Structure, Roles, Challenges and Opportunities of the Oil Palm Industry in Indonesia: The Significance of Oil Palm Smallholders

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ABSTRACT

This article aims at: (1) to give wider and more in-depth information related to the structural development of the oil palm industry in Indonesia, (2) to explain the structure and socio-economic roles of the oil palm industry in Indonesia, (3) to explore the challenges encountered and emerging opportunities in recent and future development of the oil palm industry, and (4) to give emphasis to the future roles of the oil palm smallholders. A desk study was employed to search for previous findings and to gather other relevant information. The results show that the structure of the oil palm industry has changed historically since the era of colonialism. The traditional roles of the industry include various socio-economic contributions such as job opportunities, revenues for smallholders and oil palm companies, export earnings and tax revenue for the government, economic growth, and, more importantly poverty alleviation for the poor living in rural areas. Environment issues and social conflicts are among the challenges faced by the industry, whereas, the emerging issues relating to food, feed, fuel and fibre are among the opportunities potentially to be gained by the industry. Oil palm planting by smallholders to some extent has proven to contribute significantly to poverty alleviation as well as other socio-economic development.

The smallholders are a part of the sustainable development of the oil palm industry. In response to the future dynamics of a strategic environment, there will be a need for an adjustment process in the Indonesian oil palm industry. While gaining from opportunities, the demands for social and environment protection should be internalised in the development of the oil palm industry. The development of smallholders should be part and parcel of the industry development otherwise the existing current issues will remain unchanged. The key to the implementation of sustainable development lies with the policies of the government of Indonesia towards sustainable development of the oil palm industry.

ABSTRAK

Artikel ini bertujuan untuk: (1) memberi maklumat yang lebih tepat dan mendalam mengenai struktur pembangunan industri sawit di Indonesia, (2) untuk menerangkan fungsi struktur dan sosio-ekonomi industri sawit di Indonesia, (3) untuk meneroka cabaran dan peluang baru yang bakal muncul pada masa kini dan akan datang dalam pembangunan industri sawit, dan (4) untuk memberi penekanan tentang kepentingan masa hadapan pekebun kecil sawit. Kajian dijalankan untuk mendapat maklumat tentang kajian yang dijalankan dahulu dan mengumpul maklumat yang berkaitan. Keputusan menunjukkan bahawa struktur industri sawit telah berubah dari segi sejarahnya sejak era kolonialisme. Peranan tradisi industri merangkumi pelbagai sumbangan sosio-ekonomi seperti peluang pekerjaan, keuntungan kepada pekebun kecil dan syarikat sawit, pendapatan daripada ekspor dan keuntungan cukai kepada kerajaan, pertumbuhan ekonomi dan yang paling penting dapat mengurangkan kadar kemiskinan di kawasan luar bandar. Isu alam sekitar dan konflik sosial adalah antara cabaran yang dihadapi oleh industri, manakala, isu-isu baru berkaitan dengan makanan, bekalan makanan, bahan api dan fiber adalah antara isu-isu yang berpotensi untuk dikembangkan oleh industri. Penglibatan pekebun kecil dalam industri sawit telah terbukti menyumbang kepada pengurangan kadar kemiskinan seiring dengan pembangunan sosio-ekonomi yang lain.

Pekebun kecil merupakan salah satu bahagian penting dalam pembangunan industri sawit mampam. Sebagai tindak balas terhadap mewujudkan strategi persekitaran yang dinamik, industri sawit di Indonesia pada masa hadapan, perlu melaksanakan proses pelarasan. Dalam memenuhi peluang ini, permintan terhadap perlindungan sosial dan persekitaran perlu dihanyut dalam pembangunan industri minyak sawit. Pembangunan pekebun kecil perlu menjadi sebahagian daripada pembangunan industri, jika tidak, isu-isu semasa yang sedia ada

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INTRODUCTION

The oil palm industry has been one of the most important industries in Indonesia. According to the Indonesian Agency for Agricultural Research and Development (2009), the area of oil palm expanded from around 120,000 ha in 1968 to more than 7.5 million hectares in 2009. Oil palm plantations and smallholdings also spread from only three provinces to 19 provinces. Sumatra is the largest area accounting for 69.85% of total oil palm cultivation, followed by Kalimantan and Sulawesi at around 25.98% and 2.95%, respectively. The composition of the area has changed as well, from only state- and privately-owned plantations to include smallholder estates. This fast growth of the oil palm industry has generated important economic and social benefits, such as being a source of foreign exchange and employment. In her study, Casson (1999) noted that Indonesia experienced these benefits in the period from the 1960s to 1997, even though from early 1998 to 2002 the expansion of oil palm was interrupted due to the economic crisis at that time and to political change. However, it is noted that since 2003 up till now, the oil palm industry has grown consistently in line with the growth in market demand for vegetable oils, with special reference to palm oil.

