



Organization of the Petroleum Exporting Countries

# OPEC Monthly Oil Market Report

14 February 2023

**Feature article:**  
*Review of global oil demand trend*

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# Oil Market Highlights

## Crude Oil Price Movements

The OPEC Reference Basket (ORB) crude rose \$1.94, or 2.4%, m-o-m in January to average \$81.62/b. The ICE Brent front-month increased by \$2.57, or 3.2%, to average \$83.91/b, and NYMEX WTI rose by \$1.64, or 2.1%, to average \$78.16/b. The Brent/WTI futures spread widened m-o-m, rising by 93¢ to average \$5.75/b. The market structure of ICE Brent strengthened in January, and the first-to-third month spread flipped into backwardation. However, the forward curve of NYMEX WTI weakened further, and the first-to-third month spread moved into deeper contango. Hedge funds and other money managers raised their combined futures and options net long positions in January in both ICE Brent and NYMEX WTI, compared to December's low levels.

## World Economy

The world economic growth forecast for 2022 is revised up slightly to 3.1%, given the better-than-anticipated 2H22 economic performance in various key economies. The 2023 global economic growth forecast is also revised up slightly to 2.6% with some of the 2H22 momentum carrying over into 2023. For the US, the economic growth forecast is revised up to 2.1% for 2022 and 1.2% for 2023. Similarly, the Euro-zone's economic growth is revised up to 3.5% for 2022 and 0.8% for 2023. Japan's economic growth forecast remains at 1.2% for 2022, but is revised up to 1.2% for 2023. China's economic growth forecast for 2022 is revised down to 3%, but is revised up to 5.2% for 2023. India's economic growth forecast remains unchanged at 6.8% for 2022 and 5.6% for 2023. Brazil's economic growth forecast remains at 2.8% for 2022 and is also unchanged at 1% for 2023. The 2022 economic growth forecast for Russia is revised up to a contraction of 3.5%, followed by a small contraction of 0.5% in 2023, unchanged from last month. While principally the current economic momentum provides a good base for this year's growth, a slowing dynamic for the year is still likely with inflation remaining high and further lifts in key interest rates, particularly in the Euro-zone. The world economy will continue to navigate through numerous challenges including high sovereign debt levels in many regions and geopolitical developments.

## World Oil Demand

The world oil demand growth forecast for 2022 remains unchanged from last month's assessment at 2.5 mb/d. The OECD demand in 4Q22 was adjusted downward to reflect the latest data but non-OECD demand in 4Q22 was revised higher due to improvements in economic activity in some countries and a slight recovery in oil demand in China after the lifting of its zero-COVID-19 policy. For 2023, world oil demand growth is adjusted slightly upwards by 0.1 mb/d to stand at 2.3 mb/d. The OECD is projected to grow by around 0.4 mb/d and non-OECD at about 2.0 mb/d.

## World Oil Supply

Non-OPEC liquids supply is estimated to have grown by 1.9 mb/d in 2022, broadly unchanged from the previous assessment. Downward revisions to Other Eurasia, OECD Europe and Other Asia were largely offset by upward revisions to liquids production in Russia. The main drivers of liquids supply growth for 2022 are seen to be the US, Russia, Canada, Guyana, China and Brazil, while the largest declines are expected from Norway and Thailand. For 2023, non-OPEC liquids production growth is revised slightly down by 0.1 mb/d from last month and is forecast to grow by 1.4 mb/d. The main drivers of liquids supply growth are expected to be the US, Norway, Brazil, Canada, Kazakhstan and Guyana, while declines are forecast in Russia and Mexico. Nevertheless, large uncertainties remain over the impact of ongoing geopolitical developments, as well as US shale output in 2023. OPEC NGLs and non-conventional liquids are forecast to grow by 0.1 mb/d in 2022 to average 5.39 mb/d and by 50 tb/d to average 5.44 mb/d in 2023. OPEC-13 crude oil production in January decreased by 49 tb/d m-o-m to average 28.88 mb/d, according to available secondary sources.

### Product Markets and Refining Operations

Refinery margins reversed trends in January and strengthened substantially in all main trading hubs, with sizeable margin gains registered, particularly in the Atlantic Basin, backed by a firm recovery in gasoline's performance. In the US, a drop in jet/kerosene inventories drove up that products' crack spread, to become the largest margin contributor across the barrel, followed by gasoline. In Europe, robust gasoline exports to the US, amid stronger product buying interest within the region ahead of the 5th of February sanctions on Russian products, supported the products market, particularly at the top section of the barrel. In Asia, the recent lifting of COVID-19 restrictions in China, the boost in transport activity around the Chinese Lunar New Year holidays, the improvement in petrochemical activities and unplanned refinery outages in the country have all contributed to significant support for Asian naphtha and gasoline markets despite losses at the bottom of the barrel.

### Tanker Market

Dirty freight rates continued the previous month's decline in January, with m-o-m losses across all monitored routes. Rates slipped from elevated levels, after having been being pushed higher in previous months amid concerns about potential disruptions due to sanctions on Russian crude. However, the upward pressure eased as crude trade flows have largely adjusted ahead of the implementation of sanctions and as Russian crude was seen trading below price cap levels. VLCCs rates on the Middle East-to-East route declined 36% m-o-m in January, while Suezmax rates on the US Gulf-to-Europe route dropped 37% over the same period. Aframax rates on the Indonesia-to-East route gave up the gains seen in the previous month, declining 19%. Clean rates fell for the first time since October, down 42% East of Suez and 52% West of Suez. Some of the downward pressure was due to many ship owners choosing to forego carrying Russian cargos ahead of sanctions, limiting demand for their tankers.

### Crude and Refined Products Trade

Preliminary data shows US crude imports hitting a three-year high in January, averaging 6.6 mb/d. US crude exports fell back to 3.6 mb/d in January, after remaining around 4 mb/d over the previous three months. Japan's crude imports hit a five-month high in December, averaging just under 3.0 mb/d. Japan's product imports, including LPG, recorded an 11-month high in December, driven by inflows of heating fuel. China's crude imports were steady in December, averaging 11.4 mb/d. China's import of Russian crude remained broadly unchanged, while strong m-o-m increases were seen from Malaysia, the United Arab Emirates (UAE) and Iraq. Product exports from China strengthened further in December to reach the highest since April 2020, with gasoline, gasoil and jet fuel outflows increasing sharply. India's crude imports were broadly stable m-o-m in December, averaging 4.6 mb/d. India's product imports continued to edge higher in December to stand at a 22-month high of 1.2 mb/d, as a jump in fuel oil inflows outweighed declines in gasoline and LPG. India's product exports surged 31% m-o-m to a nine-month high, with gains seen across the barrel. Estimates show OECD crude imports broadly stable y-o-y in January, despite a sharp drop in pipeline flows, while refined product exports were higher over the same period.

### Commercial Stock Movements

Preliminary December data sees total OECD commercial oil stocks down 10.9 mb from the previous month. At 2,768 mb, inventories were 117 mb higher than the same month a year ago, 95 mb lower than the latest five-year average and 158 mb below the 2015–2019 average. Within the components, crude stocks rose by 5.2 mb, while product stocks fell m-o-m by 16.2 mb. At 1,344 mb, OECD crude stocks were 72 mb higher than the same time a year ago, but 36 mb lower than the latest five-year average and 83 mb lower than the 2015–2019 average. OECD product stocks stood at 1,424 mb, representing a surplus of 45 mb from the same time in the previous year, but 59 mb lower than the latest five-year average and 75 mb below the 2015–2019 average. In terms of days of forward cover, OECD commercial stocks rose m-o-m by 0.3 day in December to stand at 60.1 days. This is 2.2 days above levels seen in the same month last year, but 2.5 days less than the latest five-year average and 2.3 days lower than the 2015–2019 average.

### Balance of Supply and Demand

Demand for OPEC crude in 2022 remains unchanged from the previous month's assessment to stand at 28.6 mb/d. This is around 0.5 mb/d higher than in 2021. Demand for OPEC crude in 2023 is revised up by 0.2 mb/d from the previous assessment to stand at 29.4 mb/d, which is 0.8 mb/d higher than in 2022.

## Feature Article

### Review of global oil demand trend

**Global oil demand in 2022** is estimated to have grown by 2.5 mb/d, y-o-y, supported by solid economic activity from OECD and non-OECD countries other than China which saw a decline in its yearly oil requirements. However, the lifting of China's zero-COVID-19 policy in December 2022 is expected to support its oil demand in 2023. Meanwhile, the OECD is forecast to see somewhat slower oil demand increases this year, leading to forecast global oil demand growth in **2023** at 2.3 mb/d, y-o-y.

In **2022**, **OECD** oil demand increased by about 1.3 mb/d, y-o-y, led by OECD Americas, which increased by about 0.7 mb/d, y-o-y. In OECD Europe, oil demand grew by 0.5 mb/d, y-o-y, while OECD Asia Pacific saw minor growth of 0.1 mb/d, y-o-y. With regard to oil products in the OECD, jet/kerosene led demand growth, due to a recovery in airline activities, although overall demand remained 17% below pre-pandemic levels in 2019. This was followed by LPG, which surpassed the pre-pandemic level by 8%, due to a strong petrochemical sector. Gasoil/diesel and gasoline also grew, almost reaching the pre-pandemic level, due to an improvement in economic activities and the transportation sector.

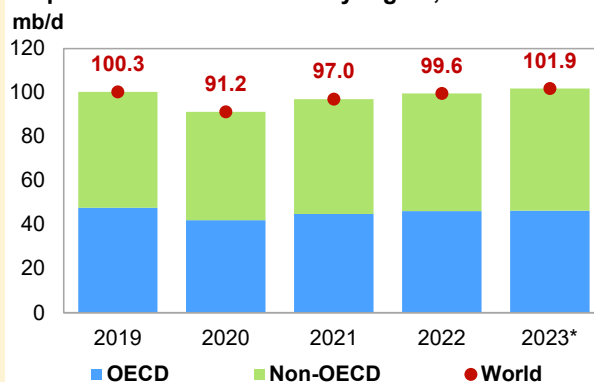
Oil demand in the **non-OECD** region grew by 1.3 mb/d, y-o-y, with the Middle East contributing 0.5 mb/d, and India and Other Asia each rising by close to 0.4 mb/d, y-o-y (see **Graph 1**). In terms of products, non-OECD demand growth was led by increases in gasoil/diesel, followed by gasoline and residual fuels. At the same time, jet kerosene declined slightly y-o-y. All product categories in the non-OECD region, except for jet kerosene, surpassed pre-pandemic levels.

Looking ahead, global oil demand is forecast to rise by 2.3 mb/d in **2023**, y-o-y. The **OECD** region's demand is projected to rise by around 0.4 mb/d in 2023, still just below pre-pandemic levels in absolute volumes. OECD Americas is forecast to drive growth, while oil demand in OECD Europe and OECD Asia Pacific is projected to remain broadly unchanged, y-o-y. In the **non-OECD**, oil demand is forecast to grow by around 2.0 mb/d, y-o-y, surpassing pre-pandemic levels for the second consecutive year. Demand is projected to be driven by China, Other Asia and the Middle East.

**Globally**, in terms of products, transportation fuels are expected to be the main drivers for oil demand. Consumption of both gasoline and diesel is forecast to increase by around 1.1 mb/d y-o-y, well above pre-pandemic levels and supported by expected continued growth in mobility amid an ongoing rebound in the services sector. Jet fuel demand is projected to continue its rebound, increasing by around 1.1 mb/d y-o-y, as air travel continues to recover, both nationally and internationally, though it is forecast to remain 9% below pre-pandemic levels. LPG growth is expected to slow, particularly in the OECD, up by 0.2 mb/d y-o-y globally (see **Graph 2**).

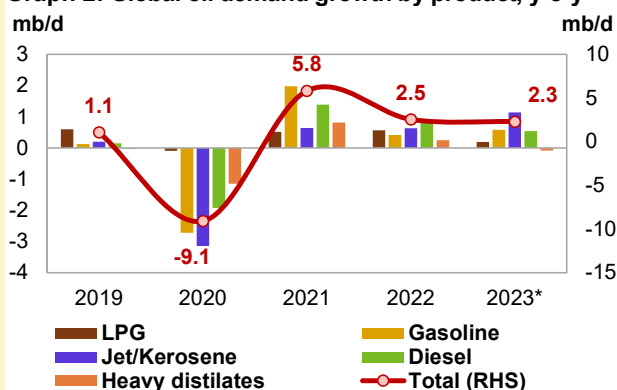
Key to oil demand growth in 2023 will be the return of China from its mandated mobility restrictions and the effect this will have on the country, the region and the world. Concern hovers around the depth and pace of the country's economic recovery and the consequent impact on oil demand. Much will depend on how the government plans to manoeuvre the delicate balance of curbing COVID-19 infections versus opening up for business. Moreover, a number of global economic concerns – including the inflation levels, monetary tightening measures, sovereign debt levels, as well as geopolitical tensions – will weigh on global oil demand prospects. Amid this considerable challenge, it is important for the countries of the Declaration of Cooperation (DoC) to continue coordinating efforts to support a balanced and stable oil market to help navigate these uncertainties.

**Graph 1: Global oil demand by region, 2019–2023**



Note: \* 2023 = Forecast. Source: OPEC.

**Graph 2: Global oil demand growth by product, y-o-y**



Note: \* 2023 = Forecast. Source: OPEC.





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# Crude Oil Price Movements

Crude oil spot prices increased in January from low levels registered the previous month, with North Sea Dated increasing by about 3.1% on a monthly average from December. Spot prices were buoyed by an improved demand outlook after China showed signs of firm demand in the crude spot market, which was boosted by the return of Chinese buyers. Higher refining margins in all major trading hubs, specifically Europe and the US Gulf Coast (USGC), added support to oil prices.

The OPEC Reference Basket (ORB) crude value rose in January, increasing by \$1.94 m-o-m, or 2.4%, to stand at \$81.62/b. This was on the back of higher ORB component-related crude benchmarks, despite a decline in most official selling prices (OSPs) and mixed crude differentials.

Crude oil futures prices bounced back in January, as selling pressure in futures and financial markets eased and market sentiment turned positive on optimism about easing COVID-19 restrictions and the reopening of the Chinese economy, which raised hopes of a strong economic and oil demand recovery. A sharp drop in US dollar value against a basket of major currencies and hopes the US Federal Reserve would slow its interest rate hikes added support to prices. A higher financial flow in oil futures contracts, mainly ICE Brent, was reflected in higher open interest, likely contributing support to oil futures prices.

On a monthly average, the ICE Brent front-month averaged \$2.57, or 3.2%, higher in January to stand at \$83.91/b, and the NYMEX WTI rose by \$1.64, or 2.1%, to average \$78.16/b. DME Oman crude oil futures prices increased m-o-m in January by \$3.53, or 4.6%, to settle at \$80.89/b.

Hedge funds and other money managers recovered part of their combined futures and options net long positions in January, after significantly cutting their net long positions in November and December 2022. A recovery in oil prices from December lows and a brighter demand outlook likely urged speculators to bet on higher oil prices. Expectations of a tight middle distillate market and anticipation of an EU ban on Russian petroleum products also prompted money managers to raise their bullish positions and cut short positions.

The price structure of ICE Brent strengthened in January, with the nearest-month time spreads flipping into backwardation amid evidence that the oil market perception of the supply/demand balance outlook improved due to the prospect of a stronger demand outlook, specifically from China. The DME Oman price structure flattened slightly last month, though remaining in backwardation. Rising flows of sour crude toward the East of Suez market amid more favourable west-to-east arbitrage economics and softer middle and heavy distillate margins weighed slightly on the value of the prompt DME Oman contract. However, the NYMEX WTI forward curve weakened further in January amid soft crude supply/demand fundamentals in the US market.

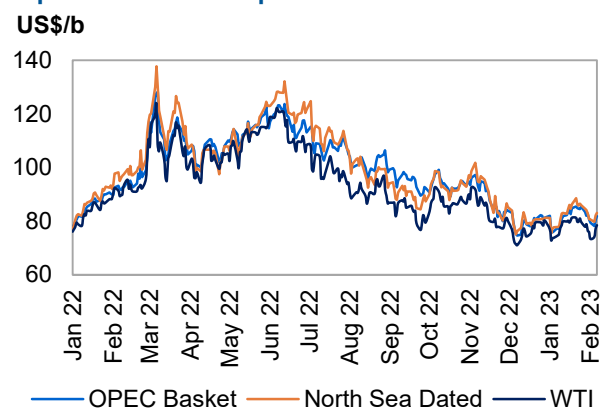
The value of sour crude in January strengthened against the value of light sweet crude in all major markets, as the value of medium sour crude was supported by robust demand from Asia-Pacific buyers, while high availability of light sweet crude, including in the Atlantic Basin, weighed on the value of light sweet crude. This is despite stronger light refined product margins, including naphtha, gasoline and gasoil.

## Crude spot prices

After several consecutive months of decline, **crude oil spot prices** increased in January from a low level registered the previous month, with North Sea Dated increasing by about 3.1% on a monthly average from December.

Crude spot prices rose in January, buoyed by an improved demand outlook after China lifted most COVID-19-related mobility restrictions and the country's economy was expected to continue to reopen. Signs of firm demand in the crude spot market were boosted by the return of Chinese buyers and the expectation of further increasing crude demand after China's Ministry of Commerce released a second batch of crude import quotas in 2023. Chinese refinery throughputs are also expected to increase following the release of higher oil product export quotas in the first batch of 2023.

Graph 1 - 1: Crude oil price movements



Sources: Argus, OPEC and Platts.

## Crude Oil Price Movements

Higher refining margins in all major trading hubs added support to oil prices. Stronger refining margins were seen in January m-o-m, specifically in Europe and the USGC, driven by stronger middle distillate, gasoline and naphtha crack spreads, which added support to spot prices in the Atlantic. However, refining margins rose at a slower rate in the Asia Pacific region compared with other regions. The expected entry into force of the import ban on Russian petroleum products to Europe on 5 February raised concern about the product availability outlook in Europe, which contributed to supporting oil prices.

Nonetheless, the oil price rally was capped by signs of a well-supplied spot crude market, including East of Suez and in the Atlantic Basin, and a large build in US crude oil stocks in January amid lower m-o-m demand from US refineries.

**Spot crude prices** remained below futures prices in January in a sign that the crude market is adequately supplied. North Sea Dated stayed at a discount to ICE Brent's first-month contract in December and January on a monthly basis. On a monthly average, the North Sea Dated-ICE Brent spread stood at a discount of \$2.29/b in January, compared with a discount of 96¢/b in December 2022. The spread was at a premium of 25¢/b in November 2022.

In January, North Sea Dated and Dubai first months increased respectively by \$2.48 and \$3.66, or 3.1% and 4.7%, to settle at \$82.86/b and \$80.75/b, while WTI's first month rose by \$1.69, or 2.2%, to settle at \$78.19.

**Table 1 - 1: OPEC Reference Basket and selected crudes, US\$/b**

OPEC Reference Basket (ORB)	Dec 22	Jan 23	Change		Year-to-date	
			Jan 23/Dec 22	%	2022	2023
<b>ORB</b>	<b>79.68</b>	<b>81.62</b>	<b>1.94</b>	<b>2.4</b>	<b>85.24</b>	<b>81.62</b>
Arab Light	82.44	83.80	1.36	1.6	86.15	83.80
Basrah Medium	76.07	77.82	1.75	2.3	83.80	77.82
Bonny Light	80.69	82.36	1.67	2.1	86.85	82.36
Djeno	72.93	75.41	2.48	3.4	79.16	75.41
Es Sider	77.53	81.01	3.48	4.5	86.16	81.01
Girassol	78.69	82.05	3.36	4.3	88.28	82.05
Iran Heavy	79.11	81.56	2.45	3.1	85.59	81.56
Kuwait Export	80.46	82.94	2.48	3.1	86.28	82.94
Merey	58.17	61.74	3.57	6.1	63.58	61.74
Murban	80.17	82.53	2.36	2.9	85.11	82.53
Rabi Light	79.92	82.40	2.48	3.1	86.15	82.40
Sahara Blend	83.03	83.76	0.73	0.9	88.21	83.76
Zafiro	80.28	81.29	1.01	1.3	87.28	81.29
<b>Other Crudes</b>						
North Sea Dated	80.38	82.86	2.48	3.1	86.61	82.86
Dubai	77.09	80.75	3.66	4.7	83.34	80.75
Isthmus	67.48	68.82	1.34	2.0	79.55	68.82
LLS	78.04	80.73	2.69	3.4	85.37	80.73
Mars	71.49	74.73	3.24	4.5	81.45	74.73
Minas	79.14	81.57	2.43	3.1	82.96	81.57
Urals	52.23	52.21	-0.02	0.0	86.23	52.21
WTI	76.50	78.19	1.69	2.2	83.16	78.19
<b>Differentials</b>						
North Sea Dated/WTI	3.88	4.67	0.79	-	3.45	4.67
North Sea Dated/LLS	2.34	2.13	-0.21	-	1.25	2.13
North Sea Dated/Dubai	3.29	2.11	-1.18	-	3.27	2.11

Sources: Argus, Direct Communication, OPEC and Platts.

**Crude oil differentials** mostly strengthened in January m-o-m amid improving demand in the spot crude market and firmer demand from Asia-Pacific refiners, specifically Chinese refiners, contributing to a reduction in the number of unsold cargoes for late January and February loadings.

The value of West African crude differentials rose on stronger demand from European and Asia-Pacific buyers compared with recent months, amid improving west-to-east arbitrage economics, lower freight costs for some routes and higher middle distillate margins. Meanwhile, Bonny Light, Forcados and Qua Iboe crude differentials to North Sea Dated rose respectively by \$1.62, 94¢ and 46¢ to stand at premiums of \$1.33/b, \$2.19/b and \$1.49/b. The crude differential of Cabinda also rose on the expectation of higher demand from China for the grade and the expectation of a lower February loading programme. The Cabinda crude differential rose m-o-m by 54¢ to a discount of \$1.41/b.

In the Mediterranean and Caspian regions, crude differentials also strengthened on firm demand and a sharp rise in naphtha crack spreads that supported light sweet crude, specifically Saharan Blend and CPC Blend, which increased m-o-m, rising by \$1.45 and \$3.87 to average a premium of \$1.89/b and a discount of \$3.75/b to North Sea Dated. Azeri Light crude differentials eased 13¢ m-o-m, though staying strong, with a premium of \$5.23/b.

North Sea crude differentials weakened in January amid ample supply in Northwest Europe and soft demand from refineries in Europe for North Sea crude. The availability of similar competitive crudes, including in the USGC and West Africa, put downward pressure on the value of crude differentials. The Forties and Ekofisk crude differentials fell on a monthly average in January by 96¢ and 5¢ respectively, to settle at a discount of 34¢/b and a premium of \$2.81/b.

On the **USGC**, crude differentials averaged higher m-o-m despite lower demand from US refineries and a large increase in US crude stocks. They were supported by a weak WTI futures benchmark, which makes WTI-related crude more competitive in Europe and Asia markets. Light Louisiana Sweet (LLS) rose by 99¢ last month on a monthly basis to stand at a premium of \$2.52/b against the WTI benchmark, and Mars sour crude differentials increased by \$1.55 to an average discount of \$3.46/b. In the Middle East, the value of Oman crude differentials to Dubai fell by 22¢ m-o-m in January to a premium of \$1.30/b.

## OPEC Reference Basket (ORB)

The **ORB value** rose in January, increasing by \$1.94 m-o-m, or 2.4%, to stand at \$81.62/b, along higher major crude benchmarks, despite a decline in most OSPs and mixed crude differentials. Improving supply/demand fundamentals supported related crude benchmarks in January. The year-to-date ORB value was \$3.62, or 4.3%, lower than the same period in 2022, at \$81.62/b.

All ORB component values rose in January. West and North African Basket components – Bonny Light, Djeno, Es Sider, Girassol, Rabi Light, Sahara Blend and Zafiro – rose by \$2.17, or 2.8%, m-o-m on average to \$81.18/b. Multiple region destination grades – Arab Light, Basrah Light, Iran Heavy, and Kuwait Export – increased m-o-m by \$2.01, or 2.5% on average, to settle at \$81.53/b. Murban crude rose m-o-m by \$2.36, or 2.9%, on average to settle at \$82.53/b, and the Merey component increased m-o-m by \$3.57, or 6.1%, on average to settle at \$61.74/b.

## The oil futures market

**Crude oil futures prices** bounced back in January from low levels recorded in December, as selling pressure in futures and financial markets eased and market sentiment turned positive on optimism about easing COVID-19 restrictions and the reopening of the Chinese economy, raising hopes of a strong economic and oil demand recovery. Oil price gains were consolidated by data showing better-than-expected Chinese economic figures in 4Q22. A sharp drop in US dollar value against a basket of major currencies to its lowest point since April added support, with data showing inflation in the US falling in December, feeding hopes that the US Federal Reserve would slow its interest rate hikes. Between 1–25 January, the US dollar index fell by about 3%.

Oil futures were also supported by improving supply/demand fundamentals in the short term amid signs of a demand recovery in China and the prospect of a supply disruption of gasoil, particularly in Europe, ahead of the 5 February EU ban on Russian petroleum products. This was exacerbated by worries that workers' strikes in France could reduce the supply of petroleum products.

Higher financial flow in oil futures contracts, mainly ICE Brent, was reflected in higher open interest, which likely contributed to supporting oil futures prices. Between the weeks of 27 December and 24 January, open interest related to ICE Brent rose by 15%.

However, the oil price rally was limited, as the market remained cautious about the impact of interest rate hikes from major central banks, including the US Federal Reserve (Fed) and European Central Bank (ECB), along with weaker-than-expected economic data from the US and the UK.

## Crude Oil Price Movements

US crude stocks saw a large build, rising for six consecutive weeks to the week of 27 January by 34 mb, amid lower demand from US refineries, which put downward pressure on oil prices.

The ICE Brent front-month averaged \$2.57, or 3.2%, higher in January to stand at \$83.91/b, and NYMEX WTI rose by \$1.64, or 2.1%, to average \$78.16/b. Y-t-d, ICE Brent was \$1.66, or 1.9%, lower at \$83.91/b, while NYMEX WTI was lower by \$4.82, or 5.8%, at \$78.16/b, compared with the same period a year earlier. DME Oman crude oil futures prices increased m-o-m in January by \$3.53, or 4.6%, to settle at \$80.89/b. Y-t-d, DME Oman was lower by \$3.03, or 3.6%, at \$80.89/b.

**Table 1 - 2: Crude oil futures, US\$/b**

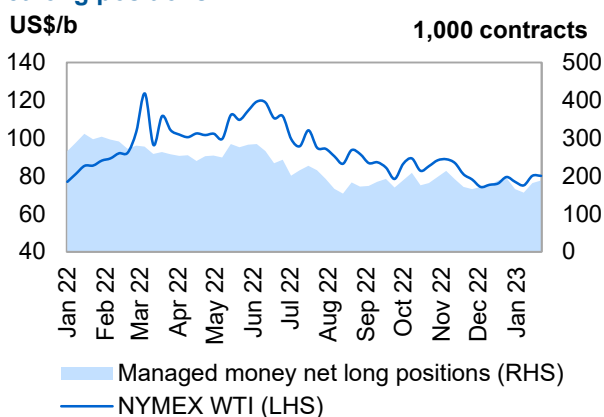
Crude oil futures	Dec 22	Jan 23	Change		Year-to-date	
			Jan 23/Dec 22	%	2022	2023
NYMEX WTI	76.52	78.16	1.64	2.1	82.98	78.16
ICE Brent	81.34	83.91	2.57	3.2	85.57	83.91
DME Oman	77.36	80.89	3.53	4.6	83.92	80.89
<b>Spread</b>						
ICE Brent-NYMEX WTI	4.82	5.75	0.92	19.2	2.59	5.75

Note: Totals may not add up due to independent rounding. Sources: CME, DME, ICE and OPEC.

The **spread between the ICE Brent and NYMEX WTI** first-month premium widened sharply in January reaching \$7/b on a daily basis. The Brent futures contract was supported by an improving demand outlook and China's reopening, while NYMEX WTI was under pressure due to soft US supply/demand fundamentals and a sharp rise in US crude stocks, including at Cushing. According to US Energy Information Administration (EIA) weekly data, crude stocks at Cushing, the delivery point of the NYMEX WTI futures contract, rose by 13.0 mb, or 51.9%, between the weeks of 23 December and 27 January, to its highest point since July 2021. The ICE Brent/NYMEX WTI spread widened by a m-o-m average of 93¢ in January to settle at \$5.75/b. A wide Brent–WTI spread made the purchase of WTI-related crude in the USGC more competitive for international buyers, which pushed the crude differential higher, specifically for sour crude. North Sea Dated premium to WTI Houston also widened in January, but at a slower rate, up by 11¢ on a monthly average to stand at a premium of \$3.28/b.

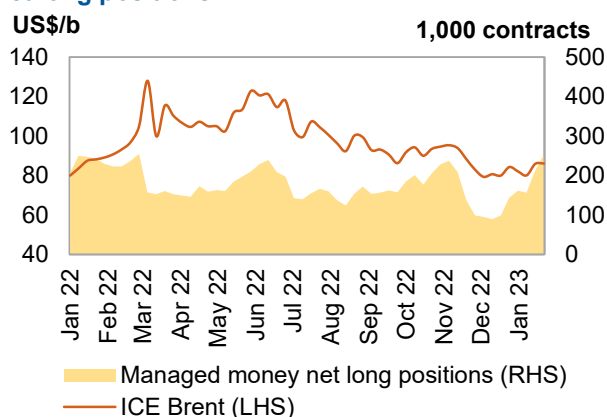
After significantly cutting their net long positions in November and December, **hedge funds and other money managers** recovered part of their combined futures and options net long positions in January. Total futures and options net long positions in both ICE Brent and NYMEX WTI rose by about 30% in January to their highest point since early November. A recovery in oil prices from December lows and a brighter demand outlook likely urged speculators to bet on higher oil prices. Expectations of a tight middle distillate market and anticipation of an EU ban on Russian petroleum products also prompted money managers to raise their bullish positions and cut short positions. Between the week of 27 December and 24 January, money managers were net buyers of an equivalent of about 102 mb in both Brent and WTI. This took place in addition to a rise in total open interest of 14%. However, speculators were more bullish about the Brent futures price as a global crude benchmark.

**Graph 1 - 2: NYMEX WTI vs. Managed Money net long positions**



Sources: CFTC, CME and OPEC.

**Graph 1 - 3: ICE Brent vs. Managed Money net long positions**



Sources: ICE and OPEC.

The rise of net long positions was more pronounced in futures and options related to **ICE Brent**, which increased by 75.5%. Money managers raised their futures and options net long positions in ICE Brent by 108,439 lots between the weeks of 27 December and 24 January to 252,142 contracts, according to the ICE Exchange.

During the same period, gross long positions rose by 73,322 lots, or 34.7%, to 284,481 contracts, while gross short positions declined by 35,117 lots, or 52.1%, to 32,339 contracts.

However, speculators slightly cut their net long positions in **NYMEX WTI** contracts between the weeks of 27 December and 24 January, and were sellers of a net of about 7 mb. During the period, combined futures and options net long positions declined by 6,935 contracts, or 3.5%, to stand at 188,474 lots in the week to 24 January, according to the US Commodity Futures Trading Commission (CFTC). This is due to a combination of a decrease in both long and short positions. In the week ending 24 January, gross short positions declined by 4,909 lots, or 13.5%, to stand at 31,470 contracts, and gross long positions declined by 11,844 lots, or 5.1%, to 219,944 contracts during the same period.

Consequently, the **long-to-short ratio of speculative positions** in ICE Brent contracts rose sharply in the week of 24 January to 9:1, compared with 3:1 in late December. The NYMEX WTI long-to-short ratio also rose to about 7:1 in the week of 24 January, compared with 6:1 in late December. Total futures and options open interest volumes on the two exchanges reversed their downtrend in January, increasing by 13.8%, or 579,942 contracts, to stand at 4.8 million contracts in the week ending 24 January.

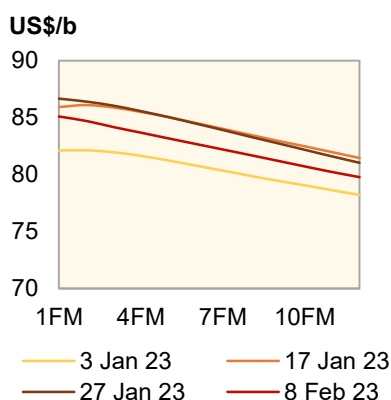
## The futures market structure

The ICE Brent **price structure** strengthened in January, with the nearest-month time spreads flipping into backwardation amid evidence that the oil market perception of the supply/demand balance outlook improved due to the prospect of a stronger demand outlook, specifically from China. Moreover, downward pressure on prompt month prices was alleviated, as elevated volumes of unsold cargoes in December started to ease in January, contributing to supporting the price structure.

Market participants also weighed the EU decision to impose import bans on Russian petroleum products starting 5 February. Worries about a tighter middle distillate market in the Atlantic Basin also buoyed the value of prompt-month prices.

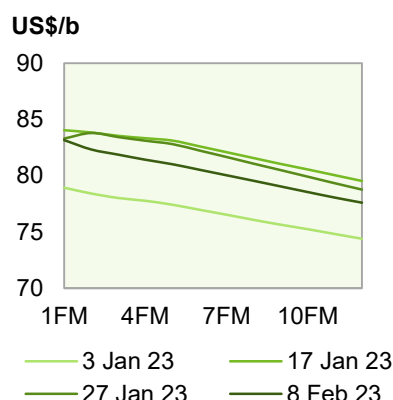
However, signs of a well-supplied physical crude market and uncertainty regarding the strength of the demand recovery limited the rise of prompt prices compared with forward prices. The **ICE Brent** first-month premium to the third month rose m-o-m by 32¢ to a backwardation of 6¢/b, from a contango of 26¢/b in December. The ICE Brent M1-M6 moved into wider backwardation last month to settle at \$1.20/b on average, compared with a backwardation of 46¢/b in December.

**Graph 1 - 4: ICE Brent forward curves**



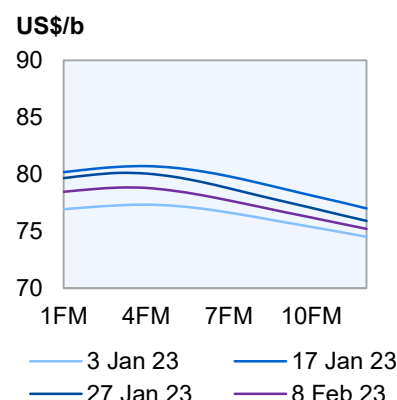
Sources: ICE and OPEC.

**Graph 1 - 5: DME Oman forward curves**



Sources: DME and OPEC.

**Graph 1 - 6: NYMEX WTI forward curves**



Sources: CME and OPEC.

**DME Oman's** price structure flattened slightly last month, though remaining in backwardation. Rising flows of sour crude toward the East of Suez market amid more favourable west-to-east arbitrage economics and softer middle and heavy distillate margins weighed slightly on the value of the prompt DME Oman contract. The DME Oman's first-to-third month backwardation contracted by 10¢ to stand at 28¢/b on average in January, compared with backwardation of 38¢/b in December.

However, the **NYMEX WTI** forward curve weakened further in January amid soft crude supply/demand fundamentals in the US market, specifically around the Cushing, Oklahoma, trading hub. US crude oil stocks rose sharply in January to their highest point since June 2021, amid lower m-o-m demand from domestic refineries and lower crude exports. The NYMEX WTI first-to-third month contango widened by 33¢ to stand at 49¢/b on average in January, compared with a contango of 16¢/b in December.

## Crude Oil Price Movements

The **North Sea Brent** spreads widened in January on a monthly average of 28¢ to a contango of 18¢/b, compared with a contango of 47¢/b in December. **Dubai** M1/M3 backwardation widened in January by 3¢ m-o-m to \$1.21/b, while the **WTI** M1/M3 spread moved into a deeper contango of 51¢/b in January, compared with a contango of 19¢/b in December.

## Crude spreads

The value of sour crude in January strengthened against the value of light sweet crude in all major markets, as the value of medium sour crude was supported by robust demand from Asia-Pacific buyers, while the high availability of light sweet crude, including in the Atlantic Basin, weighed on its value. This is despite stronger light refined product margins, including for naphtha, gasoline and gasoil.

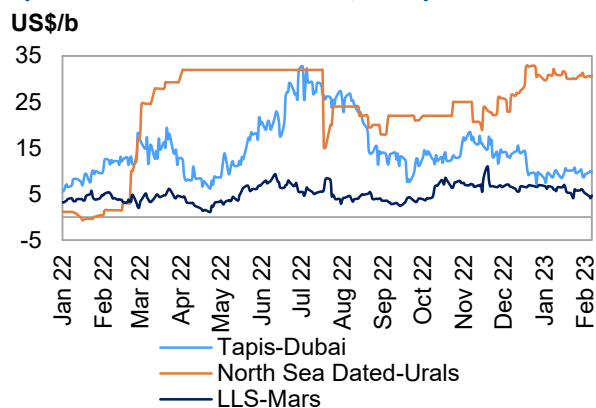
In **Europe**, the Ekofisk–Johan Sverdrup spread narrowed in January by \$3.39 m-o-m to stand at \$4.50/b, as the value of medium sour crude Johan Sverdrup was supported by demand from European refineries. However, the North Sea Dated–Urals spread widened again in January, as the value of Urals came under more pressure in the European market with the entry into force of EU and G7 sanctions against Russian crude. The discount of Urals against North Sea Dated widened in January by \$2.50 m-o-m to stand at \$30.65/b.

In the **USGC**, the LLS–Mars crude spread also narrowed on strong recovery in sour crude value that was supported by a robust demand for export in January.

However, the LLS–Mars spread remained significantly wide at around \$6/b. The premium of light sweet crude LLS over the value of medium sour crude Mars narrowed by 54 m-o-m to stand at an average of \$6.00/b in January.

Similarly, in **Asia**, sweet-sour crude differentials narrowed last month but remained significantly high compared with historical levels, at about \$10/b. The Tapis/Dubai spread narrowed by \$2.84 in January to \$9.58/b from \$12.41/b the previous month. Firm demand for medium sour crude in the Asia Pacific region, including China, supported the value of sour crude, while improving west-to-east arbitrage economics, as reflected in a falling Brent–Dubai exchange of futures for swaps (EFS), weighed on the value of light sweet crude in the East of Suez market. The North Sea Dated–Dubai spread narrowed by \$1.18 to stand at an average of \$2.11/b in January. Meanwhile, the EFS Dubai also narrowed last month by \$1.06 to stand at \$4.29/b.

**Graph 1 - 7: Differential in Asia, Europe and USGC**



Sources: Argus, OPEC and Platts.



# Commodity Markets

The divergence between the energy and non-energy commodity price indices widened further m-o-m in January. The energy price index fell for the fifth consecutive month while non-energy price indices continued to advance in the same period.

In the paper market, money managers' total net long positions rose across selected commodity markets for the fourth consecutive month, and total open interest rose after two consecutive months of decline. Overall sentiment was mixed m-o-m, as money managers were bearish on energy commodities but bullish on non-energy commodities.

Optimism over China's reopening, the decline of energy prices and a weaker US dollar underpinned the demand of non-energy commodities against the backdrop of supply uncertainties outside of China. Looking ahead, the slowdown of interest rates hikes by the US Federal Reserve and the improvement of some global macroeconomic indicators could add support to commodity prices in the months to come.

## Trends in selected commodity markets

The **energy price index** declined for the fifth consecutive month. It fell by 8.9% m-o-m as most components receded, but was partially offset by an increase in average crude oil prices. The index was down by 0.8% y-o-y, a significant reversal from the previous month, driven by a sharp decline in natural gas prices.

The **non-energy index** advanced for the third consecutive month, increasing by 1.7% m-o-m. A diminished crop outlook in key producing regions amid adverse weather and ongoing geopolitical developments in Eastern Europe sustained upward pressure on agricultural prices. The index was down by 5.1% y-o-y, but supply uncertainties remained elevated.

Table 2 - 1: Commodity prices

Commodity	Unit	Monthly averages			% Change Jan 23/Dec 22	Year-to-date	
		Nov 22	Dec 22	Jan 23		2022	2023
<b>Energy*</b>	Index	<b>139.4</b>	<b>130.9</b>	<b>119.3</b>	<b>-8.9</b>	<b>121.3</b>	<b>119.3</b>
Coal, Australia	US\$/mt	342.2	379.2	318.0	-16.1	197.0	318.0
Crude oil, average	US\$/b	87.4	78.1	80.4	3.0	83.9	80.4
Natural gas, US	US\$/mbtu	5.3	5.5	3.3	-40.5	4.3	3.3
Natural gas, Europe	US\$/mbtu	35.7	36.0	20.2	-44.0	28.3	20.2
<b>Non-energy*</b>	Index	<b>114.3</b>	<b>115.3</b>	<b>117.3</b>	<b>1.7</b>	<b>123.6</b>	<b>117.3</b>
<b>Base metal*</b>	Index	<b>109.5</b>	<b>114.8</b>	<b>121.0</b>	<b>5.4</b>	<b>133.2</b>	<b>121.0</b>
<b>Precious metals*</b>	Index	<b>131.3</b>	<b>138.1</b>	<b>144.9</b>	<b>4.9</b>	<b>139.1</b>	<b>144.9</b>

Note: \* World Bank commodity price indices (2010 = 100).

Sources: World Bank and OPEC.

