

Socio-economic development of palm oil smallholders in Malaysia



Junaidi Awang Besar^{1,*}, Mohd Fuad Mat Jali¹, Ahmad Rizal Mohd Yusof², Al-Amril Othman¹, Rosmadi Fauzi³

¹Faculty of Social Sciences and Humanities, The National University of Malaysia, Bangi, Malaysia

²Institute for Ethnic Studies, The National University of Malaysia, Bangi, Malaysia

³Faculty of Arts and Social Sciences, University of Malaya, Kuala Lumpur, Malaysia

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ABSTRACT

Malaysia is the world's second-largest producer, and a major exporter, of palm oil commodities. Making up to 46.9% of Malaysia's GDP in an agricultural contribution for the year 2015, palm oil commodity has also increased rural farmers' earnings, and a majority has succeeded in getting out of poverty. This article aims to analyze issues and suggestions for strengthening the socio-economic development of palm oil smallholders through our case study in the state of Terengganu Darul Iman. Realistically, this study used face-to-face interview methods and secondary references to obtain raw data and information. Then both data and information will be qualitatively analyzed. Finding has shown ten issues confronted by oil palm smallholders such as the technique used to cultivate the oil palm, their awareness of latest technology in oil palm, lack of capital, low wages in oil palm commodity, transportation, subsidies by the government, labor problems in the fields, inconsistent prices of an oil palm, pestilence and its diseases. To overcome these issues, this study has made some recommendations to strengthen the socio-economic development of palm oil planters through advisory, exhibition, inspection to oil palm fields, and other efforts such as downstream crops.

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1. Introduction

Palm oil commodities are one of the most important agricultural assets in Malaysia. This plant is high in durability, easy to monitor, and produces continuous crops. However, the quality of oil palm plantation depends on the commitment and discipline of planters to ensure that the cultivation of these commodities can produce fruitful results. The authorities responsible for managing and monitoring the plantation activity of palm oil, particularly the Malaysian Palm Oil Board (MPOB), has done well to ensure that oil palm planters are able to cultivate oil palm in the right and best manner, especially in terms of the cultivation and marketing of coconut palm. In cultivating this palm oil plant, there should be various issues or problems, different from the area and the planters themselves. This initiative must be managed well to ensure that all parties participating will benefit from working on the palm

oil plant. Hence, these issues need to be dealt with in order to ensure that the output of palm oil yields will further enhance the socio-economic development of the planters and the country. Hence it is the purpose of this article to further analyze the issues and suggestions for the stabilization of the socio-economic development of oil palm smallholders by making the state of Terengganu Darul Iman, Malaysia, as the case study area.

2. Background of industrial development of palm oil in Malaysia

Palm oil or its scientific name *Elaeis Guineensis* comes from West Africa. The industry started when the first palm oil entered the country through Singapore's Botanic Garden, in 1870, but the first commercial cultivation did not start until 1917 (Choo et al., 2015; Kushairi and Parveez, 2017) First planting experiment by Department Agriculture was in Batu Tiga, Selangor in 1903 but this was not followed in 1922, the pollination effect was planted at a distance of 30 feet. The results showed that there was an increase in yields up to 5 times that control was obtained with the help of pollination. It is interesting to note that the present invention still has value, and today, pollination is assisted and practiced by many farms.

* Corresponding Author.

Email Address: jab@ukm.edu.my (J. A. Besar)

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Corresponding author's ORCID profile:

<https://orcid.org/0000-0003-1521-6827>

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The cultivation of oil palm in Malaysia was introduced by the government, which was aimed at eradicating poverty among the populations, especially in rural areas. In the 1960s, the Federal Land Development Authority (FELDA) opened new lands that were intended to be explored and transformed into oil palm estates. Development in the palm oil industry is particularly impressive with emphasis on research to produce new methods of cultivation technology, quality seed production, and the creation of new palm oil-based products. The government has also set up several agencies responsible for matters related to palm oil. Department of Agriculture Malaysia, established in 1912, is tasked with implementing agricultural policies outlined by the government. The Federal Land Development Authority (FELDA) is set up to coordinate the opening of new lands while the Malaysian Palm Oil Research Institute (PORIM) works to focus more on R & D efforts and further increase production. The palm industry is a pillar of the Malaysian economy and plays an important role in supplying food and energy to the growing global population. Palm oil is a productive crop and multi-purpose palm oil that plays an important role in investment, research, and technical promotion.

The Malaysian Palm Oil Board (MPOB) is the first government agency entrusted to serve the country's palm oil industry. Its main role is to promote and develop the nation's goals, policies, and priorities for the well-being of the Malaysian palm oil industry. It was established by the Parliament Act (Act 582) and was established on 1 May 2000, taking over, through the merger, a function of the Malaysian Palm Oil Research Institute (PORIM) and Palm Oil Registration and Licensing Authority (PORLA). Each of these organizations has been involved in the palm oil industry for more than 20 years, and it is to provide more effective services as well as to focus on larger and larger national and international industries that the MPOB has started. MPOB is financed primarily from cessation imposed on the industry for every tonne of palm oil and palm kernel produced. In addition, MPOB receives budget allocations from the government to finance development projects and approved research projects under the Program's Focus on Priority Areas (IRPA) program. The MPOB Policy is as follows:

1. To adopt a strong market, industry-oriented research, and development programs.
2. To conduct technology transfers and commercialize aggressive research results.
3. To establish an active partnership in the development of technology and the joint use of the private and public sectors.
4. Strengthen international relations and research collaboration in selected areas.
5. To increase global awareness, appreciation, and demand for palm oil and Malaysian palm oil products.

