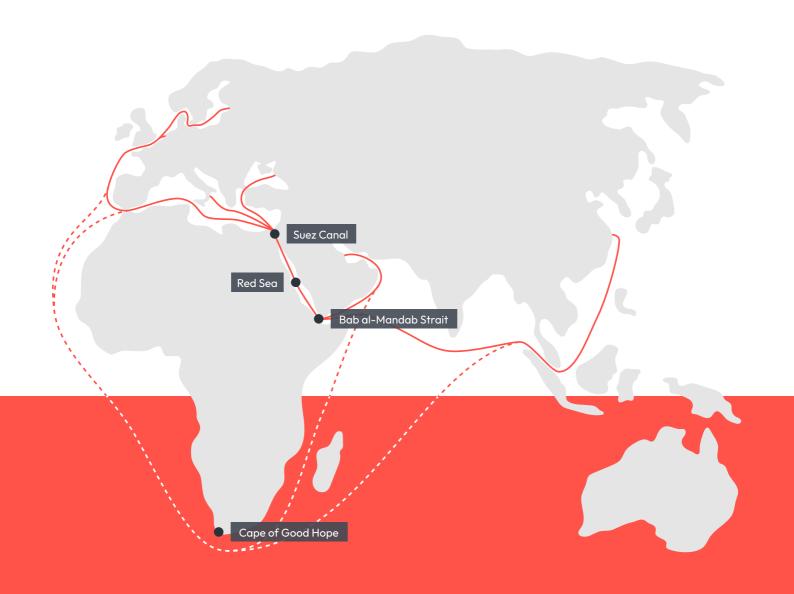


Red Sea disruption

30 January 2024



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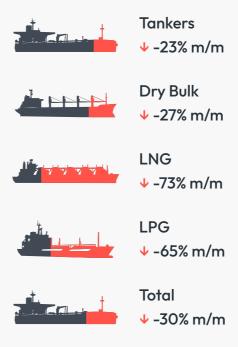


Overview

As the disruption around the Bab el-Mandeb strait enters its third month, a rising number of bulk vessels are avoiding the region, creating ever broader negative impacts to commodity markets and the wider economy. To counter the threat, the US and UK conducted coordinated strikes on Houthi targets in Yemen earlier this month. This has not deterred the Iran backed Houthis with attacks on vessels persisting, most recently with a strike on the tanker Marlin Luanda carrying Russian naphtha, the most serious attack on a vessel to date.

Average daily Suez Canal transits by bulk commodity carriers hit a more than two-year low of 28 on 26 January. The recent strike on the Marlin Luanda highlights the ongoing risk to vessels and the likelihood that the current crisis will impact shipping and commodity markets for the foreseeable future. In this report, we highlight the current and potential risks to various commodity markets.

Change in Suez Canal transits Jan 24 vs Nov 23



Key commodity prices (% change since 15 December)

Singapore VLSFO bunker

↑ 14% \$662/t

Singapore VLSFO crack

↑ 43% \$12.10/bbl

North Sea Dated

↑ 8% \$83.41/bbl

NWE ULSD crack

↑ 8% \$29.47/bbl

Singapore naphtha crack

√ -65% \$5.84/bbl

NWE Jet crack

↑ 10% \$31.73/bbl

Corn front month futures

√ -8.50% ¢442/bu

Wheat front month futures

√ -6% ¢590/bu

Dutch TTF Natural Gas Futures

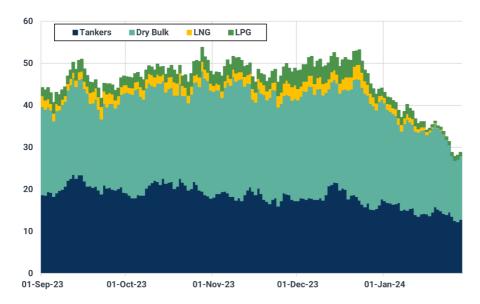
√ -16% \$8.94/MMBtu

Soybean front month futures

√ -10% ¢1199/bu

Source: Kpler, Argus Media, ICE, CME

Bulk commodity carrier transits of the Suez Canal (7-day moving average)



Macroeconomic

Escalating tensions in the Red Sea represent a risk to global disinflationary trends we've seen over the past year. Containership flows through the Red Se, in particular, have eased considerably with numerous containership firms, including Maersk, banning all Red Sea shipments indefinitely. This effectively pushes up the cost to ship goods from east to west amid longer transit times around the Cape of Good Hope. Higher freight costs are effectively passed through to goods prices.

