

## **CHAPTER II**

### **THE DYNAMIC OF INDONESIA'S CPO INDUSTRY**

In this chapter, the author would like to explain the dynamic of Indonesia's CPO Industry. It begins to describe the history of how palm oil can exist in Indonesia, where is the location of Indonesian palm oil producing centers, and palm oil as a primary and potential commodity. Further, the author explains another critical point about palm oil production in Indonesia, such as the amount of palm oil production in Indonesia from year to year. The last important point is about the export of Indonesian palm oil. On this last point, the author will explain about the number of Indonesia's CPO volume export according to the countries destination, number of Indonesia's CPO export and the demand elasticity of EU CPO imports from Indonesia.

#### **A. Development of the Indonesian CPO Industry**

Palm oil (*Elaeis Guineensis Jacq*) is not original from Indonesia. Palm oil is a tree plant that originates from the African continent. Palm oil is widely cultivated in tropical regions such as Asia, Africa, and South America. Palm oil was entering Indonesia in 1848 that was brought by the Dutch colonial government. Then in 1911, people of Belgium named Adrien Hallet tried to start to cultivate oil palm plants in Indonesia precisely in the area of Deli, the east coast of Sumatra and also in Aceh. Palm oil plants are the primary source of vegetable oil after coconut in Indonesia. Indonesia is one of the countries in the Asian region that is quite famous for its palm oil plantations. Palm oil can grow and develop well in Indonesia because it is supported by natural factors, mainly because of the availability of warm temperatures, sunlight, and high rainfall that can maximize the production of palm oil.

The development of palm oil consumption shows an increasing trend in the world. Indonesia is the world's largest producer and exporter of palm oil. According to Index Mundi 2016, the data shows that Indonesia's palm oil export volume reaches 25.75 million tons. Malaysia followed in second place with an export volume of 18 million tons. Meanwhile, in third place in Benin, a small country in the African continent with exports reaching 580 thousand tons (Index Mundi , 2016). This is because Indonesia as an agricultural country has an outstanding prospect in palm oil plantations. In terms of geography, palm oil has grown and developed well in various islands in Indonesia. Because in terms of raw material competitiveness, Indonesia has a high availability of raw materials considering that the area of national oil palm plantations is quite extensive in the world. Data from the Directorate General of Plantations, Ministry of Agriculture of the Republic of Indonesia, shows that in the past ten years Indonesia's palm oil plantation area has increased by an average of 5.9 percent. The highest increase in palm oil land in 2011 was 7.24 percent to 8.99 million hectares.

Meanwhile, the area of Indonesian palm oil plantations in 2016 is estimated to reach 11.67 ha. This amount consists of smallholder plantations covering an area of 4.76 million hectares, private plantations of 6.15 million hectares, and state plantations of 756 thousand hectares (Ministry of Agriculture, 2017). While in 2017, the area of Indonesia's oil palm plantations has reached 16 million Ha, with extensive community plantations Indonesia, which reached 53 percent and ranks first in the proportion of the total ownership of Indonesian oil palm land and managed to defeat the dominance of private plantations (PASPI, 2018).

**Figure 2. 1 Location of Indonesian Palm Oil Producing Centres**



*Source:* Indonesia-Investments. Retrieved November 27, 2018, from: <https://www.indonesia-investments.com/business/commodities/palm-oil/item166> (1: Sumatra, 2: Kalimantan)

The picture above shows that almost 70 percent of Indonesia's palm oil plantations are located in Sumatra, the location where the palm oil industry was started first, namely in the period of Dutch colonial. Meanwhile, around 30 percent are found in the area of Borneo (Indonesia Investments, 2017). Based on data from the Central Bureau of Statistics (CBS) in 2016, Riau is the largest region for palm oil producing in Indonesia with production reaching 7.33 million tons. Then followed by North Sumatra in second place with 5.1 million tons and Central Kalimantan in third place with 3.4 million tons. The two provinces, namely Sumatra and Kalimantan, are centers for producing palm oil in Indonesia (BPS, 2017).