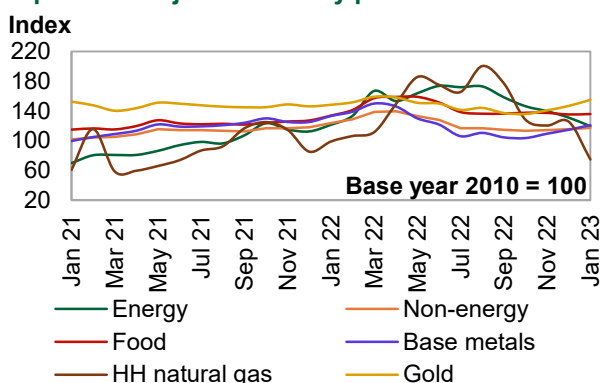
**Average crude oil prices** rose by 3.0% m-o-m after two consecutive months of decline. Prices received support from optimism on China's reopening and improving market fundamentals, ahead of the EU's import ban on Russian refined petroleum products. Prices were down by 4.2% y-o-y amid ongoing concerns of a global economic slowdown.

**Henry Hub's natural gas prices** fell by a sharp 40.5% m-o-m. Weaker demand weighed heavily on prices amid warmer weather, which led to considerable inventory build-ups. According to data from the US Energy Information Administration (EIA), underground storage is currently above 5.0% of the five-year average. Additionally, Title Transfer Facility (TTF) and LNG Asia spot prices declined 40.5% and 33.8% respectively m-o-m, weighing on US LNG demand. Prices were down by 24.5% y-o-y, a significant trend reversal compared with last month.

**Natural gas prices in Europe** also fell sharply following a small recovery the previous month. The **average TTF price** went from \$36.0/mmbtu in December 2022 to \$20.2/mmbtu in January 2023, a 44.0% decline m-o-m. Warmer weather and high storage levels have helped reduced the geopolitical risk premium of TTF prices. The latest data from Gas Infrastructure Europe shows EU gas storage at 70% capacity, down from 83.2% in the previous month, but considered at healthy levels. Nonetheless, the continuous decline of storage levels underscores the upside price potential. As stated in previous reports, colder weather conditions would accelerate the depletion of inventories and add upward pressure to prices, albeit LNG imports. Y-o-y, prices were down by 28.6%.

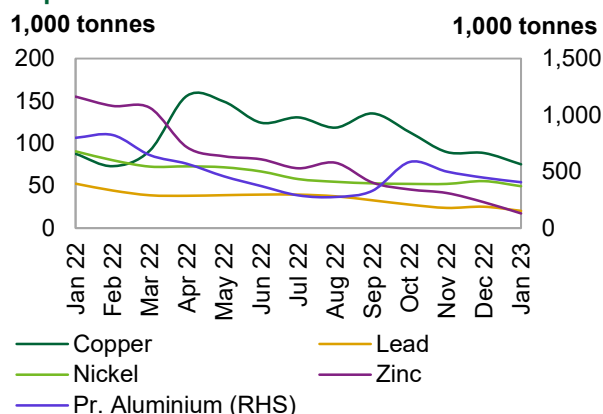
**Australian thermal coal prices** receded by 16.1% m-o-m, erasing all gains from the previous month. Prices rose in the previous month on optimism of China's demand and increased demand for power generation in the EU amid a ban on Russian coal imports. However, warmer temperatures in the EU weighed on demand for coal while reported healthy inventories in China added more downward pressure on prices. Nonetheless, coal prices remained elevated, up by 61.5% y-o-y.

**Graph 2 - 1: Major commodity price indices**



Sources: World Bank, S&P Goldman Sachs, Haver Analytics and OPEC.

**Graph 2 - 2: Inventories at the LME**



Sources: LME, Thomson Reuters and OPEC.

The **base metal index** advanced for the third second consecutive month, increasing by 5.4% m-o-m. Price movement within the index components was mixed m-o-m but skewed towards the upside. The improvement in China's industrial activity added support to the index. China's manufacturing Purchasing Managers' Index rose from 49.0 in December to 49.2 in January; however, it remains below the expansion level. Outside China, improved macroeconomic conditions and lower energy prices, particularly in Europe, continued to add support to the demand for base metals, as did a weaker US dollar. Y-o-y, the index was down by 9.1%.

**Aluminium prices** advanced for the fourth consecutive month, increasing by 4.2% m-o-m. As stated in the previous report, demand for aluminium continued to improve, supported by lower energy prices and a weaker US dollar, while inventory levels continue to decline. According to data from London Metal Exchange (LME), inventories fell by 8.9% m-o-m. Prices were down by 10.8% y-o-y.

Average monthly **copper prices** rose for the third consecutive month, increasing m-o-m by 7.9% m-o-m. China's support to the property and construction sectors helped elevate copper demand. Meanwhile, outside of China, supply uncertainty continued to sustain upward pressure on prices in the form of disruptions to Chile's production and declining inventory levels at LME. Inventories at the LME fell for the fourth consecutive month, declining by 15.0% m-o-m. Y-o-y, prices were down by 7.6%.

**Lead prices** receded after three consecutive monthly gains. Prices fell by 0.7% m-o-m on weaker sales of electric vehicles, particularly in China. Prices were down by 5.6% y-o-y.

**Movement of nickel and zinc prices** was mixed m-o-m. **Nickel** prices receded by 2.6% m-o-m on weaker demand for stainless steel, while **zinc** prices rose for the second consecutive month, increasing by 5.8% m-o-m. **Zinc** prices received support from the rise in iron ore prices (up by 9.3% m-o-m) amid China's support to the property and construction sectors. In terms of inventories at LME, nickel inventories fell by 10.8% m-o-m in January and zinc inventories fell by 43.4% in the same period. Y-o-y, nickel prices were up by 26.1% while those for zinc were down by 8.0%.

The **precious metals index** rose for the third consecutive month, increasing by 4.9% m-o-m. All index components rose m-o-m, led by gold. Precious metals continued to advance on the back of a weaker US dollar, lower interest rates hikes by the US Federal Reserve and optimism on China's reopening.

**Gold prices** rose by 5.6% m-o-m. Buying interest from major central banks also underpinned gold prices. Meanwhile, **silver and platinum** advanced by 1.4% and 4.2%, respectively, in the same period. Both silver and platinum also received support from improved manufacturing activity in China given their industrial applications. Y-o-y, the index was up by 4.2%. Gold was up by 4.5%, silver by 2.1% and platinum by 5.9%.

## Investment flows into commodities

**Total money managers' net length** rose for the fourth consecutive month, increasing by 7.2% m-o-m. Copper led the increase in net length, followed by gold, which was partially offset by declines in crude oil and natural gas. Total open interest also rose after two consecutive months of decline, increasing by 9.3% m-o-m. Copper also led the increase in open interest, followed by gold, crude oil and natural gas.

**Table 2 - 2: CFTC data on non-commercial positions, 1,000 contracts**

Selected commodity	Open interest		Net length			
	Dec 22	Jan 23	Dec 22	%OI	Jan 23	%OI
Crude oil	1,875	2,014	183	10	173	9
Natural gas	1,015	1,082	-60	-6	-83	-8
Gold	590	678	55	9	89	13
Copper	179	225	15	9	28	13

Note: Data on this table is based on a monthly average.

Sources: CFTC and OPEC.

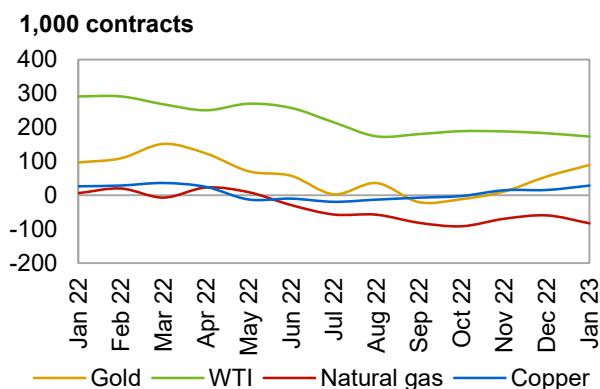
**Total crude oil (WTI) open interest (OI)** increased by 7.4% m-o-m. However, money managers' net length fell for the third consecutive month, decreasing by 5.3% in the same period. Despite optimism over China's reopening and improved macroeconomic conditions, soft US oil market fundamentals weighed on money managers' sentiment.

**Total Henry Hub natural gas OI** rose for the fourth consecutive month, increasing by 6.6% m-o-m; meanwhile, money managers reduced their net length by 38.8% in the same period. Money managers' sentiment remained bearish amid a higher ratio of short positions.

**Gold's OI** increased by 14.9% m-o-m. Money managers also increased their net length for the second consecutive month, by 61.6% m-o-m. Lower interest rate hikes by the US Federal Reserve and a weaker US dollar continued to support the bullish sentiment on gold.

**Copper's OI** rose after two consecutive months of decline, increasing by 26.0% m-o-m. Money managers' net length also rose for the third consecutive month, increasing by 84.2%. Improved macroeconomic conditions amid optimism over China's reopening supported money managers' bullishness.

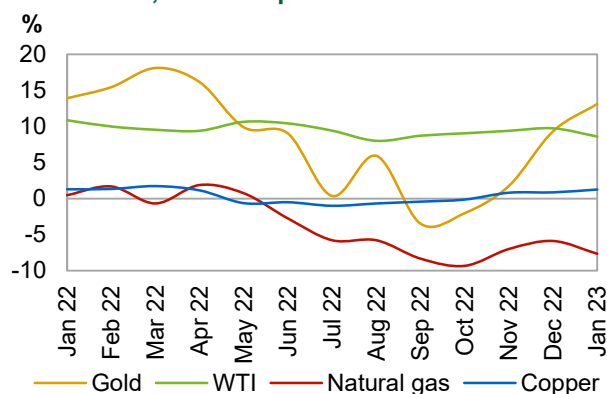
**Graph 2 - 3: Money managers' activity in key commodities, net length**



Note: Data on this graph is based on a monthly average.

Sources: CFTC and OPEC.

**Graph 2 - 4: Money managers' activity in key commodities, as % of open interest**



Note: Data on this graph is based on a monthly average.

Sources: CFTC and OPEC.

## World Economy

The latest actual data points from 2H22 confirm that the global growth dynamic was better-than-expected towards the end of last year, with the US economy exhibiting an ongoing solid consumer spending pattern and the Euro-zone avoiding a declining economy despite its energy market related challenges. The 2022 global economic growth dynamic has been revised up slightly to stand at 3.1%. With some of this momentum expected to carry over into 2023. In addition to the anticipated positive effects from China's reopening, the global growth forecast for 2023 was also revised up slightly to 2.6%. While the current economic momentum could be deemed to provide a sound base for this year's economic growth pattern, the dynamic of an annual slow-down compared to 2022 remains evident with inflation still high and with likely further lifts in key interest rates, particularly in the Euro-zone.

While OECD economies are generally doing well and China is benefitting from its re-opening, India is likely to perform relatively well in 2023, following strong growth in 2022. Additional support should come from India's just released annual budget that includes income tax cuts and a rise in government spending. Brazil and Russia are forecast to face challenging environments in 2023, albeit for differing reasons, but they should also benefit from government support measures and an ongoing robust commodities market.

Downside risks are apparent and may include further geopolitical tensions in Eastern Europe, China's ongoing domestic challenges amid the pandemic and potential spill-overs from China's still fragile real-estate sector. Also, the effects of China's rebound, as a result from the reopening efforts, could lead to more sustained global inflation, causing continued monetary tightening actions. In addition, very high global debt levels, in particularly those related to sovereign debt, but also in the private sectors of various economies could impact the growth dynamic.

Upside potential may come from the US Federal Reserve (Fed) successfully managing a soft landing. This is the most likely outcome in the US, given the expected inflation slowdown and the sufficient underlying demand dynamic. An even stronger-than-anticipated rebound in China is another possibility. Moreover, in the Euro-zone an even more accentuated extension of the relatively better-than-expected dynamic from 2H22 may continue into 2023. A slight further easing of commodity prices in 2023, compared to annual averages in 2022, and a resolution of the tensions in Eastern Europe may provide further upside potential. Finally, inflation may subside more rapidly than expected, providing central banks with more room for an accommodative monetary policy.

**Table 3 - 1: Economic growth rate and revision, 2022–2023\*, %**

	World	OECD	US	Euro-zone	UK	Japan	China	India	Brazil	Russia
<b>2022</b>	<b>3.1</b>	<b>2.8</b>	<b>2.1</b>	<b>3.5</b>	<b>4.0</b>	<b>1.2</b>	<b>3.0</b>	<b>6.8</b>	<b>2.8</b>	<b>-3.5</b>
<b>Change from previous month</b>	0.1	0.2	0.1	0.3	0.2	0.0	-0.1	0.0	0.0	0.5
<b>2023</b>	<b>2.6</b>	<b>1.1</b>	<b>1.2</b>	<b>0.8</b>	<b>0.0</b>	<b>1.2</b>	<b>5.2</b>	<b>5.6</b>	<b>1.0</b>	<b>-0.5</b>
<b>Change from previous month</b>	0.1	0.2	0.2	0.4	0.0	0.2	0.4	0.0	0.0	0.0

Note: \* 2022 = Estimate and 2023 = Forecast. The GDP numbers have been adjusted to reflect 2017 ppp.

Source: OPEC.

## Update on the latest global developments

The latest **2H22 GDP numbers** and output measures confirmed a relatively resilient growth dynamic in the global economy. They showed better-than-expected momentum in 2H22, especially in OECD economies, with the US and the Euro-zone having weathered the ongoing challenges of monetary tightening and high inflation, among other factors, relatively well. Consumer spending – especially in wealthier economies – has been supported by a combination of social welfare measures, rising wages and salaries, and increasing debt-financed consumption (particularly in the US), as well as consumers tapping into their savings. Notably, the Euro-zone's GDP did not decline in 4Q22, as was widely expected, expanding mildly, despite the region's ongoing energy market-related challenges. The US showed stronger-than-expected quarterly growth of almost 3% on a seasonally and annualised base.

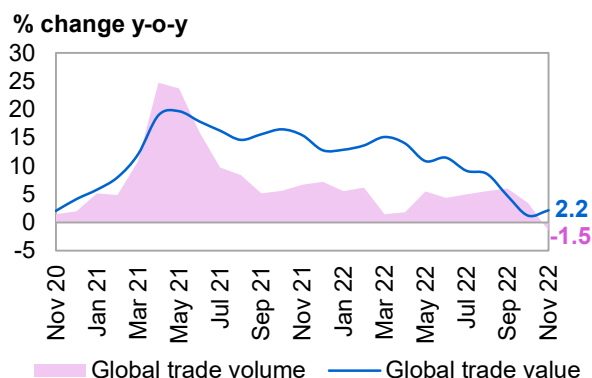
The latest **inflation** dynamic continued on a downwards trend, with US December inflation slowing for the sixth-consecutive month. It now stands below 7%, the lowest level since November 2021. Euro-zone January inflation stood at a higher level, albeit retracting for the third consecutive month to reach its lowest point since June 2022.

Overall, however, inflation remains at elevated levels in the economies of the important G4 central banks and hence all four central banks have further tightened their monetary policies this year. The European Central Bank (ECB) and the Bank of England (BoE) increased their key interest rates by 50 basis points (bp), while the Fed lifted its interest rate by 25 bp. The Bank of Japan (BoJ) is still pursuing a more accommodative monetary policy, but it also tightened its long-term target rates within its yield curve control management framework.

**Global trade** expanded in November in **value terms**, increasing by 2.2% y-o-y, after a rise of 1.2% y-o-y in October, based on the CPB World Trade Monitor Index provided by the CPB Netherlands Bureau for Economic Policy Analysis.

**Trade in volume terms** declined by 1.5% y-o-y in November, compared with a rise of 3.5% y-o-y in October and 6% y-o-y in September. The November decline was very much triggered by a significant decline in China's export volumes, which fell by 10.2% y-o-y across the month.

**Graph 3 - 1: Global trade**



Sources: Netherlands Bureau for Economic Policy Analysis, Haver Analytics and OPEC.

## Near-term global expectations

The **near-term global growth pattern** will be influenced primarily by the strength of the US, the dynamic of European economies' and the reopening effects in China. For the US and the European economies the ongoing challenges and consequences of high inflation, as well as the energy market-related challenges in Europe, constitute the major risk factors. For China, the depth and strength of its recovery on the back of its reopening, will play a key-role. In key OECD economies, it appears that the momentum at the beginning of the year is sound, although potential downside risks remain. Moreover, India is forecast to show a robust growth level, albeit at lower levels than 2022. Growth in India should also be supported by the recently released budget proposal that foresees income-tax cuts and significant government spending, among other measures.

The better-than-expected performance in **2H22** lifted last year's **global growth** estimate to 3.1%, compared to last month's estimate of 3%. While the world economy is forecast to slow somewhat in 2023 compared to 2022, the weakening dynamic is now forecast to be milder than previously expected. The 2H22 growth dynamic in the US and the Euro-zone, the effects of China's reopening and additional government economic support measures, and the positive momentum and additional fiscal measures in India, lead to a growth expectation of 2.6% for 2023, up from last month's estimate of 2.5%.

However, **downside risks** are apparent and may include a further geopolitical tensions in Eastern Europe, including further impacts on commodity markets and rising energy and agricultural prices as witnessed in 2022. Ongoing domestic challenges in China amid the pandemic and spill-overs from a generally still fragile real-estate sector could also provide further downsides. Also, the effects of China's rebound, as a result of the reopening efforts, could lead to sustained global inflation. This could necessitate continued monetary tightening actions that consequently accentuate the dampening effect on global economic growth.

Moreover, very high global debt levels – primarily sovereign debt but also in the private sectors of various economies – could impact the growth dynamic.

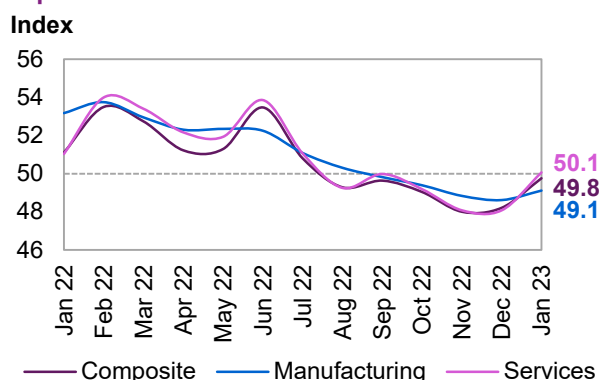
While risks to global economic growth remain skewed to the downside, further **upside potential** to the current growth forecast exists. This may come from the US Fed successfully managing a soft landing, which is the most likely outcome in the US, given the expected inflation slowdown and the sufficient underlying demand dynamic. An even stronger-than-anticipated rebound in China is another possibility, with consumption in the economy accelerating significantly after years of stringent lock-down measures. Moreover, in the Euro-zone an even more accentuated extension of the relatively better-than-expected dynamic from 2H22 may continue into 2023. A continued slight easing of commodity prices in 2023, compared to annual averages in 2022, may also have a positive effect on inflation. At the same time, commodity prices would need to remain at a sufficient income level for commodity-producer economies. A resolution of tensions in Eastern Europe would likely provide further upside potential. More generally, inflation may subside quicker than expected, providing key central banks with additional room for accommodative monetary policy, a possibility for not only the US Fed, and the UK's BoE, but also the Reserve Bank of India (RBI) and Brazil's central bank.

At present, **monetary tightening** is assumed to continue, albeit with a slowing momentum, especially from the Fed. The ECB is anticipated to continue lifting interest rates more forcefully in 2023, with a more consequential effect in terms of dampening the Euro-zone’s economic activity. The Fed is expected to lift rates by 50 bp in 1H23, while the ECB is forecast to lift interest rates by a further 75 bp by the end of the year.

**Global purchasing managers’ indices (PMIs)** reflect the continuing slowdown in the manufacturing sectors of major economies, with the global **manufacturing PMI** remaining below the growth indicating level of 50. Positively, however, the global manufacturing PMI in January rose slightly, indicating at least some improvement. It stood at 49.1, compared with 48.6 in December and 48.8 in November.

The **global services sector PMI** moved back above the level of 50 in January to stand at 50.1. This compares with 48.1 in December, reflecting a pick-up in global services activity and the sectoral switch.

**Graph 3 - 2: Global PMI**



Sources: JP Morgan, S&P Global, Haver Analytics and OPEC.

Based on better-than-anticipated momentum in 2H22, the annual **2022 GDP growth** forecast was revised up slightly to stand at 3.1%, compared with 3% in the January MOMR.

The growth forecast for **2023** was revised up to 2.6%, from 2.5% previously. While showing a slowdown from 2022, it is considered a sound growth level, especially when considering the global economic challenges which include monetary tightening, elevated inflation, high global debt levels and continuing geopolitical tensions.

**Table 3 - 2: World economic growth rate and revision, 2022–2023\*, %**

	World
<b>2022</b>	<b>3.1</b>
<b>Change from previous month</b>	0.1
<b>2023</b>	<b>2.6</b>
<b>Change from previous month</b>	0.1

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## OECD

### OECD Americas

#### US

##### Update on the latest developments

**Estimated 4Q22 GDP growth data**, as provided by the Bureau of Economic Analysis, confirmed that the US economy rebounded strongly in 2H22. Growth was at 2.9% q-o-q at the seasonally adjusted annualised rate (SAAR). This follows growth of 3.2% q-o-q SAAR in 3Q22 and reported GDP declines of 1.6% q-o-q SAAR and 0.6% q-o-q SAAR in 1Q22 and 2Q22, respectively. While this confirms a sound and better-than-expected growth trend in recent months, it is evident that challenges remain.

From the monetary perspective, the Fed continued its growth dampening monetary tightening efforts, lifting interest rates by 25 bp in February, with the key-policy rate’s upper limit now at 4.75%. In addition to monetary tightening, the US Congress is facing a major challenge on the fiscal side. An impending sovereign debt ceiling requires a bipartisan agreement to lift the level, and while negotiations are ongoing the outcome remains uncertain. A failure of these negotiations could have consequential effects. In 2011, the debt ceiling gridlock ultimately led to a downgrade to the US debt credit rating. More recently, the government shutdown at the end of 2018 lasted for more than 30 days, with noticeable economic consequences.

Positively, **inflation** retracted further. A slowing in pent-up demand, commodity price softening and an improvement in global supply chains may have supported the moderation of price increases. The general price index has now slowed for six consecutive months to stand at 6.5% y-o-y in December. This compares with 7.1% y-o-y in November.

Core inflation, defined as the general price index less the changes in food and energy prices, also retracted, albeit to a lesser extent. It increased by 5.7% y-o-y in December, the third consecutive month of gradual decline. It should be noted that it is still at a relatively elevated level and the Fed has confirmed it will stay course in its aim to reduce inflation, particularly the core inflation component. It is also being steered by its own guideline, the index of personal consumption expenditures. This has retracted gradually and stood at 4.4% y-o-y in December, the third consecutive monthly drop.

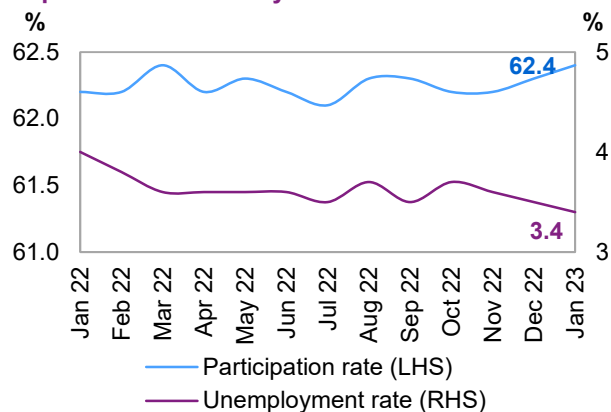
Given the price declines, in combination with the ongoing solid labour market developments, consumer confidence held up well, retracting only mildly in January. The **consumer confidence** index, based on the Conference Board index, was at 107.1 in January, compared with 109 in December and 101.4 in November.

The labour market remains tight. The **unemployment rate** fell to a very low level of 3.4% in January, compared with 3.5% in December, 3.6% in November and 3.7% in October. The January level marks the lowest level since the late 1960s.

The **participation rate** continued its gradual improvement in January too. It stood at 62.4%, compared with 62.3% in December and 62.2% in November.

**Non-farm payrolls** continued to rise strongly. There were 517,000 new jobs recorded in January, compared with an upwardly revised 260,000 new jobs in December. The corresponding hourly wage growth remained strong, but has continued to gradually soften. Hourly earnings rose by 4.4% y-o-y in January, compared with 4.8% y-o-y in December and 5% y-o-y in November.

**Graph 3 - 3: US monthly labour market**



Sources: Bureau of Labor Statistics and Haver Analytics.

## Near-term expectations

The US economy is forecast to be in a **transitional phase in 2023**, with ongoing relative high interest rates dampening activity. The main support is forecast to come from consumption, with possibly some additional support from investments too. However, a lot will depend on the ability of the Fed to engineer a soft-landing scenario, which is currently assumed in this forecast.

Additionally, if the debt ceiling debate in Congress is concluded without major frictions this could add further positive sentiment, but on the flip side a standoff could have consequential effects on business and consumer sentiment, with severe spill-over effects into the real economy.

To date, the US economy has **weathered the ongoing economic challenges** reasonably well and posted solid growth levels in 2H22. Some of this dynamic is expected to carry over into 1H23. Inflation has gradually come down in recent months, and this trend is anticipated to continue. Following core inflation of 6.1% in 2022, the forecast for 2023 is around a level of around 4.5%. This obviously depends on domestic political issues, but will also likely impacted by global inflation trends that could turn out to be more sustainable after China's reopening. Consequently, monetary tightening has continued, but it is expected to slow down in the coming months. The Fed is anticipated to lift rates further by 50 bp in 1H23, so that the key policy rate's upper limit will stand at 5.25%. There is also an equally balanced possibility of it further lifting the policy rate by 25 bp in 2H23 in the case of a further sustained inflationary trend, or that it will begin to gradually lower interest rates again by 4Q23, in the case of a sustained deflationary trend.

As **underlying consumption remains positive** and the important housing market holds up relatively well, the indicators for a soft-landing have grown. However, some – notably the inverse yield curve (i.e., the negative yield spread between short-term treasury bonds and the 10-year treasury bond) and the very low unemployment rate that potentially indicates future economic turbulence – point to the possibility of a US recession somewhere in 2023. This is not considered in the forecast, but it is important to vigilantly monitor this possibility in the coming months.

## World Economy

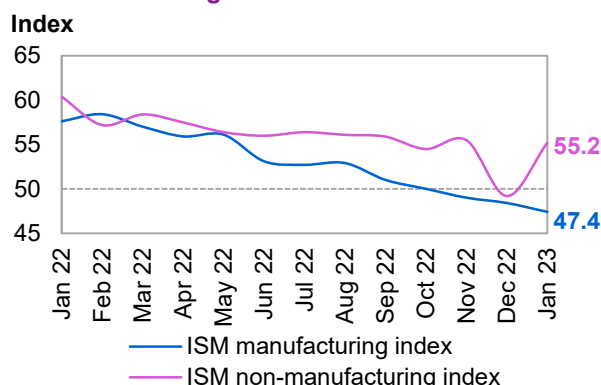
January **PMI** levels, as provided by the Institute for Supply Management (ISM), reflect a weakening in the manufacturing sector, but a significant strengthening in the services sector. The January **manufacturing PMI** fell by 1 point to stand at an index level of 47.4, compared with 48.4 in December. It remains below the growth-indicating level of 50 for the third consecutive month.

The index level for the **services sector**, representing around 70% of the US economy, rose significantly, after a surprise decline in December. In December, the services PMI unexpectedly fell to 49.2, likely impacted by the cold weather towards the end of the year. However, it bounced back to an index level of 55.2 in January, almost matching the November level of 55.5.

Taking into consideration the solid rebound in 2H22, **US GDP growth** for **2022** was revised up to 2.1%, compared with 2% in the previous month.

Provided that a soft landing materialises, that some of the sound momentum in 2H22 is carried over into 1H23, and anticipating the effects of monetary tightening, the forecast for **2023** GDP growth was revised up to 1.2%, compared with 1% from last month.

**Graph 3 - 4: US-ISM manufacturing and non-manufacturing indices**



Sources: Institute for Supply Management and Haver Analytics.

**Table 3 - 3: US economic growth rate and revision, 2022–2023\*, %**

	US
<b>2022</b>	<b>2.1</b>
<b>Change from previous month</b>	0.1
<b>2023</b>	<b>1.2</b>
<b>Change from previous month</b>	0.2

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## OECD Europe

### Euro-zone

#### Update on the latest developments

**Euro-zone growth** for 2H22 was better than expected. Contrary to the general expectation, the Euro-zone's economy was able to avoid a decline in 4Q22. Growth in 3Q22 was also better-than-expected, as reported by Eurostat, the EU's statistical office. The 4Q22 stood at 0.5% q-o-q SAAR, following 3Q22 growth of 1.2% q-o-q SAAR. This comes, however, after strong 1Q22 GDP growth of 2.6% q-o-q SAAR and 3.4% q-o-q SAAR in 2Q22. Private household consumption remained strong in 3Q22, rising by 3.2% q-o-q SAAR, albeit lower than in 2Q22 when consumption expanded by 4.4% q-o-q SAAR. While growth in the first three quarters of 2022 has been supported by the ECB's relatively accommodative monetary policies, this dynamic has changed considerably, with the ECB lifting key policy rates by 2.5 percentage points (pp) between July and December, followed by another rate hike of 50 bp in February. This has moved the key policy rate to 3%.

**Inflation** in the Euro-zone eased slightly again in January to stand at 8.5%. This compares with 9.2% y-o-y in December and 10% y-o-y in November. Core inflation remained high, however, and this is evidently a factor the ECB is carefully considering. When excluding volatile items such as food and energy, inflation stood at 7% in January. This is above the December level of 6.9% y-o-y and higher than the y-o-y levels of 6.6% and 6.4% recorded in November and October, respectively. The ECB's relatively accommodative monetary policy up to at least July 2022 supported debt-related financing to the private sector, and hence, was an important economic growth pillar in 1H22. Lending to the private sector by financial institutions continued to expand, but as a consequence of rising interest rates, it began to slow. Lending activity rose by 5.2% y-o-y in December, compared with 5.9% in November, 6.6% in October and 7.1% in September.

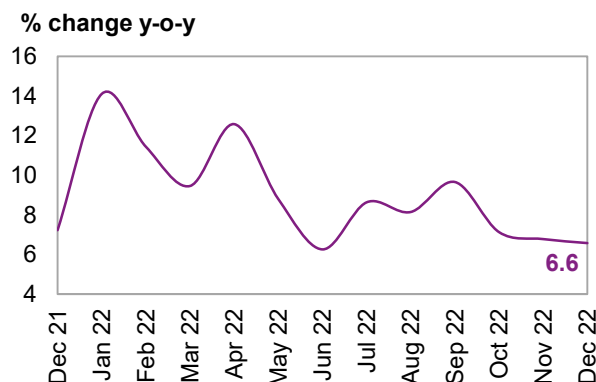


The **labour market** maintained its positive trajectory. According to the latest numbers from Eurostat, the unemployment rate stood at 6.6% in December. This was unchanged from November and October and compared with 6.7% in September and August.

Growth in **retail sales** in value terms slowed slightly in December, reaching a level of 6.6% y-o-y, following 6.8% in November and 7.1% y in October. Hence, consumers have scaled back their value spending slightly.

**Spending in volume** terms fell by 2.5% y-o-y in December, following declines of 2.6% in November and 2.4% in October.

**Graph 3 - 5: Euro-zone retail sales**



Sources: Statistical Office of the European Communities and Haver Analytics.

**Industrial production** expanded further in November, but the expansion decelerated based on the latest available data. It grew by 1.9% y-o-y, compared with 2.8% y-o-y in October and 4.3% y-o-y in September. On a monthly basis, industrial activity rose by 1% m-o-m in November.

### Near-term expectations

The Euro-zone's **economy successfully weathered the many challenges** that the economic zone was facing in 2H22, posting better-than-expected GDP growth numbers. Many factors played a role, including an ongoing relative accommodative monetary policy, large fiscal stimulus programs, such as energy subsidies and a variety of other social welfare support measures, and a general commodity price slow-down helped on various fronts. This relative better performance is forecast to provide a good base for growth in 1H23, and contrary to the previous assumption, it is now anticipated that none of the calendar quarters will see negative growth in 2023. It should be noted, however, that 2023 growth is expected to be significantly below 2022 as the ongoing challenges will likely keep growth at a lower level.

Among those dampening issues, **inflation** will continue to play an important role. Inflation stood at 8.4% y-o-y in 2022, and while it is forecast to slow it is anticipated to remain elevated at almost 5% in 2023. This will also likely lead the ECB to continue a policy of **monetary tightening**, as already pointed at by the head of the ECB.

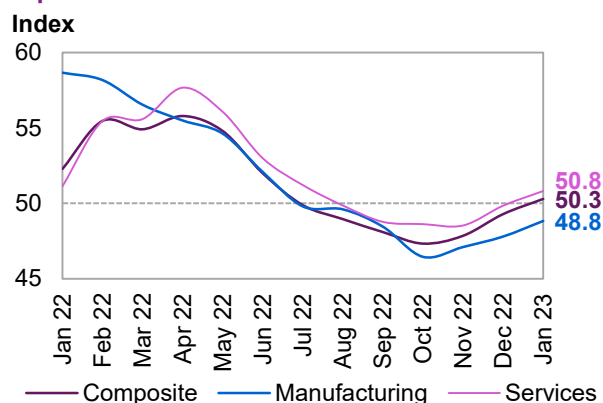
The ECB is forecast to lift interest rates by a further 75 bp up to the end of the year, moving the main key policy rate to 3.75% in 2023. Consequently, the strong Euro-zone lending activity – an important factor for investment and growth during the post-pandemic recovery – is forecast to slow across the year, with a consequent negative impact, especially on the real estate sector and business-related investment, in general. In addition, high debt levels are set to limit fiscal stimulus measures in several key Euro-zone economies. This is especially the case for those economies with high debt-to-GDP ratios that may be negatively affected in 2023 via rising interest rates, as well as falling GDP growth levels.

The **Euro-zone's January PMI** pointed to some improvement in the manufacturing and services sectors.

The **PMI for services**, the largest sector in the Euro-zone, rose by 1 index point to 50.8, moving it back into the growth indicating territory at above the 50-level. This compares to a December level of 49.8.

The **manufacturing PMI** improved too, to stand at 48.8 in January, compared with 47.8 in December. However, the index remained in contraction territory.

**Graph 3 - 6: Euro-zone PMIs**



Sources: S&P Global and Haver Analytics.

The 2023 GDP growth forecast anticipates the impact of a variety of dampening factors, including inflation and monetary tightening, expected ongoing energy supply constraints and other associated issues. **GDP growth for 2023** now stands at 0.8%, which is higher than last month's forecast of 0.4%. This compares with actual **2022 GDP growth** of 3.5%, slightly above last month's forecast of 3.2%.

**Table 3 - 4: Euro-zone economic growth rate and revision, 2022–2023\*, %**

	Euro-zone
<b>2022</b>	<b>3.5</b>
<b>Change from previous month</b>	0.3
<b>2023</b>	<b>0.8</b>
<b>Change from previous month</b>	0.4

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## OECD Asia Pacific

### Japan

#### Update on latest developments

**Japan's growth dynamic** remains impacted by a variety of external factors – including developments in its important trade partner China, COVID-19-related developments and the effects of monetary policies in light of rising inflation. While the 3Q22 GDP was reported to have contracted by 0.8% q-o-q SAAR, there was some positive momentum in 4Q22, supported especially by domestic demand in the services sector.

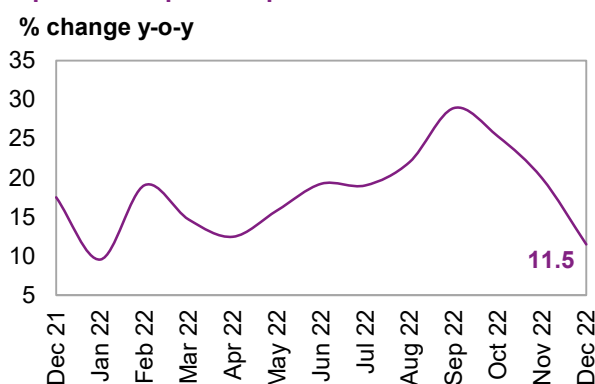
**Consumer inflation** is one important factor that will likely keep economic growth from moving much beyond 2022 levels of slightly above 1%. While it has not been an issue for the Japanese economy for a long time, inflation rose by 4% y-o-y in December, compared with an already elevated 3.8% y-o-y in November and 3.7% in October. This lifted 4Q22 inflation to 3.9% y-o-y, highest level since the beginning of the 1990s, except for a period in 2014 when a sales tax increase briefly lifted total inflation to around the same level. Positively, core inflation excluding food and energy – a main guideline for central bank policies – stood at 1.5% y-o-y in December following a more moderate level of 1.4% y-o-y in November and October.

Amid rising inflation, the **Bank of Japan (BoJ)** has already started to gradually tighten monetary policy by adjusting its yield curve control policy. At the end of December, the BoJ announced that it would allow 10-year bond yields to fluctuate by 0.5 pp above or below its target of zero, replacing the previous band of 0.25 pp, while it kept overnight interest rates at minus 0.1%. This follows the limited monetary policy tightening of the BoJ throughout 2022. The BoJ has pursued a relatively much more accommodative monetary policy than its counterparts in other advanced economies. These policies also significantly contributed to the weakening of the yen in 2022, especially compared to the US dollar, which peaked compared to the yen in October and stood at almost 150 yen to the US dollar at the end of October.

**Industrial production (IP)** retracted to -1.4% y-o-y in December, compared with -1.1% y-o-y in November, after rising by 3.4% y-o-y in October and 9.2% in September.

After a weakening trend in 1Q22, **export growth** accelerated in 2Q22 and again in 3Q22, rising by 25.3% y-o-y in October. Although exports were likely impacted by the weakened 4Q22 situation in China, which in combination with the slowdown in global trade guided export growth lower. Export growth reached 11.5% y-o-y in December and 20% y-o-y in November, all on a non-seasonally adjusted basis.

**Graph 3 - 7: Japan's exports**



Sources: Ministry of Finance, Japan Tariff Association and Haver Analytics.

**Retail sales** continued their solid trend in December in value terms, rising by 3.8% y-o-y, compared with 2.5% y-o-y in November and 4.4% y-o-y in October. **Consumer confidence** rebounded, standing at an index level of 30.9 in January, compared with 30.6 in December and 29.4 in November.

## Near-term expectations

Japan's economy is expected to continue its low **growth dynamic** in 2023, while benefitting from the reopening effects in China and a somewhat better-than-expected momentum in advanced economy trading partners, particularly the US and the Euro-zone. However, the economy will not likely escape the growth limitations of its labour market, its relatively high utilization rates and the general slowdown in 2023 global economic activity, which will be felt in external trade.

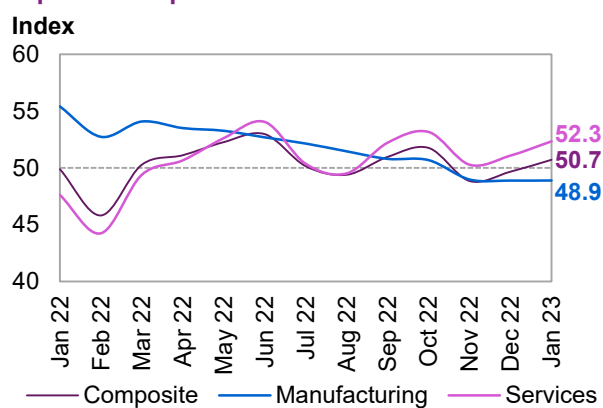
Moreover, the impact of rising **inflation** in Japan will need to be closely monitored, considering the relative accommodative monetary policies so far and the likelihood of monetary tightening. Inflation is forecast at around 1.5% annual average in 2023, after having reached 2.5% in 2022. After inflation stood at almost 3.9% in 4Q22, it is forecast to gradually recede and to stand at around 2.2% in 1H23 and to taper off towards the end of the year, when it is forecast to stand at only around 1% at the end of 2023 again. Consequently, the BoJ has already started to follow a gradual tightening path via a lift of its interest rate level within its yield curve control programme. Moreover, the expectation of further tightening is likely. As a result, long-term rates will likely continue to rise and retract only in 2H23, amid an expected slowdown in inflation and consequent **monetary policy actions by the BoJ**. After an extended period of weakness, the yen has been trending higher since November of last year, driven by the easing strength of the US dollar and supported by the BoJ's surprising December decision to hike long-term interest rates within its yield curve control programme. However, given the ongoing interest rate differentials for 2023, the yen's room for appreciation will remain limited, so that an average rate of around 130 yen/US-dollar for 2023 is expected.

**January PMI** numbers were mixed and point to continued challenges, especially in the manufacturing sector, while the services sector appears to have recovered.

The **services sector PMI**, which constitutes around two-thirds of the Japanese economy, rose to 52.3 in January from 51.1 in December and 50.3 in November.

The **manufacturing PMI** remained unchanged at 48.9 in January for the second consecutive month, still below the growth-indicating level of 50.0 and comparing with 49 in November.

**Graph 3 - 8: Japan's PMIs**



Sources: S&P Global and Haver Analytics.

Japan's **2022 GDP growth forecast** remains unchanged at 1.2%. Given the anticipated rebound in China and some improvement in domestic momentum, the **2023** growth forecast was revised up to 1.2%.

**Table 3 - 5: Japan's economic growth rate and revision, 2022–2023\*, %**

	Japan
<b>2022</b>	<b>1.2</b>
<b>Change from previous month</b>	0.0
<b>2023</b>	<b>1.2</b>
<b>Change from previous month</b>	0.2

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## Non-OECD

### China

#### Update on the latest developments

China's economy ended 4Q22 on a weak note. **Quarterly growth**, which was materially affected by the zero-COVID-19 policies, was reported at 2.9% y-o-y, below the 3Q22 level of an already soft 3.9% y-o-y. With this weakening trend the Chinese government reversed course on its strict COVID-19 policies and started to reopen the economy, risking re-emerging health-system-related challenges. Moreover in November last year it started to reintroduce support for the ailing property sector. Annual GDP growth in 2022 was relatively low at only 3% y-o-y.

