Maintaining Competitiveness of Indonesian Palm Oil Industry: Challenges and Opportunities

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Outline

1. **Performance of Indonesia Palm Oil Industry**
   - Supply Side
   - Demand Side

2. **Supply, Demand and Price Projection**

3. **Outlook 2023**
   - Production Tight
   - Weak Demand
   - Price Uncertainty

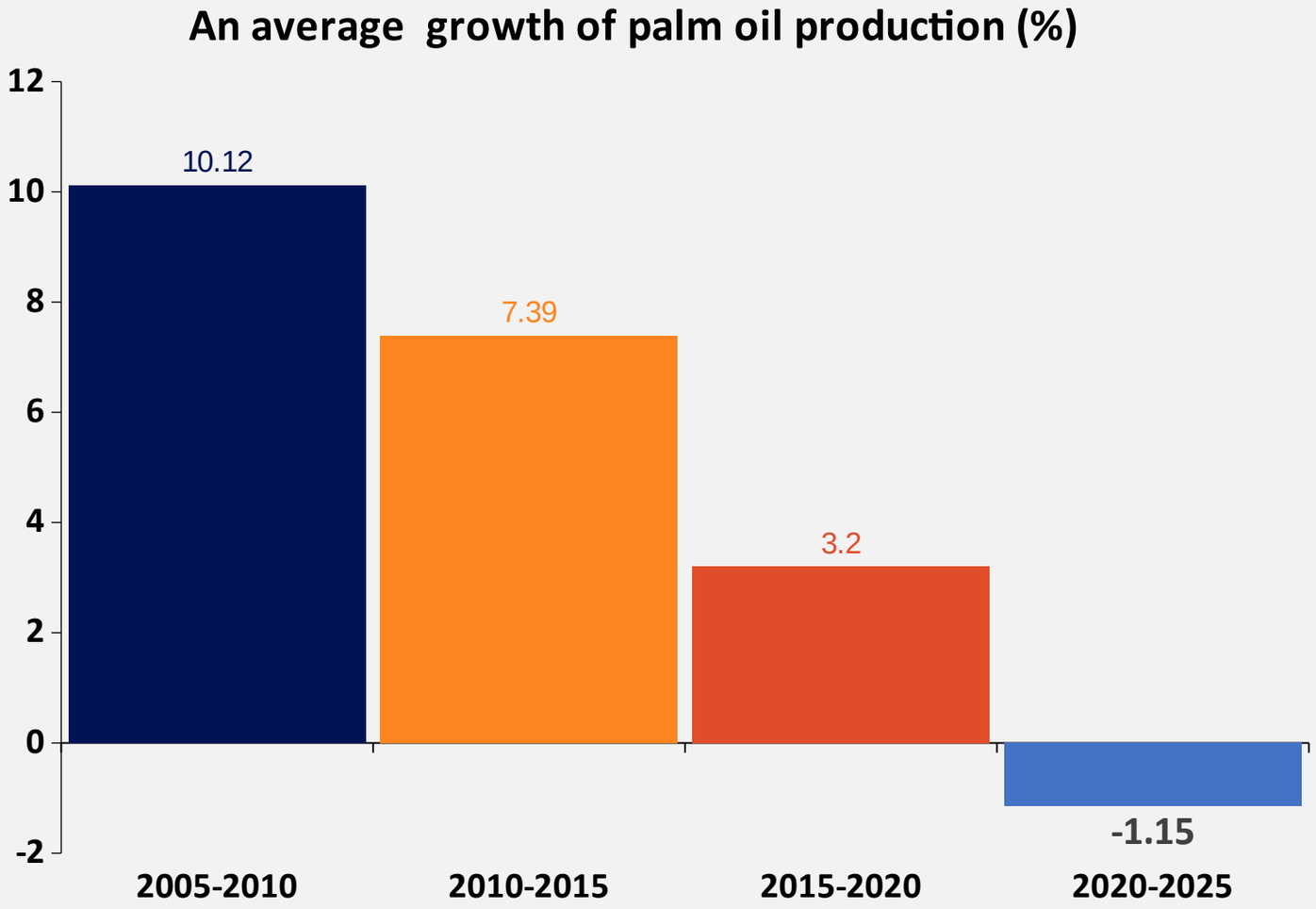
4. **Competitiveness of Indonesian Palm Oil Industry: Challenges and Opportunities**

5. **Conclusion**

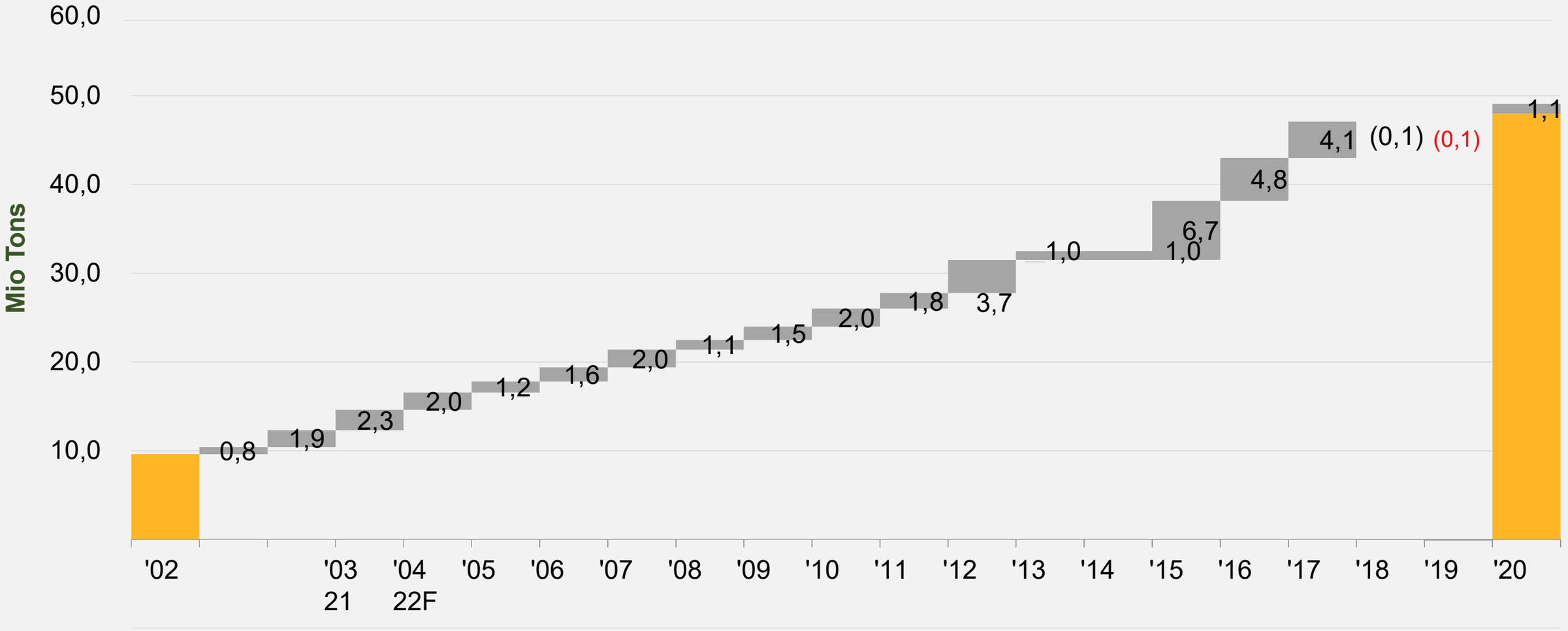
Growth of Indonesian Palm Oil Production, 2005-2025

- Growth of palm oil production experienced downward trend in the period of 2005-2025. In the periods of 2005-2010 growth was 10%, declined to 7.4% during 2010-2015 and further dropped to only 3.2% in 2015-2020.

- In the last three years 2020-2022 growth of production was negative indicating that there is structural problem in the palm oil industry. Both areas expansion and productivity are stagnant.



