

DYNAMICS OF PALM OIL STOCKS IN THE WORLD'S PRODUCING AND CONSUMER COUNTRIES DURING THE SUPPLY DISRUPTION

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RESUME

As the largest palm oil producer in the world, supply disruptions occurred in Indonesia and Malaysia in 2019-2021 due to El Nino, the Covid-19 pandemic, and the Indonesian policy also affected the palm oil exports of the two countries and subsequently affected the availability (volume ending stocks) of palm oil in the world. Although supply disruption impacts on the ending stocks of Indonesian and Malaysian palm oil. This trend shows a difference where Malaysia's ending stocks is consistently declines while Indonesia's relatively fluctuate. So that the combined the ending stocks volume of Indonesia and Malaysia's palm oil shows an increasing trend. On the other hand, the ending stocks volume of palm oil in the major importing countries showed a significant decline of 36 percent. This condition creates excess demand and causes global palm oil prices to increase.

INTRODUCTION

Since 2006, palm oil has become the largest vegetable oil produced and consumed internationally, both as a foodstuff (PASPI Monitor, 2021^a) and energy source (PASPI Monitor, 2021^b). Palm oil production's share in the top-4 major vegetable oils in 2021 has reached 43 percent. Followed by soybean oil with a share of 32 percent, rapeseed oil with 14 percent, and sunflower seed oil with 11 percent.

In 2006, there was also a change in the palm oil producing countries. Indonesia has emerged as the world's largest palm oil producer, previously held by Malaysia. Indonesia's share in 2021 will reach 59 percent of the world's palm oil production, followed by Malaysia in second place with a 25 percent share.

The large share of palm oil in world vegetable oil production influences the world vegetable oil market dynamics. Changes in world palm oil stocks will affect the dynamics of changes in world vegetable oil stocks.

Likewise, changes in Indonesian and Malaysian palm oil supply to the world market will affect changes in palm oil stocks in major palm oil importing countries. This will involve changes in world vegetable oil stocks simultaneously, which will impact on the economies of these various countries. The linkage and dependence on palm oil are caused by the many economic sectors in various countries that use palm oil as a raw

material for food products, energy products, and related industries (Kojima et al., 2016; Cui and Martin, 2017; Shigetomi et al., 2020).

This article will discuss the supply disruption of palm oil in the major producing countries, especially in the 2019–2021 period. Furthermore, the impact on the dynamics of palm oil stocks in the major importing countries is also seen.

SUPPLY DISRUPTIONS

In 2018-2021, supply disruption occurred in the world's major palm oil-producing countries, namely Indonesia and Malaysia (PASPI Monitor, 2022). This palm oil supply disruption brought changes to the volume of palm oil exports in the world market. The supply disruptions referred to:

First, the El Nino Effect in 2018/2019 hit Indonesia and Malaysia as the major palm oil-producing countries in the world. The climate anomaly is characterized by a decrease rainfall and long and extreme droughts that cause forest and land fires. The impact of El Nino also causes stress on plants, incomplete photosynthesis, and delays in fertilization, causing a decrease in the productivity of oil palm plantations. Even though El Nino occurred in 2018/2019, its impact on productivity declines will continue until 2021. The decline in productivity has led to a decrease in palm oil production in Indonesia and Malaysia (Figure 1).

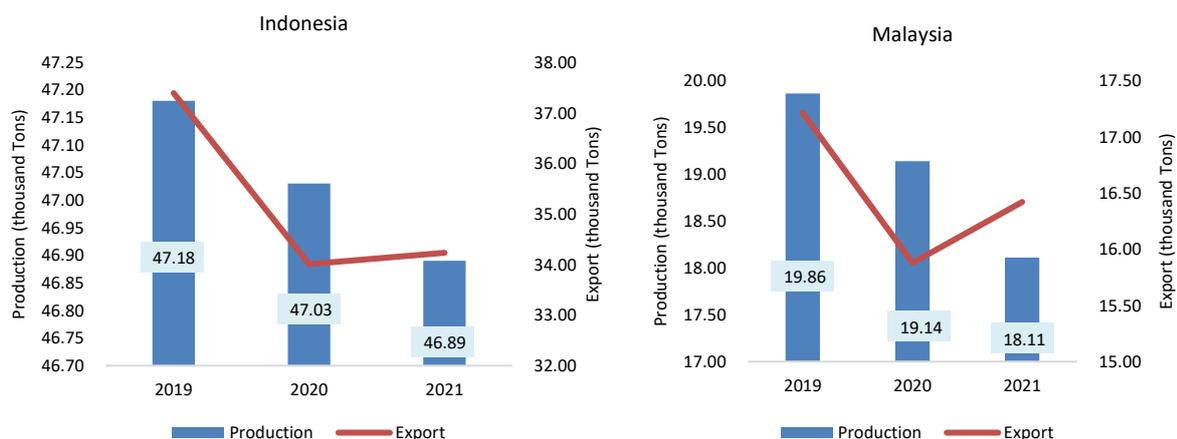


Figure 1. Production and Export Volume of Indonesian and Malaysian CPO in 2019-2021 (Source: GAPKI; MPOB, data processed by PASPI)