The current **rebound in domestic demand** and the upward trend in business sentiment indices provides a sound base of optimism for 1Q23 and likely beyond. It is still early in the year, but so far the services sector in particular seems to be well supported.

The **housing sector** shows ongoing fragility. After a sharp fall in sales in 2022, combined with the COVID-19 restrictions, the sector remains under considerable pressure. The December national real estate climate index stood at its lowest level since the start of the new data series in 2016, reaching 94.35, compared with levels of above 100 for most of the time since its initiation, except for 2020.

Recent **industrial production** growth retracted for the fourth consecutive month December to stand at 1.3% y-o-y, compared with November's level of 2.2% y-o-y. The impact of the most recent COVID-19 restrictions was also visible in nominal **retail trade**, which declined by 1.8% y-o-y in December, and by 6.1% y-o-y in November.

December data suggests that China's **trade surplus** rose to \$78 billion from \$69.1 billion in November 2022. **Exports** rose by 3.7% m-o-m in December. Imports rose by only 0.8% m-o-m due to weak domestic demand amid widespread COVID-19 curbs.

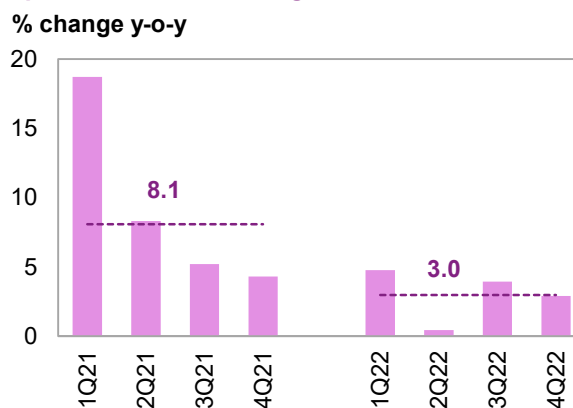
The **annual inflation rate** was 1.8% y-o-y in December, compared with 1.6% y-o-y in November and 2.1% y-o-y in October. This low level mirrors the consumption downturn in China, which curbed inflation as the country's zero-COVID-19 policy impacted consumer demand.

#### Near-term expectations

The **end of the strict zero-COVID-19 policy** towards the end of last year is expected to lift growth in 1Q23 and beyond. The reopening efforts come in combination with other stimulus measures, such as a continued accommodative monetary policy and targeted fiscal measures. However, with rising COVID-19 infection rates, it remains to be seen what the scale of the rebound in 1Q23 will be as there is still a possibility that social-distancing measures could be reinstated if the burden on the health system becomes too large. Also, voluntary social-distancing measures could dampen activity in the contact-intensive sectors.

After low quarterly growth in 2022, which was impacted by the fragile real-estate market and lockdown measures, quarterly growth in China will stand at an average of around 5% on a yearly comparison in 2023, with some higher growth levels expected for 1H23. The reopening efforts come in combination with steps to support the ailing property market, the sector that has contributed significantly to China's economic challenges in the recent past. As it seems, constraints that have tightened leverage-based financing in the real-estate sector have been reduced. Hence, the housing sector will provide some limited support to the economy. Nonetheless, national home sales are expected to grow at a low single-digit level in 2023, while real estate investment is forecast to be flat. Besides these domestically driven developments, external trade is expected to provide support with the US and the Euro-zone likely seeing a milder slowdown in 2023 compared to previous expectations.

Graph 3 - 9: China's GDP growth



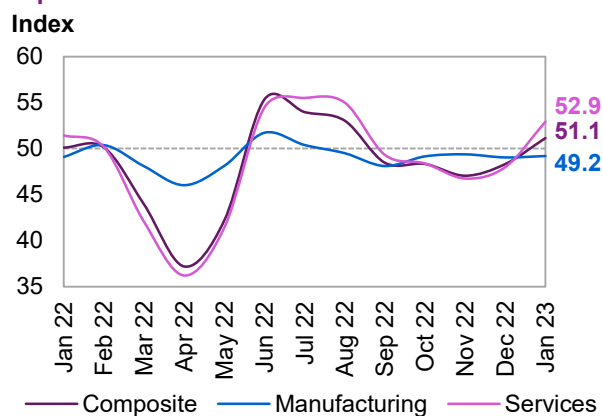
Sources: National Bureau of Statistics and Haver Analytics.

**Monetary policy** wise, it is forecast that the accommodative policy framework will continue, with authorities remaining prudent and the central bank expected to refrain from broad-based rate cuts. At the same time, it appears that the US dollar largely peaked in 2022 and the yuan is expected to appreciate mildly in 2023, with some impact on export income.

The **January PMI** readings as provided by S&P Global show that the **manufacturing** sector remains constrained. The index for the sector was almost unchanged at 49.2 in January, compared with 49 in December and 49.4 in November.

The **January services PMI** shows a strong positive trend, reflecting the reopening effect, moving up to 52.9 in January from 48 in December.

**Graph 3 - 10: China's PMI**



Given the expectation of supportive pent-up demand in 1H23 and additional measures undertaken by authorities to prop up economic growth, the **2023 GDP growth forecasts** was revised up to 5.2%. This follows **2022** GDP growth of 3%. While the current measures provide some further upside to the current 2023 GDP growth level, the depth of this year's rebound remains uncertain.

**Table 3 - 6: China's economic growth rate and revision, 2022–2023\*, %**

	China
<b>2022</b>	<b>3.0</b>
<b>Change from previous month</b>	-0.1
<b>2023</b>	<b>5.2</b>
<b>Change from previous month</b>	0.4

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## Other Asia

### India

#### Update on the latest developments

India's economy appears to have continued its solid, albeit **gradually slowing, growth dynamic into 4Q22**, supported by domestic demand and sector-wise by the services sector and agriculture. While robust, the growth is still below pre-pandemic levels. As in other economies, a shift from manufacturing to the services sector is becoming increasingly apparent.

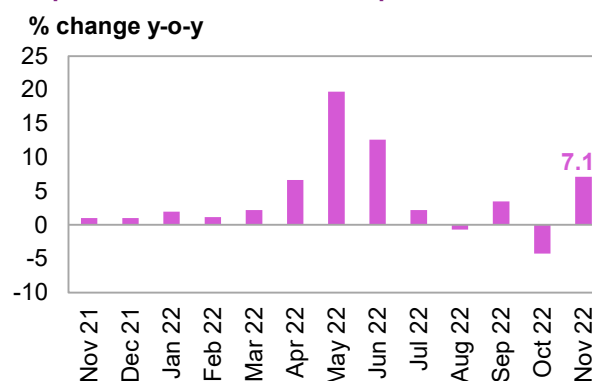
The latest **budget** proposal for the fiscal year of 2023/2024 provided expectations of sound support for 2023 growth, and to some extent helps compensate for an expected slow-down in various areas of the economy. Moreover, the budget targets a fiscal consolidation of 0.5% of GDP. This will also be achieved via major subsidy savings that are expected in the next fiscal year, including cutting back subsidies for the free grain program and providing lower fertilizer subsidies, considering the recent drop in global fertilizer prices.

This leads to fiscal savings of around 0.8% of GDP. On the fiscal spending side, the government has made capital expenditure (capex) spending a key focus again in order to support the economy. Consequently, central government capex spending has jumped from 1.7% of GDP to 2.7% of GDP in three years, according to government data. Moreover, if the capex spending target for all four post-pandemic years is to be achieved (including next year), this budget item would see a twofold rise in just four years.

Monthly indicators implied a pickup in **industrial output**, which advanced by 7.1% y-o-y in November, following a contraction of 4.2% y-o-y in October. This comes despite the November base form last year saw a healthy 1% growth and therefore providing evidence of a solid increase.

The **unemployment rate** fell to stand at 7.1% in January, compared with 8.3% in December, 8% in November and 7.9% in October.

**Graph 3 - 11: India's industrial production**

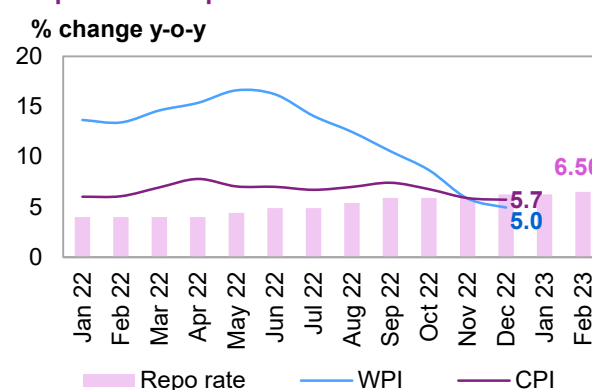


Sources: Ministry of Statistics and Program Implementation of India and Haver Analytics.

The trend in food price rises slowed sharply and in combination with base effects, helped ease annual **inflation** to 5.7% y-o-y in December. This follows a level 5.9% in November and 6.8% in October. However, core inflation remains persistently high, even above general inflation. It was at a level of 6.1% y-o-y in December, compared with 6% in November.

In the meantime, the Reserve Bank of India (RBI) lifted the **repo rate** by 25 bp to a level of 6.5% in February compared to the previous month. At the same time the central bank cut its inflation forecast for FY 2023 to 6.5% from 6.7%.

**Graph 3 - 12: Repo rate and inflation in India**



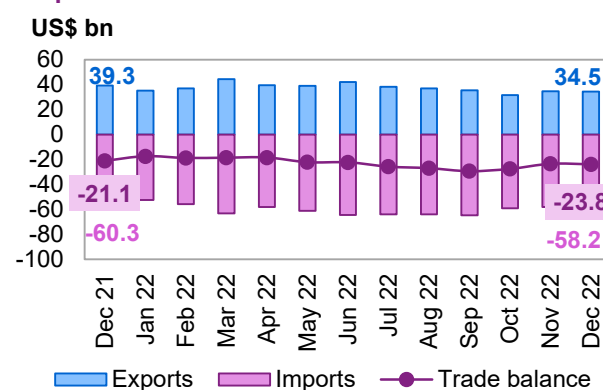
Sources: Ministry of Commerce and Industry, Reserve Bank of India and Haver Analytics.

India's **December trade balance** posted a deficit of about \$23.8 billion in December, compared with \$23.4 billion in November and a higher deficit of \$27.4 billion in October.

Monthly **exports** fell to \$34.5 billion in December from \$34.8 billion in November, but above \$31.6 billion in October.

Meanwhile, monthly **imports** remained unchanged at \$58.2 billion in December.

**Graph 3 - 13: India's trade balance**



Sources: Ministry of Commerce and Industry and Haver Analytics.

**Near-term expectations**

While India's economic growth performance is better-than-expected some months ago, the overall **dynamic is still expected to slow in 2023**. This expectation is due to a global slowdown impacting exports, as well as monetary policy normalization, among other factors, that are forecast to slow the 2023 growth dynamic relative to 2022.

In addition, the considerable recovery post-pandemic supported by private consumption and investment growth will taper off due to generally high inflation, less accommodative monetary conditions and a weakening strong base effect compared to 2022. Household consumption is expected to continue to grow, primarily supported by pent-up demand for high-contact activities, but this is likely at a lower rate.

The government's latest **budget** proposal foresees tax cuts and large government spending of a magnitude of around 4% of that aims to counterbalance the economy's weaker spots. It should be noted, however, that

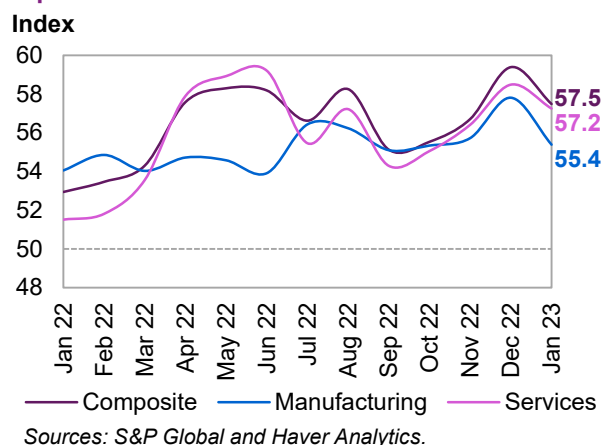
public sector enterprises have provided less capex spending in recent years so that broader public sector capex spending has been flat. Thus, it remains to be seen how much GDP growth will be impacted by the new fiscal measures, but it is evidently a considerable support factor for 2023. Given the importance of the domestic services sector it will be vital to see if this sector is able to compensate for the expected decline in manufacturing

The **RBI** is expected to lift interest rates only very gradually in 2023 as inflation has already eased substantially, another factor that is expected to support domestic demand. Inflation is forecast to remain around the RBI's upper band of 6% in 2023, but with persistently high core-inflation there is some room for uncertainty. After the repo rate was lifted by 2.25 pp in 2022 the most recent interest rate hike of 25 bp in 1H23 is likely to be the main monetary action for the year. If the situation improves further, then the RBI may even move to monetary easing towards the end of the year.

The S&P Global **manufacturing PMI** remained at a strong level of 55.4 in January, but retraced from the December level of 57.8 and remains below the 55.7 index level recorded in November.

Likewise, the **services PMI** retraced slightly, but remained strong at a level of 57.2 in January, compared with 58.5 in December. However, this level was above November and October levels of 56.4 and 55.1, respectively, supported by a generally sharp expansion in the contact-intensive services sector.

**Graph 3 - 14: India's PMIs**



With most of the current and foreseeable growth dynamic already built into expectations, India's **2022 and 2023 GDP growth** forecasts remain unchanged at 6.8% and 5.6%, respectively. Upside may come from a possible rising impact of the envisaged fiscal support, in combination with an improving global economy.

**Table 3 - 7: India's economic growth rate and revision, 2022–2023\*, %**

	India
<b>2022</b>	<b>6.8</b>
<b>Change from previous month</b>	0.0
<b>2023</b>	<b>5.6</b>
<b>Change from previous month</b>	0.0

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## Latin America

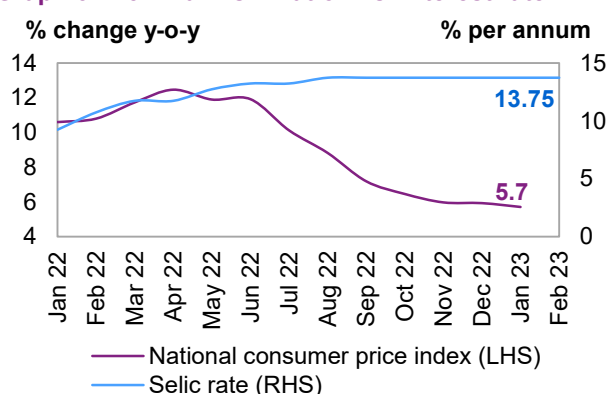
### Brazil

#### Update on latest developments

While for most of 2022, **Brazil's economic activity** surprised to the upside, the momentum seems to have slowed towards the end of the year. Growth in 2022 was supported to a significant extent by pre-election fiscal measures and higher commodity prices, but this has started to reverse since the beginning of 2023.

Moreover, **monetary policies** remained tight and key policy rates were kept unchanged at 13.75% in February as inflation slowed to 5.7% in January from 5.9% in December from 6.0% in November.

**Graph 3 - 15: Brazil's inflation vs. interest rate**



The leading institute for official labour market statistics suggested a further decline in the jobless rate. Based on a three-month moving average, Brazil's **unemployment rate** dropped to 8.1% in November, compared with 8.3% in October and 8.7% in September amid overall improving business and consumer confidence driven by the government's stimulus measures. Meanwhile, **consumer confidence** retracted slightly in January to stand at an index level of 89.2, compared with 89.5 in December, as measured by the Fundação Getúlio Vargas institute.

Brazil's new government announced ambitious plans to consolidate the budget, which – if successful – could provide a sound base for economic growth not only in 2023, but even more so in the coming years. One ambitious goal is to harmonize the tax code and to reform the VAT framework. In light of the need to reduce untargeted spending in order to implement more targeted reforms, the government will also likely phase out the tax breaks on gasoline and ethanol in March. In general, the plan to reduce the budget deficit and to balance the budget by next year – if successful – could attract private investment to the economy. In addition, a new fiscal anchor should be negotiated in Congress, which could provide more flexibility rather than the current debt limit instrument. Plans to establish a common currency with Argentina may be less successful, but this development will need to be monitored.

### Near-term expectations

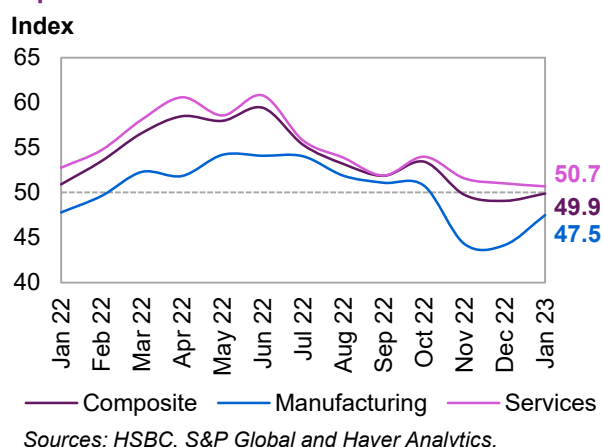
Brazil's economy seems to have **slowed towards the end of 2022** and this dynamic is forecast to carry over into 2023. While 2022 was very much supported by governmental stimulus measures and subsidies, including the tax break on fuels, the new government seems to be keen on phasing out some of these measures and consolidating the budget in order to lower the deficit. While it remains to be seen how this will be achieved, it could provide a sound base for future growth, but this is expected to take time. In the meantime, Brazil's growth will be impacted by the current high interest rate regime, the slowdown in domestic demand, as well as the phasing out the broad-based, election-year support measures and the general global downturn, including relatively lower commodity prices in 2023 when compared to 2022.

The current **monetary and fiscal situation** is well under control, but given the global slowdown and the many other challenges that the economy is facing in 2023 and beyond, fiscal developments will need to be closely monitored. Monetary policies are expected to remain relatively tight, but turning more accommodative towards 2H23 as the central bank is expected to lower key policy rates from 13.75% to 13.25%. This may come in response to the decline in inflation, which retracted sharply in 2H22, but stood at 9.2% y-o-y for 2022. As inflation is forecast to slow to 4.8% in 2023, the central bank will have more room to manoeuvre. Upside to the economy may also come from the solid agricultural sector and further opportunities in exports in light of the Eastern European conflict. Crop and livestock production accounts for almost 10% of the economy and when including processing and distribution, this share could rise even higher. Furthermore, a possible finalization of the EU-Mercosur trade deal could lift investments and trading opportunities for the economy.

Recent PMI indices indicated the slowing trend. The **manufacturing PMI** remained significantly below the growth indicating level of 50 for the third month in a row. It stood at 47.5 in January, compared with 44.2 in December and 44.3 in November. Positively, the index was up after seven months of consecutive declines.

The **services PMI** fell to 50.7 in January from 51 in December and 51.6 in November, pressured by heightened market uncertainty amid high interest rates and the political transition.

Graph 3 - 16: Brazil's PMIs





Brazil's **2022 GDP forecast** remains at 2.8%, unchanged from the previous month.

The GDP forecast for **2023** remains unchanged from last month at 1.0%. Potentially higher growth in the coming year could be supported by lower inflation, and consequently a more accommodative monetary policy; stronger asset market conditions; and optimistic business confidence. The fiscal reforms that are envisaged could also turn out as a supportive factor.

**Table 3 - 8: Brazil's economic growth rate and revision, 2022–2023\*, %**

	Brazil
<b>2022</b>	<b>2.8</b>
<b>Change from previous month</b>	0.0
<b>2023</b>	<b>1.0</b>
<b>Change from previous month</b>	0.0

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## Africa

### South Africa

#### Update on the latest developments

After a record year for **power rationing** in 2022, counting 205 days in total, the situation did not improve in January. Daily power cuts continued for up to 12 hours per day, due to equipment failures at the central energy company Eskom. This has and will continue to pose risks to business operations and public services, as well as social stability. Additionally, the private sector is experiencing a growing need to invest into power-related infrastructure to keep operations going and hence must divert resources from investments that are more likely to have good returns. Based on research by the Economic Intelligence Unit, nearly all economic activities and sectors have been affected by this malaise, including vital sectors such as health care, water supply and smaller businesses. In light of these issues, it is amazing that **South Africa's economy** performed better than previously expected throughout most of 2022.

In addition to ongoing power-supply issues, domestic political challenges and rising key policy rates, high inflation dampened momentum as well. Still, the **economy expanded** by a considerable 4.1% y-o-y in 3Q22, following growth of 0.2% y-o-y in 2Q22. On a sectoral level, eight out of ten sectors saw positive growth on a quarterly basis.

The agricultural sector expanded the most in 3Q22, growing by 19.2% q-o-q. Significant growth of 3.7% q-o-q was also seen in transportation. With sound levels of business and consumer confidence, the economy may have experienced ongoing good growth in 4Q22. Further, prospects for agriculture in the current summer season have improved due to good overall rainfall, providing support for growth in 2023, given that the sector accounts for around 6% of employment and up to 12% of total exports.

In December, **manufacturing production** fell by 3.2% y-o-y, after a decline of 2.1% y-o-y was seen in November and a rise of 2% y-o-y in October. Electricity production declined by 8.1% y-o-y in December, after a contraction of 1.6% y-o-y in November, the 16<sup>th</sup> straight month of decline, highlighting the sectorial issues affecting the economy. Mining production fell by 2.4% y-o-y in December, after a contraction of 9.2% y-o-y was seen in November, with only January showing an expansion in 2022.

#### Near-term expectations

South Africa is forecast to decelerate in 2023, a view unchanged from the previous month, as it is impacted by a variety of factors. Among these dampening factors are the expectation of a relatively softer commodity market in 2023, relative to the strong appreciation seen in 2022. Domestic political issues and the ensuing spill-over into rising domestic uncertainty also play a role. In particular, challenges stemming from the ongoing power supply crisis play a vital – and dampening – factor. Moreover, the central bank will continue its monetary tightening efforts in order to rein in inflation. Also, the administration's budget is facing fiscal constraints.

It remains to be seen how the government will tackle the energy crisis, but there is some possibility that a declaration of a state of disaster will be made and that some unused expenditure in the budget may be reallocated to help mitigate persistent power shortages.

Considering ongoing issues in the economy, the forward-looking seasonally adjusted composite **Purchasing Managers' Index** as provided by S&P Global fell below the growth-indicating level of 50 in January to stand at 48.7, compared with 50.2 in December and 50.6 in November.

South Africa's **2022 GDP growth** was revised up slightly to 1.9% from 1.8%, with somewhat better output indicators up to the end of the year.

The **2023 forecast** was kept unchanged from the last assessment of 1.1%. More downside risks in 2023 could surface, depending on domestic and global economic developments over the short term. The power sector will particularly need monitoring in this respect.

**Table 3 - 9: South Africa's economic growth rate and revision, 2022–2023\*, %**

South Africa	
<b>2022</b>	<b>1.9</b>
<b>Change from previous month</b>	0.1
<b>2023</b>	<b>1.1</b>
<b>Change from previous month</b>	0.0

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## Russia and Central Asia

### Russia

#### Update on the latest developments

Over the past year, **Russia has managed to limit the decline in its GDP**. The economy has been significantly impacted by external political and economic pressure, especially through sanctions, and through a slowdown in domestic consumption, but high income from exports – primarily commodities - and government spending has helped to negate these negative factors to a large extent. Additionally, a well-managed central bank policy, and sound commodities markets in 2022 have also helped to shield the economy from more severe effects.

After Russia's GDP was reported to have contracted y-o-y by 3.7% in 3Q22, monthly data for 4Q22 shows a similar negative trend. November GDP declined y-o-y by 4%, following a decline of 4.5% y-o-y in October, according to the latest release by Russia's State Statistics Service and its Ministry of Economic Development. This compares to a decline of 4.1% y-o-y in 2Q22. Household consumption declined y-o-y by 2.9% in 3Q22, after a drop of 5.5% y-o-y in 2Q22. While 3Q22 numbers show support from gross capital formation, at a magnitude of 7.3% y-o-y, recent monthly data does not provide this detail. From the perspective of retail sales, in value terms this decelerated sharply in the latest available month of December, expanding by only 0.6% y-o-y. This follows a y-o-y rise of 4.2% in November, 2.6% in October and 3.5% in September.

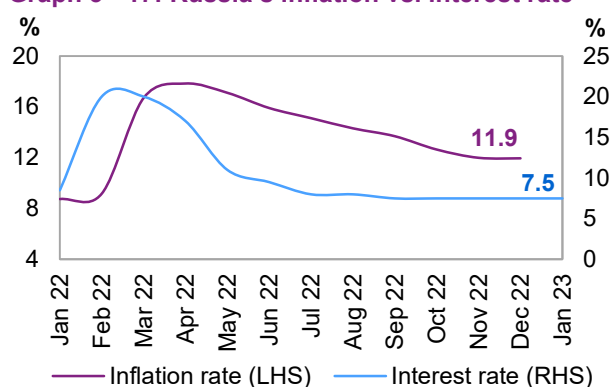
The contraction in **industrial production** rose as to stand at a negative 4.3% y-o-y in December, compared with -1.8% in November and -2.6% in October. December's results marked the ninth consecutive monthly decline in industrial activity, with the exception of August when it was flat.

**Consumer inflation** was unchanged in December with the CPI standing at 11.9% y-o-y, the same as in November. This compares to 12.6% y-o-y in October.

**Producer price** growth fell by 3.3% y-o-y in December. This compares with a contraction of 1.9% y-o-y in November, and a rise of 0.8% y-o-y in October.

Russia's central bank has held its policy rate at 7.5% in January, while indicating it would continue to use the latest data to adjust monetary policy in future meetings. Russia's **jobless rate** remained at a very low level of 3.7% in December, the same as in November. This compares to a level of 3.9% in October.

**Graph 3 - 17: Russia's inflation vs. interest rate**



Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.

#### Near-term expectations

The **accentuated downward shift of the Russian economy in 2H22**, in combination with rising external pressure, are forecast to keep growth in negative territory in 2023. The counterbalancing measures undertaken by the government have compensated, at least to a significant extent, the slowdown over the past year. However, near-term developments are dependent on the ongoing geopolitical tensions in the region and these uncertainties related to the impact of sanctions make forecasting economic growth challenging. In addition, any potential softening environment in the commodities sector in 2023, compared to 2022, may also negatively impact government revenues. The combination of factors makes a continuation of the decline witnessed towards the end of 2022 relatively likely.

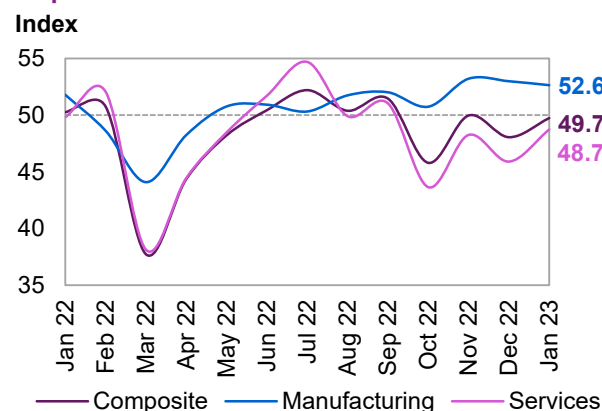
Quarterly growth stood at 3.5% y-o-y in 1Q22, but GDP started to decline in 2Q22. It fell by 4.1% y-o-y and then by 3.7% y-o-y in 3Q22. GDP is forecast to drop by a further 8.5% y-o-y in 4Q22, amid widespread sanctions and the implementation and impact of the EU ban on Russian crude seaborne imports. Public spending, however, is expected to continue to provide economic support. Moreover, it remains to be seen as to what extent the decline in domestic consumption will stabilise and how energy export revenues will develop. For the time being, domestic investment – supported by the government – is forecast to rise by 3% in 2023 and direct government spending is also estimated to expand considerably by slightly more than 1.5%. Consumption, however, is forecast to decline by around 1% in the current year and exports are forecast to drop by around 7%.

**PMI indices** reflect recent expectations in both the manufacturing and services sectors, with some stabilising forces in manufacturing supported by the commodities sector alongside a continued challenging situation in the services sector.

January's S&P Global's **Manufacturing PMI** was almost unchanged at 52.6, compared with 53.0 in December and 53.2 in November.

The **services PMI** rebounded and stood at 48.7 in January, compared with 45.9 in December and 48.3 in November.

**Graph 3 - 18: Russia's PMI**



Sources: HSBC, S&P Global and Haver Analytics.

**Russia's** real economic contraction is forecast at 3.5% in **2022**, an upward revision from a contraction of 4.0% in the previous month.

**2023 GDP growth** is forecast to decline by 0.5%, unchanged from the previous month.

These forecasts remain subject to high levels of uncertainty amid the ongoing geopolitical tensions and the global economic environment.

**Table 3 - 10: Russia's economic growth rate and revision, 2022–2023\*, %**

	Russia
<b>2022</b>	<b>-3.5</b>
<b>Change from previous month</b>	<b>0.5</b>
<b>2023</b>	<b>-0.5</b>
<b>Change from previous month</b>	<b>0.0</b>

Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

## OPEC Member Countries

### Saudi Arabia

After very strong growth of 9.0% in 2022, the **Saudi Arabian economy** is forecast to see easing expansion in 2023, although some of the strong underlying dynamic is expected to carry over into 2023. This year's growth will be impacted by an expected slowdown in the global economy and the consequent effects this may have on export revenues. The economy grew by 5.4% y-o-y in 4Q22 and 8.8% y-o-y in 3Q22, its strongest performance since 4Q11. Details for 4Q22 growth are not available in this first estimate. This economic growth dynamic follows an expansion of a 12.2% y-o-y in 2Q22 and 9.9% in 1Q22. Details for 3Q22 show that household consumption remained strong, expanding by 3.3% y-o-y, albeit somewhat below the 2Q22 level of 5.5% y-o-y and far less than the 7.1% seen in 1Q22. The latest purchasing managers' index (PMI) reading of 58.2 in January points to continued strong growth at the beginning of the year. This compares with 56.9 in December. While domestic activity remains strong, the latest key policy rate increases by the Saudi Central Bank may dampen economic activity going forward. The central bank lifted interest rates by 25 bp in February to 5.25%, mirroring the US-dollar interest rate regime.

### Nigeria

Following GDP growth of 2.4% y-o-y in 3Q22, 4Q22 data indicates that **Nigeria's economy** faces a sharp rise in inflation, accompanied by higher interest rates and slowing private-sector momentum, leading to a slowdown in household consumption. The inflation rate remained almost unchanged at 21.3% y-o-y, after it had accelerated to its highest level in 17 years in December, reaching 21.5% y-o-y. This has been driven by localized food and fuel shortages. The rate showed a constantly rising trend for most of the year.

However, on a monthly basis, CPI inflation stood at 1.7% m-o-m in December, following a rise of 1.4% m-o-m in November and 1.2% m-o-m in October. In line with expected slowing momentum towards the end of the year, the PMI for the total economy retracted somewhat, though it still points to an ongoing expansion. The Stanbic IBTC Bank total economy PMI retracted to stand at 53.5 in January, after reaching 54.6 in December and compared with 54.3 in November.

## The United Arab Emirates (UAE)

The most recent indicators available for the **UAE's economy** point to continued robust growth in both the hydrocarbons sector and non-oil-related activities, but likely at a slowing pace in 2023. The S&P Global UAE PMI for January was almost unchanged at 54.1, compared with an index level of 54.2 in December and 54.4 in November. This very gradually slowing momentum may continue in 2023. Further support for the 2023 growth dynamic may come from the hydrocarbons sector, along with government policies that aim to increase foreign direct investment through eight comprehensive economic and trade agreements that it envisages to implement, together with rising investment into renewable energy. With a strong US-dollar pegged currency, the economy's growth **dynamic** could, however, be impacted by an increase in interest rates. The central bank lifted its key policy rate by 25 bp in February to stand at 4.65%, mirroring the US-dollar interest rate regime. The impact of gradually slowing expansion will mostly effect the private sector. It is also likely that higher interest rates — and their effect on rising capital costs — will also impact the UAE's real estate sector.

## The impact of the US dollar (USD) and inflation on oil prices

The **US dollar (USD) index** declined for the third consecutive month, falling by 1.7% m-o-m. A slowdown in US interest rate hikes, combined with the increase hawkishness of major central banks from **developed market (DM) economies**, weighed on the USD. Additionally, improvements in the global macroeconomic outlook dampened the safe haven appeal of the USD as investors shifted capital towards growth assets and traditional safe haven assets. In DM currencies, the USD fell m-o-m against the euro by 1.8% m-o-m and against the yen and the pound sterling by 3.8% and 0.1%, respectively.

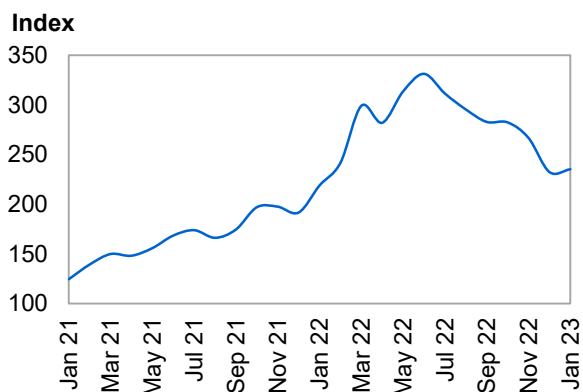
In terms of **emerging market (EM) currencies**, the USD fell by 0.6% m-o-m in January against the rupee, thus erasing gains from the previous month. The USD also fell against the yuan, declining by 2.7% m-o-m, and by 0.9% against the real over the same period.

The differential between nominal and real **ORB** prices narrowed on a weaker USD and lower crude oil prices. **Inflation** (nominal price minus real price) went from a negative \$0.92/b in December to \$0.99/b in January, a 208% increase m-o-m.

In **nominal terms**, accounting for inflation, the ORB price rose after sixth consecutive months of decline, increasing from \$79.68/b in December to \$81.62/b in January, a 2.4% rise m-o-m.

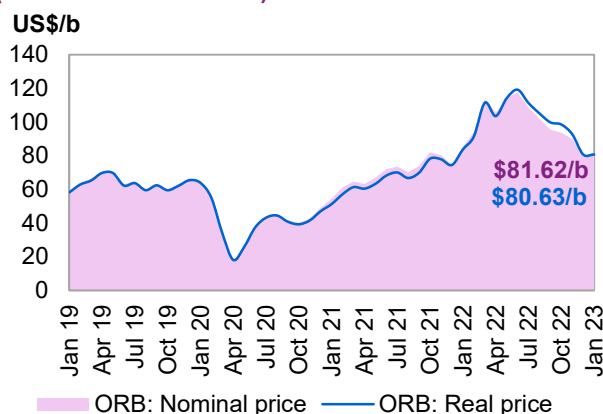
In **real terms** (excluding inflation), the ORB went from \$80.60/b in December to \$80.63/b in January, a 3.6% increase m-o-m.

**Graph 3 - 19: The Modified Geneva I + US\$ Basket (base June 2017 = 100)**



Sources: IMF and OPEC.

**Graph 3 - 20: Impact of inflation and currency fluctuations on the spot ORB price (base June 2017 = 100)**



Source: OPEC.

## World Oil Demand

2022 world oil demand growth is estimated to remain broadly unchanged from last month at 2.5 mb/d. However, in 3Q22 and 4Q22, oil demand was adjusted slightly lower to incorporate revisions to OECD data. By contrast, oil demand in non-OECD countries is revised higher, due to improvements in economic activity in some countries and a recovery in oil demand in China after the zero-COVID-19 policy was abandoned. Total world oil demand is estimated to have averaged 99.6 mb/d in 2022.

For 2023, the world oil demand growth forecast is slightly adjusted upwards from the last MOMR, to stand at 2.3 mb/d. Oil demand in the OECD is projected to grow by around 0.4 mb/d and in the non-OECD region by around 2.0 mb/d. Minor upward adjustments were made to OECD Asia Pacific in 1Q23 and 2Q23, to reflect the expected positive spillover from the opening of the Chinese economy on the region's petrochemical sector. In the non-OECD, minor upward revisions were applied to consider an acceleration of oil demand growth in China, on the back of a stronger perceived performance of the country's economy following the abandonment of COVID-19 restrictions. Accordingly, world oil demand in 1Q23 is forecast to rise by 1.9 mb/d y-o-y and to grow even more in the following quarters. For 2023, oil demand is projected to average 101.9 mb/d. However, this forecast is subject to many uncertainties, including global economic activity, a possible shift in China's COVID-19 policy, and ongoing geopolitical developments.

**Table 4 - 1: World oil demand in 2022\*, mb/d**

World oil demand	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21	
							Growth	%
<b>Americas</b>	24.32	24.77	24.98	25.33	25.16	25.06	0.75	3.08
<i>of which US</i>	20.03	20.38	20.41	20.62	20.68	20.52	0.49	2.44
<b>Europe</b>	13.13	13.19	13.42	14.09	13.73	13.61	0.48	3.68
<b>Asia Pacific</b>	7.38	7.85	6.99	7.22	7.71	7.44	0.06	0.81
<b>Total OECD</b>	<b>44.83</b>	<b>45.81</b>	<b>45.39</b>	<b>46.65</b>	<b>46.61</b>	<b>46.12</b>	<b>1.29</b>	<b>2.88</b>
<b>China</b>	14.97	14.74	14.42	14.64	15.44	14.81	-0.16	-1.06
<b>India</b>	4.77	5.18	5.16	4.95	5.26	5.14	0.37	7.66
<b>Other Asia</b>	8.63	9.09	9.27	8.73	8.85	8.98	0.36	4.12
<b>Latin America</b>	6.23	6.32	6.36	6.55	6.49	6.43	0.20	3.27
<b>Middle East</b>	7.79	8.06	8.13	8.50	8.32	8.25	0.46	5.93
<b>Africa</b>	4.22	4.51	4.15	4.25	4.61	4.38	0.16	3.72
<b>Russia</b>	3.61	3.67	3.42	3.45	3.59	3.53	-0.08	-2.32
<b>Other Eurasia</b>	1.21	1.22	1.16	1.00	1.21	1.15	-0.06	-5.07
<b>Other Europe</b>	0.75	0.79	0.75	0.73	0.80	0.77	0.01	1.62
<b>Total Non-OECD</b>	<b>52.18</b>	<b>53.58</b>	<b>52.81</b>	<b>52.79</b>	<b>54.56</b>	<b>53.44</b>	<b>1.25</b>	<b>2.40</b>
<b>Total World</b>	<b>97.01</b>	<b>99.38</b>	<b>98.20</b>	<b>99.44</b>	<b>101.17</b>	<b>99.55</b>	<b>2.54</b>	<b>2.62</b>
<b>Previous Estimate</b>	97.01	99.38	98.20	99.43	101.18	99.55	2.54	2.62
<b>Revision</b>	0.00	0.00	0.00	0.01	-0.01	0.00	0.00	0.00

Note: \* 2022 = Estimate. Totals may not add up due to independent rounding. Source: OPEC.

Table 4 - 2: World oil demand in 2023\*, mb/d

World oil demand	2022	1Q23	2Q23	3Q23	4Q23	2023	Change 2023/22	
							Growth	%
<b>Americas</b>	25.06	24.96	25.27	25.68	25.42	25.33	0.27	1.08
<b>of which US</b>	20.52	20.46	20.54	20.88	20.81	20.67	0.15	0.74
<b>Europe</b>	13.61	13.22	13.46	14.13	13.78	13.65	0.04	0.29
<b>Asia Pacific</b>	7.44	7.89	7.05	7.27	7.73	7.48	0.04	0.55
<b>Total OECD</b>	<b>46.12</b>	<b>46.08</b>	<b>45.77</b>	<b>47.08</b>	<b>46.93</b>	<b>46.47</b>	<b>0.35</b>	<b>0.76</b>
<b>China</b>	14.81	15.10	15.22	15.25	16.03	15.40	0.59	4.01
<b>India</b>	5.14	5.41	5.44	5.21	5.50	5.39	0.25	4.96
<b>Other Asia</b>	8.98	9.42	9.61	9.10	9.20	9.33	0.35	3.85
<b>Latin America</b>	6.43	6.44	6.49	6.71	6.65	6.58	0.15	2.29
<b>Middle East</b>	8.25	8.45	8.46	8.84	8.61	8.59	0.33	4.04
<b>Africa</b>	4.38	4.71	4.34	4.43	4.80	4.57	0.19	4.34
<b>Russia</b>	3.53	3.63	3.45	3.59	3.75	3.61	0.08	2.17
<b>Other Eurasia</b>	1.15	1.21	1.16	1.02	1.22	1.15	0.01	0.51
<b>Other Europe</b>	0.77	0.80	0.76	0.75	0.82	0.78	0.02	2.32
<b>Total Non-OECD</b>	<b>53.44</b>	<b>55.18</b>	<b>54.92</b>	<b>54.91</b>	<b>56.58</b>	<b>55.40</b>	<b>1.96</b>	<b>3.68</b>
<b>Total World</b>	<b>99.55</b>	<b>101.26</b>	<b>100.70</b>	<b>101.99</b>	<b>103.51</b>	<b>101.87</b>	<b>2.32</b>	<b>2.33</b>
<b>Previous Estimate</b>	99.55	101.04	100.65	101.90	103.47	101.77	2.22	2.23
<b>Revision</b>	0.00	0.22	0.05	0.09	0.04	0.10	0.10	0.10

Note: \* 2022 = Estimate and 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.

