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Research Article

Development of an Accelerated Model for ISPO Certification in Independent Palm Oil Plantations

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Abstract.
The Indonesian government has committed to implementing sustainable palm oil plantation development. This commitment goes through some regulations that require smallholder plantations (plasma and independent) to have Indonesian Sustainable Palm Oil Certification (ISPO certified). Even though the ISPO certification obligation has been in effect since 2020, until mid-2023, there are still very few ISPO-certified smallholder oil palm plantations. This research aims to develop a model for accelerating ISPO certification for independent oil palm plantations as the largest part of smallholder oil palm plantations. The ISPO Certification acceleration model can be implemented by synergizing the Smallholders' Palm Oil Rejuvenation Program (PSR) – ISPO program, which is coordinated from the central to provincial and district levels. This acceleration model can carry out three roles simultaneously, namely assisting PSR participants who are also ISPO certified, empowering large private plantations (PBS/large national plantations (PBN)) to contribute to the success of the PSR/ISPO program, and focusing more on helping farmers who are not yet included in the PSR program and PBS/PBN for ISPO certification.

Keywords: model, ISPO certification, oil palm, independent smallholders

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1. Introduction

The palm oil industry has a strategic role in Indonesia's economic development. In 2022, Indonesia already has palm oil plantations covering an area of 16.83 million hectares [1] with production of 46.73 million tons. Most of the palm oil is exported (30.80 million tons) with a foreign exchange value of USD 39.28 billion. The rest is used to meet domestic needs [2]. The palm oil industry has also provided employment opportunities directly and indirectly for 16 million workers. The government believes that a sustainable palm oil industry contributes significantly to the Sustainable Development Goals or SDGs [3].

The government has committed to sustainable palm oil industry development by agreeing on RSPO (Roundtable on Sustainable Palm Oil) in Indonesia. Since 2014, Indonesia has applied plantation management practices based on the principles of

sustainable palm oil plantation development through RSPO. In 2011, the government established an Indonesian Sustainable Palm Oil Certification (ISPO) system through Minister of Agriculture Regulation (Permentan) number 19 of 2011 as a voluntary system to be guided by the Indonesian palm oil industry in managing palm oil plantations. In 2015, Minister of Agriculture Regulation Number 19 of 2011 was revised with Minister of Agriculture Regulation Number 11 of 2015. However, the implementation was still voluntary.

The implementation of Minister of Agriculture Regulation Number 19 of 2011 and Minister of Agriculture Regulation Number 11 of 2015 until March 2020 was still voluntary, and the number of ISPO-certified plantations was still low. The ISPO Commission has only issued 621 certificates covering an area of 5.45 million hectares out of 14.59 million hectares or 37.73% of the total area of Indonesian palm oil plantations. Large private plantations certify their plantation areas of 5.25 million hectares with 557 ISPO certificates. The state's large plantations have certified their 286,590-hectare plantations with 50 ISPO certificates. There are only 14 ISPO-certified community plantations with 12,270 hectares of area or only 0.20% of the total area of community oil palm plantations [4].

Even though Indonesia has applied some efforts to implement sustainable oil palm plantation development, there are still discriminatory policies and anti-palm oil campaigns questioned the health aspects when consuming palm oil [5]. Others [6-10] examined the issue of land use for oil palm plantations related to deforestation, loss of biodiversity and greenhouse gas emissions. While [11,12] questioned socio-economic problems related to smallholder livelihoods, worker exploitation, and land tenure conflicts. The European Union has been implementing discriminatory policies since 2009 through the Renewable Energy Directive (RED) to limit the use of environmentally unfriendly palm oil-based biofuels.

After the RED policy, the European Union Commission again decided that palm oil was an environmentally unfriendly product in the RED II scheme. In the RED II scheme, the European Union stipulates that if there is land expansion that causes natural damage above 10%, it will be considered a dangerous product and will not be used in the European Union. As a result, the use of CPO in the European Union has been reduced gradually in 2019 - 2023 and will be phased out starting in 2030. At the same time as RED II, the European Union carried out a negative Indirect Land Use Change (ILUC) campaign, thereby suppressing demand for palm oil in Europe. Before RED II has been completed, palm oil is being pressured again with the NDPE (No Deforestation, No Peat, No Exploitation) policy. In May 2023 the European Union enacted the Anti-Deforestation

Law or European Union Deforestation Regulation (EUDR). Anwar [13] stated that ISPO is an effort to fight negative campaigns that portray that the development of Indonesian oil palm plantations has an impact on destroying natural resources and environmental sustainability.

Discriminatory policies and negative campaigns by the European Union have further strengthened the Indonesian Government's determination in implementing ISPO. In March 2020, the Indonesian Government issued Presidential Regulation (Perpres) Number 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation Certification System. This presidential regulation stipulates that palm oil plantation businesses must undergo certification. Applying for ISPO certification is mandatory for business actors, namely plantation companies and/or farmers, where farmers are required to do so 5 years after the presidential decree is promulgated (16 March 2020). It is hoped that with the issuance of this Presidential Decree, sustainable development of Indonesian palm oil can be achieved and Indonesian palm oil products can obtain high prices on the international market after ISPO acceptance. In November 2020, the Indonesian government again issued Minister of Agriculture Regulation Number 38 of 2020 which complemented Minister of Agriculture Regulation Number 11 of 2015.

Since Presidential Decree Number 44 of 2020 and Minister of Agriculture Regulation Number 38 of 2020 were issued, there has been relatively no significant effort made by the Government to socialize ISPO, let alone empower growers to fulfill ISPO certification obligations. This condition means that ISPO certification performance in smallholder oil palm plantations remains very low. The number of ISPO certifications in smallholder oil palm plantations has only increased from 14 to 20 certificates [14]. If examined more carefully, the majority of ISPO-certified smallholder oil palm plantations are ex-plasma oil palm plantations, with very few independent oil palm plantations, whose plantation area is more than 80% of the total area of smallholder plantations. The low performance of certification on independent oil palm plantations occurs because independent oil palm plantations still have very limited guidance, including socialization about ISPO.