Growth Of Indonesian Palm Oil Production in Indonesia

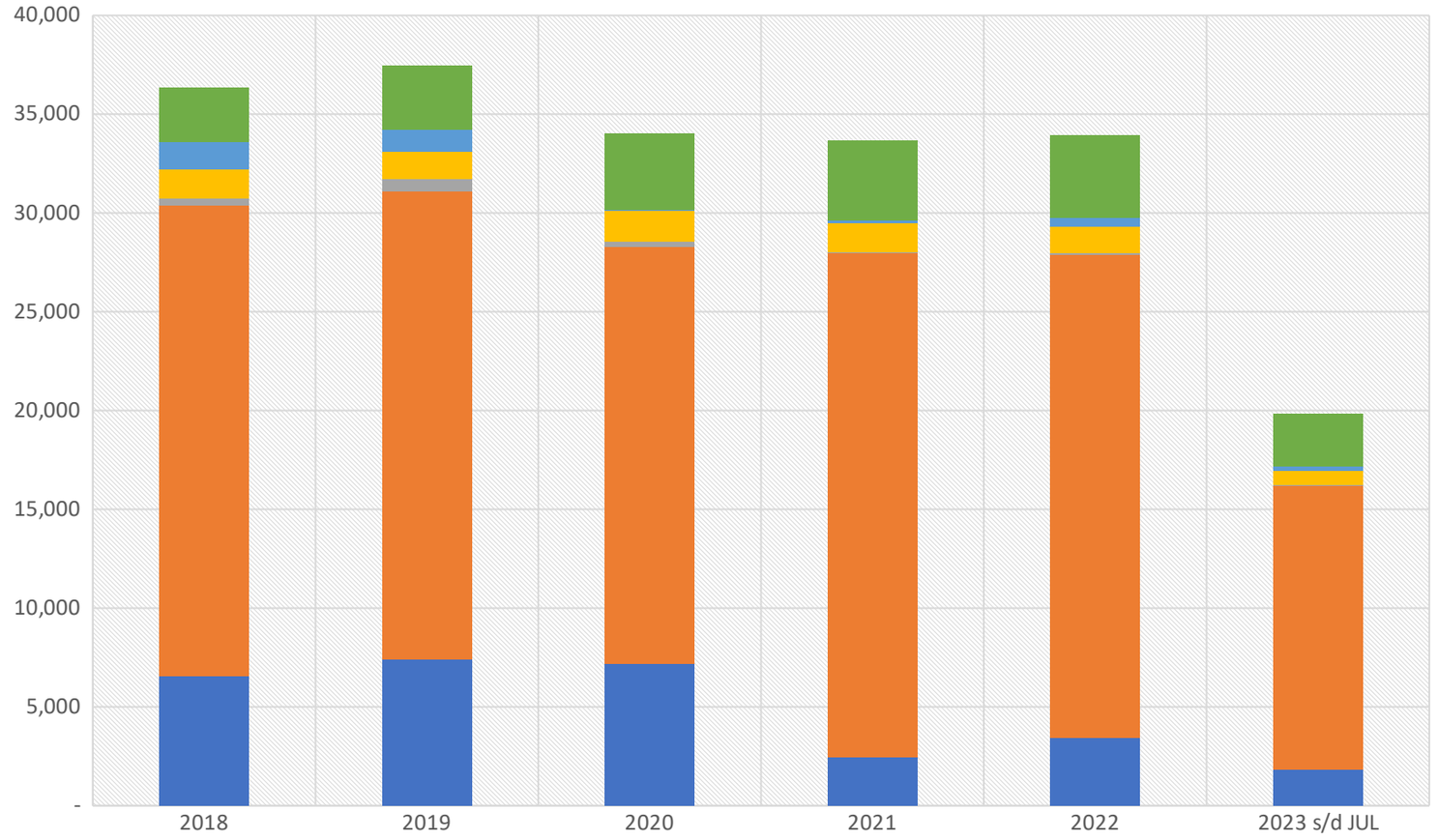


Source: GAPKI (2022), processed

Performance of Indonesia Palm Oil Industry (Supply Side)

Production of palm oil is relatively stagnant in the last four years though with declining trends.

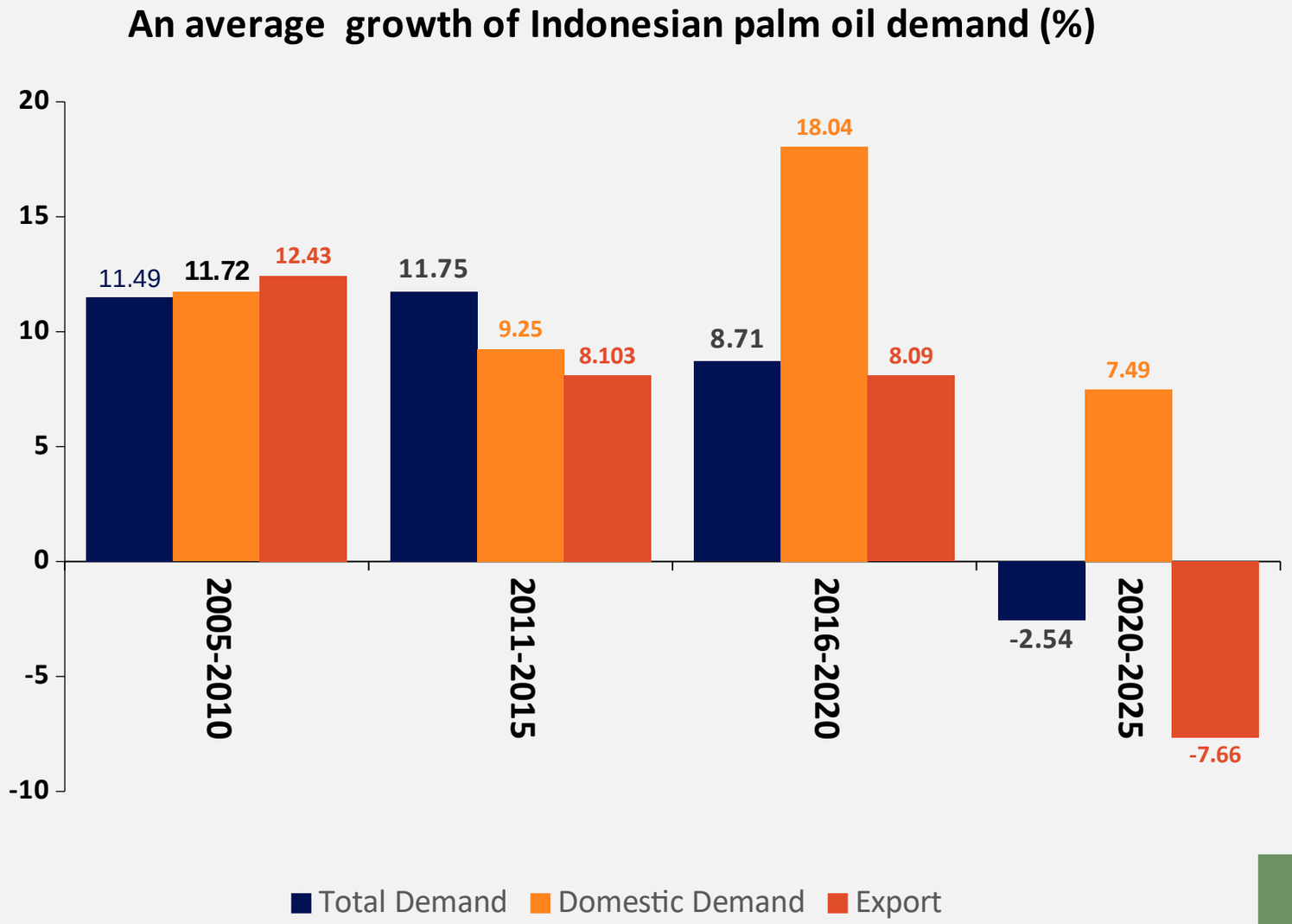
This year production is expected to be higher than in 2022 on account of yield recovery and newly harvested crops.



Growth in Indonesian Palm Oil Demand 2005-2025

- Growth of Indonesian palm oil demand was relatively stable in the periods of 2005-2015 and slightly declined to 8.7% in the periods of 2016-2020. But, in the periods 2020-2022 growth of demand was negative.

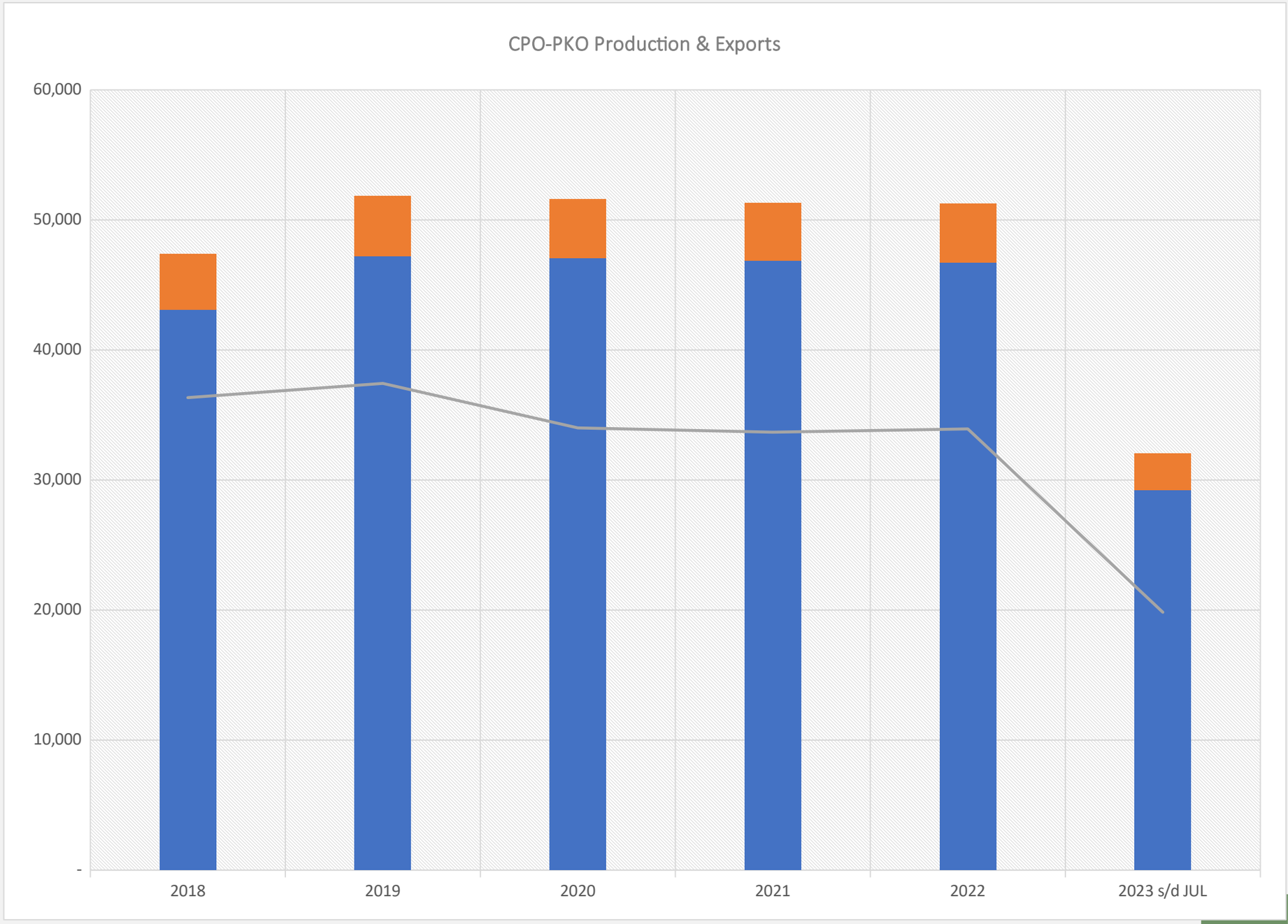
- For export, the growth showed downward trend especially in the periods of 2020-2025. While for domestic consumption indicated considerable increase in the periods of 2015-2020 due to mandatory biofuel program. So, there is shift in the composition of demand from export oriented to more domestic consumption. Now, consumption's share was around 34%.