The MPOB function in the palm oil commodity industry is as follows:

1. Implement development policies and programs to ensure the viability of the Malaysian palm oil industry.
2. Conduct and promote research and development activities related to the oil palm industry.
3. Regulate, register, coordinate, and promote all activities related to the oil palm industry.
4. Develop, promote, and commercialize research findings and provide technical services, advice, and consultation to the oil palm industry.
5. Develop and maintain a market for oil palm products and promote efficient marketing.
6. Connect and coordinate with other organizations within or outside Malaysia to further enhance the Malaysian palm oil industry.
7. To plan and implement human resource training and development programs in line with the needs of the oil palm industry.
8. Be a resource center and information for the palm oil industry, including the publication and dissemination of information on palm oil as well as other oils and fats.

Board members comprising Chairman, representatives from government and industry, and Director General of MPOB are appointed by the Minister of Plantation Industries and Commodities. The Board plays a leadership role in giving direction to the organization. Several committees serve the Board in the following areas: Research (Advisory Program), Finance and Development, Tender, Establishment, Registration and Licensing, and Audit. The Program Advisory Committee comprised of leading scientists and experts from Malaysia and abroad annually reviews and makes recommendations on research activities for Board considerations.

Growth in the upstream sector has an impact throughout the chain, and MPOB as a driver to the Malaysian palm industry continues to prioritize research and services to enhance the overall value of the palm oil chain and face challenges of development and sustainability issues. MPOB undertakes various strategies to maximize economic development and environmental care and ensures that future growth is carried out in a sustainable framework. In line with the mission "To enhance the well-being of the Malaysian palm industry through excellent research, development, and service," MPOB plays a major role through involvement in science, technology, and innovation.

In rural areas, there are about 18,000 smallholders of oil palm. The government itself has channeled RM29 million to the Smallholder Income Improvement Program so that this sector will continue to thrive and its production can grow smoothly. As a result of this, we can see how much the government seeks to build and improve in the agricultural sector.

3. Literature review

Oil palm plantations involve planting in unexplored areas. The original forest or virgin forest needs to be cleaned first before planting the oil palm. Palm trees can grow up to 24 meters in height, and they live in tropical climates with average rainfall between 2,000 to 2,500 millimeters per year. Palm trees can be grown on lowland and in undulating areas from a height of 0 to 500 meters above sea level.

In terms of the labor and oil palm industry in Malaysia-Indonesia territory, there are about four million workers working in the sector with owners or smallholders. Of these four million, 2.5 million are foreign laborers from Bangladesh, Myanmar, Thailand, the Philippines, and the majority being from Indonesia (working in the palm oil sector in Malaysia). In Malaysia, labor from foreign countries, especially from Indonesia, mostly works in oil palm plantations, which are well-managed smallholders, namely FELDA and FELCRA (Cramb and McCarthy, 2016).

Living sustainability is an approach synonymous with efforts to eradicate poverty. This approach focuses on human strength to lead a more meaningful life without undermining the rights and needs of future generations. The livelihood approach, through a directly designed development process, can enhance the sustainability of sustainable livelihoods. The ability to acquire life assets through their strengths will create a perfect life, including various aspects of life (Hill, 2013; Teoh, 2013; Ibrahim and Siwar, 2017). A sustainable life analysis approach can be used for poverty eradication studies. This approach provides a holistic framework for assessing the direct and indirect impacts of life assets and strategies on the outcome of a person's life. Sustainable life analysis approaches arise from the context of rural development and have undergone changes through three types of thinking since the 20th century, population and technology models, agricultural development, and political-economic theory (Ellis, 1998).

Agricultural equipment assistance programs are considered as complementary to various development projects under the land development program, particularly the agricultural projects undertaken. One of the goals of government development is to create a modern farming community. Hidayat (2006) used the model output input output model of Leontief and Miyazawa Model to look at the Riau region's economic structure, palm oil plantation linkages with other sectors, and regional autonomy impact on oil palm plantation performance.

Pye (2009) discussed the recent palm oil expansion as multiple crises of climate change, biodiversity loss, and (failed) development. It draws on recent research on the Malaysian "Palm Oil Industrial Complex" and on transnational campaign coalitions around palm oil to explore the

transnational dimensions of the palm oil crisis. It argues that a new campaign coalition around the issue of agrofuel policies in the European Union has emerged that links social and environmental struggles in Indonesia and Europe. Abdullah et al. (2015) described that compliance with regulatory and voluntary standards is one of the most important elements of sustainability in palm oil production. The findings showed that the compliance to regulatory and voluntary standards for Malaysian palm oil production could improve the main elements of sustainability like environmental, social, and economic performance. Besides, the goal of economic performance could also be achieved by increasing social and environmental performance.

Bullinger and Haug (2012) explained that the 'big bang' decentralization reforms Indonesia embarked upon in 2001 went along with a decentralization of the forestry sector. Findings are based on field studies conducted in two villages using ethnographic methods. Under decentralized forest governance, unclear functional competences and overlapping authorities of the central and local governments triggered a logging boom that increased inter- and intra-village conflicts, exacerbating inequality, and leading to further deforestation.

