

The future biofuels feedstocks and key market dynamics

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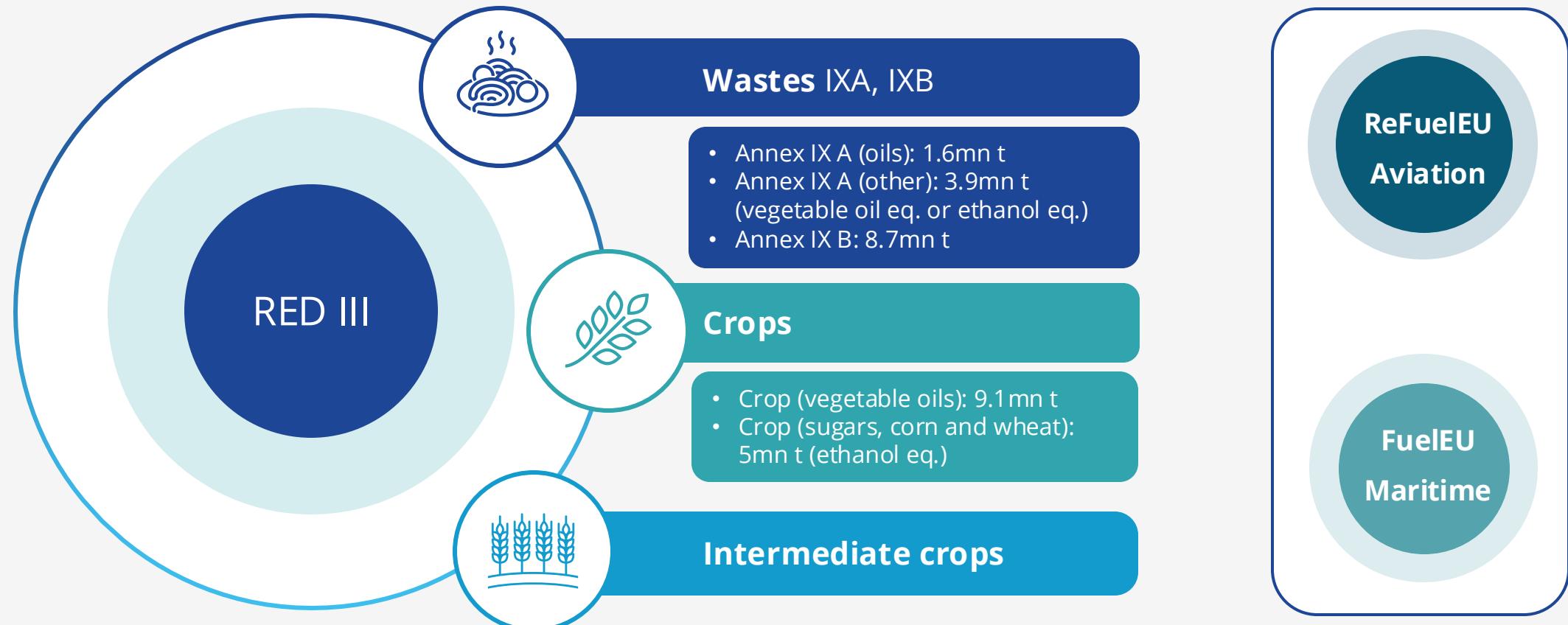


Jade Delafraye
Global Editorial Manager, Agriculture
Argus

RED III determines feedstock classification & sector regulation, providing the definitions for aviation and maritime sectors