Second, the Pandemic COVID-19 Effect that has happened worldwide since 2020. The COVID-19 pandemic, accompanied by a lockdown and restrictions on socio-economic activities in several countries, has caused production and supply chain disruptions to all commodities in the world, including palm oil. World palm oil production has also decreased during the pandemic due to the shortage of plantation workers in Malaysia (Ashaari et al., 2022).

Third, the Indonesian Policy Effect, a combination of export levy policies, domestic downstream policy, and mandatory B30 biodiesel, has been implemented intensively since 2019. Indonesia has a strategic position in the world's palm oil market and the world's vegetable oil. As the world's largest palm oil producer, changes in the Indonesian palm oil supply volume (exports) will affect the world palm oil market dynamics.

The implementation of B30 program in Indonesia has increased domestic palm oil absorption from 5.8 million tons of CPO in 2019 to 7.2 million tons of CPO in 2020 and 7.3 million tons of CPO in 2021. This causes the world's supply of palm oil to decrease. In addition, the policy of export levies and domestic downstream also affects the composition and management of world palm oil stocks in importing countries. The composition changes of Indonesia's exports due to domestic downstream (PASPI Monitor, 2021^c, 2022) will significantly reduce the CPO export volume.

The effects of El Nino and the COVID-19 pandemic have decreased Indonesia's CPO production from around 47.18 million tons in 2019 to 46.89 million tons in 2021. Meanwhile, Malaysian palm oil production has also decreased from 19.86 million tons to 18.11 million tons in the same period.

The impact of El Nino, the COVID-19 Pandemic, and the B30 Policy have decreased the Indonesian CPO export volume from 37.4 million tons in 2019 to around 34 million tons in 2021. Meanwhile, Malaysia's CPO export volume also decreased from 17.2 million tons to 15.8 million tons before rising slightly to 16.4 million tonnes.

STOCKS CHANGES

The declining volume of palm oil production in Indonesia and Malaysia has also reduced the palm oil supply from major palm oil producing countries. This means that the ending stocks of palm oil in the producing country has also decreased. This condition also causes palm oil's ending stocks in importing countries to decline.

Changes in the ending stocks volume of palm oil in the producing countries (Indonesia and Malaysia) in 2019 reached 5.9 million tons per month (Figure 2). The palm oil ending stocks volume in these major producing countries increased slightly in 2020 to 6.1 million tons per month, or about 3 percent from the previous year. However, the ending stocks monthly in 2021 has a significant decline to 5.3 million tons per month, or lower about 13 percent compared to the position in 2020 and lower about 10 percent compared to the position in 2019.

Ending stocks dynamic in palm oil-producing countries shows different behaviors. As a major producer of palm oil, volume ending stocks in 2020 has increased to 4.4 million tons compared to 2019 (3.4 million tons), but the volume has decreased to around 3.7 million tons in 2021. On the other hand, the ending stocks has consistently continued to decline from around 2.5 million tons in 2019 to 1.7 million tons in 2020 and 1.6 million tons in 2021.

The dynamics of ending stocks in the major palm oil-producing countries show two important things, namely: **First**, the Malaysian palm oil industry is more sensitive to supply disruptions (El Nino, Pandemic COVID19) than the Indonesian palm oil industry. Although the impact of El Nino on reducing palm oil production occurred in both producing countries, the management of Indonesian palm oil stocks was more stable due to flexible, progressive, and proportional levy policies, domestic downstream policies, and the mandatory B30 policy.

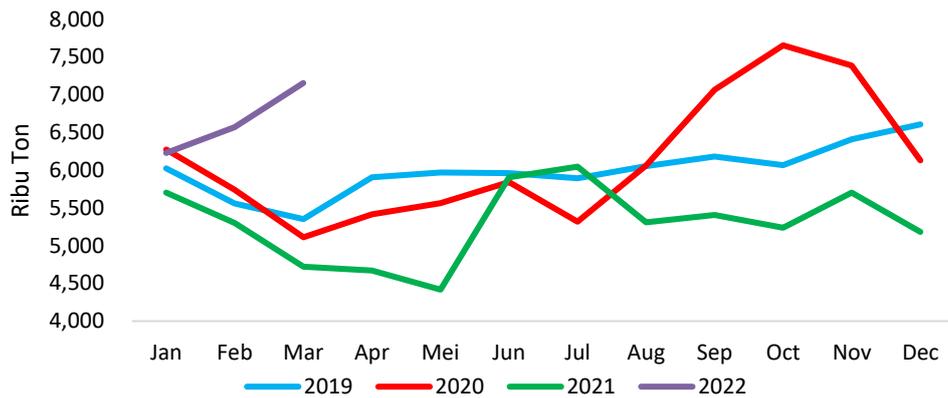


Figure 2. Dynamics of Ending Stocks Palm Oil in Indonesia and Malaysia (Source: MPOC)