Bryan (2013) explained that often smallholder production is associated with a lack of awareness of technology, good practices, and financial problems. But for North (2005), the interaction between social interactions can also be a factor that hinders the smallholders' efforts not to improve their output. Consequently, for informal source analysis, there are several factors that have become contraindications for landowners to work hard to cultivate their gardens. Cramb (2016) noted that the large-scale development of the palm industry could shape a large and robust political-economic scenario through government-to-government cooperation with large companies that could improve the socio-economic status of the state and local communities.

Heis (2015) describe it starting with an outlook on how the food regime plays out in the Thai context, the author goes on to elaborate its critical aspects fundamental for a food sovereignty critique: growing concentration of power on the side of transnational corporations, exploitative relations of production in agro-industry, and devastating effects for nature, small-scale producers, and increasingly also for consumers. In Northeast Thailand, the Alternative Agriculture Network Isan (AAN Isan) is struggling to secure income and subsistence agriculture for its members.

Vos (2016) showed that the conflict occurred in the preparatory phase of a large-scale plantation before any oil palms were planted. Using a functional analysis of property relations, the article shows that people value multiple functions of land, including food security, income security over generations, flexibility to respond to crises and opportunity, and the ability to retain autonomy and identity as farmers.

Junaidi et al. (2016) explained that the indigenous youths from Kampung Orang Asli Sungai Mai have a great interest in the activities of the oil palm plantations in their village. However, proper job training and supervision, as well as motivation, are to be provided to this group of Orang Asli youth so as to inspire these young people to reach their full potential. Thus, the role of all parties, including the agency in connection with the cultivation and marketing of the oil industry, is important for the economic empowerment of Indigenous youth so that they can go forward together with other ethnic groups in the country. Begum et al. (2016) described that the summit of the supported smallholders has zero and negative knowledge and consciousness towards the environment consistent at that location that is in keeping with best agricultural practices where as other schemes were not scrutinized in the study.

Sciortino (2017) explained that in a region undergoing rapid and unequal economic growth, accumulated wealth is increasingly being used to ameliorate the underprivileged conditions of those lagging behind. In spite of the uncertain fiscal and legal environment, home-grown philanthropy is flourishing compounded by cultural traditions, religious aspirations, and corporate interests. Hafizuddin-Syah et al. (2018) explained that the profitability of firms with a sustainability certification is almost 2% higher than firms without certification.

Junaidi and Yew (2018) described that the perception or mindset of the Orang Asli youths negatively impacted on the cultivation of land for palm oil in their area. They also stated that income from palm oil was not high compared to the hard work that they put in cultivating the crop. Additionally, the influence of friends has caused them not to be eager to work on the crop. Furthermore, their parents did not motivate them to cultivate oil palm, and they view that their parents will bear their lives as long as they live with their families. Therefore, all parties whether the youths themselves, family members, parents, village authorities as well as the authorities should play their role in renewing the spirit and reviving the culture of the Orang Asli youths so that they can advance their lives from now on to the end of their lives as life has to continue and full of challenges that are to meet the needs and wants, the life of the family, displaying the best lifestyle and living with more confidence and enthusiasm.

4. Methods and studies area

This initial study uses in-depth face-to-face interview methods for MPOB and oil palm smallholders in Terengganu Darul Iman, Malaysia, and secondary references to printed materials and related online resources. State of Terengganu Darul Iman is one of the states located on the East Coast of Peninsular Malaysia. It is located between the longitude 102.25 and 103.50 and line 4 from 5.50. In

the south and southwest, it borders Pahang. The current state of Terengganu is about 1,295,638.3 hectares. Its coastline extends 225 kilometers from the North (Besut) to the South (Kemaman). Prior to 1947, there were nine districts in Terengganu; Kuala Terengganu, Kemaman, Kemasik, Paka, Dungun, Marang, Hulu Terengganu, Besut and Setiu. The inner states of Terengganu were reduced to six: Kuala Terengganu, Kemaman, Dungun, Marang, Hulu Terengganu, and Besut. Then on 1 January 1985, a new district of Setiu was formed and made it the seventh district in the State of Terengganu. Subsequently, on 18 September 2014, Kuala Nerus was formed and made it the eighth district. Every district is administered by the District Officer. The area is Kuala Terengganu 60,654.3 hectares; Kemaman, 253,559.9 hectares; Dungun, 273,503.1 hectares; Manggahan, 66,654.3 hectares; Hulu Terengganu, 387,463.6 hectares, Setiu, 130,436.3 and Besut, 123,367.8 hectares. There are two types of oil palm planters, namely private smallholders (under 100 acres) and estate estates (100 acres and over 40 acres). In the State of Terengganu, there are roughly 3,376 oil palm planters with a total area of 13,097.65 acres.