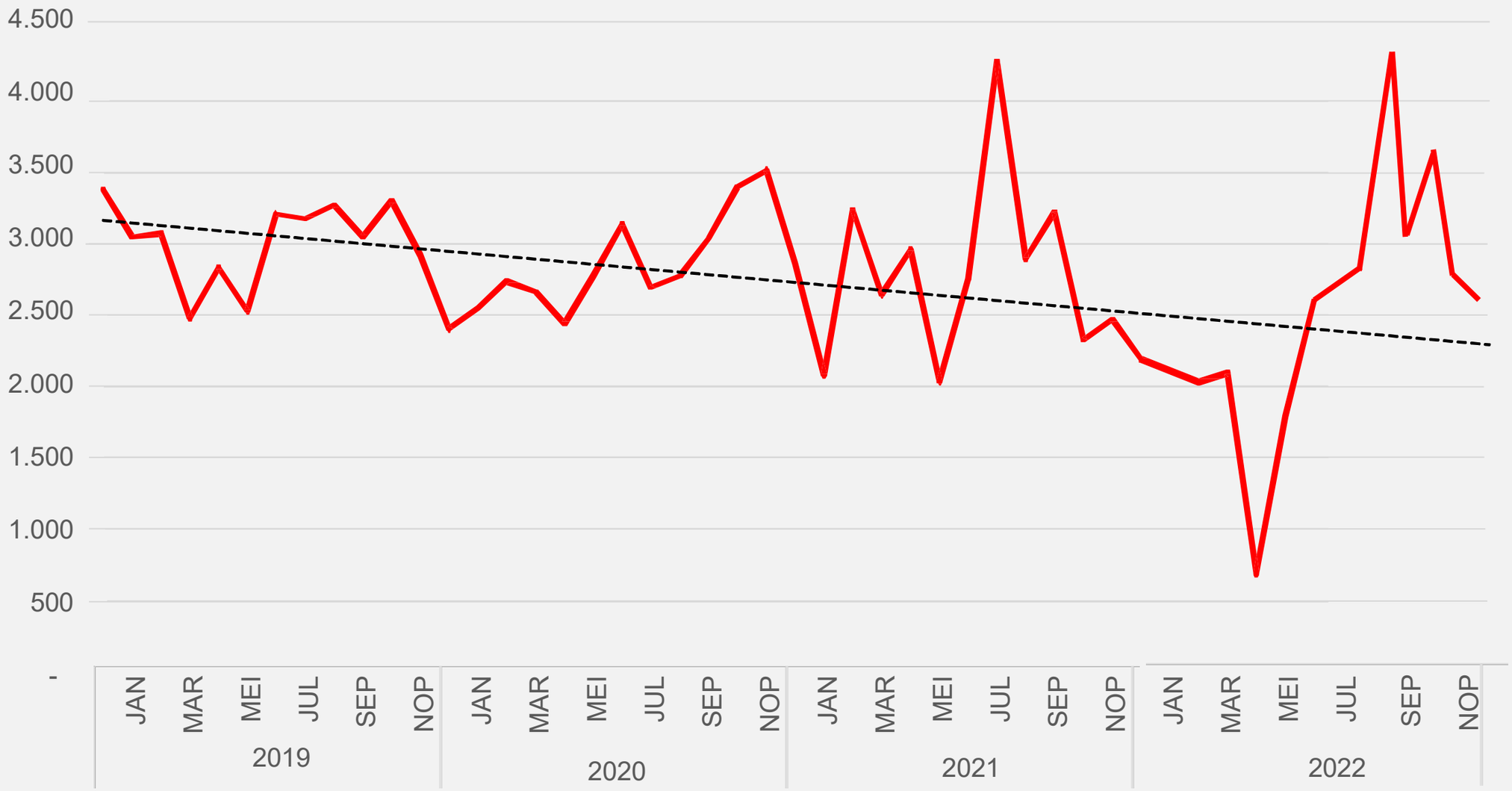
Exports of palm oil products

As with production, export also is in declining trends in the last four years and slightly recovered in 2022. The ratio of export to total production also declining due mainly to mandatory biofuel program.

Exports dominated by more downstream products a result of development of downstream industries and differentiated export tax policy.



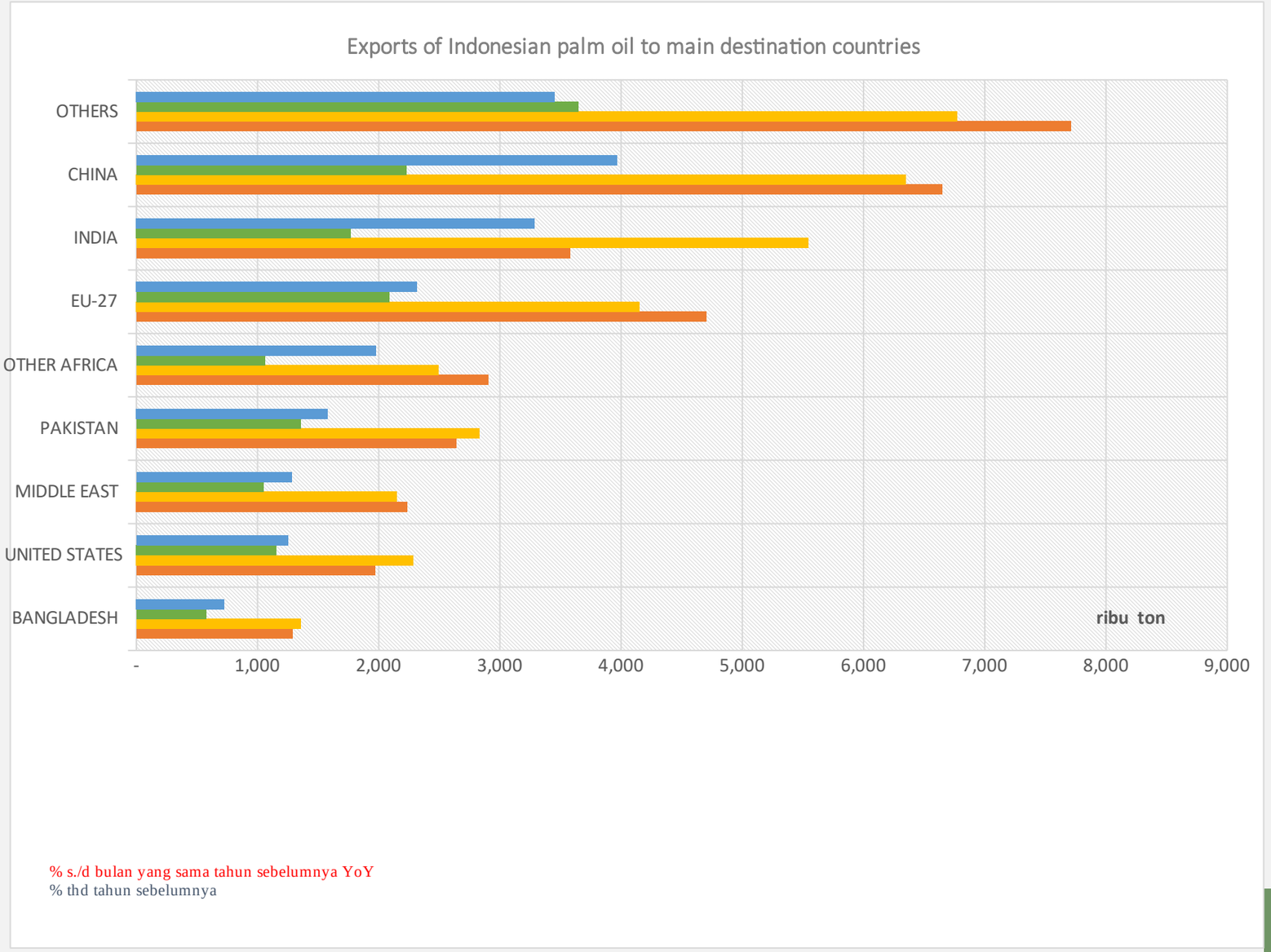
Trend Volume Export Before and After Pandemic Covid-19