Europe is the most exposed to rising costs due to its dependence on imports from Asia. The cost of manufactured goods from clothing to furniture is expected to jump in March and if issues persist in the Red Sea, rising prices could be a longer-run structural problem. Other regions, such as the United States, could also begin to feel knock-on effects as higher freight rates between Asia and Europe spread further afield.

Geopolitical

Houthi actions in the region enjoy full Iranian backing. Tehran derives three primary benefits from these events:

- · A potential upward push on oil prices
- · Disproportionately higher costs for the US and the UK in intercepting Houthi missiles
- · An enhancement of its reputation in the Muslim and Arab world. Notably, a recent survey by the Doha Institute indicates a shift in perception, with the Arab world now viewing the US and Israel as the major threats to peace and stability in the region, providing Tehran with a significant political advantage.

Moreover, recent events, including Iran's seizure of the Suezmax vessel St Nikolas in the Gulf of Oman, pose additional risks to the freight market. The St Nikolas was laden with Basrah crude destined for Tupras' Aliaga refinery. This incident, distinct from Houthi activity near the Gulf of Aden, has triggered potential consequences in the Iran-Turkey-Iraq relationship. Iran alleges that the vessel owner and the US had 980 kb of Iranian crude stolen last year, originally transported within the same vessel but eventually diverted and delivered to the US.



Freight

The impact on bulk freight rates is mixed, with tanker rates rising sharply over the second half of January, while dry bulk, LNG and LPG freight has been unmoved.

Tankers

Crude tanker rates for Suezmax vessels from the Middle East to Northwest Europe via the Suez are up around 50% to \$3.90/bbl for a Suez route since mid-December (Baltic Exchange). The additional cost of sailing via the Cape of Good Hope is around \$2.20/bbl.

Rates initially climbed in December before cooling through the first two weeks of January. But, in the last two weeks, rates accelerated again as the market began to absorb the widening effect on fleet supply from the ongoing disruption.

The majority of Middle East crude exports to Europe and the Mediterranean are now taking the Cape of Good Hope route. As 80% of crude on this route is shipped on Suezmaxes, there has been a significant uplift in Suezmax rates. Russian crude that passes through the Red Sea is shipped on both Aframaxes and Suezmaxes but none of these cargoes have been diverted and as Aframaxes are used less on other crude routes through the Suez Canal, Aframax rates have been less affected. Analysis of transits of crude carriers by type shows Aframax transits are down just 33% compared with 67% for Suezmaxes.

The Cape route adds around 17 days to a voyage from the Middle East to Europe, increasing the voyage length by around 70%. If all crude shipped on this trade flow in January took this route it would increase global crude ton-miles by around 1%. While not materially significant on its own, when you include the longer ballast voyages, the effect on rates is more significant.

MEG - Northwest Europe Suezmax freight (\$/bbl)





It's a similar picture for clean tanker rates. LR2 rates are up over 100% to \$12.90/bbl for a Middle East to Europe voyage, a record high since the route was first published by the Baltic Exchange in 2022. While this is the main route affected, the increase is not limited to routes passing through or round the Suez, LR2 rates from the Middle East to Asia jumped to \$9.65/bbl and MR rates in Europe and Asia also rallied, reaching multi-month highs.

If all middle distillate flows from the Middle East to Europe were shipped via the Cape it would increase ton-miles by approximately 70%. Over a year (and based on 2023 volumes) this would require around 21 additional LR2s, seven LR1s and seven MRs. There is no indication yet that 100% of cargoes will avoid the Suez Canal but laden clean tanker transits are down by around 30% compared with November levels and are set to remain low over the coming weeks.

Dry

Currently, the situation in the Red Sea isn't a major price driver in the dry bulk market, though this may change following a steep drop in the number of vessels passing through the Red Sea. Through to mid-January, bulker transits of the Suez Canal were down around 20% compared with November, the lowest decline among bulker carriers. But in the last week, dry bulk transits fell from an average of 20 per day to 15, the lowest level in nearly two years.

The primary dry bulk rate passing via the Red Sea, Turkey to the Far East on a Supramax is lower than prior to the crisis at \$24,633/day (Baltic Exchange). Rates increased in the last week, but this is mostly due to higher bunker prices, rather than supply-driven.

