022)]

In the same meeting, a narrator from the Union of Palm Oil Farmers underlined that many oil palm farmers have difficulty selling their palm oil. The price between the certified and the uncertified is often the same. According to him, if the market does not recognize ISPO, the government needs to guarantee certainty in prices and the domestic market. The government needs to make agricultural insurance policies, especially palm oil, that has been ISPO-certified so that farmers are not harmed when there is market turmoil, with Law no. 19/2013 as the basis. Hutabarat (2018) said that the price of FFB at the grower's level is also influenced by the distance between the smallholders' palm oil plantation and the Mill. The farther the location of the plantation from the the Mill location, the cost transportation costs will be higher. Differently with ISPO, However, Widyatmoko (2020) said that with ISPO certification, smallholders will be able to access replanting funds of 25 million per ha from the Sawit Fund and banking assistance. Differently with ISPO, Veriasa et al. (2022) reported that smallholders who have got RSPO, they get better access to the market. They can also get money (credit) from selling RSPO certificate to the big companies that cares about sustainable palm oil such as Nestle, so smallholders can finance the first surveillance auditing.

5.4 Limited support from local government

The role of local governments is one of the keys to accelerating the certification of both RSPO and ISPO. Regarding the acceleration of ISPO, a group of speakers, former ISPO Committee officials, in the FGD (2022) held at Tanjungpura University in West Kalimantan stated that the role of local governments was not optimal. The suboptimal role is related to, among others, the activities of plantation business valuation, facilitation and assistance, issuance of STD-B and SPPL, and the enactment and development of smallholder cooperatives. Some causes of the lack of cooperation are less intensive socialization and empowerment, suboptimal coordination of relevant agencies, limited human resources, and no special budget allocation for ISPO.

However, in reality, according to interview with one of key informants from the Riau provincial plantation service, she stated that her institution has supported both the RSPO and ISPO acceleration in the form of promoting, counseling and coaching to palm oil producers, especially smallholders. Even the provincial government has issued regulations to strengthen partnerships between companies and plasma smallholders (Governor Regulation No 77 of 2020). The government also entered into a partnership MOU with independent smallholders in the framework of promoting RSPO certification (Riau, 2021). As of May 2022, an area of 1,963.38 hectares of smallholder plantations was certified by RSPO with a total of 3,137 member smallholders, spread across 6 (six) districts, Riau Province. The remaining area is 343.12 hectares with as many as 102 members of smallholders who are members of the Tambusai Sejahtera Association of Independent Oil Palm Smallholders still in the process of RSPO certification.

The number of smallholder oil palm plantations that are certified by the RSPO continues increased since 2013, but the percentage is still too small, namely less than 1% of the total area of smallholder oil palm plantations in Riau Province. The accelerated development of RSPO certification for independent smallholders has occurred from 2019 until now (Veriasa et al., 2022). In the case of the Amanah Association, the government support and involvement in the process of assisting smallholders has an important role in motivating smallholders to implement sustainable oil palm cultivation practices and prepare complete legal documents (SKT, STDB and SPPL). Technical assistance by companies that understand the ins and outs of sustainable plantations will help accelerate improvements in oil palm plantation governance managed by the planters (Veriasa et al., 2022).

Meanwhile, one form of supports from the Provincial Government of West Kalimantan for the RSPO was the birth of two provincial governments. The provincial government has issued two regulations, which are Local Regulation (Regional Regulation No. 6 of 2018) concerning Sustainable Land-Based Enterprises and the Governor Regulation (Governor Regulation No. 60 of 2019) concerning Procedures and Mechanisms for Determining Conservation Areas in the Management of Land-Based Enterprises at the District level. As members of the RSPO, these growers have an obligation to create, implement, and carry out Monitoring and Evaluation of the NDPE (No Deforestation, No Peat, and No Exploitation) policy into the supply chain of palm oil commodities in their business model. One form of the NDPE policies is the obligation to identify the High Conservation Value (HCV) and High Carbon Stock (HCS) contained within company's concession. In addition, a company must ensure that areas that have been identified as HCV and HCS are managed according to conservation principles and sustainable production and involve the participation of local communities living around the company's concessions (Dinas Kominfo Kalbar, 2020).