The results of a study [15] found that only 30% of independent oil palm farmers have received socialization and almost all respondent farmers did not know that ISPO certification would be mandatory in 2025. In this research, it was also discovered that compliance with ISPO standards (Ministry of Agriculture Regulation No. 38 of 2020) in independent oil palm plantations was 57.04%. Fulfillment of ISPO standards in independent oil palm plantations is relatively higher compared to prior studies [16-18]. These three studies used the ISPO standards of Minister of Agriculture No. 11 of

2015. Fariyati [16] found that compliance with ISPO standards in smallholder plantations (independent and plasma) is 33.33%. Hadi [17] conducted research found that the percentage of compliance with ISPO standards in independent oil palm plantations is 13.31%. Azizah [18] found that the percentage of compliance with ISPO standards in independent oil palm plantations is 34.48%.

In 2025, all palm oil plantation businesses, including independent palm oil plantations, must certify their palm oil plantations. On the other hand, independent oil palm plantations are still not ready for this policy and still have a low level of compliance with ISPO standards. Pramudya [19] stated that the implementation of ISPO is still slow, especially for independent smallholders who get problems of complex requirements, limited capacity, and limited funds. This research aims to develop a model for accelerating ISPO certification in independent oil palm plantations.

2. Research Method

2.1. Research period and site

This research site is in Riau Province. The research site selection employs a purposive sampling method. The Riau Province has been quite representative in describing Indonesian oil palm plantations. It has the largest plantation area and palm oil production rate in Indonesia. In 2022, the oil palm plantations area in Riau is 3.49 million hectares or 20.80% of the total area of oil palm plantations in Indonesia (16.83 million hectares) with a production rate of 8.96 million tons (19.66% of Indonesia's total palm oil production) [1]. This region is also a pilot province in ISPO certification. This research runs from January to November 2022.

This research was conducted in Riau Province. The selection of Riau Province as a research location was carried out deliberately (purposive sampling) because Riau Province was considered quite representative in describing Indonesian oil palm plantations, where Riau Province has the largest plantation area and palm oil production in Indonesia. In 2022, the area of oil palm plantations in Riau Province will be 3.49 million hectares or 20.80% of the total area of oil palm plantations in Indonesia (16.83 million hectares) with production of 8.96 million tons or 19.66% of Indonesia's total palm oil production [1]. This region is also a pilot province in ISPO certification. This research was carried out from January to November 2022.

The sampling employed a multistage method. Siak Regency and Pelalawan Regency were two representative sample areas. Siak consists of 14 sub-districts. There were two representative sub-districts taken, namely Minas as an oil palm center and Sungai Apit as an oil palm plantation development sub-district. In Minas sub-district, the villages of East Minas and West Minas became the sample locations. In the Sungai Apit sub-district, Mengkapan and Tanjung Kuras villages are the sample locations. Pelalawan Regency consists of 12 sub-districts. Two of them became representative samples, namely Sei Kijang and Langgam sub-districts that develop independent oil palm plantations. In the Sei Kijang sub-district, Simpang Beringin village and Lubuk Ogung village became the representative sample locations. In the Langgam sub-district, the samples were Pangkalan Gondai village and Penarikan village. In each village, there were ten independent oil palm farmers taken as the respondents. The farmers have oil palm plantations categorized as productive, so there were 80 respondents. Besides the independent oil palm respondents, there are also five expert respondents.

2.2. Types and methods of data collection

This research uses primary and secondary data. The primary data was obtained by direct interviews with independent oil palm farmer respondents using a questionnaire containing structured questions. The main focus is on five principles, 13 criteria, 33 indicators, and 74 verifiers by Minister of Agriculture Regulation number 38 of 2020 for growers. Each verifier question provides deeper information. Primary data collection was carried out by conducting in-depth interviews with relevant parties such as ISPO/RSPO certified Association/Gapoktan/Poktan Managers, ISPO assistants, ISPO/RSPO auditors, and leaders at the Riau Province Plantation Service and sample districts. Secondary data was obtained from literature studies, the Siak Regency Forestry and Plantation Service, the Pelalawan Regency Plantation and Livestock Service, the Riau Province Plantation Service, and other related sources.

2.3. Data analysis

This study employs two analysis methods, namely A'WOT and the normative model with an institutional approach. A'WOT analysis aims to formulate and set priority strategies for accelerating ISPO certification in independent oil palm plantations. A'WOT analysis is a combination of SWOT (Strengths-Weaknesses-Opportunities-Threats) and AHP

(Analytical Hierarchy Process) analysis. SWOT analysis provides a basic framework that will produce functional decisions with very qualitative basic weaknesses. Meanwhile, AHP will help improve SWOT analysis in correlating analysis results. Therefore, there will be a priority on alternative strategic decisions. Strategy design using SWOT analysis has been used by [20-24]. SWOT analysis supported by AHP used by [17, 25-27]. The steps for formulating a strategy to accelerate ISPO certification are:

Information collection includes internal environmental analysis and external environmental analysis. The internal environmental analysis covers strength and weakness analysis to accelerate the implementation of ISPO certification in independent oil palm plantations. External environmental analysis includes opportunity and threat analysis to accelerate ISPO certification in independent oil palm plantations.

Matching information aims to obtain a strategy to accelerate ISPO certification. This information matching produces four groups of strategies, namely strategies that use strengths to seize available opportunities (SO), strategies that overcome weaknesses to seize available opportunities (WO), strategies that use strengths to avoid threats (ST), and strategies that reduce weaknesses and avoid threats (WT).

The final section includes decisions made on alternative strategies prioritized using AHP analysis.

A normative model works to analyze the formulation of an institutional model for accelerating ISPO certification in independent oil palm plantations [28] with an institutional approach. The steps for formulating an institutional model for accelerating ISPO certification are:

1. Identifying the process that produces real events, namely the ISPO certification institutional model developed by the government; this identification focuses on the institutions which include the organization and the rules of the game to identify: 'who,' 'doing what,' and 'how.'