LNG

Despite the issues in the Red Sea, LNG freight rates are trending lower. For an LNG carrier transiting from Qatar's 77 Mtpa Ras Laffan liquefaction facility to NW Europe on a round-trip basis, Kpler's latest model runs show there is a \$0.2/MMBtu increase in freight cost via the Cape of Good Hope (\$1.4/ MMBtu) compared to routing via the Suez Canal (\$1.2/MMBtu). This can largely be attributed to additional fuel and charter hire costs. Vessels face an extra 21-day voyage time on a round-trip basis via the Cape of Good Hope as opposed to the Suez Canal.

The Suez Canal has witnessed no LNG transits since 17 January. Despite the increase in LNG tankers travelling via the Cape, freight rates continue to weaken, with spot rates in the Pacific Basin at \$55,000/ day and the spot rate in the Atlantic basin Spark30 at \$53,250/day, as of 26 January.

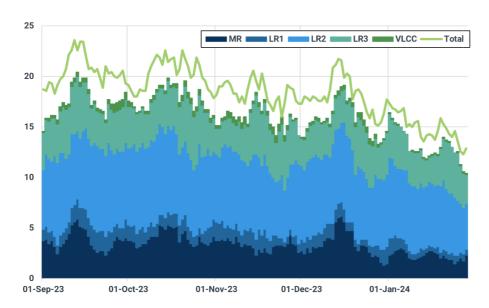
LPG

VLGC freight has been unaffected by the disruption in the Red Sea. Instead, rates have weakened significantly this month, impacted by a spike in US propane prices which closed the arbitrage to Asia. VLGC rates for a Houston to Chiba voyage fell to \$92/t, down \$131/t (Argus). LPG tanker rates had enjoyed exceptionally high rates over the second half of 2023 as a result of reduced Panama Canal transits.



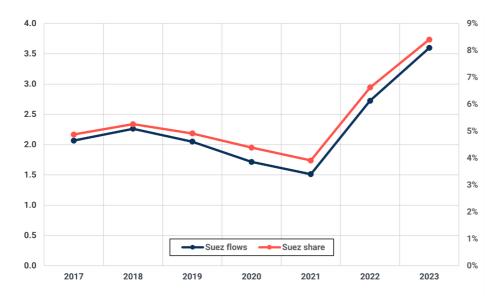
Crude

Tanker transits of the Suez Canal (7-day moving average)

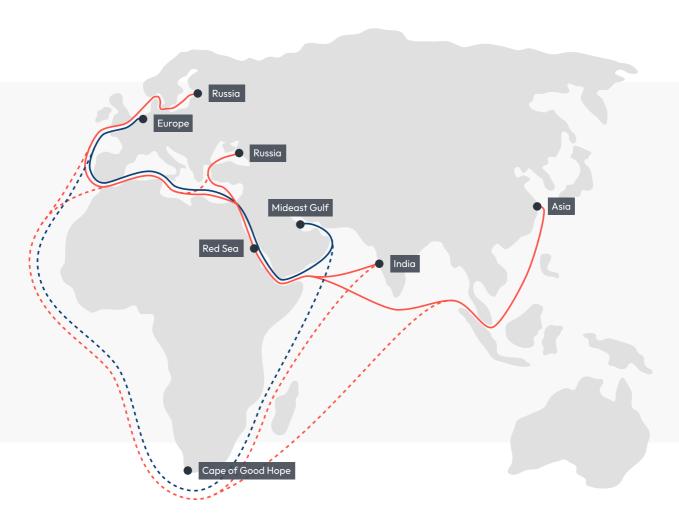


In 2023, 8% of global crude flows passed through the Suez Canal, equivalent to 3.6 Mbd. Historically, the majority of this consisted of Middle East crude shipped to Europe and the Mediterranean, but in the last two years, changes in Russian crude trade flows have seen exports to India and China increase, resulting in greater utilization of the Suez Canal.

Crude oil flows and share of flows via the Suez Canal (Mbd)



Oil prices are finally reacting to heightened geopolitical tensions in the Middle East, exhibiting a gradual ascent by several dollars per barrel over the past week. Our earlier prognostications regarding the recent uptick in prices have materialised, as we anticipated the eventual integration of a risk premium into market valuations. Notably, Brent's flat price has now surpassed \$80/bbl, buoyed by larger-than-anticipated inventory draws in the US last week.



| Trade Flows | — Suez Route | Cape Route |
|------------------------------------------------------|-------------------|--------------------|
| Mideast Gulf to Europe | 6500 nmi, 25 days | 11250 nmi, 42 days |
| Russia to India (Average of Baltic and Black Sea) | 5800 nmi, 22 days | 12000 nmi, 45 days |

Middle East

East of Suez crude and condensate flows to Europe via the Suez Canal have experienced a substantial decline since October 2023. Even with Ansarullah declaring Saudis as non-targets, an air of caution prevails. Saudi crude flows to Ain Sukhna remain robust. However, these shipments originate directly from Muajjiz on the Red Sea, circumventing the Bab el-Mandeb strait. Furthermore, the sole Saudi cargo en route to Europe in January has gone around the Cape of Good Hope.