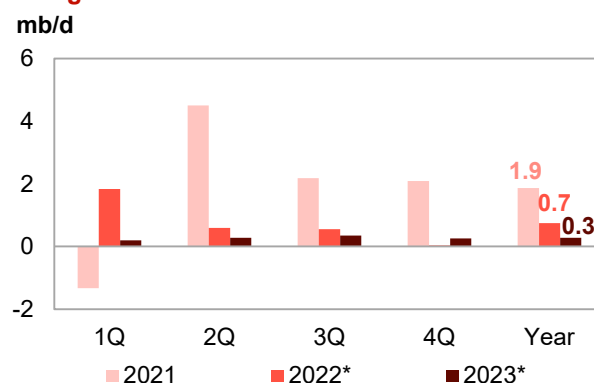
## OECD

### OECD Americas

#### Update on the latest developments

Oil demand in the US grew by a minor 20 tb/d y-o-y in **November**, down from 40 tb/d y-o-y growth in October, on signs of slowing economic activity. The US economy has been facing headwinds from rising inflation and other macroeconomic challenges weighing on oil demand. US core inflation declined somewhat, but remained high, standing at 6.5% y-o-y in November. This compared with 7.1% reported in October. The manufacturing PMI was at 49.0 points, below the 50 point threshold, according to ISM, while the services PMI was at 56.5 points, up from 54.4 points in October. Further, data from the US Federal Highway Administration shows that November traffic volume trends remained below pre-pandemic levels and declined by 1.3% y-o-y. Compared to October 2022, traffic also dropped by 1.1% m-o-m.

Graph 4 - 1: OECD Americas oil demand, y-o-y change



Note: \* 2022 = Estimate and 2023 = Forecast. Source: OPEC.

However, the IATA Air Passenger Market Analysis reported that US airline activity rebounded further in November 2022, to stand merely 1% below the November 2019 level.

The “other products” category led November oil demand growth at 0.3 mb/d y-o-y, up from a 30 tb/d y-o-y decline in October. Jet fuel increased by 0.1 mb/d y-o-y in November, from y-o-y growth of 51 tb/d in October. The uptick in jet fuel demand was due to the continued air travel recovery. LPG saw y-o-y growth of 60 tb/d, down from y-o-y growth of 0.2 mb/d seen in October. With Americans making fewer car journeys, gasoline again declined by 0.2 mb/d y-o-y in November. Residual fuels also recorded a y-o-y decline of 60 tb/d in November, and naphtha remained weak for 11 consecutive months, due to low demand from the petrochemical sector, posting a 44 tb/d y-o-y decline.

Table 4 - 3: US oil demand, mb/d

By product	Nov 21	Nov 22	Change Nov 22/Nov 21	
			Growth	%
LPG	3.54	3.60	0.06	1.7
Naphtha	0.19	0.14	-0.04	-23.4
Gasoline	9.02	8.85	-0.17	-1.9
Jet/kerosene	1.51	1.61	0.10	6.3
Diesel	4.19	4.06	-0.13	-3.1
Fuel oil	0.41	0.35	-0.06	-14.6
Other products	2.00	2.27	0.27	13.5
<b>Total</b>	<b>20.86</b>	<b>20.88</b>	<b>0.02</b>	<b>0.1</b>

Note: Totals may not add up due to independent rounding. Sources: EIA and OPEC.

## Near-term expectations

In **1Q23**, solid US GDP growth momentum is forecast to partially carry over from 2022. However, the risk of renewed inflationary pressures and the seasonal weakening of mobility during the winter is expected to reduce demand for transportation fuels. Accordingly, in 1Q23, US oil demand is projected to grow y-o-y by 80 tb/d. Jet fuel is expected to be the major driver of oil demand growth, as air travel in the US was just 1% below pre-pandemic levels in November. Furthermore, diesel and petrochemical feedstock requirements are also expected to support demand growth in the quarter, while gasoline demand is anticipated to remain relatively weak.

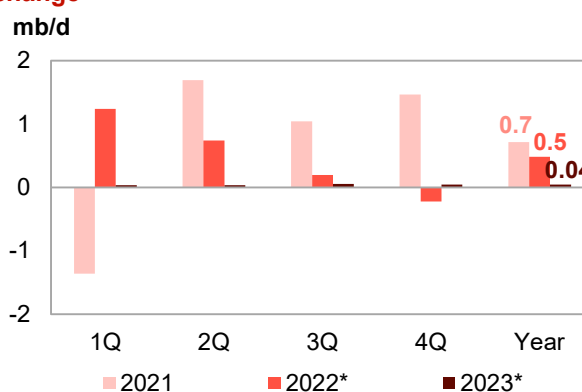
In **2Q23**, the US GDP is projected to improve slightly, with inflation expected to continue to decline. Furthermore, the expected further recovery in mobility, combined with robust airline activity and improving petrochemical demand for feedstock, will likely support oil demand to grow y-o-y by 0.13 mb/d in the quarter. However, risks remain skewed downside, with a focus on developments in the US economy.

## OECD Europe

### Update on the latest developments

Oil demand in OECD Europe showed y-o-y declines for three consecutive months. In **November**, the region posted a y-o-y decline of 0.3 mb/d, though this was an improvement from an annual decline of 0.9 mb/d in October. The region has been facing daunting challenges, partly due to ongoing geopolitical developments, coupled with inflation and slowing economic activity, which continue to weigh on oil demand in the region. On a positive note, jet/kerosene increased y-o-y by 0.2 mb/d in November as airline activity continued to improve. Residual fuels also grew, rising by 90 tb/d y-o-y in November. Gasoline posted y-o-y growth of 60 tb/d in November following two months of annual decline.

Graph 4 - 2: OECD Europe's oil demand, y-o-y change



Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

Diesel sustained a three-month y-o-y decline in November, contracting by 0.3 mb/d, y-o-y, mostly due to weaker manufacturing and trucking activity. Industrial production decelerated slightly, increasing by 1.9% y-o-y, compared with 2.8% y-o-y growth in October. At the same time, the Manufacturing and Services PMI stood at 47.1 and 48.5 in November, respectively, which is below the 50 threshold of expansion, and the services PMI stood at 48.5. Lower demand from the European petrochemical industry has been affecting feedstock in the region. Accordingly, naphtha and LPG declined by 0.25 mb/d and 20 tb/d, y-o-y, respectively. Finally, the "other products" category also declined by 80 tb/d, y-o-y.

**Table 4 - 4: Europe's Big 4\* oil demand, mb/d**

By product	Nov 21	Nov 22	Change Growth	Nov 22/Nov 21 %
LPG	0.41	0.32	-0.09	-21.9
Naphtha	0.59	0.47	-0.12	-20.7
Gasoline	1.18	1.22	0.04	3.5
Jet/kerosene	0.57	0.67	0.10	17.8
Diesel	3.33	3.14	-0.19	-5.6
Fuel oil	0.17	0.20	0.03	18.2
Other products	0.49	0.42	-0.07	-14.7
<b>Total</b>	<b>6.72</b>	<b>6.43</b>	<b>-0.30</b>	<b>-4.4</b>

Note: \* Germany, France, Italy and the UK. Totals may not add up due to independent rounding.

Sources: JODI, UK Department for Business, Energy & Industrial Strategy, Unione Petrolifera and OPEC.

## Near-term expectations

Despite still high inflation, the region's GDP is projected to remain positive y-o-y in **1Q23**. However, the ongoing supply chain bottlenecks, exacerbated by the geopolitical developments in the region, will likely continue to affect the manufacturing and petrochemical sectors of the region. Nevertheless, sustained growth in air travel activity is expected to support overall oil demand in 1Q23, which is projected to grow slightly y-o-y by 30 tb/d on the back of jet fuel demand.

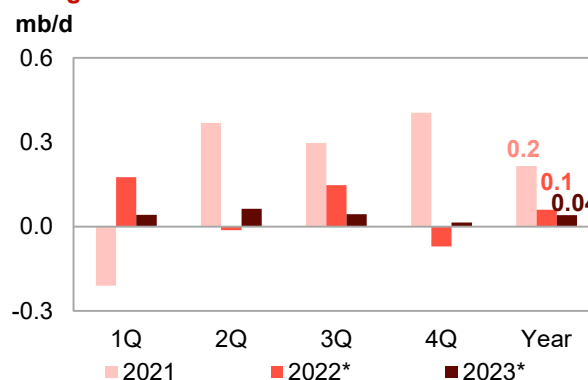
In **2Q23**, GDP growth in the region is projected to weaken further y-o-y, but is forecast to remain positive. Oil demand growth in the quarter is expected to be supported by rising demand for air travel, as well as an expected uptick in road mobility. Accordingly, jet fuel and gasoline are set to be the main oil demand drivers in 2Q23, with overall oil demand forecast to grow 30 tb/d, y-o-y. Risks, however, remain skewed to the downside, hinging on geopolitical and economic developments in the region.

## OECD Asia Pacific

### Update on the latest developments

Oil demand in OECD Asia Pacific posted slight y-o-y growth of 30 tb/d in **November**, up from a y-o-y decline of 60 tb/d in October. Oil demand increased mostly in Australia, while both Japan and South Korea's oil demand has remained in contraction since September. The two largest oil consuming countries in the region are facing some economic headwinds; Japan's Manufacturing and Services PMIs dropped respectively to 49 and 50.3 m-o-m in November. South Korea also faced some challenges in the month emanating from a truckers' strike. Nonetheless, the country saw a slight improvement in its manufacturing PMI for the month.

**Graph 4 - 3: OECD Asia Pacific oil demand, y-o-y change**



Note: \* 2022 = Estimate and 2023 = Forecast.

Source: OPEC.

From the perspective of products, jet kerosene was the driver of oil demand growth in the month, increasing y-o-y by 80 tb/d. Airlines based in the Asia Pacific continued to see y-o-y activity improvements, which supported jet/kerosene demand in the region. Rising natural gas prices also led to oil-to-gas switching, enabling the "other products" category to expand by 56 tb/d y-o-y. Other gas oil also benefitted from gas-to-oil switching to grow by 30 tb/d y-o-y. Gasoline demand grew marginally by 10 tb/d, y-o-y.

Naphtha posted an annual decline for the third consecutive month, down by 0.1 mb/d y-o-y, albeit showing an improvement from an annual decline of 0.3 mb/d in October. The region's naphtha market has faced challenges from weak margins to produce plastic derivatives. Naphtha demand was also subdued due to China's zero-COVID-19 policy that impacted the petrochemical industry in Japan and South Korea. Residual fuels saw a y-o-y decline of 3 tb/d. Finally, diesel demand declined by 42 tb/d, y-o-y.



Table 4 - 5: Japan's oil demand, mb/d

By product	Dec 21	Dec 22	Change Dec 22/Dec 21	
			Growth	%
LPG	0.50	0.67	0.18	35.5
Naphtha	0.80	0.66	-0.15	-18.4
Gasoline	0.78	0.77	-0.01	-0.8
Jet/kerosene	0.64	0.67	0.03	5.1
Diesel	0.85	0.83	-0.02	-2.7
Fuel oil	0.29	0.26	-0.02	-8.4
Other products	0.28	0.07	-0.20	-73.7
<b>Total</b>	<b>4.13</b>	<b>3.93</b>	<b>-0.19</b>	<b>-4.7</b>

Note: Totals may not add up due to independent rounding. Sources: JODI, METI and OPEC.

## Near-term expectations

The region's GDP is projected to remain positive in 2023, albeit slightly lower than what was seen in 2022. The economies of the region's two major oil-consuming countries, Japan and South Korea, have witnessed slowing momentum and inflation rates in both countries are elevated. At the same time, air travel activity continues to recover. Japan is considering downgrading COVID-19 from a pandemic to a seasonal influenza. Furthermore, the opening of the Chinese economy will also boost the region's petrochemical industry going forward. The region's oil demand is projected to grow by 40 tb/d y-o-y in **1Q23**.

By **2Q23**, oil demand growth is projected to improve slightly at 60 tb/d y-o-y, mainly supported by jet and other transportation fuels, as well as petrochemical feedstock. However, risks remain high and tilted to the downside, mainly dependent on developments in the economies of Japan and South Korea.

## Non-OECD

### China

#### Update on the latest developments

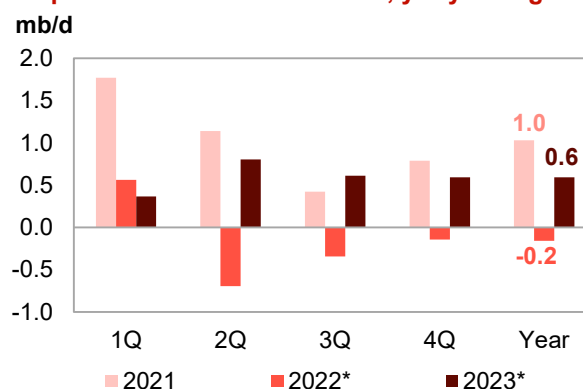
Economic and social activity have started recovering in **China** after the abandonment of the zero-COVID-19 policy in **December**. On the back of this new development, oil demand posted y-o-y growth of 0.2 mb/d in December. This follows y-o-y declines, after weakening from April to November, with only September showing an exception. The oil demand recovery was led by naphtha, which increased by 0.2 mb/d, followed by diesel, which saw a y-o-y growth of 0.1 mb/d.

Despite seven months of overall declining oil demand, diesel demand has been on a positive trajectory since May, partly supported by agricultural activity and a gradual recovery of industrial activities since June, when lockdowns in major cities such as Shanghai and Beijing eased. Furthermore, China's petrochemical industry requirements have been ongoing, as the industry remained in operation despite lockdowns.

Demand for petrochemical feedstock has been relatively resilient in supporting China's oil demand growth. As China continues to build new petrochemical capacities, consumption of naphtha (including naphtha internally produced and used in refinery-integrated plants) and LPG has been stable. China Petroleum & Chemical has continued to operate at around full capacity in December, while Hengli Petrochemical (Dalian) has been operating at around 94% capacity.

In addition, the reopening of the Chinese economy has resulted in a pick-up of industrial and manufacturing activities, also supporting demand for petrochemicals in the country. In December, naphtha posted y-o-y growth of 0.2 mb/d. LPG recorded y-o-y growth of 82 tb/d, and residual fuels saw y-o-y growth of 64 tb/d, y-o-y, in December.

Graph 4 - 4: China's oil demand, y-o-y change



Note: \* 2022 = Estimate and 2023 = Forecast.  
Source: OPEC.

On the back of rising travel demand in China, jet/kerosene also saw an increase y-o-y by 70 tb/d, y-o-y, in December. However, gasoline demand is still contracting, albeit it improved from a 0.73 mb/d y-o-y decline in November to a contraction of 0.24 mb/d in December, amid increased internal mobility. Similarly, the “other products” category declined in December by 0.12 mb/d, y-o-y, an improvement from a 0.23 mb/d, y-o-y, decline seen in November.

**Table 4 - 6: China’s oil demand\*, mb/d**

By product	Dec 21	Dec 22	Change Dec 22/Dec 21	
			Growth	%
LPG	2.39	2.47	0.08	3.4
Naphtha	2.15	2.36	0.21	9.6
Gasoline	3.20	2.96	-0.24	-7.6
Jet/kerosene	0.82	0.89	0.07	8.5
Diesel	3.20	3.31	0.11	3.4
Fuel oil	0.39	0.45	0.06	16.4
Other products	2.30	2.18	-0.12	-5.0
<b>Total</b>	<b>14.45</b>	<b>14.63</b>	<b>0.18</b>	<b>1.2</b>

Note: \* Apparent oil demand. Totals may not add up due to independent rounding.

Sources: Argus Global Markets, China OGP (Xinhua News Agency), Facts Global Energy, JODI, National Bureau of Statistics China and OPEC.

### Near-term expectations

The abandonment of the zero COVID-19 policy is expected to improve economic and social activity in China. Reports suggest that both mobility and air travel rebounded during the new year festival last month. China’s Ministry of Transport expected a 99.5% y-o-y increase in passenger trips during the 2023 Lunar Year Festival, boosting gasoline demand. Similarly, according to Chinese aviation data company VariFlight, domestic flight activity jumped to around 65% of pre-pandemic levels in December, from just 22% in November.

China’s GDP is forecast to grow by 5.2% in 2023. In addition, China’s plans to expand fiscal spending to aid the economic recovery are likely to support oil demand in manufacturing, construction and mobility. The manufacturing sector is expected to recover relatively quickly, and the aviation sector is expected to see significant increases in both local and international travel, given pent-up demand. Furthermore, the performance of the resilient petrochemical sector is also projected to improve further.

China’s **1Q23** oil demand is forecast to see y-o-y growth of 0.4 mb/d, with transportation fuels the main driver of the recovery. Domestic air travel in China has already recovered to around 70% of pre-pandemic levels and international travel is accelerating, supporting demand for jet fuel in the country. Similarly, diesel demand is forecast to grow on the back of increasing manufacturing, construction, agricultural sector-related activity, and feedstock consumption from independent refineries in China’s Shandong region may provide some support.

In **2Q23**, manufacturing and construction activity are expected to accelerate further, along with expanding requirements for the petrochemical industry. This would boost demand and output for middle and light distillate products. Furthermore, air travel is expected to continue to rebound. Accordingly, China’s oil demand is projected to grow by 0.8 mb/d y-o-y. However, risks are skewed to the downside, depending on the development of COVID-19 infections and a possible reaction by the Chinese government.

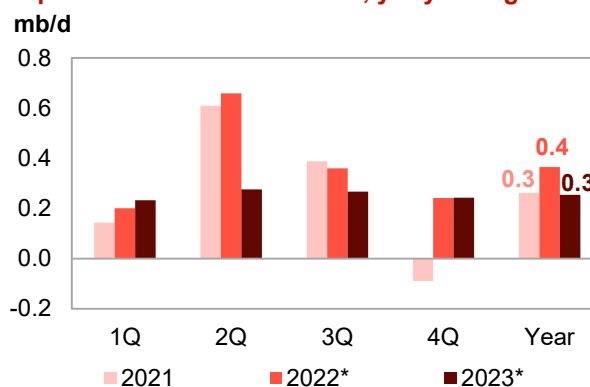
## India

### Update on the latest developments

**India's oil demand** grew by 0.2 mb/d in **December**.

The oil demand increase was led by diesel, which posted y-o-y growth of 0.1 mb/d. Diesel is the leading product in India, accounting for around 35% of total oil demand. Demand for diesel was supported by strong manufacturing activity as indicated by the rise in industrial output, which increased by 6.2%, y-o-y in November. Furthermore, December's manufacturing and Services PMIs increased to 57.8 and 58.5 m-o-m in December. Rising demand for agriculture and transportation activities in the farming sector, combined with progress in construction activity, also aided demand growth for diesel in December. India's inflation rate has also declined, dropping to 5.7% in December from 5.9% in November and is now trending toward the pre-pandemic level of 5.4%.

**Graph 4 - 5: India's oil demand, y-o-y change**



Note: \* 2022 = Estimate and 2023 = Forecast.  
Source: OPEC.

On the back of increased economic activity as well as travel during seasonal festivities, gasoline posted growth of 46 tb/d, or 6%, y-o-y. In addition, residual fuels saw y-o-y growth of 11 tb/d. Indian airline activity continues to steadily recover from the pandemic. IATA's Air Passenger Market Analysis reports that November's domestic revenue passenger kilometres (RPKs) are now only 12.2% short of the 2019 level. Demand for jet/kerosene in December increased only marginally. Naphtha has marginally increased y-o-y in December, from a y-o-y decline of 63 tb/d in November. In India, naphtha is mostly used for gasoline blending and its by-products are channelled into the domestic petrochemical sector as feedstock for naphtha-fed steam crackers.

**Table 4 - 7: India's oil demand, mb/d**

By product	Dec 21	Dec 22	Change Dec 22/Dec 21	
			Growth	%
LPG	0.93	0.97	0.04	3.9
Naphtha	0.30	0.30	0.00	0.5
Gasoline	0.77	0.82	0.05	5.9
Jet/kerosene	0.17	0.18	0.01	4.1
Diesel	1.72	1.83	0.10	6.1
Fuel oil	0.12	0.13	0.01	9.5
Other products	0.79	0.76	-0.02	-2.9
<b>Total</b>	<b>4.81</b>	<b>4.99</b>	<b>0.18</b>	<b>3.8</b>

Note: Totals may not add up due to independent rounding.

Sources: JODI, Petroleum Planning and Analysis Cell of India and OPEC.

### Near-term expectations

Looking forward, India's GDP growth is projected to remain firm at 5.6% in 2023. The country's manufacturing and service sectors are expected to continue to provide support. India's oil demand is projected to rise by 0.2 mb/d y-o-y in **1Q23**, with increasing mobility expected to support gasoline and jet fuel demand.

In **2Q23**, India's oil demand is projected to increase further y-o-y by 0.3 mb/d. The Indian government has announced a proposal to increase capital spending by \$122.3 billion to support infrastructure development in the coming fiscal year, around March and April. The government is also planning to reduce the income tax rate. These factors – combined with steady agricultural, manufacturing and construction activity – will support a healthy demand for diesel and gasoline in 2Q23.

## Latin America

### Update on the latest developments

In **November**, oil demand in Latin America increased by 0.3 mb/d, y-o-y, largely driven by demand from Brazil and Venezuela. Economic activity in the region was steady over 2022, albeit showing some signs of slowing towards the end of the year. The services PMI in Brazil stood at 51.6, down from October levels. Airline activity in the region continued improving in November, increasing to 84.9% of pre-pandemic levels.

In terms of products, oil demand in Latin America was driven by y-o-y growth of 90 tb/d of “other products” in November. Gasoline saw y-o-y growth of 67 tb/d on the back of the gradual improvement of mobility and the service sector as COVID-19 wanes in some countries in the region. Diesel showed a y-o-y increase of around 40 tb/d, up from no growth in the previous month. Jet fuel also posted y-o-y growth of 40 tb/d, on continued recovery of the aviation sector. Similarly, residual fuels posted a gain of 40 tb/d, y-o-y. However, weak petrochemical activity weighed on naphtha, which fell by 10 tb/d, y-o-y, the 11th consecutive decline.

### Near-term expectations

Looking forward, GDP growth in the region is projected to slow, albeit remaining positive at 1.5% in 2023. Oil demand is also projected to slow, growing by 0.1 mb/d, y-o-y in **1Q23**. Mobility and manufacturing activity should continue to support demand for gasoline and distillates. Similarly, the ongoing air travel recovery is expected to positively impact jet/ kerosene demand in the region.

In **2Q23**, oil demand is projected to remain at 0.1 mb/d, y-o-y, growth. The outlook sees Brazil projected to lead oil demand growth in the region. In terms of fuels, demand for transportation fuels is expected to grow the most, supported by the continued recovery in mobility and air travel as COVID-19 wanes.

## Middle East

### Update on the latest developments

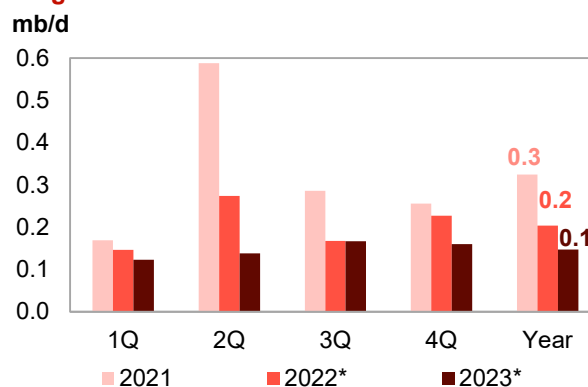
**Oil demand in the Middle East** remained strong at 0.5 mb/d growth y-o-y in November, the same y-o-y growth as a month earlier. The economies of Middle East countries maintained healthy growth supportive of oil demand. Saudi Arabia posted a composite PMI of 58.5 in November and the UAE recorded a composite PMI of 54.4 points.

The “other products” category increased by 0.3 mb/d y-o-y, driven by requirements for electricity generation, and has been the major driver of oil demand in the region accounting for over 45% of the total oil demand since May 2022. Similarly, diesel grew by 0.2 mb/d, y-o-y, for the second consecutive month.

Gasoline remained broadly unchanged y-o-y, down from 50 tb/d growth in October. The petrochemical industry and households boosted requirements for LPG, which expanded by 20 tb/d y-o-y.

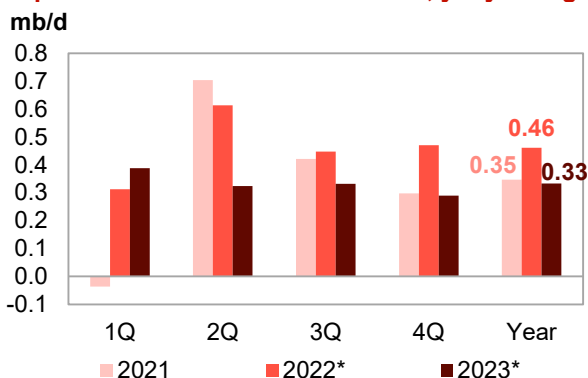
Increasing airline activity supported jet/kerosene demand, which grew y-o-y by 80 tb/d, up from 30 tb/d y-o-y growth in October; due to rising regional and international traffic. Airline activity in the region reportedly reached 84% of pre-pandemic levels in November. However, residual fuels saw a y-o-y decline of 74 tb/d.

**Graph 4 - 6: Latin America's oil demand, y-o-y change**



Note: \* 2022 = Estimate and 2023 = Forecast.  
Source: OPEC.

**Graph 4 - 7: Middle East's oil demand, y-o-y change**



Note: \* 2022 = Estimate and 2023 = Forecast.  
Source: OPEC.

Table 4 - 8: Saudi Arabia's oil demand, mb/d

By product	Dec 21	Dec 22	Change Dec 22/Dec 21	
			Growth	%
LPG	0.05	0.06	0.01	20.2
Gasoline	0.50	0.51	0.01	1.1
Jet/kerosene	0.06	0.08	0.02	36.0
Diesel	0.51	0.59	0.08	15.3
Fuel oil	0.53	0.61	0.08	15.2
Other products	0.40	0.56	0.16	39.0
<b>Total</b>	<b>2.05</b>	<b>2.40</b>	<b>0.35</b>	<b>17.2</b>

Note: Totals may not add up due to independent rounding.

Sources: JODI and OPEC.

### Near-term expectations

Robust economic activity in the Middle East is set to continue to support oil demand in 2023. Infrastructure project developments and an uptick in power generation requirements are expected to drive oil demand growth in **1Q23**. Hence, demand for residual and fuel oil is expected to continue to increase. Furthermore, rising air and road travel is expected to boost demand for jet fuel and gasoline. Accordingly, oil demand in the region is projected to grow 0.4 mb/d, y-o-y, in 1Q23.

In **2Q23**, oil demand growth is anticipated to slow slightly, growing by 0.3 mb/d y-o-y. Gasoline, diesel and jet/kerosene are expected to lead oil demand growth.

## World Oil Supply

Non-OPEC liquids supply in 2022 (including processing gains) is estimated to have grown by 1.9 mb/d to average 65.6 mb/d, broadly unchanged from the previous month's assessment. Downward revisions to Other Eurasia, OECD Europe and Other Asia were largely offset by upward revisions to liquids production in Russia.

In the US upstream sector, in addition to high cost inflation and supply chain issues, operators have been challenged in recent months by freezing weather-related outages in major basins such as the Permian and Bakken. In November, US liquids production dropped mainly due to lower NGLs and conventional crude outputs. A further decline is also expected for December owing to severe disruptions from Winter Storm Elliot. Notwithstanding, the US liquids supply growth forecast for 2022 remains unchanged at an average 1.2 mb/d, with the outages already considered.

Due to historical adjustments and lower output in December, the production forecast for Other Eurasia was revised down. Lower-than-expected output in the North Sea region was observed in December due to extended maintenance and natural declines on UK offshore platforms, along with output underperformance in Norway. A positive for supply was Russian liquids production in December that is estimated at its highest level since April 2022, although it is expected to drop in January 2023. The main drivers of liquids supply growth for 2022 are estimated to be the US, Russia, Canada, Guyana, China and Brazil, while production is expected to see the largest declines in Norway and Thailand.

Non-OPEC liquids production growth in 2023 is forecast to grow by 1.4 mb/d to average 67.0 mb/d, revised down by 0.1 mb/d from last month, due to lower output expectation for Russia and the US. Liquids supply in OECD countries is forecast to increase by 1.6 mb/d, while the non-OECD region is expected to show a decline of 0.2 mb/d. The main growth drivers are anticipated to be the US, Norway, Brazil, Canada, Kazakhstan and Guyana, whereas oil production is forecast to decline in Russia and Mexico. Nevertheless, there are significant uncertainties related to the impact of ongoing geopolitical developments in Eastern Europe and US shale output prospects in 2023.

OPEC NGLs and non-conventional liquids production in 2022 is forecast to grow by 0.1 mb/d to average 5.4 mb/d and increase by 50 tb/d to average 5.4 mb/d in 2023. OPEC-13 crude oil production in January decreased by 49 tb/d m-o-m to average 28.88 mb/d, according to available secondary sources.

Non-OPEC liquids production in January, including OPEC NGLs, is estimated to have increased m-o-m by 0.7 mb/d to average 72.8 mb/d, up by 2.5 mb/d y-o-y. As a result, preliminary data indicates that January's global oil supply increased by 0.6 mb/d m-o-m to average 101.7 mb/d, up by 3.3 mb/d y-o-y.

The **non-OPEC liquids supply estimation for 2022** was revised down slightly by 48 tb/d to average 65.6 mb/d. Y-o-y growth averaged 1.9 mb/d, revised down slightly by 43 tb/d compared with the previous month.

The overall OECD supply growth estimate for 2022 has dropped marginally. While OECD Europe and OECD Asia Pacific saw minor downward revisions, OECD Americas was broadly unchanged from the previous month's assessment.

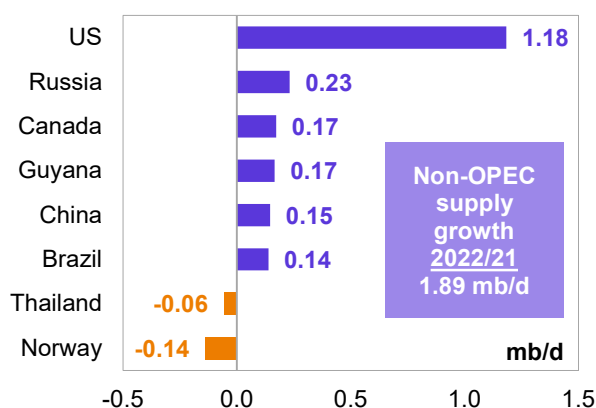
The non-OECD supply growth assessment for 2022 was revised down by 29 tb/d. Minor downward revisions to Other Eurasia and Other Asia were partially offset by upward revisions to Russia.

**Non-OPEC liquids production growth in 2023** is forecast to grow by 1.4 mb/d, down by 0.1 mb/d, compared with the previous month's assessment. The US and Russia were the main sources of this decline in the OECD and non-OECD regions, respectively.

## Key drivers of growth and decline

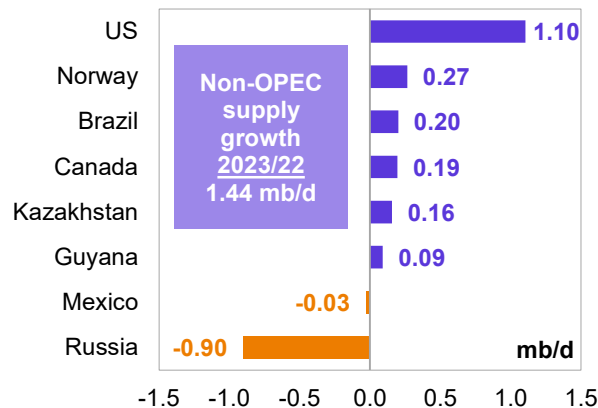
The **key drivers of non-OPEC liquids supply growth in 2022** are estimated to be the US, Russia, Canada, Guyana, China and Brazil, while oil production is expected to see the largest declines in Norway and Thailand.

**Graph 5 - 1: Annual liquids production changes for selected countries in 2022\***



Note: \* 2022 = Estimate. Source: OPEC.

**Graph 5 - 2: Annual liquids production changes for selected countries in 2023\***



Note: \* 2023 = Forecast. Source: OPEC.

For **2023**, the key drivers of non-OPEC supply growth are forecast to be the US, Norway, Brazil, Canada, Kazakhstan and Guyana, while oil production is projected to see the largest declines in Russia and Mexico.

## Non-OPEC liquids production in 2022 and 2023

**Table 5 - 1: Non-OPEC liquids production in 2022\*, mb/d**

Non-OPEC liquids production	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21	
							Growth	%
<b>Americas</b>	25.25	25.86	26.27	27.02	27.48	26.66	1.41	5.59
of which US	17.85	18.27	18.83	19.33	19.68	19.03	1.18	6.63
<b>Europe</b>	3.76	3.73	3.43	3.49	3.61	3.57	-0.19	-5.04
<b>Asia Pacific</b>	0.51	0.49	0.51	0.43	0.48	0.48	-0.03	-6.47
<b>Total OECD</b>	<b>29.52</b>	<b>30.08</b>	<b>30.22</b>	<b>30.94</b>	<b>31.57</b>	<b>30.71</b>	<b>1.19</b>	<b>4.03</b>
<b>China</b>	4.31	4.51	4.52	4.38	4.41	4.46	0.15	3.41
<b>India</b>	0.78	0.78	0.77	0.76	0.76	0.77	-0.01	-1.57
<b>Other Asia</b>	2.41	2.35	2.30	2.22	2.30	2.29	-0.12	-4.79
<b>Latin America</b>	5.95	6.11	6.18	6.46	6.58	6.33	0.38	6.46
<b>Middle East</b>	3.24	3.29	3.33	3.36	3.34	3.33	0.09	2.80
<b>Africa</b>	1.35	1.33	1.31	1.32	1.30	1.32	-0.03	-2.34
<b>Russia</b>	10.80	11.33	10.63	11.01	11.17	11.03	0.23	2.15
<b>Other Eurasia</b>	2.93	3.04	2.76	2.59	2.91	2.83	-0.10	-3.40
<b>Other Europe</b>	0.11	0.11	0.11	0.10	0.10	0.11	-0.01	-6.36
<b>Total Non-OECD</b>	<b>31.87</b>	<b>32.84</b>	<b>31.91</b>	<b>32.20</b>	<b>32.87</b>	<b>32.46</b>	<b>0.59</b>	<b>1.85</b>
<b>Total Non-OPEC production</b>	61.39	62.93	62.13	63.15	64.44	63.17	1.78	2.90
<b>Processing gains</b>	2.29	2.40	2.40	2.40	2.40	2.40	0.11	4.90
<b>Total Non-OPEC liquids production</b>	<b>63.68</b>	<b>65.33</b>	<b>64.53</b>	<b>65.55</b>	<b>66.84</b>	<b>65.57</b>	<b>1.89</b>	<b>2.97</b>
<b>Previous estimate</b>	63.68	65.33	64.54	65.57	67.00	65.61	1.93	3.04
<b>Revision</b>	0.00	-0.01	-0.01	-0.02	-0.16	-0.05	-0.04	-0.07

Note: \* 2022 = Estimate. Totals may not add up due to independent rounding. Source: OPEC.

Table 5 - 2: Non-OPEC liquids production in 2023\*, mb/d

Non-OPEC liquids production	2022	1Q23	2Q23	3Q23	4Q23	2023	Change 2023/22	
							Growth	%
<b>Americas</b>	26.66	27.59	27.68	28.04	28.41	27.93	1.27	4.76
<b>of which US</b>	19.03	19.75	20.05	20.25	20.48	20.14	1.10	5.80
<b>Europe</b>	3.57	3.92	3.90	3.79	3.92	3.89	0.32	8.92
<b>Asia Pacific</b>	0.48	0.50	0.47	0.49	0.48	0.48	0.00	1.01
<b>Total OECD</b>	<b>30.71</b>	<b>32.01</b>	<b>32.05</b>	<b>32.32</b>	<b>32.81</b>	<b>32.30</b>	<b>1.59</b>	<b>5.18</b>
<b>China</b>	4.46	4.50	4.50	4.47	4.47	4.48	0.03	0.65
<b>India</b>	0.77	0.79	0.78	0.77	0.76	0.78	0.01	1.15
<b>Other Asia</b>	2.29	2.36	2.35	2.32	2.35	2.34	0.05	2.37
<b>Latin America</b>	6.33	6.48	6.66	6.70	6.78	6.66	0.32	5.08
<b>Middle East</b>	3.33	3.34	3.35	3.38	3.38	3.37	0.04	1.09
<b>Africa</b>	1.32	1.32	1.33	1.35	1.34	1.33	0.02	1.42
<b>Russia</b>	11.03	10.28	10.00	10.10	10.15	10.13	-0.90	-8.17
<b>Other Eurasia</b>	2.83	3.07	3.04	3.00	3.05	3.04	0.21	7.51
<b>Other Europe</b>	0.11	0.10	0.10	0.10	0.10	0.10	0.00	-2.83
<b>Total Non-OECD</b>	<b>32.46</b>	<b>32.25</b>	<b>32.12</b>	<b>32.20</b>	<b>32.37</b>	<b>32.23</b>	<b>-0.22</b>	<b>-0.69</b>
<b>Total Non-OPEC production</b>	63.17	64.25	64.17	64.52	65.18	64.54	1.37	2.17
<b>Processing gains</b>	2.40	2.47	2.47	2.47	2.47	2.47	0.07	2.96
<b>Total Non-OPEC liquids production</b>	<b>65.57</b>	<b>66.72</b>	<b>66.64</b>	<b>66.99</b>	<b>67.65</b>	<b>67.01</b>	<b>1.44</b>	<b>2.20</b>
<b>Previous estimate</b>	65.61	66.75	66.83	67.18	67.84	67.16	1.54	2.35
<b>Revision</b>	-0.05	-0.03	-0.19	-0.19	-0.19	-0.15	-0.10	-0.15

Note: \* 2022 = Estimate and 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.

## OECD

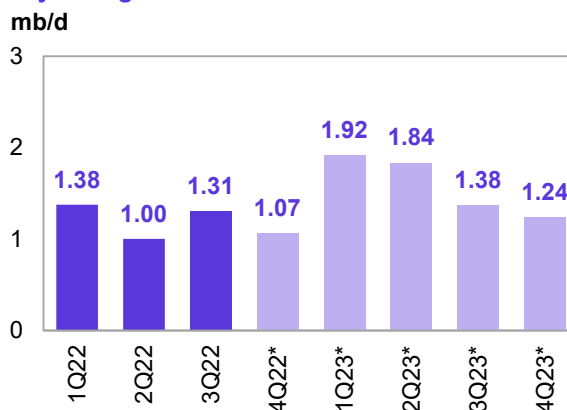
OECD liquids production in 2022 is estimated to have increased y-o-y by 1.2 mb/d to average 30.7 mb/d. This is revised down slightly by 14 tb/d compared with a month earlier, with some downward revisions for OECD Europe and OECD Asia Pacific.

OECD Americas remained unchanged compared with last month's assessment. It is expected to grow by 1.4 mb/d to average 26.7 mb/d.

OECD Europe is anticipated to decline y-o-y by 0.2 mb/d to average 3.6 mb/d.

OECD Asia Pacific is forecast to drop by 33 tb/d y-o-y to average 0.5 mb/d.

Graph 5 - 3: OECD quarterly liquids supply, y-o-y changes



Note: \* 4Q22-4Q23 = Forecast. Source: OPEC.

For 2023, oil production in the OECD is forecast to grow by 1.6 mb/d to average 32.3 mb/d. Growth is led by OECD Americas with 1.3 mb/d to average 27.9 mb/d. Yearly liquids production in OECD Europe is anticipated to grow by 0.3 mb/d to average 3.9 mb/d, while OECD Asia Pacific is expected to remain broadly unchanged to average 0.5 mb/d.



## OECD Americas

### US

**US liquids production** fell m-o-m by 45 tb/d in **November 2022** to average 19.8 mb/d. This was up by 1.0 mb/d compared with November 2021.

**Crude oil and condensate production** fell m-o-m by 35 tb/d in **November 2022** to average 12.4 mb/d, up by 0.6 mb/d y-o-y.

In terms of **crude and condensate production breakdown by region (PADDs)**, production decreased mainly in the US Gulf Coast (USGC), where it was down by 48 tb/d to average 8.9 mb/d. Production in the Rocky Mountain and West Coast regions rose by a minor 6 tb/d, while the Midwest and East Coast remained broadly unchanged m-o-m. Production declines in the main regions were primarily driven by weather-related issues, with lower production in the Gulf of Mexico (GoM), Texas and North Dakota fields.

**NGLs production** was down by 52 tb/d m-o-m to average 6.1 mb/d in November. This was higher y-o-y by 0.3 mb/d. Production of **non-conventional liquids** (mainly ethanol) jumped by 42 tb/d m-o-m to average 1.3 mb/d, according to the US Department of Energy (DoE). Preliminary estimates see non-conventional liquids averaging around 1.3 mb/d in December 2022, down by 35 tb/d compared with the previous month.

**GoM production** declined marginally m-o-m by 23 tb/d in November to average 1.8 mb/d, with a quite stable production seen on Gulf Coast offshore platforms. In the **onshore Lower 48**, crude and condensate production fell m-o-m by 22 tb/d to average 10.1 mb/d in November.

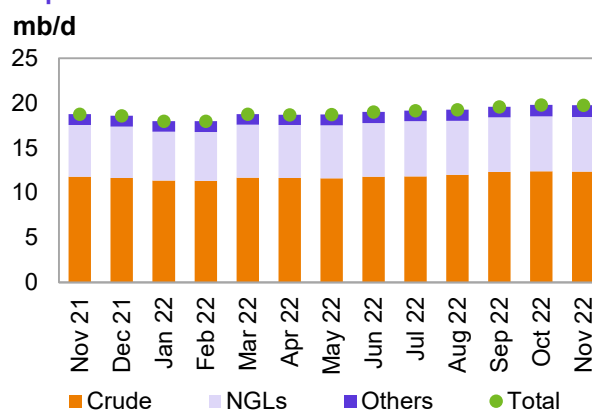
Looking at **individual states**, New Mexico's oil production remained stable at average 1.7 mb/d, which is 303 tb/d higher than a year ago. Texas production was down by 21 tb/d to average 5.2 mb/d, which is 216 tb/d higher than a year ago. In the Midwest, North Dakota's production fell m-o-m by 23 tb/d to average 1.1 mb/d, down by 69 tb/d y-o-y, while Oklahoma's production was up m-o-m by 19 tb/d to average of 0.4 mb/d. Alaska's output was up by a minor 10 tb/d m-o-m, and in Colorado, production rose slightly by 8 tb/d.

