

The Palm Oil Industry in Southeast Asia: Challenges and Opportunities

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Abstract

The study focuses on the palm oil industry which has been a major contributor to the economies of Thailand, Malaysia and Indonesia. These countries have been looked upon as the major players in the industry in the world market. This environmental scanning study assessed the contributions and the challenges posed by the presence of the industry to the countries under study. This qualitative and quantitative study looked into the two trends in the impact assessment with reference to case study examples of some industry players in Thailand, Malaysia, Indonesia and the Philippines. The first part dealt with the increasing focus on the cumulative impacts and the second part on the emerging requirements to link the social and economic impact to the ongoing social impact plans. An analysis on the effects of the industry's presence within the context of input – output model, proved to have an impact on the environment, socio-economic and political situation and other relevant factors. These effects on education, housing, population, crime rate, local authority funding and quality of life of people in the regional community have led to be the basis for policies and Social Impact Plans for the Southeast Asian countries. An advocacy may be initiated on countries with emerging economies to benchmark from countries which have improved their socio-political and economic conditions considering the positive impact of the industry's presence.

Keywords: Palm Oil, Environmental Scanning, Social Impact Plans

1.0 Introduction

In Southeast Asia, one of the fast growing industries today is the Palm Oil Industry. It is a major contributor to the economic recovery of countries like Malaysia, Indonesia and Thailand. The industry has played a major role in eradicating poverty through wealth creation specially income generation among the poor sector of the agri – industry. It has also provided opportunity and property rights as efficient palm oil plantations and

the growing demand for palm oil give smaller land holders greater opportunities to make a living of their land, maintain their ownership and support their rights to property and prosperity.

Palm Oil is a highly efficient, high yielding source of food and fuel. Palm Oil plantations are an efficient way of producing fossil fuel alternatives and capturing carbon from the atmosphere (World Growth Palm Oil Development Campaign [WGPODC], 2010). Palm Oil farming activity in

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Malaysia, Indonesia and Thailand eradicated poverty and narrowed income gap between towns and rural folks. It has also created rural townships where workers reside and enjoy good quality of life, contributed to social security and peace and reduced migration of labor force from rural areas to urban areas. The oil palm plantation industry is one of the few examples of an agricultural development in the Third World which, without any Government subsidies, can successfully compete with the highly protected farmers in the G7 countries (MPOC and APOC 2010)

The agricultural sector sees the advantages and disadvantages of shifting into the farming and production of another rich source of healthy edible vegetable oils that also provide them opportunities for employment and wealth creation. Thus, the agricultural sector, has shifted its focus from the production of other sources of vegetable oil to palm oil production.

Considering the role of the schools and universities in assisting the government in the policy formulation process through research and development, the schools also need to be more involved in the dissemination of information on the wealth of opportunities in the Palm Oil Industry to eradicate poverty. The advocacy should be initiated by the schools thus the result of the study may be used as basis for such information. With the country's goal of improving the economy and with businesses as part of the main foundations for economic recovery, the output the study provide factual information for local and foreign investors on the opportunities which they can explore in the Philippines and other countries.

Since policies are formulated not only to regulate the players in the industry they provide support through the programs implemented in line with the policies formulated. The information generated may find opportunities for further studies. Research based information may be

provided to the different industry stakeholders to be used as basis for planning and decision making.

Hence, this study was undertaken to gather empirical evidences from selected Southeast Asian Countries as bases in coming up with strategic management directions for other developing countries supportive to educating policy makers, implementers and agri-industry stakeholders on the opportunities of this budding palm oil industry.

The result of the environmental scanning activity presents not only the status of the Palm Oil Industry but the contributions and challenges faced by companies and other sectors within the industry in terms of economic, social, technological, legal and political aspects. In the field of research and evaluation, this study strongly contributes to the body of literature where the strong potentials of palm oil industry is not yet well articulated and discussed, especially in the Philippine context.