Second, Indonesia and Malaysia's palm oil production and stocks are still below the position before the supply disruptions in 2019. This shows that in 2021, the palm oil industry in Indonesia and Malaysia has not fully recovered from their performance in 2019. However, palm oil ending stocks in

Indonesian and Malaysian will have recovered in 2022.

The dynamics of palm oil stocks endings in importing countries (China, India, Bangladesh, Pakistan, USA) also show interesting things in the 2019-2022 period (Figure 3).

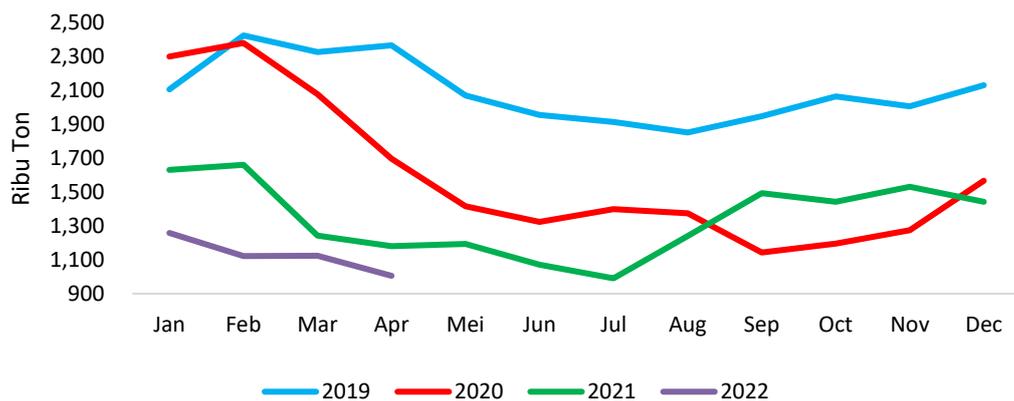


Figure 3. Ending Stocks Volume in Major Palm Oil Importing Countries (China, India, Bangladesh, Pakistan, United States of America) in the 2019-2022 (Source: MOPC)

Supply disruptions in 2019, the ending stocks volume in palm oil importing countries was still around 2.09 million tons per month and decreased by 24 percent to about 1.59 million tons in 2020. The declining volume of ending stocks continues in 2021 by 16 percent or to about 1.34 million tons. Supply chain disruptions in the 2019-2021 period, the volume of palm oil stocks in the importing country decreases by 36 percent.

Interestingly, the ending stocks dynamic in importing countries is the United States. Ending stocks volume in the US is relatively stable and tends to increase, from 161 thousand tons in 2019 to 164 thousand tons in 2020 and 166,000 tons in 2021. On the other hand, other palm oil importing

countries experienced a decrease in the volume of ending stocks during the period.

The decline in palm oil ending stocks, especially in the major importing countries, creates excess demand and causes an increase in global palm oil prices. Based on World Bank data (2022), global palm oil prices have increased from USD 537 per tonne in January 2019 to USD 1,823 per tonne in March 2022.

The palm oil ending stocks in major palm oil-importing countries has decreased by 36 percent during 2019-2021. This shows that world palm oil market has not yet recovered. The excess demand for palm oil in the world market is still ongoing until the first half of 2022.

The stocks deficit in the major palm oil-importing countries is around 0.75 million tons. If Indonesia relaxes its stocks by 0.75 million tons every month through increased exports, the excess demand for palm oil will drop drastically, and global palm oil prices will decline. On the other hand, if Indonesia reduces palm oil exports to the world market, the excess demand for the world palm oil market will continue.

CONCLUSION

1. The supply disruptions that affect the production and supply of global palm oil exports in 2019–2021 are El Nino, the COVID-19 Pandemic, and the Indonesian Policy.
2. In 2019–2021, the volume of palm oil ending stocks in the major producing countries (Indonesia and Malaysia) experienced dynamics with an increasing trend.
3. Ending stocks dynamic in palm oil importing countries fell by 36 percent in 2021 compared to the previous year (2019).
4. The global palm oil industry is estimated to be in a condition of excess demand until mid-2022. This shows the unrecovered palm oil stocks in the major palm oil importing countries.

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