Source: BPS (2022), processed

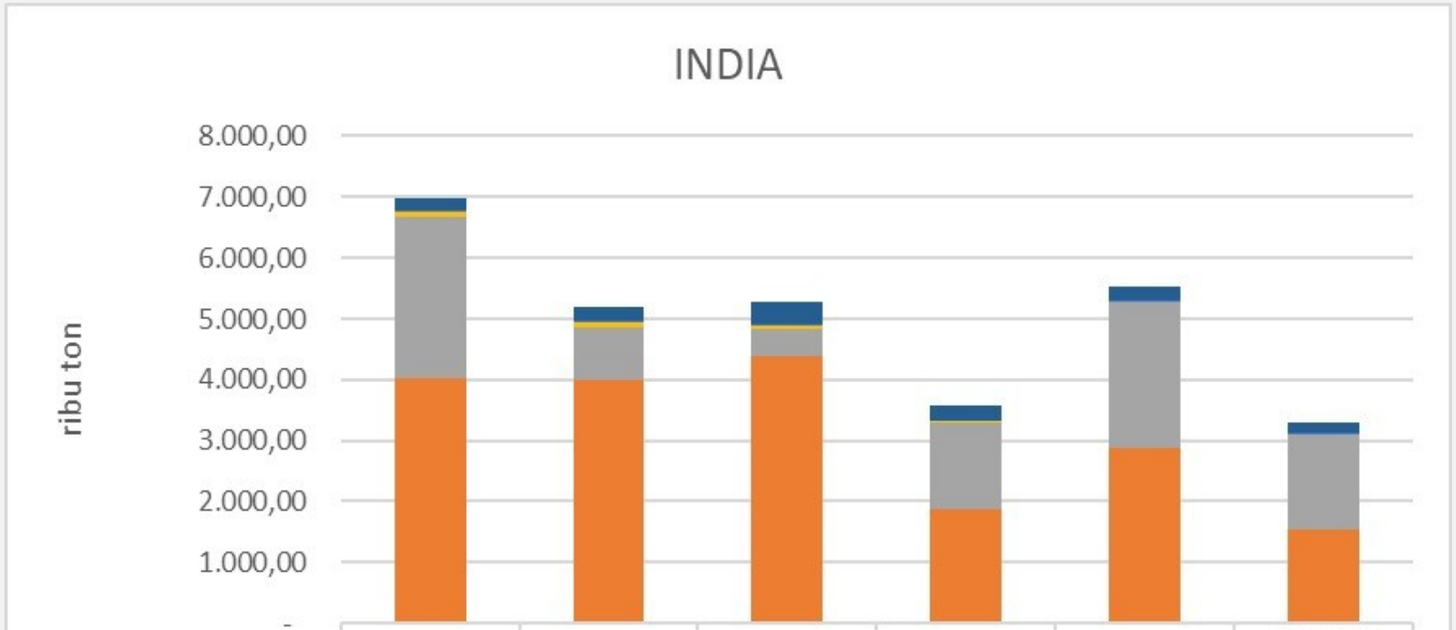
Indonesian exports to main destination importing countries

- Growth of export fluctuated but mostly recorded positive growth in 2022 as compared to 2021. Demand recovered after after Covid 19. China and India showed the largest growth of export in 2022 compared to 2021.
- **In 2023, we expect that export to some countries especially China and India continue to record positive growth along with economic recovery.**



Indonesian export of palm oil to India, 2018-2023

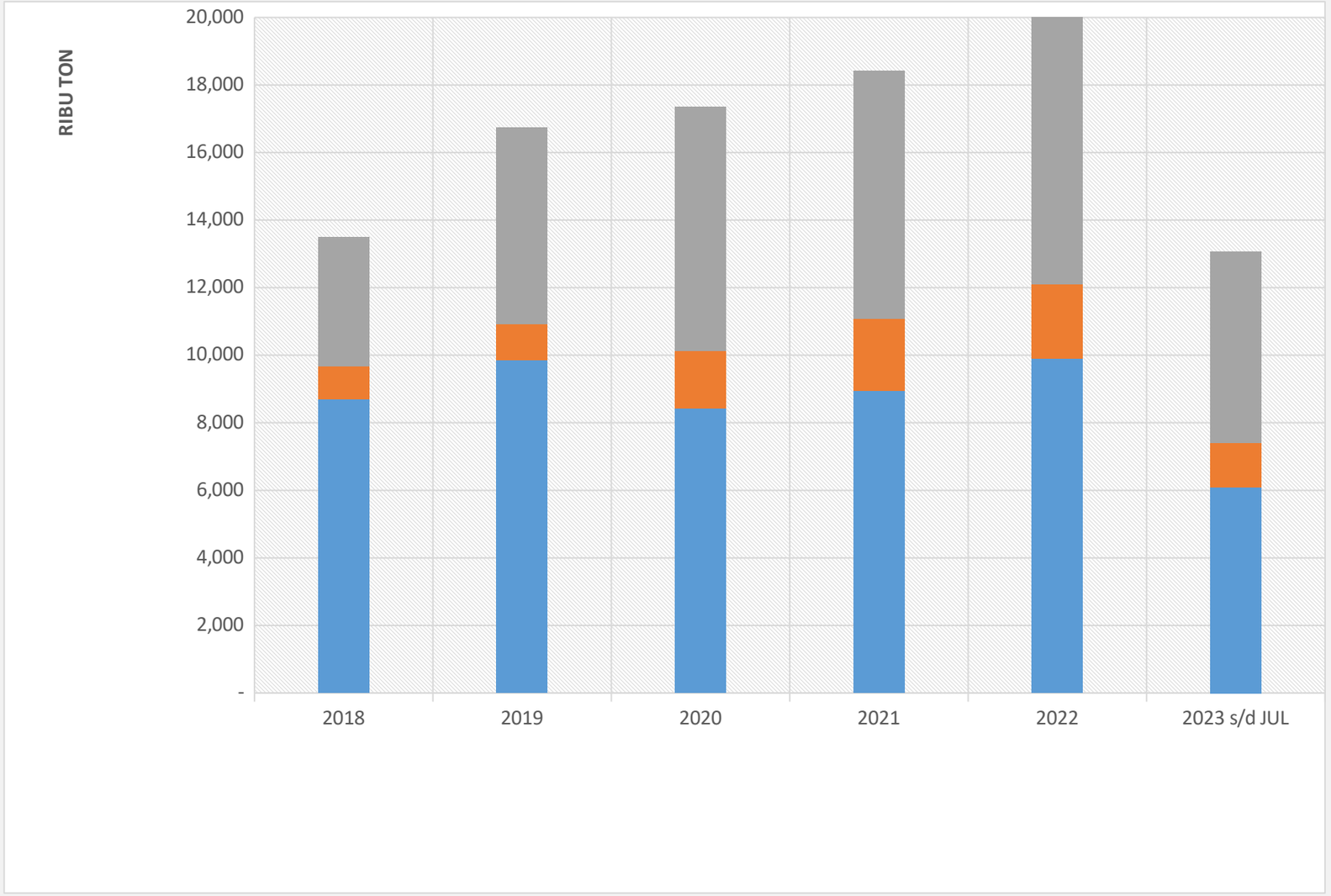
- Indonesian export to India reached its peak at 2018 then declining in the three following years and increase in 2022.
- In 2023 we expect that export will be higher than in 2022 on account of higher demand.



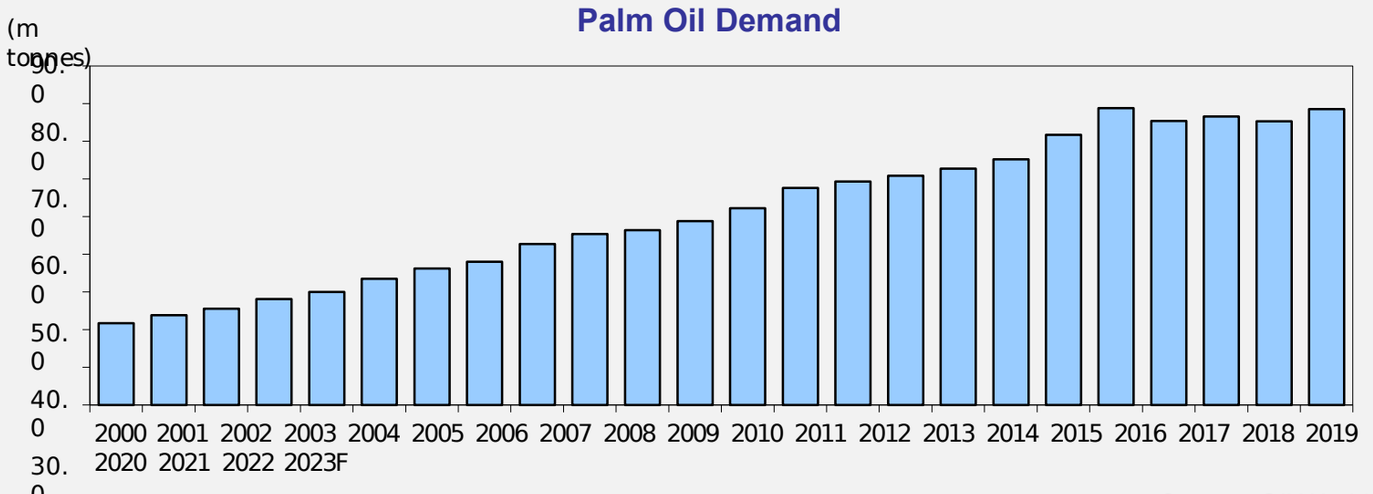
	2018	2019	2020	2021	2022	2023 TD July
OLEOKIMIA	185,06	206,49	368,52	253,49	247,41	169,05
BIODIESEL	7,88	1,00	-	-	-	-
Refined PKO	30,26	30,51	20,15	11,42	12,01	8,26
Crude PKO	69,02	76,90	62,64	12,50	1,54	0,50
REFINED PALM OIL	2.673,86	877,27	433,81	1.424,09	2.396,98	1.582,01
CPO	4.011,72	3.989,95	4.390,67	1.876,43	2.883,82	1.527,29

