International Energy Agency

Oil Market Report

13 April 2022

- Severe new lockdown measures amid surging Covid cases in China have led to a downward revision in our expectations for global oil demand in 2Q22 and for the year as a whole. Weaker-than-expected demand in OECD countries at the start of the year added to the decline. As a result, our estimate for global oil demand has been lowered by 260 kb/d for the year versus last month's *Report*, and demand is now expected to average 99.4 mb/d in 2022, up by 1.9 mb/d from 2021.

- Global oil supply rose in March by 450 kb/d to 99.1 mb/d, led by non-OPEC+. Russian oil supply is expected to fall by 1.5 mb/d in April, with shut-ins projected to accelerate to around 3 mb/d from May. Despite the disruption to Russian oil supplies, lower demand expectations, steady output increases from OPEC+ members along with the US and other non OPEC+ countries, and massive stock releases from IEA member countries should prevent a sharp deficit from developing.

- Global refinery throughputs are forecast to increase by 4.4 mb/d from April to August due to new capacity and normal seasonal gains. This would allow product inventories to see the first build in two years, offering some respite to the tight market. Overall, 2022 runs are forecast to gain 3 mb/d y-o-y, but will remain below 2017 levels.

- Global oil inventories have decreased for 14 consecutive months, with February stocks 714 mb below the end-2020 level and OECD countries accounting for 70% of the decline. OECD total industry stocks fell by 42.2 mb to 2 611 mb in February, nearly double the seasonal trend. Preliminary data show a build in OECD industry stocks of 8.8 mb for March.

- Futures prices for ICE Brent were trading at around $104/bbl as this *Report* went to print, down nearly $10/bbl following IEA collective stock release actions and a massive US release from the strategic petroleum reserve. Benchmark crude prices are now back to near pre-invasion levels but remain troublingly high and are a serious threat for the global economic outlook.

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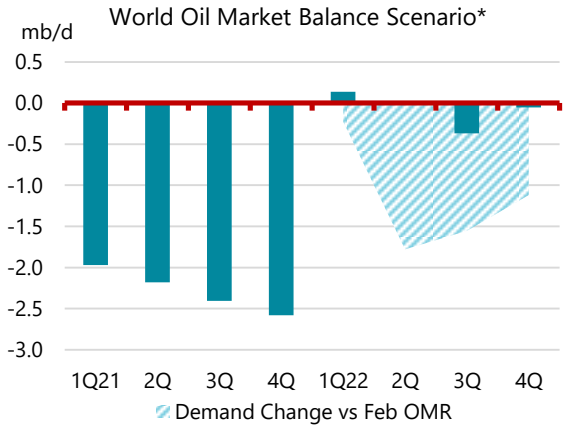
Welcome relief

Oil markets struggling to navigate supply losses and dislocations stemming from Russia's invasion of Ukraine received much needed support from US and IEA coordinated stock releases. IEA member countries agreed on 1 April to tap their emergency reserves for the second time in the space of a month, this time to the tune of 120 mb. The record volumes will provide welcome relief to an already tight oil market that's facing heightened uncertainty amid the multitude of repercussions stemming from sanctions and embargoes targeted at Russia by the international community and consumer boycotts. Crude prices have eased by nearly $10/bbl following announcements of the US and IEA stock releases, with ICE Brent last trading at around $104/bbl.

Insisting that no supply shortage exists, OPEC+ countries agreed on 31 March to stick with a modest monthly output increment for May. In March, output from the alliance's 19 members with quotas was up by a mere 40 kb/d, far below the planned 400 kb/d increase, and 1.5 mb/d below their target. Output from non-OPEC+ producers, most notably the US, also fell short of expectations at the start of the year. Non-OPEC+ output is now seen growing by 2 mb/d in 2022, 100 kb/d lower than in last month's *Report*. From this month, our OPEC+ supply estimates will be published on our website.

Russian oil supply and exports continue to fall. So far in April, roughly 700 kb/d of production has reportedly been shut in. We assume these losses will grow to an average 1.5 mb/d for the month as Russian refiners extend run cuts, more buyers shun barrels and Russian storage fills up. From May onwards, close to 3 mb/d of Russian production could be offline due to international sanctions and as the impact of a widening customer-driven embargo comes into full force.



*Assumes 1.5 mb/d Russian off-line in Apr, ~3 mb/d off-line from May.

While some buyers, most notably in Asia, increased purchases of sharply discounted Russian barrels, traditional customers are cutting back. For now, there are no signs of increased volumes going to China, where refiners have cut runs as a recent surge in Covid cases and new restrictions have dented oil demand.

The stringent lockdowns in China have led us to further revise down our estimate for oil demand in 2Q22 and for the year as a whole. In addition, more complete demand data for 1Q22, especially in the US, was sharply lower than preliminary estimates. As a result, global oil demand has been reduced by 260 kb/d for 2022 and is now forecast to average 99.4 mb/d, up by 1.9 mb/d from 2021.

Lower demand expectations and steady output increases from Middle East OPEC+ members along with the US and other countries outside the OPEC+ alliance should bring the market back to balance. But the outlook is mired in uncertainty and OECD industry stocks in February continued to draw at a steep pace to stand 320 mb below their five-year average. The IEA's latest stock release thus provides a crucial buffer to oil markets and much needed relief to consuming countries.

Demand

Overview

A surge in Covid cases and severe new lockdowns in China have led to a downward revision to global demand in 2Q22 and for the year as a whole. In addition, more complete data for 1Q22, especially in the US, were weaker than preliminary estimates, adding to the downgrade. As a result, global oil demand has been revised down by 260 kb/d for the year and is now projected to average 99.4 mb/d in 2022, up 1.9 mb/d from 2021.

We have also raised our oil price assumptions for the remainder of the year and adjusted slightly our GDP assumptions based on the latest macroeconomic forecasts available. Since last month's *Report*, the ICE Brent forward curve, used as an input for our projections, has increased by 6%, to $102/bbl on average for 2022 (as of 1 April 2022). World GPD growth for 2022 was marginally lower from our previous forecast at 3.4%.

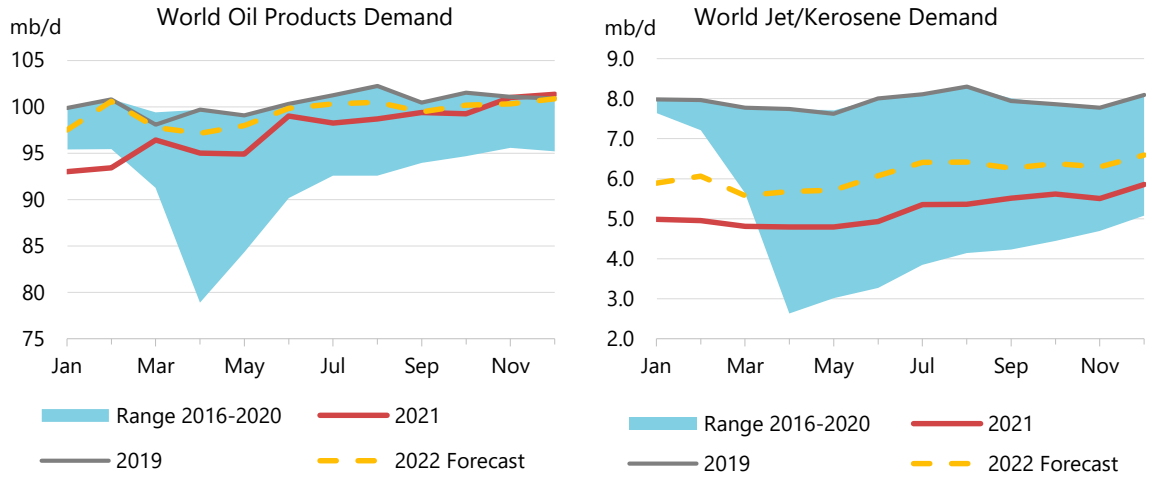
Global Demand by Product
(thousand barrels per day)

	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
LPG & Ethane	13 251	13 314	13 904	14 380	590	476	4.4	3.4
Naphtha	6 351	6 381	6 921	6 947	540	26	8.5	0.4
Motor Gasoline	26 715	23 630	25 666	26 005	2 036	338	8.6	1.3
Jet Fuel & Kerosene	7 931	4 664	5 209	6 112	544	904	11.7	17.3
Gas/Diesel Oil	28 310	26 498	27 781	27 922	1 283	141	4.8	0.5
Residual Fuel Oil	6 136	5 713	6 063	6 159	350	96	6.1	1.6
Other Products	11 744	11 688	11 953	11 840	265	- 113	2.3	-0.9
Total Products	**100 437**	**91 889**	**97 498**	**99 366**	**5 608**	**1 868**	**6.1**	**1.9**

Significant downside risks to the economic outlook remain. Major forecasting institutions are in the process of revising down their economic assumptions as the war in Ukraine continues to strongly impact commodity flows, prices, inflation and currencies. The latest trade indicators also point to a significant contraction in container activity since the start of the war due to expanding sanctions on Russia and increased uncertainty. The Kiel Trade Indicator, an important gauge of global container activity, fell by 2.8% month-on-month (m-o-m) in March. European container exports decreased by 5.6% and US exports fell by 3.4%. Russian exports were down by 5% while imports fell by 9.7%. The negative impact of lower container trade on bunker fuel demand is partially offset by longer transport routes for crude oil and oil products.

The recovery in aviation is progressing slightly slower than expected, as sanctions on Russia and an outbreak of Covid cases in China have tempered the rebound in global air traffic in recent weeks. In March, total air traffic remained roughly 25% below 2019 levels, with international travel 35% lower and domestic flights down by 15%. The number of flights at Sheremetyevo, Moscow's busiest airport, has fallen by half since the start of the war in Ukraine. Sanctions have closed several international routes and fears that aircraft may be seized in foreign countries have also stopped many leased planes from leaving Russia. The situation is expected to deteriorate further through the end of the forecast as aircraft experience difficulties in carrying out due maintenance under the current sanctions. Jet fuel demand in Russia is forecast to decline by 41% or 100 kb/d year-on-year (y-o-y) in 2022. In China, domestic flights fell by more than 70% in recent

weeks while international travel remains roughly 80% below pre-pandemic levels. Chinese air traffic is unlikely to fully recover by the end of 2022 under the current zero-Covid policy. For 2022 as a whole, Chinese jet kerosene demand is projected to post a small decline of 25 kb/d (3.5%) versus previous expectations for a 10 kb/d growth. Elsewhere, traffic continued to recover in recent weeks with falling Covid cases. Latest data show total North America traffic only 11% below 2019 levels (versus 14% last month). Air traffic in Western Europe was 18% lower (versus 29% last month), while South East Asia and North East Asia were 43% and 46% short of 2019 levels, respectively. Jet/kerosene consumption in 1Q22 was 920 kb/d higher y-o-y but remains 2.1 mb/d below 1Q19.



In this *Report*, we have revised down our forecast for Chinese oil demand for March by 730 kb/d, 925 kb/d for April and 690 kb/d for May, as the current outbreak of Covid cases and measures to control the spreading of the pandemic have been more severe than expected. Our analysis suggests that 220 million people have been under some form of strong mobility restrictions in March, whether from school shutdowns, workplace closures or more extensive stay home requirements, among other measures, to contain the spread of the virus. Lockdowns are disrupting mobility within and between provinces, slowing economic activity. Disruptions to trucking activity in provinces affected by the virus have resulted in logistical bottlenecks. In Shanghai, home to the world's largest port, cargo volumes have dropped by one-third since mid-March. Despite strong containment measures, China reported about 25,000 Covid cases on 12 April, staying at the highest level since the start of the pandemic.