5. Issues in oil palm planting by palm oil smallholders

In cultivating oil palm cultivation, there are various issues or problems experienced by oil palm smallholders. Among the issues or problems experienced by oil palm planters in the state of Terengganu is the knowledge of oil palm smallholders on oil palm cultivation. Some oil palm smallholders in the state of Terengganu are interested and able to engage in oil palm cultivation but do not have the proper knowledge to ensure that the oil palm cultivation effort can produce high yields. First of all, in terms of cultivation method, there are a handful of these oil palm planters who plant palm trees in the form of a square, which will cause the number of trees that can be planted in minimal or limited conditions. Hence, farmers should plant palm trees in triangles that can ensure that the number of tree trunks can be planted close to the edge, especially the form of a rectangular garden and this will result in a greater number of palm tree trunks and thus can produce bunches and more palm oil seeds. The second issue of knowledge is in terms of fertilizer seeding method for oil palm. There are a handful of oil palm planters who sow exactly on the oil palm shrub. This is an incorrect tempering technique. In the case of mature or large palm trees, fertilizers should be sown on land that is located or along the edge of the palm leaves. This is because the root of palm oil fibers will grow or spread as far as the tip of the leaves or palm fronds, so the fertilizer should be sown at the top of the soil so that it can be absorbed quickly by the root of the palm tree fiber.

The second issue is in terms of oil palm planter attitude. The intention here is that there are some oil palm growers who want to gain fast and more but

ignore the quality of palm oil that will be produced. There are some palm oilers who pick up unripe or semi-cooked fruit and then fry and dairy to produce palm oil. The fermented fruit will produce little and low-quality palm oil. Oil palm planters should only cite and process bunches and cooked palm seeds only to ensure high and high-quality oil production. The fermented palm seeds will only produce 'lesser' seeds with less oil content. Palmers or villagers do not understand the purpose and method of picking or collecting the proper palm oil. Hence, palm oilers need to understand the choice of bunches or palm seeds that are ripe and appropriate to understand the question of 'quantity vs. quality' in order to produce quality palm oil. They should not just harvest palm oil based on 'heavy' bunches or palm seeds alone but on the basis of 'heavy' and 'quality' of palm oil that is the priority of all parties, including MPOB and palm oil producers.

The third issue is the lack of capital to plant, fertilize, poison, cut down the fronds, and collect revenue. In general, the cost of managing oil palm cultivation is recognized to be quite high compared to other commodity crops. Farmers are also said to be unable to follow the recommended spending recommendations by the MPOB. A fertilizer bag with 50 kg costs around RM 80 according to the age of the palm tree. Although oil palm is a tough commodity crop and is said to be easy to manage, however, the cost of its various operations begins with the need for a piece of land, seedlings, fertilizer, poultry, initial planting management, and revenue collection but the diversity of the operational aspects involves a sum rather than requiring a wise, disciplined and highly motivated financial management method or technique. Hence, palm oilers need to have the skills or financial management skills in the operation of oil palm cultivation; otherwise, the cultivation will fail to further harm the palm oil palm itself.

The fourth issue is the cheap wage. The meaning of wages here is the wages paid to the oil palm revenue collected. Wages for oil palm yields are 1 ton for prices ranging from RM 40 to 60 and can reach RM 80 per market price per day. For a month, palm oilers can collect the yield twice. For once, a harvest of 1 acre of land will get about 1 ton or 1000 kg of bunches and fruit of palm oil, but the current season of the gardeners can only be around 300 kg for a one-time harvest. One ton of palm oil will get around RM500 but not yet deductible for about RM 60 for oil palm wages, RM 40 for truck/transport wages, RM 80 for fertilizers, and RM 100 for 1 barrel/4 liter if the plant condition is not under review. The wage rate for oil palm farmers is still cheap compared to the cost of capital and net profit they will get. Hence, the farmers hope the price of palm oil can be increased in line with the rising cost of living today.

The fifth issue is the transport of palm oil. Palm oil transportation is important to ensure palm oil extracted from trees can be sent to the plant for processing for good and quality oil production. Farmers had to spend their own expenses high

paying for the cost of transporting palm oil to the plant for further processing. The delay in transporting palm oil will cause the palm oil to be damaged, and it is probable that the current market price will fall if the latter is sent to the factory for processing.

The sixth issue is the assistance/subsidy to oil palm smallholders. Such subsidies or subsidies include fertilizer subsidies, poisons, and palm seedlings. Most oil palm smallholders are from poor or low income. There are two types of smallholders, i.e., full-time and part-time farmers. For a full time, it is very much dependent on oil revenue. There is a part of a full-time oil palm planter who still needs subsidies or government aid. There are also smallholders who need to be fully assisted. Otherwise, they are forced to apply for a loan from a bank, especially the Agricultural Bank, or a loan from a licensed company or a certain individual. Hence, they need to be monitored and financially assisted, advisory, and guidance services in the cultivation of the oil palm. But most successful palm oilers are self-employed growers who issue their own capital for palm oil either through their own savings or bank loans.

The seventh issue is the problem of workers in the oil palm plantation. It is common to know that the work in the palm oil plant requires strong strength and endurance. Somewhat fewer teenagers or local youths who are interested in or 'capable' to engage in cutting trimmed, poisoning, and fertilizing works are then collecting oil products. Workers or laborers have to be hired from foreign migrants, namely from Indonesia and Bangladesh, but with low wage rates. However, if the absence of such foreign labor arises, there is a problem with the operation of the palm oil plantation. Hence, the authorities need to do something so that the problem of workers in the oil palm field can be overcome well and wisely.

The eighth issue is the uncertain palm price issue. This situation will make it difficult for the palm oil planters, especially those who are full-time gardening, to obtain results either for daily expenses as well as for capital rounds for palm oil for the next season. Palm prices should be increased and stabilized so farmers can cultivate oil palm plantations so that their efforts can consistently improve their standard of living and can also boost palm oil for people in the country.

