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# The shifting landscape in SEA biofuels & feedstocks

Jakarta, Indonesia  
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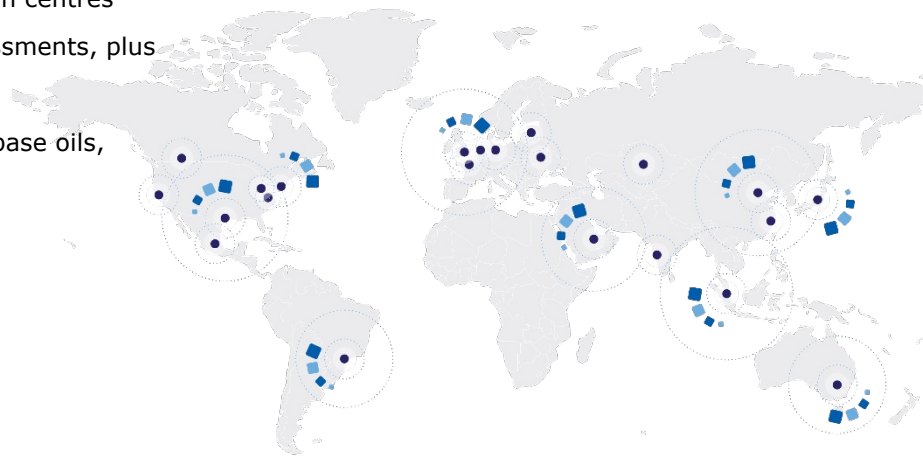


# Agenda

- Legislative changes
- Growing capacity in Asia
- Strained feedstock supply
- Recent price trends
- Concluding thoughts

# A view of Argus

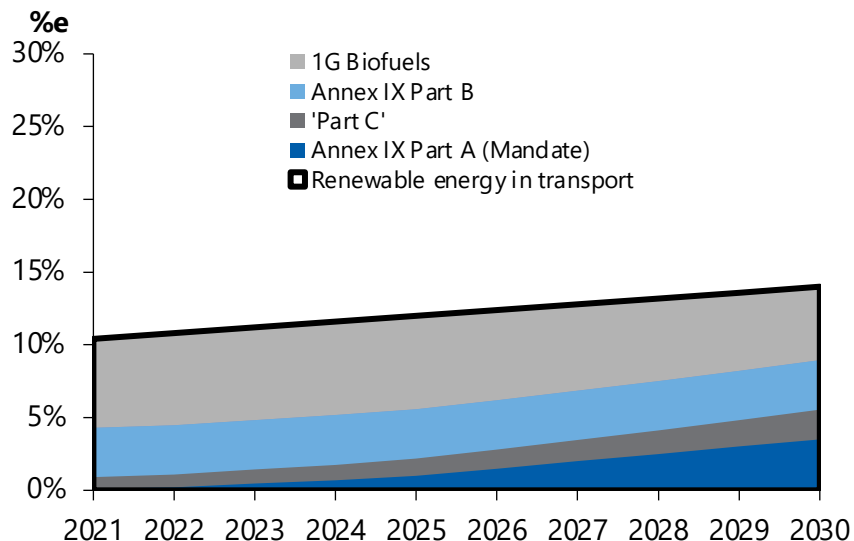
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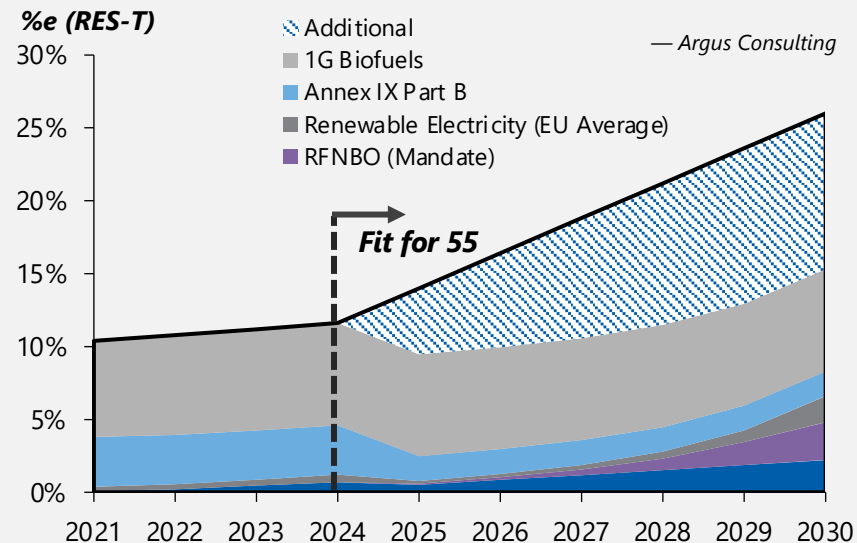
# Key Demand Drivers: Renewable Diesel