In addition to its roles as a source of foreign exchange earnings and employment, it is also widely known that, for Indonesia, the oil palm industry is also considered important for some other reasons. Palm oil is the major edible oil that is produced and consumed domestically. Palm oil is also an important raw material for industrial manufacture. Palm oil is a primary source of income in the rural areas for the present and will continue to be so in the future. The Indonesian Agency for Agricultural Research and Development (2009) noted that the income of smallholders reached USD 1246-USD 1650 per year in 2005, and it was predicted to be USD 2000-USD 2500 in 2010. Currently, palm oil is among Indonesia’s top income-generating commodities. Improvement in overall competitiveness of this commodity will significantly increase revenue from exports and bring a positive effect to farmers and the lives of millions living below the poverty line. Susila (2004) and Teoh (2010) stated that, like in other developing countries, the oil palm industry has proven to be a powerful tool for poverty alleviation in Indonesia. Susila and Setiawan (2005) even emphasised that the oil palm industry is eligible to be a leading sector. World Growth (2009a) also re-emphasised that as a development tool, palm oil functions as a staple in the national diet, contributes to economic development, and its output growth drives industrial development.

Despite the fact that the oil palm industry has significant contributions to development, the industry faces economic and social challenges as well as opportunities relating to sustainable development. Economic and social challenges affect the yield gap between actual and potential yields, and between plantations and smallholdings. Suharto (2009) in Teoh (2010) showed that in 2008 the average yield of the smallholdings in Indonesia was 2.52 t of crude palm oil per hectare, which was about 35% and 40% lower than those of privately and government-owned plantations, respectively. Meanwhile, the potential productivity has been estimated to be more than 8 t oil per hectare (Henson, 1990) in Teoh (2010). However, there are opportunities to narrow the gap by improving land productivity, use of practical technologies and providing access to resources and markets for smallholders.

Finally, relating to recent sustainable development issues, the government of Indonesia (GOI) is supporting the sustainable development of the oil palm plantations by taking more serious account of the environment and other negative impacts in the development policy. Improvement of the socio-economic aspects relating to foreign exchange earnings, employment, incomes for smallholders and poverty alleviation of the oil palm industry has to be directed towards conservation of the environment. Future development will be focused on the development of oil palm smallholders and on the downstream industry of palm oil.

This article seeks: (1) to give wider and more in-depth information relating to the structural development of the oil palm industry in Indonesia, (2) to explain the socio-economic roles of the oil palm industry in Indonesia, (3) to explore the challenges encountered and emerging opportunities in recent and future development of the oil palm industry, and (4) to give emphasis to the future roles of oil palm smallholders.

STRUCTURAL DEVELOPMENT OF OIL PALM INDUSTRY FROM 1948-2009

In this section, the development of the oil palm industry is broken down into some historical periods, starting from the colonial era right up till now. Experts in Indonesian oil palm have looked at the development of the oil palm industry not
only in the recent years, but they also divided it into a few distinct periods with respect to area, production and export. From 1848 to 2002, van Gelder (2004) followed by Abdullah (2007) and Jelsma et al. (2009) outlined the periods of oil palm development in Indonesia as the colonial period (1848-1945), post-colonial period (1945-1968), first expansion phase (1968-1985), second expansion phase (1985-1998), and the investment phase (1998-2002). The stage from 2002 up till now could be said to be the period of sustainable development. However, detailed data for each period are not provided as this section is only concerned with the fact that there was structural development in the history of the Indonesian oil palm industry.

According to van Gelder (2004), in brief, colonial development was the period when oil palm was first planted on a large scale in Deli, North Sumatra. Up to the 1940s, production development at a moderate pace as palm oil was restricted to use as a lubricant. In the post-colonial period, the plantation system collapsed as the Dutch plantation owners and labour were no longer assisted by the colonial government, and Sukarno as President of the Indonesian Republic was anti-foreign capital. The oil palm plantations were nationalised and taken over by the New State Plantation Company (Perusahaan Negara Perkebunan/PTP). During this period, the plantations suffered a period of declining production. In 1967, the oil palm plantation sector covered no more than 106 000 ha. Of this, 65 573 ha were state-owned plantations.

In the first expansion phase, direct investment in the oil palm sector was implemented via state-owned companies (Perseroan Terbatas Perkebunan/PTP). The planted area under PTP grew to 176 408 ha in 1979, most of them located in North Sumatra. Further development progressed to include private plantations and smallholder estates under the so-called PIR/NES (Perkebunan Inti Rakyat/Nucleus Estate Smallholder) scheme stimulated by GOI in cooperation with the World Bank. Since then, smallholder plantations have further expanded to reach a total of 1.1 million hectares in 1999. In this first expansion, the area under oil palm increased five-fold from that in 1968 to become 600 000 ha in 1985. The oil palm plantations also spread to Riau, South Sumatra, Jambi and West Kalimantan.

