

# **INDONESIA**

FOOD PRICE BULLETIN - April 2022

Special Focus: Palm Oil

SAVING LIVES CHANGING LIVES

# **Preface**

Global food prices rose sharply in March 2022 driven primarily by increases in wheat and vegetable oil prices. The Russian-Ukrainian conflict significantly contributed to a rise in prices of food commodities globally, as both countries are important exporters of wheat, corn, barley, and sunflower oil.

Indonesia is fully dependent on wheat imports, of which 25% comes from Ukraine. The ongoing conflict is likely to significantly affect wheat imports, and consequently the prices for wheat flour products in the medium to long term.

Ukraine and Russia are the largest exporters of sunflower oil globally while Indonesia is the top producer and exporter of palm oil, accounting for 56% of the total global supply. Potential shortages in sunflower oil supplies in global market may shift the demand to palm oil triggering oil price rise, impacting affordability for the vulnerable groups.

This Bulletin provides information and analysis on the availability of strategic food commodities and respective price trends at the national and sub-national levels in the first quarter of 2022.

It also includes a special focus on palm oil, which analysis the global and domestic market trends and covers recent major interventions on regulating exports and commodity price fluctuations in Indonesia.

Data for this analysis was derived from official government sources as well as media updates to triangulate findings.

### **WFP Analysis Team:**

Saidamon Bodamaev saidamon.bodamaev@wfp.org
Rahmitha rahmitha.rahmitha@wfp.org
Kautsar Fahreza Tandipanga kautsar.tandipanga@wfp.org

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# **Key Highlights**



- Global food prices reached record-highs in March as a result of the Russian-Ukrainian conflict. The FAO Food Price Index (FFPI) jumped by nearly 13% from February, the highest level since 1990. These increases mainly reflect soaring prices of vegetable oils, cereals, and meats as well as significant rises for sugar and dairy.
- Russia and Ukraine provide approximately half of global cereal exports, including 29% of the world's wheat supply. Together, they also provide roughly 72% of global sunflower oil exports. The conflict has already severely hampered global supply chains, impacting the prices of these commodities. On 22 April, the international price of wheat reached USD 456 per tonne, up from USD 342 recorded one week before the start of the conflict. Moreover, the FAO Vegetable Oil Price Index rose 23.2 percent, primarily driven by higher quotations for sunflower oil.
- Indonesia is fully dependent on wheat imports and acquires about one quarter of its wheat supply from Ukraine. Despite the Russian-Ukrainian conflict, domestic supplies have been maintained and wheat flour prices have not recorded a significant increase (only 1.7% between February and March). Global supply disruptions should be continually monitored as this may affect local wheat prices in the medium to long-term.
- With regards to Indonesia's 10 strategic food commodities, national stocks at the end of March were sufficient to meet domestic consumption needs. However, the stock duration for each commodity varied at both national and sub-national levels. Low stocks (availability for less than seven days) of chilli, bird's eye chilli, maize and shallots in certain provinces are likely to contribute to increased prices of these commodities, especially with the approaching Eid Al-Fitr celebrations.
- In March 2022, the monthly inflation reached 0.6%, the highest since the start of the COVID-19 pandemic in 2020. Furthermore, the food commodities inflation stood at 1.4%, which was significantly higher compared to March 2021 (0.08%) and March 2020 (0.01%). The increasing prices of red chilli, cooking oil and egg were the main drivers of inflation. Cooking oil recorded an all-time high increase of 42% compared to March 2021, and 10% compared to February 2022.

#### Special focus on Palm Oil

- Although Indonesia is the largest producer of palm cooking oil globally, the country faced unprecedented shortages and price surges in the first quarter of 2022. This was partially the result of disruptions caused by COVID-19 restrictions. This influenced production and prices in Malaysia where the global price of palm oil is determined. Nationally, the domestic price of cooking oil reached IDR 23,900/kg on 31 March 2022, the highest level ever recorded.
- To ensure sufficient domestic supply and price stabilization, the Government implemented three major regulations, including ceiling prices, a social protection scheme and more recently, an export ban on cooking oil and its derivatives. This latest measure has sparked international trade concerns, as several countries dependent on sunflower oil from the Black Sea Region may seek palm oil from Southeast Asia to compensate for their losses caused by the unfolding conflict between Russia and Ukraine.