We have slightly revised up our 2022 demand projections for oil demand, compared with last month's *Report*, in Russia (by 50 kb/d) following an updated GDP forecast. Russian oil demand is now expected to decline by 250 kb/d in 2022. The country's manufacturing PMI dropped from 48.6 in February to 44.1 in March. While the total decline in GDP expected in our new projections is close to what we included in our last *Report* (-10.9% versus -11.4%), the quarterly distribution is different, with a smaller decline during the second quarter and weaker growth during the second half of the year. The latest flight data point to a drop of 35% in air traffic at major Russian airports, close to our initial estimate.

With renewed outbreaks of Covid-19 cases and a recent spate of government restrictions designed to control them – especially in Asia – we have looked at the way the pandemic has changed urban mobility patterns. An increased preference for private over public transport has helped to inflate consumption of road fuels, particularly in advanced economies. Data show that public transport passenger numbers are significantly lagging overall activity indicators and

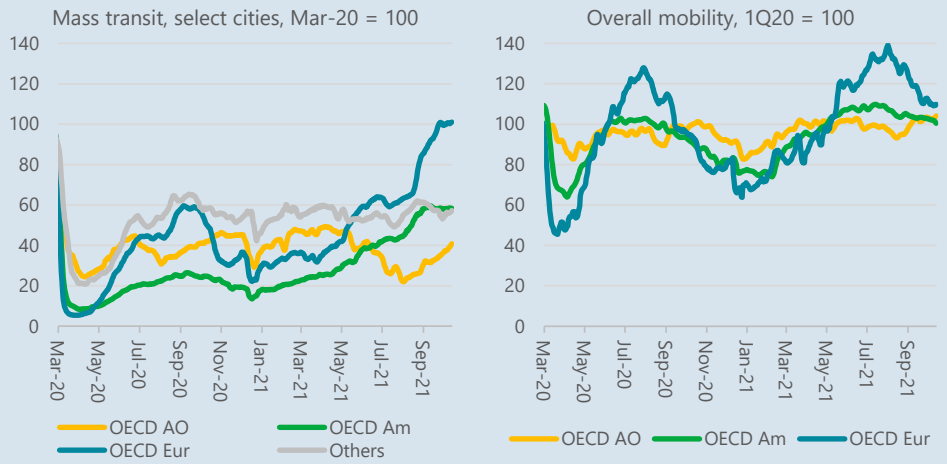
measures of car use. As was recently noted in the IEA's report "*10 point plan to cut oil use*", fuller exploitation of existing mass-transit resources could contribute to a meaningful reduction, of around 330 kb/d in OECD gasoline and diesel consumption.

Global Demand by Region
(thousand barrels per day)

	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
Africa	4 251	3 818	4 032	4 113	215	80	5.6	2.0
Americas	31 826	28 166	30 271	30 838	2 105	567	7.5	1.9
Asia/Pacific	35 834	34 061	36 076	37 093	2 015	1 016	5.9	2.8
Europe	15 093	13 142	13 817	14 260	675	443	5.1	3.2
FSU	4 723	4 497	4 778	4 458	281	- 321	6.3	-6.7
Middle East	8 711	8 206	8 523	8 604	317	81	3.9	1.0
World	**100 437**	**91 889**	**97 498**	**99 366**	**5 608**	**1 868**	**6.1**	**1.9**
OECD	47 778	42 128	44 763	45 948	2 635	1 185	6.3	2.6
Non-OECD	52 659	49 761	52 734	53 417	2 973	683	6.0	1.3

Box 1. Public-transit reluctance fuelling oil demand

Following the onset of the Covid-19 pandemic in 1Q20, mobility indicators for almost all available countries showed precipitous drops. As countries lifted work-related shutdowns and other measures affecting consumer behaviour starting in 2021, however, populations shunned public transport systems over health concerns in favour of car use. As a result, gasoline and diesel demand have risen more quickly than expected. In the IEA's recent *10 Point Plan to Cut Oil Use*, it is estimated that better utilisation of public transport could form part of a 330 kb/d fall in OECD road fuel use.



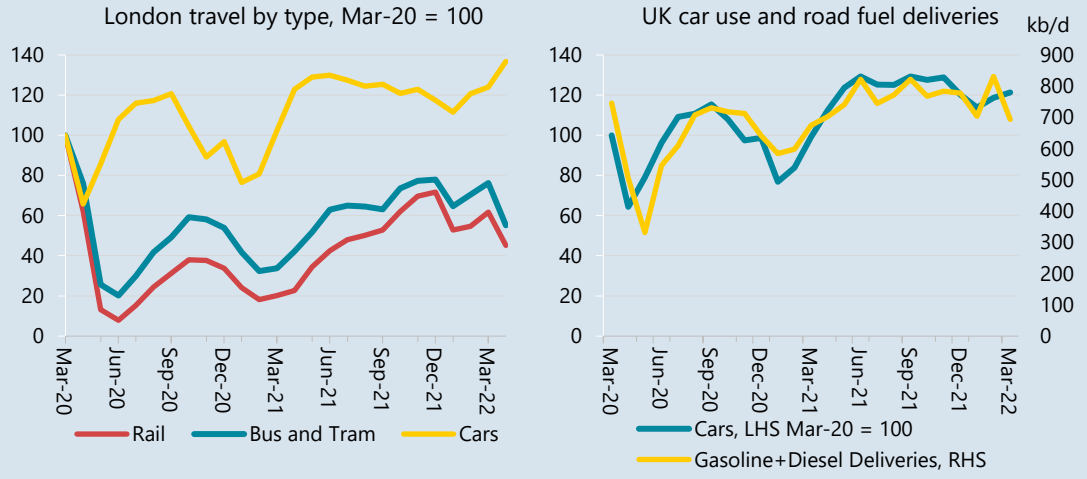
Sources: IEA, Citymapper, Google, US Bureau of Transportation Statistics, Île-de-France Mobilités, Transport for London, Tokyo Metropolitan Government, Gobierno de la Ciudad de México.

For Europe, the region of the OECD most strongly affected, *Google's* overall mobility index plummeted to less than half of pre-pandemic levels. Activity in the Americas also dropped dramatically during the first wave of Covid (by as much as 35%). According to indices produced by

the trip-planning app *Citymapper* and data provided by mass-transit operators, use of public transport saw even heavier falls. During the peak of the initial Covid-19 lockdowns in March and April 2020, rider volume across 22 major OECD European and North American cities was down by almost 95% compared with January 2020. In OECD Asia Oceania this fall was comparatively modest, at about 75%, for four major cities in Japan, Korea and Australia.

This virtual emptying of transit systems was initially driven by network cuts, public health restrictions and dramatically increased teleworking. Thereafter, the absence of road congestion in most cities and the strong preference to avoid close contact with strangers on trains or buses contributed to lower occupancy rates. The extent to which the recovery in public transport use has lagged overall mobility is striking. It is only in Europe that usage has recovered to January 2020 levels and even there it took until October 2021, despite overall mobility surpassing pre-crisis levels from late-May onwards. German Federal Statistics Office information shows that by the middle of 2021, road transport was at close to 90% of its 2019 volume for the country as a whole, but rail passengers remained 45% lower. Where available, recent data indicate a modest further recovery during 1Q22. Nevertheless, ground remains to be closed across US cities (on average at 55% of 1Q19), in London (60% of 1Q19) and Tokyo (where rush hour traffic was about at 65% of January 2020 levels in February 2022).

Data from *TomTom* suggest a connection between congestion levels in cities and this return to public transit. Road traffic congestion in European cities – largely back to 2019 levels by 3Q21 – provided a push factor in converting higher mobility into more use of public transport. This stands in contrast to North America, where rising mobility has yet to translate into greater traffic problems. The widespread preference for using private vehicles, along with the release of pent-up demand, is reflected in the relatively strong performance of gasoline across all three OECD regions, though higher retail gasoline prices in the US has recently tempered gains.



Sources: IEA, TfL, UK Department for Transport.

Unusually complete information is available for mass transit from *Transport for London* (TfL) and for road use from UK government traffic camera datasets. This reveals that journeys by private vehicles in London have returned much more rapidly and completely than those by bus or rail. Only during periods of sustained elevated road use did TfL occupancy begin to normalise, albeit slowly. Taking

into account similar traffic camera data for other UK cities and regions, we can see that these developments are closely aligned with road fuel deliveries.

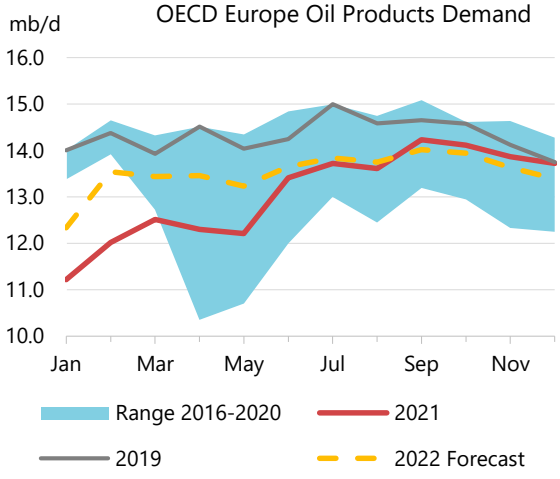
A more thorough evaluation of the distinct dynamics of private and public transportation is valuable in understanding the relationship between successive Covid waves, various mobility indicators and road fuel consumption. We consider this when estimating the impact of restrictions, such as those recently imposed in China. Latest available data tentatively suggests a modest uptick in public transport use in US cities, coinciding with higher gasoline prices. Even so, the continued under-exploitation of public transport networks in many places presents a powerful opportunity to trim oil demand in short order.

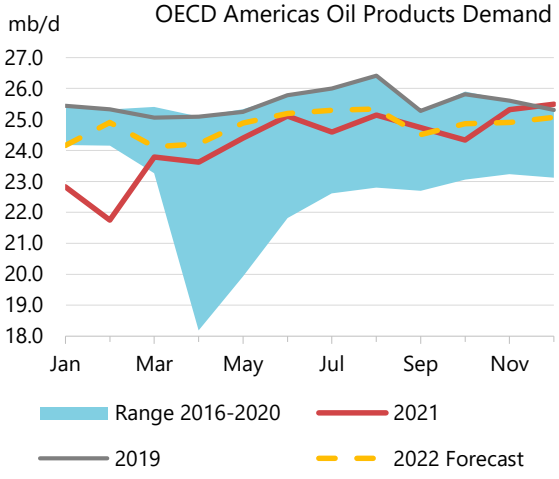
OECD

Oil demand in the OECD has been revised sharply lower for 1Q22 following receipt of more complete data. Monthly oil statistics submitted by member countries to the IEA for January were particularly weak, with demand falling by 3.2 mb/d m-o-m to 44.5 mb/d. While preliminary data for February and March were also weaker than expected, OECD oil demand in 1Q22 was 3 mb/d higher than a year ago, at 45.5 mb/d. For the year as a whole, demand is set to rise by 1.2 mb/d, compared with growth of 2.6 mb/d in 2021. At 45.9 mb/d, OECD oil demand in 2022 will still lag 1.8 mb/d behind pre-Covid levels.