The second expansion phase is the period when large forested areas were handed out to the large Indonesian business groups and foreign investors. The forest reserves that will be converted to oil palm plantation total 5.5 million hectares. Within this period (1986-1996), the government encouraged greater private sector involvement in oil palm development by providing credit at concessionary rates of 11% to 14% from executing banks for estate development, new crop planting and crushing facilities. The executing banks were eligible to borrow from the Bank of Indonesia at varying rates of 4%, 7% to 9% as rate subsidies to protect against risks and uncertainties associated with the involvement of smallholders. In this period, the area of oil palm plantations increased considerably from 600 000 ha in 1985 to reach 3.56 million hectares in 1998. Private companies experienced the greatest growth reaching 2.11 million hectares in 1998. Production of Indonesian palm oil also grew rapidly to reach 5.93 million tonnes. Unfortunately, an export restriction against palm oil by imposing an export ban for four months, followed by a high rate (40%) of export tax, led to exports declining drastically to only 1 479 000 t, a figure which was only half of the previous year.

Expansion of Indonesian oil palm paused during 1998-2002 due to financial problems and the lack of sufficient funds in the many oil palm groups. However, production still grew because most of the oil palm was planted in the preceding periods. Production and export of Indonesian palm oil still grew rapidly to reach 9.6 and 2.8 million tonnes, respectively.

In the period of sustainable development, the area of oil palm, production and export of palm oil have increased consistently. Oil palm area is expanding fast at 8% per year. If this trend continues, total oil palm area could exceed 12 million hectares in 2020, as predicted by the Directorate General for Estate Crops of the Ministry of Agriculture. The rate at which new palm area is being established in Indonesia has reached new historical heights over the last 10-year period. Significant reforms in government economic and political policy in relation to the oil palm industry have given incentives to revitalise investment and spur expansion.

Based on data provided by the Indonesian Central Bureau of Statistics (2009), in 2002, the area of oil palm was recorded at 5.07 million hectares, while in the year 2008 the total area had increased to 7.02 million hectares. In 2008, private plantations occupied the largest part of the area, i.e. 49.0%, followed by smallholder estates (41.35%) and state-owned plantations (9.65%). During the period 2002-2008, oil palm plantings were scattered in Sumatra, Kalimantan, Java, Sulawesi, the Papua and West Papua. Riau province had the largest area of oil palm. In 2008, the area of oil palm in Riau province was 1.54 million hectares (21.89%) of the total area of oil palm in Indonesia. This was followed by North Sumatra with 1.15 million hectares (16.33%) and South Sumatra with 0.78 million hectares (11.05%).
The average annual rate of growth in oil palm area accelerated to 340,000 ha yr\(^{-1}\) from 2000 to 2009, compared with 14,000 ha yr\(^{-1}\) in the 1970s, 71,000 ha yr\(^{-1}\) in the 1980s, and 293,000 ha yr\(^{-1}\) in the 1990s. These changes have been criticised by environmentalists as fostering the replacement of natural rainforests by oil palm plantations, and devolving responsibility to provincial governments where economic pressures to exploit the environment are more immediate, and international pressures to halt oil palm expansion are easier to resist.

Based on data provided by the Indonesian Central Bureau of Statistics (2009), production of palm oil has increased from 9.6 million tonnes in 2002 to more than 18 million tonnes in 2008. Most of the production came from the private plantations, followed by smallholder estates and state-owned plantations. As in the case of total area, Riau is the largest palm oil producer. In the year 2008, the production of palm oil from Riau province was 4.47 million tonnes or 24.40% of the total production. Meanwhile, production in other provinces like North Sumatra was 3.87 million tonnes (21.14%) and 1.79 million tonnes (9.76%) in South Sumatra. Even though Indonesia is the world’s largest producer of palm oil, its productivity compared with that of other countries is still considered low. In 2008, the average productivity of palm oil in Indonesia was only 3.8 t ha\(^{-1}\), while it was 4.4 t ha\(^{-1}\) and 3.96 t ha\(^{-1}\), respectively, in Malaysia and Costa Rica.

The Indonesian Palm Oil Commission (IPOC) (2008) reported that GOI anticipates the establishment of 1.35 million hectares of new plantings by 2010. Also, at least 6.6 million hectares of land with existing Location License (Izin Lokasi) – meaning that those companies holding such licenses can negotiate for access to those areas – are available. IPOC further indicates that the government foresees total palm oil production will reach 28.0 million tonnes by 2015, i.e., an 8.3 million tonnes increase over the 2008/2009 level, which in turn would require roughly 7.4 million hectares of mature area at the current national yield average. When considering only the current immature area in the country (roughly 2.2 million hectares), it is apparent that Indonesian palm oil production will continue to increase at approximately the predicted trend levels over the next six to eight years.

The global market demand for palm oil is strong, as is Indonesia’s position. Indonesia is the world’s leading producer of palm oil products. Palm oil is a major growth area and a source of profit and foreign exchange in the agriculture sector. The global market (price and demand) is expected to remain strong because of rapid demand growth for cooking oils and other palm-derived products in developing countries as well as the demand for biodiesel in developed countries.