The ninth issue is pest disturbance. Various risks have been encountered in the effort to safeguard palm oil crops, especially in terms of pest disturbance. Pest attacks are like pigs, caterpillars, and horned beetles. For example, a pig will damage the small oil palm plantation that is newly planted and still young. In the evening, the pig roamed around the area of palm trees and ate young shoots of oil palm. Therefore, the most effective method of controlling the attack of a pig is by installing an electric fence. Invasive caterpillars will damage palm oil crops. The caterpillar report will eat palm oil leaves so that the palm oil photosynthetic process does not occur. As a result, the fruits of palm oil will

not result. In addition, the insect bug attack will also damage the oil palm plant. The horned beetle is easily recognizable with its black and horny features. These animals will damage the young palm trees; the beetles will produce eggs at the palm oil. Then, the larvae will eat soft tissues on the surface of the shoots resulting in the process of growth of palm oil stunted.

The tenth issue is palm tree disease. Disease attack is also one of the risks faced by oil palm smallholders in its cultivation. There is a disease attacking the seed known as 'Brown Germ.' This disease impacts the seedlings to not germinate. Then, the disease will spread to the palm leaf area directly into the exposed palm leaf area, especially in the peat. In addition, there are two other types of diseases that always attack oil palm trees, such as root rot and degenerative diseases. Stem rot disease will attack palm trees that have been aged about 10 years old. The palm tree shoots will not germinate when the disease strikes. For the decayed decay disease, it will attack the palm trees that are about 1 to 3 years old and will cause the shoots to not germinate. As a result, the fruits of oil palm cannot be produced.

The eleventh issue is uncertain weather conditions. Prolonged summer will affect insects to breed more quickly. This will lead to more mature pests and will continue to lay eggs, thus increasing the population of this pest. In addition, in the event of natural destruction, such as floods, will damage the plant. As a result, landowners will have a huge loss.

The twelfth issue is palm theft. Palm oil yields many benefits. Thus, the risk of palm oil to be stolen is also high. Thieves can steal at any time, either in the morning or at night. As a result of the theft, they can sell and place high prices on buyers and profit without the hassle of trying. The conclusion, the small land acre will make it easier for oil palm owners to care for their crops.

6. Proposed stabilization of socio-economic development of palm oil smallholders

In order to address the issue or problem of oil palm cultivation, as discussed earlier, there are some efforts that can be made by the relevant parties. Hence among them are advisory services to smallholders of oil palm. Continuous advisory and monitoring are important to ensure that palm oilers can cultivate their orchard well and planned. The necessary advisory services are in terms of area clearing methods prior to planting, palm oil cultivation methods, fertilization and poisoning methods, pruning trimming methods and oil palm bunches for collecting yields, land clearing methods around palm oil cultivation, intermediate crop cultivation methods between oil palm lanes and palm oil marketing methods and methods of palm oil processing. This advisory service is important to give exposure to the farmers so that they can be provided with the knowledge, skills, the right techniques,

information channels for accurate and effective problem solving, and subsequent marketing can provide palm oil revenues in line with the palm oil that is. The next step is from the exhibition. Exhibitions can be made in the form of texts or pictorial methods, the actual method of rendering or results, audiovisual methods, and so on. This exhibition method will help farmers get information closer and in the real situation so they can practice in their garden after seeing the exhibition related to palm oil cultivation. Exhibition display methods can stimulate further encouraging palm oil farmers to cultivate their palm oils properly and successfully and with high quality.

The next step is by questioning methods, seminars, workshops, interviews, dialogues, or town halls. This method can be conducted directly with the farmers by listening to all the complaints or problems faced by them and then begging them to propose their own resolution of the problem. The relevant authorities may also propose the resolution of the problems faced by the planters depending on the financial capabilities, tools and technology, and limitations of existing regulations relating to the oil palm commodity sector.

The next visit to the garden by the authorities/can also be made to resolve the issues or problems faced by the planters. The visit, monitoring, and advisory services also ensured that palm oilers could have direct advice in their farms so that they can consider further practicing any kind of technique or method for cultivating and collecting good oil palm and in accordance with the condition of the plantation. The next step is to promote crop or downstream activities or crop integration in the oil palm plantation. This plant and integration or downstream or ancillary activities are suitable for the initial period or the first 3 years of oil palm cultivation. Among the appropriate cropping plants in the first 3 years are cash crops such as vegetables (chilies, tomatoes, long beans, nuts, mustard, cabbage, and eggplants) and fruits, livestock (chicken, duck, goat, and cow) fish pond. This downstream activity is crucial to ensure that farmers get a side income to increase their income while also being able to utilize the empty land area between each of the palm stalks.

The last step is research and development efforts for palm-based processing of finished products. Authorities may subsequently promote farmers to engage in palm oil processing to final products such as palm oils, ice creams, livestock feeds, cakes, and so on. This effort will increase the income of the next farmers to produce successful farming entrepreneurs at the local, state, state, and later levels that can be commercialized internationally. Therefore, from all these measures or recommendations, it is hoped that the parties concerned, especially their own farmers and the authorities, will be able to play a proactive role in order to improve the living standards of oil palm smallholders to assist the government in

establishing a developed and independent nation in the future.