'Fit for 55' proposals increase renewable fuel requirements and introduce new sub-mandates

## RED II targets for renewable energy in transport



## Fit for 55 proposal (EU Commission July 2021)

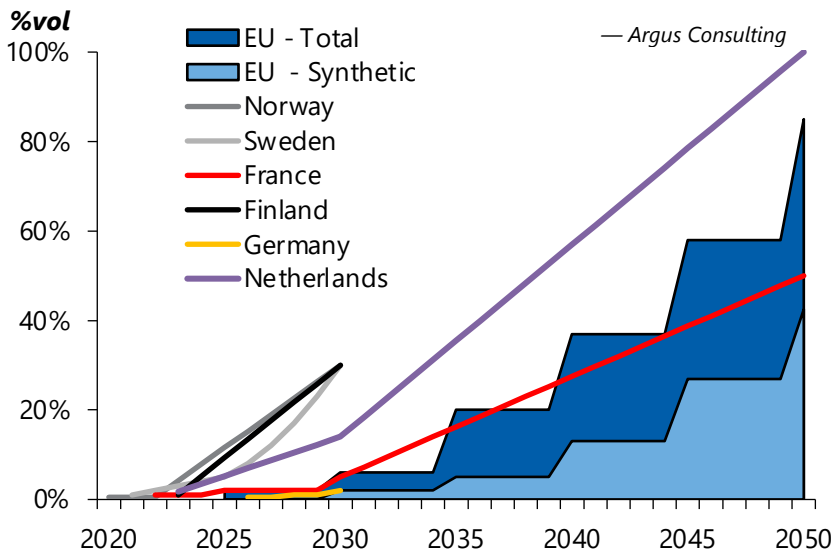


**Additional volumes of drop-in fuels. Sub-mandates for synthetic fuels.  
Caps on crop-based fuels.**

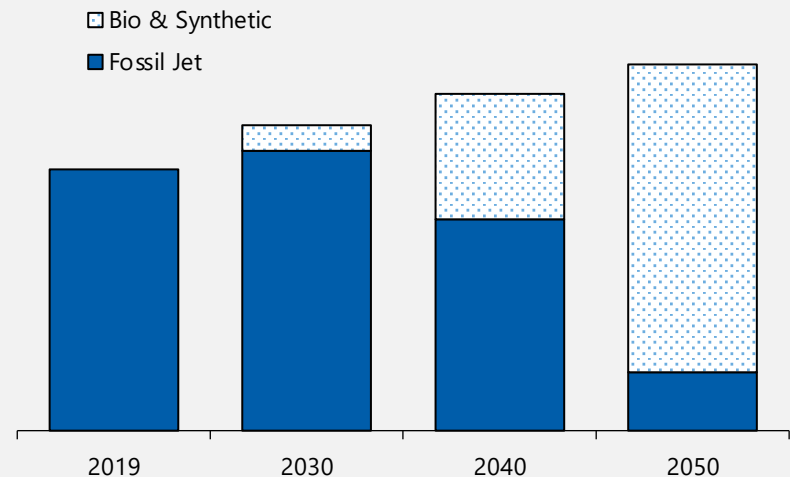
# Key Demand Drivers: Renewable Diesel

'Fit for 55' proposals increase renewable fuel requirements and introduce new sub-mandates

## EU Implemented and proposed SAF mandates



## EU aviation fuel demand



Source: Argus Consulting

# Indonesia biodiesel supply & demand

Indonesia biodiesel supply & demand mn kl						
	2021	2022	2023	2024	2025 (B30)	2025 (B40)
<b>Biodiesel demand</b>						
RUEN target	8.9	10	11.2	12.5	13.9	13.9
Projection w/ 5.5% y-o-y growth	9.2	10.2	10.7	11.3	11.9	11.9
HVO 10%						4
<b>Biodiesel supply</b>						
Fame Capacity	17.14	17.96	17.96	17.96	17.96	17.96
HVO Capacity		0.2	0.2	1.15	1.15	1.15