Based on data provided by the Indonesian Central Bureau of Statistics (2003; 2009), in 2002 the total volume of Indonesian palm oil exports reached 6.33 million tonnes with a total value of USD 2.09 billion. In 2008, the total volume of exports of palm oil was 4.29 million tonnes with a total value of USD 12.38 billion. Indonesian palm oil was marketed to meet export and local demand. In 2008, the five major importing countries of Indonesian palm oil were India, China, the Netherlands, Bangladesh and Pakistan. The export volume from Indonesia to those countries accounted for 4.8 million, 1.9 million, 1.3 million, 0.6 million and 0.4 million tonnes, respectively.

The Indonesian palm oil sector is still one of the most dynamic sectors in Indonesia. Together Malaysia and Indonesia’s palm oil accounts for 87% of world production. With palm oil set as a dominant commodity in the global edible oil market and with consumption of crude palm oil (CPO) projected to reach at least 42.4 million tonnes in 2010, it is among the top 10 priority commodities for the Indonesian government.

As of 2005, some 340 palm oil mills (POM) with a total processing capacity of 13.8 million tonnes of fresh fruit bunches (FFB) per hour are in operation. Based on the data released by the Directorate General for Estate Crops, in 2009, there were 608 POM processing 20.4 million tonnes of CPO. Most POM are located in North Sumatra and Riau, and a significant number are also located in South Sumatra, Aceh, Jambi, and in East and South Kalimantan. The typical capacities of POM in Indonesia are 30, 45, 60 and 90 t hr\(^{-1}\) (tph) of FFB per mill.

**Socio-economic roles of oil palm industry**

In this section, the roles of the oil palm industry are outlined in terms of various aspects of socio-economic development. For Indonesia, the oil palm industry has played important roles in economic growth, providing job opportunities, revenues for smallholders and oil palm companies, and export earnings and tax revenue for the government, and more importantly it has helped in poverty alleviation for the poor living in rural areas. Susila (2004) provided evidence that the oil palm industry contributed to economic growth as indicated by its positive growth in investment, output and foreign exchange earnings, even during the economic crisis of 1997-2001. A significant contribution of the oil palm industry is also demonstrated in terms of household welfare. More than 63% of the household income of smallholders came from...
oil palm-based activities, and the share of oil palm to household assets was around 63%-72%. The research also found that only a small portion (less than 10%) of poor people lived in oil palm plantations, meaning that the oil palm industry had contributed to poverty alleviation. Poverty was also below the national level at that period which was at a level of 14%.

In terms of job opportunities, data provided by the Indonesian Central Bureau of Statistics (2009) showed that in 2008 more than six million people from the workforce occupied jobs in the oil palm industry. Among those, 2.7 million worked in the downstream industry while the rest were engaged in the upstream industry. The number of jobs created appeared to be significant. It had been the experience that when a global economic crisis happened, there were no lay-offs during economic stagnation or even when there was depression in the economy.

In terms of income for the oil palm companies, Sihombing (2008) revealed that a number of big plantation companies which have shares registered in the Indonesian Stock Market (BEI), for example, gained big profits in 2007. Some of those companies include PT Astra Agro Lestari Tbk (AALI), PT PP London Sumatra Indonesia Tbk (LSIP), PT Bakrie Sumatera Plantations Tbk (UNSP) and PT Sampoerna Agro Tbk (SGRO). Those companies had cumulative profits amounting to Rp 4.045 trillion in 2007, increasing by 96.65% from the 2006 profits of Rp 2.06 trillion. Cumulative sales were boosted by 59.46% to reach Rp 20.57 trillion from a previous Rp 12.90 trillion. This increase had resulted from the CPO price increase by 59% from the previous year to USD 900 t⁻¹, with even at one point reaching USD 1000 t⁻¹. The price rise, for example, rewarded AALI in 2007 with a company net profit of Rp 1.9 trillion, or 150.7% higher than in 2006. Sales reached Rp 5.96 trillion in value, or 58.6% higher than in 2006, despite a 6.2% drop in the CPO sale volume from the previous year to 857 824 t.

Furthermore, it was predicted that in the first semester of 2008, sales soared in value by two-fold to Rp 4.41 trillion compared with the same sales volume in the same period of the previous year at a value of Rp 2.39 trillion. This increase in performance was influenced by the rise of CPO price and volume sold. UNSP over six months (January-July 2008) earned a net profit of Rp 326.45 billion. This profit was 335% higher than the one they earned during the same period in 2007 at the amount of Rp 75.02 billion. In the first semester of 2008, sales reached Rp 1.58 trillion, whilst in the first semester in 2007, sales was only worth Rp 638.03 billion.

Further, a study done by Abdullah (2007) also showed that the oil palm industry promoted socio-economic development in other sectors in the economy. Using the Social Accounting Matrix (SAM), he found that an increase of one unit in production of palm oil generated increases of 0.27 units in the use of labour, 1.06 units in household income for the agricultural sector, 1.74 units in household income for the non-agricultural sectors, 0.38 units in the income of entrepreneurs, 0.32 units in the income of the government, 1.30 units in the palm oil sector itself, 0.44 units in the output of the cooking oil industry, and 0.39 units in other palm oil-based industries.