# **Global Trends: Food Availability and Price Trends**

# Impact of the Russian-Ukrainian Conflict



Russia is the world's largest exporter of wheat, while Ukraine is the fifth largest. Together, they provide 29% of the world's wheat supply, 15% of maize and 6% of barley, making up for half of global cereal exports. The two countries also provided roughly 72% of global sunflower oil exports in 2020. The ongoing conflict has already affected global supply chains and is likely to continue causing shortages and delays from the Black Sea region, impacting timely availability of these commodities. Importers may need to identify new suppliers, which could increase transit times and lead to temporary shortages in some markets. Higher transportation costs as a result of higher energy prices are expected to add to consumer costs in markets.

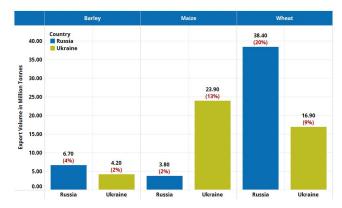
In 2021, the World Trade Organization (WTO) predicted a 4.7% growth of the global merchandise trade volume for 2022 [1]. This forecast was reduced to 2.5% due to Russian-Ukrainian conflict [2]. Although these two countries only supplied 2% of global merchandise exports in 2020, they are the main global exporters for certain commodities, including wheat. Thus, the conflict is negatively affecting global market conditions [3].

The FAO's Food Price Index (FFPI) jumped by nearly 13% with the average of 159.3 points in March 2022 compared to the index in February. It reflects a new record-high for the sub-indices of vegetable oils, cereals and meat, while the sub-indices of sugar and dairy products also increased significantly. The FAO Cereal Price Index climbed to a record level, increasing by 17% between February and March, while the vegetable oil index surged by 23% over the same period. In March 2022, palm oil prices hit record levels and soy oil prices rose to their highest levels in decades [4].

The international wheat price has increased since the first day of the Russian Ukrainian conflict (23 Feb 2022). A week before the conflict, the average wheat price was USD 342 per tonne. At the beginning of March, it reached its peak at USD 367 per tonne before slightly declining in the following days.

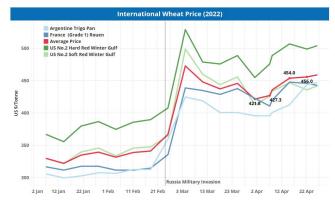
In April 2022, the average price of wheat continued increasing, reaching USD 456 by the 22nd of the month.

#### Global Cereal Exports from Russia and Ukraine, 2020/2021



Source: International Grain Council (IGC)

## **International Wheat Price, 2022**



Note: Average Price is the average price of Argentina Tigo Pan, US No.2 Hard Red Winter Gulf, US No.2 Red Winter Gulf, and France (Grade 1) Rouen)

# **National Food Availability**

### Food Trade

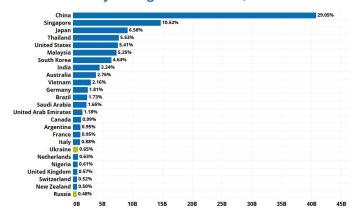


Overall, the percentage of imports from Russia and Ukraine to Indonesia in 2020 were 0.48% and 0.65% respectively, which are minor compared to imports from other countries. However, the conflict may still influence the Indonesian wheat market as the total food products imported from both countries in 2021 amounted to USD 956 million, of which 98% was wheat.

Indonesia is the second country with the highest wheat import value in the world with a total import value of USD 2.6 billion (5.4% of total global wheat imported) in 2020. According to the Ministry of Trade (MoT), the consumption of wheat in Indonesia has increased from 5.6 million tonnes in 2014 to 6.6 million tonnes in 2020 [5]. Ukraine is Indonesia's second biggest source of wheat after Australia. Statistics Indonesia (BPS) indicates that the volume of wheat and meslin imports from Ukraine accounted for 2.8 million tonnes in 2021, equivalent to 25% of the total import volume of wheat.