7. The role of organization bodies

Based on the information obtained, various methods should be taken to ensure that palm oil crops are preserved and preserved, especially the owners of oil palm smallholders. This is because the well-kept plants can produce good and good fruit. As a result, profits can be owned by planters. On May-1, 2000, the government had merged two palm oil-based agencies into a body of bodies known as the Malaysian Palm Oil Board (MPOB). The combination between Malaysian Palm Oil Research (PORIM) and the Palm Oil Registration and Licensing Authority (PORLA) is a catalyst towards the development of the Malaysian palm oil industry. Consequently, a combination of these two organizations is working to increase the income of smallholder oil palm as well as increase the national income.

MPOB's move to ensure that palm oil market prices are stable and at a safe level are among the challenges faced by MPOB. MPOB is responsible for maintaining the welfare of smallholders through new technology discovery, including input into the commercial sector to run their industry. Despite not acting directly on the conservation of smallholders such as providing financial aid or subsidies, MPOB acts as a body that ensures the continuation of palm oil and palm oil plantations through the production of good seed, palm oil quantity, and quality, systematic planting in efforts to improve their economy. For example, MPOB sets the highest price of RM3,500 and a minimum of RM2,000 per tonne. So, when the price goes above RM3,500 per tonne, say RM4,000, a difference of RM500 is required to be taken by MPOB but not paid by own farms. On the other hand, if the price falls above the RM2,000 low of only RM1500 per tonne, MPOB will have to pay the RM500 to oil palm planters as subsidies using the proceeds collected during high commodity prices. In addition, the government also examined the types of crops and seeds suitable for smallholders of oil palm as an alternative to increasing the income of the group following the collapse of the commodity market price. This step must be taken to ensure that farmer's income is not affected by price instability and to alleviate the burden of their families.

The Malaysian Palm Oil Board (MPOB), the Smallholder Farmers Authority (RISDA), the Farmers' Organization Authority (LPP), the RISDA Community Developers (PMR) are government agencies that will be able to assist in enhancing the oil palm estates. The agency's capital contribution to oil palm planters will allow them the opportunity to purchase modern and advanced technology from developed countries such as Japan and Korea to increase their productivity. Hence, providing training and courses to gardeners to better understand and recognize more new machinery and skills can also cause their production in oil palm to

be easier, faster, and more efficient. Additionally, encouragement should be given to palm growers who manage to increase their crop production through agronomic systems of selective and good seed utilization, drainage and perfect fertilization, clean farm cleaning, including farm care to be free from pests. For example, a course for youths to encourage them to engage actively in the agriculture sector was organized by RISDA in July 2008. Furthermore, RISDA also increased the density of rubber trees from 450 trees to 500 trees per hectare is another step in raising the income of smallholders. The action taken was to expect smallholders to dare to take advantage of and use all available RISDA facilities, including participating in programs to enhance their productivity.

The distribution of technical assistance to palm oilers has become an important agenda for MPOB to increase farmer's income as oil palm cultivation involves 3.3 million hectares or 60 percent of the country's agricultural land. Often, oil palm workers even contribute much to mental and physical energy in production, but their monthly income is reversible. Typically, scattered news about poverty, the first group in the category, are agricultural workers. Planters' poverty will continue to influence the efficiency of oil palm production due to their lack of capital to buy new machinery and technology to further expand in the export of oil palm to the world. Hence, quality seedlings, as well as expanding agricultural areas, cannot be carried out due to financial shortages.

Furthermore, the measures taken to increase oil palm revenue are MPOB taking initiatives to increase palm oil production by introducing incentives to farmers through the establishment of a small oil palm association called '30 tonne club' officially launched by the Main Industry Minister, Datuk Seri Lim Keng Yaik on 10 August 2000 is a bridge between MPOB and smallholders. The club was created to encourage smallholders to work hard to produce 30 tons of palm oil per hectare per year as most of today's farmers are capable of producing the maximum yield of up to 19 tons per hectare per year. He explained that the effort to foster the interest amongst growers to increase production is important because, with the yield of 30 tons of palm oil per hectare per year, the country's income through palm oil production can be increased by RM5 billion. This means, through the 30-ton Club, national income increased by RM25 billion from RM20 billion at present. The method of increasing production through the 30 tons of Clubs as the use of agricultural land for palm cultivation is expected to decline in the future, MPOB seems to have created the club as a tactic to encourage farmers to increase productivity intensively.

In addition to establishing good relations and acting as a consultant to oil palm farmers, MPOB does not neglect the importance of establishing an affiliation with the commercial sector in response to challenges in the new palm-based industry. MPOB has a total of 130 scientists and researchers in

various fields of expertise to exploit oil palm and its waste that can increase production by 10 times more than normal production through biomass techniques. For example, MPOB's research in palm oil technology produces palm fiber products for the use of pulp and paper industry known as modern density fiber, which is expected to yield substantial returns to national income. Waste of oil palm waste has the potential to be developed in the pulp and paper industry through the new technology developed by MPOB and is part of the process of diversifying the waste. This is because palm oils are often associated with pollution problems such as fronds, palm stems, and waste from palm oil processing that are burdensome to oil palm planters and planters to dispose of them.