Recently, a study conducted by Nurrochmat and Hadianto (2010) using an I-O Table showed that the development of the oil palm industry has significant impacts on output, income and employment, besides its linkage to other sectors of the economy. Based on production increase, the output multiplier is quite big at 2.79. This means that the increase of one unit output in the oil palm sector will produce an increase by 2.79 times in national output. Based on the disaggregated output multiplier, the sectors having the most benefit are the chemical, food and trade sectors.

Based on household income, the oil palm sector has the capability of increasing household incomes significantly. The income multiplier is 2.5, meaning that if there is an increase by USD 1 in the oil palm sector, the total income of society will increase by 2.5 times. In terms of employment, the employment multiplier for the sector itself is 1.05. This means that if there is an increase in employment by one person in the sector the increase in employment within the sector will be 0.5. At the current employment of 1 472 769 people within an area of 7 508 023 ha, if there is an increase by one person in the sector as a result of any development, employment in the sector itself will increase to 1 544 641 people. This implies that the ratio of worker to land is 0.21 person per hectare. The employment multiplier for the whole economy is 1.84, meaning that an increase in employment by one person in the sector, as a result of any development, will result in employment in the whole economy of 2 709 896 people.

Backward linkage with oil palm development is 1.0, ranked 19th out of 34 sectors, meaning that the sector has a relatively moderate linkage to the upstream sectors. The sector has a relatively closed linkage with the fertiliser and chemical as well as the financial sectors of the economy. Forward linkage with oil palm development is 1.30, ranked fifth out of 34 sectors, meaning that the sector has a relatively high linkage to the downstream sectors. However, as the forward spread is 0.85, the devel-
opment of the sector will have less of a distribution impact on the downstream sectors, except for the food and chemical sectors. The development of biofuel as well as its by-products (waste) will stimulate the forward spread of the sector’s development.

Referring to export earnings, data obtained from the Indonesian Central Bureau of Statistics (1981; 2009) show that the value of export earnings increased significantly from only USD 255 million in 1980 to USD 10 968 million in 2008. The rise in export earnings was also followed by a rise in government tax revenues. Unfortunately, there was limited data access to government tax revenues from the oil palm industry. However, referring to export tax, the data presented by the Ministry of Finance during a hearing of the People’s Representatives Assembly 2008, as quoted by Barani (2008), showed that the export tax value in 2008 was Rp 13 546 051 million. A part of that value was allocated to support the price subsidy for cooking oil.

CHALLENGES ENCOUNTERED AND EMERGING OPPORTUNITIES IN OIL PALM INDUSTRY DEVELOPMENT

In this section, the challenges and opportunities in the oil palm industry are presented in terms of economic, environment and social issues. The palm oil sub-sector faces some national and global issues relating to, among others: (i) imposition of export tax as a means of stabilising domestic cooking oil price, (ii) under-capacity in the development of the downstream industry, (iii) social problems related to land use, (iv) overlapping and conflicting regulations between central and local governments, and (v) sustainability with respect to the environment, for which Indonesia has been accused by non-government organisations (NGO), especially Greenpeace and Sawit Watch, to be lacking in the adoption of Roundtable for Sustainable Palm Oil (RSPO) principles and criteria. In future, the remaining issues (challenges and problems) will most probably still be related to sustainable development with respect to social and environmental issues. These include social conflicts due to disputes over land rights and tenure, and land use and environmental issues relating to climate change, deforestation and biodiversity losses, as well as industry certification.

Reffring to government policy, since 1991, the government has intervened in the marketing of palm oil. With the price boom in palm oil, and hence cooking oil, inflation fears and concern for consumers have motivated recent market interventions by the government (Dradjat, 2007). The government currently uses three policy tools to influence domestic prices. These three policy tools include an export tax, a value-added tax paid by the government, and price subsidy. The export tax is triggered when freight on board (FOB) prices reach USD 700 t⁻¹. The tax has been effective in lowering domestic prices, but does so by transferring income from the oil palm producers to the government and thence to the consumers.

From the economic point of view, however, the oil palm industry in Indonesia will play its roles consistently in the Indonesian economy. Saragih¹ in his oration as Professor Emeritus claimed that Indonesia has opportunities to be a global player by feeding the world through producing food, feed, biofuel, and biofibre (4-F) from oil palm as the future prospects of economic growth especially in developing countries, led by China and India, will still be good. In addition, Oil World (2010) forecasted that Indonesian palm oil output will increase by 5% to 22.3 million tonnes in 2010, and by 8%-9% to 24.2-24.3 million tonnes in 2011. The expected export volume from Indonesia in 2010 is predicted to increase to 16.9 million tonnes.

While the upstream palm oil industry has become stronger and stronger, the downstream industry is still running under-capacity. According to the Ministry of Industry (2009), added values from some palm oil derivative products, such as olein (cooking oil), margarine, butter, oleochemicals including biodiesel and surfactants, have not been maximised yet. Constraints faced by the industry, among others, include a lack of infrastructural development, lack of government commitment towards implementing its policies and regulations, and market access.