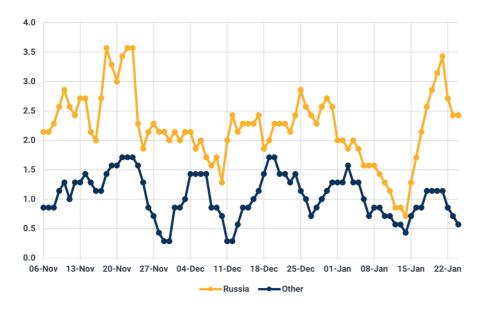
Iraq has also been more cautious. Despite SOMO selling cargoes on a FOB basis, only four Suezmax vessels laden with Basrah crude, amounting to 203 kbd, have traversed the Bab el-Mandeb and the Suez Canal in January thus far. The majority of other Basrah cargoes, totalling 427 kbd mtd, have opted for the longer route via the Cape of Good Hope

Russia

West-to-east flows via the Suez Canal, mainly made of Russian crude, have been less impacted, remaining steady at around 1.4 Mbd. So far this month all cargoes shipped to Asia from Western Russian ports have travelled via the Suez Canal.

The recent strike on a tanker carrying a Russian naphtha cargo could see transits through the Red Sea fall more steeply in the coming weeks. This would impact crude supply more significantly than has occurred since attacks on ships started. However, there has been no immediate change in approach since the attack, four tankers carrying Urals passed through the Bab el-Mandeb strait with another three heading south through the Red Sea.

Daily crude tanker transits of the Suez Canal by cargo origin (7DMA)

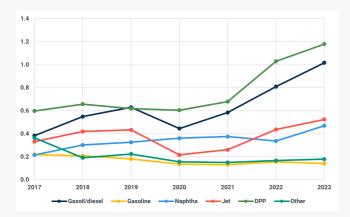




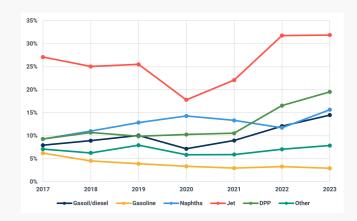
Refined products

Last year, 3.5 Mbd of refined product flows was shipped via the Suez, a record annual high, making up 14% of total refined product flows. Jet fuel is the most exposed, with 33% of exports utilizing the canal. Flows of these products are already disrupted with some cargoes travelling via the Cape, while others are waiting in the Arabian Sea. The surge in freight rates has also closed arbitrages which will restrict long haul flows to Europe.

Refined products flows via the Suez Canal (Mbd)



Suez Canal share of total refined product flows



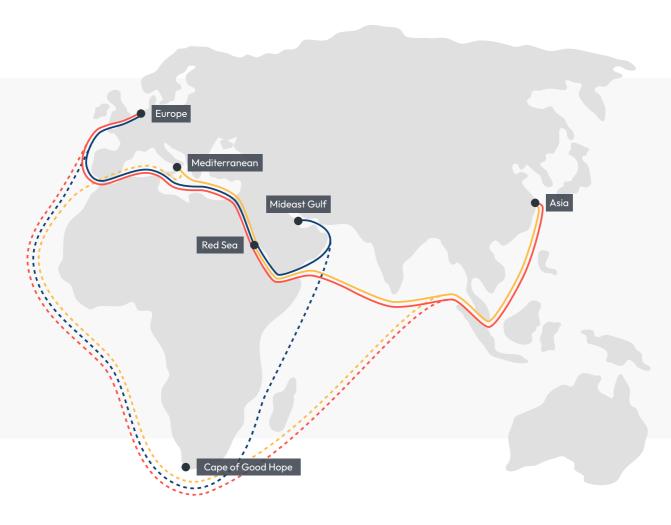
Jet

The main jet trade flow is from the Middle East and India to Europe, averaging 400 kbd in 2023. Europe is the most reliant on the flow of products through the Suez with 1.3 Mbd arriving via this route, 24% of total. This share has increased in recent years after Europe banned the import of Russian oil products, forcing a greater volume (mainly middle distillates) to be sourced from the East of Suez. The majority of Middle East and Indian jet exports to Europe are now taking the Cape route, adding 15–20 days to the voyage length. This is higher than for diesel as the Saudi Samref refinery in the Red Sea continues to export diesel to Europe via the Suez Canal without having to pass through the Bab el-Mandeb strait.