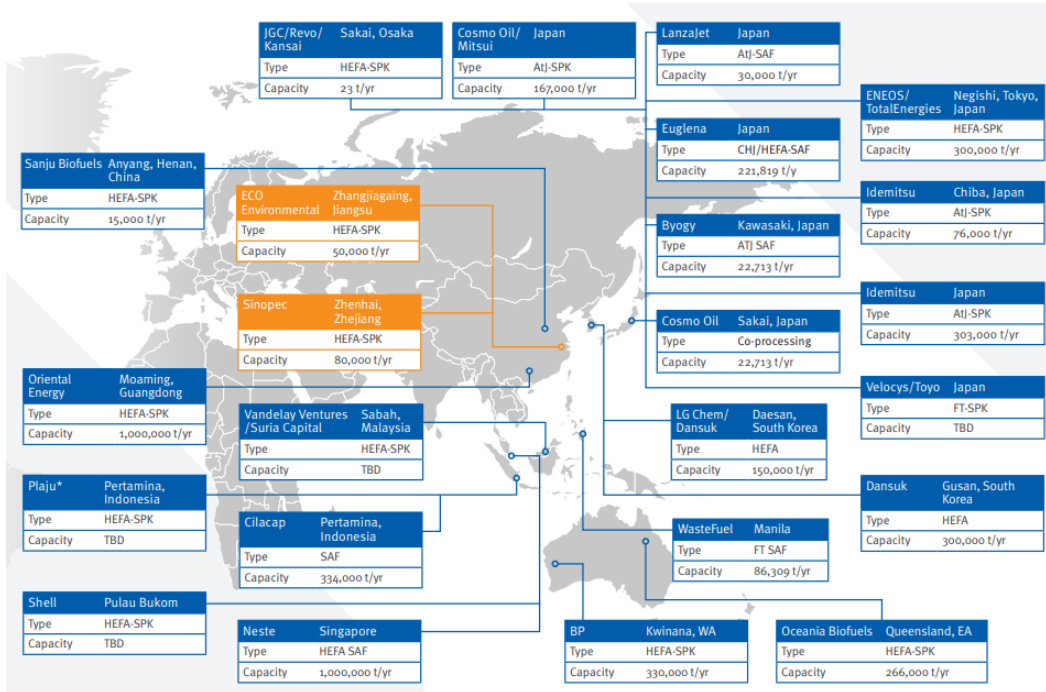
\*Source: Dadan Kusdiana, MEMR, IPOC 21

Assumes B30 to 2024

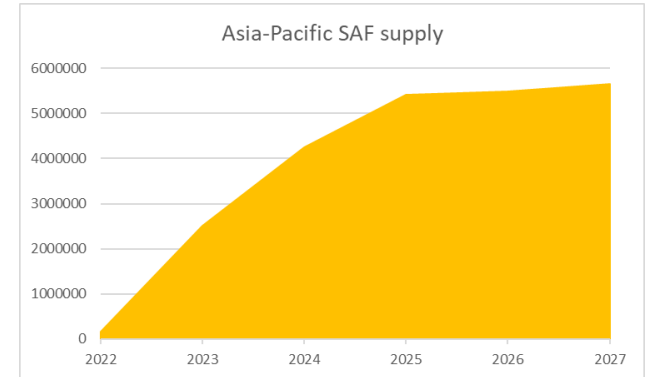
RUEN = Indonesia's National Energy Plan



# Mandates still lagging behind in Asia



- The Civil Aviation Administration of China has set a SAF consumption target of 50,000t between 2022-25
- Japan has a target of 10pc SAF use by 2030
- Study underway to assess India's SAF potential
- Indonesia is targeting 5pc renewable energy mix in air transport by 2025