OECD Americas

Oil demand in the OECD Americas was significantly weaker than expected at the start of year, resulting in a downward adjustment to our 1Q21 forecast of 350 kb/d on average.

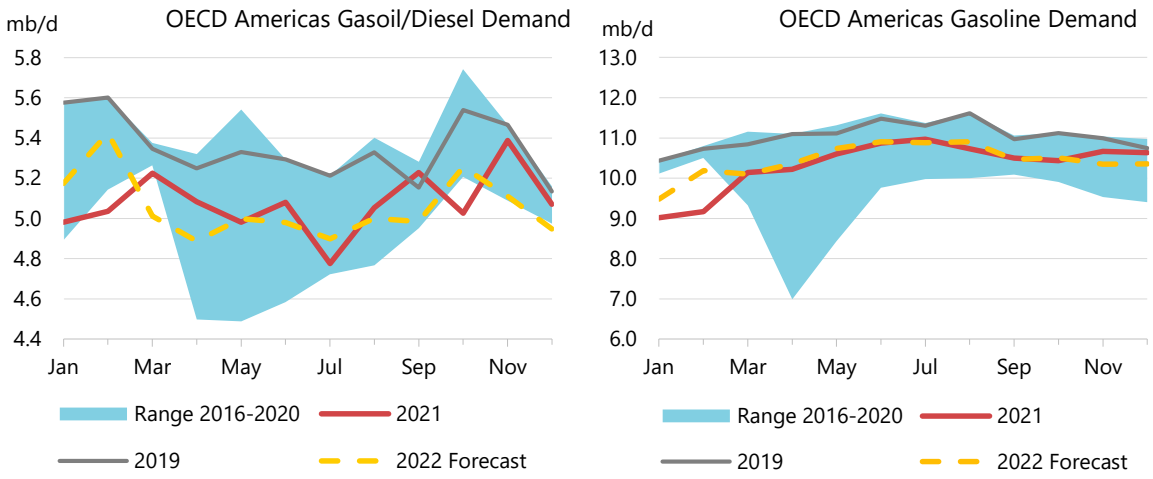




US oil demand in January fell by 1 mb/d m-o-m, to 19.9 mb/d, sharply lower than preliminary weekly estimates published by the Energy Information Administration (EIA). Both gasoline and diesel deliveries slumped as freezing temperatures across the Northeast and Texas reduced travel and as rising prices took their toll on demand. Weekly data for February and March point to continued weakness in gasoline demand, as consumers reacted to higher prices.

Nevertheless, due to a comparison with very low Covid-impacted demand in 1Q21, US consumption in 1Q22 ended up 1.3 mb/d higher y-o-y.

US manufacturing PMI fell from 58.6 in February to 57.1 in March. A strong rise in input prices and lower new orders contributed to the fall. US inflation rose by 7.9% y-o-y in February, reducing consumer purchases. It is the sharpest increase in prices since 1982. Facing high inflation, the Federal Reserve Board is tightening monetary policy, reducing its balance sheet and increasing interest rates. The resulting slowdown in economic activity and high oil prices will cap increases in oil demand for the rest of the year.



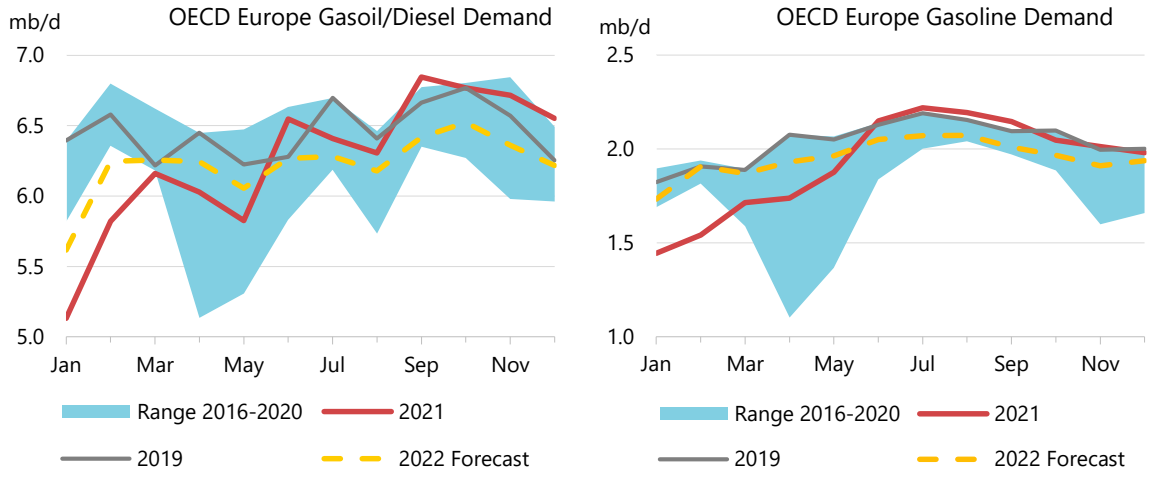
Canadian oil demand has also been revised down in January, by 160 kb/d, on lower gasoline and jet kerosene use. Nevertheless, Canadian deliveries were 90 kb/d higher y-o-y. Mexican data confirmed a rebound in deliveries observed at the end of 2021, ending 145 kb/d higher y-o-y for February, on strong gasoline, kerosene and gasoil deliveries.

Our forecast for the rest of 2022 is roughly unchanged with OECD Americas demand increasing by 170 kb/d y-o-y on average for the next three quarters. As a result, OECD Americas demand in 2022 should increase by 510 kb/d on average.

OECD Europe

Final data indicates that demand in OECD Europe was 230 kb/d lower than expected in January, falling by 1.4 mb/d m-o-m (roughly double the normal seasonal decline). This reflects tightened mobility restrictions, following the spread of the Omicron variant, which were introduced in several large European economies.

Countries implementing more severe restrictions were particularly affected. German product demand fell by 240 kb/d m-o-m in January, switching from a small increase versus pre-pandemic levels (30 kb/d) in December to a large deficit (-200 kb/d) in January. In the Netherlands, where severe lockdowns were implemented at the end of December 2021 and the start of January 2022, demand remained 180 kb/d below 2019 on average for these two months.



While Germany's service sector in March grew at the fastest pace in six months after the easing of Covid restrictions, Italy and Spain's service industry slowed as the war in Ukraine reduced consumer confidence. The *S&P Global Eurozone Manufacturing PMI* fell to a 14-month low of 56.5 from 58.2 in February. The rupture of economic links with Russia, very high energy prices and supply chain disruptions (in part due to Covid restrictions in China) are likely to reduce economic growth and oil demand in the next few months.

Gasoline and diesel demand will remain constrained by high fuel prices and slowing GDP growth. However, we forecast oil demand to increase by 435 kb/d in OECD Europe in 2022, supported by the ongoing rebound in jet/kerosene use (+380 kb/d). A possible disruption to coal and gas imports from Russia would likely temporarily provide some additional support to oil demand in industry and the power sector. In our forecasts we continue to incorporate additional oil demand due to high natural gas prices even though the cost advantage of oil has significantly declined since mid-March.

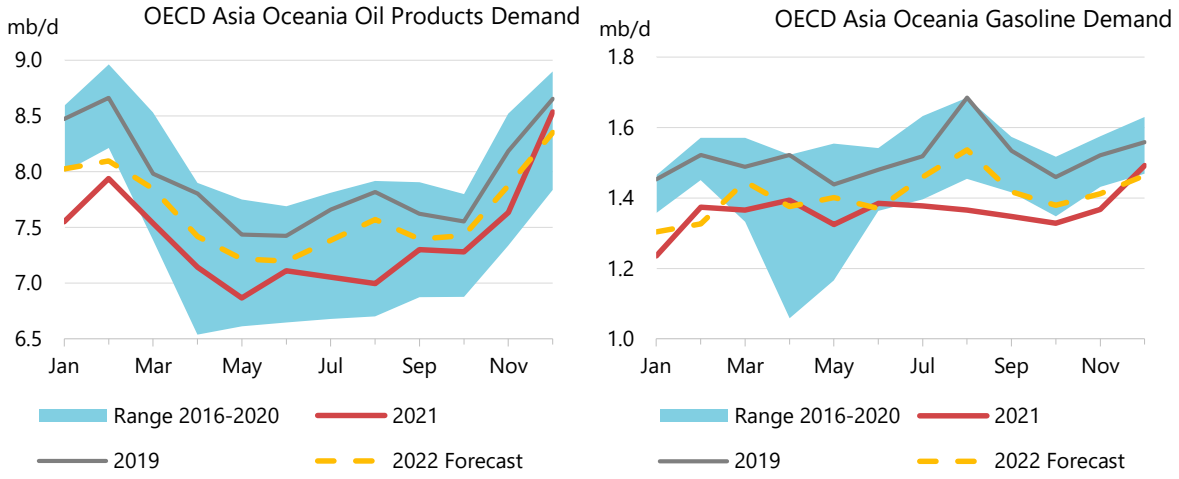
OECD Asia Oceania

OECD Asian deliveries fell by 500 kb/d in January, slightly more than the seasonal trend. Preliminary data point to an increase of 75 kb/d in February, one-fifth of the normal seasonal gain. January demand was up 475 kb/d y-o-y and 30 kb/d higher than in 2019.

Japanese economic activity accelerated in 1Q22, as reflected in the manufacturing PMI increase from 52.7 in February to 54.1 in March. However, while production rose in March, export orders recorded a sharp reduction. The combination of the Ukraine war and Covid restrictions in China combined to reduce external demand. The war and supply chain disruption will also increase input prices and inflation pressure.

Korean factory activity slowed in March, with manufacturing PMI declining from 53.8 in February to 51.2. Export sales fell on economic sanctions on Russia and the war in Ukraine.

In Japan and Korea, February saw lower than expected naphtha demand (-195 kb/d) and higher than forecast LPG demand (+130 kb/d). This reflects the difficulties experienced by petrochemical producers amid rising feedstock prices and the relative weakness of olefin production based on naphtha input relative to LPG.



We expect that OECD Asia average deliveries in 2022 will grow by 240 kb/d. Demand will remain 290 kb/d below pre-pandemic levels, with gasoline (-110 kb/d) and jet kerosene (-215 kb/d) particularly weak.