Biofuels demand for feedstocks in 2025*

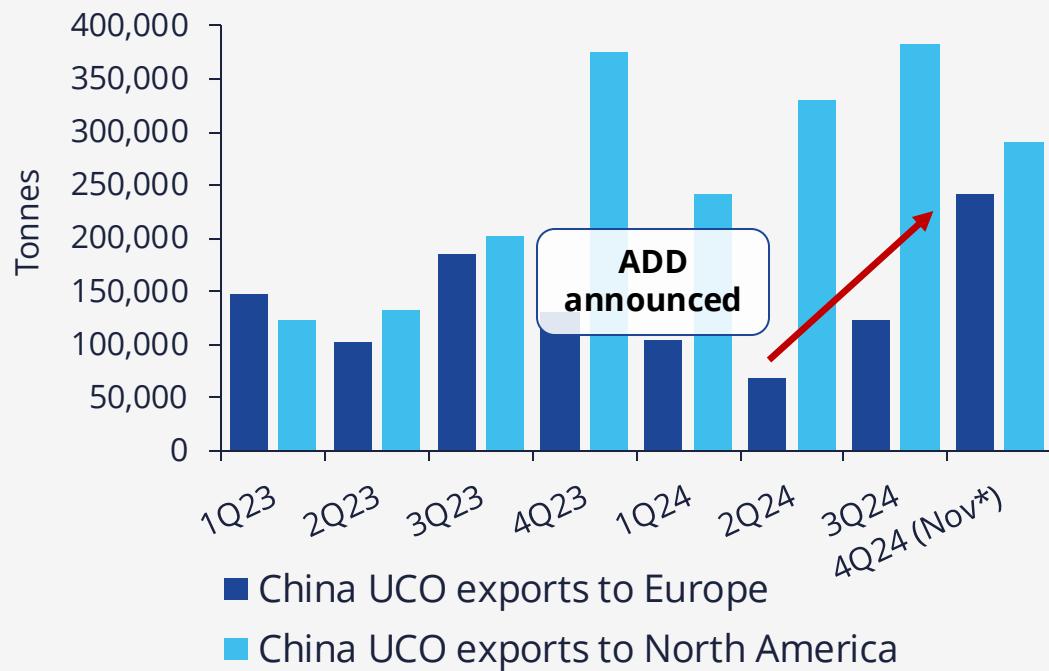
*Road and aviation transport sectors



Source: Argus Consulting

UCO export rebalance; European market sets price tempo

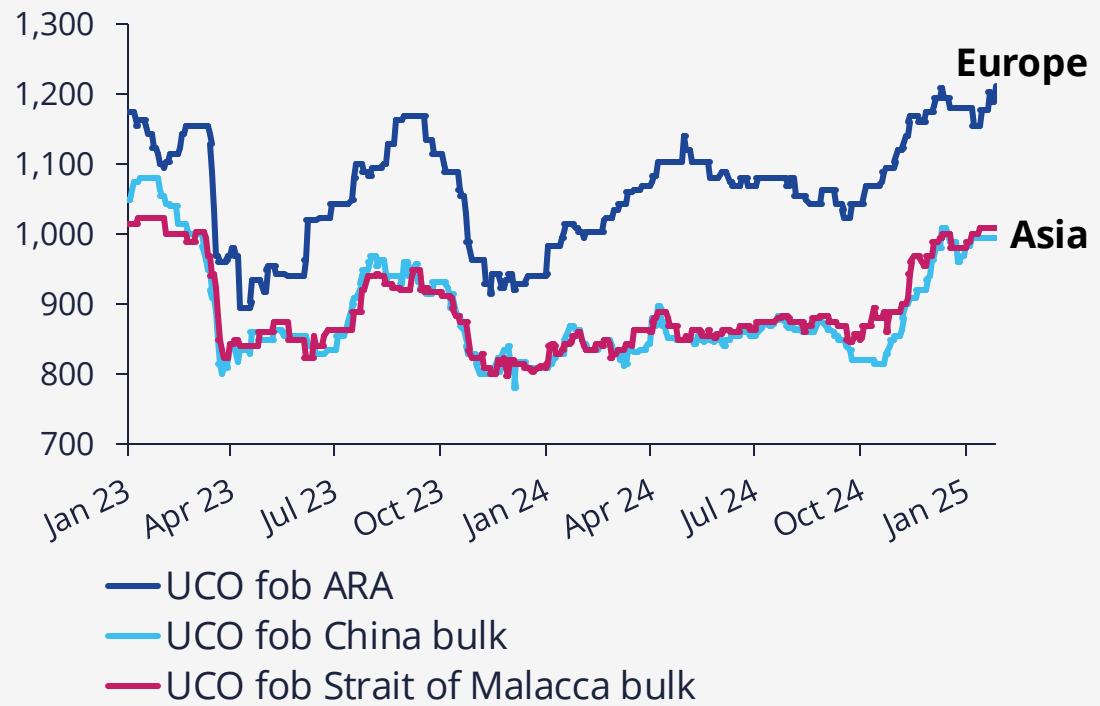
Chinese UCO exports to North America & Europe