Adding on to introducing a new technology of palm oil refineries in maintaining the environment, MPOB has also established an environmentally-friendly plant management system through ISO 14000 in order to benefit the palm industry more competitive internationally. Based on the references, the country's palm industry will not be viable with its closest competitors if handling the industry regardless of environmental protection through minimizing wastage and pollution. New technologies created by MPOB, are believed to be able to strengthen the country's revenue from palm commodities if technology transfer is commercially viable. To date, MPOB has successfully deployed 76 technologies in various fields based on the palm, and its waste and almost one third have been successfully commercialized. This year alone, MPOB produced a total of 20 new technologies that were 'waving' their hands to be welcomed by the industrial sector for commercialization, including oleochemical technology seen to grow rapidly especially in the cosmetics and food industries. Implementation of technology transfer to the industry is not merely favorable for plant operators, but it is actually an encouragement for researchers to carry out innovation in palm research. MPOB's passion for technology transfer as an effort to generate industrial development is a prelude to the country's preparations for AFTA 2005 despite the idea that the palm industry has never been protected by any trade restrictions.

In addition, MPOB also provides several incentives to assist small-scale oil palm planters, providing the assistance of the Palm Oil Integration Incentive Scheme (ITE) and the Palm Oil Integration Incentive Scheme (ITA). What can be concluded is that with wise management such as FELDA, MPOB, and agencies responsible for these crops, it is expected to help increase the income of smallholders of palm oil, resulting in high-quality products and the harvest that can meet the demands of the world. Research and research (R & D) activities need to be enhanced to produce new findings in the field of palm oil, ensuring the quality of palm oil is at its highest level and diversifying its own use of the palm itself. The improvements in the quality and

productivity of palm oil crops will indirectly increase the income of oil palm smallholders in Malaysia.

8. Role of government

The slogan 'Agriculture is a Business' launched by the Malaysia Ministry of Agriculture should be appreciated and practiced by gardeners and certain parties related to agriculture. Agro Bank and Agriculture Marketing Authority of Malaysia (FAMA), the government should provide a considerable amount of trust to them so that the outcomes of this sector can continue to grow and all agricultural activities can be expanded. In this regard, the responsible parties should provide credit facilities to the farmers as 'borrowing hands' for them to purchase sophisticated equipment and machinery and technology to facilitate the smooth production of oil palm and increase the direct income of the workers. In addition, an effective way to help smallholders of oil palm is the government to open up new agricultural areas. Most agricultural areas have been replaced by new housing developments in Malaysia. People now complain that the freshness and faith of the agricultural landscape have vanished in this era and unlike the old days of greenery. The limited agricultural area and the number of agricultural plantations resulted in the decline of oil palm in Malaysia. Fairly fierce competition has emerged amongst gardeners to seize agricultural opportunities for lucrative income. It is, therefore, desirable that the government work in exploring new areas for agricultural activities to continue to grow. The evidence, the granting of land reserves to certain parties such as the Federal Land Development Authority (FELDA) for the purpose of expanding the agricultural land should be allocated for no reason. FELDA Kemahang Kelantan, FELDA Taib Andak, Johor is a FELDA that has been successfully explored by the government to ensure smooth farming. With this effort, the quantity of palm oil production will certainly increase while raising national income. The phrase "light weight mouths" is likened to responsible parties who only know how to talk sweetly in the news, but less action is taken than promised. In carrying out this effort, the Malaysian Agricultural Research and Development Institute (MARDI) has to go down the field regularly to ensure effective research is carried out with the aim of improving the quality and healthy quality of palm oil consumed by consumers.

In addition, formal education should also not neglect his efforts in contributing to the agricultural sector. According to [Gratton and Goshal \(2003\)](#), education plays an important role in productivity and profitability. His words are so accurate and correct. With as much knowledge as one can, he will be able to use the received wisdom to generate more advantages. Most of these palm oil factories are low-educated and have no chance to go to school due to poor families and no more money to do anything else. 'A morning breakfast, an evening meal' is an ideal proverb to describe the living conditions of the

gardeners. However, upgrading skills, such as using the latest modern technology to increase productivity through education, also needs to be emphasized.

9. Mass media role

The steps that can be taken to increase the income of oil palm planters are the role of the mass media. This is because mass media, as a channel of middleman, reveals the knowledge and the good of the agricultural sector so that more people are interested in engaging in agricultural activities. Television programs related to this sector should always be published on television, radio, and the internet so that Malaysians can understand the country's main source is, in fact, palm oil and not just an edible delicacy. The 'sharp eye of the sword' is likened to segments related to entrepreneurship figures, and well-known people who have succeeded in the agricultural sector should be shown to further inspire people to explore this field. For example, in conjunction with the RISDA Community Developers has delivered every government plan on the development of smallholders to rubber and palm oil factories under their respective supervision, the mass media also played a role in publicizing the program to the public through news and television.

10. Conclusion

In conclusion, the oil palm commodity sector has helped to significantly increase the income of rural farmers and many have succeeded in getting out of poverty. However, due to economic instability as well as inconsistent prices, there are a handful of similar calamities that still remain. With this, positive and effective measures need to be taken to the best of the parties' abilities so that this country's priority sector can be reflected in the economic downturn of the country and will not disappear forever. In general, the national community needs to open their eyes and mind in improving the country's economy as well as the income of the workers. Diligence and cooperation need to be applied by every individual to ensure the steady-state administration is consistent. Human capital educated from small in school should apply as much science as possible so as not to fall into the valley that should not be. The role of parents is very important in nurturing and educating children in giving birth to future generations with insights such as bending bamboo from the bamboo shoots. This is because the generations of the next century are the catalysts of the nation in maintaining sovereignty while keeping its dignity held high. The welfare of the people needs to be improved to reduce said issues.