RSPO (2023) reported the Indonesian government and RSPO, through the Ministry of Cooperatives and SMEs, are pushing for the acceleration of RSPO certification. The acceleration can be conducted by strengthening their relationship. 40% of Indonesian smallholders are not yet sustainable, it means less than 1% of Independent Smallholders are certified by RSPO. So that the RSPO in collaboration with the government needs to encourage oil palm smallholders to conduct stronger sustainable practices through certification (RSPO, 2023). For instance, the RSPO, in collaboration with Jambi Provincial and District Governments as well as local organizations, has launched a memorandum of understanding (MoU) program aimed at increasing the inclusion of oil palm smallholders in sustainable ecosystems. This province has set as a pilot project that can be replicate to Riau and West Kalimantan (RSPO, 2022). In addition, we agree to Hutabarat et al. (2018), the optimum participation of the parties is needed to accelerate facilitation of RSPO certification for independent smallholders

involving other actors, such corporations.

Indeed, the process of managing ISPO and RSPO certification requirements is not easy. Apart from not being in groups, some farmers have also not been accurately recorded. In terms of financial support, both provinces and districts need more funds to encourage acceleration. Accelerating certification requires intensive socialization and facilitation. Promoting and facilitating requires a lot of budget support, while local governments must also allocate funds for other development priorities. From the experience of the Siak Regency government, for an area of 8,000 ha, it took seven years due to budget constraints. Siak Regency can reach 1,500-2,000 ha of certified farmer plantations.

> "*With a target of this magnitude, for all plantations in Siak to be certified, it is estimated that it will take 96 years for an area of around 192,000 ha"*, said a key informant from the Siak agriculture department.

On the other hand, based on in-depth interviews with group administrators and farmers, they acknowledged that most do not yet understand what the benefits of ISPO are.

> *"What are the benefits for us to participate in ISPO certification". One farmer admits that the price of FFB that have been ISPO-certified from those that have not is no different. There was even a lower one".* A farmer said.

Salam (2022) said that ISPO certified fresh fruit bunches are priced the same as uncertified ones, making ISPO less attractive to farmers. To further explore the problems at the farmer level, we organized an FGD with the Tinerajaya farmer group. Tinerajaya cooperative is located in Teluk Masjid Village with ten farmer sub-groups. The population of Tinerajaya is quite balanced between migrants and locals. For the Malay population, as much as 50 percent and the population of migrants or migrants from various regions, such as Java, as much as 50%. The area of certified potential oil palm plantations is more than 7,000 ha.

Meanwhile, the area of plantations that have been certified is 611 ha. The number of farmers is 225, with an average land tenure area of 2.8 ha. Likewise, from the results of the FGD with farmers in Tinerajaya, it was confirmed that the management of SPPL was a process that took a long time. The duration of land certification and SPPL takes 12 months. Meanwhile, the national program related to the certification of population land also takes six months, as illustrated in Figure 5. Meanwhile, a facilitator from the NGO said that based on his experience, facilitating five groups of farmers from preconditioning to obtaining RSPO certificates took five years (60 months).

Key informants from Siak have been aware that palm oil certification would be difficult without third-party support. Likewise, NGO facilitators recognize that facilitation funding support is needed to accelerate certification. Meanwhile, the certainty of the benefits and incentives received will allow farmers confidence to grow in the certification program. For a resource person from a Jakarta-based NGO, farmers have no interest in certification because there are no incentives. According to him, palm oil funds can be used to facilitate palm oil certification. The fund can not only improve welfare for farmers but also for the development of biodiesel. The case in Siak proves that palm oil certification, both ISPO and RSPO for smallholders, especially requires field assistance. ISPO certification in Siak has not yet reached 50% of the total Siak oil palm plantations. The condition of farmers or plantations is almost the same problem as other locations in Riau, such as the community does not use superior seeds, no good plantation cultivation practices, most farmers have not been involved in planter institutions, inadequate budgets for strengthening the capacity of smallholders, limited

infrastructure support, low-quality palm oil as 49.3% plantations are on peatland, some smallholders do not have direct market access to palm oil mills (Pabrik Kelapa Sawit).