Domestic Consumption

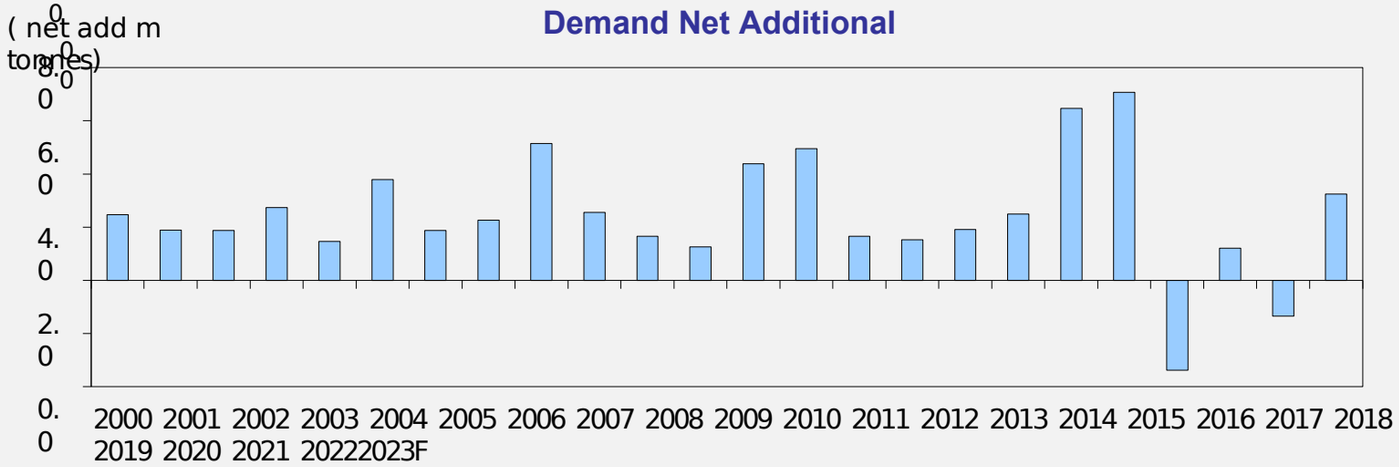
- Domestic consumptions continue to increase in the last five years on account of mandatory program of biofuel which is now at 35% blending. Meanwhile consumption of oleochemical products increased due to pandemic.
- Food consumption/cooking oil also relatively stable in the last three years except in the year 2022 when cooking oil consumption increased due to the scarcity in the market in the beginning of the year.
- Government increases biofuel blending policy to 35% beginning February. This means that an additional of around 1,5 million tons CPO consumed domestically.



2023: Sluggish Demand



Source: Oil World



Source: Oil World and UOB

Demand Outlook:

- Demand recovery is behind expectation
- 1H23 demand was below expectation
  - Indonesia biodiesel blending behind schedule
  - Weaker exports because PO lost market share as other competing vegoils were much cheaper
- Expect better 2H23 demand because
  - Better pricing now vs other vegoil
  - Indonesia biodiesel take up to improve

3 key themes that will drive food and energy prices

1

Climate change

- **El Niño and dry weather events will impact commodity prices**
- **Volatile crop yields and hard-to-predict weather**

2

Global economic rebound

- **Can China's recovery drive commodity prices higher?**
- **Lingering Black Sea tensions are a key upside risk for commodity prices**

3

Energy transition

- **How will energy and commodity companies tackle the energy transition and decarbonisation challenges?**
- **Increased use of crop feedstock as fuel**

DBS

El Niño – impact on CPO production

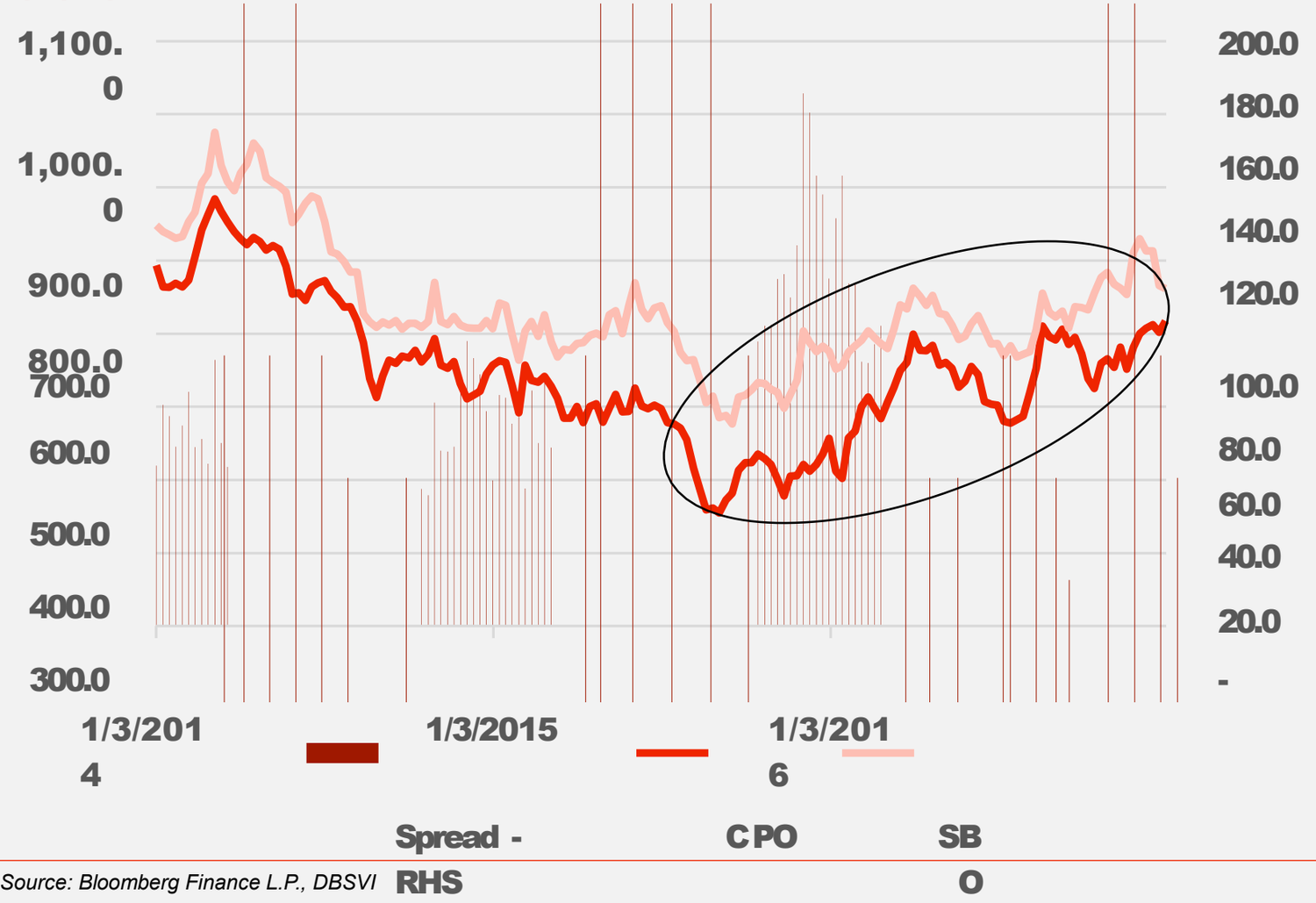
Indonesia CPO production is vastly affected, as 50% of Indonesia's palm oil estates consist of small farmers' estates

	2017A	2018A	2019A	2020A	2021A	2022A	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Malaysia	19.919	19.748	19.863	19.100	18.097	18.400	18.837	20.502	20.905	21.212	21.413	21.425	21.371	21.294
vol. growth	*2.6*	*-0.2*	*0.1*	*-0.8*	*-1.0*	*0.3*	*0.4*	*1.7*	*0.4*	*0.3*	*0.2*	*0.0*	*-0.1*	*-0.1*
% growth	*15.0*	*-0.9*	*0.6*	*-3.8*	*-5.3*	*1.7*	*2.4*	*8.8*	*2.0*	*1.5*	*0.9*	*0.1*	*-0.3*	*-0.4*
Indonesia	38.116	45.364	48.700	51.500	47.400	49.087	51.017	46.379	42.290	39.277	36.089	33.200	30.583	27.997
vol. growth	*6.0*	*7.2*	*3.3*	*2.8*	*-4.1*	*1.7*	*1.9*	*-4.6*	*-4.1*	*-3.0*	*-3.2*	*-2.9*	*-2.6*	*-2.6*
% growth	*18.7*	*19.0*	*7.4*	*5.7*	*-8.0*	*3.6*	*3.9*	*-9.1*	*-8.8*	*-7.1*	*-8.1*	*-8.0*	*-7.9*	*-8.5*
Others	7.215	6.938	7.937	3.560	7.000	5.369	3.671	8.200	14.309	19.891	26.381	29.852	34.371	37.389
vol. growth	*-2.2*	*-0.3*	*1.0*	*-4.4*	*3.4*	*-1.6*	*-1.7*	*4.5*	*6.1*	*5.6*	*6.5*	*3.5*	*4.5*	*3.0*
% growth	*-23.7*	*-3.8*	*14.4*	*-55.1*	*96.6*	*-23.3*	*-31.6*	*123.4*	*74.5*	*39.0*	*32.6*	*13.2*	*15.1*	*8.8*
Total	**65.250**	**72.050**	**76.500**	**74.160**	**72.497**	**72.856**	**73.524**	**75.051**	**78.821**	**81.498**	**83.467**	**84.949**	**86.387**	**87.381**
vol. growth	*6.4*	*6.8*	*4.5*	*-2.3*	*-1.7*	*0.4*	*0.7*	*1.5*	*3.8*	*2.7*	*2.0*	*1.5*	*1.4*	*1.0*
% growth	*10.8*	*10.4*	*6.2*	*-3.1*	*-2.2*	*0.5*	*0.9*	*2.1*	*5.0*	*3.4*	*2.4*	*1.8*	*1.7*	*1.2*
		3.2	3.4	3.6	3.4	3.6	3.8	3.5	3.3	3.1	2.9	2.8	2.6	2.4

Source: MPOB, GAPKI, DBSVI

El Niño – impact on CPO and SBO prices

CPO and SBO price trends before and after the last strong El Niño event in 2015/16



Source: Bloomberg Finance L.P., DBSVI

- **An extreme El Niño event can provide a 20%-30% upside risk to our price next year due to weaker-than-expected production volumes**
- **A severe El Niño impact may raise the palm oil price to US$1,200/MT in 2024**
- **The soybean price is another critical factor to the CPO price – the rally could be limited by the narrowing of the SBO-CPO spread**