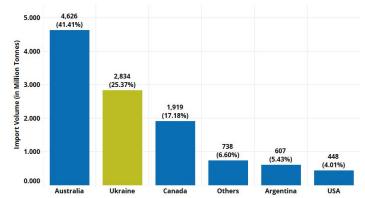
The wheat import dependency is likely to influence the domestic supply and prices, and put an additional burden on Small and medium-sized enterprises (SMEs) who provide 66% of domestic wheat flour for consumption in the country. In the short-term, the price of flour may not be affected because the wheat stock of flour producers is expected to last until April 2022 according to MoT. Moreover, the main wheat supplier for Indonesia is Australia, which accounts for 41% of the total import volume. Nevertheless, in the long-term, the Government may need to find alternative import countries to replace the wheat supply from Ukraine. To maintain the domestic wheat supply, the Ministry of Industry has suggested that the Ministry of Agriculture relax the import permit policies for certain wheat importer countries including India, Pakistan, Rumania, Bulgaria and Lithuania [6].

# Percentage of Import Trade Value of All Products based on Country of Origin to Indonesia, 2020



Source: The Observatory of Economic Complexity (OEC)

### Wheat Import Trade Volume of Indonesia, 2021



Source: Statistics Indonesia (BPS)

# **National Food Availability**

### Food Balance at National Level



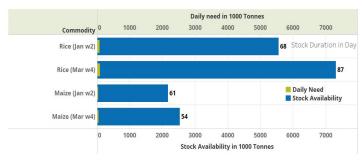
According to the Food Stock Monitoring System (SIMONSTOK) of the National Food Agency (NFA), the stock availability of ten strategic commodities in the last week of March 2022 was sufficient to meet national consumption needs. However, the stock duration for each commodity varied between one week to three months. Lower stock durations were found for chicken, sugar, shallot, chilli and bird's eye chilli compared to the second week of January. Thus, it is not surprising that the prices of these commodities increased at the end of March and with the approaching Eid Al-Fitr celebrations.

The stock of chicken was found to be lower due to reduced production as chicken feed prices have increased [7]. Moreover, the demand for chicken also increased due to Ramadan. Similarly, the stock of sugar was also lower due to high demand during Ramadan and because the sugar mill season is expected to start in May.

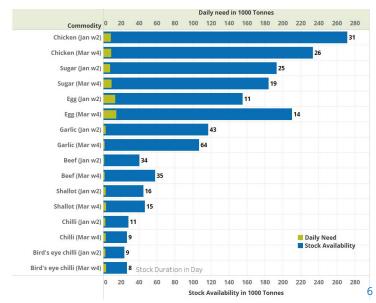
In the case of shallots, the stock was lower because many shallot planting areas were changed to paddy planting areas at the beginning of the year and only returned back to shallot planting areas in April Chilli and bird's eye chilli were recorded to have the shortest stock durations as the wet season reduced the total production of both commodities. However, stocks are expected to increase again with the harvest season in April.

Although the stock of beef increased in March, the Government expected a spike in demand during Ramadan. To prevent a shortage and meet the domestic demand, the Government expanded import permits of beef and buffalo meat for private sector companies.

### Food Commodity Balance - Rice and Maize, 2022



## Food Commodity Balance - Other commodities, 2022



# **National Food Availability**

### Distribution of Provinces with Low Food Balance



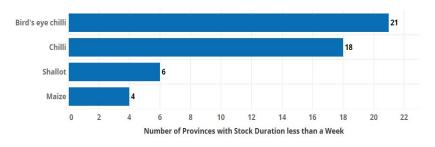
While the national level stocks of the 10 strategic commodities was considered sufficient in March 2022, regional disparities were widespread. A low food stock is defined by availability for less than seven days.

During the fourth week of March, 21 provinces experienced low stocks of bird's eye chilli and 18 provinces had low stocks of red chilli. Furthermore, a low stock of shallots was found in 6 provinces including Kalimantan, Sulawesi, Maluku and Papua. This may relate to the fact that the main supplies of shallot come from Sumatera Utara, Sumatera Barat, Jawa Barat, Jawa Tengah, Daerah Istimewa Yogyakarta (DIY), Jawa Timur, Bali, NTB, and Sulawesi Selatan and the provinces with low stocks are located far from these producer provinces.

Meanwhile, 4 other provinces in Sumatera, Java, and Kalimantan experienced a low stock of maize although the maize was mainly supplied from some provinces in Java and Sumatera. For example, Kepulauan Bangka Belitung mainly supplied its maize stock from DKI Jakarta instead of province in Sumatera [8].