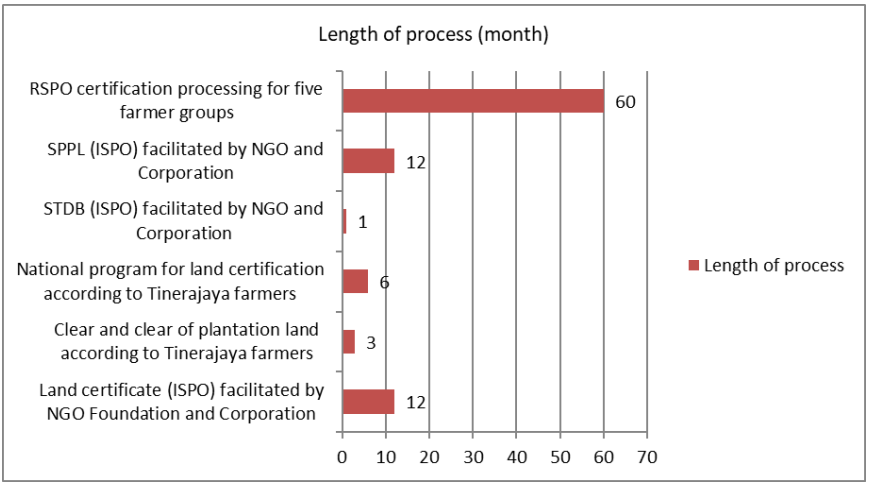

Figure 5. Bureaucracy for managing ISPO and RSPO administrative requirements in Siak. Source of FGD with farmer at Siak Regency, Riau and a facilitator from NGO

Tables 4 and 5 below show the statistical test results in Riau and West Kalimantan. Factors influencing the achievement of certification are different. So far, the result for Riau does not indicate that 4 types of incentive approaches are reliable for accelerating certification achievement. On the other hand, the incentives mechanism is appropriate to be mainstreamed in West Kalimantan province (indicated by the degree of determination coefficient).

Table 4. Multivariate regression results of the relationship between certification achievement and independent variables in Riau

Variables in the Equation[a] (Riau)							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[b]	X1	.000	.000	.487	1	.485	1.000
	X2	.536	.523	1.053	1	.305	1.709
	X3	2.037	.437	21.686	1	.000	7.666
	X4	.929	.597	2.425	1	.119	2.533
	Constant	-1.329	.878	2.291	1	.130	.265

Based on the results of the partial hypothesis test, only the ease of marketing factor significantly impacts the ownership of the certification. It can also be seen that the value of the Nagelkerke R square is 0.243, meaning that the magnitude of the influence of the free variables (X1, X2, X3, and X4) on the dependent variable (Y) is only 24.3%, which means that the influence is weak.

Table 5. Multivariate regression results of the relationship between certification achievement and independent variables of case studies in West Kalimantan

Variables in the Equation[a] (West Kalimantan)							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[b]	X1	.003	.001	24.084	1	.000	1.003
	X2	2.307	.781	8.724	1	.003	10.048
	X3	2.303	.764	9.075	1	.003	10.002
	X4	-.090	.473	.036	1	.850	.914

Variables in the Equation[a] (West Kalimantan)						
	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-9.870	1.334	54.711	1	.000	.000

From the table above, the following regression equation is formed:

Y = -9.87 + 0.003X1 + 2.307X2 +2.033 X3 - 0.090X4 (2)

From the results of the partial hypothesis test, only the ownership of SHM does not significantly impact the ownership of the certification. It can also be seen that the value of the Nagelkerke R square is 0.505, meaning that the magnitude of the influence of the free variables (X1, X2, X3, and X4) on the dependent variable (Y) is only 50.5%, which means that the influence is quite strong.

5.5 Types and sources of incentives

Both speakers from the expert and the Palm Oil Farmers Union stated that there are many varieties of incentives for accelerating certification. One of them is from the BPDPKS.

"Just 20% of it and certification will be done", said a source from the NGO.

One of the FGD discussants from the National Research Agency stated that based on his research results, the certification implementation problem is in legality for both RSPO and ISPO. From the research experience in the three pilot projects, only one passed the certification.

"It is also an incentive when the problems of farmers in forest areas can be solved". He spoke.

For the deputy of one of the relevant ministries, in the FGD of August 9, 2022, seeing that the National Action Plan for Sustainable Palm Oil Plantations is an incentive. In the RAN KSB, in addition to increasing the capacity of farmers, there are conflict alleviation programs, data collection and expansion of ISPO. The RAN KSB can be financed by the National Budget (APBN) and from all other potential funding sources. Meanwhile, another resource person, from a palm oil expert, stated that accelerating the certification of independent smallholders can be done by providing incentives, as follows: (i) the cost of certification of smallholder oil palm plantations is partly borne by the BPDPKS and partly borne by partner CPO-Mills; (ii) providing incentives for smallholders in the form of land and building tax (PBB) relief for their oil palm plantations that can successfully obtain ISPO certification; (iii) ISPO fulfillment and certification is part of the partnership; and (d) BPDPKS provides operational funds to districts (for certification/letter of land rights, STDB and business or institutional legality. The Minister of Finance allows the Regent/Governor to open an account related to this matter. Many stakeholders argue that the willingness of BPDPKS to provide funds is the key. Based on the survey results, it can be described that farmers in both provinces want several types of incentives, as shown in Figures 6 and 7 below.