OECD Demand based on Adjusted Preliminary Submissions - February 22

(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		LPG/Ethane		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD Americas	**10.19**	**11.1**	**1.74**	**40.4**	**3.47**	**7.2**	**2.05**	**7.8**	**4.28**	**28.7**	**0.53**	**3.6**	**2.75**	**11.0**	**24.90**	**14.5**
US*	8.62	10.9	1.53	34.2	2.71	8.0	1.65	6.1	3.37	37.8	0.34	15.8	2.17	11.0	20.31	15.5
Canada	0.82	9.8	0.10	164.2	0.28	-3.2	0.34	12.4	0.53	-1.4	0.05	98.1	0.39	31.4	2.51	12.5
Mexico	0.66	16.3	0.08	95.1	0.30	20.9	0.05	39.4	0.35	11.6	0.11	-35.5	0.17	-14.8	1.73	9.2
OECD Europe	**1.91**	**23.7**	**1.12**	**75.6**	**4.84**	**9.6**	**1.65**	**0.3**	**1.16**	**4.8**	**0.81**	**20.3**	**2.30**	**2.7**	**13.54**	**12.7**
Germany	0.43	11.7	0.15	57.8	0.62	6.6	0.27	1.0	0.09	-19.7	0.06	31.0	0.40	-10.5	2.02	4.4
United Kingdom	0.30	77.0	0.29	53.6	0.53	24.0	0.16	9.2	0.14	9.9	0.02	7.3	0.13	37.2	1.55	34.4
France	0.21	21.9	0.17	104.2	0.74	7.7	0.17	-4.1	0.13	3.5	0.04	27.4	0.25	7.7	1.71	13.5
Italy	0.19	28.3	0.06	129.1	0.53	9.9	0.06	0.9	0.13	7.9	0.07	36.9	0.23	4.9	1.25	14.7
Spain	0.11	17.2	0.09	214.3	0.44	8.0	0.28	9.8	0.07	8.7	0.12	22.3	0.20	-2.7	1.26	14.0
OECD Asia & Oceania	**1.33**	**-3.5**	**0.96**	**12.5**	**1.34**	**-3.9**	**0.60**	**7.6**	**1.01**	**14.6**	**0.53**	**3.9**	**2.37**	**-1.1**	**8.10**	**2.0**
Japan	0.69	-6.4	0.65	9.1	0.42	-3.2	0.38	1.1	0.54	6.8	0.29	12.5	0.95	1.6	3.91	2.1
Korea	0.22	-2.9	0.21	15.1	0.32	-10.1	0.16	27.0	0.41	31.2	0.21	-10.3	1.24	-2.4	2.72	1.8
Australia	0.30	1.2	0.08	39.5	0.53	-1.3	-	-	0.04	1.3	0.01	15.6	0.12	-5.6	1.09	1.9
OECD Total	**13.42**	**11.1**	**3.82**	**39.9**	**9.65**	**6.7**	**4.30**	**4.8**	**6.46**	**21.4**	**1.87**	**10.3**	**7.41**	**4.3**	**46.54**	**11.6**

* Including US territories

Non-OECD

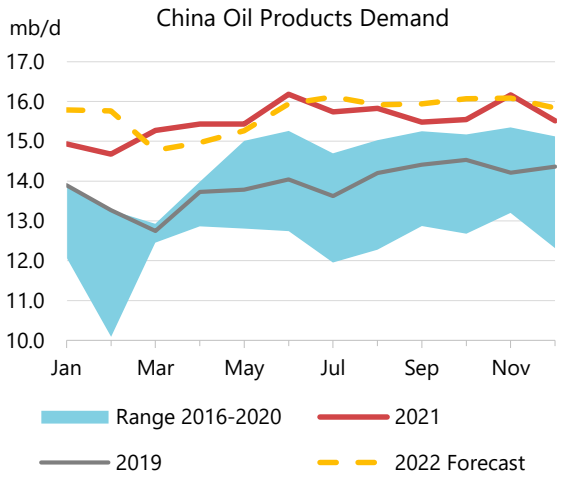
Non-OECD demand will grow by 680 kb/d in 2022, reaching 53.4 mb/d. This is a downward revision of 200 kb/d from our March *Report*, primarily due to the ongoing wave of Covid-19 cases and lockdowns across China. Severe restrictions, currently impacting hundreds of millions people, in provinces across the country are creating acute problems for the freight, manufacturing and aviation sectors as well as dampening private consumption. We assume that the developing situation will cut Chinese demand by an average of 780 kb/d from March to May but if the spread of the virus cannot be adequately controlled this could be deeper and more persistent.

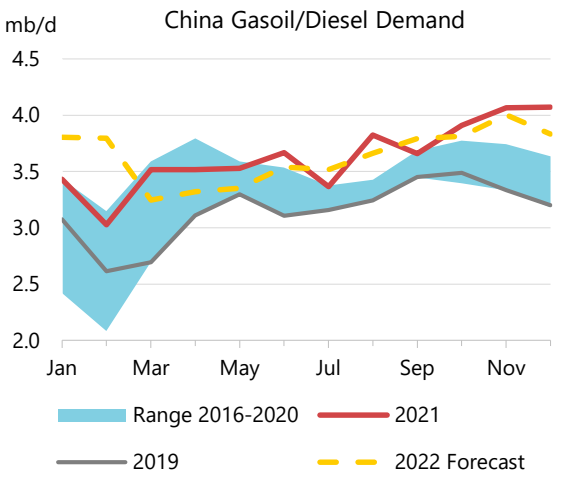
We have slightly revised our 2022 demand expectations for Russia, and are now projecting an average decline of 250 kb/d (6.9%), on an updated GDP forecast. For India and Latin America, our estimates have been raised following strong recent oil data. Non-OECD demand increased by 1.1 mb/d m-o-m in February – slightly ahead of the normal seasonal rise – with robust deliveries

across most of the major countries reporting data. Nevertheless, we expect oil use to plummet by 1.7 mb/d in March as the impacts of Russia's invasion of Ukraine and Covid lockdowns in China are felt.

China

In response to an upsurge in recorded cases of Covid-19, local and national Chinese authorities have introduced a wave of public health measures in communities across the country. Our analysis of data from Oxford University's *Blavatnik School of Government (BSG)* indicates that, at some point in March, 220 million people were in areas affected by school closures, large-scale workplace stoppages or stay-at-home orders. In a research note, Japan's Nomura Research Institute estimated that similar areas accounted for 22% of Chinese GDP and, we forecast that there will be a significant impact on oil demand. As a result, projections have been reduced for March by 730 kb/d, April by 925 kb/d and May by 690 kb/d, with demand subsequently recovering quickly through the middle of the year. Demand growth is now forecast to average 180 kb/d in 2022, reaching 15.7 mb/d (180 kb/d lower than in the March *Report*).

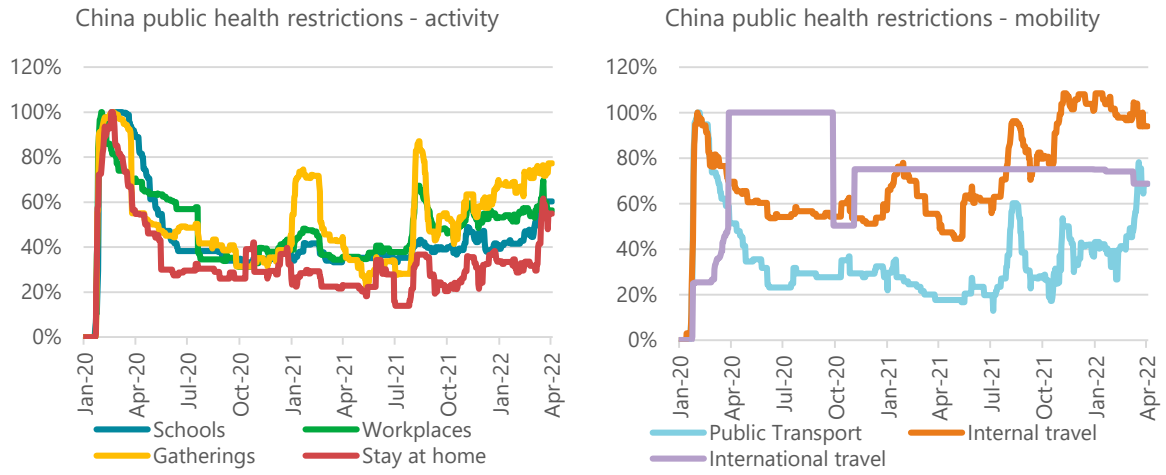




While news headlines have, understandably, largely focussed on the severe containment measures in place in Shanghai – China's largest city and home to the world's largest port – towns, cities and districts in almost every region of the country have been affected and cases have recently been reported in all but three of the nation's provinces. Shenzhen in Guangdong and the province of Jilin are amongst other areas with the toughest restrictions. The strong response to these measures as part of so-called 'zero-Covid' policies is having clear impacts on various forms of oil consumption. Personal mobility, flights, and shipping all appear to be substantially disrupted. The rapid and sustained increase in infections in Shanghai (which exceeded 20 000 daily cases on 7 April) and subsequent extensions of lockdown measures illustrates a potentially serious downside scenario.

Provincial level *BSG* data reveals the extent and contours of these new restrictions. Weighted by provincial oil demand, restrictions directly impacting mobility (international travel bans, interprovincial travel restrictions and closures of public transport) are near peak 2020 levels and, by-and-large, have been for some time. In contrast, restrictions relating to activity (including school and workplace closures, limitations on gatherings and stay-at-home orders) have increased strongly in recent weeks. These are close to peak levels in some provinces, but nationally currently remain broadly comparable to those during the 3Q21 lockdowns. Stay-at-home orders, which are amongst the strongest (and most disruptive) public health

measures available to officials, became dramatically more prevalent in March, having been relatively rare since 1Q20.

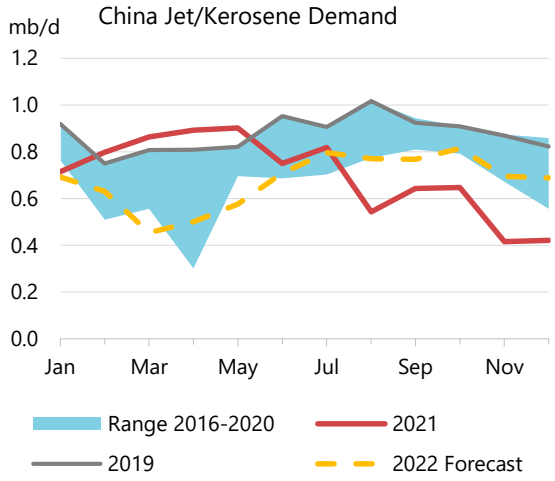


Source: Oxford University Blavatnik School of Government. Percentage of 2020 peak.

Reports indicate that efforts to contain the virus are proving especially problematic for freight transport, creating inland logistical bottlenecks compounded by disruption at ports. According to consulting firm *FourKites*, ocean-freight loadings in Shanghai were down by 33% in early-April from mid-March, while Shenzhen had 32% lower throughput in March before a partial improvement in April. *Caixin's China Manufacturing PMI* dropped to 48.1 in March (from 50.4 in February), its lowest point since February 2020. We expect these difficulties to weigh heavily on gasoil demand, which accounts for the largest share of our downward revisions. Demand will shrink by 550 k/d m-o-m in March, contrary to normal seasonality, before gradually recovering. We project that gasoil use will exceed the five-year average by June and be close to 2021 levels from July.

Interprovincial mobility, derived from *Baidu* data, also indicates a substantial interruption to ordinary patterns of activity. Nationwide mobility in late March were midway between the prevailing level until January 2022 and of February 2020. While limits on personal mobility will have a strong negative impact on consumption, restrictions on plane travel, closures of public transport and the desire to avoid crowded trains and buses should all make gasoline demand relatively resilient. Indeed, China posted strong apparent gasoline demand from November through February at a time of increasing restrictions on public transport. Gasoline demand is subject to a smaller downward revisions than gasoil and will not fall below the five-year average.