CPO: Price set to recover in 2H23

Price outlook

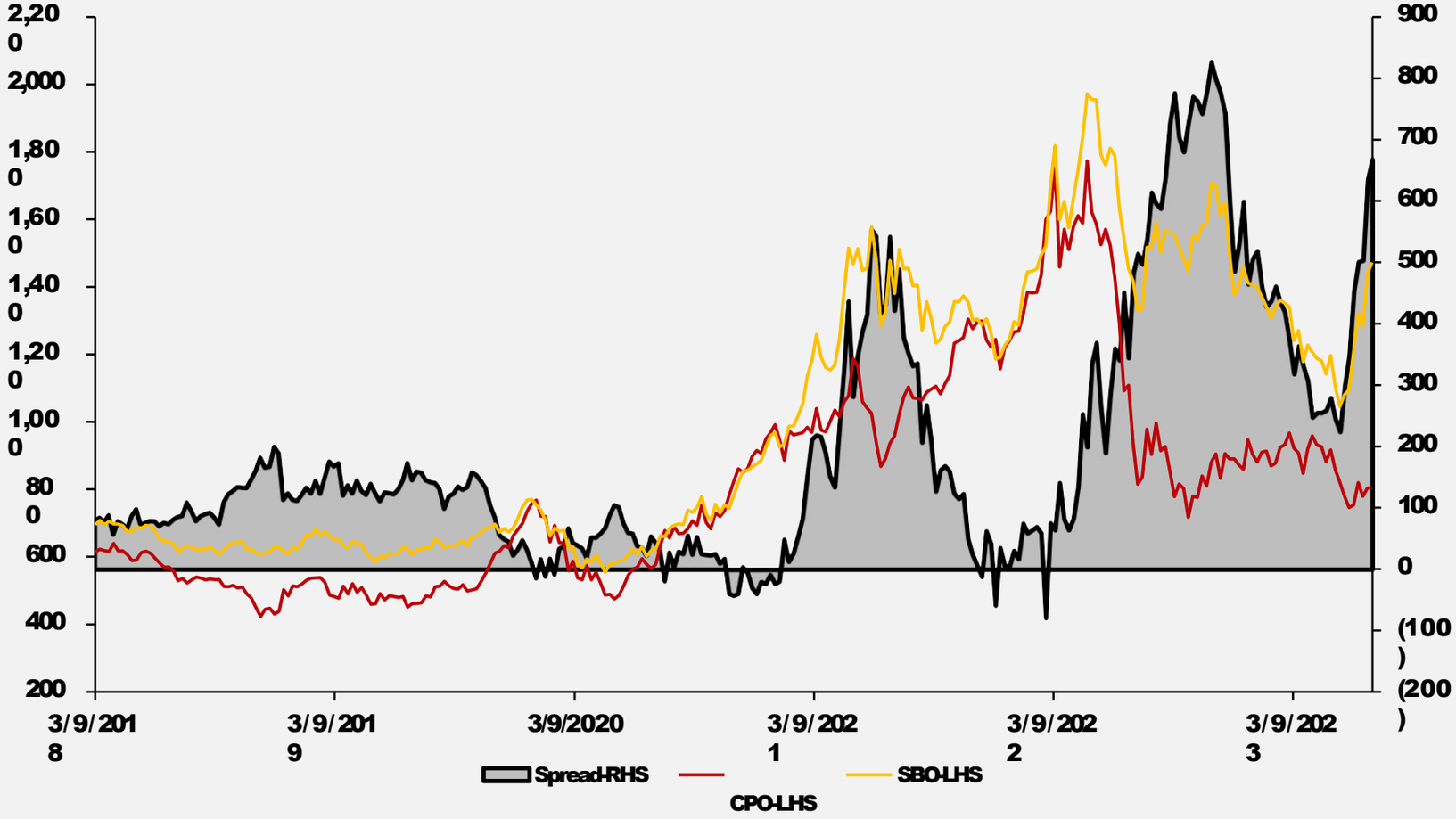
There is room for the CPO price to recover in 2H23 and 2024. The palm oil price discount to the soybean oil price widened to US$600 per MT, which will provide room for a recovery in the palm oil price.

The improving Brent crude oil price will also limit the downside risk on the palm oil price based on the steady outlook on fuel demand, mainly driven by Indonesia's biodiesel.

The soybean oil price is expected to remain firm in 2H23, since the currently thin soy crushing margin will significantly hinder soybean crushing activity.

We forecast the CPO price would trend up to US$900 per MT in 2023 before improving to US$1,000 per MT in 2024.

Improving gasoil price and soybean oil price will help CPO price recover



Source: Bloomberg Finance L.P, GAPKI, DBS Bank estimate

Indonesia palm oil statistic July 2023

DESCRIPTION (in 1000 ton)	2022			2023		TOTAL JAN-JULY 2023
	JUL	JAN-JUL	JAN-DEC 22	JUN	JUL	
OPENING STOCK (1)	6.687	6.687	4.129	4.380	3.393	3.691
CPO P[RODUCTION (2)	3.465	24.904	46.729	4.034	4.357	29.255
CPKO PRODUCTION (2)	338	2.399	4.519	387	414	2.810
TOTAL PRODOCTION	3.803	27.303	51.248	4.421	4.771	32.066
IMPORTS (3)	1	33	56	5	4	37
DOMESTIC CONSUMPTION (2)	-	-	-	-	-	-
FOOD	937	5.235	9.892	880	853	6.082
OLEOCHEMICALS	185	1.268	2.200	190	185	1.329
BIODIESEL	759	5.111	9.048	893	719	5.660
TOTAL DOMESTIC CONSUMPTION	1.881	11.614	21.140	1.963	1.757	13.071
EXPORTS (3)	-	-	-	-	-	-
CPO	251	568	3.463	504	589	1.838
REFINED CPO	2.103	11.295	24.410	2.487	2.403	14.363
CPKO	0	13	107	1	2	22
REFINED CPKO	87	592	1.335	88	119	717
BIODIESEL	62	145	435	13	5	246
OLEOCHEMICALS	384	2.314	4.179	357	401	2.647
TOTAL EXPORTS	2.886	14.926	33.928	3.450	3.519	19.832
DOMESTIC CONSUMPTION+EXPORTS	4.767	26.540	55.068	5.413	5.276	32.903
ENDING STOCKS (1)	5.905	5.905	3.691	3.393	2.892	2.892
Export value	3.801	21.432	39.069	2.877	2.918	17.520

Outlook 2023

Production Tight:

a. Weather condition
b. Lack of fertilizer used especially at smallholder farmers
c. No productivity improvement
d. Replanting program

In 2023, we estimate that production of palm oil will be slightly increase.

Demand Uncertainty:

a. World Economic Recession
b. An increase in palm oil consumption (China Factor)
c. An increase in domestic consumption (biofuel program and DMO policy)

Price volatility:

a. Weak demand
b. Tight supply
c. Uncertainty in the market

Projection performance in 2023

Production increases slightly, around 700 thousand tonnes.

Domestic consumption increase considerably on account of B35 program.

Exports declines due to the weak demand.

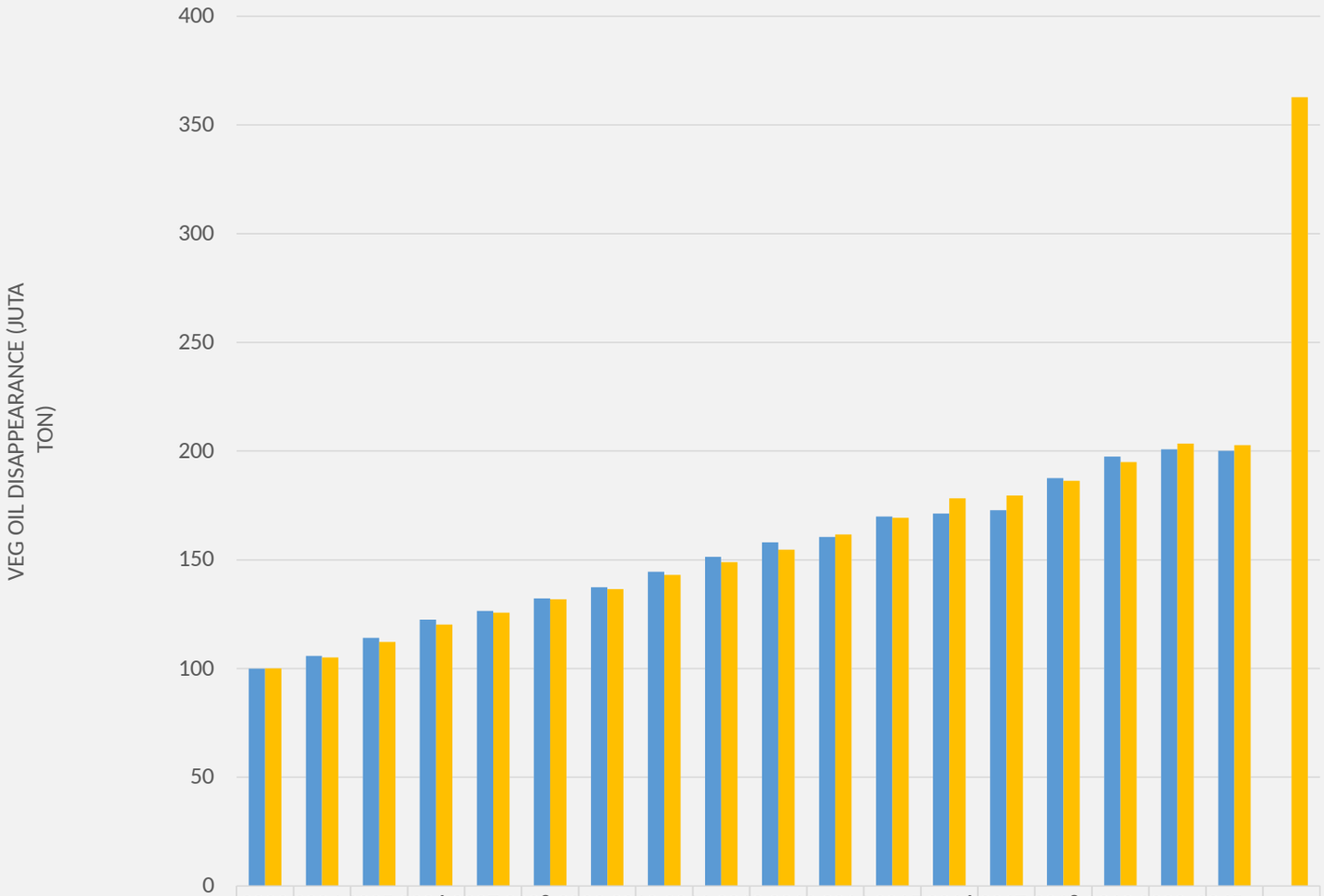
We project an average price of CPO in 2023 will be on the range of US$ 900/MT (CIF Rotterdam). Climate factor determines price in 2024.