Over time, palm oil continues to grow and can play a role in the international market. The existence of palm oil is necessary for Indonesia. Palm oil commodities have a strategic role in the Indonesian economy as the most significant foreign exchange of a country after oil and gas. In 2017, the Indonesian palm oil industry recorded a new record in the country's foreign exchange contributor, amounting to USD 23

billion, equivalent to Rp.300 trillion. Palm oil, which is the primary commodity of the country, has become a legend since the era of Dutch colonial (PASPI, 2018). Here are some of the roles of national strategic industries namely palm oil as a contributor to the country's foreign exchange in the Indonesian economy:

- a. The national strategic industry which is one of the sources of vegetable oil in the world.
- b. One of the mainstay agricultural commodities of non-oil exports, this commodity has good prospects as a source of foreign exchange and tax revenues.
- c. In the process of production and processing, this commodities also able to create employment opportunities and improve people's welfare, because it encourages GDP growth and reduces poverty in Indonesia.

The rapid development of Indonesian palm oil has become one of the issues that have attracted the attention of the world community. Besides having a strategic role in the Indonesian economy as described above (World Growth, 2011), palm oil has also succeeded in becoming one of the mainstay commodities in Indonesia. Data from the Ministry of Trade of the Republic of Indonesia states that since 2012 palm oil is included in the ten primary and potential commodities. The following table can prove this:

Table 2. 1 10 Main and Potential Commodities Export

No.	URUAIAN	PERIODE : 2012-2017 (JANUARI-NOVEMBER)						REKORD 10 BULAN TERAKHIR	
		2012	2013	2014	2015	2016	2017	REKORD 10 BULAN TERAKHIR	
								PERIODE 12-16	PERIODE 17-16
1	TPT	12.468.384,2	12.681.715,5	12.742.635,1	12.284.983,1	11.813.377,2	11.452.684,6	6,42	8,20
	PAKAIAN JADI	7.572.053,6	7.719.797,2	7.683.015,7	7.586.130,2	7.452.675,7	7.448.078,3	10,48	5,33
	SEKUTU DAN BELANG	4.581.127,8	4.520.138,2	4.662.528,6	4.311.597,1	3.998.132,3	3.665.609,2	0,00	0,00
	KAIN	367.207,9	391.778,1	397.768,1	401.235,8	388.582,2	338.824,5	-4,48	0,24
2	ELEKTRONIK	10.272.404,5	9.666.295,7	9.294.638,3	8.231.238,4	7.645.980,3	7.664.796,4	-8,04	5,49
	PRODUK KOMPUTER	3.289.505,4	3.087.786,4	2.976.664,1	2.522.281,1	2.248.419,4	2.208.453,8	0,88	1,50
	ELEKTRONIKA BISNIS/INDUSTRIAL	1.824.526,1	1.585.666,2	1.585.666,2	1.412.218,2	1.278.823,5	1.243.443,5	-6,34	1,61
	KOMPONEN & BAGIAN	3.997.238,9	3.278.345,1	3.487.239,6	3.295.319,6	3.139.542,7	2.864.937,5	-8,18	2,05
	ALAT CERM. ELEKTRONIK	1.536.004,1	1.197.504,1	1.197.504,1	1.285.319,6	1.159.542,7	1.154.630,8	-5,89	0,33
3	KARAT DAN PRODUK KARAT	10.475.130,6	9.394.177,4	7.100.023,1	7.000.023,1	5.913.509,6	5.664.242,4	-15,57	5,09
	PRODUK BAHAN BUKAN KAYU	17.602.188,0	15.838.830,2	14.042.904,7	12.933.110,4	10.908.276,4	8.547.125,0	-0,63	7,77
	PRODUK BAHAN BUKAN KAYU	8.799.779,2	9.042.477,2	9.293.110,4	9.293.110,4	9.008.379,6	8.547.125,0	-2,10	3,35
	PERKUTANE	1.767.130,4	1.747.481,8	1.708.520,5	1.708.520,5	1.607.468,5	1.465.604,8	-2,95	3,02
	KAYU DAN PRODUK KAYU	2.842.246,5	3.015.607,5	3.177.111,8	3.314.936,1	3.198.506,4	3.008.427,1	3,02	2,15
	PAPIR DAN PAPER	4.190.386,3	4.280.407,9	4.177.111,8	3.984.968,9	3.728.160,2	3.292.186,7	4,96	25,27
4	ALAS KAKI	3.524.592,2	3.860.393,9	4.108.448,5	4.507.024,3	4.639.859,3	4.215.551,2	6,53	3,21
	OTOMOTIF	4.727.123,7	4.636.015,3	5.127.761,3	5.377.717,4	5.802.560,5	6.299.290,5	17,97	4,51
	KENDARAAN KHUSUS	1.653,2	6.430,2	79,7	4.820,2	3.186,0	2.979,0	10,75	0,01
	KENDARAAN RODA 4	168.909,4	159.269,0	143.722,2	152.589,5	134.042,8	96.423,0	-25,31	0,07
	KENDARAAN RODA 4 C/D	32.236,2	13.813,3	72.971,1	84.916,6	181.115,1	156.471,5	-9,80	0,10
	KENDARAAN RODA 4 BUKAN C/D	2.289.652,4	2.206.956,9	2.688.596,7	2.419.289,1	2.424.875,5	2.242.407,0	26,24	2,03
	KENDARAAN TEMPORER	51.226,6	1.030,9	429,2	182,7	1.420,5	1.420,5	-34,82	0,00
	KOMPONEN KENDARAAN	1.500.214,1	1.461.624,1	1.631.231,8	1.840.253,9	2.000.761,1	1.912.889,6	3,74	1,37
	KOMPONEN MOTOR	463.263,8	437.976,6	448.739,5	428.586,9	500.851,9	548.181,4	20,25	0,39
	MOTOR	200.726,5	126.443,0	143.306,6	401.796,4	468.072,3	468.198,1	61,27	0,49
	TRAILERS DAN BAHAN BAKU	13.672,9	15.987,1	18.529,9	8.868,8	27.201,7	26.467,9	-4,85	0,05
	TRAKTOR	3.395,6	5.446,2	12.501,7	33.431,4	61.333,5	69.025,5	26,41	0,00
8	UOBAK	1.208.543,8	1.481.284,3	1.815.229,8	1.356.322,5	1.497.420,9	1.329.362,9	-12,87	1,09
	KAYU	833.141,8	993.072,7	1.095.237,9	1.146.928,3	1.029.055,4	952.609,0	-9,84	0,61
10	KOPRI	1.249.518,8	1.174.045,3	1.039.605,5	1.097.735,1	1.008.590,1	890.338,3	-11,24	0,80
TOTAL 10 KOMODITI UTAMA		71.413.294,7	65.543.324,7	60.121.624,4	54.403.929,4	47.027.326,2	46.320.329,4	18,28	47,40
TOTAL EKSPOR NON HUKAS		133.043.004,7	149.918.763,4	165.941.207,6	131.791.907,2	122.080.252,2	119.498.335,7	16,91	100,00