The generated data and findings of the study narrowed down data gaps on palm oil statistics in Southeast Asia. It also hopes to provide valuable information to the government and non- government support provided to industry players and stakeholders thereby allowing future researchers and entrepreneurs a broader understanding of the industry's advantages and disadvantages.. As the global demand for palm oil products is expected to increase in the next few years so the data may provide opportunities for entrepreneurs and businessmen to take part in the global exchange process and be ready to face the challenges and threats in entering into another growing industry.

2.0 THE PALM OIL INDUSTRY

The palm oil is feeding the world and is consumed in over 150 countries (USDA 2007). It provides a crucial source of food & energy supplies to the developing world. Scientifically proven to provide nutritional & health benefits

and durability, it also provides bio-energy and is an environmentally-friendly alternative to fuel source to supplement decreasing high carbon fossil fuels. It is highly productive and significantly more palm oil produced per hectare compared to other oil seed crops. Palm oil is used in more than half of packaged supermarket products today.

Eighty-Nine percent of the world’s vegetable oils are grown in developing nations, making them an important way to raise incomes and standards of living for the world’s poor. (Oil World 2012). The Palm Oil industry is highly beneficial for small local land holders. In 2006 the Indonesian Bureau of Statistics estimated that 43 percent of the total palm area was owned by small holders, rather than large private companies or the Government. In Malaysia, 40 percent of plantations are owned by small holders, with many being allocated by the Government for settlement plots. Netherlands, a major palm oil importer recently made a firm stance that by 2015, it will be committed to using only sustainable palm oil. (3rd Palm Oil Summit 2001).

Palm Oil plantations do not lead to rampant destruction of tropical rainforests. In Malaysia, plantations are restricted to the 20 percent of the land which is allocated for agricultural purposes. Sixty percent of Malaysia’s territory is reserved for forest. The average in Europe is 25 percent. This

means that palm oil plantations can only occur on land already zoned for agriculture(MPOC 2011). Oil Palm plantations have a higher carbon sequestration capacity than other biodiesel crops. Palm Oil plantations have a 25 – 30 year life span and an annual crop. This means that in many ways, palm oil’s capacity to sequester carbon dioxide mimics a natural forest through its perennial leaves and closed canopy. It does not require land clearing on an annual basis as other biodiesel crops do. Palm Oil is a very high yield and sustainable plantation.(MPOB 2011) The oil palm is the most efficient oil-bearing crop in the world, requiring only 0.26 hectares of land to produce one ton of oil while soybean, sunflower and rapeseed require 2.22, 2.0 and 1.52 hectares, respectively, to produce the same (MPOC, 2011)

Research indicates that biodiesel from Palm Oil has a lower greenhouse gas footprint than other sources of biodiesel. Using a life cycle analysis approach the GHG emissions of palm oil have been estimated at 835kg carbon equivalent. Soybean emissions were estimated at 1,387 kg. and rapeseed emissions at 1,562kg (Global Oils & Fat Business [GOFB], 2008), Palm Oil is a highly energy efficient plantation. It generates nearly 10 times the energy it consumes, compared to a ratio of 2.5 for soybeans and 3 for ripe oilseed (Lama, Tana, Lee & Rahma, 2009)

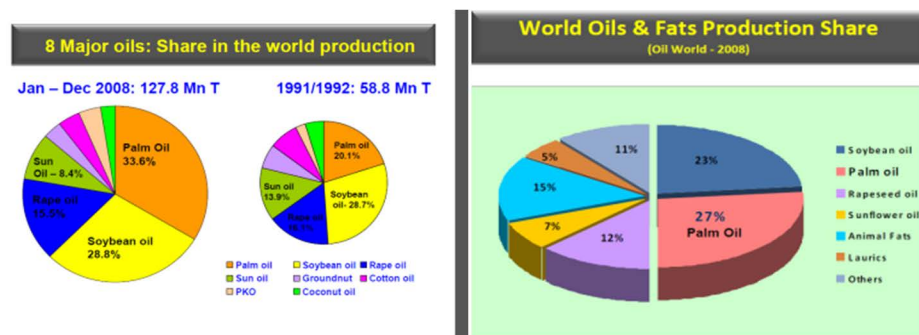


Figure 1. Share of Palm Oil as a Major Vegetable Oil Products (Oil World – 2008)