Figures 6 and 7 illustrate that the majority of farmers (54%) in both Riau and West Kalimantan both want this type of incentive in the form of a higher FFB price (premium price). Meanwhile, 28% of farmers in Riau want facilitation and convenience in obtaining SPPL, followed by low interest loans and ease in obtaining land certificates. Meanwhile, 34% of farmers in West Kalimantan did not know the type of incentive and did not answer. However, as many as 6% of West Kalimantan farmers want land legality issues to be facilitated, followed by STDB facilities.

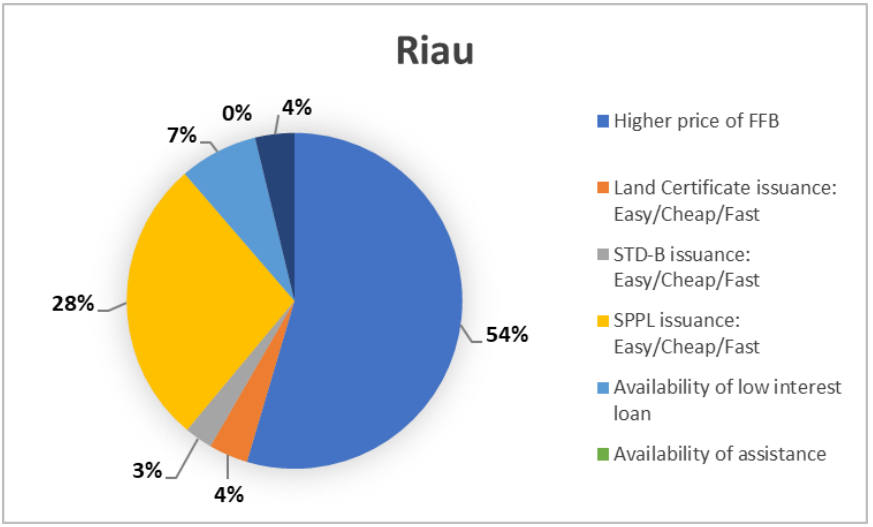

Figure 6. Type of incentives desired by Riau farmers

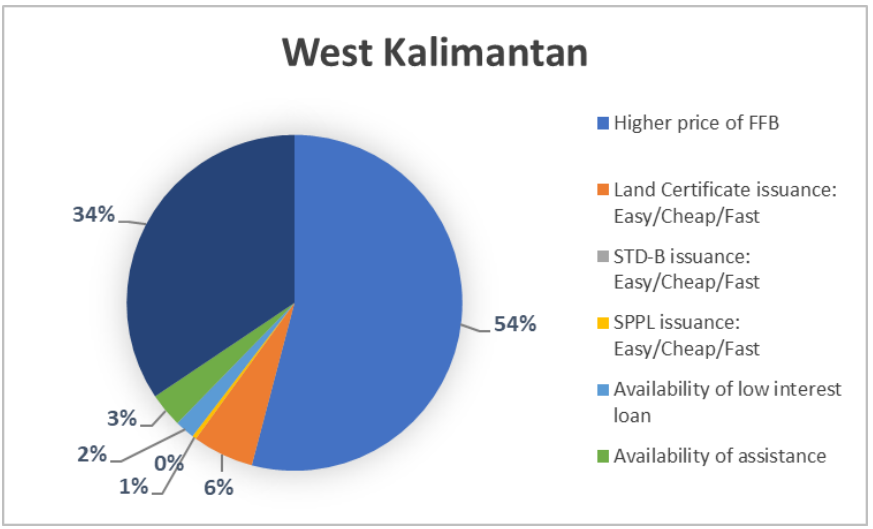

Figure 7. Type of incentives desired by West Kalimantan farmers

6. DISCUSSION

6.1 Supportive policy for accelerating palm oil certification

The government has explicitly supported the acceleration of palm oil certification within the framework of supporting sustainable palm oil management. There are at least two legal foundations that mandate immediate acceleration by mobilizing local government support. These regulations are Presidential Instruction No. 6 of 2019 concerning the National Action Plan for Sustainable Palm Oil Plantations and Presidential Regulation No. 20 of 2020 concerning acceleration of ISPO certification. In response to these two regulations, both Riau and Kalimantan have now issued policies and regulations related to the RAD for sustainable oil palm plantations. The two regions have also formed a kind of task force to accelerate palm oil certification.