**Table 5 - 3: US crude oil production by selected state and region, tb/d**

State	Nov 21	Oct 22	Nov 22	Change	
				m-o-m	y-o-y
Texas	4,994	5,231	5,210	-21	216
Gulf of Mexico (GOM)	1,772	1,824	1,801	-23	29
New Mexico	1,420	1,724	1,723	-1	303
North Dakota	1,151	1,105	1,082	-23	-69
Colorado	455	436	444	8	-11
Alaska	446	435	445	10	-1
Oklahoma	399	423	442	19	43
<b>Total</b>	<b>11,790</b>	<b>12,410</b>	<b>12,375</b>	<b>-35</b>	<b>585</b>

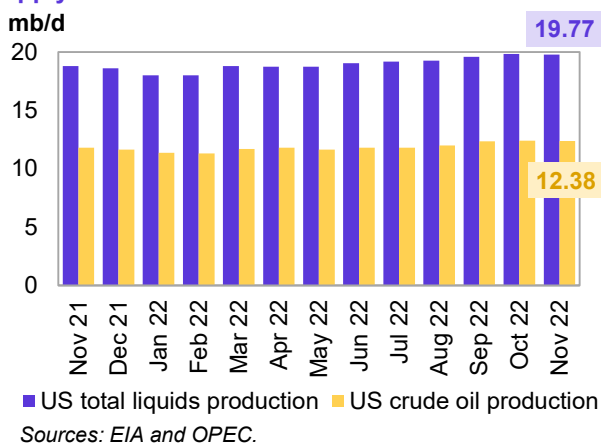
Sources: EIA and OPEC.

**Graph 5 - 4: US monthly liquids output by key component**

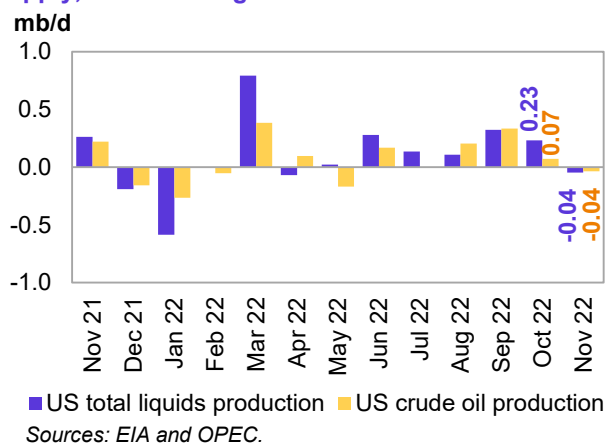


Sources: EIA and OPEC.

**Graph 5 - 5: US monthly crude oil and total liquids supply**



**Graph 5 - 6: US monthly crude oil and total liquids supply, m-o-m changes**

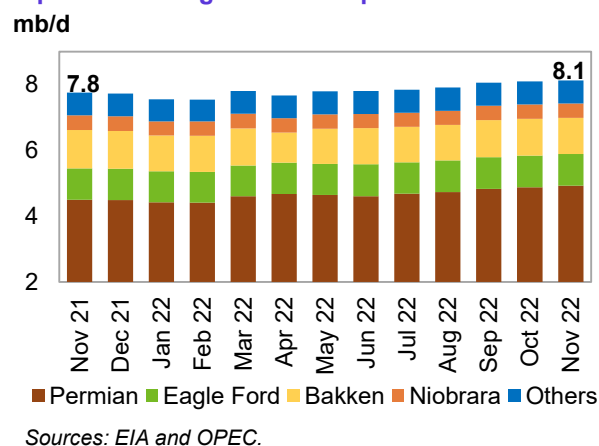


**US tight crude output in November 2022** is estimated to have risen by 35 tb/d m-o-m to average 8.1 mb/d, according to the latest estimation by the US Energy Information Administration (EIA). This was 0.4 mb/d higher than in the same month last year.

The m-o-m increase from shale and tight formations using horizontal wells came mainly from the Permian, which increased output by 48 tb/d to average 4.9 mb/d. This was up by 0.4 mb/d y-o-y.

In the Williston Basin, Bakken shale production dropped by 24 tb/d, averaging 1.1 mb/d. This is down by 65 tb/d y-o-y. Tight crude output at Eagle Ford in Texas rose by a minor 7 tb/d to average 1.0 mb/d. This is up by 9 tb/d y-o-y. Production in Niobrara-Codell in Colorado and Wyoming was unchanged at an average of 0.4 mb/d.

**Graph 5 - 7: US tight crude output breakdown**



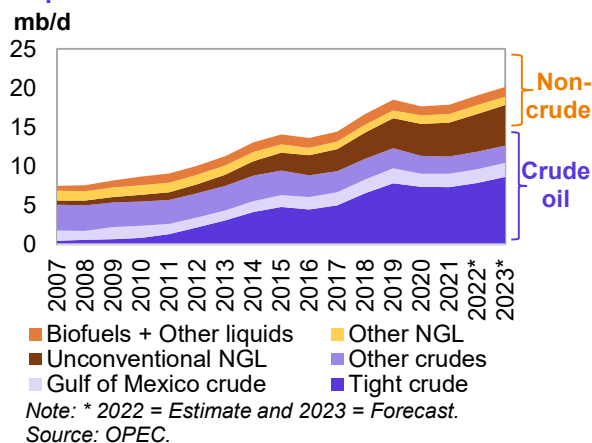
**US liquids production in 2022**, excluding processing gains, is estimated to expand y-o-y by 1.2 mb/d to average 19.0 mb/d. This is broadly unchanged compared with the previous assessment. Tight crude is assessed to grow by 0.5 mb/d in 2022 to average 7.9 mb/d. In addition, NGLs (mainly from unconventional basins) are estimated to grow by 0.5 mb/d to average 5.9 mb/d, and production in the GoM is anticipated to increase by a minor 30 tb/d. Non-conventional liquids and the crude from conventional reservoirs are assessed to expand by 40 tb/d to average 1.2 mb/d and by 70 tb/d to average 2.3 mb/d, respectively.

Given the current pace of oil field drilling and well completions, **crude oil and condensate production** is estimated to grow by 0.6 mb/d y-o-y to average 11.9 mb/d in 2022.

**US liquids production in 2023**, excluding processing gains, is forecast to expand y-o-y by 1.1 mb/d to average 20.1 mb/d, revised down by 50 tb/d from the previous assessment. This was due to lower US upstream activities in recent weeks. Greater drilling activity and fewer supply chain/logistical issues in the prolific Permian, Eagle Ford and Bakken shale sites are still assumed for 2023. Crude oil output is anticipated to increase by 0.7 mb/d y-o-y to average 12.6 mb/d. Average tight crude output in 2023 is forecast at 8.6 mb/d, up by 0.8 mb/d y-o-y.

At the same time, NGLs production and non-conventional liquids, particularly ethanol, are forecast to increase y-o-y by 0.31 mb/d and 40 tb/d, to average 6.3 mb/d and 1.3 mb/d, respectively.

**Graph 5 - 8: US liquids supply developments by component**



The 2023 forecast assumes continuing capital discipline, lower inflation rate pressure, as well as moderate supply chain issues and oil field service constraints (labour and equipment). Tightness in the hydraulic fracking market has been one of the biggest issues for US producers in recent months, and this is expected to remain a challenge.

**Table 5 - 4: US liquids production breakdown, mb/d**

US liquids	Change		Change		Change	
	2021	2021/20	2022*	2022/21	2023*	2023/22
<b>Tight crude</b>	7.33	-0.02	7.86	0.52	8.61	0.75
<b>Gulf of Mexico crude</b>	1.71	0.04	1.74	0.03	1.82	0.09
<b>Conventional crude oil</b>	2.21	-0.08	2.28	0.07	2.19	-0.09
<b>Total crude</b>	<b>11.25</b>	<b>-0.06</b>	<b>11.87</b>	<b>0.62</b>	<b>12.62</b>	<b>0.75</b>
<b>Unconventional NGLs</b>	4.31	0.23	4.81	0.50	5.18	0.37
<b>Conventional NGLs</b>	1.12	0.02	1.15	0.03	1.09	-0.06
<b>Total NGLs</b>	<b>5.42</b>	<b>0.25</b>	<b>5.95</b>	<b>0.53</b>	<b>6.27</b>	<b>0.31</b>
<b>Biofuels + Other liquids</b>	1.17	0.02	1.21	0.04	1.25	0.04
<b>US total supply</b>	<b>17.85</b>	<b>0.21</b>	<b>19.03</b>	<b>1.18</b>	<b>20.14</b>	<b>1.10</b>

Note: \* 2022 = Estimate and 2023 = Forecast. Sources: EIA, OPEC and Rystad Energy.

**US tight crude production** in the Permian in 2022 is estimated to increase y-o-y by 0.5 mb/d to 4.7 mb/d. It is then forecast to grow by 0.6 mb/d y-o-y to average 5.3 mb/d in 2023.

The **Bakken** shale production decline that occurred in 2020 and 2021 is set to continue in 2022. Tight crude production in the Bakken is estimated to drop by 45 tb/d in 2022 to average 1.1 mb/d. This is much lower than the pre-pandemic average output of 1.4 mb/d. Drilling activity in North Dakota and available DUC wells are lower than the levels required to revive output. In 2023, growth is forecast to resume at 21 tb/d to average 1.1 mb/d.

The **Eagle Ford** in Texas saw an output of 1.2 mb/d in 2019, which declined in 2020 and 2021. It is estimated to remain broadly unchanged in 2022 to average 0.96 mb/d. Growth of 40 tb/d is then forecast for 2023, to average just under 1.0 mb/d.

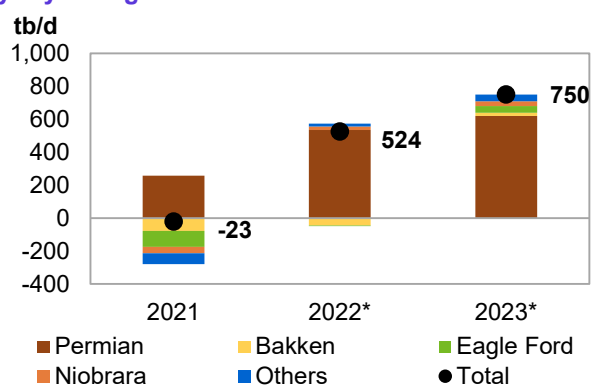
**Niobrara** production is estimated to grow y-o-y by 22 tb/d in 2022 and then forecast to increase by 30 tb/d in 2023 to average 435 tb/d and 465 tb/d, respectively. Other shale plays are expected to show marginal increases of 18 tb/d and 40 tb/d in 2022 and 2023, respectively, given current drilling and completion activities.

**Table 5 - 5: US tight oil production growth, mb/d**

US tight oil	Change		Change		Change	
	2021	2021/20	2022*	2022/21	2023*	2023/22
<b>Permian tight</b>	4.17	0.26	4.70	0.53	5.32	0.62
<b>Bakken shale</b>	1.12	-0.08	1.08	-0.04	1.10	0.02
<b>Eagle Ford shale</b>	0.96	-0.10	0.96	0.00	1.00	0.04
<b>Niobrara shale</b>	0.41	-0.04	0.43	0.02	0.46	0.03
<b>Other tight plays</b>	0.67	-0.07	0.69	0.02	0.73	0.04
<b>Total</b>	<b>7.33</b>	<b>-0.02</b>	<b>7.86</b>	<b>0.52</b>	<b>8.61</b>	<b>0.75</b>

Note: \* 2022 = Estimate and 2023 = Forecast. Source: OPEC.

**Graph 5 - 9: US tight crude output by shale play, y-o-y changes**



Note: \* 2022 = Estimate and 2023 = Forecast. Sources: EIA and OPEC.

## US rig count, spudded, completed, DUC wells and fracking activity

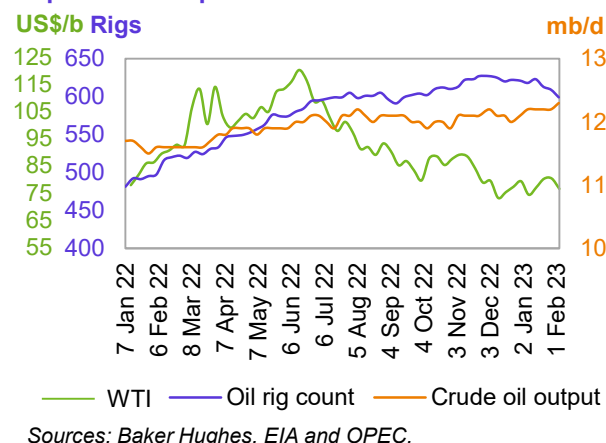
Total **active US drilling rigs** fell by twelve to 759 in the week ending February 3, 2023. This was up by 146 rigs compared with a year ago. The number of active offshore rigs fell w-o-w to 12, a decrease of one. This is lower by four compared with the same month a year earlier. Onshore oil and gas rigs were lower by 11 w-o-w to stand at 745 rigs, up by 150 rigs y-o-y, with two rigs in inland waters.

The **US horizontal rig count** fell by five w-o-w to 700, compared with 555 horizontal rigs a year ago. The number of drilling rigs for oil fell by ten w-o-w to 599. At the same time, gas-drilling rig counts were down by two to 158.

The Permian's rig count fell by three w-o-w to 354 rigs. At the same time, rig counts remained steady in Eagle Ford, Williston and DJ-Niobrara at 72, 42 and 16, respectively. The rig count also stayed unaffected w-o-w in Cana Woodford at 25.

Two operating oil rigs remained in the Barnett basin, unchanged w-o-w, but down from three last month.

**Graph 5 - 10: US weekly rig count vs. US crude oil output and WTI price**

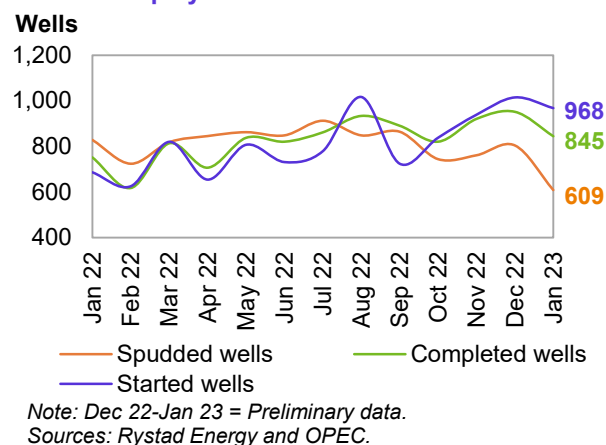


**Drilling and completion (D&C) activities** for spudded, completed and started oil-producing wells in all US shale plays, based on EIA-DPR regions, included 804 horizontal wells spudded in December 2022 (as per preliminary data). This is up by 43 m-o-m, and 8% higher than in December 2021.

December 2022 preliminary data indicates a higher number of completed wells at 952, which is up 47% y-o-y. Moreover, the number of started wells was estimated at 1,015, which is 60% higher than a year earlier.

Preliminary data for January 2023 estimates 609 spudded, 845 completed and 968 started wells, according to Rystad Energy.

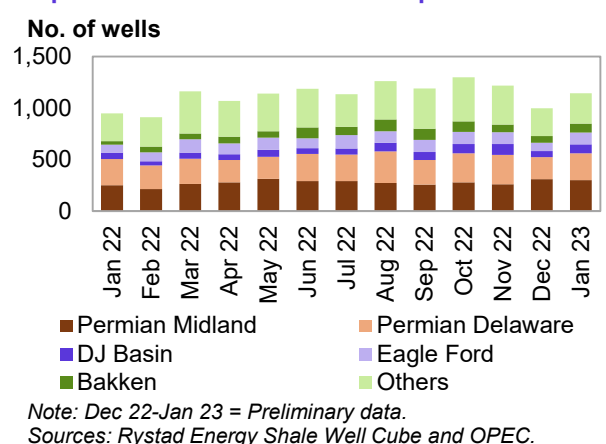
**Graph 5 - 11: Spudded, completed and started wells in US shale plays**



In terms of identified **US oil and gas fracking operations by region**, Rystad Energy reported that 1,218 wells were fracked in November 2022. In December 2022 and January 2023, it stated that 999 and 1,143 wells began fracking, respectively. Preliminary numbers are based on analysis of high-frequency satellite data.

Preliminary December data showed that 309 and 214 wells were fracked in the Permian Midland and Permian Delaware, respectively. Compared with November, there was a jump of 47 in the Midland and a decline of 69 in the Delaware. Data also indicated that 61 wells were fracked in the DJ Basin, 79 in Eagle Ford and 64 in Bakken during December.

**Graph 5 - 12: Fracked wells count per month**



## Canada

**Canada's liquids production in December** is estimated to have dropped m-o-m by 136 tb/d to average 5.7 mb/d, falling back from the highest production on record in November, largely due to weather-related impacts on mining activities.

Conventional crude production increased m-o-m by 13 tb/d to average 1.2 mb/d, while NGLs output declined m-o-m by 10 tb/d to average 1.2 mb/d. Crude bitumen production output fell m-o-m by 43 tb/d in December, and synthetic crude dropped by 96 tb/d. Taken together, crude bitumen and synthetic crude production decreased by 139 tb/d to 3.2 mb/d.

Canada's liquids supply in **2022** is estimated to expand by 0.2 mb/d to average 5.6 mb/d, broadly unchanged from the previous assessment. Oil sands output, mainly from Alberta, saw an average of 3.2 mb/d from January to December 2022.

Canada's production grew in 4Q22 by 0.1 mb/d q-o-q, due to turnaround recoveries and project ramp-ups. However, disruptions related to a short closure of the Canada-to-US Keystone crude pipeline and weather-related issues imposed some reductions on December output.

For **2023**, Canada's liquids production is forecast to increase at a pace similar to 2022, rising by 0.2 mb/d to average 5.8 mb/d. Incremental production will come through oil sand project ramp-ups and debottlenecks alongside conventional growth.

Moreover, the Terra Nova Floating Production Storage and Offloading (FPSO) platform is expected to resume production in 1Q23 on Newfoundland's coast, reaching 30 tb/d at peak by mid-2023.

## Mexico

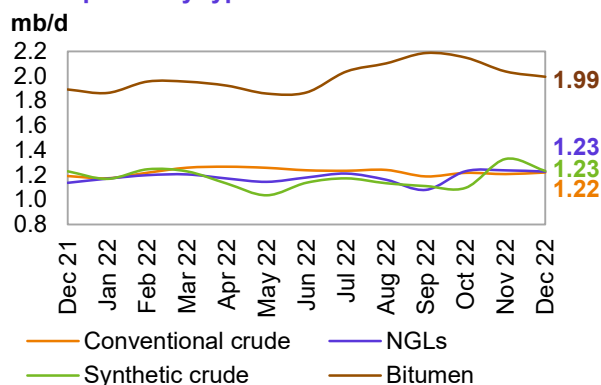
**Mexico's crude output** increased by 10 tb/d m-o-m in **December** to average 1.6 mb/d driven by the ramp-up of the light Tupilco Profundo, while NGLs output fell by 19 tb/d. This saw Mexico's total December liquids output drop m-o-m by a minor 9 tb/d to average 2.0 mb/d, according to Pemex.

For **2022**, Mexico's liquids production is estimated to average 2.0 mb/d, broadly unchanged from the previous month's assessment. Growth of 50 tb/d in 2022 is estimated to be mainly driven by foreign-operated fields rather than Pemex-operated assets. Persistent declines in Pemex's heavy mature oil fields were set to mostly offset its other grades.

For **2023**, liquids production is forecast to decline by 29 tb/d to average 1.98 mb/d, which is similar to the previous assessment.

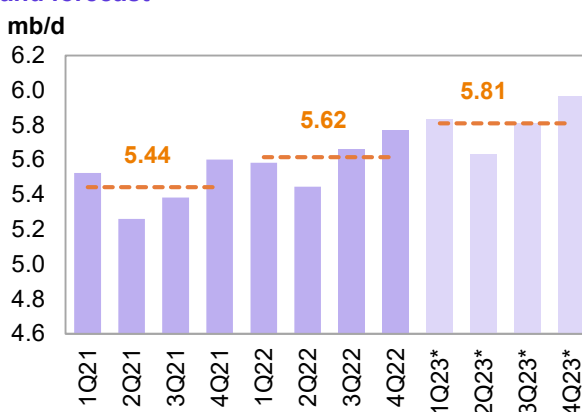
The total crude production decline in Pemex's mature fields is projected to outweigh production ramp-ups, mainly from Mexico's foreign-operated fields.

**Graph 5 - 13: Canada's monthly liquids production development by type**



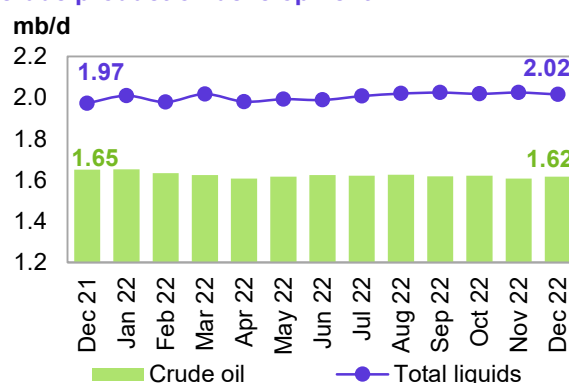
Sources: Statistics Canada, Alberta Energy Regulator and OPEC.

**Graph 5 - 14: Canada's quarterly liquids production and forecast**



Note: \* 1Q23-4Q23 = Forecast. Source: OPEC.

**Graph 5 - 15: Mexico's monthly liquids and crude production development**



Sources: Mexico Comision Nacional de Hidrocarburos (CNH) and OPEC

## OECD Europe

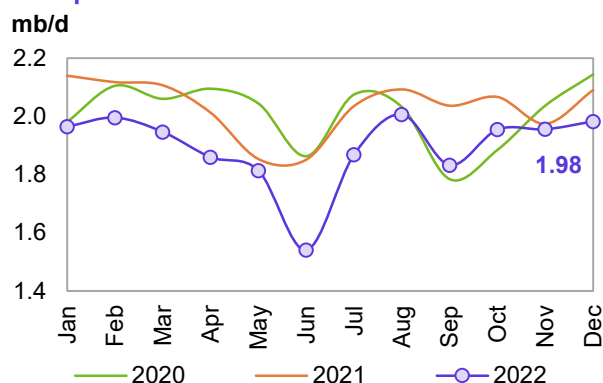
### Norway

**Norwegian liquids production in December** increased by just 27 tb/d m-o-m to average 2.0 mb/d, which was lower than expectations and reflects ongoing underperformance in Norwegian fields.

Norway's crude production rose by 23 tb/d m-o-m in December to average 1.7 mb/d, down by 80 tb/d y-o-y. Monthly oil production was 9.7% lower than the Norwegian Petroleum Directorate's (NPD) forecast.

At the same time, the production of NGLs and condensates remained broadly unchanged m-o-m, averaging 0.2 mb/d, according to NPD data.

**Graph 5 - 16: Norway's monthly liquids production development**



Sources: The Norwegian Petroleum Directorate (NPD) and OPEC.

For **2022**, production growth has been revised down a minor 5 tb/d y-o-y to average 1.9 mb/d. This is mainly due to downward revisions in 4Q22 output on the back of lower-than-anticipated December production.

The start-up of giant Johan Sverdrup's Phase 2 took place on December 15. According to Equinor, however, production at Norway's flagship Johan Sverdrup project was at a reduced rate as an equipment fault in mid-January hampered the recovery from a power failure at recently commissioned facilities. Electricity to the field has been restored, with production resumed at the end of January. The two phases now account for around one-third of the country's oil production and add a heavier, sour crude to the North Sea's predominantly light sweet flows.

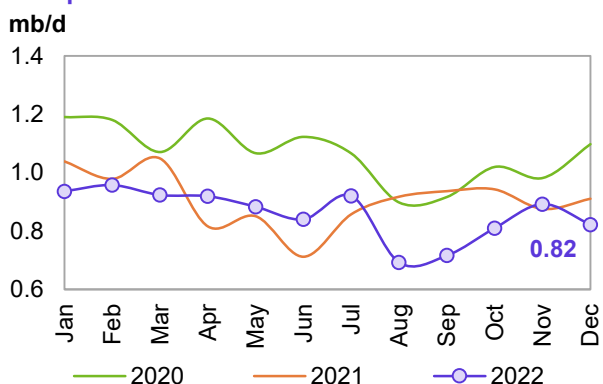
For **2023**, Norwegian liquids production is forecast to expand by 0.3 mb/d, broadly unchanged compared with the previous month, to average 2.2 mb/d. A number of small-to-large projects are scheduled to ramp up in 2023. The continuing Johan Sverdrup Phase 2 ramp-up is projected to be the main source of growth.

### UK

**UK liquids production fell m-o-m in December** by 70 tb/d to average 0.8 mb/d. Crude oil output decreased by 66 tb/d m-o-m to average 0.7 mb/d, according to official data, which was lower by 0.1 mb/d y-o-y. NGLs output remained broadly unchanged at an average of 90 tb/d. UK liquids output in December was down by 9.7% from the same month a year earlier, mainly due to extended maintenance and natural declines.

For **2022**, UK liquids production is estimated to drop by 47 tb/d to average 0.9 mb/d. This is unchanged from the previous assessment, as higher production in November offset the December decline.

**Graph 5 - 17: UK monthly liquids production development**

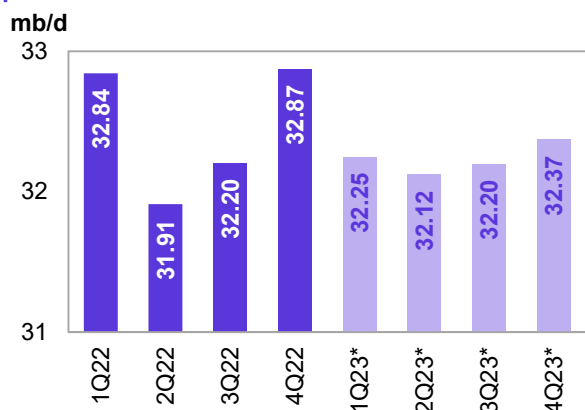


Sources: UK Department for Business, Energy and Industrial Strategy and OPEC.

For **2023**, UK liquids production is forecast to increase by 48 tb/d to average 0.9 mb/d. A number of new fields, including Seagull, the Penguins Redevelopment, and Captain EOR, will help offset base declines. Project sanctioning will be essential to maintain future oil and gas output, as UK production has been in long-term decline. It should be noted that the UK government in November last year approved an increase to the windfall tax. This jumped by 10% to 35% starting in January 2023 and lasting through 2028, bringing the total tax rate to 75%. Some operators have objected to the high taxes, indicating that they will reconsider some of their future offshore investments or may plan to cut jobs.

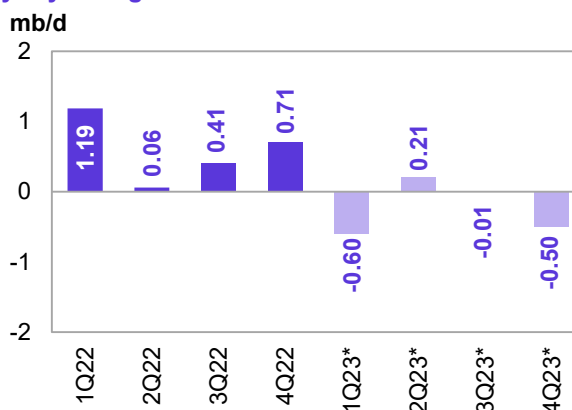
## Non-OECD

Graph 5 - 18: Non-OECD quarterly liquids production and forecast



Note: \* 1Q23-4Q23 = Forecast. Source: OPEC.

Graph 5 - 19: Non-OECD quarterly liquids supply, y-o-y changes

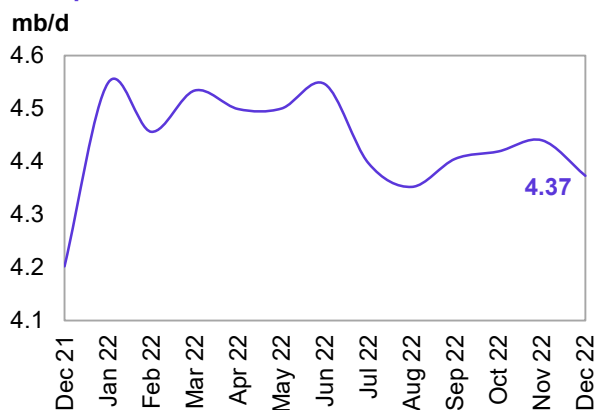


Note: \* 1Q23-4Q23 = Forecast. Source: OPEC.

## China

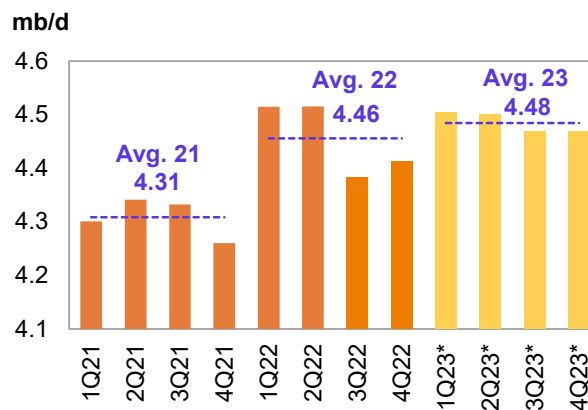
China's liquids production fell m-o-m in **December** by 67 tb/d to average 4.4 mb/d, which is a rise of 171 tb/d y-o-y, according to official data. Crude oil output in December averaged 4.0 mb/d, down by 67 tb/d compared with the previous month but higher y-o-y by 138 tb/d. Crude oil production over January–December 2022 averaged 4.1 mb/d, higher by 2.7% compared with the same period the previous year.

Graph 5 - 20: China's monthly liquids production development



Sources: CNPC and OPEC.

Graph 5 - 21: China's quarterly liquids production and forecast



Note: \* 1Q23-4Q23 = Forecast. Sources: CNPC and OPEC.

For **2022**, a growth of 147 tb/d is estimated for an average of 4.5 mb/d. This is broadly unchanged from the previous assessment. Natural decline rates are expected to be offset by additional growth through more infill wells and enhanced oil recovery (EOR) projects amid efforts by state-owned oil companies to ensure energy supply security.

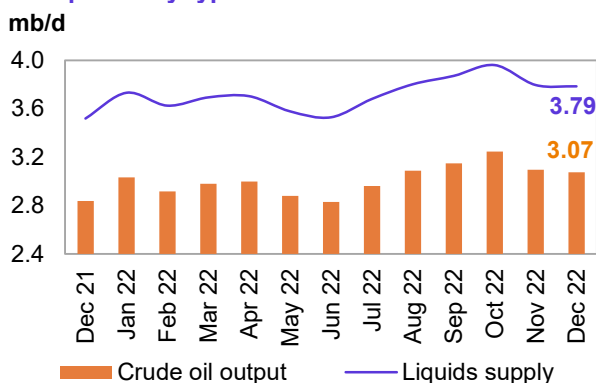
For **2023**, y-o-y growth of 30 tb/d is forecast for an average of 4.5 m/d, unchanged from last month's assessment. New offshore discoveries, the development of remote onshore basins and more investment in advanced EOR projects are expected to offset the declining output of mature fields. China National Offshore Oil Corporation (CNOOC), which has been the main contributor to growth in China's oil and gas output in recent years, has raised its 2023 production target by around 8%. CNOOC is stepping up the development of large domestic fields like Baodao 21-1 in the Qiongdongnan basin of the South China Sea.

## Latin America

### Brazil

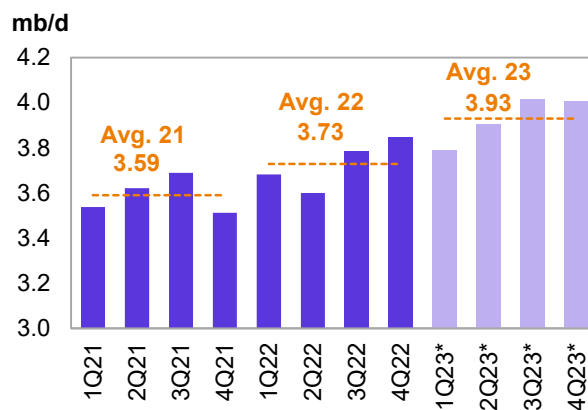
**Brazil's crude output in December** fell m-o-m by 21 tb/d to average 3.1 mb/d. NGLs production was up by a minor 10 tb/d to average 93 tb/d and this is expected to remain flat in January 2023. Biofuels output (mainly ethanol) was flat in December at an average of 618 tb/d, with preliminary data also showing a 24 tb/d increase in January. Total liquids production decreased by a minor 11 tb/d in December to average 3.8 mb/d, a drop from the record production rate of 4.0 mb/d witnessed in October. The output reduction was mainly due to some issues at Tupi field installations that started last month. However, the December level is a rise of 0.3 mb/d y-o-y.

**Graph 5 - 22: Brazil's monthly liquids production development by type**



Sources: Brazilian National Agency of Petroleum, Natural Gas and Biofuels (ANP) and OPEC.

**Graph 5 - 23: Brazil's quarterly liquids production**



Note: \* 1Q23-4Q23 = Forecast. Sources: ANP and OPEC.

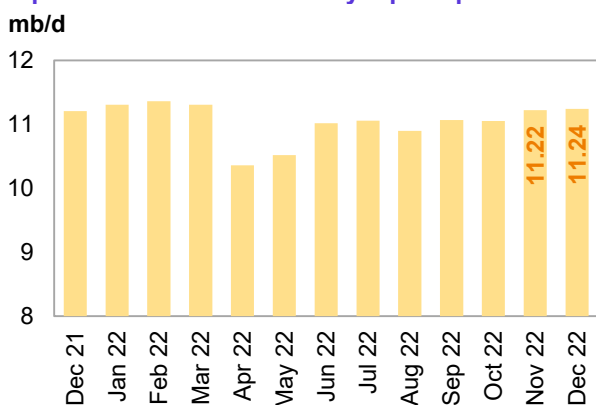
For **2022**, Brazil's liquids supply, including biofuels, is estimated to increase by 0.1 mb/d y-o-y to average 3.7 mb/d. This is chiefly unchanged from the previous month's assessment. Growth in 2022 is being driven by the continued ramp-up of the Sepia field and the start-up of Mero 1 in the pre-salt Santos basin, as well as Peregrino (Phases 1 and 2) in the Campos basin. In addition, Petrobras advanced its Campos basin renovation plan, starting up ten new production wells and four injector wells to expand output from this basin.

For **2023**, Brazil's liquids supply, including biofuels, is forecast to increase by 0.2 mb/d y-o-y to average 3.9 mb/d, broadly unchanged from the previous forecast. Crude oil output is set to increase through production ramp-ups in the Mero (Libra NW), Buzios (Franco), Tupi (Lula), Peregrino, Sepia, Marlim and Itapu (Florim) fields. However, offshore maintenance is expected to cause some interruptions in major fields.

### Russia

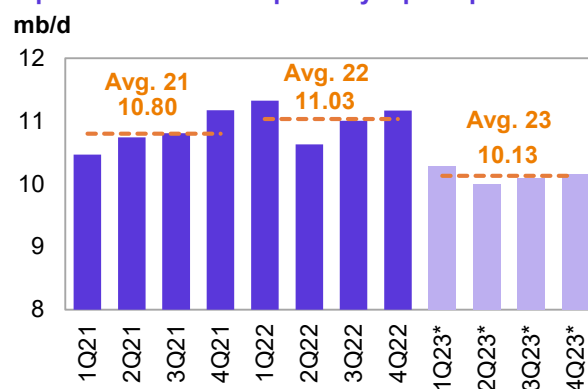
**Russia's liquids production in December** rose m-o-m by 21 tb/d to average 11.2 mb/d. This includes 9.8 mb/d of crude oil and 1.4 mb/d of NGLs and condensate. A preliminary estimate of Russia's crude production in January 2023 shows a m-o-m drop of 88 tb/d to average 9.7 mb/d, while NGLs and condensate were relatively stable.

**Graph 5 - 24: Russia's monthly liquids production**



Sources: Nefte Compass and OPEC.

**Graph 5 - 25: Russia's quarterly liquids production**



Note: \* 1Q23-4Q23 = Forecast. Sources: Nefte Compass and OPEC.



Russian liquids output in **2022** is estimated to have increased y-o-y by 0.2 mb/d to average 11.0 mb/d. This is broadly unchanged from the previous month's assessment.

For **2023**, Russian liquids production is forecast to drop by 0.9 mb/d to average 10.1 mb/d. Annual growth is revised down by around 50 tb/d from the previous assessment. It should be noted that Russia's oil forecast remains subject to high uncertainty.

## Caspian

### Kazakhstan & Azerbaijan

**Liquids output in Kazakhstan** remained broadly unchanged to average 2.0 mb/d in **December**. Crude production was up by a minor 7 tb/d m-o-m to average 1.6 mb/d, while NGLs remained steady at 0.4 mb/d. Total liquids output was the highest monthly level in 2022. This was mainly due to the ramp-up of the Kashagan oil field, as well as full production from the Karachaganak gas condensate field.

Kazakhstan's liquids supply for **2022** is now forecast to decline by 44 tb/d y-o-y to average 1.8 mb/d. This is down by a minor 8 tb/d compared with the previous month's assessment due to some small downward revisions from 1Q22 to 3Q22.

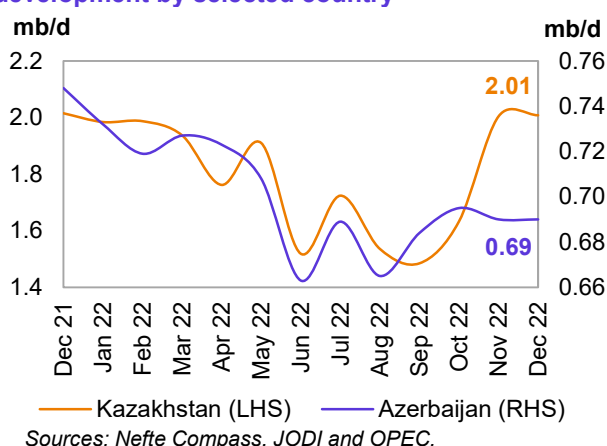
For **2023**, liquids supply is forecast to increase by 157 tb/d, unchanged compared with the previous forecast. In addition to the Kashagan oil field ramp-up, oil output in the Tengiz field and gas condensate production in the Karachaganak field are expected to rise marginally.

**Azerbaijan's liquids production in December** remained unchanged m-o-m, averaging 0.7 mb/d, although this is a drop of 8 tb/d y-o-y. Crude production averaged 550 tb/d, with NGLs output at 140 tb/d, according to official sources.

For **2022**, liquids supply in Azerbaijan is estimated to decline y-o-y by 42 tb/d to average 0.7 mb/d. This is a downward revision of a minor 8 tb/d, due to lower-than-expected production in major oil fields in December. The main declines in legacy fields are estimated to be offset by ramp-ups in other fields, such as the BP-led consortium's Shah Deniz gas condensate field.

Azerbaijan's liquids supply for **2023** is forecast to rise by 60 tb/d to average 0.8 mb/d. Growth is forecast to come from the Shah Deniz and Absheron condensate projects. Production could rise further after crude output starts up at the Azeri Central East flank project in 2023.

**Graph 5 - 26: Caspian monthly liquids production development by selected country**



## OPEC NGLs and non-conventional oils

**OPEC NGLs and non-conventional liquids in 2022** are estimated to grow by 0.1 mb/d to average 5.4 mb/d, unchanged from the previous assessment.

NGLs output in 4Q22 is estimated to have averaged 5.33 mb/d, while OPEC non-conventional output remained steady at 0.1 mb/d. Taken together, 5.4 mb/d is expected for December, according to preliminary data.

OPEC NGLs and non-conventional liquids are forecast to expand by around 50 tb/d in **2023** to average 5.4 mb/d. NGLs production is projected to grow by 50 tb/d to average 5.3 mb/d, while non-conventional liquids are projected to remain unchanged at 0.1 mb/d.

**Graph 5 - 27: OPEC NGLs and non-conventional liquids quarterly production and forecast**

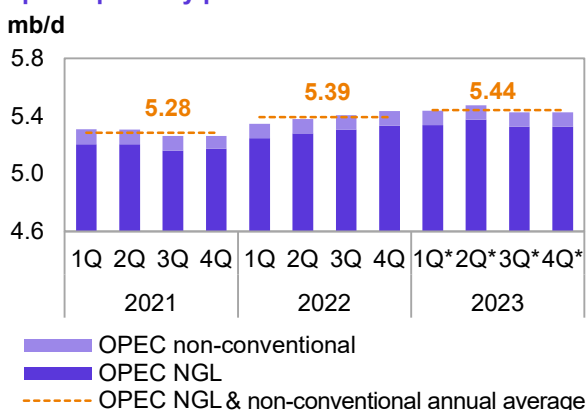


Table 5 - 6: OPEC NGL + non-conventional oils, mb/d

OPEC NGL and non-conventional oils	Change		Change		1Q23	2Q23	3Q23	4Q23	2023	Change 23/22
	2021	21/20	2022	22/21						
OPEC NGL	5.18	0.12	5.29	0.11	5.34	5.37	5.33	5.33	5.34	0.05
OPEC non-conventional	0.10	0.00	0.10	0.00	0.10	0.10	0.10	0.10	0.10	0.00
<b>Total</b>	<b>5.28</b>	<b>0.12</b>	<b>5.39</b>	<b>0.11</b>	<b>5.44</b>	<b>5.47</b>	<b>5.43</b>	<b>5.43</b>	<b>5.44</b>	<b>0.05</b>

Note: 2022 = Estimate and 2023 = Forecast. Source: OPEC.