Gasoline

There is limited impact on gasoline markets. Gasoline flows via the Suez Canal accounted for just 3% of total trade last year. Europe is well supplied domestically for gasoline, unlike diesel and jet while production in the Middle East and Asia meets supply in the East.





| Trade Flows | — Suez Route | Cape Route |
|---------------------------------------------------------------|--------------------|--------------------|
| Middle East to Europe (diesel, jet and refinery feedstock) | 6500 nmi, 25 days | 11250 nmi, 42 days |
| Mediterranean to Eastern Asia (naphtha) | 8700 nmi, 32 days | 13100 nmi, 50 days |
| Europe to Asia (low sulphur fuel oil) | 10500 nmi, 40 days | 13800 nmi, 52 days |

Naphtha

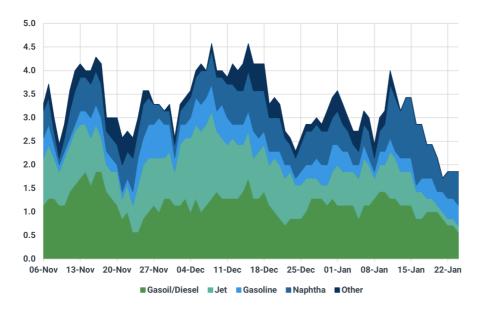
Naphtha transiting through the Suez Canal (and thus Red Sea) account for 15% of global naphtha exports (+3.5% y/y or 450 kbd). The route has only grown in importance since February 2023 when a G7+EU embargo of Russian-origin oil products came into effect, forcing higher quantities of Russian naphtha to clear East. For Asia, around 20% of the region's import needs are typically met by a mix of Algerian, European Med and Russian origin barrels flowing through the Suez Canal. The global naphtha market has already faced tightening fundamentals from the supply-side amid a myriad of weather, refinery maintenance and Panama Canal related issues over the past few months. Heavy primary distillation turnarounds in the Middle East (most in Saudi Arabia) will also add to tightening fundamentals in the EoS through to H2 February.



Russian naphtha flows through the Red Sea from West to East had been unaffected by the disruption, although total exports are down around 130 kbd m/m. The strike on the Marlin Luanda laden with Russian naphtha could trigger a change in approach, however. Since then, the first tanker carrying Russian clean products has sailed past the Strait of Gibraltar from the Baltic, taking the Cape of Good Hope route.

Naphtha exports to Asia from within the Mediterranean have taken a more conservative approach with Algerian cargoes sailing around the Cape.

Daily clean tanker transits of the Suez Canal by product type (7DMA)



Gasoil/diesel

Last year 1 Mbd of gasoil/diesel flow through the Suez Canal, around 14% of total exports. Like jet, most of this was from the Middle East to Europe, but also North Africa. The events in the Red Sea have yet to show clear causation with a downward impact on the physical flow of gasoil/diesel into Europe and North Africa coming from the Middle East. Weekly flows departing from the Mideast Gulf towards North Africa and Europe have certainly been weaker over the past three weeks, but this follows a very strong set of loadings through late-November and the first half of December.

If the issues in the Red Sea escalate and shipments from the Middle East slow or are diverted to other areas, such as East Africa, the United States is the most obvious source of supply for Europe and North Africa given geographical proximity and lack of need to transit the Suez Canal.

Dirty Products

The Suez Canal saw 21% of global residual fuel oil exports (1.2 Mbd) pass through its waters in 2023. This is up from 17% in the previous year as embargoes by the US and the EU on Russian fuel oil imports reshuffled global trade flows. For the ships that avoided the Red Sea and took the longer way around the Cape of Good Hope, this caused some delays in supply, but these were typically short-lived given the route adds about ten days to the voyage. This longer route, however, incurs higher costs.



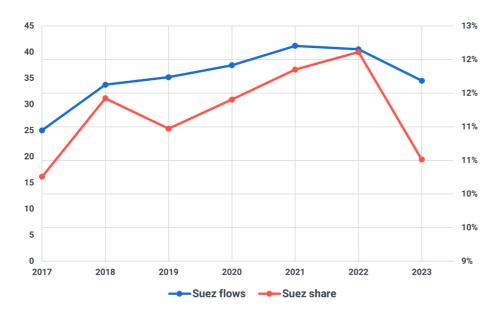
Bunker sales volumes in the Singapore hub soared to record highs in December as ships loaded larger quantities of fuel in anticipation of longer voyages. With Red Sea tensions surging to new highs in January, we expect Singapore bunker sales to continue posting red hot volumes as more ships avoid the increasingly perilous route. Other ports too have benefited, including those in Fujairah in the UAE, South Africa, Port Louise in Mauritius, as well as others in West Africa.