Indeed, accelerating certification is not enough just to create a blueprint document for an action plan such as RAN and RAD. The central and regional governments need to take concrete actions in the field through systematic and measurable steps, bearing in mind that, as discussed earlier, there are many challenges in the field, such as most farmers are still in the novice classification, the complexity of the process to fulfill legality (Land certificate, SPPL, STDB), the fragmented smallholders palm oil land, some palm oil plantation located in forest areas, bad seeds, expensive certification costs, erratic palm oil prices, and others. Sawit Indonesia (2021) reported that the head of the Indonesian Palm Oil Farmers Association (APKASINDO) explained that farmers participating in PSR (rejuvenation of oil palm smallholders) would very easily meet the ISPO requirements, since all the requirements needed for oil palm rejuvenation are relatively the same as ISPO requirements. So that PSR can be the entry point for ISPO certification. The government should pay attention to farmers (non-PSR) who have difficulty taking ISPO certification. The amount of non PSR farmers is quite large, reaching 6.35 million hectares and they mostly are hampered by special requirements for land legality, agronomic history, SPPL, and STDB.

The government's attention in accelerating certification is of course not only borne by ISPO, but also RSPO, even though formally there are no specific regulations that support RSPO. Indeed, there is no regulatory support issued specifically and explicitly from the government to support the acceleration of the RSPO as is the case with ISPO which is supported by Presidential Decree 6 of 2019 regarding the National Action Plan for Sustainable Palm Oil Plantations and Presidential Regulation No. 44 of 2020 concerning acceleration of ISPO certification. Referring to the theory of public policy from (Anderson, 2003; Dye, 2002), policy is whatever the government does or does not do. Public policy is a government choice to do something or not. Policy is also a long series of related activities. Public policy concerns a number of activities related to the public interest.

The main idea of policy is related to a number of actions (Anderson, 2003). The government's action, through the Ministry of Cooperatives and Small and Medium Enterprises (UMKM), to collaborate with RSPO in November 2022, following a side event of the 2022 Annual Roundtable Conference on Sustainable Palm Oil, to accelerate certification for smallholders is clear evidence of government support for RSPO certification. In addition, based on experience at the Amanah Palm Oil Farmers Association, it is easier for oil palm smallholders who obtain RSPO certification to obtain ISPO certification, because the requirements for RSPO are almost the same as ISPO. The key requirements demanded by both certifications are farmer group certification, proof of land legality, best management pratices, oganisation management and documentation – farmers organized in groups, the development of Internal Control System (ICS) as a group to ensuring that each member implement the RSPO standard and have documentation to demonstrate compliance. Thus, by complying to these key requirements make certification process easier.

6.2 Incentives for accelerating palm oil certifications

Given that smallholder oil palm plantations are strategic for sustainable palm oil development and within the framework of increasing the competitiveness and welfare of smallholders, certification acceleration is crucial to be immediately carried out by various related stakeholders. The certification target in 2025, which requires all smallholders to be certified, requires extravagant efforts to realize, considering that the area of certified smallholder oil palm plantations has only reached 0.19%. Commodity certification ensures incentives are given to those who work to improve their methods or ways of production (Schouten & Glasbergen, 2011).

Many different incentives can be encouraged be given to oil palm farmers. However, we agree that Jordaan (2012) opinion needs to be carefully designed to achieve a specific policy goal, viz., improvement of traceability, global competitiveness, sustainability and welfare of farmers. Proactive steps, especially from the government, through involving all relevant stakeholders are principal and determine the achievement of certification. The central government needs to actively build communication with local governments to determine what incentives are contextual for the acceleration of smallholding palm oil certification, mechanism and source of incentives. Given that, in practice, incentives are not specifically aimed at protecting smallholders. In fact, according to Pramudya et al. (2022), government regulations (For example, Presidential Regulation no. 44/ 2020 and Minister of Agriculture Regulation no. 38/ 2020) tend to be too strict, ignoring the challenges of smallholder farmers and the various limitations they face.