In Indonesia, one of the world's most densely populated countries, 25 percent of the country has been set aside for forest conservation. Palm Oil is only cultivated in areas set aside for commercial production. The Palm Oil industry is a highly regulated and monitored industry. Many Palm Oil producers and other interest groups have started the process of certifying sustainably produced palm oil through the Roundtable on Sustainable Palm Oil. In addition to this, local laws in both Malaysia and Indonesia impose a number of environmental and production standards on palm oil plantations and manufacturers.

Palm Oil is a cheap source of food for low-income people across the world. It is a very healthy and cheap source of food for many nations across the world which, along with a new emphasis on biodiesels as an alternative fuel source, has seen a large increase in demand. A squeeze on the supply of palm oil would see the cost of foodstuffs increase for many of those people who can least afford it.(USFDA 2012).

Since this study determined further the differences in status of the palm oil Industry of the four countries under study it is also supported by the Theory of Comparative Advantage on International Trade by Suranovic 2010 which emphasizes on the reasons why international trade takes place which include, differences in technology, differences in resource endowments, differences in demand, the presence of economies of scale, and the presence of government policies. Each model of trade generally includes just one motivation for trade.

3.0 MATERIALS AND METHODS

This study utilized the mixed methods of quantitative and qualitative research approaches. For the qualitative approach, the case study method presents the existing status of the palm oil industry from three local and three Asian

industries. For the quantitative approach, an objective based evaluation model was used to present the contributions of the palm oil industry to the respective countries.

The case study method was used at bringing understanding of a complex issue and in extending experience to what is already known from literature or previous researches.. Objectives-based evaluation was applied to assess each country's palm oil industry based on the outcomes. In the qualitative approach, this study utilized the Interview guide as tool in gathering the data. Focused group discussion was also done with the representatives of the planters in the plantation sites. The assistance of a moderator and recorder was utilized in the conduct of the activity. or the Quantitative approach - a questionnaire was used. The questionnaire was adapted from the previous environmental scanning study which was conducted by the proponent in 2008 on the BPO Industry.

This environmental scanning study was conducted in the six areas where oil palm farming and milling is a major activity. In Agusan del Sur, Kidapawan Cotabato and Cagayan de Oro in the Philippines, in Sabah, Malaysia, in Medan Indonesia and in Krabi, Thailand. Agusan del Sur is a landlocked province in Mindanao. Krabi and Suratthani Provinces of Southern Thailand, are the first plantations were established in 1969 and replanting of a new generation of palms commenced in 1992. Univanich, the biggest company operating in Thailand has now achieved a balanced age profile of palms with approximately 4% of the area routinely replanted each year. (Univanich PLC 2011).Sabah, Malaysia is the largest producing state for palm oil. About 50% of the total Sabah CPO production comes from Sandakan and the West Coast region. Sandakan is a strategic location to the distribution of oil palm plantations around the district and is poised to become a major

outlet for Malaysian palm oil to China. Indonesia,

The respondents of the study were the representatives of the different sectors in the industry namely, the planters, the millers, the distributors of finished products, the suppliers and heads of organizations which are constantly part of the exchange process. The researcher communicated with the industry players in the four identified countries who were involved in the conduct of the study. These included the CEOs of the identified companies and heads of industry associations. They were informed of the present study and the researcher sought permission to gather the needed data for the study. Strict confidentiality of divulged information throughout the conduct and data gathering was observed. Data gathering procedures varied from the countries under study due to the differences in the permission given.