	2018	2019	2020	2021	2022	2023
PRODUCTION CPO (2)	43,108	47,180	47,034	46,888	46,729	47,500
PRODUCTION CPKO (2)	4,280	4,648	4,549	4,412	4,519	4,512
PRODUCTION TOTAL	47,388	51,828	51,583	51,300	51,248	52,013
DOMESTIC CONSUMPTION (2)				-	-	
FOOD (2)	8,704	9,860	8,428	8,954	9,941	11,000
OLEOCHEMICAL (2)	963	1,056	1,695	2,126	2,185	2,300
BIODIESEL	3,824	5,831	7,226	7,342	8,842	11800
TOTAL DOMESTIC CONSUMPTION	13,491	16,747	17,349	18,422	20,968	25,100
TOTAL EXPORTS	36,333	37,430	34,007	33,674	30,803	27,000

World Vegetable Oil & Fats Prod & Cons

Production growth tightly in line with consumption growth.

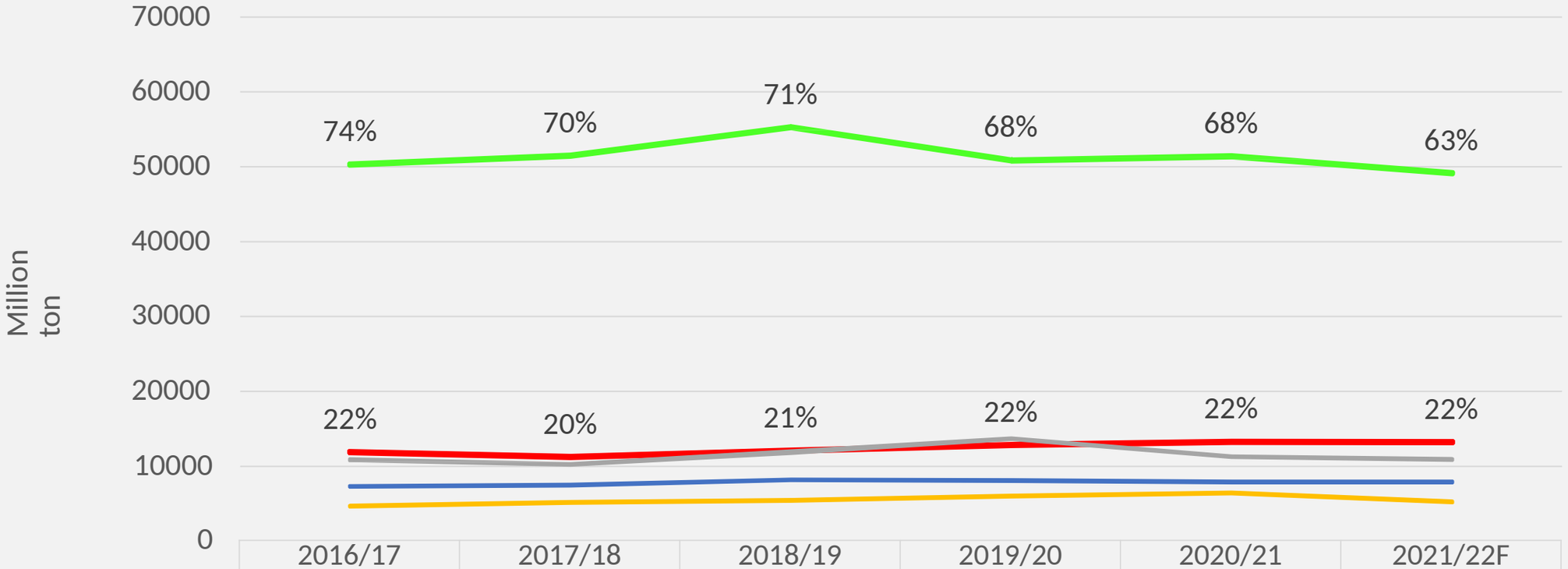
World production growth by 7.3 million ton per year, while world consumption growth by 7.4 million ton per year. Exception in 2020 due to pandemic



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2045
Production	100	106	114	122	127	132	137	145	151	158	161	170	171	173	188	197	201	200	
Disappear.	100	105	112	120	126	132	137	143	149	155	162	169	178	180	186	195	204	203	363

Source : Oil World (2020)

Global Export of Vegetable Oil

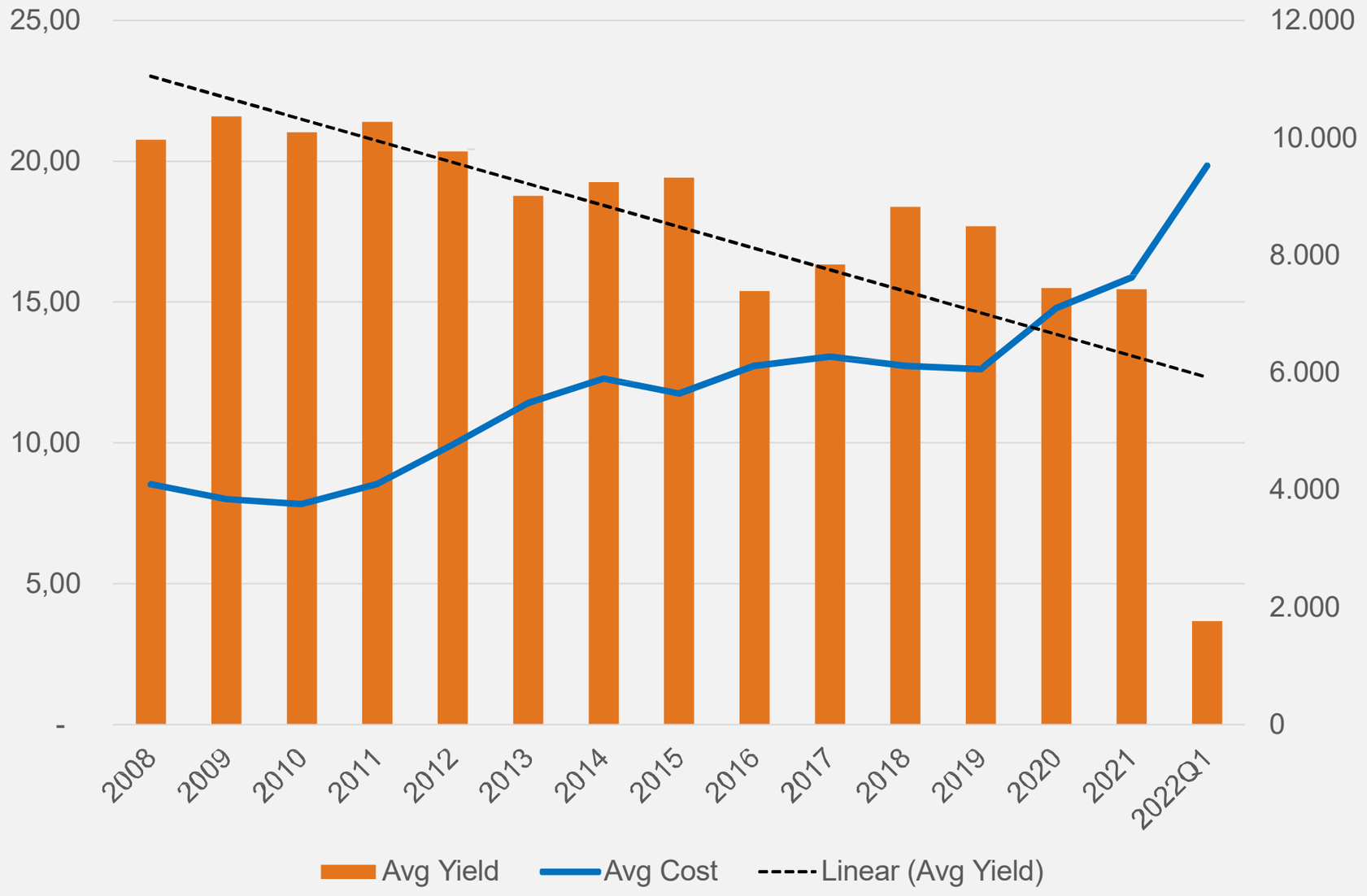


	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22F
Palm oil	50298	51507	55286	50837	51402	49148
Soybean oil	11908	11232	12101	12865	13273	13254
Sunfloweroil	10875	10244	11825	13689	11297	10896
Rapeseed oil	4677	5155	5431	5999	6448	5242
other oil	7308	7481	8174	8067	7878	7891

Palm oil is the most traded vegetable oil but the share drop considerably due to low growth in production