By contrast, exports of Russian-origin oil products, most of which now head to Asia, appear to be undeterred by the escalating hostilities in the Red Sea. This, presumably, is due to the inherently higher risk appetite of the ships moving Russian cargoes or even because operators of those ships see little threat from the Houthi's given both are acting against western powers. Again, however, the recent strike on a Trafigura operated tanker carrying Russian naphtha will encourage operators moving Russian oil to reassess their approach, expanding the fleet of tankers avoiding the Red Sea route.



Chemicals and Biofuels

Chemicals and biofuel flows and share of flows via the Suez Canal (Mt)



Chemicals

European liquid chemical imports have not been affected significantly by the ongoing Red Sea diversions seen since the end of last year. The European chemical industry is well developed and produces and consumes a wide range of chemicals which are predominantly fulfilled internally with Intra-European trade accounting for just over 50% of chemical imports into the region.

The next largest trading partner is the Americas, contributing on average 26% of European chemical imports mainly consisting of key bulk chemicals such as; Methanol, MEG, Caustic Soda and UAN.Liquid chemical trade from East of the Suez to Europe has fallen significantly in the last two years, accounting for 22% of European liquid chemical imports in March 2022 to now an expected 11% in Jan 2024. A key driver for this has been the rise in clean tanker rates since the start of Russian invasion of Ukraine making it less viable to import cargoes further afield. In January 2024, it is expected that only 421 kT of chemicals will flow from East of Suez to Europe. Diving deeper we can see only 70 kT of these chemicals chose to divert away from the Red Sea to reach Europe, accounting for 2% of the 3729 kT of European seaborne liquid chemical imports expected in January 2024.

Europe liquid chemical exports to the East of Suez curtailed in December 2023 with exports falling 120 kT m/m to 38 kT and has remained at this level since. January 2024 saw a slight increase in these flows, but it still remains at the lowest level seen in recent history. However, this has been met by an increase in Intra-European chemical trade fulfilling the deficit in long-haul exports.



Biofuels

The biofuels market seems to be adequately absorbing the effects of disruption in Suez Canal for the time being, although many players are taking a wait-and-see approach while there is an uncertainty of further constraints on the flows from Asia. Huge oversupply created in 2023 still weighs on the market, while demand shows few signs of revival in a market environment where biofuels mandates in few countries were cut this year.

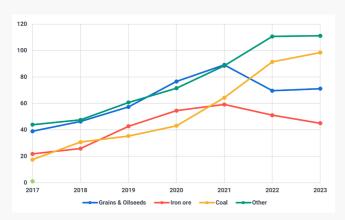
While some HVO and FAME producers, using imported Asia feedstocks, are facing higher freight costs, those using locally collected feedstocks, such as used cooking oil, may observe their margins improved and increase running rates, that were cut last year.



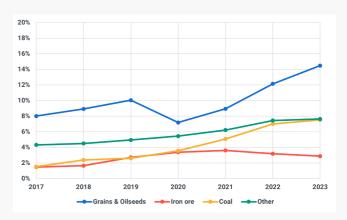
Dry

In 2023, 350 Mt (7%) of seaborne dry bulk trade passed through the Suez Canal, a record high. However, the proportion of trade transiting the Suez Canal varies significantly across dry bulk commodities. More than 12% of seaborne grains and oilseeds trade used this route in 2023, with significant contributions coming from fronthaul shipments out of the Black Sea, including corn, soybean and wheat exports from the US East Coast (USEC) and US Gulf (USG) ports, and European grain exports. This is a markedly higher proportion than for coal and iron ore trade.