The data-gathering methodology included key informant interviews and focused-group discussions with officers of the palm oil industry associations and companies, government officials, local cooperatives, smallholders/out-growers, local communities in oil palm sites and NGOs. Case studies were carried out in Cagayan de Oro, Agusan

del Sur, Bukidnon and Kidapawan. Field visits were also conducted in several oil palm plantations in Mindanao, in Sabah, Malaysia, and Krabi, Thailand. Data mining was adapted as a method to gather and analyze additional data particularly from Indonesia.

The researcher attended the International Palm Oil Conferences in Sabah Malaysia, Kidapawan, Cotabato in Mindanao Philippines and in Krabi, Thailand to gather secondary data about the opportunities and challenges affecting the different sectors in the industry.

4.0 RESULTS AND DISCUSSION

A significant change in the palm oil industry has taken place during the past season as Indonesia surpassed Malaysia in the production of palm oil and is now the world leader. Figure 2 shows the palm oil production of the three countries in the study – Malaysia, Indonesia and Thailand. The Philippines is not included in the top ten palm oil producer.

The status of palm oil industry includes the 1) area planted, 2) annual yield, 3) employment generation, 4) socio-cultural impact, 5) economic contribution, 6) legal and political impact 70

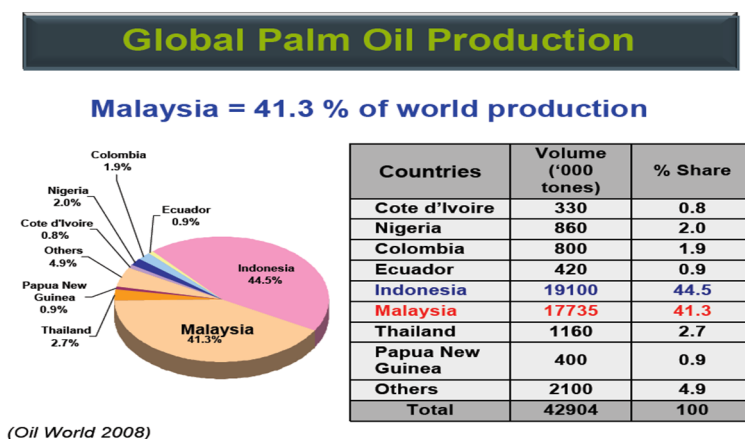


Figure 2. Global palm oil production by countries, 2008

Table 1. Area Planted to Palm Oil Trees and Yield by Country

Country	Area Planted in Hectares		Rank in the world	Annual Yield in Metric Tons		People Employed
	2008	2013		2008	2012	
Indonesia	7,825,000*	9,000,000	1	20,500	28,000	603,786
Malaysia	4,480,000	4,850,000	2	17,259	19,000	570,000
Philippines	46,608	143,000	16	82	100	286,000
Thailand	580,000	892,000	3	1,540	1,700	1128,000

programs and policies, 8) challenges and 9) government and non-government support in the industry.

4.1 Area Planted and Annual Yield.

As of April 2013, plantations of palm has greatly increased from 2008 in the four countries in Southeast Asia as shown in Table 1. Philippines increased by more than 600% including potential areas which are planted to coconuts and other agricultural products. Thailand has increased by 53% and only utilized barren lands for the plantation

In 2010, the plantations in Thailand produced 15.0% of the fresh fruit bunches (FFB) processed by the companies factories, with 85.0% of FFB being purchased from out grower farmers. The overall planted area of oil palms in Thailand is expanding rapidly and it is this expansion of small-holder plantings that is fueling the Company's long-term growth (Univanich PLC, 2011)

The oil palm is the most efficient oil-bearing crop in the world, requiring only 0.26 hectares of land to produce one ton of oil while soybean, sunflower and rapeseed require 2.22, 2 and 1.52 hectares, respectively, to produce the same. [MPOC.

The Oil Palm Tree, 2012]. The yield of the four countries is increasing in rapid pace trying to meet the domestic and world demands. Comparatively, Indonesia surpassed Malaysia in the production of palm oil and is now the world leader.