2. Identifying the expected event; the desired 'model' is approached from learning models carried out by plantation companies, Non-Governmental Organizations (NGOs), and from the neighboring country, Malaysia.

3. Identifying the gap between the reality of the identification results and desires; this gap identification uses a gap analysis.

4. Identifying the dynamics of closing the gap

5. Analyzing policies that can close the gap

3. Result and discussion

3.1. ISPO certification acceleration strategy

3.1.1. Environmental analysis

Environmental analysis consists of internal and external environmental analyses. Internal environmental analysis examines internal factors that can be controlled, where farmer organizations such as farmer groups or cooperatives can influence and control these elements. Farmer organizations can adapt and modify internal aspects. The internal environment includes an analysis of strengths and weaknesses in ISPO certification on independent oil palm plantations. External factors include those beyond control that influence an organization's choices regarding direction and action. They will also influence the organization's structure and internal processes. External environmental analysis includes analysis of opportunities and threats in ISPO certification in independent oil palm plantations [29].

Strength reflects the current organization's or program's power [23]. In short, the strengths in implementing ISPO certification include (i) the government's high commitment to developing sustainable oil palm plantations [14, 19, 30]; (ii) funding assistance for ISPO certification [31] (iii) support from PBS/PBN [32, 33]; (iv) PSR program support [15]; (v) support from certification agencies [4], and; (vi) learning from RSPO certification [34].

Weaknesses describe some organizational activities that are not running well or resources needed by the organization but are not owned by them [23-24]. The weaknesses in ISPO certification include: (i) ISPO organizing institutions are still weak [17]; (ii) certification costs are quite high [35, 36]; (iii) independent oil palm plantations have not yet joined farmer groups or cooperatives [17]; (iv) many independent oil palm plantations use non-improved seeds (illegal) [15,17]; (v) low plantation productivity [17, 37]; (vi) low FFB selling prices [38], and; (vii) ISPO certificate holders do not get credit [19, 34, 39, 40].

Opportunities are positive factors from an environment that provides opportunities for organizations or programs to take advantage of Phadermrod [22]. The opportunities in this study include: (i) ISPO is starting to be recognized internationally [41, 42]; (ii) increasing world demand for palm oil [43, 44]; (iii) trend towards renewable energy [45, 46], and; (iv) increasing domestic energy needs [47, 48].

Threats are negative factors from an environment that trigger obstacles to the development or running of an organization or program [24]. The threats in this study include (i) anti-palm oil campaigns [6-12]; (ii) discriminatory regulations in consumer countries [49, 50]; (iii) many independent oil palm plantations are located in remote areas [19, 51, 52]; (iv) independent oil palm plantations are on peatlands [15, 53], and; (v) high fertilizer prices [39, 44, 54].

3.1.2. Formulation of ISPO certification acceleration strategy

After collecting information through environmental analysis (internal environmental analysis and external environmental analysis), the information is then matched to generate a strategy to accelerate ISPO certification in independent oil palm plantations. The acceleration strategy through information matching is shown in Figure 1.

Internal / Eksternal	Strengths (S)	Weaknesses (W)
	1. The government's high comitment to developing sustainable oil palm plantations	
	2. Funding assistance for ISPO certification	1. ISPO organizing institutions are still weak
	3. Support from PBS/PBN	2. Certification cost are quite high
	4. PSR Program support	3. Independent oil palm plantations have not yet joined farmer group or cooperatives
	5. Support from certification agencies	4. Many independent oil palm plantations use non improved seeds (il
	6. Learning from RSPO certification	5. Low plantation productivity
		6 Low FFB selling prices
		7. ISPO sertification holders do not get credit
Opportunities (O)	**Strategi SO**	**Strategi WO**
1. ISPO is starting to be recocnized internationally		
2. Increasing world demand for palm oil	1. Accelerating the implementation of community palm oil Rejuvenation - PSR	1. Strengthening ISPO organization institutions
3. Trend toward rewenable energy	2. Collaboration of ISPO and RSPO certification	2. Strengthening smallholder' institutions
4. Incresing domestic energy needs	3. Empowerment of PBS/PBN in ISPO certification of independent oil palm plantations	3. Providing assistant staff
		4. Developing an ISPO acceleration model that is more suitable for independent oil palm grower
		5. Accelerating implementation PSR
Threats (T)	**Strategi ST**	**Strategi WT**
1. Anti palm oil campaigns		
2. Discriminatory regulations in consumer countries	1. Strengthening the good palm oil campaign	1. Colaboration on ISPO and RSPO certification
3. Many inpependent oil palm plantations are located in remote areas	2. Colaboration on ISPO and RSPO certification	2. Providing incentives
4. Independent oil palm plantation are on peatland		
5. High fertilizer prices		

Figure 1: Strategy for accelerating ISPO certification in independent palm oil plantations.

The SO strategy consists of (i) accelerating the implementation of Community Palm Oil Rejuvenation – PSR, (ii) collaboration of ISPO and RSPO certification, and (iii) empowerment of PBS/PBN in ISPO certification of independent oil palm plantations. The WO strategy consists of (i) strengthening ISPO organizing institutions, (ii) strengthening smallholders' institutions, (iii) providing assistant staff, (iv) developing an ISPO acceleration model that is more suitable for independent oil palm farmers, and (v) accelerating implementation PSR. ST's strategy consists of (i) strengthening the good palm oil campaign, and (ii) collaborating on ISPO and RSPO certification. The WT strategy consists of ISPO and RSPO collaboration and (ii) providing incentives. If all strategies are compiled, the ISPO certification acceleration strategy consists of (i) encouraging the acceleration of PSR implementation, (ii) collaborating with ISPO and

RSPO certification, (iii) empowering PBS/PBN in ISPO certification of independent oil palm plantations, (iv) strengthening ISPO organizing institutions, (v) strengthening farmer institutions, (vi) providing assistant staff, (vii) developing an accelerated ISPO certification model that is more suitable for independent oil palm smallholders, (viii) strengthening the good oil palm campaign, and (ix) providing incentives.