## OPEC crude oil production

According to secondary sources, total **OPEC-13 crude oil production** averaged 28.88 mb/d in January 2023, lower by 49 tb/d m-o-m. Crude oil output increased mainly in Nigeria, Angola and Kuwait, while production in Saudi Arabia, Iraq and IR Iran declined.

Table 5 - 7: OPEC crude oil production based on secondary sources, tb/d

Secondary sources	2021	2022	2Q22	3Q22	4Q22	Nov 22	Dec 22	Jan 23	Change Jan/Dec
Algeria	913	1,017	1,015	1,040	1,030	1,025	1,015	1,015	0
Angola	1,122	1,141	1,173	1,154	1,085	1,093	1,108	1,155	47
Congo	265	263	268	266	256	261	244	262	19
Equatorial Guinea	97	83	90	89	62	63	55	53	-3
Gabon	182	197	190	201	199	199	193	183	-10
IR Iran	2,392	2,554	2,555	2,565	2,567	2,566	2,579	2,557	-22
Iraq	4,046	4,439	4,440	4,522	4,505	4,461	4,470	4,424	-46
Kuwait	2,419	2,705	2,690	2,801	2,713	2,684	2,648	2,693	45
Libya	1,143	981	743	976	1,153	1,142	1,159	1,148	-10
Nigeria	1,372	1,204	1,209	1,063	1,171	1,175	1,271	1,336	65
Saudi Arabia	9,114	10,531	10,450	10,894	10,606	10,474	10,475	10,319	-156
UAE	2,727	3,066	3,045	3,168	3,094	3,052	3,042	3,045	2
Venezuela	553	684	714	667	672	666	666	686	20
<b>Total OPEC</b>	<b>26,345</b>	<b>28,865</b>	<b>28,583</b>	<b>29,406</b>	<b>29,113</b>	<b>28,861</b>	<b>28,926</b>	<b>28,876</b>	<b>-49</b>

Notes: Totals may not add up due to independent rounding, given available secondary sources to date. Source: OPEC.

Table 5 - 8: OPEC crude oil production based on direct communication, tb/d

Direct communication	2021	2022	2Q22	3Q22	4Q22	Nov 22	Dec 22	Jan 23	Change Jan/Dec
Algeria	911	1,020	1,016	1,050	1,030	1,021	1,009	1,012	3
Angola	1,124	1,140	1,173	1,151	1,076	1,088	1,088	1,105	17
Congo	267	262	258	261	261	260	257	275	19
Equatorial Guinea	93	81	91	83	56	56	54	55	1
Gabon	181	191	184	198	183	191	189	..	..
IR Iran	..	..	..	..	..	..	..	..	..
Iraq	3,971	4,450	4,472	4,632	4,505	4,430	4,431	4,331	-100
Kuwait	2,415	2,707	2,694	2,799	2,721	2,676	2,676	2,676	0
Libya	1,207	..	..	..	..	..	..	..	..
Nigeria	1,323	1,143	1,133	999	1,145	1,186	1,235	1,258	23
Saudi Arabia	9,125	10,591	10,542	10,968	10,622	10,468	10,435	10,453	17
UAE	2,718	3,064	3,042	3,170	3,093	3,047	3,043	3,038	-5
Venezuela	636	716	745	673	693	693	669	732	63
<b>Total OPEC</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>

Notes: .. Not available. Totals may not add up due to independent rounding. Source: OPEC.

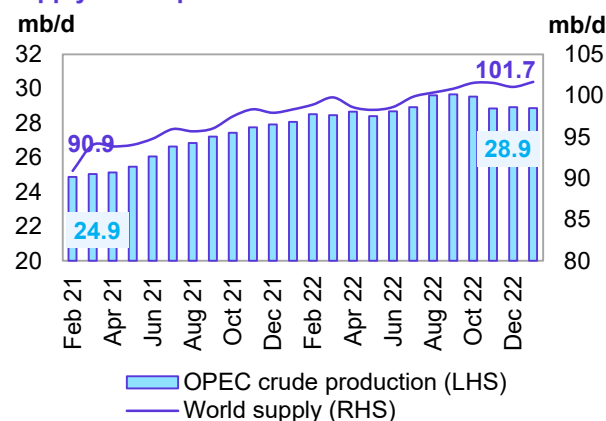
## World oil supply

Preliminary data indicates that **global liquids production in January** increased by 0.6 mb/d to average 101.7 mb/d compared with the previous month.

**Non-OPEC liquids production (including OPEC NGLs)** is estimated to have increased m-o-m in January 2023 by 0.7 mb/d to average 72.8 mb/d. This was higher by 2.5 mb/d y-o-y. Preliminary estimated production increases in January were mainly driven by OECD Americas, OECD Europe and Latin America, which partially offset declines in Russia.

The **share of OPEC crude oil in total global production** decreased by 0.2 pp to at 28.4% in January, compared with the previous month. Estimates are based on preliminary data for non-OPEC supply, OPEC NGLs and non-conventional oil, while assessments for OPEC crude production are based on secondary sources.

**Graph 5 - 28: OPEC crude production and world oil supply development**



## Product Markets and Refinery Operations

In January, refinery margins reversed trend and strengthened substantially in all main trading hubs, with sizeable margin gains registered, particularly in the Atlantic Basin, vastly backed by a solid recovery in gasoline performance. Moreover, in the US, a drop in jet/kerosene inventories drove the product crack spread on a hike to become the largest margin contributor across the barrel, followed by gasoline. In Europe, firm gasoline exports to the US, amid stronger product buying interest in Europe ahead of the 5 February sanctions on Russian products, led to a stronger product market, particularly for those linked to the top section of the barrel. Meanwhile, in Asia, the recent lifting of COVID-19 restrictions in China and an improvement in transport activity around the Chinese Lunar New Year holidays, boosted petrochemical activities and unplanned refinery outages in the country, contributing significant support to Asian naphtha and gasoline markets, despite recorded losses at the bottom of the barrel.

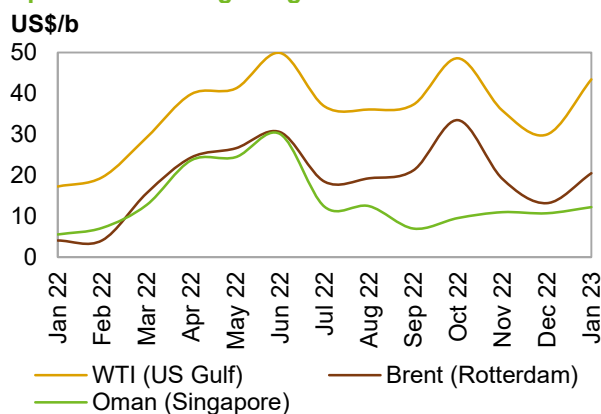
Over the month, global refinery processing rates declined, losing nearly 0.73 mb/d, m-o-m. In the coming month, refinery intakes are expected to drop much further as offline capacity is likely to pick up with the start of spring peak maintenance season.

### Refinery margins

**USGC refining margins against WTI** showed a strong rebound from the nine-month low registered the previous month. The support for this upturn came from across the barrel, with jet/kerosene fuel leading sharply. This is a reflection of a decline in refinery output, as several refineries underwent unplanned shutdowns due to a severe cold front, which led to product supply disruptions.

According to preliminary estimates, refinery intake in the US declined by 726 tb/d m-o-m to average 15.89 mb/d in January. Going forward, intake is expected to decline further, as maintenance interventions intensify with the start of the spring peak maintenance season. USGC margins against WTI averaged \$43.46/b in January, up by \$13.46 m-o-m and \$26.15 y-o-y.

Graph 6 - 1: Refining margins



Sources: Argus and OPEC.

**Refinery margins in Rotterdam against Brent** ended the downward trend seen the previous month to exhibit a solid gain, as product markets performed positively on stronger fundamentals, particularly those at the top of the barrel. Rising maintenance work amid refinery worker strikes in France over unsatisfactory pension reforms led to product output cuts and tightened product availability within the region. In addition, strong product buying in the region in order to build stocks ahead of the 5 February sanctions on Russian products further solidified bullish product market sentiment, which drove product crack spreads up and European refining economics higher.

Refinery throughput in Europe decreased by 500 tb/d to average 9.31 mb/d according to preliminary data. Refinery margins against Brent in Europe averaged \$20.51/b in January, up by \$7.32/b compared with a month earlier and higher by \$16.46 y-o-y.

**Singapore refining margins against Oman**, saw limited gains compared with their western counterparts, with all of the support deriving from cleaner products, while gasoil and fuel oil weakened. Gasoline and jet fuel tightness in the West incentivized flows from Asia, allowing strength in markets for those products to filter through Asia. In addition, the relaxation of stringent COVID-19-related quarantine requirements and mandatory testing contributed to stronger mobility activities over the month and more positive product market sentiment.

Reported unplanned refinery shut-downs in China and subsequent pressure on the country's product balance in the month of January further contributed to positive performance in the Asian product markets.

In contrast to what was observed in other regions, refinery run rates in Asia increased in January, albeit only by a slim 30 tb/d relative to the previous month, as intakes remained rather high, despite reported unplanned outages, averaging 26.96 mb/d, according to preliminary data. Refinery margins against Oman in Asia gained \$1.50/b m-o-m to average \$12.21/b, higher by \$6.69 y-o-y.

## Refinery operations

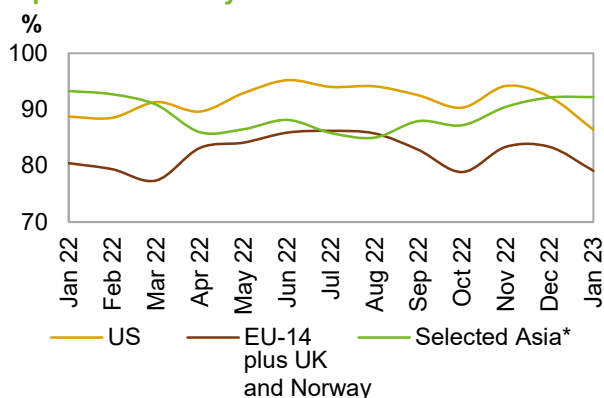
**US refinery utilization rates** decreased in January to average 86.4%, which corresponds to a throughput of 15.9 mb/d. This represents a drop of 5.8 pp and 730 tb/d, respectively, compared with December. Y-o-y, the January refinery utilization rate was down by 2.3 pp, with throughput showing a drop of 30 tb/d.

**European refinery utilization** averaged 79.1% in January, corresponding to a throughput of 9.3 mb/d. This is an m-o-m drop of 4.2 pp or 500 tb/d. On a y-o-y basis, utilization rates were down by 1.4 pp, while throughput was lower by 160 tb/d.

In **Selected Asia** – comprising Japan, China, India, Singapore and South Korea – refinery utilization rates increased to average 92.2% in January, corresponding to a throughput of 26.96 mb/d.

Compared with the previous month, utilization rates were up by 0.1 pp, and throughput was higher by 30 tb/d. However, y-o-y utilization rates were lower by 1.1 pp, and throughput was up by 357 tb/d.

Graph 6 - 2: Refinery utilization rates



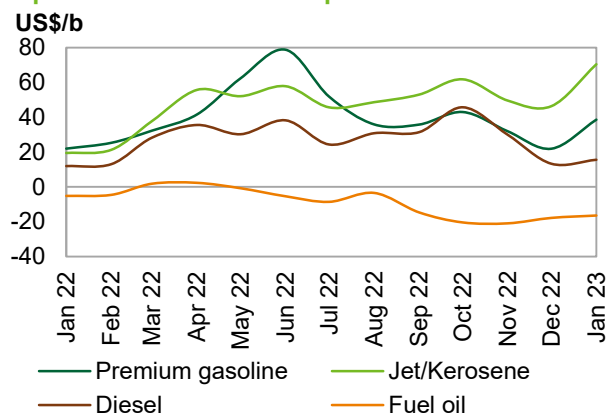
Note: \* China, India, Japan, Singapore and South Korea.  
Sources: Argus, EIA, Euroilstock, PAJ and OPEC.

## Product markets

### US market

The **USGC gasoline crack spread** recovered the previous months' losses to show considerable gains. Gasoline supplies experienced a slowdown during the month as severe cold weather affected operations in several refineries. Despite lower output levels, gasoline inventories continued to grow as product imports remained steady, while exports declined in January. Consequently, the net positive trade movement helped offset the product output drop at the storage tanks. Nonetheless, news about refinery outages and fuel flow disruptions strongly affected product prices, indicating earlier expectations of a much more devastating effect than that which actually materialized.

Graph 6 - 3: US Gulf crack spread vs. WTI



Sources: Argus and OPEC.

In January, wholesale gasoline 93 prices reversed trend and increased by \$18.38 m-o-m to average \$116.77/b, standing \$11.67/b higher compared with the same month a year earlier. The USGC gasoline crack spread gained \$16.69 m-o-m to average \$38.58/b in January and was up by \$16.63 y-o-y.

The USGC **jet/kerosene crack spread** gained massive ground to become the top performer across the barrel and across key markets, keeping its position as the main contributor to the USGC product market. This strength was mainly the result of a supply-side downturn, as weaker refinery output pointed to lower availability, which led to upward pressure on product price and crack spreads.

Jet fuel wholesale prices jumped by \$25.72/b over the month to average \$148.56/b. The fuel retained its position as the highest-priced product in the USGC market in January, as inventories for the fuel remained below the five-year average. The US jet/kerosene crack spread against WTI averaged \$70.37/b, up by \$24.03 m-o-m and higher by \$50.87 y-o-y.

The USGC **gasoil crack spread** trended upward in response to a reduction on the product supply side. US gasoil inventories, ended the month at a significantly higher level relative to what was recorded in the last week of the previous month, although they remain below the five-year average. Gasoil prices averaged \$93.72/b in January, up by \$3.97 relative to December. The US gasoil crack spread against WTI averaged \$15.53/b, up by \$2.28 m-o-m and \$3.63 y-o-y.

The **USGC fuel oil crack spread against WTI** kept its positive momentum and added to the gains seen the previous month. This upturn was mostly attributed to strong hydrocracking margins, which led to more intensive fuel oil destruction due to favourable gasoline and gasoil pricing signals and conversion economics. In January, the US fuel oil crack spread against WTI averaged minus \$16.37/b, higher by \$1.37/b m-o-m, but lower by \$11.21 y-o-y.

## European market

**Gasoline crack spreads** strengthened, supported by supply-side pressure as refinery output levels for the same product dropped. The gasoline crack spread against Brent averaged \$40.34/b in January, up by \$13.03 m-o-m and \$24.48 y-o-y.

In January, jet/kerosene crack spreads increased in line with adverse supply-side dynamics. The Rotterdam jet/kerosene crack spread against Brent averaged \$46.19/b, up by \$8.09 m-o-m and \$31.29 y-o-y.

**Gasoil 10 ppm crack spreads** showed a significant rise, as buying interest within the region remained strong, enabling a diesel stock build ahead of the 5 February sanctions on Russian products. In addition, positive market sentiment grew over stronger diesel

consumption as winter temperatures dropped and weather forecasts pointed to a new emerging cold front in the near term within the region and upside potential for gasoil consumption. High hydrocracker margins throughout the month of January, an indication of favourable economics for gasoil production, likely contributed to positive performance in European gasoil markets. The gasoil crack spread against Brent averaged \$42.04/b, down by \$4.34 m-o-m and up by \$27.47 y-o-y.

At the bottom of the barrel, **fuel oil 1.0% crack spreads** regained the previous months' losses, ending a three-month downward trend. Product flow adjustments in light of the approaching EU sanctions on Russian products and the start of the refinery maintenance season are likely to boost bunker fuel oil requirements in the coming months, which should strengthen fuel oil markets. In terms of prices, fuel oil 1.0% increased in value m-o-m to average \$68.38/b, which was \$3.61 higher than to the previous month. In Europe, fuel oil cracks averaged minus \$14.48/b in January, having gained \$3.77 m-o-m, though they lost \$10.84 y-o-y.

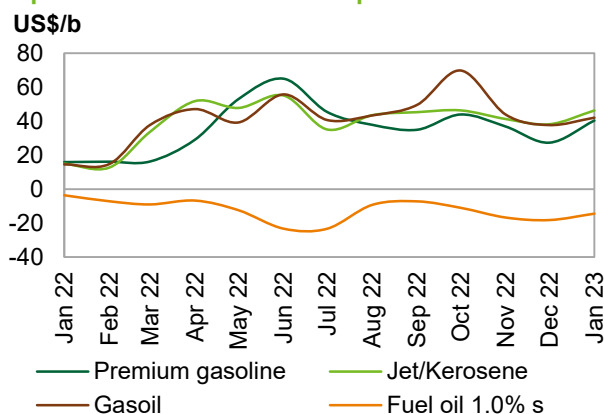
## Asian market

The **Asian gasoline 92 crack spread** increased further over the month, mainly supported by healthy exports, given the growing gasoline tightness in the West. The lifting of zero-COVID-19 policies in China amid reported refinery outages in the country provided further support to gasoline markets in the region. The Singapore gasoline crack spread against Oman in January averaged \$14.74/b, up by \$6.47 m-o-m and by \$1.90 y-o-y.

Asian **naphtha crack spreads** improved further over the month, with demand firming as manufacturing and petrochemical activities picked up amid the recent relaxation of the COVID-19 policy in China. The Singapore naphtha crack spread against Oman averaged minus \$8.23/b, increasing by \$2.45 m-o-m but dropping by \$9.45 y-o-y.

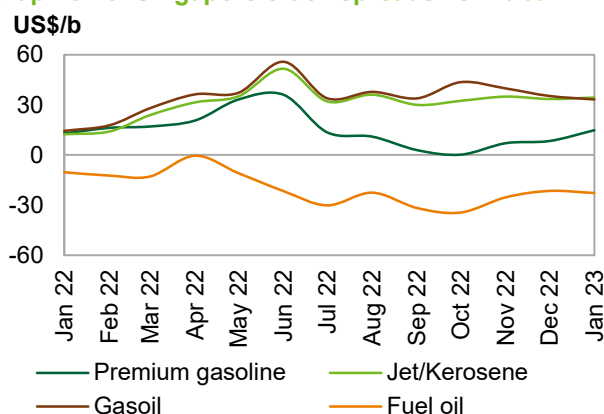
In the middle of the barrel, **jet/kerosene crack spreads** continued to improve gradually, emerging out of negative territory as overall jet/kerosene demand was supported by stronger exports, given the significant East-West jet/kerosene price difference and the hike in US jet/kerosene crack spreads. Going forward, middle distillate exports from Asia are expected to pick up pace in the coming months, as refineries in the West enter

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Sources: Argus and OPEC.

Graph 6 - 5: Singapore crack spreads vs. Dubai



Sources: Argus and OPEC.

heavy maintenance season. The Singapore jet/kerosene crack spread against Oman averaged \$34.32/b, up by 87¢ m-o-m and \$21.88 y-o-y.

The Singapore **gasoil crack spread** was the strongest negative performer across the barrel in January. This was a reflection of export requirements by European buyers, who remained focused on Russian volumes ahead of the 5 February sanctions on Russian products. In addition, the regional gasoil market was affected by ample supplies from the wider East of Suez region. The Singapore gasoil crack spread against Oman averaged \$33.23/b, down by \$2.09 m-o-m but up by \$18.73 y-o-y.

The Singapore **fuel oil 3.5% crack spread** lost ground as increasing supplies in the region amid strong imports led to higher floating storage and exerted pressure on high sulphur fuel oil crack spreads. Singapore fuel oil cracks against Oman averaged minus \$25.34/b, up by \$9.13 m-o-m but down by \$13.81 y-o-y.

**Table 6 - 1: Short-term prospects for product markets and refinery operations**

Event	Time frame	Asia	Europe	US	Observations
<b>Spring peak refinery maintenance season</b>	Jan 23–Apr 23	↑ Support for product crack spreads	↑ Support for product crack spreads	↑ Support for product crack spreads	The projected drop in refinery product output is expected to exert upward pressure on product prices, crack spreads and refining margins.
<b>February 5 Russian product sanctions</b>	Feb 23	-	↑ Support for product crack spreads	-	The sanctions are expected to lead to flow adjustments. Concerns over the effectiveness of this sanction points to a softer impact in the mid and long term.

Source: OPEC.

**Table 6 - 2: Refinery operations in selected OECD countries**

	Refinery throughput, mb/d				Refinery utilization, %			
	Nov 22	Dec 22	Jan 23	Change Jan/Dec	Nov 22	Dec 22	Jan 23	Change Jan/Dec
<b>US</b>	<b>16.92</b>	<b>16.62</b>	<b>15.89</b>	<b>-0.73</b>	<b>94.18</b>	<b>92.22</b>	<b>86.38</b>	<b>-5.8 pp</b>
<b>Euro-14, plus UK and Norway</b>	<b>9.81</b>	<b>9.81</b>	<b>9.31</b>	<b>-0.50</b>	<b>83.34</b>	<b>83.32</b>	<b>79.08</b>	<b>-4.2 pp</b>
<b>France</b>	0.89	0.94	0.97	0.03	77.33	81.64	84.50	2.9 pp
<b>Germany</b>	1.90	1.85	1.76	-0.09	92.52	90.23	85.90	-4.3 pp
<b>Italy</b>	1.27	1.33	1.22	-0.11	66.68	70.16	64.12	-6.0 pp
<b>UK</b>	1.03	1.01	0.92	-0.09	87.47	85.68	78.34	-7.3 pp
<b>Selected Asia*</b>	<b>26.45</b>	<b>26.93</b>	<b>26.96</b>	<b>0.03</b>	<b>90.44</b>	<b>92.08</b>	<b>92.18</b>	<b>0.1 pp</b>

Note: \* Includes Japan, China, India, Singapore and South Korea.

Sources: Argus Media, EIA, EuroiStock, NBS, PAJ and OPEC.

Table 6 - 3: Refinery crude throughput, mb/d

Refinery crude throughput	2020	2021	2022	1Q22	2Q22	3Q22	4Q22
<b>OECD Americas</b>	<b>16.59</b>	<b>17.79</b>	<b>18.68</b>	<b>18.35</b>	<b>18.74</b>	<b>19.00</b>	<b>18.61</b>
of which US	14.72	15.66	16.52	16.06	16.61	16.82	16.60
<b>OECD Europe</b>	<b>10.65</b>	<b>10.92</b>	<b>11.44</b>	<b>10.99</b>	<b>11.57</b>	<b>11.78</b>	<b>11.40</b>
of which:							
France	0.67	0.69	0.84	0.79	0.84	0.96	0.76
Germany	1.72	1.72	1.83	1.75	1.87	1.83	1.88
Italy	1.11	1.23	1.32	1.16	1.42	1.41	1.31
UK	0.92	0.92	1.04	1.04	1.06	1.02	1.03
<b>OECD Asia Pacific</b>	<b>5.87</b>	<b>5.76</b>	<b>6.07</b>	<b>6.21</b>	<b>5.83</b>	<b>6.17</b>	<b>6.06</b>
of which Japan	2.48	2.49	2.75	2.80	2.60	2.73	2.87
<b>Total OECD</b>	<b>33.12</b>	<b>34.47</b>	<b>36.18</b>	<b>35.55</b>	<b>36.14</b>	<b>36.96</b>	<b>36.07</b>
<b>Latin America</b>	<b>3.20</b>	<b>3.50</b>	<b>3.54</b>	<b>3.37</b>	<b>3.61</b>	<b>3.64</b>	<b>3.52</b>
<b>Middle East</b>	<b>6.08</b>	<b>6.78</b>	<b>7.41</b>	<b>7.21</b>	<b>7.34</b>	<b>7.50</b>	<b>7.60</b>
<b>Africa</b>	<b>1.79</b>	<b>1.78</b>	<b>1.80</b>	<b>1.79</b>	<b>1.82</b>	<b>1.79</b>	<b>1.78</b>
<b>India</b>	<b>4.42</b>	<b>4.73</b>	<b>5.00</b>	<b>5.18</b>	<b>5.22</b>	<b>4.69</b>	<b>4.89</b>
<b>China</b>	<b>13.48</b>	<b>14.07</b>	<b>13.50</b>	<b>13.96</b>	<b>12.89</b>	<b>13.00</b>	<b>14.14</b>
<b>Other Asia</b>	<b>4.72</b>	<b>4.81</b>	<b>5.33</b>	<b>5.07</b>	<b>5.43</b>	<b>5.37</b>	<b>5.45</b>
<b>Russia</b>	<b>5.39</b>	<b>5.61</b>	<b>5.46</b>	<b>5.71</b>	<b>5.04</b>	<b>5.50</b>	<b>5.59</b>
<b>Other Eurasia</b>	<b>1.10</b>	<b>1.26</b>	<b>1.32</b>	<b>1.28</b>	<b>1.31</b>	<b>1.31</b>	<b>1.38</b>
<b>Other Europe</b>	<b>0.43</b>	<b>0.41</b>	<b>0.51</b>	<b>0.42</b>	<b>0.51</b>	<b>0.55</b>	<b>0.56</b>
<b>Total Non-OECD</b>	<b>40.61</b>	<b>42.95</b>	<b>43.86</b>	<b>43.99</b>	<b>43.17</b>	<b>43.35</b>	<b>44.91</b>
<b>Total world</b>	<b>73.73</b>	<b>77.42</b>	<b>80.04</b>	<b>79.54</b>	<b>79.32</b>	<b>80.31</b>	<b>80.98</b>

Note: Totals may not add up due to independent rounding.

Sources: AFREC, APEC, EIA, IEA, Euroilstock, PAJ, Ministry data, including Ministry of Energy of the Russian Federation, Ministry of Petroleum and Natural Gas of India, OPEC and JODI.



Table 6 - 4: Refined product prices, US\$/b

	Dec 22	Jan 23	Change Jan/Dec	Annual avg. 2022	Year-to-date 2023
<b>US Gulf (Cargoes FOB)</b>					
<b>Naphtha*</b>	69.40	83.55	14.15	89.24	83.55
<b>Premium gasoline</b> (unleaded 93)	98.39	116.77	18.38	134.59	116.77
<b>Regular gasoline</b> (unleaded 87)	91.04	106.64	15.60	123.34	106.64
<b>Jet/Kerosene</b>	122.84	148.56	25.72	140.17	148.56
<b>Gasoil</b> (0.2% S)	89.75	93.72	3.97	122.10	93.72
<b>Fuel oil</b> (3.0% S)	54.18	55.30	1.12	76.84	55.30
<b>Rotterdam (Barges FoB)</b>					
<b>Naphtha</b>	65.57	76.21	10.64	85.08	76.21
<b>Premium gasoline</b> (unleaded 98)	110.33	123.20	12.87	136.26	123.20
<b>Jet/Kerosene</b>	121.12	129.05	7.93	139.86	129.05
<b>Gasoil/Diesel</b> (10 ppm)	120.72	124.90	4.18	142.32	124.90
<b>Fuel oil</b> (1.0% S)	64.77	68.38	3.61	88.77	68.38
<b>Fuel oil</b> (3.5% S)	56.87	60.49	3.62	78.86	60.49
<b>Mediterranean (Cargoes FOB)</b>					
<b>Naphtha</b>	60.68	73.95	13.27	82.26	73.95
<b>Premium gasoline**</b>	89.82	100.56	10.74	120.04	100.56
<b>Jet/Kerosene</b>	114.74	124.71	9.97	135.36	124.71
<b>Diesel</b>	112.15	123.96	11.81	135.91	123.96
<b>Fuel oil</b> (1.0% S)	71.36	74.50	3.14	94.51	74.50
<b>Fuel oil</b> (3.5% S)	52.97	54.67	1.70	72.30	54.67
<b>Singapore (Cargoes FOB)</b>					
<b>Naphtha</b>	66.41	72.52	6.11	83.91	72.52
<b>Premium gasoline</b> (unleaded 95)	89.40	98.83	9.43	115.05	98.83
<b>Regular gasoline</b> (unleaded 92)	85.36	95.49	10.13	111.02	95.49
<b>Jet/Kerosene</b>	110.54	115.07	4.53	126.76	115.07
<b>Gasoil/Diesel</b> (50 ppm)	113.53	115.67	2.14	134.94	115.67
<b>Fuel oil</b> (180 cst)	110.54	111.94	1.40	129.75	111.94
<b>Fuel oil</b> (380 cst 3.5% S)	55.56	57.98	2.42	76.63	57.98

Note: \* Barges. \*\* Cost, insurance and freight (CIF).

Sources: Argus and OPEC.

# Tanker Market

Dirty freight rates continued the previous month's decline in January, with m-o-m losses across all monitored routes. The decline came as rates continued to fall from elevated levels that had been pushed higher by concerns about disruptions due to trade dislocations. However, as trade flows had largely adjusted and with Russian crude trading below price cap levels, the upward pressure eased. VLCCs showed the biggest declines, falling 34%. Suezmax rates fell 32% m-o-m. Aframax rates saw the smallest decline, down 29%, partly supported by longer-haul demand.

Clean rates declined for the first time since October 2022, falling 42% on East of Suez routes and 52% on West of Suez routes. Some of the downward pressure was due to ship owners choosing to forego carrying Russian cargos ahead of sanctions, reducing demand for their tankers.

## Spot fixtures

The latest estimates show **global spot fixtures** continued to decline in January to average 12.1 mb/d. Fixtures fell around 0.9 mb/d or around 7% m-o-m. Compared with the previous year, spot fixtures declined by 1.9 mb/d or around 13%.

**Table 7 - 1: Spot fixtures, mb/d**

Spot fixtures	Nov 22	Dec 22	Jan 23	Change Jan 23/Dec 22
All areas	16.52	12.97	12.11	-0.86
OPEC	12.18	9.13	8.39	-0.74
Middle East/East	7.31	5.42	4.88	-0.54
Middle East/West	1.26	1.20	1.30	0.10
Outside Middle East	3.61	2.51	2.21	-0.30

Sources: Oil Movements and OPEC.

**OPEC spot fixtures** declined in January to average 8.4 mb/d. This represents a m-o-m drop of 0.7 mb/d, or 8%. In comparison with the same month in 2022, fixtures decreased by 0.8 mb/d, or more than 8%.

**Middle East-to-East** fixtures fell by 0.5 mb/d, or 10%, to average 4.9 mb/d. Compared with the same month of the previous year, eastward flows from the Middle East declined 1.2 mb/d, or almost 20%.

By contrast, spot fixtures from the **Middle East-to-West** edged up in January, increasing 0.1 mb/d, or 8% m-o-m, to average around 1.3 mb/d. Y-o-y, rates were also higher, gaining 0.5 mb/d, or almost 58%.

**Outside the Middle East**, fixtures dropped 0.3 mb/d or around 12% m-o-m to average 2.2 mb/d. Compared to the same month last year, fixtures on the route slipped by about 2%.

## Sailings and arrivals

**OPEC sailings** partially recovered from the decline in December, averaging 24.8 mb/d in January. This represents a m-o-m increase of almost 2.0 mb/d or close to 8%. Y-o-y, OPEC sailings increased 3.2 mb/d or 15%.

**Middle East sailings** edged higher to average 16.8 mb/d, representing a gain of 0.2 mb/d or over 1%. Y-o-y, sailings from the region increase 0.4 mb/d, or about 3%.

**Table 7 - 2: Tanker sailings and arrivals, mb/d**

Sailings	Nov 22	Dec 22	Jan 23	Change Jan 23/Dec 22
OPEC	25.30	22.84	24.79	1.95
Middle East	17.31	16.59	16.83	0.24
Arrivals				
North America	9.31	9.00	9.95	0.95
Europe	11.51	12.71	12.82	0.11
Far East	17.26	16.97	16.05	-0.92
West Asia	7.34	9.42	9.09	-0.33

Sources: Oil Movements and OPEC.

**Crude arrivals** saw a mixed performance in January, strengthening East of Suez while weakening in the West. Arrivals in North America increased by about 1.0 mb/d, or about 11% m-o-m, to average just under 10.0 mb/d. Y-o-y, arrivals in North America were similarly higher. Arrivals in Europe increased 1.1 mb/d, or just under 1%, to average 12.8 mb/d. European arrivals were broadly unchanged with the same month of the previous year.

Arrivals in the Far East declined 0.9 mb/d, or about 5%, to average just under 16 mb/d. Y-o-y, they were around 1.4 mb/d, or just under 10%, higher. West Asian arrivals fell 0.3 mb/d, or about 4%, to average 9.1 mb/d. Y-o-y, arrivals in the region rose 0.6 mb/d, or about 7%.

## Dirty tanker freight rates

### Very large crude carriers (VLCCs)

**VLCC** spot rates declined further in January, falling 34% on average m-o-m. However, compared to the same month of the previous year, VLCC rates were still up 53% on average.

On the **Middle East-to-East** route, rates fell 36% m-o-m to average WS49 points. This was still 36% higher y-o-y. Rates on the **Middle East-to-West** route lost 33% m-o-m to average WS39 points. Y-o-y, rates on the route increased 117%.

**West Africa-to-East** spot rates declined 34% m-o-m to average WS51 points in January. Compared with the same month of the previous year, rates were 38% higher.

**Table 7 - 3: Dirty VLCC spot tanker freight rates, Worldscale (WS)**

VLCC	Size	Nov 22	Dec 22	Jan 23	Change
	1,000 DWT				Jan 23/Dec 22
Middle East/East	230-280	112	77	49	-28
Middle East/West	270-285	68	58	39	-19
West Africa/East	260	111	77	51	-26

Sources: Argus and OPEC.

### Suezmax

**Suezmax** rates saw an accelerated decline in January, falling 32% m-o-m. Compared with the same month of the previous year, they were still up 94%.

Rates on the **West Africa-to-US Gulf Coast (USGC)** route fell 27% to average WS117 points. Compared with the same month of the previous year, they were 121% higher.

Spot freight rates on the **USGC-to-Europe** route fell 37% compared with the previous month to average WS85 points. Y-o-y, rates were 67% higher.

**Table 7 - 4: Dirty Suezmax spot tanker freight rates, WS**

Suezmax	Size	Nov 22	Dec 22	Jan 23	Change
	1,000 DWT				Jan 23/Dec 22
West Africa/US Gulf Coast	130-135	194	161	117	-44
US Gulf Coast/ Europe	150	172	135	85	-50

Sources: Argus and OPEC.

### Aframax

**Aframax** spot freight rates also joined the general decline. On average, spot Aframax rates fell 29% m-o-m. Compared with the same month of the previous year, rates were 126% higher.

The **Indonesia-to-East** route gave up the gains seen in the previous month, averaging WS249 in January. This represents a decline of 19% m-o-m, although y-o-y rates on the route were still 162% higher.

Spot rates on the **Caribbean-to-US East Coast (USEC)** route continued their sharp decline, falling 42% m-o-m to average WS152 points. Y-o-y, rates were still 57% higher.

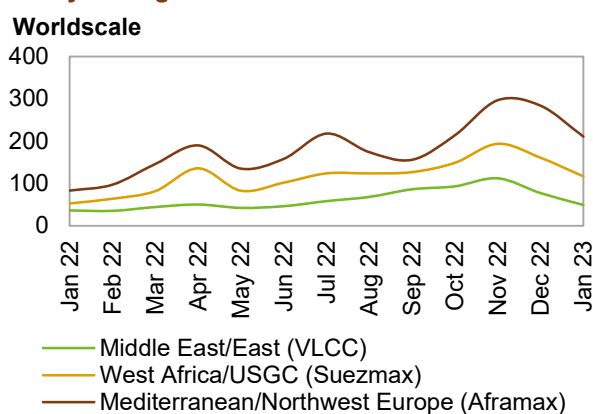
**Table 7 - 5: Dirty Aframax spot tanker freight rates, WS**

Aframax	Size	Nov 22	Dec 22	Jan 23	Change
	1,000 DWT				Jan 23/Dec 22
Indonesia/East	80-85	260	306	249	-57
Caribbean/US East Coast	80-85	466	263	152	-111
Mediterranean/Mediterranean	80-85	325	314	220	-94
Mediterranean/Northwest Europe	80-85	297	284	211	-73

Sources: Argus and OPEC.

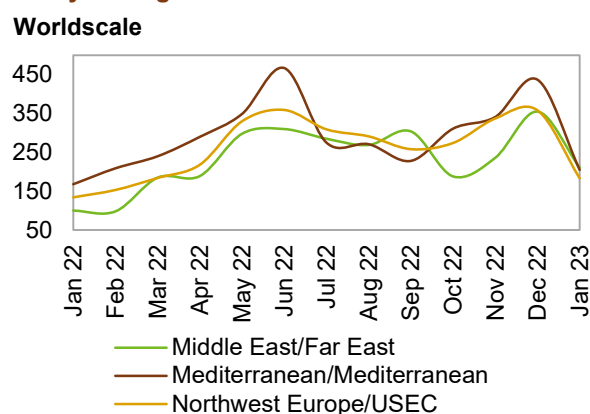
**Cross-Med** spot freight rates declined 30% m-o-m to average WS220 points. They were 134% higher y-o-y. On the **Mediterranean-to-Northwest Europe (NWE)** route, rates dropped 26% m-o-m to average WS211 points. Compared with the same month of the previous year, they were around 154% higher.

**Graph 7 - 1: Crude oil spot tanker freight rates, monthly average**



Sources: Argus and OPEC.

**Graph 7 - 2: Products spot tanker freight rates, monthly average**



Sources: Argus and OPEC.

## Clean tanker freight rates

**Clean spot freight rates** declined on all reported routes in January, after having been supported by high tanker demand in the prior two months. On average, rates fell 48% m-o-m but were 46% higher compared with January levels of the previous year.

**Table 7 - 6: Clean spot tanker freight rates, WS**

East of Suez	Size	Nov 22	Dec 22	Jan 23	Change
	1,000 DWT				Jan 23/Dec 22
Middle East/East	30-35	236	355	211	-144
Singapore/East	30-35	337	382	219	-163
<b>West of Suez</b>					
Northwest Europe/US East Coast	33-37	337	358	183	-175
Mediterranean/Mediterranean	30-35	341	437	205	-232
Mediterranean/Northwest Europe	30-35	351	444	212	-232

Sources: Argus and OPEC.

Rates on the **Middle East-to-East** route declined 41% in January to average WS211. Y-o-y, rates were up 111%. Freight rates on the **Singapore-to-East** route rose 43% m-o-m to average WS219 but were 70% higher compared with the same month of the previous year.

Spot freight rates on the **NWE-to-USEC** route fell 49% m-o-m to average WS183 points in January. They were 37% higher y-o-y. Rates for the **Cross-Med** route declined 53% to average WS205 points, while rates on the **Med-to-NWE** route lost 52% to average WS212 points. Compared with the same month previous year, rates on the Med routes were 22% and 20% higher, respectively.

## Crude and Refined Products Trade

Preliminary data shows US crude imports hit a three-year high in January, averaging 6.6 mb/d. US crude exports fell back to 3.6 mb/d, based on preliminary weekly data, after remaining around 4.0 mb/d over the previous three months.

Japan's crude imports hit a four-month high in December, averaging just under 3.0 mb/d. Product imports, including LPG, recorded an eleven-month high in December, driven by inflows of heating fuels.

China's crude imports were relatively steady in December, averaging 11.4 mb/d. Russian inflows declined while increases were seen from Malaysia, Angola and Norway. Product exports strengthened further in December to reach the highest since April 2020, with gasoline, gasoil and jet fuel outflows sharply higher.

India's crude imports were broadly stable m-o-m in December, averaging 4.6 mb/d. Product imports continued to edge higher in December to stand at a 22-month high of 1.2 mb/d, as a jump in fuel oil inflows outweighed declines in gasoline and LPG. Product exports surged 31% to a nine-month high, with gains seen across the barrel.

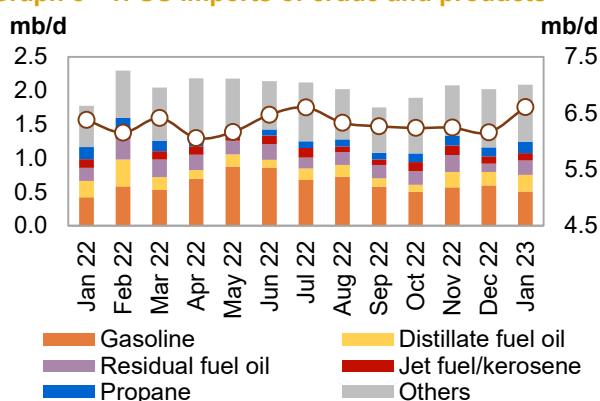
Preliminary figures for OECD Europe indicate that increased crude imports from the US, the Middle East and elsewhere have largely replaced Russian volumes in the effected countries. Relatively strong diesel imports into Europe are likely to dampen the impact of the ban on Russia product flows in the near term, as ARA inventories are at the highest since July 2021.

## US

Preliminary data shows **US crude imports** hit a three-year high in January, averaging 6.6 mb/d. Inflows were last at this level in December 2019. M-o-m, crude inflows increased 450 tb/d, or about 7%. Compared with the same month last year, crude imports flows were 0.2 mb/d, or around 4%, higher.

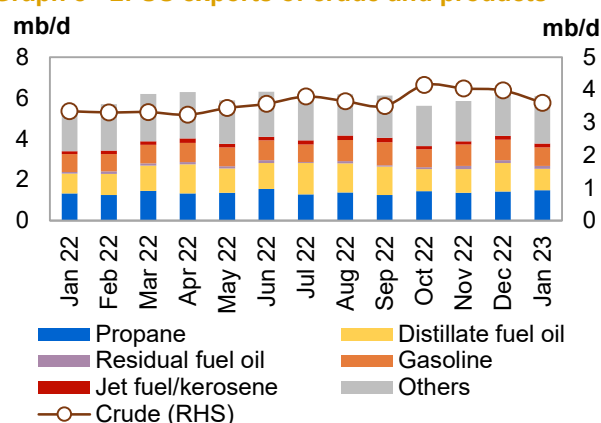
Canada remained the **top supplier of crude** in January, although its share fell to 55%, according to preliminary weekly data. Mexico was second with its share remaining at 11%. Saudi Arabia was third with a share of 4%.