Source: China customs data

- European UCO demand back as EC sets antidumping duties (ADD) on Chinese biofuels
- US demand uncertain due to potential 45Z changes

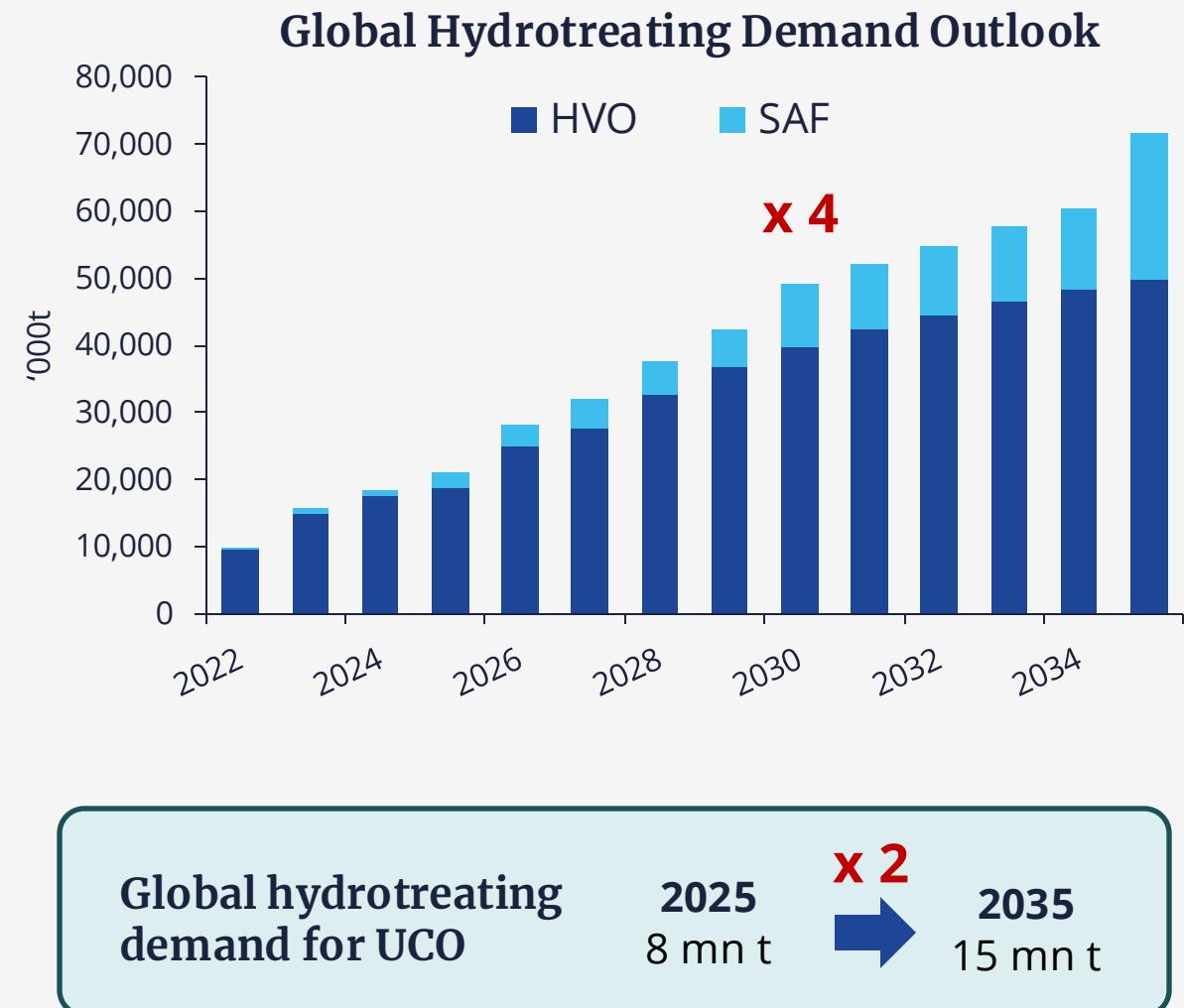
European & Asia UCO (\$/t)