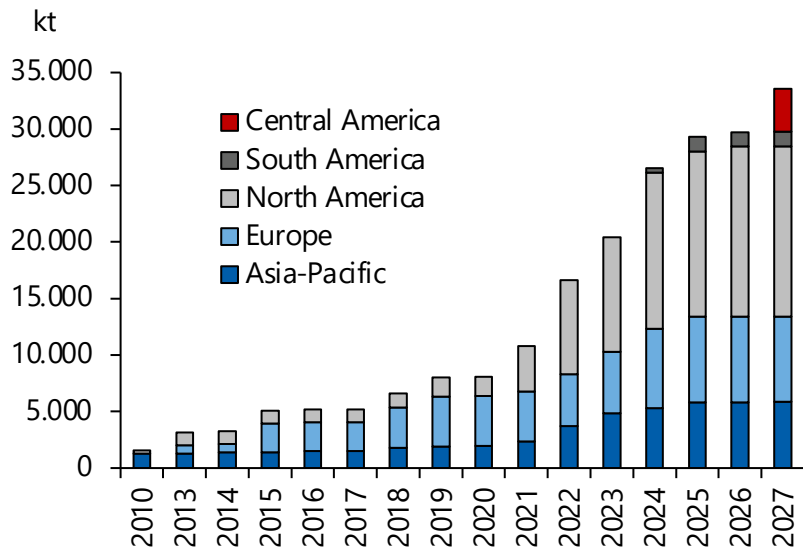




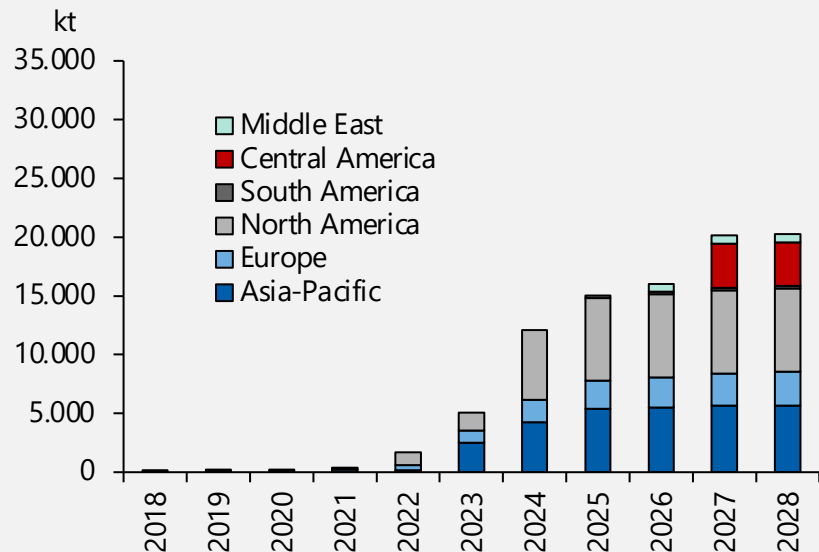
# Renewable Diesel and SAF Production Capacity

