

**S&P Global**

Commodity Insights

# The European fertilizer industry: a nutrient-wise review

A presentation for the EU Fertilizers Market Observatory

Prepared by Fertecon | S&P Global Commodity Insights

March 19, 2024



# S&P Global Agribusiness: Six core sectors of expertise

We support organizations in driving success across the global agribusiness value chain



## Crop Science

- Pesticides: Conventional and biological — fungicides, insecticides, herbicides, PGRs and nematicides
- Seed / GM Crops: Input and output traits, and seed treatments
- Digital farming and precision agriculture
- Commercial deals and more



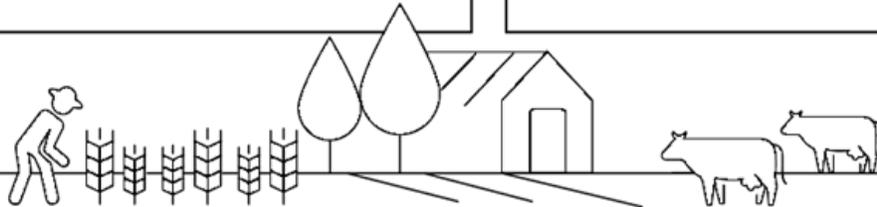
## Food and Agricultural Commodities

- Crops: Soybean, corn and feed grains, wheat, rice, oilseeds and more
- Softs: Sugar, sweeteners, molasses, cocoa and coffee
- Proteins: Livestock, beef, pork, poultry, eggs and dairy
- Foods: Fruit & vegetables, dried fruit & nuts, frozen foods, beverages and more



## Biofuels

- Ethanol and biodiesel price reports
- Feedstocks, acreages, weather and crop reports
- Monthly balances and global trade, including import and export data
- Production, processing and consumption
- Commercial factories, capacity, acquisitions and joint ventures



## Fertilizers

Price benchmarks, short and long-term supply / demand / cost and price forecasts across:

- Ammonia
- Nitrates
- Urea
- Potash
- Phosphate
- Phosphate raw materials
- Sulphur
- Sulphuric Acid



## Policy

European and US analysis:

- Agriculture: Trade and farm policy, energy, environment and policy
- Food: Food and health policy, advertising and labelling, food safety and standards, traceability and supply chains



## Animal Health

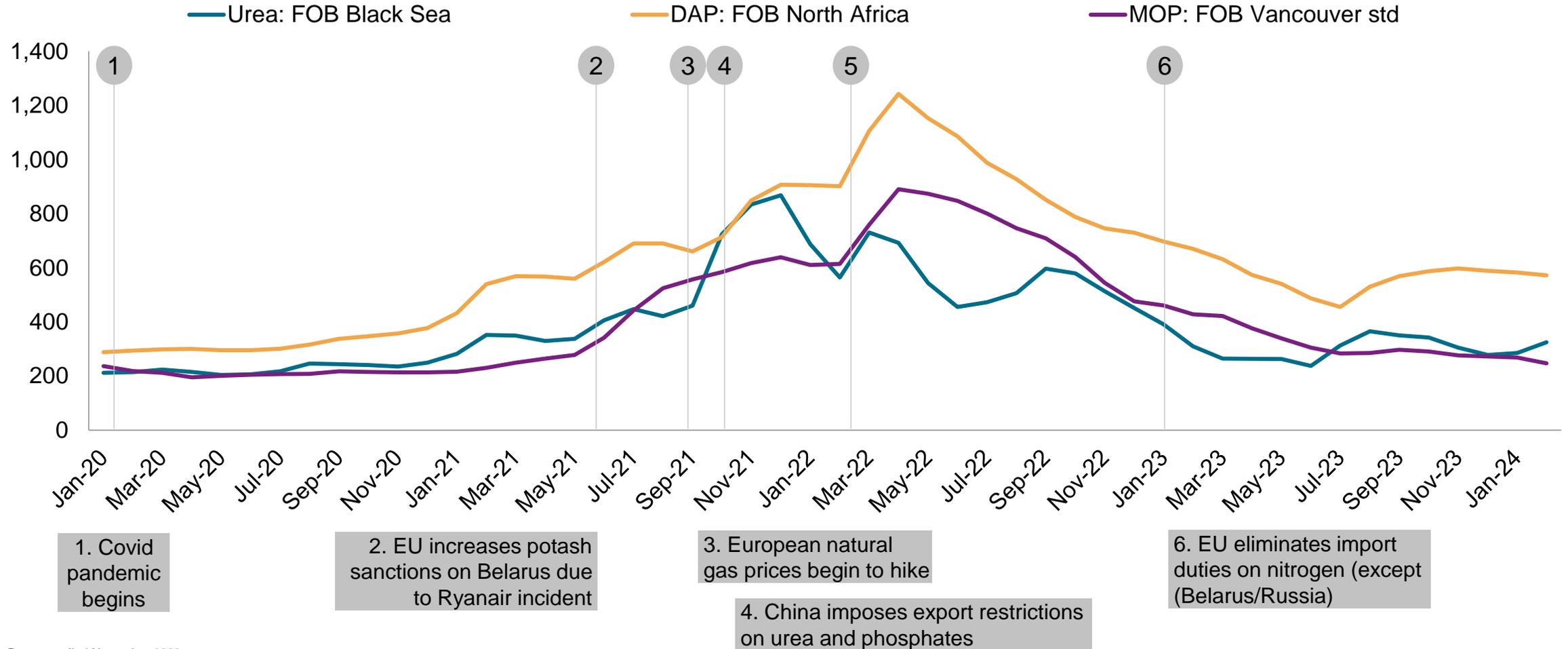
- Parasiticides, vaccines, pharmaceuticals, generics, diagnostics and tech
- Nutrition, feed and additives
- Investment and M&A developments
- Policy and regulation
- Major disease outbreaks

Source: S&P Global Commodity Insights.

# Recent price developments

# Recent price evolution

## Price evolution for key fertilizer benchmark prices (US\$/t product)



Data compiled November 2023.