- European demand sets price levels for Asian UCO exports
- “Tug of war” price levels Chinese suppliers & international market

UCO demand as HVO/SAF quadruples to 2035

- Strong pull for UCO with HVO/SAF demand expected to quadruple
- Hedging as biorefinery price exposure increase
- 1 July new methodology, step-up UCO standardisation
- 5x launches of Argus-linked UCO futures globally:
 - UCO fob ARA range (ICE & CME)
 - UCO fob China (ICE)
 - UCO fob Strait of Malacca (ICE)
 - UCO US Gulf Coast (CME)
- UCO proxy for wider wastes and residues?



Different structure in regulation drives different feedstock demand

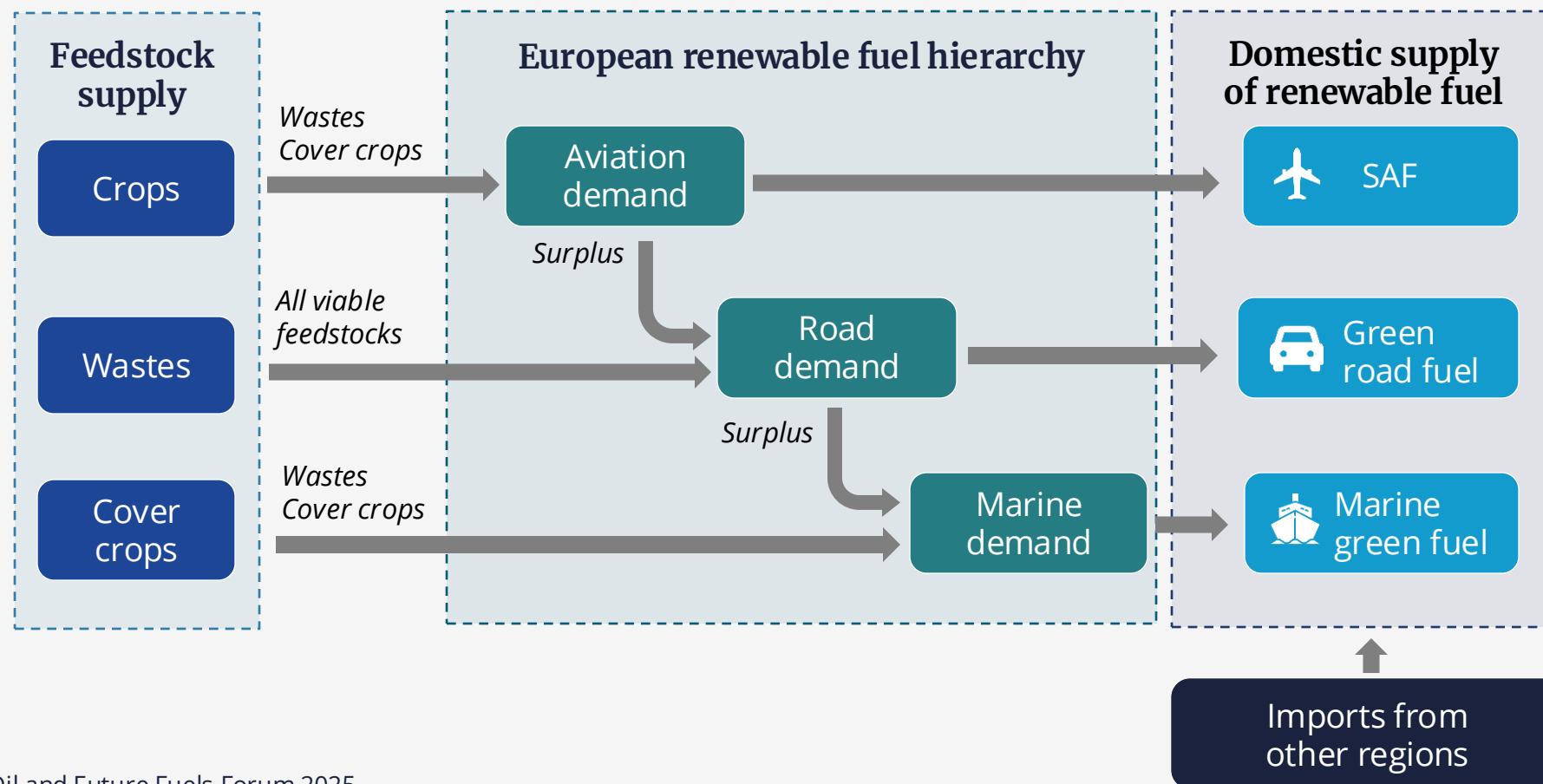
RED III, ReFuelEU Aviation and FuelEU Maritime drive uptake of renewable fuels in Europe but with differing market impacts