A large decline in domestic flights, which were close to February 2020 levels in early April, has been reported by *Radarbox*. Flights from Shanghai's Pudong airport are down by more than 90% from February 2022. As a result, we expect a very considerable impact on jet kerosene use, and have revised jet/kerosene demand estimates down by 200 kb/d for March and April from our previous *Report*. The recovery thereafter is expected to be relatively swift but incomplete. The anticipated maintenance of strict controls throughout the year means that overall 2022 Chinese jet/kerosene demand will fall by 25 kb/d y-o-y, compared to previous expectations of 10 kb/d growth, and remain 200 kb/d below 2019 levels.



Sources: IEA, Radarbox

In contrast to the dismal outlook for the coming months, newly available data for January and February showed unexpectedly strong apparent demand. Gasoil led the gains, on average 570 kb/d higher y-o-y for the two months, with gasoline close behind (+510 kb/d). Much stronger mobility indicators over the Lunar New Year period (compared to 2021) likely drove this surge in demand. LPG (+260 kb/d) and naphtha (+230 kb/d) demand both pushed ahead, reflecting the extraordinary scale of petrochemical capacity additions over the past year. We see a shift of about 100 kb/d of demand from naphtha to LPG. Margins for olefin production from naphtha lost ground relative to LPG throughout the first two months of the year and those producers with the ability likely modified their input mixes accordingly.

Demand was so robust in January and February that, despite the projected drop in March, average 1Q22 was 460 kb/d higher y-o-y, although it fell by 310 kb/d q-o-q when flat demand was more typical in the years before the pandemic. Demand in 2Q22 will not fare so well, declining by 290 kb/d y-o-y and 40 kb/d q-o-q (in 2021 the equivalent q-o-q rise was 710 kb/d).

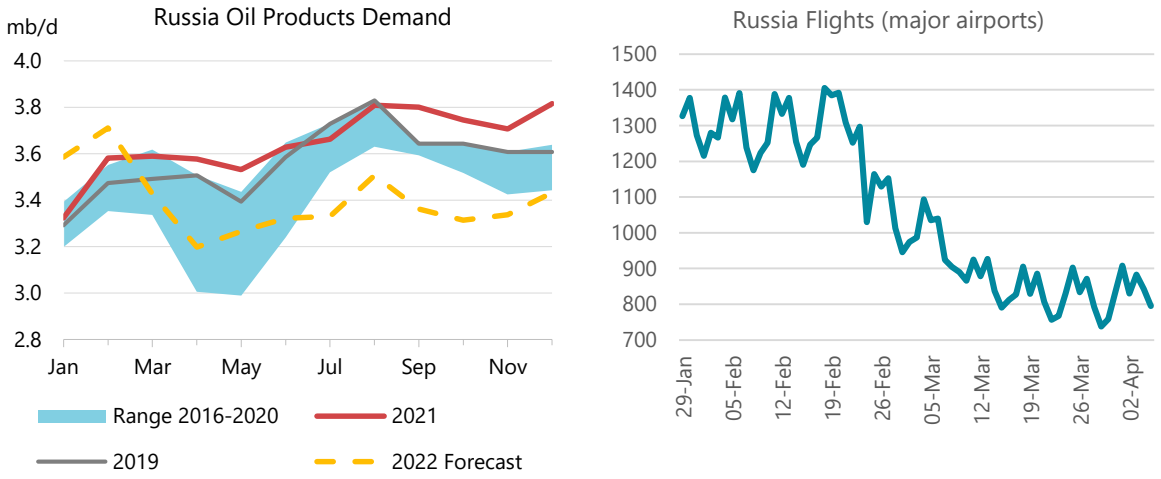
China: Demand by Product
(thousand barrels per day)

	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
LPG & Ethane	1 781	1 912	2 230	2 373	317	144	16.6	6.4
Naphtha	1 373	1 478	1 679	1 810	201	131	13.6	7.8
Motor Gasoline	3 332	3 284	3 630	3 621	345	- 9	10.5	-0.2
Jet Fuel & Kerosene	877	722	700	675	- 21	- 25	-3.0	-3.6
Gas/Diesel Oil	3 151	3 259	3 636	3 638	377	2	11.6	0.1
Residual Fuel Oil	444	445	481	500	36	19	8.1	4.0
Other Products	2 948	3 197	3 165	3 085	- 32	- 80	-1.0	-2.5
Total Products	**13 905**	**14 298**	**15 521**	**15 703**	**1 223**	**182**	**8.6**	**1.2**

Russia

Based on an updated GDP forecast, we have marginally revised up our expectations for Russia's oil demand in 2022. This change (50 kb/d) is accompanied by a redistribution of demand changes during the year. We now expect the largest declines in GDP, and therefore oil demand in 2H22, rather than 2Q22 as in our previous forecast. The current forecast of the average drop in 2022

GDP is, at 10.9%, close to the 11.4% we previously assumed. Russian oil demand is expected to decline by 250 kb/d to 3.4 mb/d in 2022.



Sources: IEA, FlightRadar24

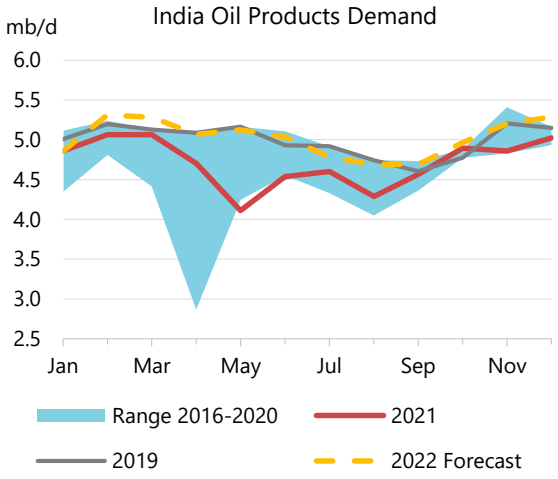
Flight tracking data from *Radarbox* and *FlightRadar24* suggests that the number of commercial flights from Russia has fallen by 35-40% from pre-war levels, which is roughly in line with our earlier expectations. International journeys have been severely cut by bans, particularly on European routes, and on Russian fears that leased planes will be seized at foreign airports. Airports in south-western Russia remain closed as the war in Ukraine continues, substantially reducing domestic flight numbers. Following an initial month-long decline, flight numbers appear to have largely stabilised at this lower level. However, we expect that the decline will resume and continue through the rest of the year, with ramifications for jet fuel demand, as sanctions on equipment make maintenance difficult.

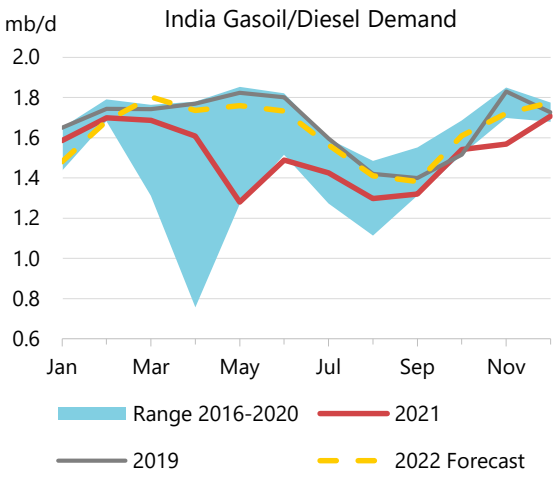
February demand increased by 120 kb/d m-o-m (+130 kb/d y-o-y), slower than the average seasonal increase of 180 kb/d, with most of the growth likely taking place before Russia's invasion of Ukraine. Gasoil posted the overwhelming majority of this increase (+120 kb/d m-o-m) while gasoline (-40 kb/d), jet/kerosene and fuel oil (each -10 kb/d) all declined from January, contrary to normal seasonality. We expect a substantial drop in March deliveries, which will fall by 280 kb/d from February and 160 kb/d y-o-y. Despite this, 1Q22 will post a y-o-y increase of 70 kb/d with a period of six consecutive months where demand surpassed 2019 ending in March.

India

Provisional data indicates that March oil deliveries in India slipped by 30 kb/d from the high level of February. This is close to the typical seasonal change, with March demand 220 kb/d higher y-o-y. Oil use is set to increase by 150 kb/d y-o-y in 1Q22 and average 2022 consumption will rise by 310 kb/d to 5 mb/d.

The major factor behind the strong figures of the last two months is an upturn in gasoil demand, with back-to-back m-o-m increases of 200 kb/d and 120 kb/d, respectively. Indian manufacturers saw robust market conditions over the same period, with the *S&P Global India Manufacturing PMI* slowing to 54 in March from 54.9 in February. Reportedly, businesses sought to build inventories amid concerns around inflation and wider economic uncertainty.





Notably, road fuel consumption has benefited from the decision of major state-owned retailers to hold prices steady, despite rising prices on international markets, in the run-up the elections in the country. As well as supporting private demand, this led to bulk buyers purchasing diesel direct from filling stations, because wholesale prices rose in line with global prices. Consumers apparently filled fuel stocks in anticipation of the post-election price hike. March gasoline deliveries are 210 kb/d above 2019 levels, reflecting consumers' preference for private vehicles over public transport.

India: Demand by Product
(thousand barrels per day)

	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
LPG & Ethane	837	869	888	915	19	27	2.1%	3.0%
Naphtha	308	318	319	322	2	2	0.5%	0.7%
Motor Gasoline	734	667	750	772	83	22	12.4%	3.0%
Jet Fuel & Kerosene	225	120	128	160	9	31	7.2%	24.2%
Gas/Diesel Oil	1 667	1 414	1 516	1 638	102	122	7.2%	8.0%
Residual Fuel Oil	145	136	141	145	6	4	4.1%	2.5%
Other Products	1 076	1 016	968	1 070	- 49	102	-4.8%	10.6%
Total Products	**4 991**	**4 540**	**4 711**	**5 022**	**171**	**311**	**3.8%**	**6.6%**

Other Non-OECD

Middle Eastern oil demand grew by an estimated 200 kb/d y-o-y in 1Q22. The increase was led by jet/kerosene (+120 kb/d) and gasoline (+100 kb/d). Almost half of the rebound in jet/kerosene demand will take place in the **UAE**. Air traffic at major Emirati hubs was already approaching 2019 rates in late 2021 and remains robust as demand for travel locally and between Europe and south and southeast Asia continued to recover. **Saudi Arabian** direct use of crude oil was stronger than expected in January (+130 kb/d y-o-y). Overall 2022 demand for the region is set to reach 8.6 mb/d, 80 kb/d higher than 2021.

Demand in **Sri Lanka is** forecast to fall 35 kb/d (28%) on average in 2022. In recent weeks, widespread anti-government protests have erupted in response to severe food, power and fuel shortages.

Latin America demand increased by 400 kb/d m-o-m in February, double the typical seasonal increase. The 290 kb/d y-o-y rise was principally the result of higher **Brazilian** consumption,

which increased by 310 kb/d m-o-m and 120 kb/d y-o-y. The economic environment in Brazil improved during 1Q22, with the *S&P Global Brazil Manufacturing PMI* indicating a return to expansion in March, rising to 52.3 from the previous mark of 49.6 in December. Gasoil led Brazilian February demand growth at 110 kb/d higher y-o-y. Overall Latin American demand is expected to average 6.1 mb/d in 2022, a rise of 40 kb/d.