3.1.3. Priority strategy for accelerating ISPO certification

Priority strategies were analyzed using AHP with the Expert Choice tool. The results of the AHP analysis as shown in Figure 2 show that the inconsistency of 0.07 is still below the allowed inconsistency limit of 0.1 so the comparison results are suitable for use. The priority strategy for accelerating ISPO certification in independent oil palm plantations is to encourage the acceleration of PSR implementation followed by a strategy to strengthen ISPO organizing institutions and providing assistant staff to support ISPO organizing institutions. These three main priority strategies, namely PSR with performance according to targets and strong ISPO organizing institutions and supported by field assistants, will be able to strengthen the institutions of independent oil palm growers, empowering parties (PBS/PBN/NGOs) to participate more in assisting independent smallholders for ISPO certification and developing and implementing specific models to accelerate ISPO certification for independent oil palm growers. The strategy of strengthening good palm oil campaigns, providing incentives and collaborating on ISPO and RSPO certification can be used as supporting strategies in efforts to accelerate ISPO certification in independent oil palm plantations.

Figure 2: Priority strategy for accelerating ISPO certification in independent palm oil plantations.

3.1.4. Accelerating PSR implementation

From 2017 to 2022, the Directorate General of Plantation has been targeting the rejuvenation of 2.4 million hectares of smallholder oil palm plantations, including 2.12 million hectares of independent oil palm plantations, 153.39 thousand hectares of PIR-BUN plasma, and 136.78 thousand hectares of PIR-Trans plasma. In the PSR program, almost all stages of plantation development are in line with fulfilling ISPO standards, especially those that have been less able to be met in independent oil palm plantations. Many independent oil palm farmers do not have proof of legal land ownership, have not joined any groups (KUD), use non-improved or illegitimate seeds, and are low in implementing good plantation practices [17]. If these plantations get rejuvenated through the PSR program, they can fully meet ISPO standards. In 2022, the smallholder oil palm plantations in Indonesia were 6.38 million hectares [1]. From 2017 to 2022, the rejuvenated land will be 2.41 million hectares according to the PSR target. At least 37.78% of the plantation areas have met ISPO standards and are ready to be ISPO certified.

Even though PSR performance until 2021 is still relatively low, if it is accelerated towards 2025 it will greatly support the acceleration of ISPO certification for independent oil palm plantations facing the mandatory era in 2025. Hadi [17] suggested the PSR and ISPO certification accelerations by strengthening the institution of the PSR Team, especially the District PSR Team supported by sufficient strength and quality. A strong PSR team institution will strengthen the independent oil palm farmers to participate in the PSR program and encourage active participation in PBS or PBN If acceleration strategies are implemented simultaneously, it will accelerate PSR performance achievements, and the plantation will be of ISPO standard.

3.1.5. Strengthening ISPO implementation institutions

In 2025, the ISPO certification is a must for independent oil palm plantations. It is an exciting period for ISPO observers, but not for independent oil palm growers who until now have received little outreach and are not aware of the 2025 ISPO certification obligations [15]. Meanwhile, ISPO organizing institutions are “too high” and “too far away” from independent oil palm farmers who live in rural areas. They are often helpless and need guidance from ISPO organizers. Therefore, the institutional (committee) organizers of ISPO having a more tiered and coordinated structure must exist at

the provincial and district levels. At the district level, ISPO implementation institutions should have accompanying staff. Because the leaders of the ISPO Committee are the Minister of Agriculture and the Secretary is the Directorate of Agriculture, the institutional implementation of PSR and ISPO can be synergized to achieve the PSR program and implementation of certification organized under one roof, especially at the regency or at all levels.

3.1.6. Provision of assistant personnel

Strengthening the institutional implementation of ISPO and the PSR program will be successful if there is support from the assisting staff. The decision makers' assumption that oil palm farmers have been empowered is incorrect. The empowerment of smallholder oil palm farmers, especially the independent ones, is relatively weak. It is characterized by low compliance with ISPO standards [15]. Therefore, there should be an empowerment approach and mentoring to improve the empowerment of independent oil palm smallholders. The companies that will assist independent smallholders must have met ISPO standards and be ready to take part in certification. They must also have three years of assistance experience. Barani [55] stated that accelerating ISPO certification requires good support from plantation assistants. If the assistants only rely on companions from the company, their number and reach will be very limited. Therefore, it is the obligation of the government which requires ISPO and has received Export Levy (PE) and Export Duty (BK) as well as other levies originating from palm oil to provide accompanying personnel who play a dual role in accompanying the PSR and ISPO programs.

3.1.7. Strengthening growers' institutions

This aims to strengthen the institutional implementation of ISPO at all levels. There should be support from the field assistants, so the priority is strengthening the farmers' institutions. The main weakness of independent oil palm farmers that cannot meet ISPO standards is weak farmer institutions [15]. Pandiangan [56] cited the opinion of Professor Dr. Nagata Junji from the University of Tokyo, Japan. He suggested strengthening farmer institutions. The weak bargaining position of independent oil palm farmers is due to the weakness or absence of institutions among them. There must be good support for independent smallholder institutions. This is something that distinguishes

oil palm farmers in Indonesia from those in Malaysia. Hadi [17] stated that only 20% of independent oil palm farmers in Riau Province are members of farmer institutions such as farmer groups or cooperatives. Meanwhile, the remaining 80% have not joined any institutions. Sabinus [57] researched the implementation of ISPO certification among independent oil palm farmers in Sanggau Regency. They found that independent oil palm smallholders have not been yet in groups and have not received any guidance.

Most independent oil palm farmers have not joined any institutions. They might face many problems in fulfilling ISPO standards. Most ISPO standards' fulfillment is related to the farmers' institutions. On the other hand, in oil palm plantations there are only very limited numbers of PSR program assistants (2 – 3 people per district) so they are unable to reach the scattered independent oil palm smallholders to make them join in an institution. Strengthening farmer institutions can start by strengthening ISPO organizing institutions and synergizing with the PSR program, especially at the district level. There must be support from sufficient numbers of assistants (at least one personnel per sub-district) and some professionals. The ISPO organizing institutions at the regency level supported by professional personnel can empower independent oil palm grower institutions to meet ISPO standards.