**Graph 8 - 1: US imports of crude and products**



Sources: EIA and OPEC.

**Graph 8 - 2: US exports of crude and products**



Sources: EIA and OPEC.

**US crude exports** in January averaged 3.6 mb/d, according to preliminary weekly data, after remaining around 4.0 mb/d over the previous three months. This represents a m-o-m decline of 377 tb/d, or almost 10%. However, outflows were still higher y-o-y by 257 tb/d, or almost 8%.

According to the latest US Energy Information Administration (EIA) monthly data, India was the top **destination** for **US crude exports** in **November** with a share of 14%, followed by South Korea at a similar level of 14% and the Netherlands with 10%.

Based on weekly data, **US net crude imports** averaged 3.0 mb/d in **January**, compared with 2.2 mb/d in December and 3.0 mb/d in the same month last year.

On the **products** side, **imports** reached a six-month high, averaging 2.1 mb/d. This represents an increase of over 3%. Gains in distillates, fuel oil and naphtha outpaced a strong decline in gasoline. Compared with the same month in 2022, product inflows rose 312 tb/d, or around 18%.

## Crude and Refined Products Trade

**Product exports** declined m-o-m by around 2% in January to average 6.1 mb/d. Distillates outflows fell sharply and gasoline exports also declined. Compared with January 2022, product exports were sharply higher, up 687 tb/d, or 13%.

As a result, preliminary data saw **US net product exports** averaging 4.0 mb/d in January, compared to 4.2 mb/d in the previous month and 3.6 mb/d in the same month last year.

Preliminary data indicates that **US net crude and product exports** averaged 1.0 mb/d in January, compared with about 2.1 mb/d the month before and just 0.6 mb/d in the same month last year.

**Table 8 - 1: US crude and product net imports, mb/d**

US	Nov 22	Dec 22	Jan 23	Change Jan 23/Dec 22
<b>Crude oil</b>	2.20	2.18	3.00	0.83
<b>Total products</b>	-3.78	-4.23	-4.02	0.22
<b>Total crude and products</b>	<b>-1.58</b>	<b>-2.06</b>	<b>-1.01</b>	<b>1.05</b>

Note: Totals may not add up due to independent rounding.

Sources: EIA and OPEC.

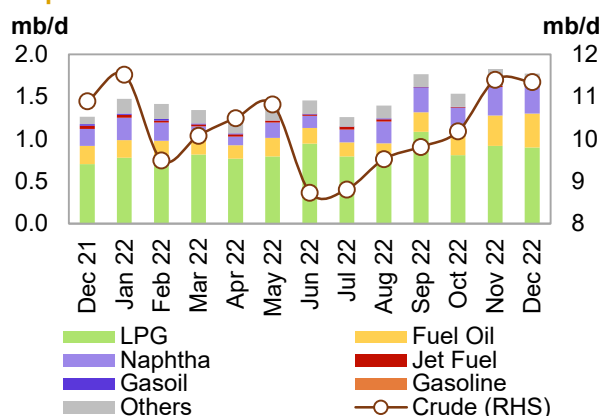
**Looking ahead**, US crude exports are likely to be dampened in the near term by unseasonably cold weather. For 2023, however, crude exports are expected to rise as US production reaches record levels, expanding the volumes available for export.

Similarly, US product exports are seen temporarily declining over the near term, amid lower flows to South America. For 2023, trade dislocations should push increasing volumes of **US product exports** to Europe.

## China

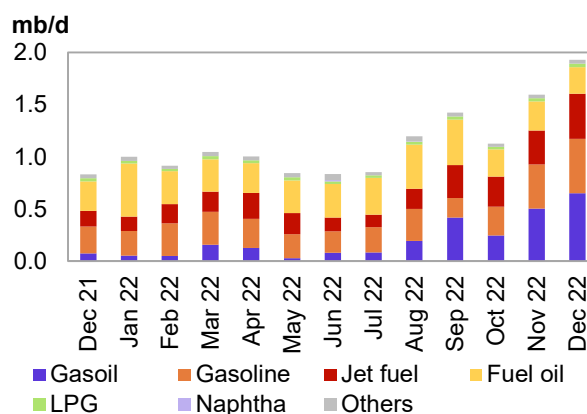
**China's crude imports** were broadly steady in **December**, averaging 11.4 mb/d. Russian inflows declined while increases were seen from Malaysia, Angola and Norway. Compared to the same month of the previous year, crude inflows rose 0.5 mb/d, or 4%. In annual terms, Crude imports averaged 10.2 mb/d, falling for the second year in a row, from the high levels seen during the pandemic when China filled its strategic reserves with low-cost crude.

**Graph 8 - 3: China's import of crude and total products**



Sources: China OGP and OPEC.

**Graph 8 - 4: China's export of total products**



Sources: China OGP and OPEC.

In terms of **crude imports by source**, Saudi Arabia reclaimed the top spot in **December**, with average inflows of about 1.7 mb/d. Russia was second with 1.5 mb/d. Malaysia was third with 1.3 mb/d, followed by Iraq and the UAE with around 1.2 mb/d each.

**Product imports** dropped back slightly from robust levels, averaging 1.8 mb/d, amid declines in jet fuel and LPG, although fuel oil inflows strengthened. M-o-m, product inflows were about 3% lower. However, imports were 0.5 mb/d, or around 41%, higher y-o-y.

**Product exports** strengthened further in December to reach 1.9 mb/d, the highest since April 2020. Product outflows were up 0.3 mb/d m-o-m, or nearly 21%, led by sharply higher gasoline, gasoil and jet fuel outflows. Y-o-y, product exports jumped 132%, or 1.1 mb/d.

As a result, China was a **net product exporter** in December for the first time since June 2021, averaging 154 tb/d. This compares to net imports of 231 tb/d the month before and 411 tb/d in the same month of 2021.

**Table 8 - 2: China's crude and product net imports, mb/d**

China	Oct 22	Nov 22	Dec 22	Change Dec 22/Nov 22
Crude oil	10.14	11.40	11.34	-0.07
Total products	0.41	0.23	-0.15	-0.39
<b>Total crude and products</b>	<b>10.55</b>	<b>11.64</b>	<b>11.19</b>	<b>-0.45</b>

Note: Totals may not add up due to independent rounding.

Sources: China OGP and OPEC.

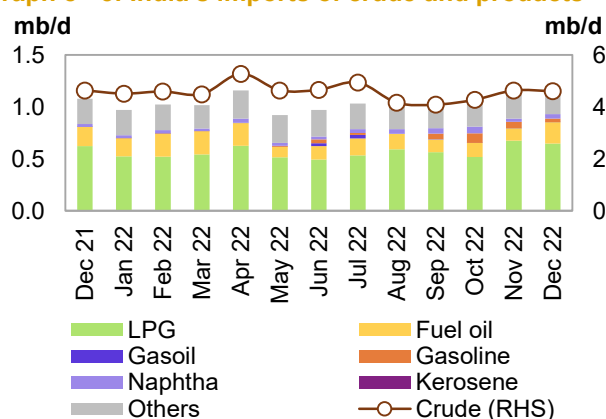
**Looking ahead**, China crude imports are expected to increase in 2023, following two years of declines. Product exports are also expected to be higher in 2023, contingent on government policy regarding lockdowns and the refining sector. These non-fundamental factors make developments in China one of the key uncertainties impacting crude and refined product trade flows in 2023.

## India

**India's crude imports** were broadly stable in **December**, edging down less than 1% to average 4.6 mb/d. Y-o-y, crude inflows were also less than 1% lower. In 2022, crude imports rose 8% or 0.3 mb/d to average 4.6 mb/d. This represented record high in annual terms, slightly above the previous record set in 2019.

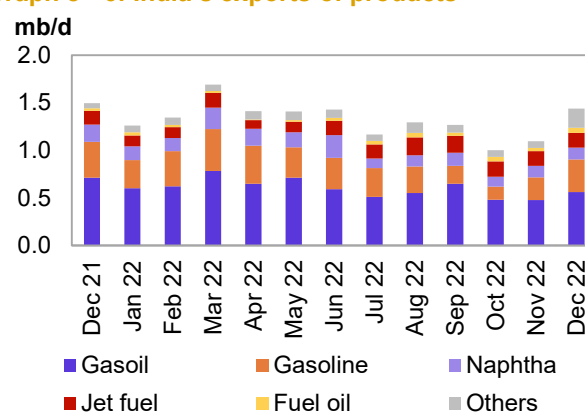
In terms of **crude imports by source**, Kpler data shows Russia was the top supplier of crude to India in December for the sixth-consecutive month with a share of 26%, as refiners continued to bring in discounted barrels. Iraq was second with 20%, followed by Saudi Arabia with 15% and the US with 7%.

**Graph 8 - 5: India's imports of crude and products**



Sources: PPAC and OPEC.

**Graph 8 - 6: India's exports of products**



Sources: PPAC and OPEC.

In terms of **products, imports** continued to edge higher in December to stand at a 22-month high of 1.2 mb/d. A jump in fuel oil inflows outweighed declines in gasoline and LPG. Compared with the same month in 2021, inflows increased by about 10%, or 103 tb/d.

**Product exports** surged 31%, or 0.3 mb/d, to average 1.4 mb/d, representing a nine-month high. Gains were seen across the barrel, led by gasoline and diesel oil. Y-o-y, product exports were 57 tb/d, or about 4%, lower.

As a result, India returned to being a **net product exporter** at 255 tb/d following two months of atypical net imports. In November, net imports averaged 47 tb/d, while in December 2021 net exports averaged 455 tb/d.

**Table 8 - 3: India's crude and product net imports, mb/d**

India	Oct 22	Nov 22	Dec 22	Change Dec 22/Nov 22
Crude oil	4.28	4.64	4.61	-0.03
Total products	0.06	0.05	-0.26	-0.30
<b>Total crude and products</b>	<b>4.34</b>	<b>4.68</b>	<b>4.35</b>	<b>-0.33</b>

Note: Totals may not add up due to independent rounding.

India data table does not include information for crude import and product export by Reliance Industries.

Sources: PPAC and OPEC.

## Crude and Refined Products Trade

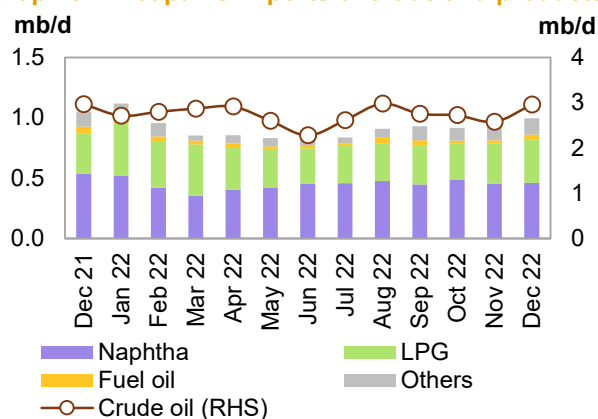
**Looking ahead, crude imports** are expected to continue to grow in 2023, supported by both internal and external demand for the country's refined products, and access to discounted crude. **Product exports** are expected to be higher this year, boosted by expanding flows to Europe, although the government will continue to ensure ample availability domestically.

## Japan

**Japan's crude imports** hit a five-month high in December, averaging just under 3.0 mb/d, representing a four-month high. Inflows increased m-o-m by 0.4 mb/d, or almost 15%. Compared with the same month of the previous year, imports were negligibly lower. In 2022, crude imports rose 10% or 0.2 mb/d to average 2.7 mb/d in 2022, the first annual increase since 2017.

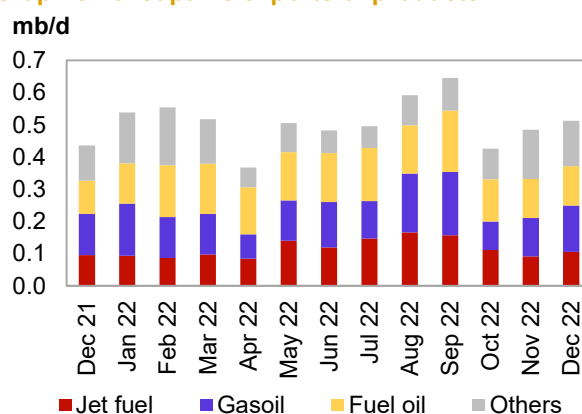
In terms of **crude imports by source**, Saudi Arabia rose to the top spot in December with a share of 41%. The UAE was second with 36%, followed by Kuwait with about 9%.

**Graph 8 - 7: Japan's imports of crude and products**



Sources: METI and OPEC.

**Graph 8 - 8: Japan's exports of products**



Sources: METI and OPEC.

**Product imports**, including LPG, recorded an eleven-month high in December, averaging 996 tb/d. Gains were primarily driven by heating fuels. Product inflows rose m-o-m by 5%, or 50 tb/d. Compared to the same month of the previous year, imports declined 5%, or 51 tb/d. For the year 2022, product imports average 0.9 mb/d, representing a decline of 10% y-o-y following the strong performance seen in 2021, when imports reached a nine-year high.

**Product exports** recovered further in December, averaging 513 tb/d, representing a gain of about 6%, or 28 tb/d. Increases were seen in gasoil and jet fuel, which were slightly offset by declines in kerosene. Y-o-y, product outflows were 76 tb/d, or about 18% higher. In annual terms, product exports jumped 27% or 0.1 mb/d to average 0.5 mb/d in 2022, although still remaining below the pre-pandemic levels. Gains were seen across the board, led by gasoil outflows.

As a consequence, Japan's **net product imports** averaged 483 tb/d in December. This compares with 461 tb/d the month before and 610 tb/d in December 2021.

**Table 8 - 4: Japan's crude and product net imports, mb/d**

Japan	Oct 22	Nov 22	Dec 22	Change Dec 22/Nov 22
Crude oil	2.72	2.58	2.96	0.38
Total products	0.49	0.46	0.48	0.02
<b>Total crude and products</b>	<b>3.21</b>	<b>3.04</b>	<b>3.44</b>	<b>0.40</b>

Note: Totals may not add up due to independent rounding.

Sources: METI and OPEC.

Japan saw strong growth in **crude imports** (+10%) and **product exports** (+27%) in 2022. **Looking ahead**, the expected return of China to the international product market is likely to provide greater competition for Japan's product outflows, which would have a knock on effect for its crude buying.

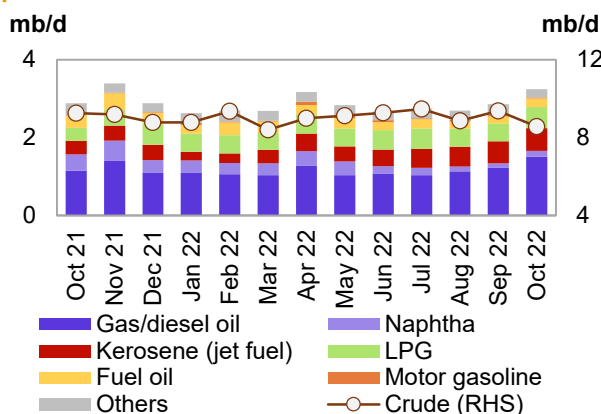


## OECD Europe

The latest regional data shows **OECD Europe** crude imports fell by almost 9%, or 0.8 mb/d, m-o-m in October to average 8.6 mb/d, representing the lowest level since March 2022. Y-o-y, crude imports were 7%, or 0.7 mb/d, lower.

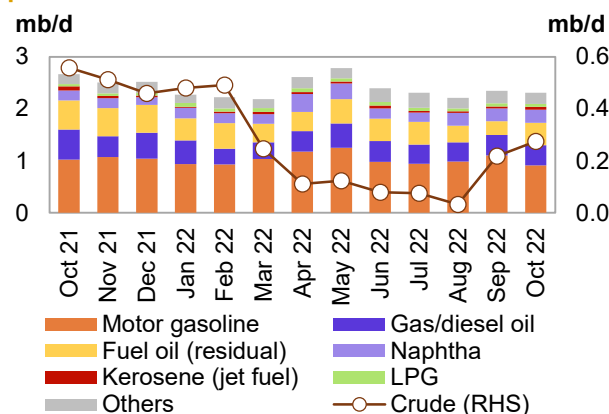
In terms of **import sources** from outside the region, Russia remained the top supplier in October with 1.5 mb/d, which was 1.4 mb/d, or about 46%, lower compared to the same month last year. The US came in second with 1.3 mb/d. Nigeria and Brazil saw higher flows

**Graph 8 - 9: OECD Europe imports of crude and products**



Sources: IEA and OPEC.

**Graph 8 - 10: OECD Europe exports of crude and products**



Sources: IEA and OPEC.

**Crude exports** continued to climb from an eight-year low in August, averaging 275 tb/d in October amid higher flows to China. This compares with 218 tb/d the month before and 558 tb/d in October 2021.

China was the top **destination** outside the region in October, taking in around 250 tb/d, followed by Korea with 22 tb/d.

**Net crude imports** averaged 8.3 mb/d in October, compared with 9.2 mb/d in September and 8.7 mb/d in October 2021.

In terms of **products, imports** in October rose by more than 13%, or 381 tb/d, to average 3.2 mb/d, primarily due to higher inflows of gasoil. LPG and naphtha were also higher. Compared with the same month of the previous year, product outflows were about 13%, or 361 tb/d, higher.

**Product exports** edged lower, down by less than 2% m-o-m to average 2.3 mb/d, as a drop in gasoline outweighed a strong gain in fuel oil. Y-o-y, exports were 14%, or 0.4 mb/d, lower.

**Net product imports** averaged 934 tb/d in October, compared with net imports of 516 tb/d in the month before and 212 tb/d in October 2021.

Combined, **net crude and product imports** averaged 9.2 mb/d in October. This compares with 9.7 mb/d the month before and 8.9 mb/d in October 2021.

**Table 8 - 5: OECD Europe's crude and product net imports, mb/d**

OECD Europe	Aug 22	Sep 22	Oct 22	Change Oct 22/Sep 22
<b>Crude oil</b>	8.83	9.16	8.29	-0.86
<b>Total products</b>	0.48	0.52	0.93	0.42
<b>Total crude and products</b>	<b>9.31</b>	<b>9.67</b>	<b>9.23</b>	<b>-0.44</b>

Note: Totals may not add up due to independent rounding.

Sources: IEA and OPEC.

**Looking ahead**, increased crude imports from the US, Middle East and elsewhere are seen sufficient to allow Europe to forgo Russian volumes. Relatively strong diesel flows into Europe in recent months are likely to dampen the impact of the ban on Russia product flows in the near term, as ARA inventories are at the highest since July 2021. A greater test will come when product demand picks up in 2Q23.

## Eurasia

**Total crude oil exports from Russia and Central Asia** in December declined by 0.2 mb/d, or about 3%, to average 6.4 mb/d, driven by lower flows from Baltic Sea ports. Compared with the same month in 2021, total crude exports from the Eurasian region were down by 0.3 mb/d, or 5%.

Crude exports through the **Transneft system** saw mixed movement in December. Taken together, outflows fell by 272 tb/d, or about 7%, to average about 3.7 mb/d. Compared with the same month of 2021, exports were down by 0.2 mb/d, or 4%. Shipments from the **Black Sea** port of Novorossiysk edged up 93 tb/d, or 20%, to average 550 tb/d. In contrast, exports from the **Baltic Sea** declined 319 tb/d m-o-m, or by about 22%, to average 1.1 mb/d. Flows from Primorsk led declines, down 192 tb/d, or 25%, to average 571 tb/d, while exports from Ust-Luga fell by 127 tb/d, or about 19%, to average 552 tb/d.

Shipments via the **Druzhba** pipeline increased by 57 tb/d or about 10% to average 638 tb/d. Exports to China via the **ESPO pipeline** edged down 30 tb/d to average 597 tb/d in December. Flows to the Pacific port of **Kozmino** slipped 74 tb/d, or about 9% m-o-m, to average 766 tb/d.

In the **Lukoil system**, exports via the Varandey offshore platform in the Barents Sea averaged 117 tb/d in December, up 13% m-o-m. There were no exports from the Kaliningrad terminal for the second month in a row.

On other routes, **Russia's Far East** exports jumped by 73%, or 88 tb/d, to average 209 tb/d in December. This was still a drop of 36%, or 116 tb/d, compared to the volumes shipped in December 2021.

**Central Asian** exports averaged 220 tb/d in December, representing a decline of 4% compared with the month before, but 7% higher y-o-y.

Black Sea total exports from the **CPC terminal** increased further, up by almost 5%, to average 1.5 mb/d in December. This was a gain of 8% compared with the same month in 2021. There were no exports via the Supsa pipeline in December, compared with 82 tb/d in the same month of the previous year. Exports via the **Baku-Tbilisi-Ceyhan (BTC) pipeline** in December rose by 10%, or 72 tb/d, to average 633 tb/d.

**Total product exports from Russia and Central Asia** rose by 25%, or 703 tb/d m-o-m, to average 3.6 mb/d in December. M-o-m gains were seen across the board, except for VGO. Gasoil exports were 0.3 mb/d, or 31%, higher, while fuel oil was up 0.2 mb/d, or 23%, and naphtha gained 0.1 mb/d, or 29%. Y-o-y, total product exports were 30%, or 0.8 mb/d, higher in December, with gasoil leading gains, up by around 0.4 mb/d.

## Commercial Stock Movements

Preliminary December data sees total OECD commercial oil stocks down by 10.9 mb from the previous month. At 2,768 mb, inventories were 117 mb higher than the same month a year ago; 95 mb lower than the latest five-year average and 158 mb below the 2015–2019 average. Within the components, crude stocks rose by 5.2 mb, while product stocks fell by 16.2 mb, m-o-m.

At 1,344 mb, OECD crude stocks were 72 mb higher than the same time a year ago, but 36 mb lower than the latest five-year average and 83 mb lower than the 2015–2019 average.

OECD product stocks stood at 1,424 mb, representing a surplus of 45 mb from the same time a year ago, but 59 mb lower than the latest five-year average and 75 mb below the 2015–2019 average.

In terms of days of forward cover, OECD commercial stocks rose m-o-m by 0.3 days in December to stand at 60.1 days. This is 2.2 days above levels seen in the same month last year, but 2.5 days less than the latest five-year average and 2.3 days lower than the 2015–2019 average.

Preliminary data for January 2023 showed that total US commercial oil stocks rose by 30.4 mb m-o-m to stand at 1,235.6 mb. This is 45.6 mb, or 3.8%, higher than the same month in 2021; but 25.8 mb, or 2.0%, below the latest five-year average. Crude stocks rose by 32.0 mb, while product stocks fell by 1.7 mb, m-o-m.

## OECD

Preliminary **December** data sees **total OECD commercial oil stocks** down m-o-m by 10.9 mb. At 2,768 mb, they were 117 mb higher than the same time one year ago, but 95 mb lower than the latest five-year average and 158 mb below the 2015–2019 average.

Within the components, crude stocks rose by 5.2 mb, while product stocks fell by 16.2 mb, m-o-m. Total commercial oil stocks in December fell in all OECD regions.

OECD commercial **crude stocks** stood at 1,344 mb in December. This is 72 mb higher than the same time a year ago, but 36 mb lower than the latest five-year average and 83 mb lower than the 2015–2019 average.

Compared with the previous month, OECD Americas saw a crude stock build of 4.3 mb, OECD Asia Pacific stocks rose by 4.2 mb, while stocks in OECD Europe dropped by 3.2 mb.

**Total product inventories** stood at 1,424 mb in December. This is 45 mb above the same time a year ago; 59 mb lower than the latest five-year average and 75 mb below the 2015–2019 average. Product stocks fell in all OECD regions.

**Table 9 - 1: OECD's commercial stocks, mb**

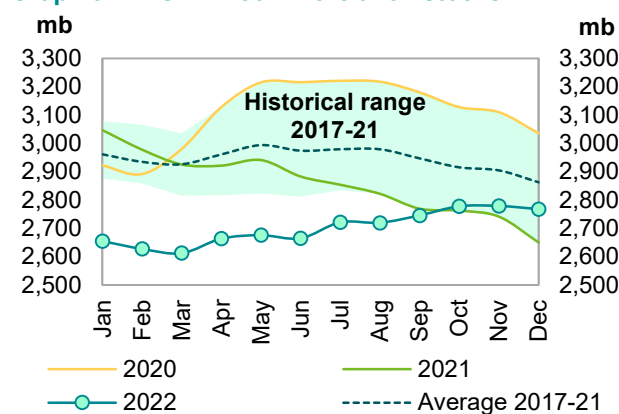
OECD stocks	Dec 21	Oct 22	Nov 22	Dec 22	Change Dec 22/Nov 22
Crude oil	1,273	1,362	1,339	1,344	5.2
Products	1,378	1,416	1,440	1,424	-16.2
<b>Total</b>	<b>2,651</b>	<b>2,778</b>	<b>2,779</b>	<b>2,768</b>	<b>-10.9</b>
<b>Days of forward cover</b>	<b>57.9</b>	<b>59.6</b>	<b>59.8</b>	<b>60.1</b>	<b>0.3</b>

Note: Totals may not add up due to independent rounding.

Sources: Argus, EIA, Euroilstock, IEA, METI and OPEC.

In terms of **days of forward cover**, OECD commercial stocks rose m-o-m by 0.3 days in December to stand at 60.1 days. This is 2.2 days above December 2021 level, but 2.5 days less than the latest five-year average and 2.3 days lower than the 2015–2019 average.

**Graph 9 - 1: OECD commercial oil stocks**



Sources: Argus, EIA, Euroilstock, IEA, METI and OPEC.

## Commercial Stock Movements

All three OECD regions were below the latest five-year average: the Americas by 3.0 days at 59.7 days; Asia Pacific by 1.3 days at 46.1 days; and Europe by 2.5 days at 69.3 days.

### OECD Americas

**OECD Americas total commercial stocks** fell by 1.3 mb m-o-m in December to settle at 1,489 mb. This is 19 mb higher than the same month in 2021, but 40 mb lower than the latest five-year average.

Commercial **crude oil stocks** in OECD Americas rose m-o-m by 4.3 mb in December to stand at 741 mb, which is 2.1 mb higher than in December 2021 and 13.6 mb less than the latest five-year average. The monthly build in crude oil stocks can be attributed to lower crude runs, which dropped by around 300 tb/d m-o-m to 16.62 mb/d.

By contrast, **total product stocks** in OECD Americas fell m-o-m by 5.6 mb in December to stand at 748 mb. Nevertheless, this was 17 mb higher than the same month in 2021, but 27 mb below the latest five-year average. Higher consumption in the region was behind the product stock draw.

### OECD Europe

**OECD Europe total commercial stocks** fell m-o-m by 7.2 mb in December to settle at 916 mb. This is 58.5 mb higher than the same month in 2021, but 35.5 mb below the latest five-year average.

OECD Europe's **commercial crude stocks** fell by 3.2 mb m-o-m to end the month of December at 418 mb, which is 45.4 mb higher than one year ago and 4.1 mb above the latest five-year average. The drop in crude oil inventories came despite refinery throughput in the EU-14, plus the UK and Norway remaining unchanged from the previous month.

Europe's **product stocks** also fell m-o-m by 4.0 mb to end December at 498 mb. This is 13.1 mb higher than a year ago, but 39.6 mb below the latest five-year average.

### OECD Asia Pacific

**OECD Asia Pacific's total commercial oil stocks** fell m-o-m by 2.5 mb in December to stand at 363 mb. This is 39.7 mb higher than a year ago, but 19.5 mb below the latest five-year average.

OECD Asia Pacific's **crude inventories** rose by 4.2 mb m-o-m to end December at 185 mb, which is 24.4 mb higher than one year ago, but 26.4 mb below the latest five-year average.

OECD Asia Pacific's **total product inventories** also fell m-o-m by 6.6 mb to end December at 178 mb. This is 15.4 mb higher than the same time a year ago and 7.0 mb higher than the latest five-year average.

## US

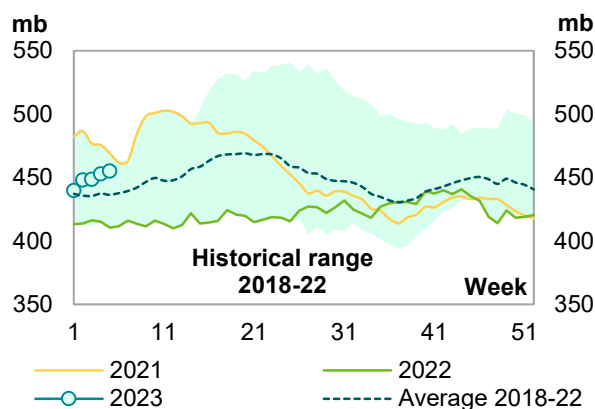
Preliminary data for **January 2023** showed that **total US commercial oil stocks** rose by 30.4 mb m-o-m to stand at 1,235.6 mb. This is 45.6 mb, or 3.8%, higher than the same month in 2021; but 25.8 mb, or 2.0%, below the latest five-year average. Crude stocks rose by 32.0 mb, while product stocks fell by 1.7 mb, m-o-m.

US commercial **crude stocks** in January 2023 stood at 452.7 mb. This is 38.4 mb, or 9.3%, higher the same month of the previous year, and 12.6 mb, or 2.9%, above the latest five-year average. The monthly build in crude oil stocks can be attributed to lower crude runs, which dropped by around 730 tb/d to 15.89 mb/d.

In contrast, **total product stocks** fell in January 2023 to stand at 782.9 mb. This is 7.2 mb, or 0.9%, higher than January 2022 levels; but 38.4 mb, or 4.7%, lower than the latest five-year average. The stock drop could be attributed to higher product consumption.

**Gasoline stocks** rose m-o-m by 11.9 mb in January 2023 to settle at 234.6 mb. This is 17.2 mb, or 6.8% lower than in the same month in 2022; and 22.2 mb, or 8.7%, lower than the latest five-year average.

**Graph 9 - 2: US weekly commercial crude oil inventories**



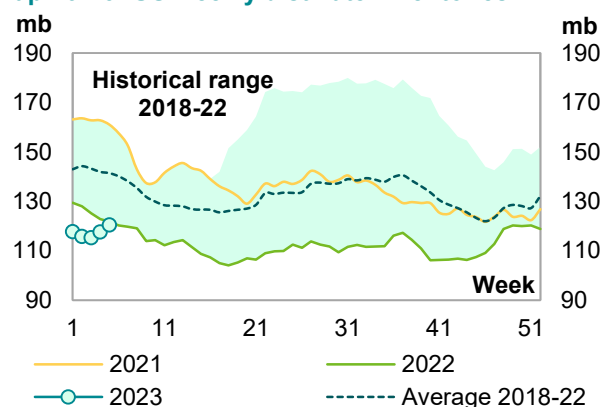
Sources: EIA and OPEC.

**Residual fuel oil stocks** rose by 1.3 mb m-o-m in January 2023. At 31.3 mb, this was 4.6 mb, or 17.1%, higher than a year earlier, and 1.0 mb, or 3.4%, above the latest five-year average.

**Jet fuel stocks** also rose m-o-m by 1.3 mb, ending January 2023 at 35.5 mb. This is 3.1 mb, or 8.1%, lower than the same month in 2022, and 6.3 mb, or 15.0%, below the latest five-year average.

By contrast, **distillate stocks** fell m-o-m by 1.2 mb in January 2023 to stand at 117.6 mb. This is 7.4 mb, or 5.9%, lower than the same month of the previous year; and 25.2 mb, or 17.6%, below the latest five-year average.

**Graph 9 - 3: US weekly distillate inventories**



Sources: EIA and OPEC.

**Table 9 - 2: US commercial petroleum stocks, mb**

US stocks	Jan 22	Nov 22	Dec 22	Jan 23	Change Jan 23/Dec 22
Crude oil	414.3	416.3	420.6	452.7	32.0
Gasoline	251.8	221.3	222.7	234.6	11.9
Distillate fuel	125.0	120.5	118.8	117.6	-1.2
Residual fuel oil	26.7	29.1	30.0	31.3	1.3
Jet fuel	38.6	37.8	34.1	35.5	1.3
Total products	775.7	809.7	784.6	782.9	-1.7
Total	1,190.0	1,226.1	1,205.2	1,235.6	30.4
SPR	588.3	388.4	372.4	371.6	-0.8

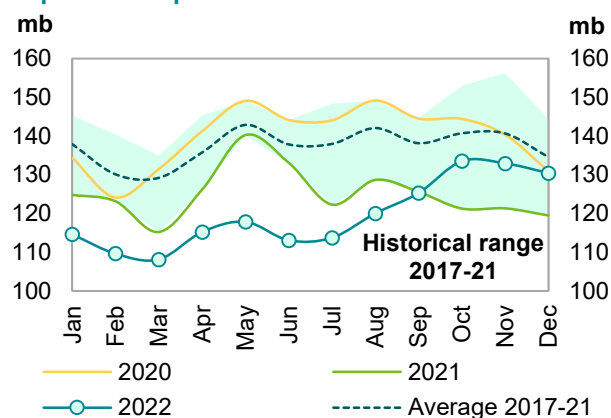
Sources: EIA and OPEC.

## Japan

In **Japan**, **total commercial oil stocks** in **December** fell m-o-m by 2.5 mb to settle at 130.5 mb. This is 10.9 mb, or 9.2%, higher than the same month in 2021; but 4.1 mb, or 3.0%, below the latest five-year average. Crude stocks rose by 4.2 mb, while product stocks fell by 6.6 mb, m-o-m.

Japanese **commercial crude oil stocks** rose m-o-m by 4.2 mb in December to stand at 71.3 mb. This is 11.0 mb, or 18.2% higher than the same month of the previous year; but 2.2 mb, or 3.0%, lower than the latest five-year average. This stock build came on the back of higher crude imports, which rose m-o-m by 378 tb/d, or 14.7%, to stand at 2.96 mb/d.

**Graph 9 - 4: Japan's commercial oil stocks**



Sources: METI and OPEC.

In contrast, Japan's **total product inventories** fell m-o-m by 6.6 mb to end December at 59.2 mb. This is in line with the same month in 2021; but 1.9 mb, or 3.1%, below the latest five-year average.

**Gasoline stocks** fell m-o-m by 0.9 mb to stand at 10.2 mb in December. This was 0.3 mb, or 2.9% below a year earlier at the same time; and 0.4 mb, or 3.8%, lower than the latest five-year average. The fall came on higher gasoline consumption, amounting to 15.2% m-o-m. Lower imports, which declined by 14.4%, also supported the drop in gasoline stocks.

**Distillate stocks** also fell m-o-m by 5.0 mb to end December at 27.1 mb. This is 1.1 mb or 4.1% below the same month in 2021 and 1.5 mb, or 5.3%, below the latest five-year average. Within distillate components, kerosene, jet fuel and gasoil stocks went down by 21.9%, 15.4% and 3.9%, respectively.

**Total residual fuel oil stocks** fell m-o-m by 0.8 mb to end December at 11.8 mb. This is 0.6 mb, or 4.8%, lower than in the same month of the previous year; and 0.8 mb, or 6.4%, below the latest five-year average. Within the components, fuel oil A and fuel oil B.C stocks fell by 12.3% and 2.3%, m-o-m, respectively.

**Table 9 - 3: Japan's commercial oil stocks\*, mb**

Japan's stocks	Dec 21	Oct 22	Nov 22	Dec 22	Change Dec 22/Nov 22
<b>Crude oil</b>	<b>60.3</b>	<b>71.6</b>	<b>67.1</b>	<b>71.3</b>	<b>4.2</b>
Gasoline	10.5	9.8	11.1	10.2	-0.9
Naphtha	8.1	9.9	10.0	10.1	0.1
Middle distillates	28.3	29.8	32.1	27.1	-5.0
Residual fuel oil	12.4	12.4	12.6	11.8	-0.8
<b>Total products</b>	<b>59.2</b>	<b>61.9</b>	<b>65.8</b>	<b>59.2</b>	<b>-6.6</b>
<b>Total**</b>	<b>119.5</b>	<b>133.5</b>	<b>132.9</b>	<b>130.5</b>	<b>-2.5</b>

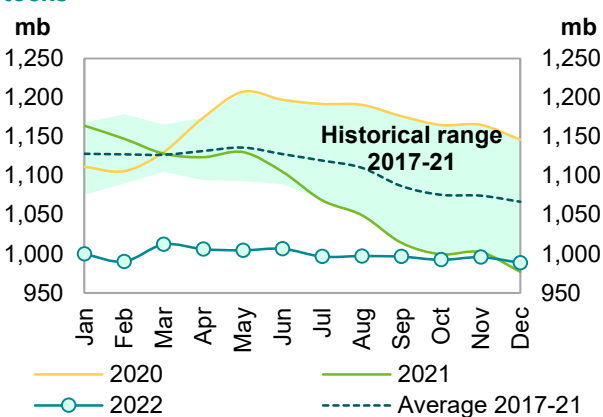
Note: \* At the end of the month. \*\* Includes crude oil and main products only.

Sources: METI and OPEC.

## EU-14 plus UK and Norway

Preliminary data for **December** showed that **total European commercial oil stocks** fell m-o-m by 7.2 mb to stand at 988.7 mb. At this level, they were 11.5 mb, or 1.2%, above the same month a year earlier; but 77.9 mb, or 7.3%, lower than the latest five-year average. Crude and product stocks fell m-o-m by 3.2 mb and 4.0 mb, respectively.

European **crude inventories** fell in December to stand at 432.7 mb. This is 18.8 mb, or 4.5%, higher than the same month in 2021, but 25.5 mb, or 5.6%, below the latest five-year average. The drop in crude oil inventories came despite refinery throughput in the EU-14, plus the UK and Norway remaining unchanged from the previous month.

**Graph 9 - 5: EU-14 plus UK and Norway's total oil stocks**

Sources: Argus, Euroilstock and OPEC.

**Total European product stocks** also fell m-o-m by 4.0 mb to end December at 556.0 mb. This is 7.3 mb, or 1.3%, lower than the same month of the previous year; and 52.4 mb, or 8.6%, below the latest five-year average.

**Gasoline stocks** fell m-o-m by 2.1 mb in December to stand at 102.9 mb. At this level, they were 3.8 mb, or 3.5%, lower than the same time a year earlier; and 12.0 mb, or 10.5%, below the latest five-year average.

**Residual fuel stocks** also fell m-o-m by 2.7 mb in December to stand at 59.2 mb. This is 2.6 mb, or 4.7%, higher than the same month in 2021; but 1.6 mb, or 2.6%, below the latest five-year average.

By contrast, **distillate stocks** rose m-o-m by 0.8 mb in December to stand at 362.7 mb. This is 14.1 mb, or 3.7%, below the same month in 2021; and 42.5 mb, or 10.5%, less than the latest five-year average.

Meanwhile, **naphtha stocks** remained unchanged m-o-m in December, ending the month at 31.2 mb. This is 7.9 mb, or 33.8%, higher than the December 2021 level; and 3.8 mb, or 13.7%, higher than the latest five-year average.

**Table 9 - 4: EU-14 plus UK and Norway's total oil stocks, mb**

EU stocks	Dec 21	Oct 22	Nov 22	Dec 22	Change Dec 22/Nov 22
<b>Crude oil</b>	<b>413.9</b>	<b>435.5</b>	<b>435.9</b>	<b>432.7</b>	<b>-3.2</b>
Gasoline	106.6	105.1	105.0	102.9	-2.1
Naphtha	23.3	30.8	31.2	31.2	0.0
Middle distillates	376.8	359.5	361.9	362.7	0.8
Fuel oils	56.6	61.6	61.9	59.2	-2.7
<b>Total products</b>	<b>563.3</b>	<b>557.0</b>	<b>560.0</b>	<b>556.0</b>	<b>-4.0</b>
<b>Total</b>	<b>977.2</b>	<b>992.5</b>	<b>995.9</b>	<b>988.7</b>	<b>-7.2</b>

Sources: Argus, Euroilstock and OPEC.

## Singapore, Amsterdam-Rotterdam-Antwerp (ARA) and Fujairah

### Singapore

In **December**, **total product stocks in Singapore** rose m-o-m by 1.8 mb to 44.1 mb. This is 4.1 mb, or 10.4%, higher than the same month in 2021; but 1.5 mb, or 3.2%, below the latest five-year average.

**Light distillate stocks** rose m-o-m by 0.3 mb in December to stand at 15.0 mb. This is 3.0 mb, or 25.3%, higher than the same month of the previous year; and 1.6 mb, or 12.0%, above the latest five-year average.

**Middle distillate stocks** also rose m-o-m by 0.2 mb in December, to stand at 8.0 mb. This is in line with a year earlier at the same time; and 2.9 mb, or 26.9%, lower than the latest five-year average.

**Residual fuel oil stocks** also rose m-o-m by 1.2 mb, ending December at 21.1 mb. This is 1.1 mb, or 5.6%, higher than December 2021; but 0.2 mb, or 0.7%, below the latest five-year average.

### ARA

**Total product stocks in ARA** rose m-o-m in **December** by 1.9 mb. At 42.6 mb, they were 4.8 mb, or 12.8%, higher than the same month in 2021; and 0.7 mb or 1.6% higher than the latest five-year average.

**Gasoline stocks** in December fell by 0.1 mb m-o-m to stand at 11.4 mb, which is 2.7 mb, or 31.4%, higher than the same month of the previous year; and 2.0 mb, or 21.0%, above the latest five-year average.

**Jet oil stocks** also fell by 0.1 mb m-o-m to stand at 6.8 mb. This is 0.2 mb, or 3.5%, lower than levels seen in December 2021; but 0.8 mb, or 14.2%, above the latest five-year average.

In contrast, **gasoil stocks** rose by 1.8 mb m-o-m, ending December at 14.6 mb. This is 1.6 mb, or 12.6%, higher than December 2021; but 1.9 mb, or 11.7%, below the latest five-year average.