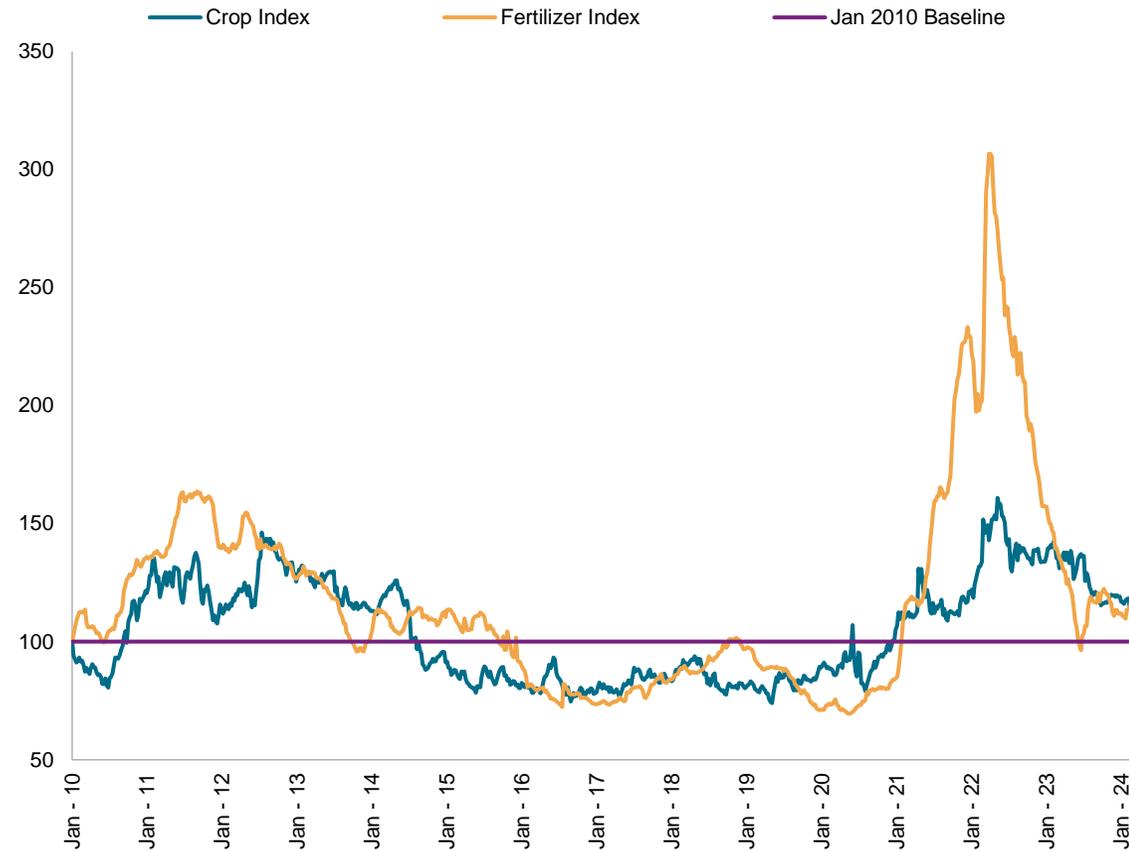
FOB = Free on board; DAP = Diammonium phosphate; MOP = Muriate of Potash / Potassium Chloride.

Source: S&P Global Commodity Insights; Fertecon.

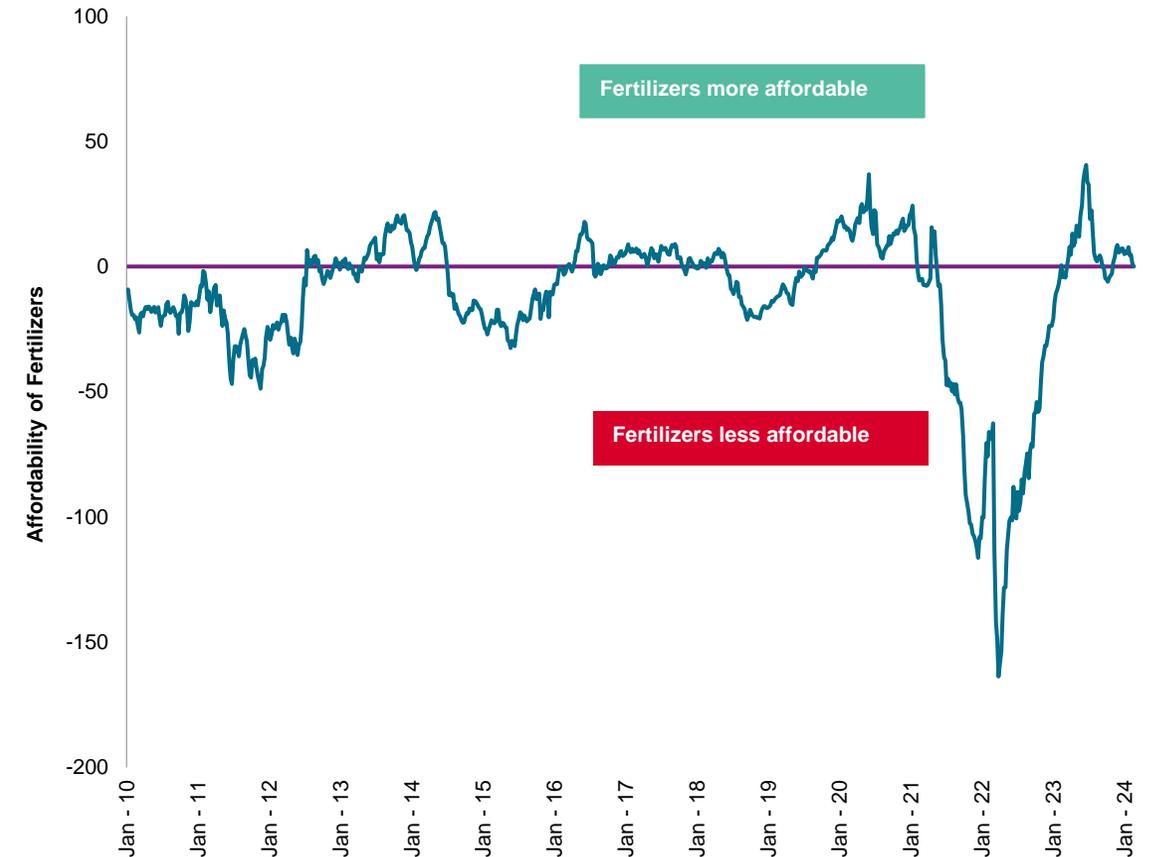
# Fertilizers are currently much more affordable than at any time since Covid...

...but they remain comparatively expensive

### Fertecon Fertilizer and Crop Indices



### Historical Difference between Crop and Fertilizer Indices



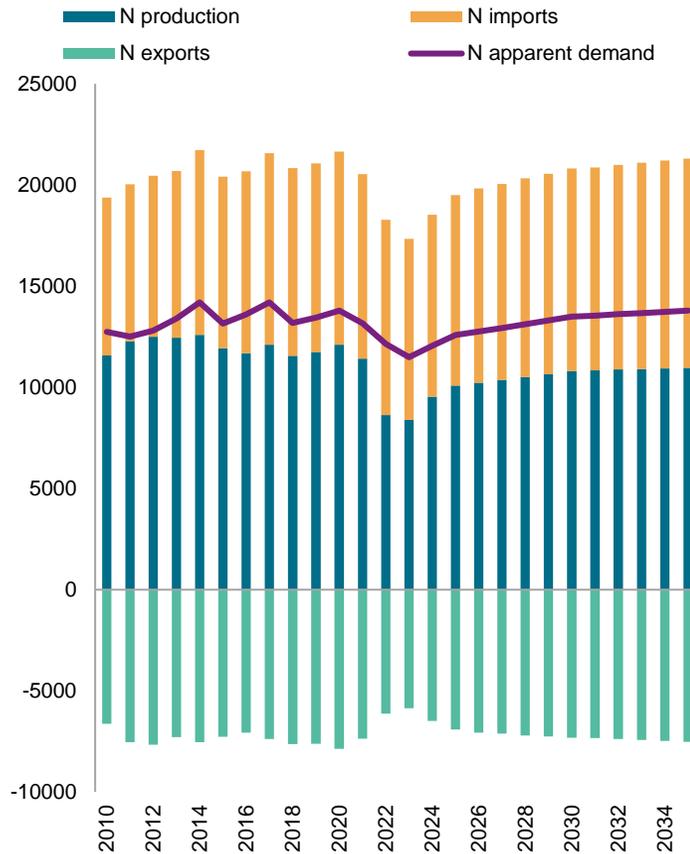
Data compiled February 2024.  
Source: S&P Global Commodity Insights