#### **Number of Provinces with Low Food Balance**

4th week of Mar- Source: SIMONSTOK BKP - Ministry of Agriculture



Source: Food Stock Monitoring Information System (SIMONSTOK), National Food Agency (NFA)

#### List of Provinces with Low Food Stock

Fourth week of Mar- Source: SIMONSTOK BKP - Ministry of Agriculture

Region	Commodity and Province							
	Bird's eye chilli	Red Chilli	Shallot	Maize				
Sumatera	Gorontalo, Kepulauan Bangka Belitung, Kepulauan Riau, Riau,	Aceh, Kepulauan Bangka Belitung, Kepulauan Riau, Riau, Sumatera Selatan	-	Kepulauan Bangka Belitung, Kepulauan Riau				
Java	DKI Jakarta, Banten	DKI Jakarta	-	DKI Jakarta				
Bali & Nusa Tenggara	Nusa Tenggara Barat, Nusa Tenggara Timur		-	-				
Kalimantan	Kalimantan Barat, Kalimantan Selatan, Kalimantan Tengah, Kalimantan Timur, Kalimantan Utara	Kalimantan Tengan, Kalimantan Tlmur, Kalimantan Utara	Kalimantan Utara	Kalimantan Tengah				
Sulawesi	Sulawesi Barat, Sulawesi Tengah, Sulawesi Tenggara, Sulawesi Utara	Sulawesi Barat, Sulawesi Tengah, Sulawesi Tenggara, Sulawesi Utara	Sulawesi Tenggara	-				
Maluku & Papua	Maluku, Maluku Utara, Papua, Papua Barat	Maluku Utara, Papua, Papua Barat	Maluku, Maluku Utara, Papua, Papua Barat	-				

# **National-level Price Development**

# Inflation Rates and Monthly Price Changes

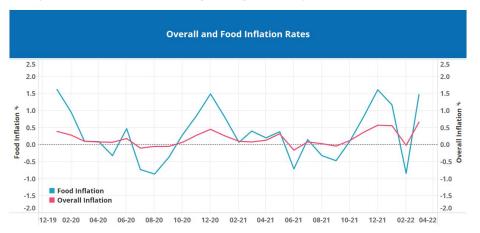


The price of five basic food commodities - red chilli, bird's eye chilli, vegetable oil, imported soybean and shallot - showed an increase of more than 5% in March 2022 compared to February 2022 (MoM). Red chilli recorded the highest MoM increase in March (25.7%), followed by bird's eye chilli (15.2%) and cooking oil (10.8%). The other six commodities recorded a moderate price increase (below 5%), while rice was the only commodity for which the price slightly decreased.

According to data from BPS, the overall inflation in March 2022 reached 0.6%, while the food commodities inflation stood at 1.4%. The food commodities inflation in March 2022 was significantly higher compared to March 2021 (0.08%) and March 2020 (0.1%). It is worth noting that increasing prices of food commodities including red chilli, cooking oil and eggs was the main driver of inflation in March.

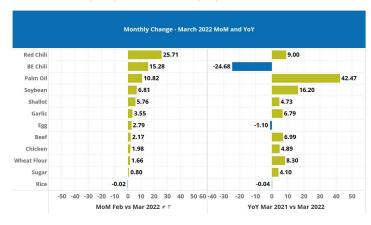
### Monthly Overall and Food Inflation (%)

Monthly Inflation - Overall and Food, Beverage, and Cigarettes Group (Food)



### **Monthly Price Change (%)**

Month-on-Month (MoM) and Year-on-Year (YoY)



Source: WFP calculation based on data from PIHPS (Bank Indonesia) and SP2KP (MoT)

Year-on-year (YoY) changes show that the price of cooking oil recorded the highest increase in March 2022, up by 42% compared to March 2021. On 31 March, the price reached its highest point at IDR 23,900/kg, 1.5 times higher than the regulated ceiling price (HET) of IDR 14,000/litre (equivalent to IDR 15,500/kg).

The sharp increase in the price of cooking oil has been a major domestic issue for the last two months as the global CPO prices rose. The domestic wheat flour price observed a only slight MoM increase of 1.7% in March, but high YoY increase by 8.3%. This indicates that there has been no significant effects of the Russian-Ukrainian conflict in the short-term, however prices of wheat could be expected to increase in the longer-term.