Palm oil production in Indonesia is already the world’s largest, but emerging concerns over the environment and sustainable practices have impeded growth and acceptance from important markets like the European Union (EU). Since 2000, the challenges confronting oil palm development have been focused on sustainability, especially with respect to the environment. Environmentalists, among others, claim that oil palm development creates environmental problems; especially in increasing carbon emissions resulting from deforestation, land clearing by burning, and the use of peatland for plantations (Ardiansyah, 2006; Greenpeace, 2009).

With reference to sustainable development, a forum called the Roundtable for Sustainable Palm Oil Development (RSPO) has been set up in 2005. As can be seen on its website www.rspo.org, RSPO

¹ Professor Emeritus Oration, Bogor Agricultural University, 17 April 2010.
represents stakeholders comprising planters, processors, traders, manufacturers as well as users of palm oil products, retailers, banks, investors and NGO. RSPO is committed to eight principles and 39 criteria for sustainable palm oil development. There is a certification process for an oil palm plantation to be declared an environmental-friendly plantation (RSPO, 2005).

Currently, issues relating to the environment have become more challenging. EU countries has launched the Renewable Energy Directive/Fuel Quality Directive 2009. The Renewable Energy Directive (RED) imposes the stretching of renewable targets for 2020 across EU. The sustainability criteria relate to two issues (Langenheld, 2009):

(i) The life cycle greenhouse gas (GHG) emissions of biofuels. For CO₂ impact, the overall GHG savings from biofuel production must be at least 35% in order for cultivation of the specified crop to be considered sustainable. The values increase in 2017 to 50% for existing installations, and to 60% for new installations; and

(ii) The land used to produce biofuels. Areas that contain high carbon stock (such as wetlands, permanent forested areas and peatland) or areas with high biodiversity (such as primary forests, highly bio-diverse grasslands and nature-protected areas) should not be used for biofuel production. This is to avoid big GHG emissions through the release of carbon stored in the soil and in the plants, and to avoid disturbing biodiversity and disrupting natural habitats.

All the environmental concerns above need not stop oil palm plantation development. These sustainability criteria could be perceived as technical trade barriers, especially for palm oil and its derivative products. As is known, palm oil is the least costly vegetable oil which potentially can dominate or even replace the role of other vegetable oils. The various environmental challenges make it much harder to plant oil palm on recently deforested areas and peatland. It is also more difficult to export palm oil and its derivatives, including biofuel, when they cause significant amounts of GHG to be released during the production process. World Growth (2009b) considered the environmental policies of EU as an anti-poor strategy, that is, the right and opportunity to reduce poverty and raise living standards by palm oil-producing countries have been ignored by EU and the World Bank. Further, World Growth called the environmental strategy unavoidable collateral: raising living standards and not regarding increases in poverty damage.

**EFFORTS TO COUNTER ENVIRONMENTAL AND SOCIAL PRESSURES**

In this section, efforts by stakeholders and GOI to counter the environmental and social pressures are described. The implementation of principles and criteria for a sustainable standard proposed by RSPO and those of the Indonesian Sustainable Palm Oil (ISPO) is used as a reference for the description.

To some extent, Indonesian growers are showing their concern in sustainable development by becoming members of RSPO, an organisation of oil palm stakeholders dedicated to promoting sustainable development of the oil palm industry. As quoted by Dradjat (2010) from the RSPO website, up to 2010, the members of RSPO included banks and investors (8), consumer goods manufacturers (94), environment or nature conservation organisations/NGO (11), palm oil growers (84), palm oil processors and traders (152), retailers (23), and social or development organisations/NGO (9).

As members of RSPO, Indonesian growers have to implement the eight principles and 37 criteria for sustainable development. According to Darussamin (2010), growers who have complied to these principles and criteria are eligible to hold a certificate of sustainable palm oil (CSPO). At present, 19 of the Indonesian palm oil companies, including 71 units within the companies, already hold CSPO, and some 30 others will follow. In the RSPO requirements for smallholders, the oil palm companies are responsible for financing smallholder certification. The cost of smallholder certification is reduced while RSPO provides a subsidy to the farmers for training in sustainable practices.

However, complaints by Greenpeace referring to violations of the principles and criteria, especially in relation to deforestation and land degradation, among others, by two Indonesian companies (Sinar Mas and Duta Palma) still emerged. Unfortunately, consumer goods manufacturers such as Unilever, Nestle and Burger King even supported the complaints by stopping their buying contracts. In response to the complaints, the company Sinar Mas has already done an independent evaluation. The independent evaluation team reported in a discussion conducted by the Ministry of Industry that the problems were not similar to Greenpeace’s complaints. The problems were actually related to a disharmony of the principles and criteria with the laws and regulations. One of regulations proposed by the district government necessitates the investor in oil palm planting to show field activities first even though the investor has not done an environment impact analysis as imposed by RSPO and the central government of Indonesia. In terms of social
problems, there were no complaints from the surrounding community against the existence of Sinar Mas. In fact, the community even received various social benefits, such as education, health care and religious services from the company.