Global HVO/SAF capacity is set to surge based upon announced projects

## Total announced HVO Capacity



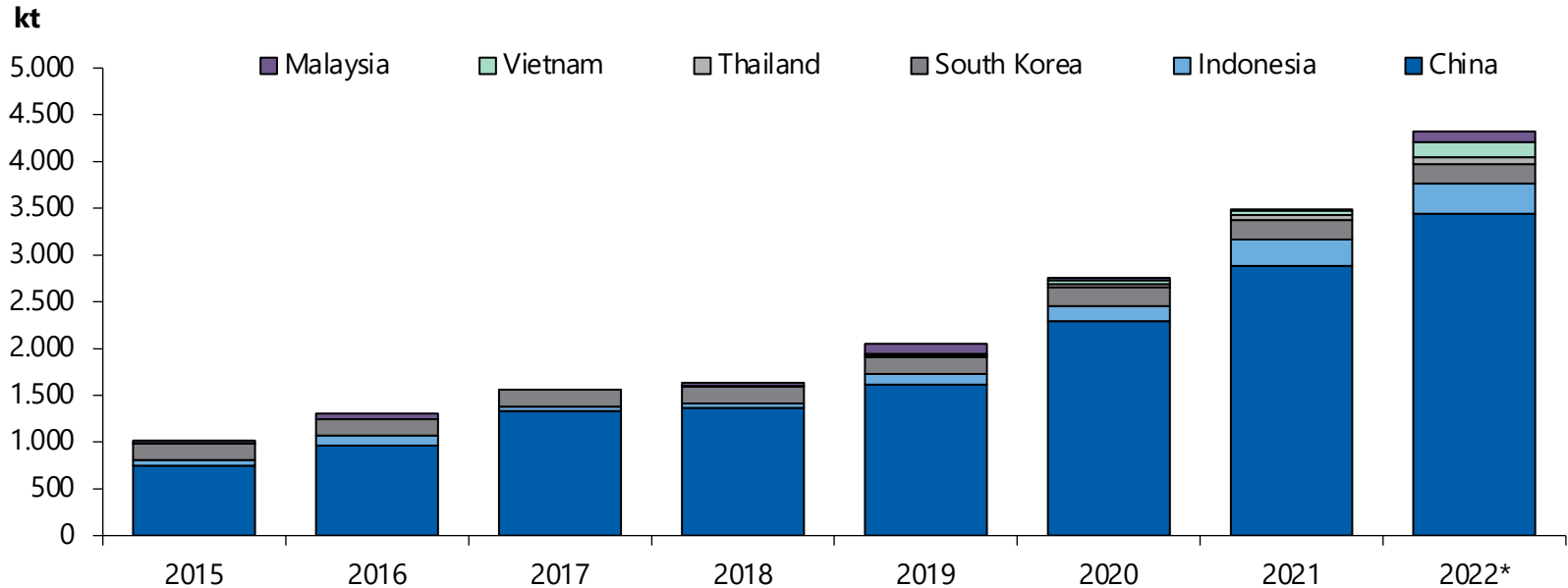
## Total announced SAF Capacity



**At present, the majority of announced projects will utilise the HVO/HEFA process**

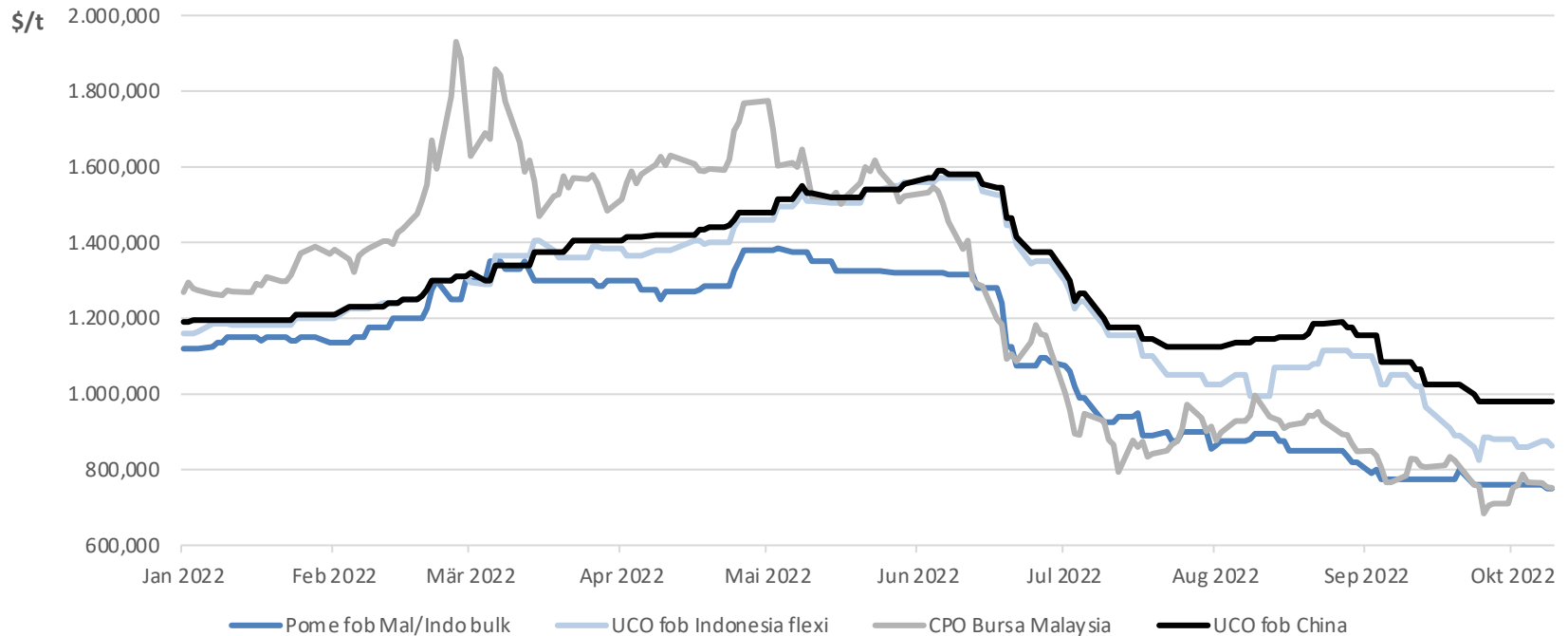
# Feedstock Markets

## Asia-Pacific UCO supply growth

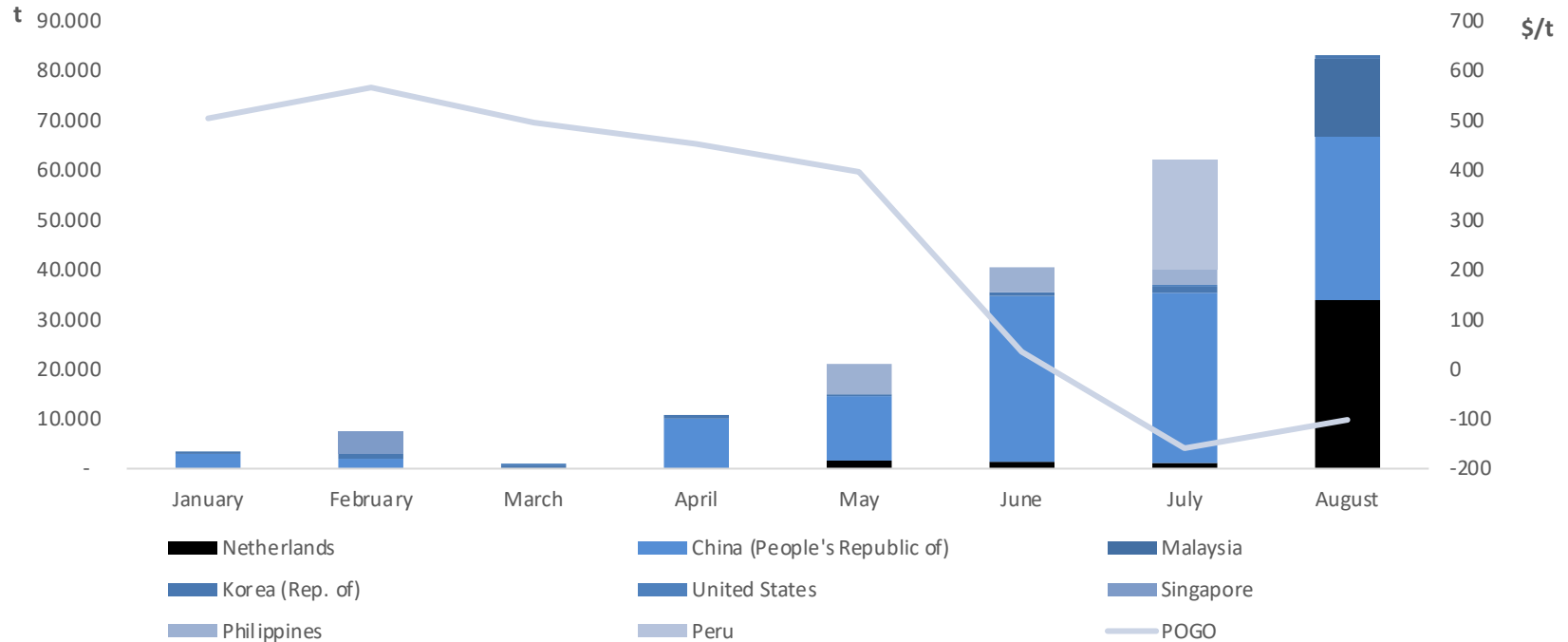


Notes: Chart presented in terms of tonnes of feedstock availability. \*Adjusted based upon YTD information  
-Argus Consulting

# Volatile year for feedstocks



# Indonesian Biodiesel exports surge with POGO



# Pricing

## Argus Biofuels report – daily pricing since 2008

- European biodiesel benchmarks RME, Fame 0 & UCOME
- Growing global markets e.g. Advanced FAME 0 fob ARA range, BGME & Ucome bulk fob China
- Hydrotreated vegetable oil (HVO), ARA & Asia
- Sustainable aviation fuel (SAF), ARA & Asia
- Bionaphtha, ARA & Asia
- UCO ARA, China, Indonesia & Malaysia...launched Vietnam October 2022
- Part A feedstocks, palm oil mill effluent Malaysia & Indonesia & brown grease China
- Daily German, Dutch & UK tickets for UCO on 19 days, and further indications

**Argus Biofuels**  
Daily international market prices and commentary  
Issue 22-136 | Tuesday 19 July 2022

**HIGHLIGHTS**

- RME/Fame 0 spot price spread tops November 2021 high
- Liquidity sends RSD fob batch mill prices downwards
- Spot ethanol markets firm in ARA, trade supports gains
- UK increases targets under domestic RTFD requirement
- Asia-Pacific biofuels: China POME buying picks up

**MARKET COMMENTARY**

**NWE prompt RME/Fame 0 spread hits record**  
The RME/Fame 0 fob ARA range spread reached the highest level since Argus introduced the price assessments, with liquidity for waste and crop-based biodiesel slowing on Argus Open Markets (OOM).