# **Regional Variations in Food Prices**

# Monthly Price Trends



### **Palm Cooking Oil**

In March 2022, the YoY price of cooking oil increased significantly across all regions. **Sulawesi region recorded the highest surge**, with an increase of 63%, followed by Maluku and Papua (45%) and Kalimantan (38%) regions.

#### **Red Chili**

The highest price jump was found in the Maluku-Papua region of 32%, followed by Sulawesi (28%) and Kalimantan (20%). Only a small increase was recorded in Sumatera. Conversely, the prices declined for 20% in Bali-Nusa Tenggara and Jawa (4%). Maluku-Papua region mainly supply the stock from Maluku Province but the price from farmer could increase 29-81% at the consumer level in the region [9].

### Soybean (Import)

The price of imported soybean was reported to have increased across all regions, with the highest increase recorded in Jawa (19%).

#### Other commodities

The price of other strategic commodities in March 2022 remained stable or went through a slight increase compared to March 2021. Bird's eye chili experienced a declining trend compared to last year with the highest decline recorded in Java (-44%). This may be related to the fact that most of bird's eye chilli supplies in Indonesia come from Java region.

# **Price Change by Commodity and Region (%)**

Monthly Prices, March 2021 vs March 2022 (Year-on-Year / YoY)

Regional	Ri	ice	Chic	ken	Eg	g		Beef	Sha	illot	Soybear	ı (lmport)
Sumatera	-0.1%	ĺ		5.9%		1.3%		8.5%		4.3%		16.4%
Jawa		0.9%		2.3%		6.1%		5.9%	-3.2%			19.1%
Bali-Nusa Tenggara	-1.7%		-1.7%		-0.6%			2.1%	-0.9%			12.5%
Kalimantan	-0.4%			7.8%	-5.5%			6.7%		8.8%		11.3%
Sulawesi	-0.3%			8.9%	-6.1%			8.0%		13.3%		15.8%
Maluku-Papua		0.2%		5.0%	-2.4%			6.8%		5.7%		14.8%
	-40% 0	% 40%	-40% 0	% 40%	-40% 0	% <b>40</b> %	-40%	0% 40%	-40% (	% 40%	-40% (	0% 40%

Regional	BE Chili	Garlic	Palm Oil	Red Chili	Sugar	Wheat Flour
Sumatera	-23.0%	7.2%	34.7%	3.5%	4.6%	9.7%
Jawa	-44.4%	6.8%	35.8%	-4.2%	4.5%	8.2%
Bali-Nusa Tenggara	-31.8%	2.5%	39.1%	-20.6%	1.6%	9.9%
Kalimantan	-23.4%	7.8%	38.7%	20.8%	6.7%	11.79
Sulawesi	-16.5%	5.2%	63.6%	28.3%	4.7%	5.0%
Maluku-Papua	-0.4%	10.0%	45.3%	32.8%	0.9%	6.6%
	-40% 0% 40%	-40% 0% 40%	-40% 0% 40%	-40% 0% 40%	-40% 0% 40%	-40% 0% 40%

Source: WFP calculation based on data from PIHPS (Bank Indonesia) and SP2KP (Ministry of Trade)

# Focused Analysis: Palm Cooking Oil

Global and Domestic Market Situation



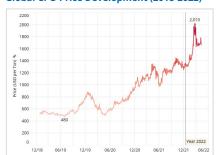
#### **Global Palm Oil Market Situation**

According to CIF Rotterdam, the global Crude Palm Oil (CPO) price surged and reached a record high at USD 2,010 per tonne on 9 March 2022. The FAO Vegetable Oil Price Index, consisting of prices of vegetable oils including palm oil, also hit an all-time high in March 2022 [10].

Indonesia is the largest producer of palm oil globally. The country supplied 56% of palm oil in 2021, followed by Malaysia with 33% share in global supplies [11]. The global price for commodity oil is determined by Malaysia on Bursa Malaysia Derivatives (BMD) as the country was considered the biggest palm oil exporter until 2006 [12]. The global price of palm oil is also determined by the CIF Rotterdam.