Sumber : BPS (data hasil Survei Kemungkinan Perdagangan)

Source: Ministry of Trade. *Economic Profile: 10 Main and Potential Commodities*. Retrieved November 28, 2018, from Ministry of Trade Web Site: <http://www.kemendag.go.id/id/economic-profile/10-main-and-potential-commodities>

Based on the table above, palm oil commodities are at number 4, above the commodities of forest products and below the commodities of rubber and rubber products. This data proves that palm oil from 2012 until 2017 can become a mainstay commodity. Also, there are supporting factors such as the increasing number of production and land expansion, the increasing number of palm oil-based companies and the value of exports that continue to increase in each period. With the classification of palm oil as one of Indonesia's mainstay commodities, it is expected that in the future the government can maximize it through production and export activities (Ministry of Trade, 2017).

Nowadays, Indonesia is the largest producer of palm oil in the world. Indonesia's CPO market is not only focused on Asian regions such as India and China but also has grown on the markets of the European Union and the Middle East. The demand for CPO in countries of the European Union shows a significant increase. Coinciding with the industrial revolution in Europe, the European Union market showed an increase in the amount of CPO use. It is due to the increasing number of companies in Europe that require vegetable oils in their production of raw materials. Then, because of this reason, the European Union has decided to import palm oil.