# High-level review: European primary nutrients market size

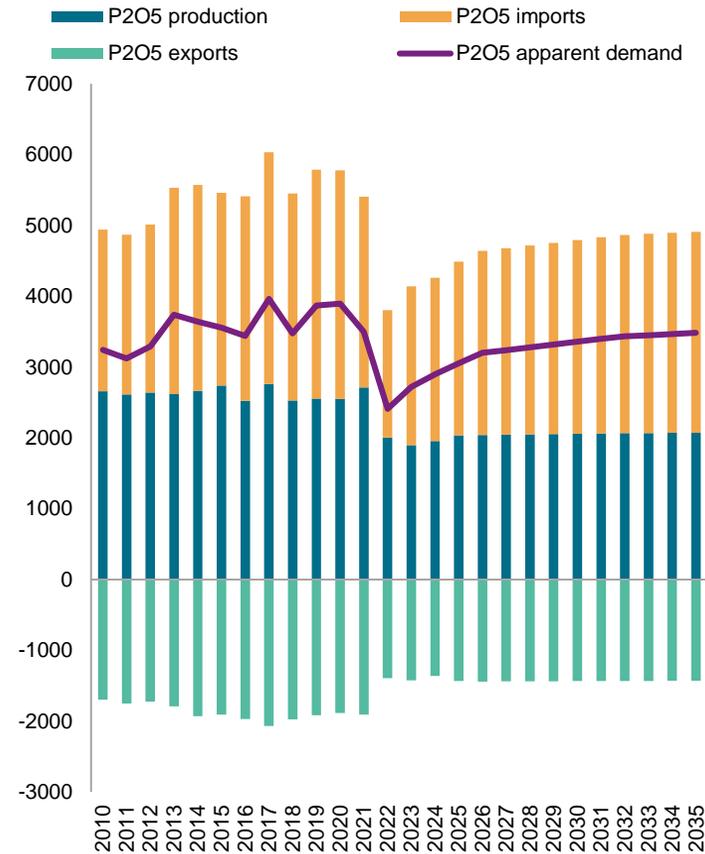
# Europe: a structural net importer of all primary nutrients

Note: the majority of exports are to other European countries

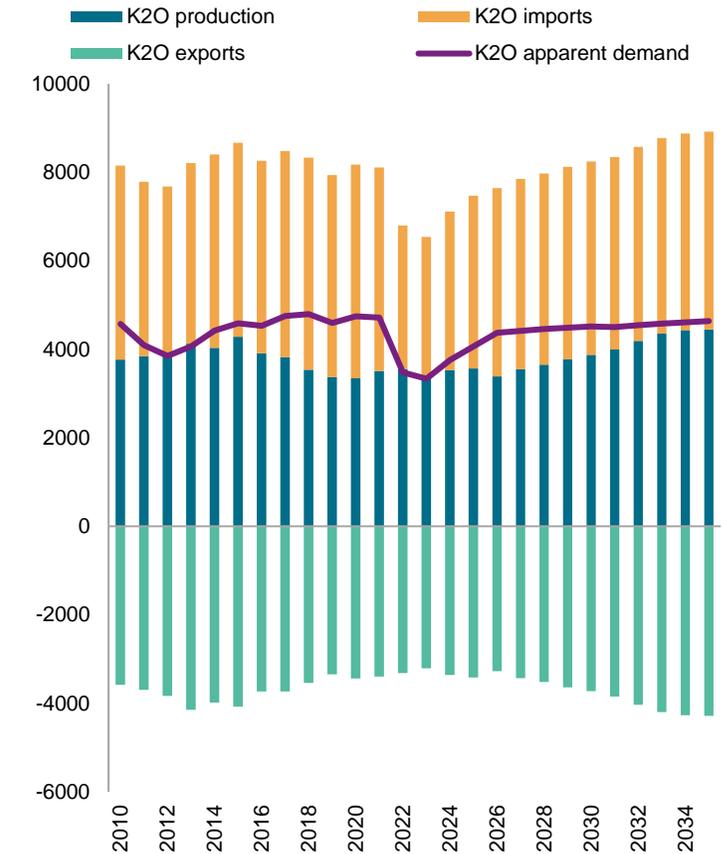
Europe - nitrogen balances ('000t N)



Europe - phosphate balances ('000t P2O5)



Europe - potash balances ('000t K2O)

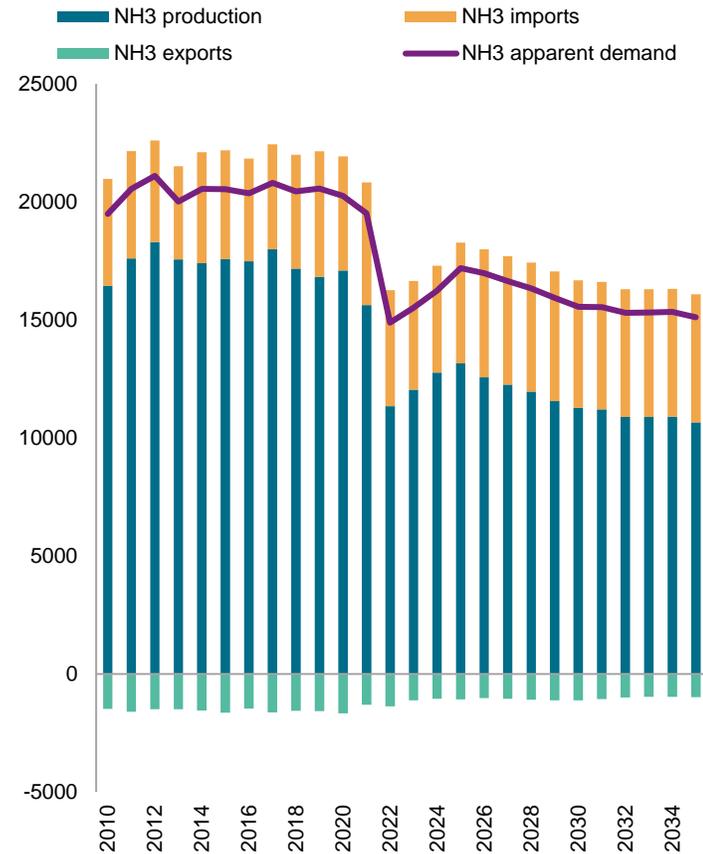


Source: S&P Global Commodity Insights

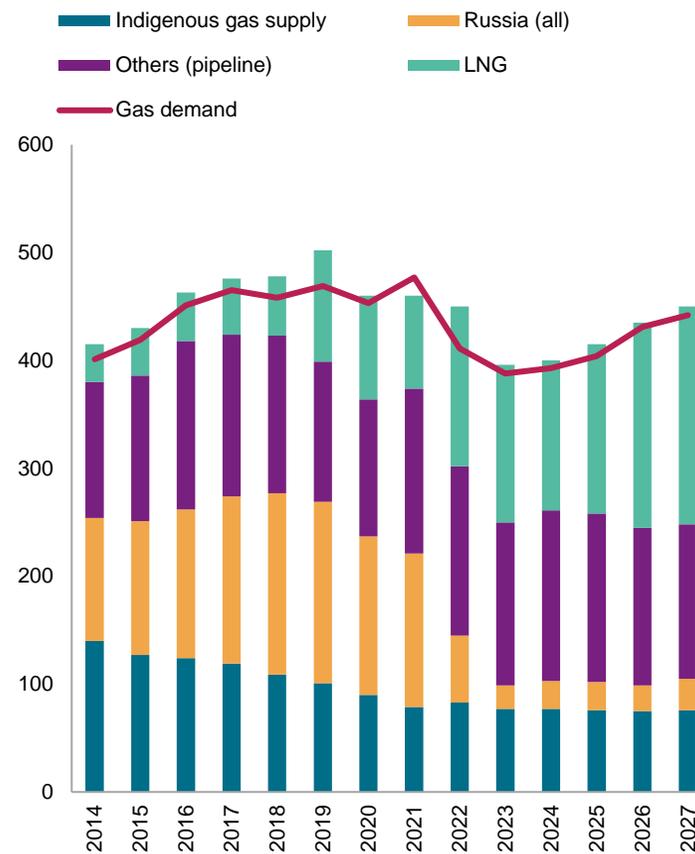
# For each output, there is an input – and it does matter