The COVID-19 movement restrictions resulted to the global CPO price increase primarily causing lower production in Malaysia [13,14]. The CPO production in Malaysia decreased by 7% in 2020/2021 percent compared to the 5-year average [15], while the global demand remained at the same level.

#### **Global CPO Price Development (2018-2022)**



Source: CIF Rotterdam

# FAO Food and Vegetable Oil Price Index



#### Palm Oil Production and Consumption in Indonesia

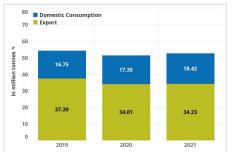
According to BPS and the Indonesian Palm Oil Association (GAPKI), Indonesia palm oil production was 51.3 million metric tonnes in 2021. About 61% of it was exported, 33% was consumed domestically and 6% remained as initial stock for next year. At the domestic level, CPO plays a significant role for food consumption with almost half of domestic CPO used in food products, 40% in biodiesel and 12% in oleochemical products in 2021.

#### Palm Oil Price in Indonesia

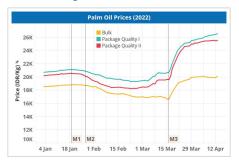
Amidst the rising global CPO price in the first quarter of 2022, Indonesia witnessed unprecedented domestic shortages and surging prices of cooking oil. Nationally, the domestic price of cooking oil reached IDR 23,900/kg (equivalent to IDR 22,400/litre) on 31 March 2022, the highest level ever recorded.

The rising prices of palm cooking oil was one of the main drivers of the country's overall inflation in March 2022.

### **CPO Domestic Consumption and Export**



#### Palm Cooking Oil Price, National, 2017-2022



Source: BPS, Indonesian Palm Oil Association (GAPKI)

Source: PIHPS (Bank of Indonesia)

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# Focused Analysis: Palm Cooking Oil

#### Government Interventions



### **Ceiling Price**

The Indonesian Ministry of Trade (MoT) issued three ministerial regulations to control the ceiling prices (HET) of cooking oil. On 19 Jan 2022, the MoT Regulation (Permendag) 3/2022 (M1) set one price for all quality types, with a maximum of IDR 14,000/litre or equivalent to IDR 15,500/kg. A week later, the regulation was lifted and the Permendag 6/2022 (M2) was revised, setting the HET at IDR 11,500/litre for bulk cooking oil, IDR 13,500/litre for regular packaged, and IDR 14,000/litre for premium packaged. These measures resulted in a reduction of prices, albeit still remaining at higher levels than the regulated HET. Moreover, although the Permendag No 6/2022 was implemented, stock shortages were still reported widely. On 16 Mar 2022, the MoT issued the Permendag 11/2022 to increase HET for bulk oil and revoke it for packaged oil to follow market mechanisms.

This led to increased availability of packaged cooking oil on the market but followed by a rapid increase in prices reaching even higher levels than before the initial regulation (M1) was put in place [16]. The price of bulk cooking oil also increased despite the imposed HET, which was likely due to consumers shifting from packaged oil to bulk oil.

The Government allocated IDR 7.28 trillion in Mar for the provision of 1.2 million litres of subsidised bulk cooking oil, ensuring that it could be purchased at the regulated price (IDR 14,000/litre).

Code	Regulation of Ministry of Trade	Changes in Ceiling Price (HET)
M1	<b>Regulation of MoT No 3/2022</b> 19 January 2022	One-Price Cooking Oil All types : IDR 14,000 per liter
M2	Regulation of MoT No 6/2022 27 January 2022	Bulk : IDR 11,500 per liter Package Regular : IDR 13,500 per liter Package Premium : IDR 14,000 per liter
M3	Regulation of MoT No 11/2022 16 March 2022	Bulk : IDR 14,000 per liter Packaged : follow market mechanism

#### **Social Protection**

The Government launched the Unconditional Cash Transfer (UCT) for Cooking Oil (BLT Minyak Goreng) scheme to improve households' and small street vendors' purchasing power. The Government provided UCT in amount of IDR 100,000 (equivalent to USD 6.96) per month to 20.5 million families (KPM), including those registered in the Family Hope Programme (PKH) and Sembako programmes as well as 2.5 million small street vendors. The BLT scheme was implemented for three months (April-June 2022) with advance disbursements equivalent to IDR 300,000. The Government allocated total of IDR 6.9 trillion for BLT, including IDR 6.15 trillion for low-income families and IDR 0.75 trillion for small street vendors. The disbursement carried out by the Ministry of Social Affairs (MoSA).