A total of 9,000t of trade was initiated on the platform, down from 21,000t on Monday and the lowest volume so far this month, with a \$46.97/t fall in the underlying gasoil contract, weighing on an assessed outright price.

Trade for Fame 0 was initiated seven times at \$433-440/t with spot value assessed at the \$437.61/t traded average. This was down by \$6-46/t, with outright Fame 0 falling by a steeper \$53/t to \$1,501/t.

For RME, trade was initiated twice at \$1,300/t and \$1,306/t, with spot value assessed at the \$1,324/t traded average. This was up by \$39.50/t, with outright RME falling by only \$2/t to \$2,281/t. The RME/Fame 0 spread rose by \$45.96/t to \$487.61/t, the highest level on record and up from the next highest of \$875/t on 9 November, when demand for winter grade RME was rising and producers were lowering output amid a catalyst shortage.

Trade for UCOME was not initiated in the window for the first time since 4 July after 5,000t of trade on Monday. The window closed in a \$10/t bid offer range of \$1,015-1,025/t, with spot value assessed at the \$1,020/t midpoint of this closing range. This was up by \$5-40/t, with outright UCOME falling by \$31.57/t to \$2,283.50/t.

In biodiesel paper trade reported to Argus, a HQ UCOME/Fame 0 spread dealt at -\$505/t (C950/t -\$480/t), 5,000/t.

**CONTENTS**

- European biodiesel
- Feedstocks and European ethanol
- Asia-Pacific biofuels and freight
- US biofuels and month to date averages
- Market news

**PRICES**

Biofuels spot prices

	RME	ARA	\$/t
RSD biodiesel	1,488.00	1,494.00	6.00
POME (incl. fob ARA range)	2,284.00	2,294.00	10.00
Expanded OME fob ARA range	1,546.00	1,576.00	30.00
FAME 0 C-FFP fob ARA range	1,498.00	1,526.00	28.00
FAME 0 C-FFP fob ARA range	2,291.00	2,305.00	14.00
UCOME fob ARA range	2,283.50	2,283.50	0.00
Tallow OME fob ARA range	2,028.00	2,038.00	10.00
Advanced FAME 0 C-FFP fob ARA range	2,248.00	2,278.00	30.00
RSD hydrotreated vegetable oil (HVO)	-	-	-
HVO fob ARA range (Class 1)	-1,075.00	-1,075.00	0.00
off 7-28 days for gasoil 500 (19 Jul)	-1,201.28	-1,204.12	2.84
HVO fob ARA range (Class 1)	2,441.41	2,446.23	4.82
off 7-28 days for gasoil 500 (19 Jul)	-1,515.00	-1,525.00	10.00
HVO fob ARA range (Class 1)	-1,342.31	-1,395.13	52.82
off 7-28 days for gasoil 500 (19 Jul)	1,394.44	1,397.26	2.82
HVO fob ARA range (Class 1)	-1,200.00	-1,205.00	5.00
off 7-28 days for gasoil 500 (19 Jul)	-1,504.41	-1,514.23	9.82
HVO fob ARA range (Class 1)	2,494.54	2,497.36	2.82
off 7-28 days for gasoil 500 (19 Jul)	-	-	-
Sustainable aviation fuel (SAF)	-	-	-
off 7-28 days for gasoil 500 (19 Jul)	-1,790.00	-1,790.00	0.00
off 7-28 days for gasoil 500 (19 Jul)	-1,202.00	-1,202.00	0.00
off 7-28 days for gasoil 500 (19 Jul)	1,311.19	1,324.54	13.35
Hydrotreated Ethanol and Fatty Acid (HEFA-2E)	-	-	-
Bionaphtha	2,200.00	2,200.00	0.00
MEG ethanol	1,200.00	1,200.00	0.00
ET ethanol (incl. fob ARA range) fob Asia (19 Jul)	1,570.10	1,583.30	13.20
T2 premium ethanol fob ARA range fob Asia (19 Jul)	1,658.10	1,671.30	13.20
T2 ethanol fob ARA range fob Asia (19 Jul)	1,599.00	1,599.00	0.00
T2 ethanol fob ARA range fob Asia (19 Jul)	1,555.10	1,555.10	0.00
T2 ethanol off to London dry	-485.12	-485.39	0.27
RSD hydrotreated fob ARA range	1,498.00	1,498.00	0.00
Hydrotreated fob ARA range off to offshore	-	-	-
Hydrotreated fob ARA range off to offshore	1,498.00	1,498.00	0.00
ETBE	1,809.25	1,809.25	0.00
ETBE fob Rotterdam (18 Jul)	1,809.25	1,809.25	0.00
off to WTIKE (18 Jul)	-103.00	-	-