Nitrogen → Ammonia → natural gas; Phosphates → phosphoric acid → phosphate rock (and sulphur)

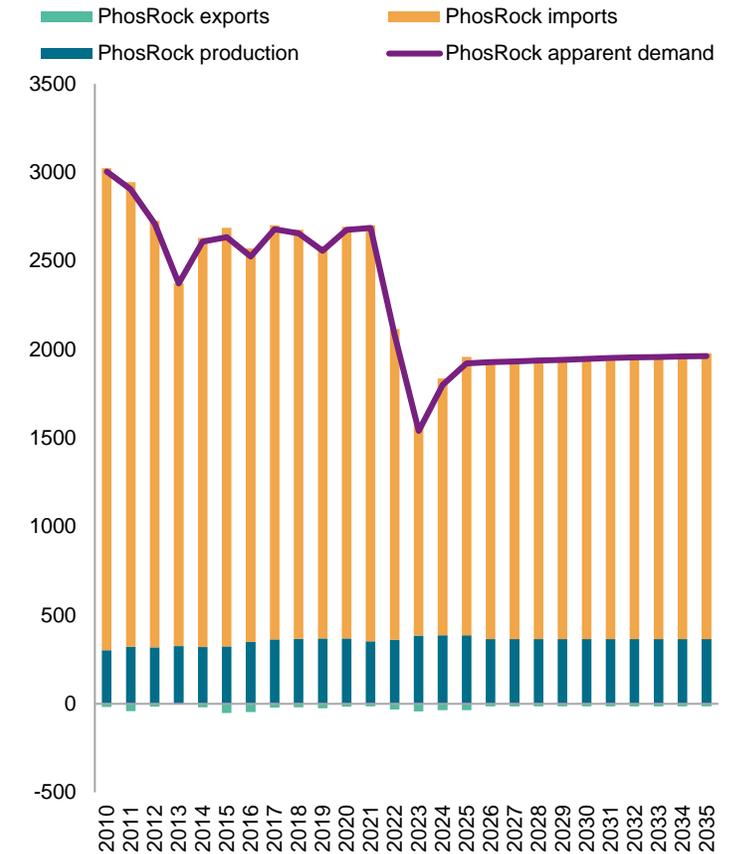
Europe - ammonia balances ('000t NH3)



Europe gas balances, EU27 + UK, billion cubic metres



Europe - phosphate rock balances ('000t P2O5)



Source: S&P Global Commodity Insights.

# Summary of key external exposures for EU nutrient procurement

Value-chain geographical sensitivities are skewed towards Russia, North America, and north-western Africa

## Nitrogen

- Natural gas imports (for indigenous supply)
  - Working status of major non-Russian pipelines and LNG terminals
  - Stability in key areas of supply (notably USA, Algeria, Nigeria)
- Ammonia imports
  - Algeria, USA, Egypt, Trinidad and Tobago, Libya, Qatar, Saudi Arabia
- Fertilizer imports
  - Urea: Egypt, Russia, Algeria, Turkmenistan, Nigeria
  - Nitrates: Russia, Norway, Turkey, USA, Georgia
  - Ammonium sulphate: China, Russia

## Phosphate

- Phosphate fertilizers
  - Morocco, Russia
  - At some distance: Norway, Egypt, Tunisia, Israel
- Phosphoric acid
  - Morocco, Israel, Tunisia
- Phosphate rock
  - Russia, Morocco, Egypt, Algeria, South Africa, recently Jordan
  - ...Lebanon? **NO! Syria**

## Potash

- Canada
- UK
- Israel
- Russia
- Jordan
- Uzbekistan
- (Chile)

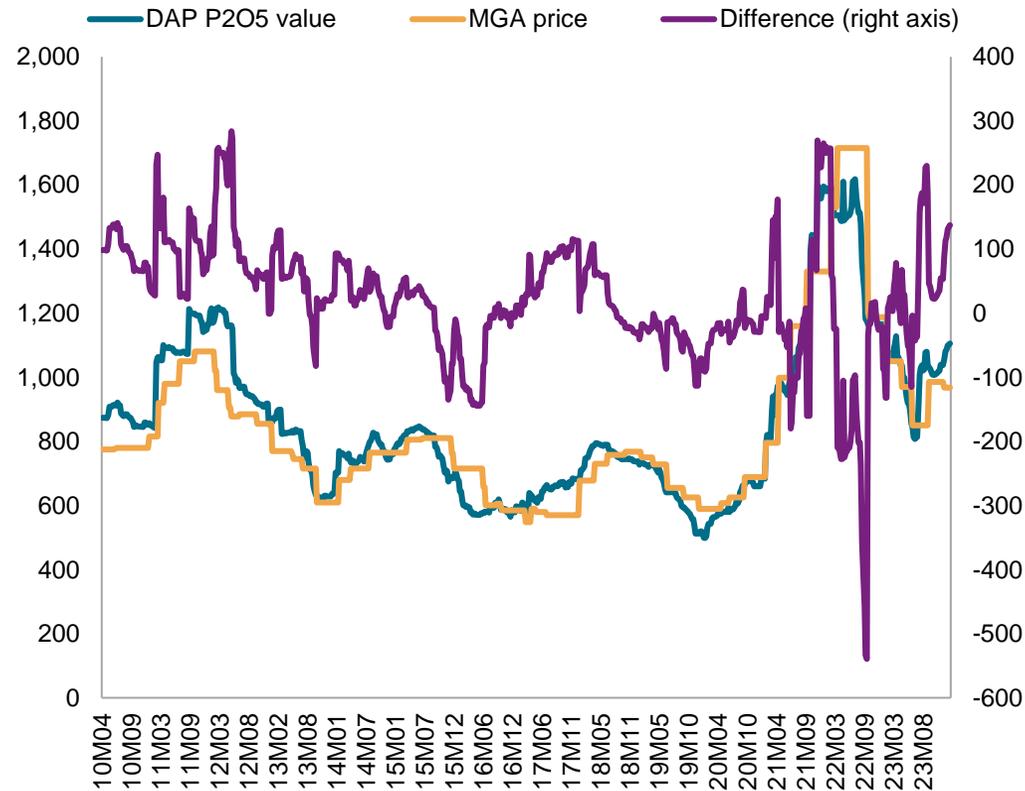
Source: S&P Global Commodity Insights.