Actually, GOI has already set up various rules and regulations relating to the establishment of oil palm plantations. These already cover various aspects of sustainable oil palm development, *i.e.*, conversion of natural forests and peatland, license provision, good agricultural and manufacturing practices, environmental and social impact analyses, and others. However, it appears that implementation of these laws is weak. To be aware of the importance of and in response to the demand for sustainable development in oil palm, GOI is now creating ISPO, a comprehensive set and harmonisation of national laws relating to sustainable standards for oil palm development. Based on the ISPO draft, ISPO adopts the principles of sustainable development from the existing national laws which are included in more than 20 national rules and regulations and also those from RSPO. There are seven principles and 25 criteria to be implemented in ISPO.

In the near future, possibly starting in 2011, implementation of ISPO will be mandatory. GOI through qualified assessors will evaluate every three years the oil palm plantations including those of smallholders based on ISPO principles and criteria. The plantations satisfying the principles and criteria of ISPO will receive a certificate of ISPO. However, those plantations which do not satisfy the principles and criteria will get sanctions, depending on their category of non-compliance. GOI and the companies will facilitate the eligibility of smallholders to also hold the certificate of sustainable development.

Other efforts by GOI include collaboration with the government of Malaysia in response to the NGO demands. Both governments promote and campaign for the oil palm industry of each respective country to consumers and importing countries, especially in EU. This joint collaboration is also taking place among the growers in both countries. Promotions and positive campaigns seem to be effective as up till now none of the governments of the importing countries has rejected or banned oil palm in their trade policy.

Recently GOI also signed a letter of intent with the Norwegian government on a moratorium on natural forest and peatland conversion to oil palm usage. This GOI policy shows that sustainable development is an important concern of GOI as a part of its overall concern over climate change. With this policy, at least within two years from 2011, the issuance of licenses to expand oil palm planting will be limited. As it is demanded by NGO, this limitation will reduce the deterioration of the environment and promote sustainable development.

**THE SIGNIFICANCE OF OIL PALM SMALLHOLDERS**

When unemployment and poverty in rural areas were unsolved problems, the establishment of the oil palm industry in these areas has proven to be capable of providing jobs and income for the rural people in a significant way. The role of the oil palm industry is thus more important as it covers poverty reduction. Research done by Susila (2004) showed that the NES Project in general has been successful in reducing poverty in the rural areas. The percentage of poor people in several of the NES areas was only around 2%–7%. *Figure 1* shows that this is way below the national level of poverty of 14%. In some other government programmes, namely the modified NES (NES for transmigration areas and NES partnerships) and revitalisation programmes, the industry also brought social and economic benefits to the participants. As guided by the Directorate General for Estate Crops, in the revitalisation programme, farmers gain benefits from getting access to various provisions, such as planting materials, credit subsidies and market for FFB. So, it could be said that the development of the oil palm industry in Indonesia can be a means or an instrument for poverty reduction.

Another positive impact from the development of the oil palm industry is that it improves the income distribution among the rural people. This is different from the impact from other non-agricultural development where unequal distribution of income is likely to happen. Again, Susila (2004) showed that in the oil palm development areas in 2002, the Gini coefficient of income distribution was 0.36. *Figure 1* shows a relatively good income distribution as that value is still below the upper limits of unequal income distribution of 0.4.

According to Susila (2004), the income distribution among households in the Kampar development area in Riau Province shows that the number of households with income around Rp 5 million per month (which is categorised as poor) is relatively small (less than 10 000). Most of the household incomes in the Kampar development area are between Rp 10 million and Rp 25 million, well above the poverty line (*Figure 1*). *Figure 1* shows that the proportion of households which lie above the poverty line is 75%, meaning that development of the oil palm industry can reduce or even alleviate poverty.
In another case, Jelsma et al. (2009) found that the NES/PIR-BUN Ophir project has been successful in implementing the principles of participatory development. The farmers are both the subject and the object of development initiatives challenging many of the standard assumptions for NES development. In the NES/PIR-BUN Ophir project, the farmers could become a viable, progressive and self-reliant farming community.

Currently, smallholdings are growing faster, but face several disadvantages. Overall smallholding productivity is significantly lower than that of plantations, despite the fact that the overall size of land managed by smallholders is relatively larger than what is being owned by the private and state-owned companies. Their problems are largely due to a lack of access to better information and inputs, as well as other deficiencies such as in their post-harvest handling, access to financing and linkages to markets.

The expansion of oil palm planting in vast areas has, unfortunately, been accused of creating some social problems as is the case in certain areas. Some people in Riau and Central Kalimantan which are supported by NGO claimed that the development of oil palm plantations has negative impacts on their lives. They felt that their opportunities to use the land for their own planting were gone as their traditional customary rights to the land have been abolished by the national law. In another case, they claimed that they became poorer even though they are employed to work in the oil palm plantations as labourers or farmers.