Together with the increase of land and yield, the people employed are also increasing. The Malaysian industry employs more than 570,000 people with 405,000 engaged in cultivation (Kui, 2008). In Indonesia, the Palm Oil industry has been attributed with the alleviation of poverty for millions of inhabitants (United States Department of Agriculture [USDA], 2007). Thailand have also an estimated millions of workers based on the ratio of 1 ha.:2 workers.

4.2 Magnitude of Gaps Between Production, Utilization and Contribution to GDP

Of the four countries, Indonesia has the highest contribution to the national GDP which could be attributed to its very high volume of exports and production of crude palm oil and land area utilization. Considering the low domestic consumption in comparison to the supply, Malaysia's high volume of importation is way beyond expectation.

Table 3. Supply, Domestic Consumption, and Export of Palm Oil Products in Metric Tons by Country, 2012

Country	Supply	Domestic Consumption	Exports	Import	Contribution to National GDP in billion \$
Indonesia	29,469	7870	19,600	20	\$174.03 (14.4%)
Malaysia	23,205	3323	17,205	1725	\$39.35 (8.0%)
Philippines	164	130	2	45	\$4.16 (1.0%)
Thailand	1,957	1,245	480	20	\$38.59 (6.0%)

The palm oil industry has greatly help in the emerging economy of a country in terms of contribution to GDP. The production of Malaysia and Indonesia has gone far beyond their domestic consumption, hence they can export in great bulk to needing countries.

4.3 Social and Environmental Impact.

Aside from the industry's contribution to economy, contrastingly, it also gave rise to social and environmental concerns to the people, government and the private sector. The expected increase of global demand for palm oil products in the next few years may lead to more social and environmental issues in a country. To address both economic and social concern, the government has to strategically think out of the box. This may also posed as a challenge to the industry players as they gradually meet the world demand for palm oil products.

In Thailand, crime rate has decrease since people are already earning in the plantation and factories. Such earnings provided food, shelter, and education to family members thus leading them to have better quality of life and self worth. This scenario is shared by the other countries. Moreover, Indonesia, has changed their perception from being in a lowly state to being one of the

world's significant nation.

Palm Oil plantations do not lead to rampant destruction of tropical rainforests. In Malaysia, plantations are restricted to the 20 percent of the land which is allocated for agricultural purposes. Sixty percent of Malaysia's territory is reserved for forest. The average in Europe is 25 percent. This means that palm oil plantations can only occur on land already zoned for agriculture. In Indonesia, one of the world's most densely populated countries, 25 percent of the country has been set aside for forest conservation. Palm Oil is only cultivated in areas set aside for commercial production.

On the other hand, the industry also contributed to some social ills. In the Philippines, land grabbing was experienced by the natives, when unknowingly, the palm oil company converted their farmlands into palm plantation. Albeit, this problem is still unsolved, the tribes working in the farms were provided with schools, health centers, and other social services by the company. The farmers are educated on new practices and farming technology. The carbon emission in Indonesia due to has affected the health of the residents near the burnt forests. The forest degradation also lead to climate change.

In Indonesia, the Palm Oil industry has been attributed with the alleviation of poverty for

millions of inhabitants. [United States Department of Agriculture, 2007]. Eighty-Nine percent of the world's vegetable oils are grown in developing nations, making them an important way to raise incomes and standards of living for the world's poor. The Malaysian industry employs more than 570,000 people with 405,000 engaged in cultivation. [; Kui, D. P. C. F 2008,]

4.4 Challenges and Support.

One of the most challenging issues confronting the oil palm industry is proving its commitment to sustainable production of palm oil and oil palm products. Several nongovernmental organizations have related oil palm cultivation to deforestation and declining biodiversity. To address this issue, several agricultural and food industries are promoting certified sustainable palm oil (CSPO) to meet the increasing demand of buyers requiring proof of sustainability in the palm oil supply chain.