Non-OECD: Demand by Region

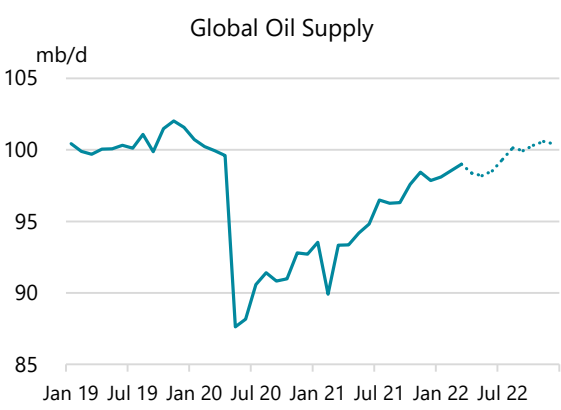
(thousand barrels per day)

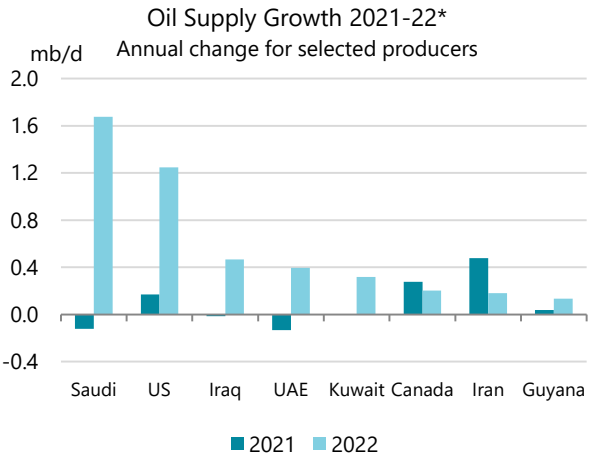
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
Africa	4 251	3 818	4 032	4 113	215	80	5.6	2.0
Asia	27 899	26 923	28 668	29 445	1 745	777	6.5	2.7
FSU	4 723	4 497	4 778	4 458	281	- 321	6.3	-6.7
Latin America	6 294	5 610	5 996	6 053	387	56	6.9	0.9
Middle East	8 711	8 206	8 523	8 604	317	81	3.9	1.0
Non-OECD Europe	782	708	737	745	28	8	4.0	1.1
Total Products	**52 659**	**49 761**	**52 734**	**53 417**	**2 973**	**683**	6.0	1.3

Supply

Overview

Great uncertainty is clouding the outlook for world oil supply at the start of the second quarter. By far the biggest variable is Russian oil production – just how much will be shut in after Moscow's invasion of Ukraine as companies shun exports and consumption slows internally. So far in April, around 700 kb/d on average had reportedly gone offline versus March and, for now, we assume losses will grow to an average 1.5 mb/d for the month as Russian refiners throttle back further and buyers shy away. From May onwards, close to 3 mb/d could be offline as the full impact of a widening customer-driven voluntary embargo on Moscow comes into effect. Given the rapidly evolving situation and high degree of uncertainty, our estimates are under continuous review and will be revised as necessary.





* Assumes OPEC+ cut phased out by Sept 2022. Iran remains under sanctions.

Despite the magnitude of the Russian oil supply disruption, weaker demand growth and steady output increases from Middle East OPEC+ members along with the US and other countries outside the OPEC+ alliance (non-OPEC+) should prevent a severe deficit from developing.

During March, global oil supply rose by 450 kb/d to 99.1 mb/d, led by non-OPEC+ producers who more than offset small decreases from OPEC+ members Russia, Kazakhstan and Libya. The producer group's long-running struggle with capacity constraints and technical issues pushed the supply gap compared to official output targets during March to 1.5 mb/d – the widest since record cuts of nearly 10 mb/d were enforced in May 2020 to counter Covid-induced demand destruction.

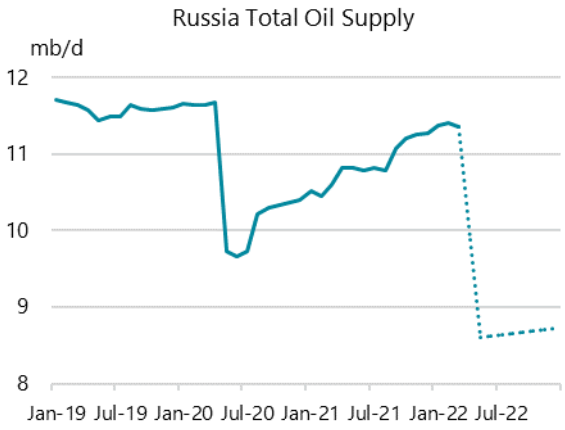
Excluding Russia, output from the rest of the world is set to rise by 3.9 mb/d from March through December. OPEC+ is expected gradually to increase output by 1.9 mb/d, assuming it fully unwinds OPEC+ cuts in line with existing policy. Middle East members of the group account for most of the increase. Saudi Arabia is projected to add 780 kb/d while Iraq, Kuwait and the UAE between them could add a similar amount. Non-OPEC+ producers are expected to pump 2 mb/d more. The US is set to lead the gains, rising by 1.27 mb/d, while Canada, Brazil and Guyana also post substantial increases. For the year as a whole, production is forecast to rise 5.5 mb/d

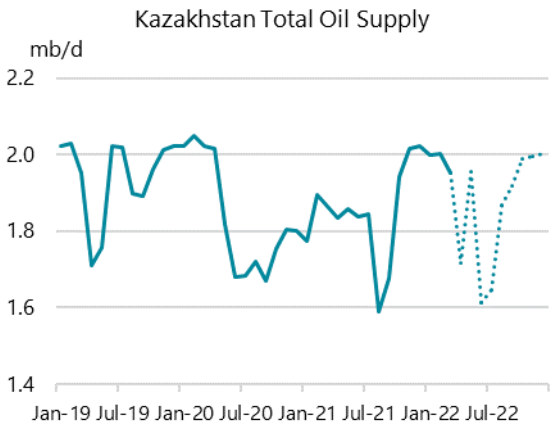
(excluding Russia) – with OPEC+ accounting for 3.5 mb/d and non-OPEC+ 2 mb/d. The US accounts for 62% of the non-OPEC+ expansion.

Sanctions impact Russia from April

Russian oil volumes held relatively steady during March as we assumed in last month's *Report*. Although a large contingent of Western companies self-sanctioned, buyers in Asia have snapped up sharply discounted Russian barrels, helping reallocate some of the trade flows. Total production of crude oil, condensates and NGLs eased 50 kb/d month-on-month (m-o-m) to 11.35 mb/d in March. Output of crude oil declined by 50 kb/d to 10 mb/d, which was 330 kb/d below the country's OPEC+ target.

So far in April, however, Moscow appeared to have turned down the taps by around 700 kb/d on average compared to March. Russian Deputy Prime Minister Alexander Novak has said oil production may decline by 4% or 5% in April versus March due to issues with insurance and usage of vessels. We are projecting a larger loss of around 1.5 mb/d. If existing sanctions deter further buying or should the ban on Russian oil expand, losses could stretch close to 3 mb/d from May onwards.





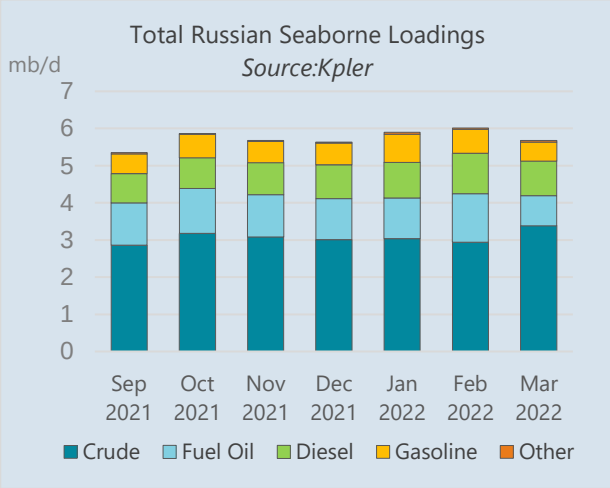
Kazakhstan, Russia's neighbour and fellow member of OPEC+, adds another layer of uncertainty to the supply picture. Crude production is forecast to fall further in April due to repairs of the Caspian Pipeline Consortium (CPC) loading terminal on Russia's Black Sea coast. Although loaded in Russia, CPC Blend does not fall under US sanctions. Most of Kazakhstan's crude is shipped via the CPC pipeline and, prior to the unscheduled maintenance, loadings averaged around 1.5 mb/d in February. The landlocked country has few export options aside from the 1 500 km CPC pipeline to Novorossiysk.

March output decreased due to the unexpected interruption of CPC flows towards the end of the month. Total oil production of crude oil and condensates slipped by 50 kb/d in March to 1.95 mb/d, with crude oil easing by 50 kb/d to 1.6 mb/d. Chevron-led Tengizchevroil, operator of the Tengiz oilfield, reduced supply by 40 kb/d to 620 kb/d in March "due to unscheduled repair works". Volumes at the Kashagan oil field, operated by North Caspian Operating Company (NCOC) led by a group of Western majors, held steady at roughly 400 kb/d. But by the start of April, the offshore field reportedly had fallen below 300 kb/d. The field is due to shut down for maintenance in June and July and following the upgrade work, Kashagan output is expected to rise to around 450 kb/d.

Box 2. Russian oil exports see modest declines in March, bigger losses looming

Russian seaborne exports of crude and product have been hit by import embargoes and buyer boycotts. The resulting pressure on trade flows has had a mixed impact so far. The wind-down in Russian exports only began towards mid-March as the last cargoes of pre-invasion spot purchases rolled off and the US import embargo came into effect. European buyers have begun to cut imports while shipments to the US, which averaged around 600 kb/d before the invasion, have halted. Contrary to expectations, so far there are no signs of increased Russian exports to China, where surging Covid cases and severe mobility restrictions have cut economic activity and oil demand.

Total Russian oil exported by sea (crude and products) fell by around 330 kb/d to 5.7 mb/d in March with crude and products seeing divergent trends according to IEA analysis of *Kpler* data. Crude shipments, excluding volumes from Central Asian producers exported via Russian ports, rose 440 kb/d m-o-m to 3.4 mb/d while products fell around 780 kb/d to 2.3 mb/d. Fuel oil and feedstocks represented two-thirds of the declines in product exports while naphtha, followed by gasoil, made up most of the rest.

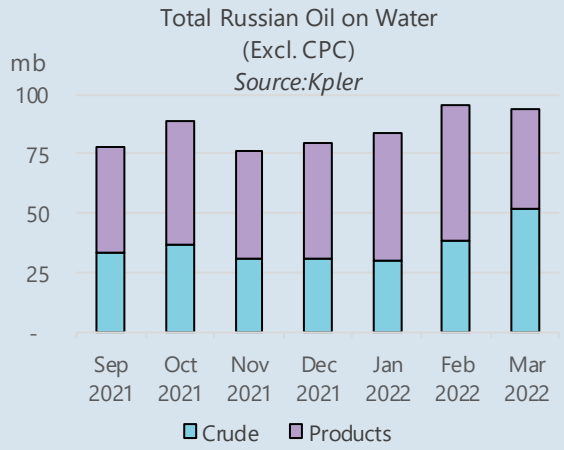


Import embargoes on Russian crude and products were announced by the UK, the US, Canada, and Australia in early March. In the US and Canada they were effective immediately while the UK and Australia are phasing them in. Of the four, the US is the biggest importer of Russian crude and products, mostly refinery feedstocks. Buyers' boycotts by European and some Asian oil and petrochemical companies concern both crude and products and took effect relatively rapidly in March. In most cases, cargoes purchased before restrictions were imposed have been loaded. Moreover, a number of traders with longer-term contracts continue to lift Russian crude and products in line with their contractual obligations.