	 RED III	 ReFuelEU Aviation	 FuelEU Maritime
Target	14.5pc GHG OR 29pc energy	70pc by volume	52pc carbon intensity reduction
Target date	2030	2050	2050
Feedstock eligibility	 Crop feedstock capped	 No crop feedstocks	 No crop feedstocks
Price ceiling	 National buyouts	 No buyout, compliance rolls over	 Penalty
Fuel switching	 Moderate fuel switching options	 Limited fuel switching	 Broad fuel switching options

Source: Argus Consulting

Aviation likely to compete for waste feedstocks, leaving road & maritime with limited availability

Different structure in regulations expected to result in difference in willingness-to-pay across the three transport sectors, allowing aviation and road markets to compete strongly for feedstocks



Intermediate crops – the missing (feedstock) link?

Criteria based on definition in RED Annex IX:

- Grown in areas where food & feed crops limited to one harvest
- Does not trigger demand for additional land
- Soil organic matter maintained

Challenges:

- Regulation uncertainty
- Certification process
- Farming learning curve
- Storage & logistics
- Appropriate crushing capacity

Intermediate oilseed demand forecast ('000t)



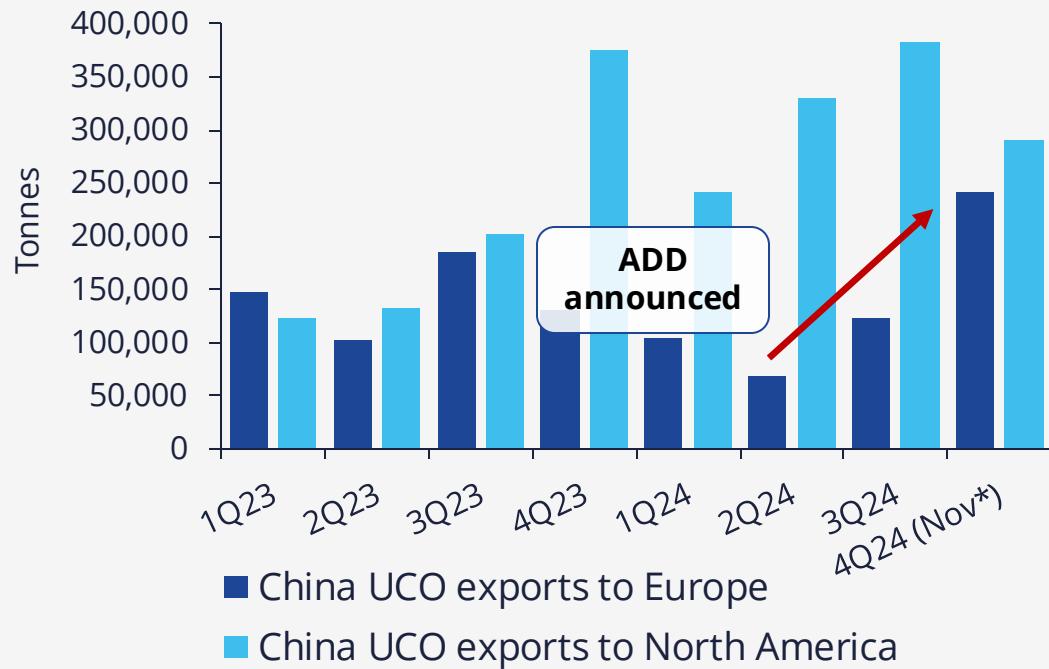