# Key short-term market movers for key nutrients

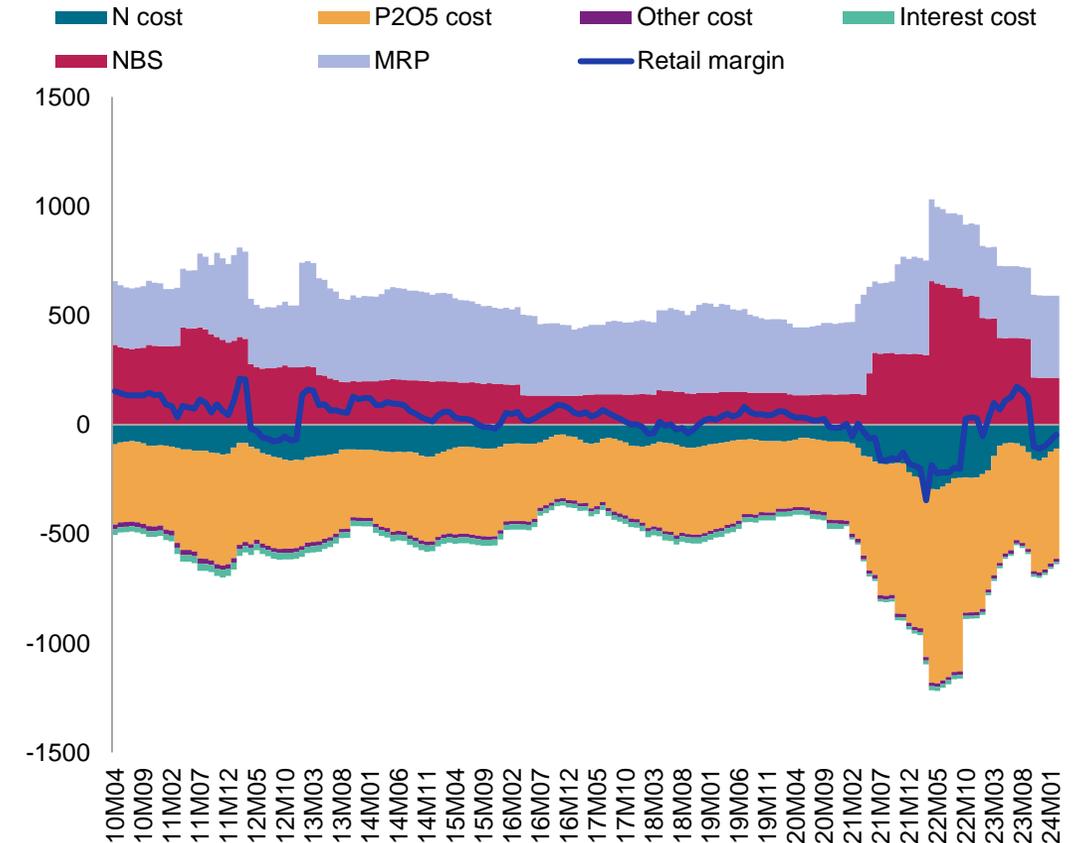
# Indian subsidy and investment cycles

Subsidy discussions are crucial in determining the economic viability of phosphate raw materials

CFR India nutrient values for MGA and DAP, USD/t P2O5



Indian DAP retail margins (MGA-based, no JV credit), USD/t DAP

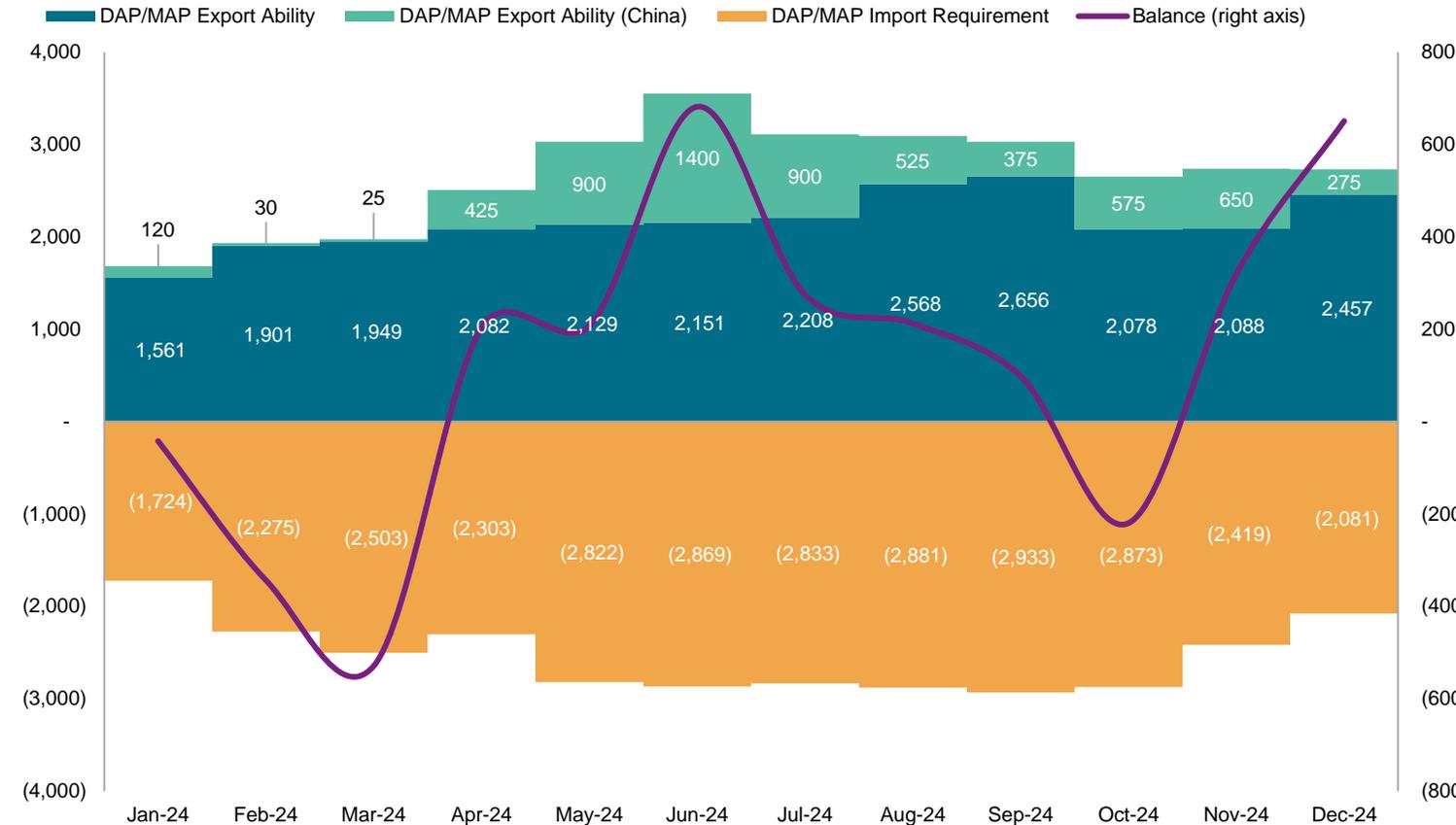


Source: S&P Global Commodity Insights.

# Chinese export tariffs (on phosphates and urea)

## Seasonality in exports is back as a significant component of global balances

DAP/MAP trade balance, 2024 ('000 t)



- The chart on the left is our estimate of export availability and import requirement of DAP/MAP. On a general note, we consider seasonality at the country level, inventory levels of key phosphate importers, turnaround schedule of key exporters, export restrictions (of particular significance for mainland China), and affordability factors. The analysis is linked to our long-term research which considers nutrient extraction to develop a near-term forecast. Risks to such kind of projections are black swan events such as plant shutdowns, sudden change in regulation, drastic changes in weather conditions, etc.
- The trade balance in this edition has been altered mainly on the supply side due to higher export availability expected from China. This is forecast to hit the market from April onwards, considerably loosening the balance from April to September. The market has been and remains firm in Q1 2024 amid export restrictions from China and despite relatively slow demand in key importing regions.
- We maintain the view that there have been limited exports from mainland China in Q1 2024 and the new quotas are understood to be around 2 million t for MAP and 4.5 million t for DAP from January 2024 to April 2025.
- Market tightness is still expected to reduce in Q2 although now to a greater extent with the expected trade surplus reaching as high as 650-700,000 t in June – the month when mainland China’s export availability is forecasted to be the highest in 2024. Such predicted increase in availability, however, might be matched by parallel increases in early bookings.