Consumers from developed countries are concerned about the social and environmental aspects of production and marketing of products. Thus, national laws and regulations incorporate sustainability requirements which may influenced requirements to certify environmentally and socially sustainable production. As an example, the European Union Renewable Energy Directive and the US Environmental Protection Agency Renewable Fuel Standard programs have already adopted a number of conditions or criteria and recognized voluntary sustainability standards (Voegele, 2011).As the world's largest supplier of RSPO-certified sustainable palm oil, Malaysia is well prepared to handle environmental policies of importing countries as well as Indonesia. But Philippines and Thailand may be less affected because of iys meager volume of export.

The Palm Oil industry is a highly regulated and monitored industry. Many Palm Oil producers and other interest groups including the WWF

have started the process of certifying sustainably produced palm oil through the Roundtable on Sustainable Palm Oil. In addition to this, local laws in both Malaysia and Indonesia impose a number of environmental and production standards on palm oil plantations and manufacturers.

5.0 Conclusion

There is a growing market for palm oil in the world thus countries are increasing their plantations. The palm oil industry has both advantages and disadvantages to the people, the environment and the country in general. However, government policies have been instituted to address the social concern and at the same time protect the inhabitants and the industry itself. In conclusion, a country has the choice to make the palm oil industry as one of the main sources of revenues while ensuring that it will not be harmful to the nation. The theory of Comparative Advantage on International Trade by Suranovic (2010) stating that any future change is a continuation of the direction and rate of present trends among a limited number of social, technological, economic, and political variables supports the findings of the study.

References

- Basiron. 2008. Malaysia's Oil Palm – Hallmark of Sustainable Development, *Global Oils & Fats Business Magazine*, 5(4)
- Global Oils and Fat Business, 2008. Malaysia's Oil Palm – Hallmark of Sustainable Development. *Global Oils & Fats Business*, 5(4).
- Indonesian Palm Oil Development to Accomplish the Indonesian Vision of the Year 2020. *OIL PALM INDUSTRY ECONOMIC JOURNAL* (VOL. 3 (1)/2003)

- Kui, D.P.C.F, 2008. Malaysian Efforts in Developing Responsible Practises in the Palm Oil Industry, edited version of the keynote address by the Malaysian Minister of Plantation Industries and Commodities at the World Sustainable Palm Oil Conference, London. *Global Oils & Fats Business Magazine*, 5(4).
- Lama, Tana, Lee &Rahma. 2009. Malaysian palm oil: Surviving the food versus fuel dispute for a sustainable future, *Renewable and Sustainable Energy Reviews*, 13(Volume 13, Issues 6-7, August-September 2009).
- MPOC, n.d. The Oil Palm Tree.
- S.O. Aghalino. British Colonial Policies And The Oil Palm Industry In The Niger Delta Region Of Nigeria, 1900-1960. *African Study Monographs*, 21(1): 19-33, January 2000.
- Malaysia's Oil Palm 2008, – Hallmark of Sustainable Development, *Global Oils & Fats Business Magazine*, Vol. 5, Issue No. 4;
- Suranovic, S. (2010).International trade: Theory and policy. George Washington University.eISBN: 978-1-4533-2732-6. Available online from Flat World Knowledge, Inc.
- USDA. (2007), Indonesia: Palm Oil Production Prospects Continue to Grow, Foreign Agriculture Service Commodity Intelligence Report, 31 December; Washington DC.
- Villanueva, Jo. (n.d.) Oil Palm Expansion in the Philippines Analysis of Land Rights, Environment and Food Security Issues (in Oil Palm Expansion in Southeast Asia: Trends an Implications for Local communities and Indigenous People by FPP and Sawitwatch, 2011).
- Voegele, Erin. (2011), European Commission announces new voluntary schemes under Renewable Energy Directive. *Biodeisel Magazine*. July 20, 2011.