Source: Argus Consulting

Example Intermediate crops:
camelina, carinata, mustard,
safflower



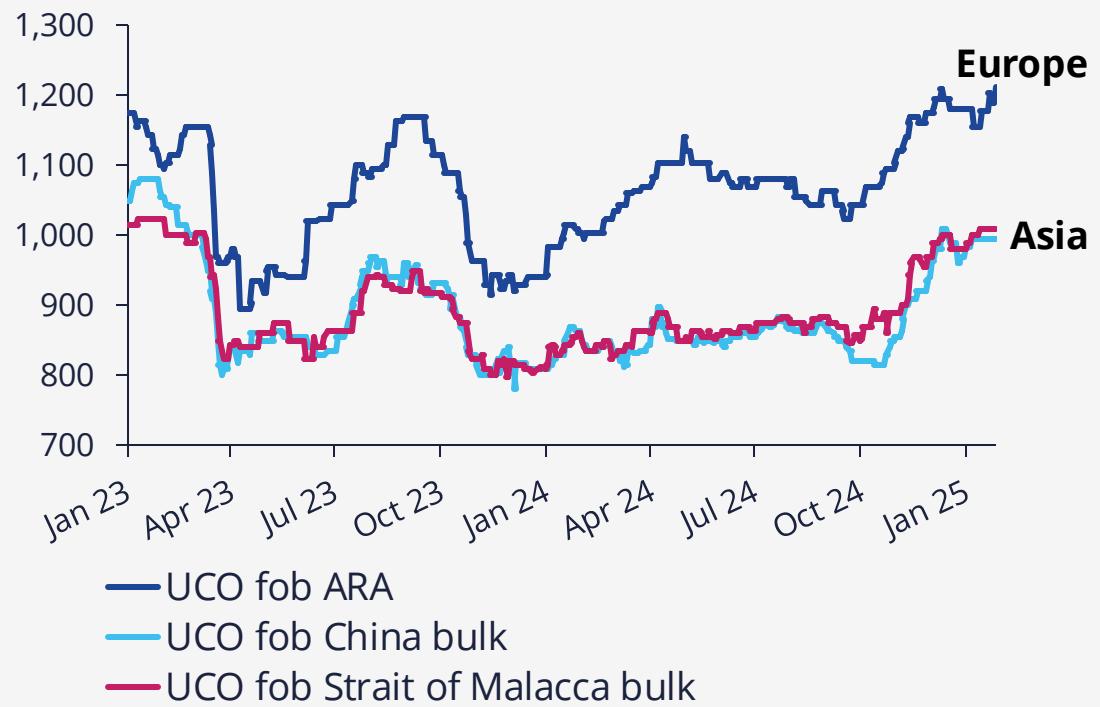
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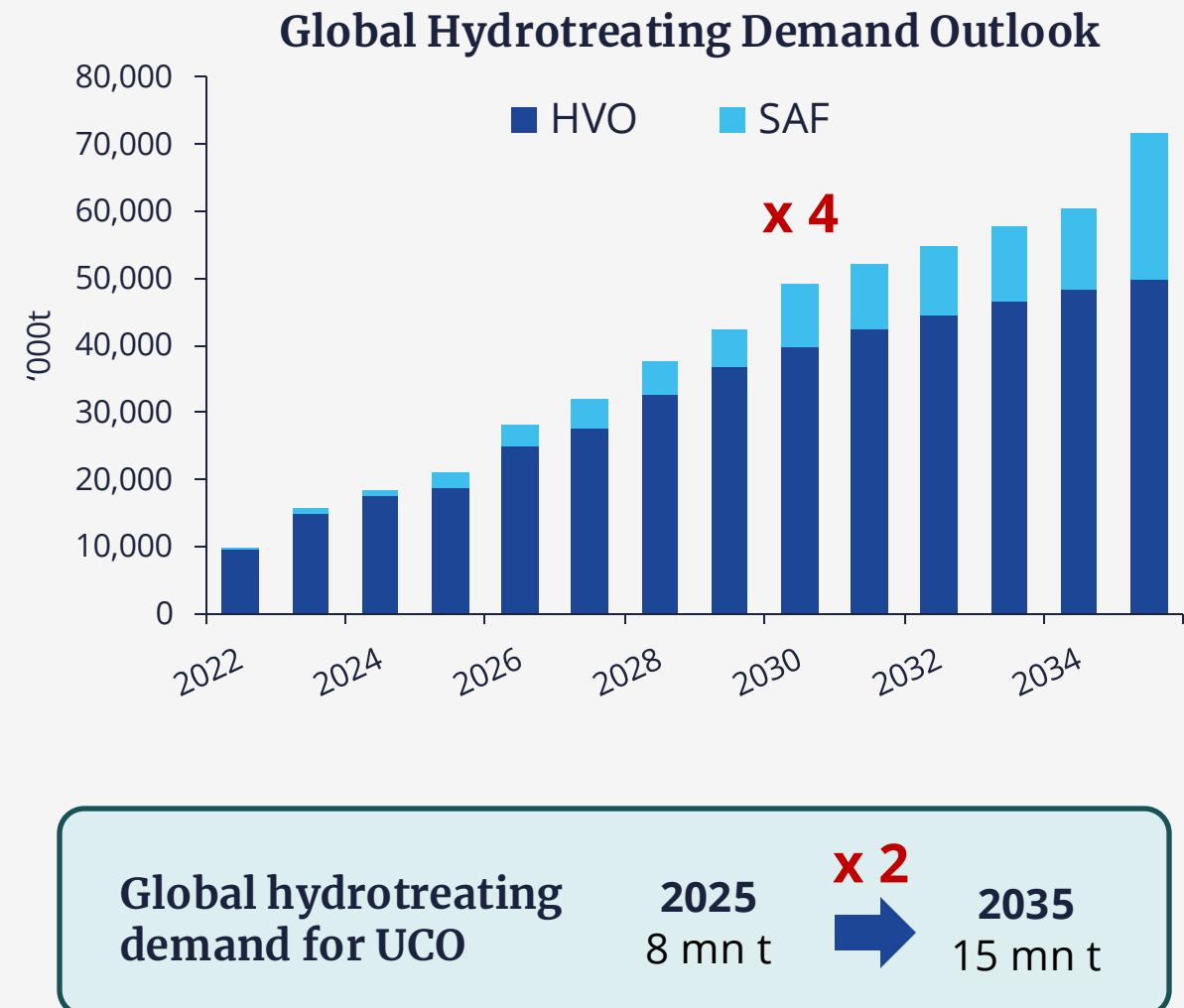
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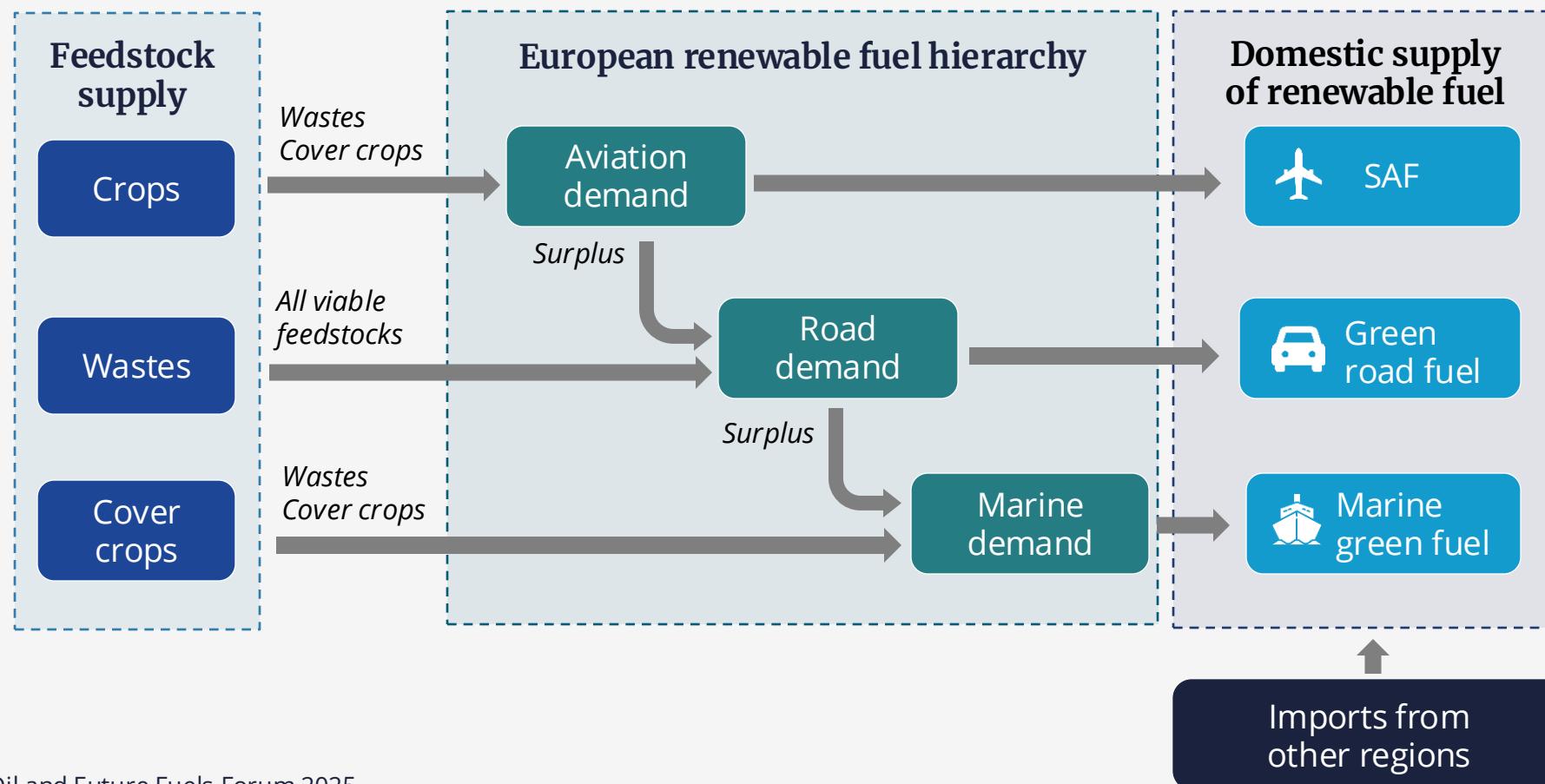
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