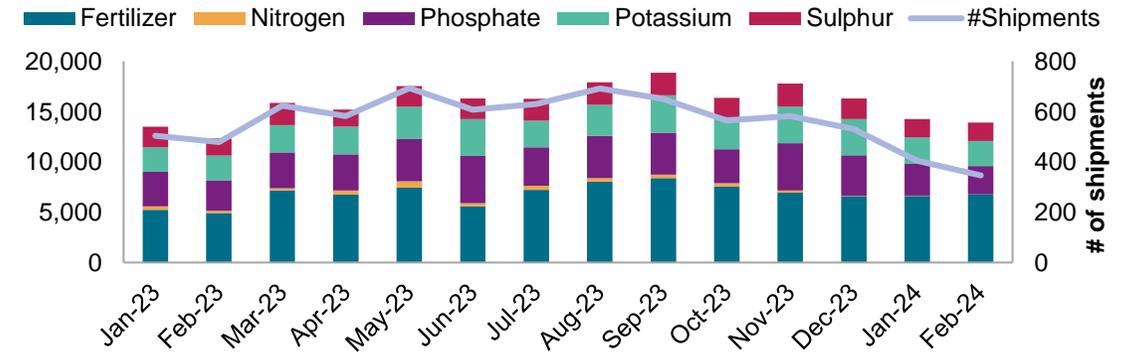
Source: S&P Global Commodity Insights.

# Houthi attacks in the Bab el Mandeb strait are changing trade routes

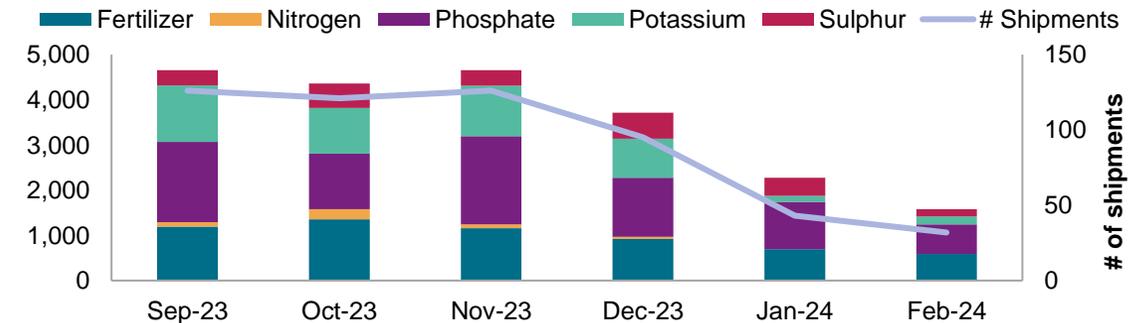
February data shows how much has changed

- Overall tracking to total seaborne freight carrying dry bulk fertilizers suggests Jan-Feb volumes in 2024 show around 5% y-o-y increase with 2023.
- Before the Gaza war, around 25% of the world's dry bulk fertilizer trade transited Bab el Mandeb.
- This has reduced to:
  - 23% in December 2023
  - 16% in January 2024
  - 13% in February 2024
- With total freight at typical levels, this suggests alternative routes are being used.
- There has been no obvious impact on benchmark prices
  - Additional costs are absorbed into supplier costs, i.e. reducing supplier margins.
  - Insurance costs through the Red Sea are X10 higher.

14-month fertilizer shipping data (kt, #shipments)



Fertilizer shipments transiting the Bab el Mandeb Strait, Sept '23-Feb '24, '000 t



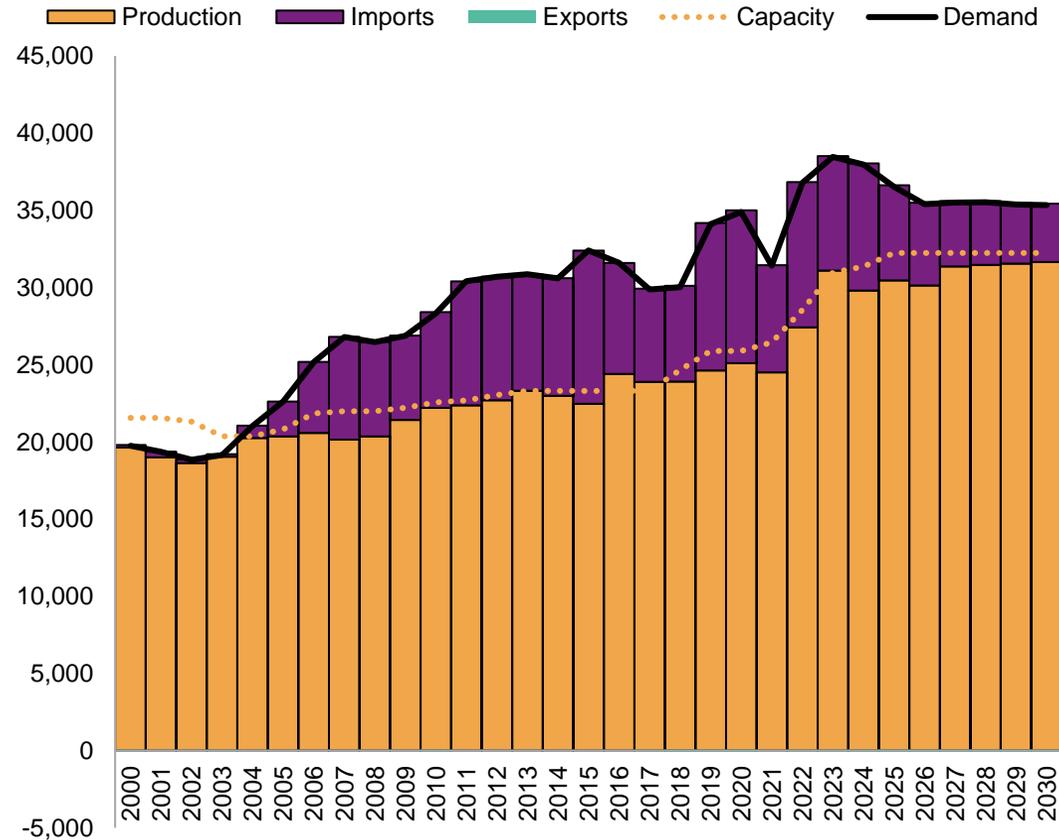
Source: S&P Global Commodities at Sea, part of S&P Global Commodity Insights