Total crude loadings from Russian ports fell by around 70 kb/d m-o-m in March to 4.5 mb/d. However, the decline reflects a 510 kb/d m-o-m drop in exports of crude from Central Asian producers transiting via Russian ports and a 440 kb/d m-o-m increase in Russian crude exports.

Shipments of Russian crude oil to Europe fell by 420 kb/d m-o-m to 1.4 mb/d while those to the US dropped by 115 kb/d to 23 kb/d on average in March and to zero by end-month. On the other hand, loadings to India rose from almost nothing in February to 310 kb/d on average in March. Seaborne exports to China were up 70 kb/d m-o-m to 790 kb/d. More tellingly, the share of unreported destinations rose 250 kb/d in March, contributing to rising volumes of Russian crude oil on water. By end-March, it was up by 14 mb m-o-m to 52 mb, partly reflecting shipments to destinations further afield. By contrast, lower product shipments resulted in a 15 mb decline in products on water in March. By end-month, 42 mb of Russian oil products were in transit.

The biggest product export losses so far have been in fuel oil and feedstocks categories, which fell in March by 500 kb/d in total to 810 kb/d. Fuel oil was down by 230 kb/d while feedstocks dropped by 280 kb/d. The decline reflects a combination of factors. The US embargo cut Russian fuel oil and feedstocks exports to the US from an average 370 kb/d in January and February to just 70 kb/d (feedstock -160 kb/d), before coming to a complete halt by mid-month. Shipments to Europe fell 210 kb/d m-o-m to 440 kb/d in March (feedstocks -130 kb/d). These declines were partly offset by increased sales to buyers in South East Asia but volumes loaded for undeclared destinations also rose over the month, limiting the drop in volumes of fuel oil in transit. Russian fuel oil has been backed-out of bunker blending operations by credit financing restrictions from banks. Consequently, some of the European imports typically used for blending may have gone into storage.



Russian naphtha exports fell by 160 kb/d in March to 350 kb/d versus their average in January and February. Large petrochemical companies in Europe and OECD Asia sharply reduced their offtake of Russian naphtha, reflecting the broad impact of the oil buyers' boycott. On a month-on-month basis, exports to the US fell 50 kb/d to 15 kb/d in March and to zero at end-month. Exports to Europe fell 50 kb/d and those to Latin America (mostly Brazil) dropped 27 kb/d. Exports to East Asia lost 75 kb/d m-o-m. In particular, exports to South Korea fell from 110 kb/d on average in January and February to 10 kb/d in March and nothing by end-month.

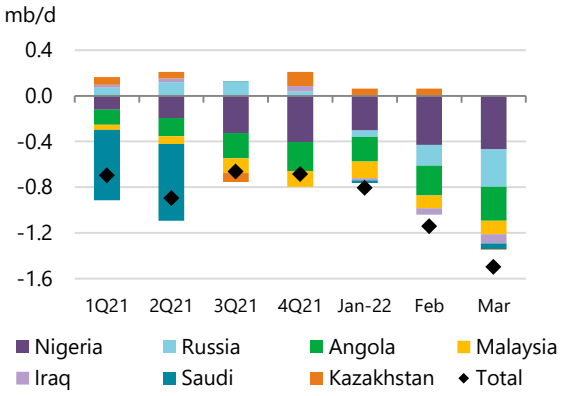
Gasoil exports fell 150 kb/d m-o-m versus peak February shipments, returning to levels similar to December-January. The last exports to the US East Coast occurred in January and have stopped since. Exports to Europe were relatively stable.

It remains to be seen if Asian buyers can absorb Russian crude and products rejected by Europe and banned in the US, UK, Canada and Australia. Without a full re-allocation, Russia may have to shut in additional oil production with potential longer-term consequences for world supply. Our latest projections for Russian supplies anticipate a decline of around 3 mb/d for May. Russian refiners have already had to halt operations at some units due to insufficient outlets (domestic or international) for their product. As boycotts and embargoes consolidate and storage fills up, crude oil exports face steeper declines in the coming weeks. Exports of fuel oil and naphtha are also expected to see further losses in April. However, there is no significant trend showing a decline in gasoil exports to typical destinations for the moment.

OPEC+ sticks with existing policy

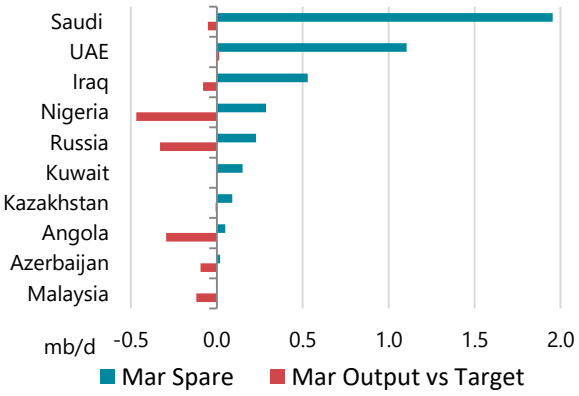
What is clear for the supply outlook is that OPEC+ is sticking firmly with its existing policy to raise crude oil output in modest monthly increments. It endorsed a 432 kb/d supply rise for May – up slightly from previous monthly increases of 400 kb/d due to a re-alignment of targets for Saudi Arabia, Russia, the UAE, Kuwait and Iraq. Russia's May target has been set at 10.55 mb/d, the same level as Saudi Arabia. But Russia, now the third OPEC+ member subject to sanctions along with Iran and Venezuela, was already closing in on sustainable capacity before sanctions threatened its production. The 23-member bloc is due to meet again on 5 May.

OPEC+ Output vs Target*



* Selected producers.

OPEC+ Spare Capacity, Output vs Target*



* Selected producers.

During March, total crude oil production from all 23 members of the OPEC+ bloc held steady at 44.1 mb/d after losses led by Libya, Russia and Kazakhstan offset modest increases from several Middle East members. Taking into account only the 19 members bound by the supply deal, output was up a mere 40 kb/d, far short of the planned 400 kb/d increase. Altogether, 12 countries pumped below their quotas, highlighting the bloc's dwindling spare capacity and reduced operational efficiency. As a result, their combined production trailed 1.5 mb/d below target in March compared to a deficit of 1.1 mb/d the previous month. That gap – the widest since OPEC+ enforced record cuts in May 2020 – is set to blow out further as many countries can't keep up with rising targets due to capacity constraints, technical issues and in Russia's case, sanctions as well.

Production of crude from OPEC countries increased by 60 kb/d to 28.54 mb/d in March, led by Middle East producers. Libya posted the largest decrease, with volumes falling to 1.1 mb/d (-60 kb/d m-o-m) after supply fell due to two of its oil fields being shut early in the month. The country is vulnerable to output disruptions because of its ongoing political crisis.

Non-OPEC partners, led by Russia, produced 15.55 mb/d, down 70 kb/d. For the fourth month running, Russia pumped under its OPEC+ target (330 kb/d below in March) and supply is expected to fall further in the coming weeks as buyers spurn the country's oil.

OPEC+ Crude Oil Production[1] (million barrels per day)	Feb 2022 Supply	Mar 2022 Supply	March Compliance	Mar 2022 Target	Sustainable Capacity[2]	Spare Cap vs Mar
Algeria	0.98	1.00	88%	0.99	0.99	0.00
Angola	1.16	1.14	417%	1.44	1.19	0.05
Congo	0.26	0.26	342%	0.31	0.29	0.03
Equatorial Guinea	0.09	0.09	529%	0.12	0.11	0.02
Gabon	0.19	0.20	-108%	0.18	0.21	0.00
Iraq	4.27	4.29	128%	4.37	4.82	0.53
Kuwait	2.61	2.64	99%	2.64	2.79	0.15
Nigeria	1.27	1.25	522%	1.72	1.54	0.29
Saudi Arabia	10.23	10.28	108%	10.33	12.23	1.95
UAE	2.96	2.99	93%	2.98	4.09	1.10
Total OPEC-10	**24.02**	**24.14**	**157%**	**25.06**	**28.26**	**4.13**
Iran[3]	2.58	2.58			3.80	1.22
Libya[3]	1.16	1.10			1.20	0.10
Venezuela[3]	0.72	0.72			0.75	0.03
Total OPEC	**28.48**	**28.54**			**34.02**	**5.48**
Azerbaijan	0.57	0.58	321%	0.68	0.60	0.02
Kazakhstan	1.65	1.60	106%	1.61	1.69	0.09
Mexico[4]	1.63	1.64		1.75	1.69	0.05
Oman	0.82	0.83	102%	0.83	0.87	0.04
Russia	10.05	10.00	149%	10.33	10.23	0.23
Others[5]	0.90	0.90	318%	1.04	0.93	0.04
Total Non-OPEC	**15.62**	**15.55**	**162%**	**16.23**	**16.01**	**0.47**
OPEC+-19 in cut deal[4]	**38.00**	**38.05**	**159%**	**39.54**	**42.58**	**4.55**
Total OPEC+	**44.10**	**44.09**			**50.03**	**5.96**

1 Excludes condensates.

2 Capacity levels can be reached within 90 days and sustained for extended period.

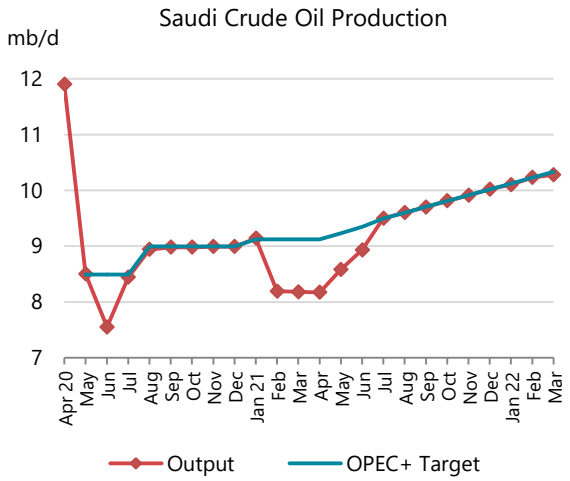
3 Iran, Libya, Venezuela exempt from cuts.

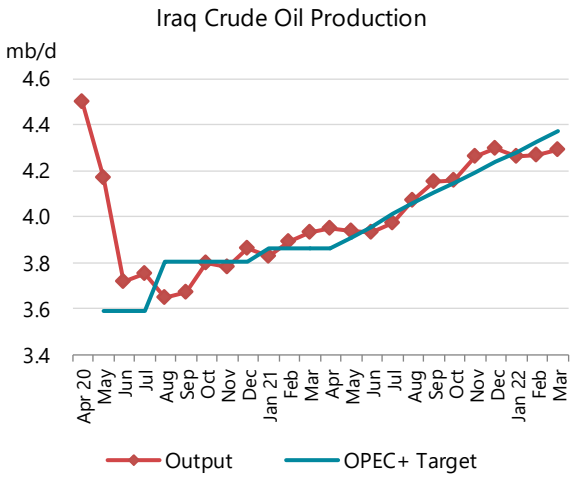
4 Mexico excluded from OPEC+ compliance. Only cut in May, June 2020.