So far, based on facts found in the field, market-based incentives have had a significant impact on farmers who obtain RSPO certification. For example, the Amanah Palm Oil Farmers Association, with a premium price (Credit from Unilever) they were able to finance the first surveillance. Apart from that, they are also able to encourage farmers to change their farming culture from unsustainable to sustainable. Oil palm smallholders are also able to carry out GAP, and finance the operations of institutions including the Internal Control System (ICS). In addition, another advantage for farmers is that with the RSPO there is a clearer market guarantee compared to non-certified production.

Meanwhile ISPO has so far not optimally benefited farmers. Some farmers still doubt the benefits of ISPO, especially from market guarantees and premium prices. Some farmers are of the view that the price of ISPO-certified FFB is the same as the price of non-certified ones and some are even lower than non-certified ones. While the most widely felt benefits are from a better administrative management side, clearer legality and better agricultural culture. In addition, the farmers also feel that there is an increase in confidence in managing their plantations and feel that they have a greater opportunity to receive oil palm rejuvenation funds from the BPDPKS.

Indeed, In the framework of accelerating certification so far, the actors who receive incentives are still focused on farmers, while other actors who have a role in facilitation both from a policy and assistance perspective are still neglected. For example, district or provincial governments are key actors in accelerating certification. The district government is the spearhead in collecting data on farmers and facilitating legality, such as STDB. Local governments and other actors working in the field should receive incentives when they are able to encourage the transformation of sustainable palm oil management from the central government or donors through BPDPKS or environmental funds. In addition, incentives can also be provided through the palm oil production sharing fund (DBH) which has now been approved and according to a palm oil researcher interviewed, the Ministry of Finance and Commission XI of the Indonesian House of Representatives are currently discussing draft regulations. The Ministry of Finance and the DPR agreed on an allocation of the Palm Oil Production Sharing Fund (DBH) for 2023 of IDR 3.4 trillion, the source of which is from export levies and export duties. The legal basis for oil palm DBH is articulated in article 123 of Law No. 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments. The amount of DBH funds is 4% and can continue to increase according to the country's capacity. The DBH allocation funds can be used to accelerate certification such as solving legality issues, strengthening groups and empowering oil palm smallholders.

Referring to the view of Jordaan (2012), many direct and indirect incentive options can be applied. Direct incentives can be reimbursement payments for administrative management, such as land legality, STDB or SPPL. Another direct incentive is that certified farmers receive insurance reimbursement when prices fall, which harms farmers. So, it is not only the premium price from consumers (Piñeiro et al., 2020). Meanwhile, indirect incentives can be in the form of providing facilitation or assistance fees for pre-conditions, group formation, and strengthening the capacity of farmers in plantation management and GAP. Other indirect incentives can be in the form of reduction of agricultural input costs, income tax rates, import tariffs, and land and building taxes, and the protection of business competition and regulatory incentives that benefit farmers (Piñeiro et al., 2020), such as simplification of the administration of the legality of ISPO.

Lesson learned from RSPO certification on Independent Smallholders of the Bungo Tanjung Cooperative, Dosan Village, Siak District, factors causing the failures are 1) the absence of funding support for RSPO certification for independent smallholders (Veriasa et al., 2022). Referring to Hutabarat et al. (2018), the initiation fee for RSPO certification at the Trustee Association reaches IDR 950.5 million, which includes the costs of farmer group setup, such as internal control system, and audit setup. So, we think that the central government through the National Expenditure Budget (APBN), the Environmental Fund Agency, or BPDPKS and local governments, through the Regional Expenditure Budget (APBD), and other sources of incomes can provide funding supports. This depends on the government's political comments and the support of legislative institutions in supporting sustainable palm oil. According to Veriasa et al. (2022), the fund can be allocated in the community organizing process such as identification of smallholders and group of smallholders, identification of baselines legality data, and plantation conditions, mapping of farmer's garden locations, as well as post-training monitoring and evaluation.