3.1.8. PBS/PBN empowerment in ISPO certification

In smallholder oil palm plantations, there are only twenty plantations with ISPO certification as of March 31, 2021 [14]. Many large private plantations support all ISPO-certified smallholder oil palm plantations. PBS and PBN participation can further develop by taking advantage of Corporate Social Responsibility (CSR) and a 20% obligation to build plantations for the local communities. The obligations of plantation companies (PBS/PBN) in implementing CSR and the obligation to build community plantations must focus on implementing ISPO certification assistance by PBS/PBS. ISPO organizing institutions can play a role in coordinating the roles of PBS/PBN in assisting farmers with ISPO certification based on their respective duties.

The area of PBN and PBS in 2022 is 9.00 million hectares [1]. Thus, the community oil palm plantations built and supported by ISPO standards must be at least 1.8 million hectares. If the PSR program can carry out rejuvenation of 2.41 million hectares and development by PBS/PBN of 1.8 million hectares, the total area of smallholder oil palm plantations ready to be certified will be 4.21 million hectares or 65.99% of the total area of smallholder oil palm plantations.

3.1.9. Development of a specific model for accelerating ISPO certification

After rejuvenating parts of oil palm plantations through the PSR program, PBS/PBN will take part according to their obligations. The government (in this case, the ISPO committee from the central to regency level) can focus more on developing the remainder, namely smallholder oil palm plantations that cover an area of 2.17 million hectares. The farmers' groups whom PSR and empowerment by PBS/PBN do not yet assist are those with relatively low empowerment levels. Therefore, there should be more specific treatment to achieve ISPO certification. There must be the development of a model for independent palm oil farmers in this group so that ISPO certification can be accelerated and reach the lowest independent palm oil farmers.

Based on the ISPO certification assistance model by large private companies and the Malaysian Sustainability Palm Oil (MSPO) model, Hadi [15] recommended a specific model for accelerating ISPO certification, i.e. the farmer empowerment model. In this empowerment model, ISPO certification institutions are closer to farmers (at least at the district level) and it does not assume that farmers are empowered to certify their oil palm plantations, when actually they are powerless. Strengthening the empowerment of independent oil palm farmers to carry out ISPO obligations goes through intensive assistance by assistants available at ISPO certification institutions in synergy with PSR companions.

3.1.10. Strengthening the good palm oil campaign

The "Good Palm" campaign comes from the support of BPDP-KS, the Coordinating Ministry for the Economy, and the Ministry of Communication and Information. After running for almost three years, the campaign is popular on social media channels. It has been successful in boosting the people living around the palm oil industry, one of which is oil palm farmers [58]. The healthy palm oil campaign also needs to expand to micro, small, and medium enterprises (MSMEs) [59]. The most important groups for the good palm oil campaign are educational institutions (from kindergartens to universities). This will make the the young generation who are the future successors of the Indonesian nation understand that palm oil is good. If all elements of this nation agree that palm oil is good, it will have a very positive influence on the the oil palm selling rates. Barani

[55] stated that the widespread campaign for good palm oil with positive campaigns has led to the acceptance of ISPO as a sustainability standard.

3.1.11. Providing incentives

Even though ISPO certification is mandatory by Presidential Decree number 44 of 2020, the only magic word is “mandatory.” Thus, all independent oil palm farmers must be able to fulfill their obligations to certify their plantations. Independent oil palm farmers are facing more problems than plasma coconut growers but have received less guidance from the government. They build the plantations independently. After the production period, they must still be subject to many levies like Export Levy (PE) and Export Duty (BK). When fertilizer and herbicide prices increasing more than double, or FFB prices fall in 2022, the government did not apply necessary policies, except slightly reformulating existing rules such as zero export levies. Regarding the ISPO certification obligation, there has been no meaningful action, including funding assistance for certification as promised in Presidential Decree number 44 of 2020 and Minister of Agriculture Regulation number 38 of 2020.

Pramudya [19] explained some incentives that cover various aspects, namely land legality, farmers’ managerial and institutional capacity, implementation of Good Agricultural Practices (GAP), and financial requirements to implement ISPO standards. These incentives are not only for the farmers. They also aim to improve coordination among institutions, certification administering institutions, and local institutional capacity. Providing good incentives will help farmers meet legal requirements and production gaps and increase access to markets and finance. Providing incentives for independent oil palm farmers who will, are currently, and have fulfilled their obligations to certify ISPO may include expanding the plantation land certification program through the Complete Systematic Land Registration (PTSL) program, training, and assistance to strengthen farmer institutions and allocation of subsidized fertilizer and premium FFB prices for ISPO certified farmers.

3.1.12. ISPO and RSPO certification collaboration

Voluntary RSPO certification has previously been implemented by providing incentives to farmers who successfully sell RSPO-certified sustainable palm oil to international buyers via the PalmTrace RSPO trading platform. RSPO [60] stated that in 2022, 2,295

independent palm oil smallholders from four farmer associations in North Sumatra and Riau succeeded in selling RSPO-certified sustainable palm oil and received around IDR 11 billion or the equivalent of USD 732,453 from the transactions. This incentive provision for RSPO has not been applied to ISPO certification. For PBS, whose partners are RSPO-certified palm oil farmers and suppliers of FFB for their PKS, there is added value if they get supplies from RSPO-certified farmers. Their processed products can go to the countries that require an RSPO certificate. At the same time, PBS can build a better image.

One way of PBS for assisting oil palm farmers is by obtaining RSPO certification followed by ISPO certification. When palm oil products go to countries that require RSPO certification, ISPO certification will also be included. This situation provides an advantage to familiarize the consumers with ISPO certification equivalent to RSPO. Therefore, many experts have recommended bringing ISPO principles, criteria, and indicators closer to RSPO. Another supporting aspect is the existence of RSPO and ISPO certification agencies and auditors who are generally the same.