Palm oil is the primary raw material in the manufacture of cooking oil, margarine, soap, cosmetics, cables and also the pharmaceutical industry. It is caused due to the superiority of the nature of the palm head which is resistant to high-pressure oxidation and can dissolve chemicals that are difficult to dissolve by other solvents. Furthermore, the most exciting thing is that there is no garbage in the palm oil production process. All the remaining products can be appropriately processed including fiber, shells, stems, bunches, and midribs of palm oil plants can be processed into compost, while the derivative oil can be used as a renewable energy source, namely biodiesel because of the various advantages that make palm oil as the most promising plantation commodity in the world. Also, biodiesel which is

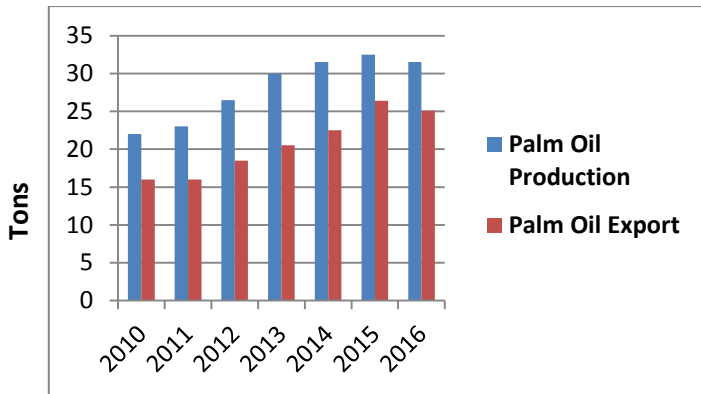
used as alternative energy is also an absolute source of CPO as a future energy source because its effects are very environmentally friendly (Pichler, 2010).

The use of biofuels as alternative energy fuels encourages increased consumption of CPO on the European market. In the European Union, biofuels are being developed with the aim of overcoming energy scarcity. The use of palm oil as an alternative substitute for fuel is expected to provide several benefits. The primary material for producing biofuels in the European Union is using the CPO from Indonesia. Then this situation that makes the demand for Indonesian CPO exports to the European Union increase from year to year.

## **B. Palm Oil Production in Indonesia**

Several industries in Indonesia have shown their strong growth in the areas of international trade, for example, such as the domestic palm oil industry for the past 20 years. This commodities growth is reflected in the rapidly increasing number of palm oil production in Indonesia and the increasing number of oil palm plantation areas. Driven by increasing global demand and higher yields, oil palm cultivation has been significantly expanded by palm oil farmers and entrepreneurs in Indonesia at the expense of the environment and also sacrificed production figures from other agricultural products such as cocoa and coffee. The farmers choose to switch to palm oil plantations because that will be more ensured (PASPI, 2018).

**Figure 2. 2 Palm Oil Production and Export 2010-2016**



*Source:* Indonesian Palm Oil Association. Retrieved November 27, 2018, from: <https://gapki.id/news/397/refleksi-industri-kelapa-sawit-2015-dan-prospek-2016>

The data above illustrates that the blue color in the chart shows the amount of palm oil production, while the red color in the chart shows the export volume of palm oil. Then, based on the data above, it can be seen that the amount of palm oil production in Indonesia continues to increase from year to year, but in 2016 Indonesia's palm oil (CPO) production declined by 3 percent from the previous year of 2015, which only reached 31.5 million tons from 32.5 million tons. This decline was the first time since 2010. Not only in CPO production, but Indonesia's CPO export volume in 2016 also decreased by 4.92 percent to 25.1 million tons from the previous year, which was 26.4 million tons. The Indonesian Palm Oil Association targets that Indonesia will produce at least 40 million tons of CPO per year in the next 2020 (GAPKI, 2017).

The oil palm plantation industry is the principal industry for the Indonesian economy. Because as explained in the previous explanation, palm oil exports are the most



important foreign exchange and also the industry providing employment for millions of people in Indonesia. Then, in terms of agriculture, palm oil is the most critical industry in Indonesia because it plays an active role in contributing to a gross domestic product (GDP) (Indonesia Investments, 2017).

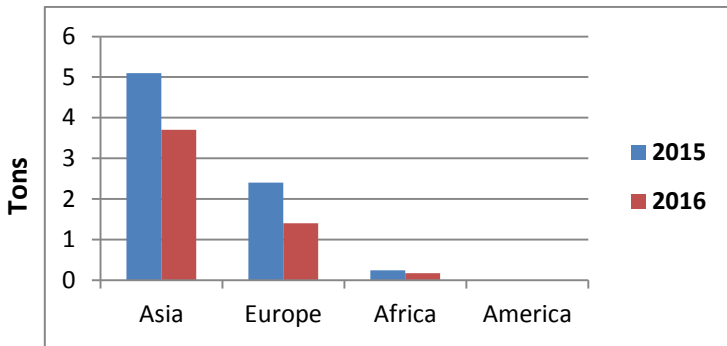
Looking at the data that presented above, it is highly expected that in the future Indonesia will be able to continue to increase the amount of palm oil production, which will later be marketed both domestically and internationally through export activities.