The provision of incentives for the acceleration of certification can be built on the framework of Government Regulation no. 46 of 2017, concerning Environmental Economic Instruments. Too much expectation in incentives based on market mechanisms, such as premium prices, is highly dependent on market confidence. However, this market confidence requires a long time to have an impact. For this reason, the choice of strategic policy steps is to explore the existing potential from various internal sources. Like it or not, the institutionalization of an incentive policy to accelerate certification for oil palm smallholders is not separated from the low contribution of palm oil commodities to palm oil-producing regions. So, the demands of some palm oil-producing regions to receive a fairer sharing fund (DBH) are reasonable. It is because they demand fiscal justice, which can later be allocated to provide incentives for smallholders. Until now, there has been no regulation on oil palm Profit-Sharing Funds (DBH). For this reason, the government needs to formulate a DBH regulation for palm oil producers soon (Nurfatriani et al., 2022).

Another source of incentives is the palm oil fund (Figure 8). The largest source of revenue from palm oil comes from export levies managed by the BPDPKS and utilized for (Presidential Regulation no. 61/ 2015): (i) Human Resource Development (HR); (ii) Research and development of oil palm plantations; (iii) Promotion of oil palm plantations; (iv) Replanting oil palm plantations; (v) Oil palm plantation facilities and infrastructure; 6. Development of biodiesel.

The figure illustrates state revenue from the palm oil sector, which is then allocated to the Revenue Sharing Fund (DBH), mostly from taxation. Meanwhile, despite their great potential, state revenues from export levies have not been allocated for DBH for the regions. Therefore, the regions do not have sufficient incentives to encourage the

acceleration of certification. Based on Kontan's daily report, December 28 2021, it was recorded as very large as IDR 69.72 trillion.

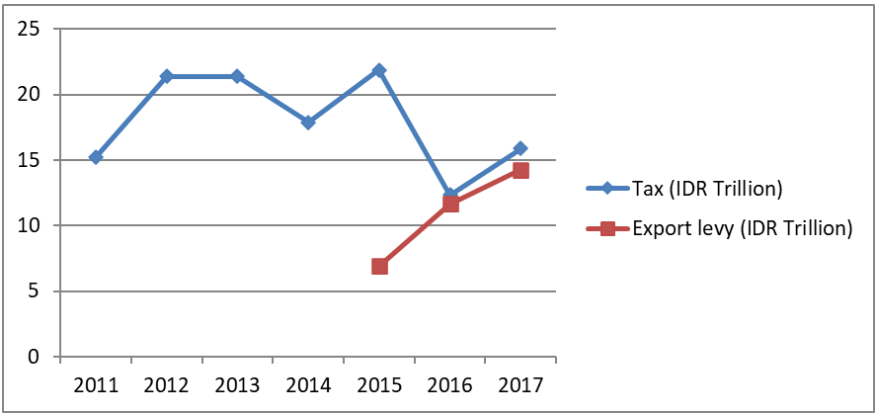

Figure 8. State Revenues from taxes and export levies of Palm Oil Sector (KPK in Saputra (2020))

Other sources of environmental funds can also be used to provide incentives for certification management for smallholders. Nevertheless, incentives can be both positive and negative (disincentives). That is, we agree with Kuyvenhoven et al. (2004) for farmers who do not want or are reluctant to certify their plantations, disincentives are needed so that certified smallholders get awards or various benefits, such as market access and higher prices. It has shown smallholders' reluctance to certify because the sales of their commodities are not better than those that are not ISPO certified.

7. CONCLUSIONS AND POLICY IMPLICATIONS

Quantitatively, the reasons of certification achievement in Riau remains unrevealed as the influence of four tested variables (FFB; ease of obtaining soft interest loans; ease of selling FFB; ownership of land legality) is weak (R^2: 0.243). On the other hand, the influence of these factors is quite strong in West Kalimantan (R^2: 0.505), with only ownership of land legality as the insignificant factor to the certification achievement. Using qualitative approach, in Riau, smallholders dominantly demand the higher price of fresh fruit bunches and the practicality to achieve SPPL (Statement of Environmental Management) as the form of incentive. In addition, in West Kalimantan, the higher price of fresh fruit bunches and the availability of low interest loan are incentives the farmers' demand. The sources of incentives can be from intergovernmental fiscal transfer mechanisms such as revenue-sharing mechanisms, export levies, and environmental funds. Smallholders need the certainty of a significant advantage from the ISPO certification, particularly in terms of price and market access. The variety of problems among farmers is the key to accelerating certification for smallholder farmers. It requires the government's strong initiative to solve all these problems synergistically with various stakeholders to accelerate the ISPO certification for smallholders.