# Key long-term market movers for key nutrients

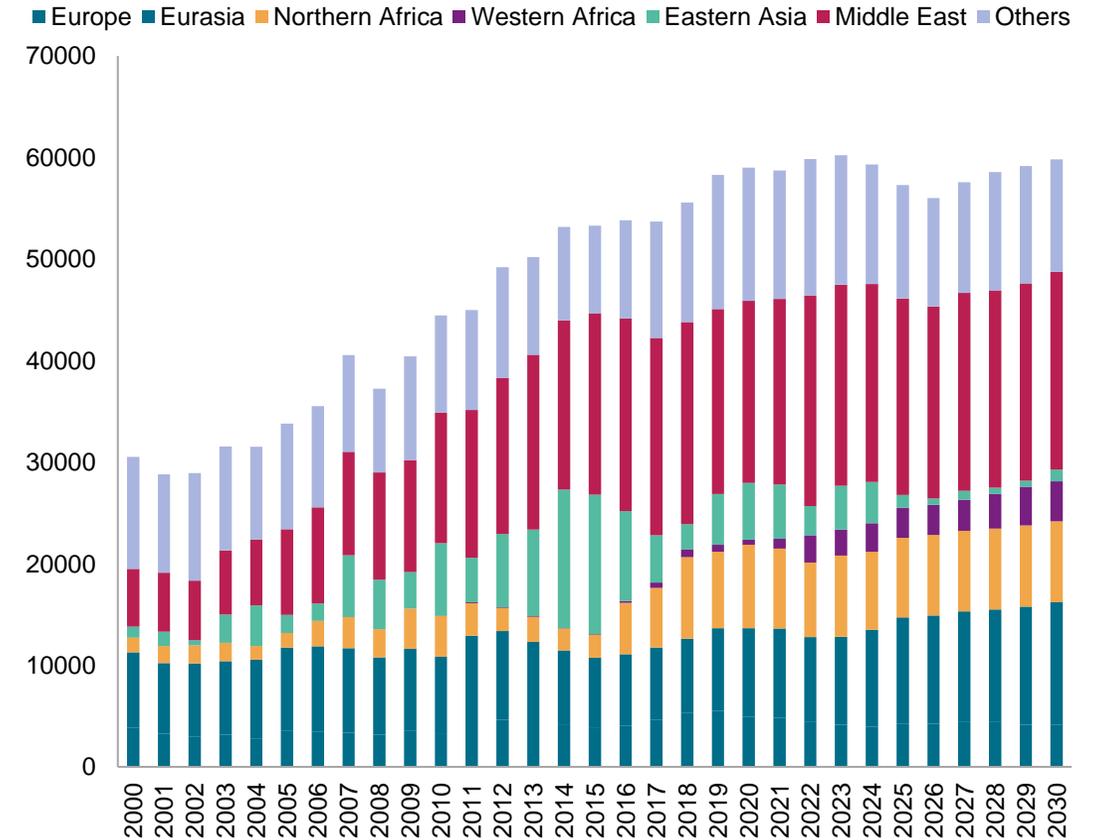
# Significant changes ahead in international trade for urea

India continues to aim at formal self-sufficiency, exporters temporarily unscathed due to China's retreat

Indian urea balances, thousand metric tonnes product



Key export dynamics for urea, 2000-2030, thousand metric tonnes

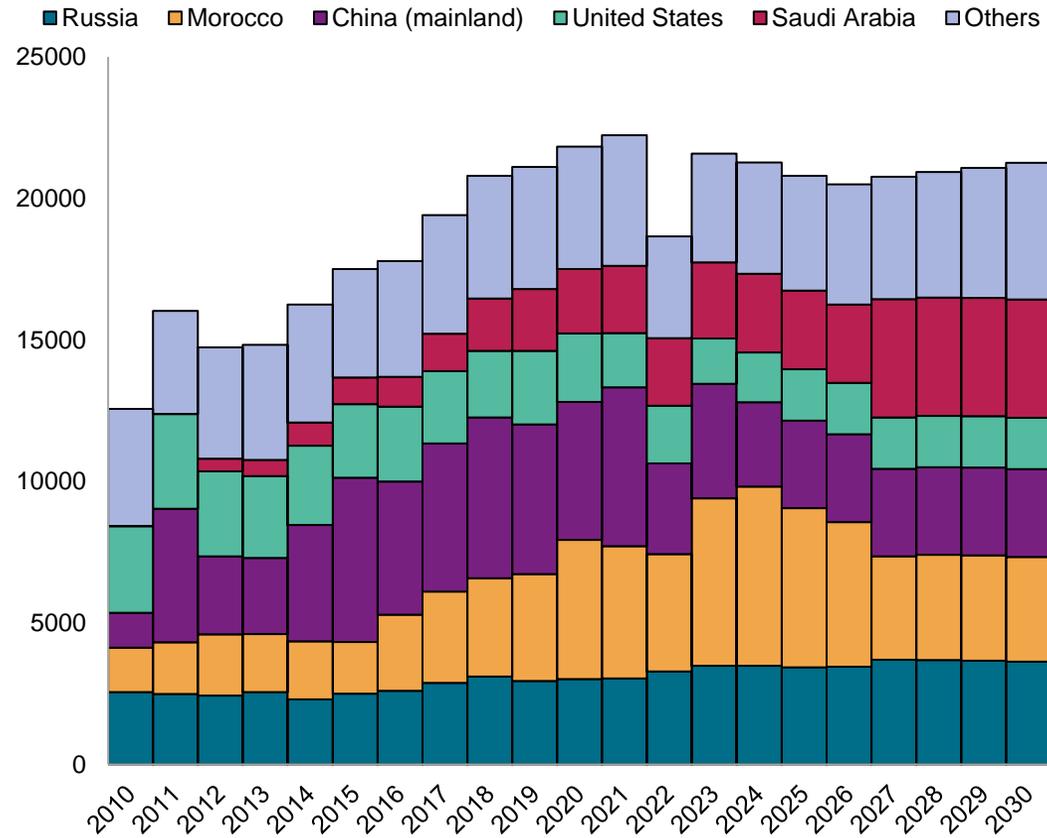


Source: S&P Global Commodity Insights.

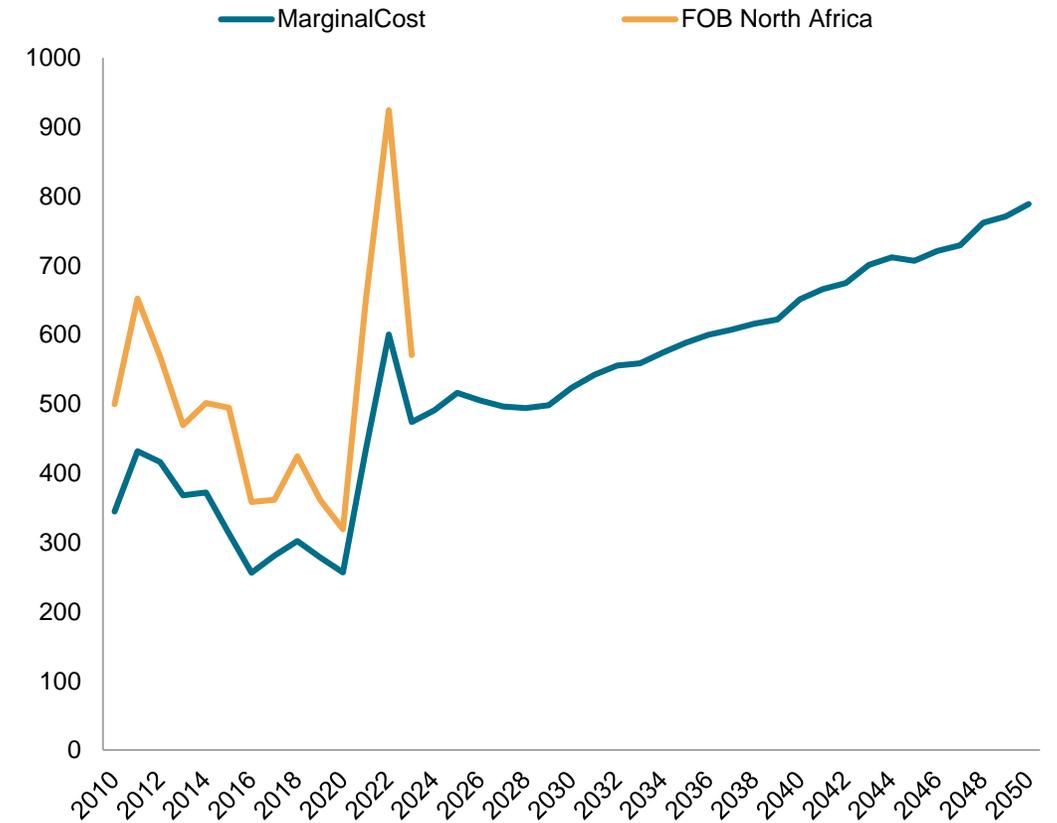
# Phosphates: limited investment outside key hubs/companies