3.2. ISPO certification acceleration institution

3.2.1. ISPO certification institution

Presidential Decree Number 44 of 2020 concerning the sustainable palm oil plantation certification system has regulated the ISPO certification institution (Figure 3). The Coordinating Minister for the Economy with the daily Chair of the Minister of Agriculture leads the steering committee. The members are the Minister of Environment and Forestry, Minister of Agrarian Affairs and Spatial Planning, Minister of Trade, Minister of Industry, Minister of Home Affairs, and Head of the National Standardization Agency. The ISPO Steering Committee has the task of establishing general policies in the ISPO system and mechanism, supervising and evaluating ISPO policies, and determining the membership of the ISPO committee [61].

The Coordinating Minister for the Economy is the chairman of the steering committee and has issued the Minister of Economy Regulation number 257 of 2020 concerning the Sustainable Palm Oil Plantation Committee. The ISPO Committee is chaired by the Minister of Agriculture with the Deputy Chair for Food and Agribusiness Coordination. The secretary is the Director General of Plantations. The members of the ISPO Committee are Directors/Deputy Ministers of the Steering Committee. Representatives of business

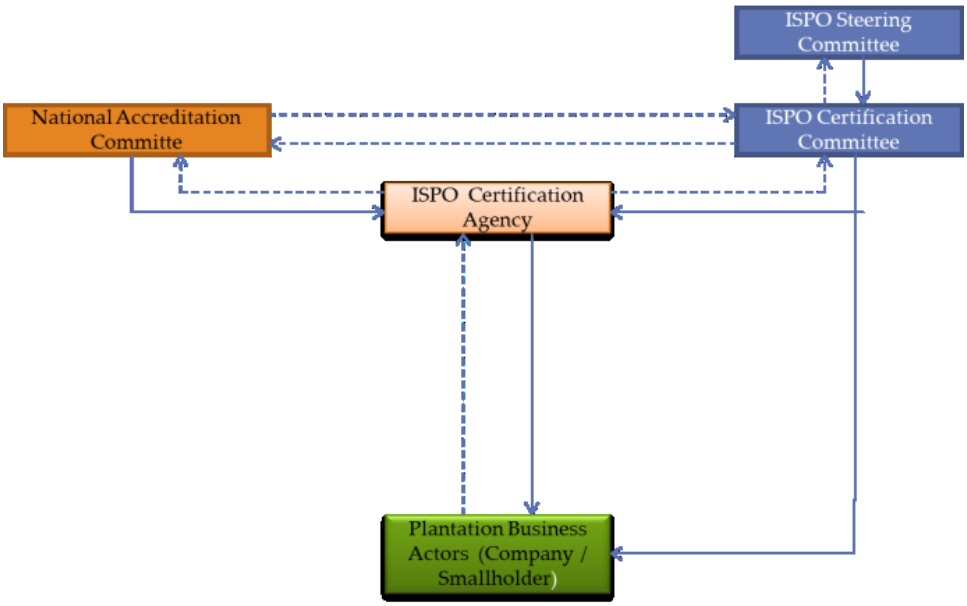

Figure 3: ISPO certification institution.

actors are the Chair of the Indonesian Palm Oil Entrepreneurs Association (GAPKI), the General Chair of the Indonesian Vegetable Oil Industry Association (GIMNI), the Chair of the Indonesian Palm Oil Farmers Forum Association, the Chair of the Sustainable Strategy Development Forum, and the Director of the Indonesian Ecolabel Institute. The academic element in the ISPO Committee is Dr. Ir. Harsawardana, M.Eng., and Dr. Ir. Arya Hadi Dharmawan. The ISPO Committee has seven functions, namely: (1) outlining general policies in the management and implementation of Indonesian Sustainable Palm Oil Plantations established by the Plantation Steering Committee as operational policies, (2) developing principles and criteria for Sustainable Palm Oil Plantations, (3) developing assessment standards for each level of compliance with the principles and criteria of Indonesian Sustainable Palm Oil Plantations, (4) developing requirements and certification schemes, (5) evaluating the oil palm plantation certification system to maintain good plantation governance, (6) developing a system information on Indonesian sustainable palm oil plantation certification by implementing data sharing and integrated electronically, and (7) coordinating with ministries, institutions, regional governments and other parties deemed necessary in managing and implementing Sustainable Palm Oil Plantation certification in Indonesia.

When the ISPO certification institution was first established (especially the ISPO Committee from August 20, 2020 to August 2023), there was no systematic movement by the ISPO Committee to empower plantation business actors, especially smallholder oil palm plantation businesses in facing the era of mandatory ISPO certification. There

were only a few smallholder farmers who have been ISPO certified. As of March 2020, 14 ISPO-certified smallholder plantations were covering an area of 12,270 hectares [4]. It only increased to twenty certificates in March 2021 [14] and 32 certificates in 2022 [62]. At the end of 2022, there are only 32 certificates for smallholder oil palm plantation institutions. All of them are accompanied and financed by large plantations, and almost none reflects the real work of the government through the ISPO Certification Committee or Regional Governments. In Riau Province, there are two patterns of large plantation partnership models in empowering smallholder plantations to obtain ISPO certification.

The first model is an intensive partnership implemented by the Pelalawan Siak Independent Palm Oil Farmer Association and the Rokan Hulu Independent Palm Oil Farmer Association by PT Season Mas. The second one is a semi-intensive model as applied in Gapoktan Manunggal Sakti, Gapoktan Pandan Jaya, and Poktan Setia Rukun accompanied by the Indonesian Palm Oil Farmers Association (Apkasindo) and funding by large plantations, namely PT Blooming Core Diamonds. These two partnership models also get some lessons from Malaysian Sustainable Palm Oil (MSPO) certification in Malaysia.