#### **Export Restriction**

In January 2022, Indonesia implemented export restrictions through the Domestic Market Obligation (DMO) and Domestic Price Obligation (DPO) to ensure the sufficient domestic supply of cooking oil and its price stabilization. Through the DMO and DPO, palm oil producers obliged to sell 20% of their exports volume (in the form of CPO and Red Palm Oil (RBD) to the domestic markets at a maximum price of IDR 9,300/kg [17,18]. The Government, in March increased the DMO required for exporters of cooking oil products, from 20% to 30%.

However, this regulation seemed not sufficiently effective for ensuring increased domestic stock of cooking oil. Hence, the Government announced a ban on the export of palm cooking oil and its derivatives on 22 April [19].

The export ban policy is expected to take effect on 28 April 2022. This regulation implies that 100% of palm oil production will be available for the domestic market and intends as a measure to protect vulnerable groups by ensuring improved affordability.

# **Data Sources and Methodology**



#### **Data Sources**

#### **Macroeconomic Data**

 Inflation Rate Development Statistics Indonesia (BPS) https://www.bps.go.id/

#### **Food Stocks and Food Prices**

- International Grain Council (IGC) https://www.igc.int/en/default.aspx
- The Observatory of Economic Complexity (OEC) https://oec.world/en/profile/country/idn
- Food Stock Monitoring System (SIMONSTOK)
   Food Security Agency Ministry of Agriculture
   http://pusatkkp.bkp.pertanian.go.id/simonstok/
- Statistics Indonesia (BPS)
   Statistic Bulletin of International Trade December 2021
   https://www.bps.go.id/publication/2022/03/01/b3a21519f1598
   b4b439b00c3/buletin-statistik-perdagangan-luar-negeri-impordesember-2021.html
- Center for Information of Strategic Food Prices (PIHPS)
   Central Bank of Indonesia (BI)
   https://hargapangan.id/
- Basic Necessity Market Monitoring System (SP2KP)
   Ministry of Trade
   https://ews.kemendag.go.id/Rdesign\_index.aspx
- Crude Palm Oil (CPO) Price
   CIF Rotterdam
   https://www.investing.com/commodities/crude-palm-oil-cif-rot
   terdam-futures-historical-data

Cover Photo: Unsplash / The Ian

# Methodology

**Analysis of Price Indices.** The price analysis was conducted by calculating the change in average price compared to the previous temporal reference. **Month-on-Month (MoM)** is calculated as a percentage change of the latest available monthly nominal price from the previous month. **Year-on-Year (YoY)** is calculated as a percentage change of the latest available monthly nominal price of the same month last year. For daily price movements, the daily price change is calculated as a percentage change from a baseline (reference point) to a particular date.

**PIHPS**. The 10 food commodities surveyed and presented by the Strategic Food Price Information Center (PIHPS) have a significant contribution to the formation of (strategic) inflation figures, particularly for volatile food inflation. Data was collected in 82 municipalities/districts that were sampled for the calculation of the Consumer Price Index (CPI) inflation by Statistics Indonesia (BPS).

**SIMONSTOK**. The Strategic Food Stock Monitoring System (SIMONSTOK) includes data and information on the availability, needs and balance of 11 staple foods in each Province of Indonesia. The stages include (a) identify supply chain distribution patterns; determine, and classify the location of production centres based on BPS final (ATAP) production data; (b) determine a sample of districts based on production capacity using the Neyman formula; (c) determine the number of enumerators in each district / city. The sample consisted of wholesalers, agents, retailers and distributors. The process of determining the sample was carried out using a multistage random sampling method every week nationally. Stock duration of food commodities was measured using SIMONSTOK data. The total number of days of stock duration is measured by dividing the stock availability with the daily stock need.

#### **Abbreviation Notes:**

CPO Crude Palm Oil RPO Red Palm Oil

POME Palm Oil Mill Effluent

RBD Refined, Bleached, Deodorized



Wisma Keiai 9th floor Jl. Jend Sudirman Kav. 3 Jakarta 10220 T. 62-21 5709004 | F. 62-21 5709001

wfp.indonesia@wfp.org