Dry bulk flows via the Suez Canal (Mt)



Suez Canal share of total dry bulk flows



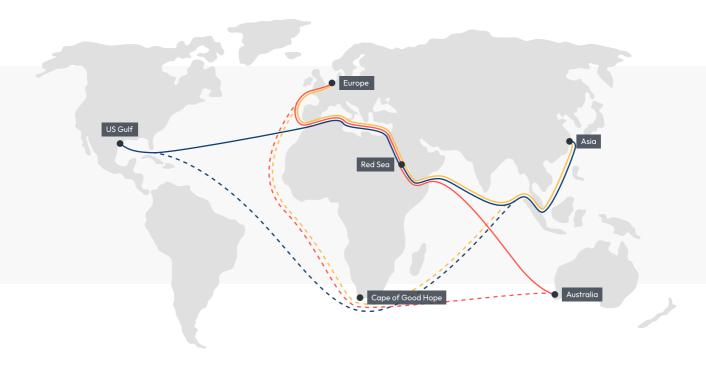
Grains and Oilseeds

Of the ~7 Mt of grains that pass through the Suez every month, we see confirmed diversions of about 3.8 Mt (55%) of en-route cargo and increasing. More vessels are making the decision to take the cape route since the beginning of January, especially those sailing from the US Gulf. Vessels departing the US Gulf bound for East Asia that avoid the Panama Canal (the shortest route) and instead opt to travel via the Suez add up to 20 days of sailing time. 80 Mt of grains pass through the Red Sea in an average year of which 28 Mt goes to China. Prices are lower 6-10% but mostly led by fundamentals and not particularly because of diversions.

Iron Ore

Minimal impact on seaborne trade from Red Sea disruptions. It is not a major trade route; iron ore is generally carried on Capesize vessels (the clue is in the name), and alternative supplies are ample. Just under 3% (48.22 Mt) of seaborne iron ore trade used the Suez Canal/Red Sea route in 2023.





| Trade Flows | — Suez Route | Cape Route |
|-----------------------------------|--------------------|--------------------|
| US Gulf to Asia (soybeans) | 14000 nmi, 53 days | 15100 nmi, 57 days |
| Europe to Asia (wheat) | 10500 nmi, 40 days | 13800 nmi, 52 days |
| Australia to Europe (rapeseed) | 10100 nmi, 38 days | 11300 nmi, 42 days |

Coal

Little impact on global trade. At 105.48 Mt, seaborne coal (thermal and metallurgical) trade through the Suez Canal/Red Sea route represented 7.70% of seaborne coal shipments in 2023.

Bauxite

Globally minimal impact, potentially some impact on bauxite flows into the UAE. Almost all West Africa-China bauxite trade uses the Cape route. Only 3.61% (5.62 Mt) of seaborne bauxite trade flowed through the Suez Canal/Red Sea route in 2023.

Steel

Potential for disruption. Backhaul steel cargoes from major Asian producers into the European/ Mediterranean market use the Suez Canal/Red Sea route. However, interruption/increased costs on this trade would probably be welcomed by domestic producers in major importers as levelling the playing field with cheaper mills in Asia.



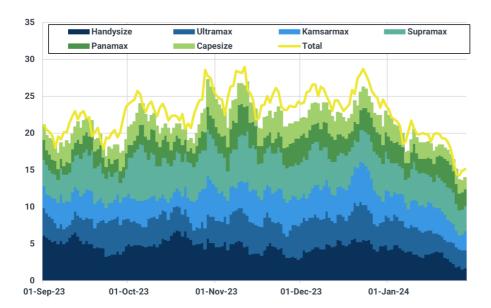
Fertiliser

There is some disruption possible. Black Sea, North African and Saudi Arabian fertiliser exporters make regular use of the Suez Canal/Red Sea route with cargoes flowing both East and West.

Petcoke

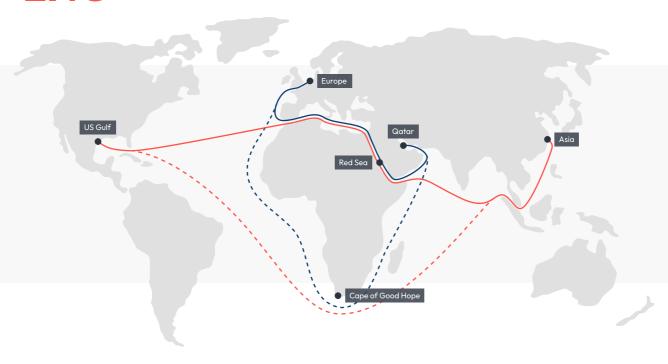
Also some potential disruption. Fronthaul US petcoke shipments to India, China and other Asian countries make extensive use of the Suez Canal/Red Sea route. An indicative US Gulf-East Coast India voyage is 14.03% longer if the CofGH is used instead.