3.2.2. Learning models

3.2.3. Large plantation intensive partnership model

PT. Musim Mas and the International Finance Corporation (IFC) developed the Indonesian Palm Oil Development Finance Corporation to encourage and empower independent palm oil farmers to obtain RSPO and ISPO certification. The smallholder oil palm plantation business empowerment by PT. Musim Mas, like the Pelalawan Siak Independent Palm Oil Farmer Association, has covered twelve villages in the Pelalawan and Siak Regencies since 2017. To support and empower independent oil palm farmers, PT. Musim Mas and IFC prepared twelve trained assistants to strengthen groups or institutions and provide training and mentoring to fulfill ISPO and RSPO standards. From 2017-2022, there has been intensive assistance to independent oil palm farmers by holding meetings almost every week. In 2020, the assisted villages covering 367 farmers applied for and received RSPO certificates.

One year later, in 2021, the assisted villages including 318 independent oil palm farmers applied for and obtained ISPO certificates. Assistance by PT Musim Mas does not stop until the RSPO/ISPO certificate is received but continues to assist post-certification.

PT Musim Mas provides post-RSPO/ISPO certification assistance with three personnel by holding meetings almost every two weeks to assist farmers in maintaining compliance with the RSPO/ISPO standards. Every year, the survey institute that issues the RSPO/ISPO certificate carries out a re-audit (surveillance).

3.2.4. Semi-intensive partnership model of large plantations

The semi-intensive partnership model applies to the farmers in the Smallholders' Palm Oil Rejuvenation Program (PSR) financed through the Palm Oil Plantation Fund Management Agency (BPDP-KS). The smallholder oil palm plantations participating in the certification program through this model include Gapoktan Manunggal Sakti, Gapoktan Pandan Jaya, and Poktan Setia Rukun. In the PSR program, they get assistance from Apkasindo with off-taker PT Blooming Core Diamonds. After the oil palm plants have been two years old, PT. Berlian Inti Mekar agreed to provide assistance to finance ISPO certification. The assistance by PT Both Berlian Inti Mekar and Apkasindo runs sparingly or semi-intensively. Both institutions assist if the Gapoktan/Poktan (farmer groups) experience problems in preparing ISPO certification. The two accompanying institutions provide almost no training or assistance like PT Musim Mas does. At the beginning of 2021, Gapoktan Manunggal Sakti, Gapoktan Pandan Jaya, and Poktan Every Rukun got facilitation and financial support from PT. Berlian Inti Mekar for ISPO certification. On February 21, they received the ISPO certificate.

3.2.5. MSPO model Malaysia

In Malaysia, Malaysian Sustainable Palm Oil (MSPO) certification for smallholders has been mandatory (mandatory) since January 1, 2020. The institution assigned by the Malaysian Government to organize MSPO for small plantations is the Malaysian Palm Oil Board (MPOB). Previously, they got a task for an oil palm rejuvenation program for small farmers in Malaysia. In MSPO certification for small oil palm farmers, the Malaysian government has budgeted RM 130 million or the equivalent of IDR 429,130,000,000 [63]. Small oil palm farmers having oil palm plantations of less than 40.46 hectares (100 acres) will receive incentives in the form of free certification fees, MSPO-related training, chemical storage, and other equipment.

The initial step taken by MPOB is that all small plantations, both individual (swadaya) and organized (partnerships), must register for MSPO certification before December

31, 2020. This announcement has been disseminated through various media such as YouTube videos. Thus, the small farmers could know this important information. In registering for MSPO certification, the farmers should bring three types of files to MPOB, namely: (a) Identification Card (KTP), (b) Copy of MPOB license (STDB equivalent), and (c) Copy of Estate Gran (Land Certificate). If they do not register, the growers will get punished by canceling their MPOB license. Those who register with MPOB are given form A for the Mampan Malaysia (MPOB) palm oil certification application for further auditing by the designated institution.

In this MSPO certification, MPOB is responsible for assisting farmers in providing documents, training for sustainable palm oil clusters (SPOC), and teaching sessions. In serving farmers, MPOB provides 54 Palm Oil Teaching and Advice (TUNAS) offices throughout Malaysia to help them with MSPO certification. when they are ready to be audited, the MSPO certification audit runs through a certification body accredited under Jabatan Standard Malaysia. The Malaysian Palm Oil Certification Council (MPOCC) appoints the certification body [64].

In the MSPO certification model for small farmers in Malaysia, the fully assigned institution is MPOB, supported by 54 offices spread throughout Malaysia. MPOB assists the farmers with registration, training, file preparation, and others. Thus, the farmers are ready for audits. In June 2022, MPOB claimed to have succeeded in assisting almost all (100%) of the plantations of structured oil palm farmers (Felda/partnerships) to obtain MSPO certification [65]. There are 232,601 farmers with MSPO certificates covering an area of 673,512 hectares. There are 174,347 private (swadaya) farmers successfully assisted by MPOB to obtain MPOB certificates, covering an area of 621,269 hectares. The latest data for November 2022 showed that the individual oil palm plantations that have received MSPO certification have increased to 696,319.19 hectares, and structured plantations have increased to 784,205.48 hectares. Data on certification status and MSPO achievements can be accessed by all parties at https://mspotrace.org.my/.

3.2.6. Institutional model for accelerating ISPO certification

The ISPO certification mandated in Presidential Decree Number 44 of 2020 and Minister of Agriculture Regulation Number 38 of 2020 should not only apply to large plantations or non-governmental organizations (NGOs) or be carried out independently by independent smallholders. The government has issued mandatory ISPO regulations for all plantation businesses, including independent oil palm plantations. They must

also directly assist those having low ability to fulfill ISPO requirements. Therefore, the ISPO certification institution should be improved to actively empower independent oil palm smallholders. The Intensive Partnership Model for Large Plantations and the Semi-Intensive Partnership Model for Large Plantations must develop and expand in better directions. The government's role in assisting independent palm oil farmers to fulfill ISPO certification obligations must be dominant. They should not only rely on other parties. The government has so far benefited more from the existence of the palm oil industry, and some contributions come from independent palm oil plantations.