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Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Abdullah I, Mahmood WW, Fauadi MM, and Ab Rahman MN (2015). Benefits of regulatory and voluntary sustainability standards compliance: A review on Malaysian palm oil. *Journal of Advanced Manufacturing Technology (JAMT)*, 9(1): 1-12.
- Begum H, Siwar C, Er AC and Alam ASA (2016). Environmentally friendly practices of oil palm cultivators. *International Journal of Advanced and Applied Sciences*, 3(2): 15-19.
- Bryan D (2013). Toward better practice in smallholder palm oil production. *Journal of Palm Oil Research*, 27(1): 110-120.
- Bullinger C and Haug M (2012). In and out of the forest: Decentralisation and recentralisation of forest governance in East Kalimantan, Indonesia. *Austrian Journal of South-East Asian Studies*, 5(2): 243-262.
- Choo YM, Yew AT, Krishnan R, Kuntom A, Bahari MM, Nik Ibrahim NMA, Wei PC, and Ismail F (2015). *Malaysia oil palm sustainability manual*. Malaysian Palm Oil Board, Bandar Baru Bangi, Malaysia.
- Cramb R (2016). The political economy of large-scale oil palm development in Sarawak. In: Kaba A (Ed.), *The oil palm complex: Smallholders, agribusiness and the state in Indonesia and Malaysia*: 189-246. National University of Singapore Press, Singapore. <https://doi.org/10.2307/j.ctv1xz0km.11>
- Cramb R and McCarthy JF (2016). Characterising oil palm production in Indonesia and Malaysia. In: Cramb R and McCarthy JF (Eds.), *The oil palm complex: Smallholders, agribusiness and the state in Indonesia and Malaysia*: 27-77. NUS Press, National University of Singapore, Singapore. <https://doi.org/10.2307/j.ctv1xz0km.7>
- Ellis F (1998). Household strategies and rural livelihood diversification. *The Journal of Development Studies*, 35(1): 1-38. <https://doi.org/10.1080/00220389808422553>
- Gratton L and Ghoshal S (2003). Managing personal human capital: New ethos for the 'volunteer' employee. *European Management Journal*, 21: 1-10. [https://doi.org/10.1016/S0263-2373\(02\)00149-4](https://doi.org/10.1016/S0263-2373(02)00149-4)
- Hafizuddin-Syah BAM, Shahida S, and Fuad SH (2018). Sustainability certifications and financial profitability: An analysis on palm oil companies in Malaysia. *Jurnal Pengurusan (UKM Journal of Management)*, 54: 143-154. <https://doi.org/10.17576/pengurusan-2018-54-12>

- Heis A (2015). The alternative agriculture network Isan and its struggle for food sovereignty: A food regime perspective of agricultural relations of production in Northeast Thailand. *Austrian Journal of South-East Asian Studies*, 8(1): 67-86.
- Hidayat D (2006). Analisis peranan perkebunan kelapa sawit di provinsi riau dalam era otonomi daerah. Ph.D. Dissertation, Bogor Agricultural University, Bogor, Indonesia.
- Hill RD (2013). *Agriculture in the Malaysian region*. NUS Press, Singapore, Singapore.
<https://doi.org/10.2307/j.ctv1qv2h1>
- Ibrahim AZ and Siwar C (2017). *Kelestarian penghidupan: Petani luar bandar*. Universiti Utara Malaysia Press, Changlun, Malaysia.
- Junaidi AB and Yew VW (2018). Perception of orang asli youths on labour force participation in oil palm plantations. *International Information Institute (Tokyo), Information*, 21(6): 1733-1743.
- Junaidi AB and Yew VW, Lyndon N, Abdul Manaf A, and Ramli Z (2016). The empowerment of indigenous youth in oil palm industry. Available online at:
<https://bit.ly/2A3V6xH>
- Kushairi A and Parveez GKA (2017). *The oil palm saga*. Malaysian Palm Oil Board, Bandar Baru Bangi, Malaysia.
- North DC (2005). *Understanding economic change*. Cambridge University Press, Cambridge, USA.
- Pye O (2009). Palm oil as a transnational crisis in South-East Asia. *Austrian Journal of South-East Asian Studies*, 2(2): 81-101.
- Sciortino R (2017). Philanthropy in Southeast Asia: Between charitable values, corporate interests, and development aspirations. *Austrian Journal of South-East Asian Studies*, 10(2): 139-163.
- Teoh CH (2013). Malaysian corporation as strategic players in Southeast Asia's palm oil industry. In: Pye O and Bhattacharya J (Eds.), *The palm oil controversy in Southeast Asia: A transnational perspective: 19-47*. ISEAS Publishing, Singapore, Singapore.
<https://doi.org/10.1355/9789814311458-006>
- Vos RED (2016). Multi-functional lands facing oil palm monocultures: A case study of a land conflict in West Kalimantan, Indonesia. *ASEAS-Österreichische Zeitschrift für Südostasienwissenschaften*, 9(1): 11-32.