Dry bulk transits of the Suez Canal (7-day moving average)





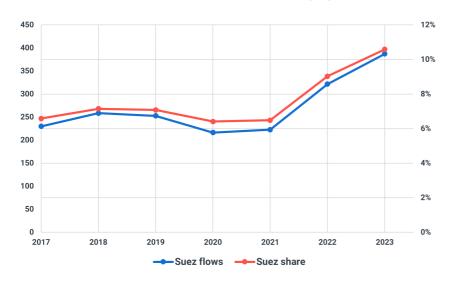
LNG



| Trade Flows | — Suez Route | Cape Route |
|-----------------|--------------------|--------------------|
| Qatar to Europe | 6500 nmi, 25 days | 11250 nmi, 42 days |
| US Gulf to Asia | 14000 nmi, 53 days | 15100 nmi, 57 days |

Last year, nearly 8% of total global LNG supply transited the Suez Canal via the Red Sea, or 31.4 Mt. The waterway is a key passage for Qatari LNG headed to Europe and Atlantic basin LNG shipments to Asia, particularly in light of the drought-stricken Panama Canal.

LNG flows and share of flows via the Suez Canal (M†)

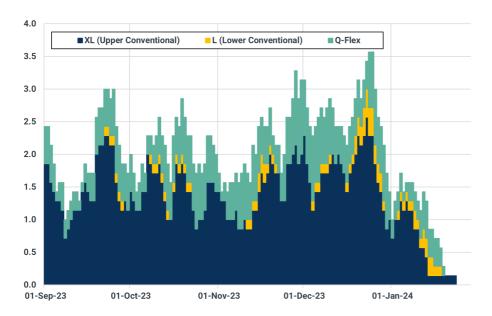


Qatar alone shipped 15 Mt of LNG to Europe via the Red Sea in 2023 – 19% of all Qatari exports. Meanwhile, Atlantic-based LNG plants shipped 14 Mt to Asia via the Suez route – a large proportion of which originated from US liquefaction plants.

To date, at least 30 diversions of LNG tankers in and around the Red Sea have been recorded since hostilities with the Houthis emerged and, as of 17 January, there have been no LNG carriers transiting the Red Sea.

Qatari LNG deliveries via the Cape of Good Hope are expected to take an extra 10-11 days to reach NW Europe and QatarEnergy has recently announced delays and cancellations to cargo deliveries, including those to European offtakers Edison and Endesa. Europe is expected to manage these delays effectively given the region's current loose supply-demand and high stock position for the time of year. Europe's underground gas storage sites alone currently hold over 14 bcm more gas than seasonal normal levels.

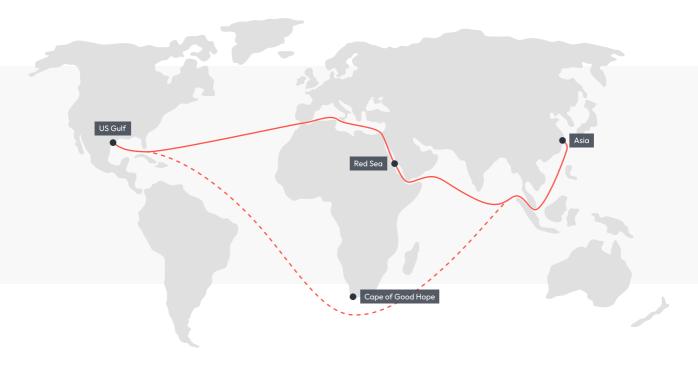
LNG tanker transits of the Suez Canal (7-day moving average)





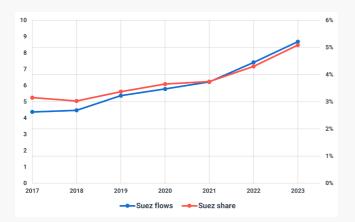
LPG

The ongoing security crisis in the Red Sea is having a small impact on the LPG industry although the Suez Canal as a route for moving US-origin barrels to Asia has gained in importance since end Q3 2023 after the Panama Canal Authority decided to tighten vessel movements through the canal amid the ongoing drought. Using the Suez Canal to reach east Asia from the USGC saves around 5 days journey, despite the additional costs relating to canal fees, and several traders have increasingly utilized the route over the past two months. That said, with most vessels using the Cape of Good Hope, the 5 days additional journey time for a portion of US barrels heading east (or 12%) should not dramatically push delivered prices higher in the East.



| Trade Flows | — Suez Route | Cape Route |
|-----------------|--------------------|--------------------|
| US Gulf to Asia | 14000 nmi, 53 days | 15100 nmi, 57 days |

LPG flows and share of flows via the Suez Canal (Mt)



LPG tanker transits of the Suez Canal

(7-day moving average)