### **C. Export of Indonesian Palm Oil**

The majority of Indonesia's palm oil output is for export activities. However, Indonesia also carries out import activities for their CPO commodities. This activity has done because the CPO production process is not balanced with domestic consumption needs. One of the oils that are entirely consumed by Indonesia is cooking oil. Therefore, Indonesia must continue to import cooking oil from other countries. Based on data from the Central Bureau of Statistics (CBS) in 2017, if viewed throughout January until April 2017, the total import of cooking oil is 12.1 thousand tons with a value of US \$ 13.8 million. Cumulatively, most of the imported cooking oil from January to April 2017 originated from Malaysia with 4,686 tons with a value of US \$ 5.1 million. Papua New Guinea followed the second position with 2,175 tons or equivalent to the US \$ 3.4 million. The third is China with 2,039 tons valued at the US \$ 1.3 million. The fourth position came from Thailand with a volume of 1,161 tons with a value of US \$ 1.2 million, and the last from Australia was 1,133 tons with a value of US \$ 1.3 million (Ministry of Trade, 2017).

Refers to the export activities of Indonesian palm oil, here is a graph showing the volume of exports of Indonesian palm oil in the world according to the country of destination in 2015 to 2016.

**Figure 2. 3 Export Volume of Indonesian Palm Oil According to The Countries Destination (2015-2016)**



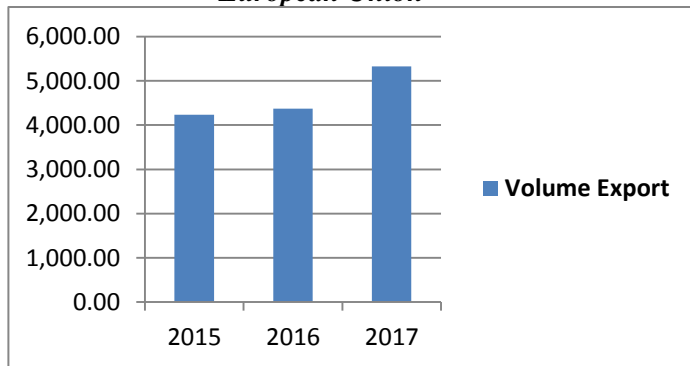
*Source:* Central Bureau of Statistics (CBS) 2017. (November 17, 2017). Retrieved November 27, 2018, from: Indonesian Palm Oil Statistics Catalog 2016

Based on the graph above, the blue color in the graph shows the year of 2015 while red shows the year 2016. Based on these data, it can be seen that the most significant volume of Indonesian palm oil exports in 2015 to 2016 according to the countries destination it refers to the countries in the Asian continent. The export volume of Indonesian palm oil to Asia in 2015 reached 5.1 million tons while in 2016 it reached 3.7 million tons. Then followed by Europe in the second position in 2015 reached 2.4 million tons and in 2016 reached 1.4 million tons and in the third position was Africa which in 2015 reached 241 thousand and in 2016 reached 179.2 thousand. From these data, it can be concluded that in the last two years, 2015 and 2016, the export volume of Indonesian palm oil was still won by the Asian continent. Meanwhile, the volume of palm oil exports has been stated to have decreased significantly in each continent region in 2016 (BPS, 2017).

Focused on the topic of this thesis, the author wants to examine more deeply about Indonesian CPO exports to the European Union. Then, related to the data above, Europe is the

leading destination for Indonesian CPO exports. However, in the previous data showed that the existence of Europe was still inferior to the country of the Asian continent. Even though in fact, Europe is the first country's destination for non-oil and gas exports. For more details, the development of EU CPO imports from Indonesia can be briefly seen in the picture of 2.5 below:

**Figure 2. 4 Indonesia's CPO Export Volume to the European Union**



*Source:* Indonesian Palm Oil Association. Retrieved November 27, 2018, from: <https://gapki.id/news/4268/analisis-ekspor-cpo-indonesia-ke-uni-eropa-faktor-apa-yang-mendorong-trend-positif>

The data from the Indonesian Palm Oil Association in 2017 above shows that Indonesian CPO exports to the European Union tend to be flat in 2015 to 2016, which is a 3.24 percent increase. While the growth of Indonesia's CPO exports to the European Union looks very significant in 2017, which is an increase of 21.82 percent compared to the previous year. This fact shows that the pressure to stop Indonesian CPO exports in the global market was not easy to do. Price elasticity is one of the factors that influence the balance of supply demand in the global market. The price elasticity in question is how much the

response to changes in EU CPO imports every 1 percent price change (GAPKI, 2018).