So far, based on facts found in the field, market-based incentives have had a significant impact on farmers who obtain RSPO certification. For example, the Amanah Palm Oil Farmers Association, with a premium price (Credit from Unilever) they were able to finance the first surveillance. In addition, another advantage for farmers is that with the RSPO there is a clearer market guarantee compared to non-certified production. Meanwhile ISPO has so far not optimally benefited farmers. Some farmers still doubt the benefits of ISPO, especially from market guarantees and premium prices.

Some farmers are of the view that the price of ISPO-certified FFB is the same as the price of non-certified ones and some are even lower than non-certified ones. While the most widely felt benefits are from a better administrative management side, clearer legality and better agricultural culture.

The variety of problems among farmers is the entry point to accelerating certification for smallholder farmers. Effective actions must be implemented immediately, considering that the target of 100% ISPO certification is only three years away. Farmer data collection, land and business legality, group mentoring, and farmer capacity building are factual approaches required at the two study sites. Whether they have a strong initiative to solve all these problems synergistically with various stakeholders remains for the government. Hence it depends on a strong commitment of the government.

In pushing for the acceleration of palm oil certification for smallholders, both ISPO and RSPO, based on reflections from the results of field research in Riau and West Kalimantan, it would be best if the actors' receiving incentives were not only smallholders, but also the provincial government, regional government and even, if necessary, the village government and other actors such as NGOs. This is because, in fact, the position of the local government is very decisive in the pre-conditions for farmers, encouraging and mobilizing farmers, strengthening institutions, strengthening sustainable palm oil governance at the farmer level and others. Sources of incentives for local governments and other actors can be taken from various sources (State-based incentives), such as BPDPKS, the environmental fund and the palm oil DBH which are now just waiting for the regulation draft. This paradigm shift requires a strong political commitment from the central government and other relevant stakeholders. Likewise with farmers, the source can be from market-based incentives and state-based incentives. While the types of incentives that can be given to farmers can be direct incentives in the form of premium prices and indirectly in the form of assistance with various programs or policies such as land legalization programs and the creation of STDB and SPPL quickly, not bureaucratically. This program requires synergistic work with other ministries such as Forestry and Land Affairs, as well as local and village governments.

In contrast to the ISPO, which is mandatory, the RSPO is voluntary, the actual policy action taken by the Indonesian government and the RSPO, through the Ministry of Cooperatives and SMEs, to encourage the acceleration of RSPO certification is clear evidence of the central government support for oil palm smallholders. Likewise, at the sub-national level, the Riau and West Kalimantan Provinces have made RAD for sustainable palm oil, even though within the RAD those provincial governments do not specifically mention the RSPO within the RAD Documents, implicitly these policies can be interpreted as a form of support for RSPO certification. In addition, we agree with Hutabarat et al. (2018), optimal participation of the parties is needed to accelerate the facilitation of RSPO certification for independent smallholders. One way to accelerate RSPO certification is to increase the contribution of companies to facilitate RSPO certification for independent smallholders in their supply chains. For acceleration, program synergy is also needed, between RSPO, Rejuvenation of People's oil palm and ISPO. The smallholder oil palm replanting program and the RSPO can be an entry point for the ISPO program because requirements such as legality are relatively the same.

One of the policy implications of this research is that accelerating ISPO and RSPO certification requires a paradigm shift in the development and institutionalization of incentives at the practical level. The combination of policy options for institutionalizing incentives between market-based and state-based is a rational option for accelerating acceleration supported by exploration of sources and types of effective incentives for

accelerating certification. The second policy implication is that accelerating certification needs to pay attention to certification quality, not just quantity targets, through strengthening sustainable palm oil governance at the farmer level.

8. THE LIMITATIONS OF THE RESEARCH AND IMPLICATION FOR THE FUTURE RESEARCH

We acknowledged that this research certainly has some limitation. Actually, we have interviewed 551 respondents, but only data of 455 respondents can be analyzed. It is related to the limitations of this research, which include: (i) The research locations in two provinces and six districts and 16 scattered farmer groups are one of the problems in resource mobilization, especially enumerators in collecting detailed data; and (ii) The various backgrounds of enumerators and research experiences also have an impact on data collection in the field.

Lessons learned from this research going forward need to be considered when conducting research with a large sample of respondents and locations is related to mobilization issue of the enumerators to make the time efficient. In addition, proficiency to use local language of enumerators will help during the interview process and make respondents more comfortable. It will be beneficial to gather data and information.

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