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Issue 22-136 | Tuesday 19 July 2022

**International biofuels / feedstock differentials and freight**

Map showing freight routes from Rotterdam to various destinations: UCO bulk fob China via SEA, HVO fob Asia via UG ARA, and FAME fob Asia via UG ARA.

Route	Freight (\$/t)
Rotterdam to UCO bulk fob China via SEA	422.00
Rotterdam to HVO fob Asia via UG ARA	107.00
Rotterdam to FAME fob Asia via UG ARA	107.00
Port Klang to Singapore	257.00

**International biofuels spot prices**

	RME	ARA	\$/t
RSD biodiesel	1,488.00	1,494.00	6.00
UCOME fob ARA range	1,500.00	1,400.00	100.00
UCOME fob ARA range	1,500.00	1,500.00	0.00
PME fob Indonesia	1,000.00	1,010.00	10.00
PME fob Indonesia	875.00	1,010.00	-135.00
Biodiesel:	-	-	-
RME ex works India	681.00	685.00	4.00
SAE fob Singapore (incl. tax) (18 Jul)	1,481.11	1,516.84	35.73
SAE fob Australia (18 Jul)	1,281.31	1,294.27	12.96
SAE fob Houston (18 Jul) July +10C	614.00	704.21	90.21
RSD hydrotreated vegetable oil (HVO)	-	-	-
HVO fob China (19 Jul)	2,000.00	2,000.00	0.00
HVO fob Singapore (Class 1) wetback	2,121.91	2,130.71	8.80
HVO fob Singapore (Class 1) wetback	2,878.04	2,891.74	33.70
HVO fob Singapore (Class 1) wetback	2,542.04	2,578.84	36.80
Sustainable aviation fuel (SAF)	-	-	-
SAF fob Singapore (19 Jul)	1,376.19	1,409.04	32.85
Hydrotreated Ethanol and Fatty Acid (HEFA-2E)	-	-	-
Bionaphtha (19 northeast Asia)	1,100.00	1,120.00	20.00
MEG ethanol	1,100.00	1,100.00	0.00
MEG ethanol	1,000.00	1,000.00	0.00
ETBE	990.00	1,020.00	30.00
ETBE (Singapore 19 Jul)	770.00	790.00	20.00
EtOH fob northeast Asia (19 Jul)	876.00	876.00	0.00
SAF fob Singapore (19 Jul)	870.00	970.00	100.00

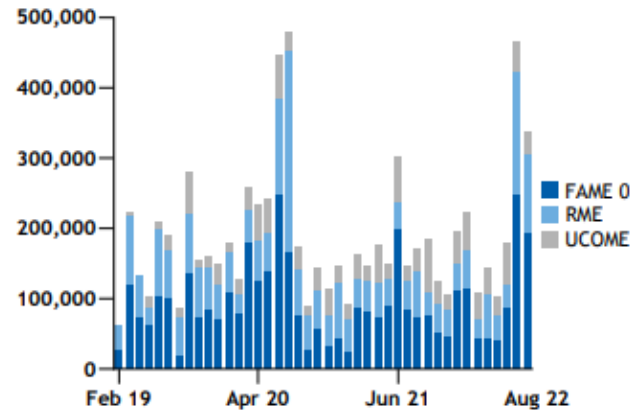
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# Argus Open Markets (AOM)

High liquidity on biodiesel – traded on AOM

**Total trade volumes RME, FAME 0, UCOME (t)**



- FAME 0, RME & UCOME price assessments underpinned by trade on AOM platform
- Cash-settled futures associated with Argus benchmarks, record monthly volumes
- HVO (Classes I, II, III), UCO and ethanol (fob ARA range) also on AOM
- Soon launching Asia window with UCOME and UCO fob China, and UCO fob Malaysia

## Concluding thoughts

- EU continues to drive Asia demand
- Asia still lags but rising mandates and capacity additions in the region will make it a more independent trading hub going forward
- Feedstock sourcing remains structural issue
- More transparency needed in the market



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