**Table 2. 2 Demand Elasticity of EU CPO Imports**

Year	Price Elasticity	Described
2015	-20.37	Price factor is more dominant
2016	-1.03	Price factor is more dominant
2017	3.69	Excess demand factor

*Source:* Indonesian Palm Oil Association. Retrieved November 27, 2018, from: <https://gapki.id/news/4268/analisis-ekspor-cpo-indonesia-ke-uni-eropa-faktor-apa-yang-mendorong-trend-positif>

The data above shows that the average monthly price elasticity of demand for EU CPO imports from Indonesia is elastic in the short term. In 2015, the average monthly elasticity was 20.37, meaning that if the CPO price per year were 1 percent, then the volume of EU CPO imports would increase by 20.37 percent. It also happens to the elasticity in 2016, where one percent price change succeeded in increasing demand for EU CPO imports by 1.03 percent. It shows that from 2015 to 2016, prices have an important role and have an impact on changes in CPO imports in the European Union. However, in 2017, the change in elasticity has a positive trend. It shows that although the CPO prices rise, demand for EU CPO imports continued to rise, which amounted to 3.69 percent. It shows that the dominant factor is the need for high vegetable oil because it is not able to be fulfilled by European Union domestic production (GAPKI, 2018).

In addition to fulfilling the food industry, related to table 2.2 previously, the potential of palm oil is currently

being looked at to meet energy needs. In Europe, many refinery companies use palm oil as an advanced low-cost raw material for biodiesel production, especially in the port of Rotterdam. It happens because the price of palm oil is considered more stable than the prices of soybean oil and other vegetable oils, which are also a source of supply for biodiesel. In the eyes of the world, biodiesel is also considered capable of competing with fossil fuels in the energy market, where the price of palm oil depends on current oil prices.

In the past few years, the government seems eager to encourage the production of biofuel to fulfill the demand of national energy. It is useful, especially when the price of palm oil in the world market fluctuates. President Joko Widodo also issued a discourse to increase the use of biofuels as an implementation of increasing alternative fuel consumption by up to 20 percent, from the current implementation of only 5 percent. It is the latest response of President's from the Presidential Regulation number 5 the year 2006 that concerning in National Energy Policy which targets domestic energy supply and the achievement of optimal mix energy in 2025 which is the biofuel by 5 percent (APROBI, 2018). Because the population in Indonesia continues to increase and government support for biodiesel is very high, the demand for oil domestic palm oil in Indonesia is also increasing. The increasing demand for domestic palm oil can mean that the shipment of crude palm oil (CPO) from Indonesia will be constrained in the following years.

CPO exports depend on market fluctuations. Global economic factors are cause the country's economic growth. Thus, it can be concluded that the Indonesian palm oil industry is currently controlled in a free market mechanism, with the influence of dominance, control and hegemony factors that involve complex international actors.

Indonesia still often experiences some trade barriers from several countries, including the European Union. The European Union Parliamentary Resolution states that there is a ban on palm-based biodiesel. This palm oil product from

Indonesia is considered to still cause various kinds of problems such as deforestation, corruption, child labor, and also the prohibition of human rights. The European Union will take steps to ban every country in the European Union from importing CPO from Indonesia. The European Union Parliament has approved a plan to phase out crude palm oil or crude palm oil biodiesel in 2021 (Indonesia Investments, 2017). Plans to ban CPO based biodiesel and its derivative products can lead to unfair trade. Therefore, the European Union began a negative campaign by raising the issue of environmental damage and promoting the campaign of food products with labeling their products that did not contain oil palm. Furthermore, the problems for industries in the European Union began to occur after the implementation of dumping label for palm oil products based-biodiesel from Indonesia.