Source: Oil World (2021), processed

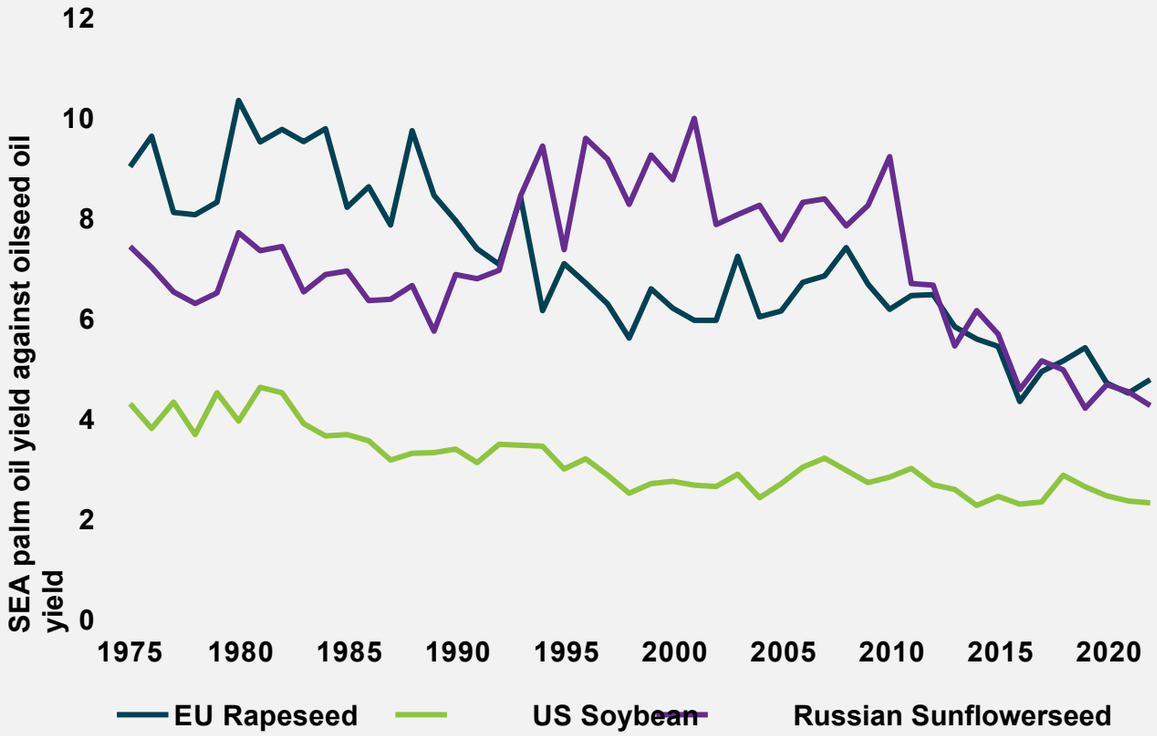
Yield performance declining, cost increasing



Source: GAPKI (2022), processed

The Key Issue is the Outlook for Relative Yields

Rapeseed, soybean and sunflower oil yield per hectare relative to palm oil



Source: *Dr Julian Conway McGill*

In terms of relative yields, the oil palm's performance has been very weak.

Where palm oil once yielded 4 times as much oil per hectare as US soybeans, today it is only double. A similar decline occurred against EU rapeseed oil and Russian sunflower oil.

The major concern for the oil palm is not it's structurally higher labour requirement, but it's poor yield performance.

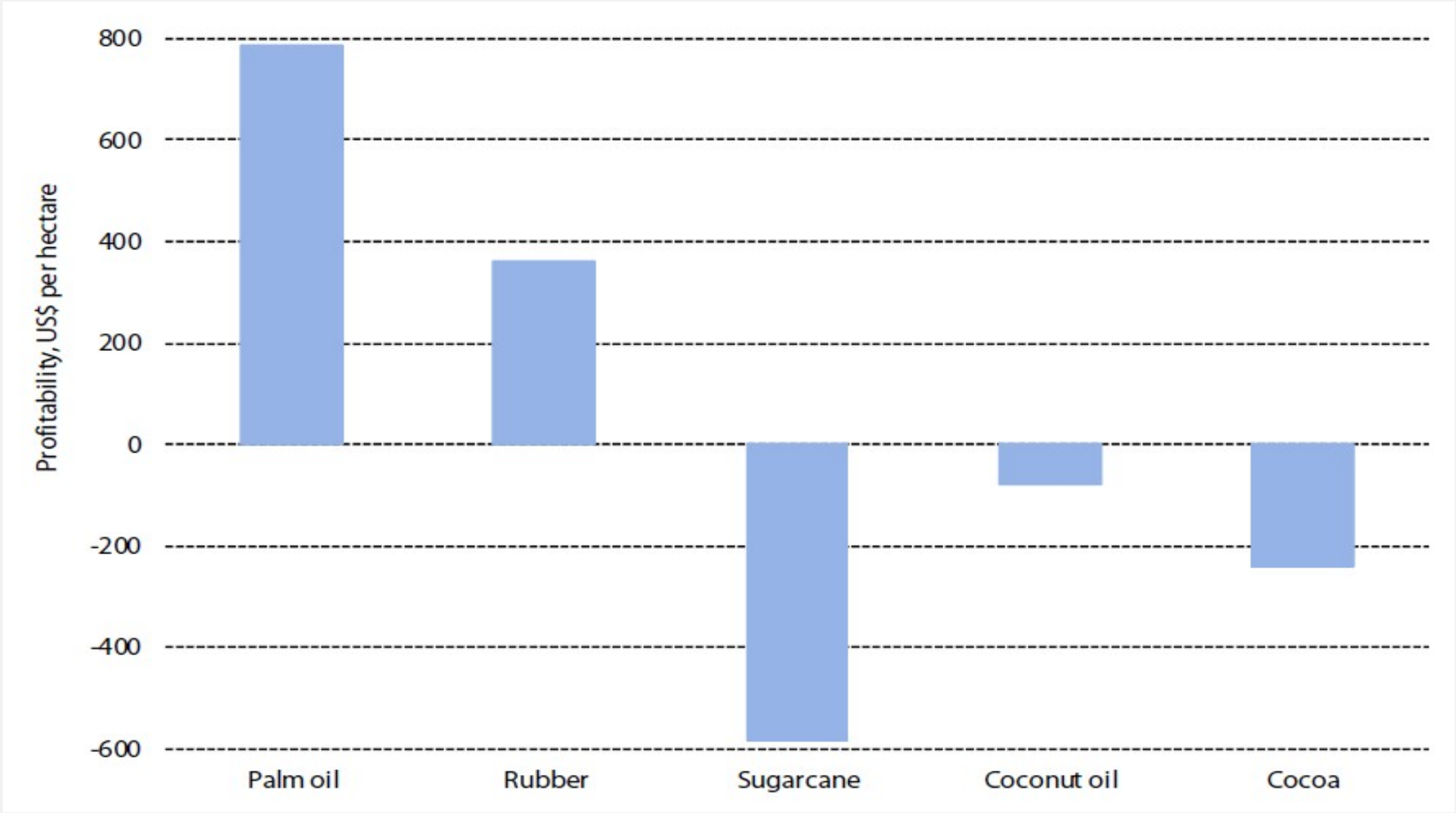
Why Indonesia

- The gap of productivity between smallholders and large plantation are wide, thus there is still room for productivity improvement to increase production. Smallholder productivity is around 2.8 tonnes per hectare compared with large plantation which has productivity of around 4.2 tonnes per hectare.

- Land is still available compared to other countries.

- Palm oil is the most profitable crops.

Profitability of Palm Oil Compared with Other Commodities in Indonesia (US$/hectare) 2018



Source: LMC International

Indonesian and Malaysian Revealed Comparative Advantages in Palm Oil Production

Year	CPO		PKO	
	Indonesia	Malaysia	Indonesia	Malaysia
2004	1,10	0,82	0,99	0,99
2005	0,97	0,99	1,01	0,81
2006	0,94	1,27	1,08	0,76
2007	1,08	0,81	0,96	1,63
2008	1,01	0,92	0,98	0,88
2009	0,95	1,05	0,97	0,94
2010	0,92	1,01	0,91	0,97
2011	0,78	1,27	0,82	1,51
2012	1,08	1,24	0,79	1,22
2013	1,04	0,89	1,14	0,94
2014	0,91	1,17	1,19	0,84
2015	1,13	0,97	1,05	0,94
2016	0,93	0,95	1,00	1,06
2017	1,12	0,64	0,98	0,93
2018	0,90	1,15	1,05	0,91
2019	1,12	1,03	0,98	1,07
2020	0,91	1,10	0,99	0,91
2021	0,45	1,45	1,01	0,79
2022	0,93	0,73	0,80	1,15

Constraint of Maintaining Competitiveness: Supply Side

- Lack of availability land.
- Restrictions of area expansion.
- Increasing cost of production.
- Slow replanting program.
- Lack of government extension service provided for smallholder farmers.
- Lack of R&D especially for smallholder farmers.
- Inconsistency regulation (DMO and DPO, Export tax and levies).

Challenges in Increasing Demand of Palm Oil

- Trade restrictions imposed by importing countries especially in EU (subsidy, dumping, trade regulations).
- EU imposes due diligence for seven commodities claimed as main caused of deforestation including palm oil through verification and traceability system.
- Inconsistency of tariff in importing countries.
- High level of export tax and levies which caused competitiveness of the industry.
- Negative perceptions on palm oil.

Concluding Remarks

1. Production of Indonesian palm oil industry is in decline trend while on the demand side there is shift in the consumption from exports to domestic consumptions.
2. We predict that both production and consumption will be relatively stagnant in 2023. So does the price on account of the likely world economic recession.
3. Indonesian palm oil industry is still competitive but with declining trend. There are challenges and restrictions on how to maintain competitiveness of the Indonesian palm oil industry from supply and demand side.
4. There are many challenges in maintaining competitiveness from supply side. The key is how to increase productivity especially at smallholder farmers. In this regard, replanting program and use of better technology of production become important program.
5. Various trade restrictions imposed by importing countries highlight the need of more diversify export markets. Strengthening trade and economic diplomacy to expand and diversify export market.

THANK YOU

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