In Malaysia, the MSPO certification assignment goes to MPOB, which is also responsible for the rejuvenation program. In Indonesia, there are also PSR Teams at every level. Therefore, the certification process can run effectively, efficiently, and professionally. Meanwhile, at the same time, it can also overcome the weaknesses of the institutional model for ISPO certification that does not exist at the provincial and district levels. The model for accelerating the implementation of ISPO aims to synergize the PSR program with the ISPO Certification Institution (PSR-ISPO Synergy Model). These two institutions have aligned goals so that they can use resources collectively, including the assignment of field assistants to empower plantations both for rejuvenation and to assist growers in meeting ISPO standards. In short, at the regency and provincial levels, the PSR Team and ISPO Team are under one management, supported by sufficient quantity and quality of personnel and adequate funding from funds collected by BPDP-KS.

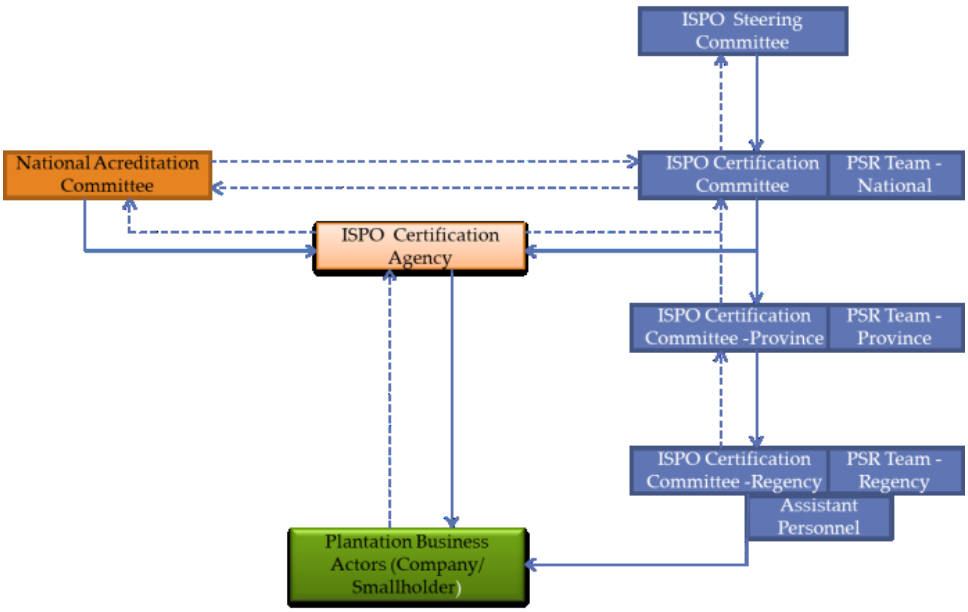

Figure 4: ISPO certification acceleration model.

The institutional model for accelerating ISPO certification 'PSR ISPO synergy' at the provincial and district levels can play three roles. First, the model can assist PSR participants to be ready for certification. If the PSR runs according to the target covering an area of 2.41 million hectares, then smallholder oil palm plantations certified by ISPO (Large Plantation Semi-Intensive Partnership Model) will also cover an area of 2.41 million hectares or 37.77% of the total smallholder oil palm plantations. Second, it can coordinate and facilitate PBS/PBN to take the maximum role in assisting the farmers in fulfilling ISPO obligations. PBS and PBN participation can further improve by emphasizing the obligation of 20% to build plantations for the local people. If the area of PBN and PBS in 2022 is 9.00 million hectares [1], then the smallholder oil palm plantations' area built and supported by ISPO standards should be at least 1.8 million hectares. The intensive and semi-intensive partnership models can accompany the ISPO certification of smallholder plantations covering an area of 4.21 million hectares (65.99% of the total area of smallholder oil palm plantations). Third, the 'PSR-ISPO Synergy Team can focus on assisting smallholders in smallholder oil palm plantations covering an area of 2.17 hectares (the remaining area of assistance in the Intensive and Semi-Intensive Partnership Model for Large Plantations). If the role and function of the PSR-ISPO Synergy Team can run well in a trustworthy manner, the smallholder oil palm plantations, including the independent ones, can carry out their obligations to certify their oil palm plantations.

Another concern for ISPO organizers at the central and regional levels is understanding the obstacles and limitations of independent oil palm smallholders in fulfilling ISPO standards. Accelerating ISPO certification in independent oil palm plantations will be more effective if ISPO certification is not solely due to obligation but from awareness supported by incentives for the growers who will, are currently, or have achieved ISPO standards. If the farmers with RSPO certificates receive RSPO credit through the PalmTrace RSPO trading platform, there should be adequate incentives for those holding ISPO certification. The incentives include premium FFB purchase prices, subsidized fertilizer allocations, and easy access to certification funding as mandated in the Presidential Decree.

4. Conclusions

Accelerating ISPO certification can be successful by accelerating the implementation of the PSR program, strengthening ISPO implementation institutions, and assistance from

the staff to support the ISPO implementation institutions. Strengthening the institution for organizing ISPO and providing field assistants can be synergized with institutional strengthening, providing PSR assistants, or becoming a joint institutional organization for PSR and ISPO by utilizing the same field assistants. A strong ISPO organizing institution supported by an adequate number and quality of field assistants will be able to carry out strategies to strengthen smallholder institutions, which are the weak point of independent smallholders. A strong ISPO organizing institution supported by companions is also able to carry out PBS/PBN empowerment strategies to further participate in helping independent oil palm farmers in ISPO certification and carry out development strategies and implement certain models, namely farmer empowerment models that are in accordance with the requirements that oil palm farmers must be independent or able to take ISPO certification. If the strategy to accelerate the PSR program and the PBS/PBS empowerment strategy in providing ISPO assistance to independent oil palm smallholders can run optimally, then the land coverage of independent smallholders who are empowered and ready to be ISPO certified will be around two-thirds of the area of smallholder oil palm plantations. The ISPO certification acceleration model is the PSR – ISPO collaboration model. ISPO institutions are recommended to be established in every province and district. The PSR Team and the ISPO Committee Team need to collaborate, be under one roof and with one management so that they can jointly use the accompanying resources and receive funding from BPDP-KS.

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