To some extent, with such kinds of development, it is implied that the smallholders should not be excluded in the oil palm development programmes promoted by government. The smallholders will indeed be part of oil palm development as a whole. Indigenous people in areas of development will benefit from their rights and their culture being appreciated. Resolutions of conflicts involving smallholders will emerge. Smallholders hold legal rights in certain matters relating to oil palm development including access to financial services. Furthermore, smallholders are provided with technical assistance to improve productivity.

In terms of environmental protection, smallholders will be part of the solution and not one of the problems encountered. Smallholders will be involved in enforced spatial planning. The smallholder plantations will not be developed in areas sensitive to environmental degradation, or in areas with high conservation value (such as protected forests and peatland), or cause deforestation. The smallholder plantations will not increase methane and carbon dioxide emissions, or pollute waterways.

The smallholder farmers are now coordinated by the Indonesian Oil Palm Farmers' Association (IOPFA). This organisation will be closely linked to the Indonesian Palm Oil Association (IPOA). With reference to sustainable development, these two organisations each has its role in achieving sustainable development of oil palm. The roles of IPOA will be to promote and to facilitate growers, including smallholders, in achieving the standards of the sustainable development of palm oil. IPOA will empower networking, participate in oil palm smallholders’ empowerment and create funding strategy for the sustainability of oil palm smallholder plantations, including the enforcement of corporate social responsibility (CSR), and the proposal for reallocation of export tax fund for small-
holder development. IOPFA will support the co-operation with IPOA by implementing efforts to promote the sustainable development of palm oil.

CONCLUSION

In Indonesia, the oil palm industry is regarded as one of the most important agro-based industries contributing to poverty reduction, creating millions of employment opportunities, and as an engine for rural as well as regional development. The oil palm industry also contributes to economic growth and foreign exchange earnings as well as to tax revenues for the country. The oil palm industry has been a part of the economic development programme to increase the standard of living and welfare of millions of Indonesian people.

Oil palm is among Indonesia’s top employment and income-generating commodities. Improvement in overall competitiveness of this commodity will significantly increase the revenue from exports and positively affect farmers and the lives of millions living below the poverty line. The oil palm sector generates significant employment and economic opportunities for the poor. In Indonesia alone, the sector directly and indirectly employs between four and six million individuals of the economically active rural population, and supports a rural population of up to 36 million. The sector has proven to be a powerful tool for poverty alleviation in Indonesia. The oil palm industry is thought to be eligible as a leading sector for the economic development of Indonesia.

However, other views towards the oil palm industry through different perspectives should also be considered carefully. The views represented by some environmental groups see the industry as the main cause of deforestation and forest degradation, leading to a loss in biodiversity and to an increase in carbon emission, as well as contributing to a loss of habitat for endangered species. Other views represented by some social and human rights groups demand the improvement of land rights and tenure, and the well-being of smallholders, especially independent smallholders. The current and future development of the oil palm industry will be determined by the industry’s commitment, including smallholders to adapt and implement social and environment protection measures. The smallholders are part of the sustainable development of the oil palm industry.

In terms of the above environment protection concerns, oil palm development should overcome the problems of: (i) un-enforced spatial planning, (ii) environmental degradation, (iii) conversion of areas with high conservation value (such as protected forests and peatland), (iv) deforestation, (v) methane and carbon dioxide emissions, and (vi) pollution of waterways. The inclusion of these environment factors in government policies will ensure that the problems of deforestation, loss of biodiversity and climate change will be overcome.

In terms of social protection, oil palm development should: (i) incorporate the rights and culture of indigenous people in the areas, (ii) promote conflict resolution between communities and companies, communities and government, within communities and between communities, (iii) be supported by legal procedures for communities, (iv) increase productivity, (v) improve access to financial services, and (vi) also ensure that growers be provided with technical assistance. The inclusion of these social protection factors will reduce or even alleviate issues of land rights and tenure, land-use as well as improve the well-being of smallholders and governance.

In response to the future dynamics of a strategic environment, there will be a need for an adjustment process in the Indonesian oil palm industry. While gaining from opportunities, the demands relating to social and environment protection should be internalised in the further development of the oil palm industry. Development of smallholders should be included in oil palm development as a whole. Otherwise the existing current issues will remain unchanged.

The key to implementation of the above environment and social recommendations lie with the GOI policies. GOI should take a clear and strong position in supporting sustainable development by providing policies for: (i) accelerating the synergy between the use of forests and the spatial planning, (ii) accelerating the allocation of forests for other uses, (iii) promoting and advocating the positives of the Indonesian oil palm industry to counter negative campaigns against the industry, and (iv) licensing for new oil palm plantations while ensuring that area expansion be approved only for companies with good track records. The expansion of oil palm planting is directed towards unused land and for plantations with good productivity achievements. As for smallholders, GOI should provide guidance and training related to the principles and criteria of sustainable development. These actions should be followed by the provision of competent extension workers to provide guidance to farmers on how to implement the principles and criteria of sustainable development.
Furthermore, GOI should legalise ISPO as soon as possible in order to increase the bargaining position of the Indonesian oil palm industry. In addition, GOI should empower controlling institutions in the implementation of the sustainable standards.

REFERENCES