**Fuel oil stocks** also rose by 0.6 mb m-o-m in December to stand at 7.2 mb, which is 0.3 mb, or 4.6%, less than in December 2021; and 0.1 mb, or 1.3%, below the latest five-year average.

### Fujairah

During the week ending 30 January 2023, **total oil product stocks in Fujairah** fell w-o-w by 0.97 mb to stand at 19.02 mb, according to data from Fed Com and S&P Global Platts. At this level, total oil stocks were 0.58 mb lower than at the same time a year ago.

**Light distillate stocks** fell by 0.11 mb to stand at 6.98 mb, which is 0.61 mb higher than a year ago.

**Middle distillate stocks** also fell w-o-w by 0.65 mb to stand at 2.33 mb, which is 0.47 mb higher than the same time last year. **Heavy distillate stocks** also dropped by 0.20 mb w-o-w to stand at 9.71 mb in the week to 30 January 2023, which is 1.67 mb below the same period a year ago.

## Balance of Supply and Demand

Demand for OPEC crude in 2022 remains broadly unchanged from the previous MOMR to stand at 28.6 mb/d. This is around 0.5 mb/d higher than in 2021.

According to secondary sources, OPEC crude production averaged 28.4 mb/d in 1Q22, which is 0.4 mb/d lower than demand for OPEC crude. In 2Q22, OPEC crude production averaged 28.6 mb/d, which is 0.3 mb/d higher than demand for OPEC crude. In 3Q22, OPEC crude oil production averaged 29.4 mb/d, which is 1.0 mb/d higher than demand for OPEC crude. In 4Q22, OPEC crude oil production averaged 29.1 mb/d, which is 0.2 mb/d higher than demand for OPEC crude. For the whole year 2022, OPEC crude oil production averaged 28.9 mb/d, which is 0.3 mb/d higher than demand for OPEC crude.

Demand for OPEC crude in 2023 is revised up by 0.2 mb/d from the previous assessment to stand at 29.4 mb/d. This is around 0.8 mb/d higher than in 2022.

## Balance of supply and demand in 2022

**Demand for OPEC crude in 2022** remains broadly unchanged from the previous MOMR to stand at 28.6 mb/d. This is around 0.5 mb/d higher than in 2021.

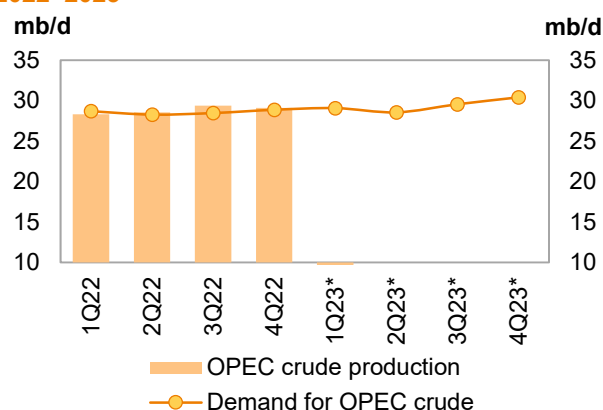
Compared with the previous assessment, 1Q22, 2Q22 and 3Q22 were unchanged from the previous month, while 4Q22 was revised up by 0.1 mb/d.

Compared with the same quarters in 2021, demand for OPEC crude in 1Q22 and 2Q22 is estimated to be higher by 2.5 mb/d and 1.3 mb/d, respectively, while 3Q22 and 4Q22 are estimated to be lower by 0.2 mb/d and 1.3 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 28.4 mb/d in 1Q22, which is 0.4 mb/d lower than demand for OPEC crude.

In 2Q22, OPEC crude production averaged 28.6 mb/d, which is 0.3 mb/d higher than demand for OPEC crude. In 3Q22, OPEC crude oil production averaged 29.4 mb/d, which is 1.0 mb/d higher than demand for OPEC crude. In 4Q22, OPEC crude oil production averaged 29.1 mb/d, which is 0.2 mb/d higher than demand for OPEC crude. For the whole year 2022, OPEC crude oil production averaged 28.9 mb/d, which is 0.3 mb/d higher than demand for OPEC crude.

**Graph 10 - 1: Balance of supply and demand, 2022–2023\***



Note: \* 1Q23-4Q23 = Forecast. Source: OPEC.

**Table 10 - 1: Supply/demand balance for 2022\*, mb/d**

	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21
<b>(a) World oil demand</b>	<b>97.01</b>	<b>99.38</b>	<b>98.20</b>	<b>99.44</b>	<b>101.17</b>	<b>99.55</b>	<b>2.54</b>
Non-OPEC liquids production	63.68	65.33	64.53	65.55	66.84	65.57	1.89
OPEC NGL and non-conventionals	5.28	5.35	5.38	5.41	5.43	5.39	0.11
<b>(b) Total non-OPEC liquids production and OPEC NGLs</b>	<b>68.96</b>	<b>70.67</b>	<b>69.91</b>	<b>70.95</b>	<b>72.28</b>	<b>70.96</b>	<b>2.00</b>
<b>Difference (a-b)</b>	<b>28.05</b>	<b>28.71</b>	<b>28.29</b>	<b>28.49</b>	<b>28.89</b>	<b>28.60</b>	<b>0.55</b>
OPEC crude oil production	26.35	28.35	28.58	29.41	29.11	28.87	2.52
<b>Balance</b>	<b>-1.70</b>	<b>-0.37</b>	<b>0.29</b>	<b>0.92</b>	<b>0.22</b>	<b>0.27</b>	<b>1.97</b>

Note: \* 2022 = Estimate. Totals may not add up due to independent rounding. Source: OPEC.



## Balance of supply and demand in 2023

**Demand for OPEC crude in 2023** is revised up by 0.2 mb/d from the previous assessment to stand at 29.4 mb/d. This is around 0.8 mb/d higher than in 2022.

Compared with the previous assessment, 3Q23 is revised up by 0.3 mb/d, while 1Q23, 2Q23 and 4Q23 were revised up by 0.2 mb/d each.

Compared with the same quarters in 2022, demand for OPEC crude in 1Q23 and 2Q23 are forecast to be higher by 0.4 mb/d and 0.3 mb/d, respectively, while 3Q23 and 4Q23 are expected to be 1.1 mb/d and 1.5 mb/d higher, respectively.

**Table 10 - 2: Supply/demand balance for 2023\*, mb/d**

	2022	1Q23	2Q23	3Q23	4Q23	2023	Change 2023/22
<b>(a) World oil demand</b>	<b>99.55</b>	<b>101.26</b>	<b>100.70</b>	<b>101.99</b>	<b>103.51</b>	<b>101.87</b>	<b>2.32</b>
Non-OPEC liquids production	65.57	66.72	66.64	66.99	67.65	67.01	1.44
OPEC NGL and non-conventionals	5.39	5.44	5.47	5.43	5.43	5.44	0.05
<b>(b) Total non-OPEC liquids production and OPEC NGLs</b>	<b>70.96</b>	<b>72.16</b>	<b>72.12</b>	<b>72.42</b>	<b>73.08</b>	<b>72.45</b>	<b>1.49</b>
<b>Difference (a-b)</b>	<b>28.60</b>	<b>29.10</b>	<b>28.58</b>	<b>29.57</b>	<b>30.43</b>	<b>29.42</b>	<b>0.83</b>

Note: \* 2022 = Estimate and 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.

# Appendix

Table 11 - 1: World oil demand and supply balance, mb/d

World oil demand and supply balance	2019	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
<b>World demand</b>													
Americas	25.40	22.45	24.32	24.77	24.98	25.33	25.16	25.06	24.96	25.27	25.68	25.42	25.33
of which US	20.58	18.35	20.03	20.38	20.41	20.62	20.68	20.52	20.46	20.54	20.88	20.81	20.67
Europe	14.31	12.41	13.13	13.19	13.42	14.09	13.73	13.61	13.22	13.46	14.13	13.78	13.65
Asia Pacific	7.95	7.17	7.38	7.85	6.99	7.22	7.71	7.44	7.89	7.05	7.27	7.73	7.48
<b>Total OECD</b>	<b>47.66</b>	<b>42.03</b>	<b>44.83</b>	<b>45.81</b>	<b>45.39</b>	<b>46.65</b>	<b>46.61</b>	<b>46.12</b>	<b>46.08</b>	<b>45.77</b>	<b>47.08</b>	<b>46.93</b>	<b>46.47</b>
China	13.81	13.94	14.97	14.74	14.42	14.64	15.44	14.81	15.10	15.22	15.25	16.03	15.40
India	4.99	4.51	4.77	5.18	5.16	4.95	5.26	5.14	5.41	5.44	5.21	5.50	5.39
Other Asia	9.06	8.13	8.63	9.09	9.27	8.73	8.85	8.98	9.42	9.61	9.10	9.20	9.33
Latin America	6.59	5.90	6.23	6.32	6.36	6.55	6.49	6.43	6.44	6.49	6.71	6.65	6.58
Middle East	8.20	7.45	7.79	8.06	8.13	8.50	8.32	8.25	8.45	8.46	8.84	8.61	8.59
Africa	4.44	4.08	4.22	4.51	4.15	4.25	4.61	4.38	4.71	4.34	4.43	4.80	4.57
Russia	3.57	3.39	3.61	3.67	3.42	3.45	3.59	3.53	3.63	3.45	3.59	3.75	3.61
Other Eurasia	1.19	1.07	1.21	1.22	1.16	1.00	1.21	1.15	1.21	1.16	1.02	1.22	1.15
Other Europe	0.76	0.70	0.75	0.79	0.75	0.73	0.80	0.77	0.80	0.76	0.75	0.82	0.78
<b>Total Non-OECD</b>	<b>52.62</b>	<b>49.16</b>	<b>52.18</b>	<b>53.58</b>	<b>52.81</b>	<b>52.79</b>	<b>54.56</b>	<b>53.44</b>	<b>55.18</b>	<b>54.92</b>	<b>54.91</b>	<b>56.58</b>	<b>55.40</b>
<b>(a) Total world demand</b>	<b>100.27</b>	<b>91.19</b>	<b>97.01</b>	<b>99.38</b>	<b>98.20</b>	<b>99.44</b>	<b>101.17</b>	<b>99.55</b>	<b>101.26</b>	<b>100.70</b>	<b>101.99</b>	<b>103.51</b>	<b>101.87</b>
<b>Y-o-y change</b>	<b>1.08</b>	<b>-9.09</b>	<b>5.82</b>	<b>5.18</b>	<b>2.55</b>	<b>1.78</b>	<b>0.73</b>	<b>2.54</b>	<b>1.88</b>	<b>2.49</b>	<b>2.55</b>	<b>2.34</b>	<b>2.32</b>
<b>Non-OPEC liquids production</b>													
Americas	25.84	24.75	25.25	25.86	26.27	27.02	27.48	26.66	27.59	27.68	28.04	28.41	27.93
of which US	18.49	17.64	17.85	18.27	18.83	19.33	19.68	19.03	19.75	20.05	20.25	20.48	20.14
Europe	3.70	3.90	3.76	3.73	3.43	3.49	3.61	3.57	3.92	3.90	3.79	3.92	3.89
Asia Pacific	0.52	0.52	0.51	0.49	0.51	0.43	0.48	0.48	0.50	0.47	0.49	0.48	0.48
<b>Total OECD</b>	<b>30.07</b>	<b>29.17</b>	<b>29.52</b>	<b>30.08</b>	<b>30.22</b>	<b>30.94</b>	<b>31.57</b>	<b>30.71</b>	<b>32.01</b>	<b>32.05</b>	<b>32.32</b>	<b>32.81</b>	<b>32.30</b>
China	4.05	4.15	4.31	4.51	4.52	4.38	4.41	4.46	4.50	4.50	4.47	4.47	4.48
India	0.83	0.78	0.78	0.78	0.77	0.76	0.76	0.77	0.79	0.78	0.77	0.76	0.78
Other Asia	2.72	2.51	2.41	2.35	2.30	2.22	2.30	2.29	2.36	2.35	2.32	2.35	2.34
Latin America	6.08	6.03	5.95	6.11	6.18	6.46	6.58	6.33	6.48	6.66	6.70	6.78	6.66
Middle East	3.19	3.19	3.24	3.29	3.33	3.36	3.34	3.33	3.34	3.35	3.38	3.38	3.37
Africa	1.51	1.41	1.35	1.33	1.31	1.32	1.30	1.32	1.32	1.33	1.35	1.34	1.33
Russia	11.51	10.54	10.80	11.33	10.63	11.01	11.17	11.03	10.28	10.00	10.10	10.15	10.13
Other Eurasia	3.07	2.91	2.93	3.04	2.76	2.59	2.91	2.83	3.07	3.04	3.00	3.05	3.04
Other Europe	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.11	0.10	0.10	0.10	0.10	0.10
<b>Total Non-OECD</b>	<b>33.09</b>	<b>31.67</b>	<b>31.87</b>	<b>32.84</b>	<b>31.91</b>	<b>32.20</b>	<b>32.87</b>	<b>32.46</b>	<b>32.25</b>	<b>32.12</b>	<b>32.20</b>	<b>32.37</b>	<b>32.23</b>
Total Non-OPEC production	63.16	60.83	61.39	62.93	62.13	63.15	64.44	63.17	64.25	64.17	64.52	65.18	64.54
Processing gains	2.37	2.16	2.29	2.40	2.40	2.40	2.40	2.40	2.47	2.47	2.47	2.47	2.47
<b>Total Non-OPEC liquids production</b>	<b>65.53</b>	<b>62.99</b>	<b>63.68</b>	<b>65.33</b>	<b>64.53</b>	<b>65.55</b>	<b>66.84</b>	<b>65.57</b>	<b>66.72</b>	<b>66.64</b>	<b>66.99</b>	<b>67.65</b>	<b>67.01</b>
OPEC NGL + non-conventional oils	5.21	5.17	5.28	5.35	5.38	5.41	5.43	5.39	5.44	5.47	5.43	5.43	5.44
<b>(b) Total non-OPEC liquids production and OPEC NGLs</b>	<b>70.74</b>	<b>68.16</b>	<b>68.96</b>	<b>70.67</b>	<b>69.91</b>	<b>70.95</b>	<b>72.28</b>	<b>70.96</b>	<b>72.16</b>	<b>72.12</b>	<b>72.42</b>	<b>73.08</b>	<b>72.45</b>
<b>Y-o-y change</b>	<b>2.18</b>	<b>-2.59</b>	<b>0.80</b>	<b>2.71</b>	<b>1.25</b>	<b>1.97</b>	<b>2.06</b>	<b>2.00</b>	<b>1.49</b>	<b>2.21</b>	<b>1.46</b>	<b>0.80</b>	<b>1.49</b>
<b>OPEC crude oil production (secondary sources)</b>	<b>29.36</b>	<b>25.72</b>	<b>26.35</b>	<b>28.35</b>	<b>28.58</b>	<b>29.41</b>	<b>29.11</b>	<b>28.87</b>					
<b>Total liquids production</b>	<b>100.11</b>	<b>93.88</b>	<b>95.30</b>	<b>99.02</b>	<b>98.49</b>	<b>100.36</b>	<b>101.39</b>	<b>99.82</b>					
<b>Balance (stock change and miscellaneous)</b>	<b>-0.17</b>	<b>2.69</b>	<b>-1.70</b>	<b>-0.37</b>	<b>0.29</b>	<b>0.92</b>	<b>0.22</b>	<b>0.27</b>					
<b>OECD closing stock levels, mb</b>													
Commercial	2,894	3,037	2,651	2,613	2,666	2,746	2,768	2,768					
SPR	1,535	1,541	1,484	1,442	1,343	1,245	1,200	1,200					
<b>Total</b>	<b>4,429</b>	<b>4,578</b>	<b>4,134</b>	<b>4,055</b>	<b>4,009</b>	<b>3,991</b>	<b>3,968</b>	<b>3,968</b>					
<b>Oil-on-water</b>	<b>1,033</b>	<b>1,148</b>	<b>1,202</b>	<b>1,231</b>	<b>1,304</b>	<b>1,407</b>	<b>1,401</b>	<b>1,401</b>					
<b>Days of forward consumption in OECD, days</b>													
Commercial onland stocks	69	68	57	58	57	59	60	60					
SPR	37	34	32	32	29	27	26	26					
<b>Total</b>	<b>105</b>	<b>102</b>	<b>90</b>	<b>89</b>	<b>86</b>	<b>86</b>	<b>86</b>	<b>85</b>					
<b>Memo items</b>													
<b>(a) - (b)</b>	<b>29.53</b>	<b>23.03</b>	<b>28.05</b>	<b>28.71</b>	<b>28.29</b>	<b>28.49</b>	<b>28.89</b>	<b>28.60</b>	<b>29.10</b>	<b>28.58</b>	<b>29.57</b>	<b>30.43</b>	<b>29.42</b>

Note: Totals may not add up due to independent rounding.

Source: OPEC.

Table 11 - 2: World oil demand and supply balance: changes from last month's table\*, mb/d

World oil demand and supply balance	2019	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
<b>World demand</b>													
Americas	-	-	-	-	-	-0.01	-0.03	-0.01	0.01	0.01	-	-0.03	-
of which US	-	-	-	-	-	-	0.05	0.01	-	-	-	0.05	0.01
Europe	-	-	-	-	-	0.02	-0.17	-0.04	-	0.01	0.04	-0.17	-0.03
Asia Pacific	-	-	-	-	-	-	-0.10	-0.03	0.01	0.01	-	-0.10	-0.02
<b>Total OECD</b>	-	-	-	-	-	<b>0.01</b>	<b>-0.30</b>	<b>-0.07</b>	<b>0.02</b>	<b>0.03</b>	<b>0.04</b>	<b>-0.30</b>	<b>-0.05</b>
China	-	-	-	-	-	-	0.20	0.05	0.20	0.02	0.05	0.25	0.13
India	-	-	-	-	-	-	-0.08	-0.02	-	-	-	-0.08	-0.02
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	0.04	0.01	-	-	-	0.04	0.01
Middle East	-	-	-	-	-	-	0.10	0.03	-	-	-	0.10	0.03
Africa	-	-	-	-	-	-	0.03	0.01	-	-	-	0.03	0.01
Russia	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Eurasia	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-OECD</b>	-	-	-	-	-	-	<b>0.29</b>	<b>0.07</b>	<b>0.20</b>	<b>0.02</b>	<b>0.05</b>	<b>0.34</b>	<b>0.15</b>
<b>(a) Total world demand</b>	-	-	-	-	-	<b>0.01</b>	<b>-0.01</b>	-	<b>0.22</b>	<b>0.05</b>	<b>0.09</b>	<b>0.04</b>	<b>0.10</b>
Y-o-y change	-	-	-	-	-	<b>0.01</b>	<b>-0.01</b>	-	<b>0.22</b>	<b>0.05</b>	<b>0.08</b>	<b>0.05</b>	<b>0.10</b>
<b>Non-OPEC liquids production</b>													
Americas	-	-	-	-	-	0.01	-0.01	-	-0.05	-0.05	-0.05	-0.05	-0.05
of which US	-	-	-	-	-	0.01	-0.01	-	-0.05	-0.05	-0.05	-0.05	-0.05
Europe	-	0.01	-	-	-	-	-0.03	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Asia Pacific	-	-	-	-	-	-	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
<b>Total OECD</b>	-	<b>0.01</b>	-	-	-	<b>0.01</b>	<b>-0.06</b>	<b>-0.01</b>	<b>-0.06</b>	<b>-0.06</b>	<b>-0.06</b>	<b>-0.06</b>	<b>-0.06</b>
China	-	-	-	-	-	-	-0.02	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Latin America	-	-	-0.01	-	-	0.01	-0.04	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Middle East	-	-	-	-	-	-	-0.01	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-
Russia	-	-	-	-	-	-	0.02	0.01	0.08	-0.08	-0.08	-0.08	-0.04
Other Eurasia	-	-	-	-0.01	-0.01	-0.02	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-OECD</b>	-	-	-	<b>-0.01</b>	<b>-0.01</b>	<b>-0.02</b>	<b>-0.09</b>	<b>-0.03</b>	<b>0.03</b>	<b>-0.13</b>	<b>-0.13</b>	<b>-0.13</b>	<b>-0.09</b>
Total Non-OPEC production	-	0.01	-	-0.01	-0.01	-0.02	-0.16	-0.05	-0.03	-0.19	-0.19	-0.19	-0.15
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-OPEC liquids production</b>	-	<b>0.01</b>	-	<b>-0.01</b>	<b>-0.01</b>	<b>-0.02</b>	<b>-0.16</b>	<b>-0.05</b>	<b>-0.03</b>	<b>-0.19</b>	<b>-0.19</b>	<b>-0.19</b>	<b>-0.15</b>
OPEC NGL + non-conventional oils	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>(b) Total non-OPEC liquids production and OPEC NGLs</b>	-	<b>0.01</b>	-	<b>-0.01</b>	<b>-0.01</b>	<b>-0.02</b>	<b>-0.16</b>	<b>-0.05</b>	<b>-0.03</b>	<b>-0.19</b>	<b>-0.19</b>	<b>-0.19</b>	<b>-0.15</b>
Y-o-y change	-	<b>0.01</b>	<b>-0.01</b>	-	-	<b>-0.01</b>	<b>-0.15</b>	<b>-0.04</b>	<b>-0.02</b>	<b>-0.18</b>	<b>-0.17</b>	<b>-0.03</b>	<b>-0.10</b>
<b>OPEC crude oil production (secondary sources)</b>	-	0.01	-	-0.01	-	-0.03	-	-	-	-	-	-	-
<b>Total liquids production</b>	-	0.02	-	-0.02	-0.01	-0.05	-	-	-	-	-	-	-
<b>Balance (stock change and miscellaneous)</b>	-	0.02	-	-0.02	-0.01	-0.06	-	-	-	-	-	-	-
<b>mb</b>													
Commercial	-	-	-	-	-	-2	-	-	-	-	-	-	-
SPR	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	<b>-2</b>	-	-	-	-	-	-	-
<b>Oil-on-water</b>	-	-	-	9	14	21	-	-	-	-	-	-	-
<b>Days of forward consumption in OECD, days</b>													
Commercial onland stocks	-	-	-	-	-	-	-	-	-	-	-	-	-
SPR	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	<b>1</b>	-	-	-	-	-	-	-
<b>Memo items</b>													
<b>(a) - (b)</b>	-	<b>-0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.14</b>	<b>0.05</b>	<b>0.25</b>	<b>0.24</b>	<b>0.28</b>	<b>0.23</b>	<b>0.25</b>

Note: \* This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the January 2023 issue.

This table shows only where changes have occurred.

Source: OPEC.

Table 11 - 3: OECD oil stocks and oil on water at the end of period

OECD oil stocks and oil on water	2020	2021	2022	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22
<b>Closing stock levels, mb</b>											
<b>OECD onland commercial</b>	<b>3,037</b>	<b>2,651</b>	<b>2,768</b>	<b>2,926</b>	<b>2,884</b>	<b>2,770</b>	<b>2,651</b>	<b>2,613</b>	<b>2,666</b>	<b>2,746</b>	<b>2,768</b>
Americas	1,613	1,470	1,489	1,578	1,553	1,523	1,470	1,407	1,436	1,469	1,489
Europe	1,043	857	916	1,002	973	891	857	890	912	918	916
Asia Pacific	380	324	363	346	357	355	324	316	318	359	363
<b>OECD SPR</b>	<b>1,541</b>	<b>1,484</b>	<b>1,200</b>	<b>1,546</b>	<b>1,524</b>	<b>1,513</b>	<b>1,484</b>	<b>1,442</b>	<b>1,343</b>	<b>1,245</b>	<b>1,200</b>
Americas	640	596	368	640	623	620	596	568	495	418	368
Europe	487	479	450	493	487	485	479	468	452	447	450
Asia Pacific	414	409	382	413	413	408	409	406	395	380	382
<b>OECD total</b>	<b>4,578</b>	<b>4,134</b>	<b>3,968</b>	<b>4,472</b>	<b>4,407</b>	<b>4,282</b>	<b>4,134</b>	<b>4,055</b>	<b>4,009</b>	<b>3,991</b>	<b>3,968</b>
<b>Oil-on-water</b>	<b>1,148</b>	<b>1,202</b>	<b>1,401</b>	<b>1,138</b>	<b>1,131</b>	<b>1,169</b>	<b>1,202</b>	<b>1,231</b>	<b>1,304</b>	<b>1,407</b>	<b>1,401</b>
<b>Days of forward consumption in OECD, days</b>											
<b>OECD onland commercial</b>	<b>68</b>	<b>57</b>	<b>60</b>	<b>66</b>	<b>63</b>	<b>59</b>	<b>58</b>	<b>58</b>	<b>57</b>	<b>59</b>	<b>60</b>
Americas	66	59	59	65	63	61	59	56	57	58	60
Europe	79	63	67	79	70	64	65	66	65	67	69
Asia Pacific	51	43	49	49	51	46	41	45	44	46	46
<b>OECD SPR</b>	<b>35</b>	<b>34</b>	<b>34</b>	<b>35</b>	<b>33</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>29</b>	<b>27</b>	<b>26</b>
Americas	26	24	23	26	25	25	24	23	20	17	15
Europe	37	35	35	39	35	35	36	35	32	33	34
Asia Pacific	56	55	55	59	58	52	52	58	55	49	48
<b>OECD total</b>	<b>103</b>	<b>92</b>	<b>94</b>	<b>101</b>	<b>96</b>	<b>91</b>	<b>90</b>	<b>89</b>	<b>86</b>	<b>86</b>	<b>86</b>

Sources: Argus, EIA, Euroilstock, IEA, JODI, METI and OPEC.

Table 11 - 4: Non-OPEC liquids production and OPEC natural gas liquids, mb/d\*

Non-OPEC liquids production and OPEC NGLs	Change												
	2019	2020	2021	3Q22	4Q22	2022	22/21	1Q23	2Q23	3Q23	4Q23	2023	23/22
US	18.5	17.6	17.8	19.3	19.7	19.0	1.2	19.8	20.1	20.2	20.5	20.1	1.1
Canada	5.4	5.2	5.4	5.7	5.8	5.6	0.2	5.8	5.6	5.8	6.0	5.8	0.2
Mexico	1.9	1.9	2.0	2.0	2.0	2.0	0.1	2.0	2.0	2.0	2.0	2.0	0.0
Chile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>OECD Americas</b>	<b>25.8</b>	<b>24.7</b>	<b>25.3</b>	<b>27.0</b>	<b>27.5</b>	<b>26.7</b>	<b>1.4</b>	<b>27.6</b>	<b>27.7</b>	<b>28.0</b>	<b>28.4</b>	<b>27.9</b>	<b>1.3</b>
Norway	1.7	2.0	2.0	1.9	2.0	1.9	-0.1	2.2	2.1	2.1	2.2	2.2	0.3
UK	1.1	1.1	0.9	0.8	0.8	0.9	0.0	0.9	0.9	0.8	0.9	0.9	0.0
Denmark	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Other OECD	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.8	0.8	0.7	0.7	0.7	0.0
<b>OECD Europe</b>	<b>3.7</b>	<b>3.9</b>	<b>3.8</b>	<b>3.5</b>	<b>3.6</b>	<b>3.6</b>	<b>-0.2</b>	<b>3.9</b>	<b>3.9</b>	<b>3.8</b>	<b>3.9</b>	<b>3.9</b>	<b>0.3</b>
Australia	0.5	0.5	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.0
Other Asia Pacific	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
<b>OECD Asia Pacific</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.0</b>
<b>Total OECD</b>	<b>30.1</b>	<b>29.2</b>	<b>29.5</b>	<b>30.9</b>	<b>31.6</b>	<b>30.7</b>	<b>1.2</b>	<b>32.0</b>	<b>32.1</b>	<b>32.3</b>	<b>32.8</b>	<b>32.3</b>	<b>1.6</b>
<b>China</b>	<b>4.1</b>	<b>4.2</b>	<b>4.3</b>	<b>4.4</b>	<b>4.4</b>	<b>4.5</b>	<b>0.1</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>0.0</b>
<b>India</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.0</b>
Brunei	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Indonesia	0.9	0.9	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8	0.0
Malaysia	0.7	0.6	0.6	0.6	0.6	0.6	0.0	0.7	0.7	0.6	0.7	0.7	0.1
Thailand	0.5	0.5	0.4	0.4	0.4	0.4	-0.1	0.4	0.4	0.4	0.4	0.4	0.0
Vietnam	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Asia others	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
<b>Other Asia</b>	<b>2.7</b>	<b>2.5</b>	<b>2.4</b>	<b>2.2</b>	<b>2.3</b>	<b>2.3</b>	<b>-0.1</b>	<b>2.4</b>	<b>2.4</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>0.1</b>
Argentina	0.7	0.7	0.7	0.8	0.8	0.8	0.1	0.8	0.8	0.8	0.8	0.8	0.0
Brazil	3.6	3.7	3.6	3.8	3.8	3.7	0.1	3.8	3.9	4.0	4.0	3.9	0.2
Colombia	0.9	0.8	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.7	0.8	0.8	0.0
Ecuador	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.0
Guyana	0.0	0.1	0.1	0.4	0.4	0.3	0.2	0.4	0.4	0.4	0.4	0.4	0.1
Latin America	0.4	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
<b>Latin America</b>	<b>6.1</b>	<b>6.0</b>	<b>5.9</b>	<b>6.5</b>	<b>6.6</b>	<b>6.3</b>	<b>0.4</b>	<b>6.5</b>	<b>6.7</b>	<b>6.7</b>	<b>6.8</b>	<b>6.7</b>	<b>0.3</b>
Bahrain	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Oman	1.0	1.0	1.0	1.1	1.1	1.1	0.1	1.1	1.1	1.1	1.1	1.1	0.0
Qatar	1.9	1.9	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Syria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Yemen	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
<b>Middle East</b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>	<b>3.4</b>	<b>3.3</b>	<b>3.3</b>	<b>0.1</b>	<b>3.3</b>	<b>3.4</b>	<b>3.4</b>	<b>3.4</b>	<b>3.4</b>	<b>0.0</b>
Cameroon	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Chad	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Egypt	0.7	0.6	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	0.6	0.0
Ghana	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.2	0.1	0.0
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Sudans	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Africa other	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
<b>Africa</b>	<b>1.5</b>	<b>1.4</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>0.0</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>0.0</b>
<b>Russia</b>	<b>11.5</b>	<b>10.5</b>	<b>10.8</b>	<b>11.0</b>	<b>11.2</b>	<b>11.0</b>	<b>0.2</b>	<b>10.3</b>	<b>10.0</b>	<b>10.1</b>	<b>10.2</b>	<b>10.1</b>	<b>-0.9</b>
Kazakhstan	1.9	1.8	1.8	1.6	1.9	1.8	0.0	2.0	1.9	1.9	2.0	1.9	0.2
Azerbaijan	0.8	0.7	0.7	0.7	0.7	0.7	0.0	0.8	0.8	0.8	0.7	0.8	0.1
Eurasia others	0.4	0.4	0.4	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
<b>Other Eurasia</b>	<b>3.1</b>	<b>2.9</b>	<b>2.9</b>	<b>2.6</b>	<b>2.9</b>	<b>2.8</b>	<b>-0.1</b>	<b>3.1</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>0.2</b>
<b>Other Europe</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>
<b>Total Non-OECD</b>	<b>33.1</b>	<b>31.7</b>	<b>31.9</b>	<b>32.2</b>	<b>32.9</b>	<b>32.5</b>	<b>0.6</b>	<b>32.2</b>	<b>32.1</b>	<b>32.2</b>	<b>32.4</b>	<b>32.2</b>	<b>-0.2</b>
Non-OPEC	63.2	60.8	61.4	63.1	64.4	63.2	1.8	64.3	64.2	64.5	65.2	64.5	1.4
Processing gains	2.4	2.2	2.3	2.4	2.4	2.4	0.1	2.5	2.5	2.5	2.5	2.5	0.1
<b>Non-OPEC liquids production</b>	<b>65.5</b>	<b>63.0</b>	<b>63.7</b>	<b>65.5</b>	<b>66.8</b>	<b>65.6</b>	<b>1.9</b>	<b>66.7</b>	<b>66.6</b>	<b>67.0</b>	<b>67.7</b>	<b>67.0</b>	<b>1.4</b>
OPEC NGL	5.1	5.1	5.2	5.3	5.3	5.3	0.1	5.3	5.4	5.3	5.3	5.3	0.0
OPEC Non- conventional	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
<b>OPEC (NGL+NCF)</b>	<b>5.2</b>	<b>5.2</b>	<b>5.3</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>0.1</b>	<b>5.4</b>	<b>5.5</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>0.0</b>
<b>Non-OPEC &amp; OPEC (NGL+NCF)</b>	<b>70.7</b>	<b>68.2</b>	<b>69.0</b>	<b>71.0</b>	<b>72.3</b>	<b>71.0</b>	<b>2.0</b>	<b>72.2</b>	<b>72.1</b>	<b>72.4</b>	<b>73.1</b>	<b>72.4</b>	<b>1.5</b>

Note: Totals may not add up due to independent rounding. Source: OPEC.

Table 11 - 5: World rig count, units

World rig count	2020	2021	Change		2Q22	3Q22	4Q22	Dec 22	Jan 23	Change Jan/Dec
			2022	2022/21						
US	436	475	722	247	718	761	775	779	772	-6
Canada	90	133	174	41	114	202	186	145	226	81
Mexico	41	45	47	2	44	48	50	47	49	2
<b>OECD Americas</b>	<b>567</b>	<b>654</b>	<b>945</b>	<b>291</b>	<b>878</b>	<b>1,013</b>	<b>1,014</b>	<b>973</b>	<b>1,049</b>	<b>77</b>
Norway	16	17	17	0	18	18	17	17	16	-1
UK	6	8	10	2	10	13	10	10	10	0
<b>OECD Europe</b>	<b>59</b>	<b>58</b>	<b>65</b>	<b>7</b>	<b>65</b>	<b>70</b>	<b>67</b>	<b>70</b>	<b>69</b>	<b>-1</b>
<b>OECD Asia Pacific</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>1</b>	<b>22</b>	<b>26</b>	<b>25</b>	<b>24</b>	<b>23</b>	<b>-1</b>
<b>Total OECD</b>	<b>648</b>	<b>735</b>	<b>1,034</b>	<b>299</b>	<b>966</b>	<b>1,109</b>	<b>1,106</b>	<b>1,067</b>	<b>1,141</b>	<b>75</b>
Other Asia*	187	174	186	12	184	185	188	184	192	8
Latin America	58	91	119	28	113	122	130	124	119	-5
Middle East	57	57	62	5	62	61	65	63	63	0
Africa	43	42	57	15	55	58	60	60	58	-2
Other Europe	12	9	10	1	9	10	13	13	11	-2
<b>Total Non-OECD</b>	<b>357</b>	<b>373</b>	<b>434</b>	<b>61</b>	<b>423</b>	<b>436</b>	<b>456</b>	<b>444</b>	<b>443</b>	<b>-1</b>
<b>Non-OPEC rig count</b>	<b>1,005</b>	<b>1,108</b>	<b>1,468</b>	<b>360</b>	<b>1,389</b>	<b>1,545</b>	<b>1,562</b>	<b>1,511</b>	<b>1,584</b>	<b>74</b>
Algeria	31	26	32	6	32	33	33	34	31	-3
Angola	3	4	7	3	6	6	9	9	9	0
Congo	1	0	1	1	0	1	1	1	1	0
Equatorial Guinea**	0	0	0	0	0	0	0	0	0	0
Gabon	3	2	3	1	3	2	3	2	3	1
Iran**	117	117	117	0	117	117	117	117	117	0
Iraq	47	39	51	12	50	54	55	55	55	0
Kuwait	45	25	27	2	27	27	28	26	23	-3
Libya	12	13	7	-6	4	3	8	9	12	3
Nigeria	11	7	10	3	11	9	10	12	13	1
Saudi Arabia	93	62	73	11	71	71	80	80	79	-1
UAE	54	42	47	5	48	49	52	52	52	0
Venezuela	15	6	3	-3	3	3	3	3	3	0
<b>OPEC rig count</b>	<b>432</b>	<b>343</b>	<b>377</b>	<b>34</b>	<b>371</b>	<b>376</b>	<b>398</b>	<b>400</b>	<b>398</b>	<b>-2</b>
<b>World rig count***</b>	<b>1,437</b>	<b>1,451</b>	<b>1,845</b>	<b>394</b>	<b>1,760</b>	<b>1,921</b>	<b>1,959</b>	<b>1,911</b>	<b>1,982</b>	<b>72</b>
<i>of which:</i>										
Oil	1,116	1,143	1,462	319	1,392	1,522	1,552	1,509	1,573	64
Gas	275	275	352	77	337	365	374	368	376	8
Others	46	33	31	-2	31	33	33	34	34	0

Note: \* Other Asia includes India and offshore rigs for China.

\*\* Estimated data when Baker Hughes Incorporated did not reported the data.

\*\*\* Data excludes onshore China as well as Russia and other Eurasia.

Totals may not add up due to independent rounding.

Sources: Baker Hughes and OPEC.

## Glossary of Terms

### Abbreviations

b	barrels
b/d	barrels per day
bp	basis points
bb	billion barrels
bcf	billion cubic feet
cu m	cubic metres
mb	million barrels
mb/d	million barrels per day
mmbtu	million British thermal units
mn	million
m-o-m	month-on-month
mt	metric tonnes
q-o-q	quarter-on-quarter
pp	percentage points
tb/d	thousand barrels per day
tcf	trillion cubic feet
y-o-y	year-on-year
y-t-d	year-to-date

### Acronyms

ARA	Amsterdam-Rotterdam-Antwerp
BoE	Bank of England
BoJ	Bank of Japan
BOP	Balance of payments
BRIC	Brazil, Russia, India and China
CAPEX	capital expenditures
CCI	Consumer Confidence Index
CFTC	Commodity Futures Trading Commission
CIF	cost, insurance and freight
CPI	consumer price index
DoC	Declaration of Cooperation
DCs	developing countries
DUC	drilled, but uncompleted (oil well)
ECB	European Central Bank
EIA	US Energy Information Administration
Emirates NBD	Emirates National Bank of Dubai
EMs	emerging markets
EV	electric vehicle



FAI	fixed asset investment
FCC	fluid catalytic cracking
FDI	foreign direct investment
Fed	US Federal Reserve
FID	final investment decision
FOB	free on board
FPSO	floating production storage and offloading
FSU	Former Soviet Union
FX	Foreign Exchange
FY	fiscal year
GDP	gross domestic product
GFCF	gross fixed capital formation
GoM	Gulf of Mexico
GTLs	gas-to-liquids
HH	Henry Hub
HSFO	high-sulphur fuel oil
ICE	Intercontinental Exchange
IEA	International Energy Agency
IMF	International Monetary Fund
IOCs	international oil companies
IP	industrial production
ISM	Institute of Supply Management
JODI	Joint Organisations Data Initiative
LIBOR	London inter-bank offered rate
LLS	Light Louisiana Sweet
LNG	liquefied natural gas
LPG	liquefied petroleum gas
LR	long-range (vessel)
LSFO	low-sulphur fuel oil
MCs	(OPEC) Member Countries
MED	Mediterranean
MENA	Middle East/North Africa
MOMR	(OPEC) Monthly Oil Market Report
MPV	multi-purpose vehicle
MR	medium-range or mid-range (vessel)
NBS	National Bureau of Statistics
NGLs	natural gas liquids
NPC	National People's Congress (China)
NWE	Northwest Europe
NYMEX	New York Mercantile Exchange
OECD	Organisation for Economic Co-operation and Development
OPEX	operational expenditures
OIV	total open interest volume
ORB	OPEC Reference Basket
OSP	Official Selling Price
PADD	Petroleum Administration for Defense Districts
PBoC	People's Bank of China
PMI	purchasing managers' index
PPI	producer price index

## Glossary of Terms

RBI	Reserve Bank of India
REER	real effective exchange rate
ROI	return on investment
SAAR	seasonally-adjusted annualized rate
SIAM	Society of Indian Automobile Manufacturers
SRFO	straight-run fuel oil
SUV	sports utility vehicle
ULCC	ultra-large crude carrier
ULSD	ultra-low sulphur diesel
USEC	US East Coast
USGC	US Gulf Coast
USWC	US West Coast
VGO	vacuum gasoil
VLCC	very large crude carriers
WPI	wholesale price index
WS	Worldscale
WTI	West Texas Intermediate
WTS	West Texas Sour



## OPEC Basket average price

US\$/b



up 1.94 in January

January 2023	81.62
December 2022	79.68
<b>Year-to-date</b>	<b>81.62</b>

## January OPEC crude production

mb/d, according to secondary sources



down 0.05 in January

January 2023	28.88
December 2022	28.93

## Economic growth rate

per cent

	World	OECD	US	Euro-zone	Japan	China	India
<b>2022</b>	3.1	2.8	2.1	3.5	1.2	3.0	6.8
<b>2023</b>	2.6	1.1	1.2	0.8	1.2	5.2	5.6

## Supply and demand

mb/d

<b>2022</b>		<b>22/21</b>	<b>2023</b>		<b>23/22</b>
World demand	99.6	2.5	World demand	101.9	2.3
Non-OPEC liquids production	65.6	1.9	Non-OPEC liquids production	67.0	1.4
OPEC NGLs	5.4	0.1	OPEC NGLs	5.4	0.0
<b>Difference</b>	<b>28.6</b>	<b>0.5</b>	<b>Difference</b>	<b>29.4</b>	<b>0.8</b>

## OECD commercial stocks

mb

	<b>Oct 22</b>	<b>Nov 22</b>	<b>Dec 22</b>	<b>Dec 22/Nov 22</b>
Crude oil	1,362	1,339	1,344	5.2
Products	1,416	1,440	1,424	-16.2
<b>Total</b>	<b>2,778</b>	<b>2,779</b>	<b>2,768</b>	<b>-10.9</b>
Days of forward cover	59.6	59.8	60.1	0.3

Next report to be issued on 14 March 2023.