The top-five exporting geographies account for about 80% of trade; high long-term costs deter investment

**Phosphate fertilizers: key exporters (thousand metric tonnes P2O5)**



**Marginal cost index, USD/metric tonne DAP/MAP**

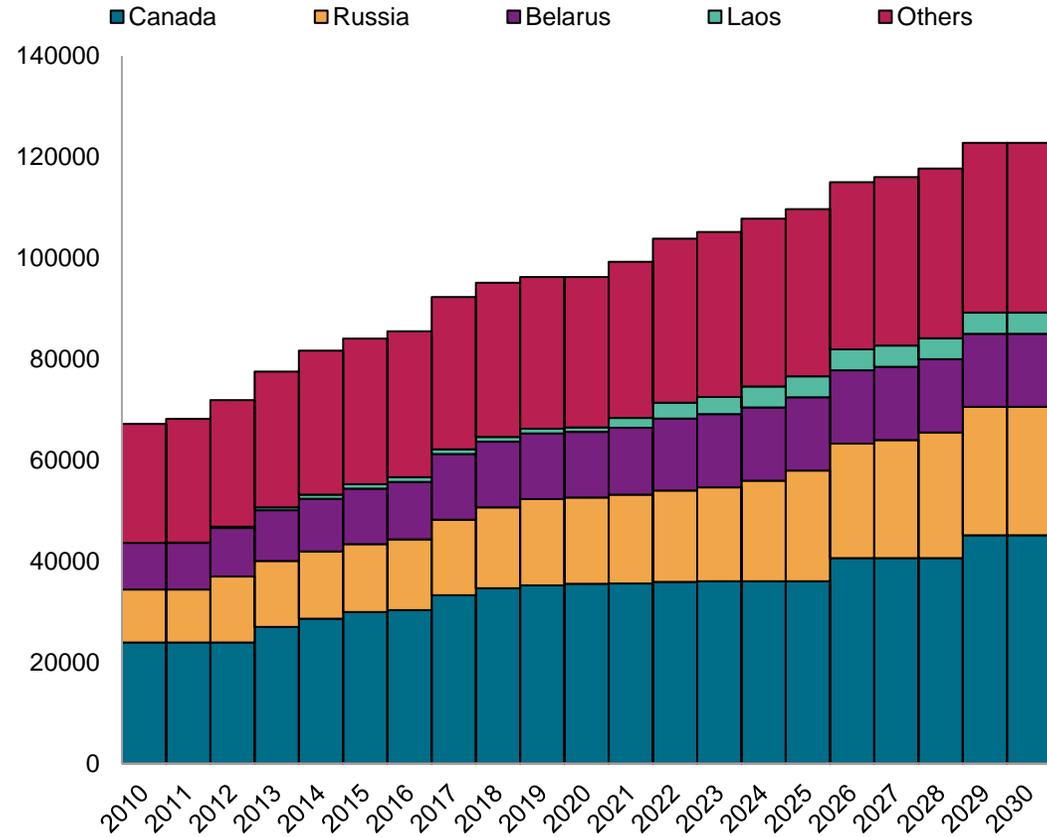


Source: S&P Global Commodity Insights.

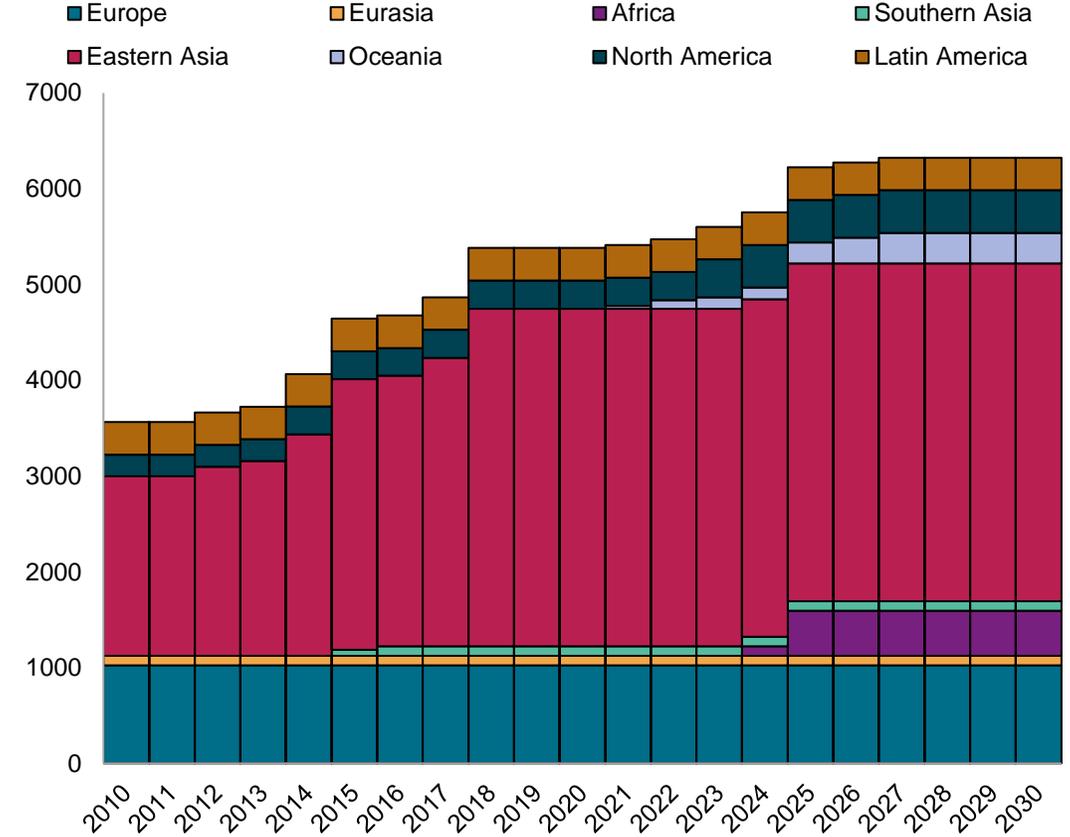
# Potash capacity has increased, and will increase

While the MOP market remains a structural oligopoly, availability is hardly in doubt

Primary MOP capacity - key expectations, '000 metric tonnes/year



Primary SOP (potassium sulphate) capacity, '000 metric tonnes/year



Source: S&P Global Commodity Insights.

# Conclusions

# Conflicting short-term and long-term signals

## Short-term

- The nitrogen supply chain seems sufficiently shielded from production issues, yet volatility in gas prices remains (and the approach of the USA to foreign trade could also change significantly within 2024)
- In the very short term, a more transparent export quota system on phosphates is allowing a window for planning – yet this could be short-lived as key importers might try and secure volumes early
- Potash supply is stable, but any further demand stimulus could put it under stress
- Disruptions related to the Red Sea are currently being absorbed by higher freight costs and no real direct link to increases in delivered prices – yet as is often the case the important factor may not be magnitude but duration of the event

## Long-term

- Geo-political risks towards key raw material suppliers persist (e.g. Russia, Syria)
- Big changes to nutrient-specific balances are coming for nitrogen and potash, with phosphates possibly lagging
- The outlook for investment across all nutrients remains quite slow, and where it is active it still focusses on similar areas of supply if not even the same set of companies. De-carbonization and energy transition are likely to divert some attention away from net capacity increases, at least for nitrogen.
- Demand fragmentation within Europe is preventing the local distribution sector from having a strong say in project financing

Source: S&P Global Commodity Insights.

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