5 Bahrain, Brunei, Malaysia, Sudan and South Sudan.

Middle East Drives OPEC+ gains

Saudi Arabia and the UAE are the world's only producers to hold substantial, readily available spare capacity. So far, these Gulf heavyweights are raising supply broadly in line with their previously-agreed OPEC+ quotas. During March, Saudi Arabia pumped 10.28 mb/d of crude oil, up 50 kb/d m-o-m.





Capital expenditure for Saudi Aramco is meanwhile forecast at $40-50 billion this year compared to $31.9 billion in 2021. It plans to boost sustainable production capacity to 13 mb/d by 2027. Current capacity is 12.2 mb/d, including the Neutral Zone. Capacity increases will primarily come

from offshore oil fields such as Zuluf (600 kb/d), Marjan (300 kb/d), Berri (250 kb/d) and Dammam (50 kb/d).

Despite the shutdown of its West Qurna-2 and Nasiriya oil fields, production in **Iraq** edged 20 kb/d higher to 4.29 mb/d in March. Exports fell, but inventories built up by around 100 kb/d, according to satellite data. The 400 kb/d West Qurna 2 oil field, operated by Russia's Lukoil, returned from maintenance on 8 March. It was closed on 21 February for repairs that were expected to last for a month. Flows at the 80 kb/d Nasiriya field, halted due to protests, restarted on 5 March after a seven-day outage. As for exports, total shipments fell 110 kb/d to 3.62 mb/d. Exports of southern Basrah oil decreased by 60 kb/d to 3.2 mb/d in March, while loadings from the north dropped 50 kb/d to 420 kb/d.

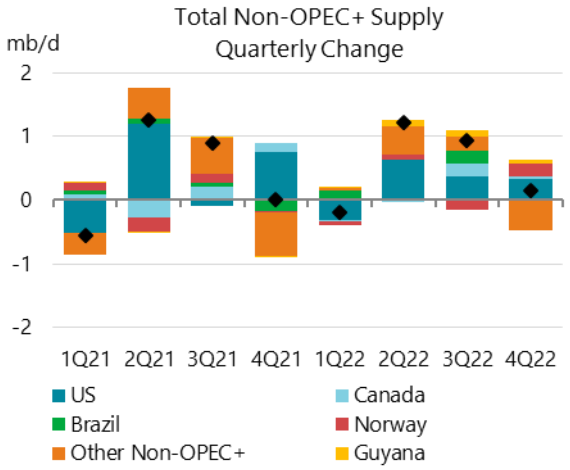
Output in **Kuwait** rose 30 kb/d to 2.64 mb/d during March. The country's capacity building effort has been set back by project delays, including the rehabilitation of its giant Burgan field, which continues to lose steam. But in a bid to help boost supply, Kuwait has signed a memorandum of understanding with Japan's Nippon Export and Investment Insurance that would allow for $1 billion to fund oil projects. Production in the **UAE**, in the midst of a long-running capacity expansion, increased to 2.99 mb/d during March.

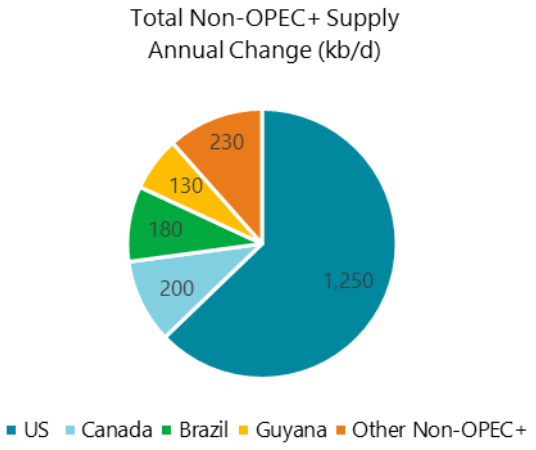
The fate of the **Iran** nuclear talks meanwhile hangs in the balance. Iran could be a source of substantial supplies if sanctions are lifted, although its return to the market would not be immediate. Talks between Tehran and the West to revive the 2015 nuclear deal have hit pause, but if and when a deal is struck it could take at least another month before sanctions are formally eased. At that point, we expect production to ramp up by more than 1 mb/d within six months to reach full capacity of 3.8 mb/d. In March, Iranian crude oil supply held at 2.58 mb/d - the highest level in nearly three years.

Non-OPEC+ stumbles; finds footing in 2Q

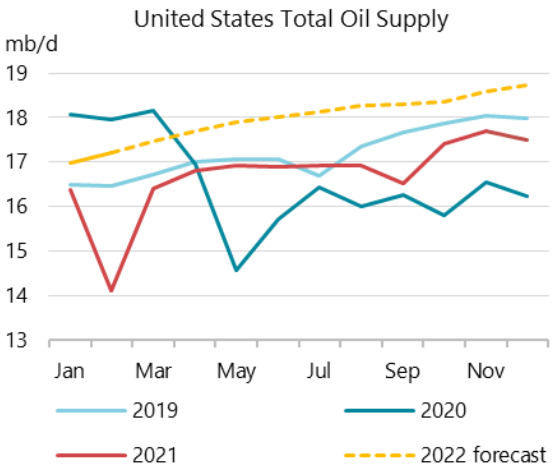
After a slow start to the year, volumes from non-OPEC+ countries grew by 400 kb/d to 47.1 mb/d in March, with rebounding production in the United States, Norway, Brazil and Canada. Supply fell in December 2021 by 800 kb/d and remained below 2H21 levels through the first quarter of this year, even with the large March increase. Non-OPEC+ is projected to exit 2022 at 49.1 mb/d, 2.6 mb/d higher than December 2021. On an annual average basis, the US is expected to account for 62% of the non-OPEC+ 2022 gains (of 2 mb/d in total), with Canada and Brazil making up close to another 20%.

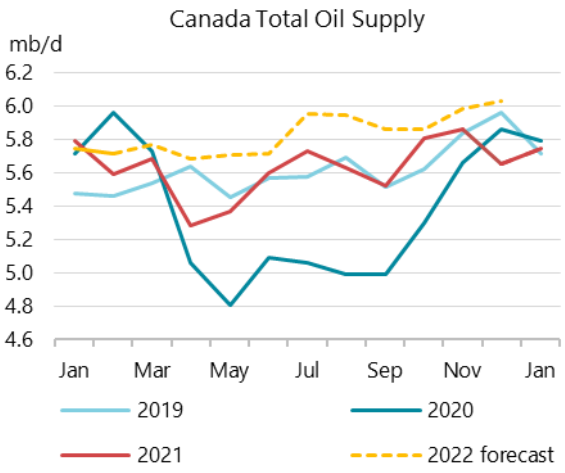
US output rose in March by an estimated 250 kb/d m-o-m to 17.5 mb/d with a strong rebound in NGLs (90 kb/d) from seasonal lows and continued crude gains (160 kb/d). In January, the latest month for which official data from the Energy Information Administration (EIA) is available, total oil supply fell by 520 kb/d. Declines were primarily driven by seasonality in NGLs (-290 kb/d) and cold weather in Texas (-120 kb/d). US production for 2022 has been revised down in this month's *Report* by 120 kb/d to 18 mb/d, of which 12.2 mb/d is crude and condensate.





US light tight oil (LTO) production has been revised downward on the EIA data, completion trends and the continuing tightening of the oilfield services sector. And while monthly price increases across the forward curve have continued as positive inputs into our forecast, they have been tempered by trends on the ground and the aforementioned EIA data and we have adjusted our 4Q21 baselines lower. We still forecast a December 2021 to December 2022 increase in US LTO supply of 900 kb/d, yet the shape of the supply response has shifted and 1H22 gains have been lowered.

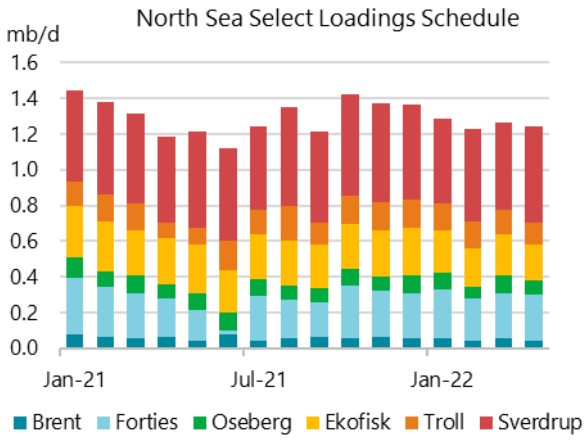


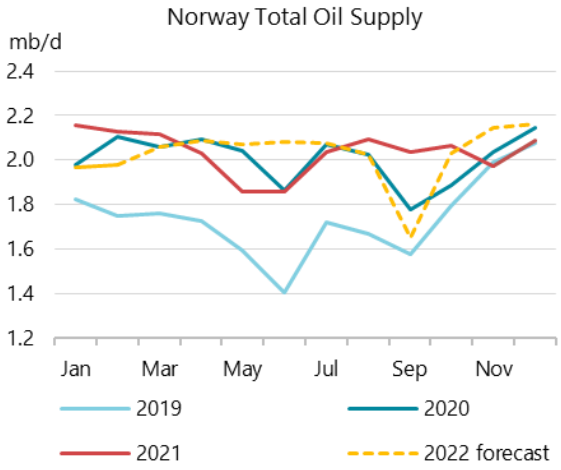


In February, **Canadian** supply fell by 40 kb/d m-o-m due to lower bitumen volumes, according to data from the Alberta Energy Regulator. Atlantic Canada offshore production rose by 10 kb/d in February, following marginal gains in January. Output in March rose by a muted 70 kb/d m-o-m as spring maintenance in the oil sands kept barrels off the market, this maintenance is expected to continue through June. Growth will, however, come in the second half of the year, bringing full-year production to 5.8 mb/d, up 200 kb/d from 2021.

The Canadian government approved in early April Equinor's Bay du Nord project, located in the Flemish Pass area offshore Newfoundland. This is a positive development for the Canadian oil and gas sector, but volumes aren't expected to come to market until the late 2020s. Less optimistically, the Trans Mountain Expansion (TMX) project, a 590 kb/d pipeline connecting Albertan producers with the Pacific basin, has been delayed due to construction complications and cost overruns. The new completion date for the project is 3Q23.

North Sea loadings (as measured by BFOE plus Troll and Johan Sverdrup) averaged 1.3 mb/d for the first quarter, with a slight uptick in March but well within normal variances. April's schedule is forecast to be 1.2 mb/d. **UK** output was down slightly m-o-m in March at 900 kb/d, and 150 kb/d lower than a year ago. Production is expected to remain roughly flat on the year, averaging 900 kb/d – in line with current volumes. In March, the UK government granted a two-year license extension to the troubled Cambo project after Shell's exit late last year. The decision comes on the heels of Russia's invasion of Ukraine and a renewed push for domestic energy security.





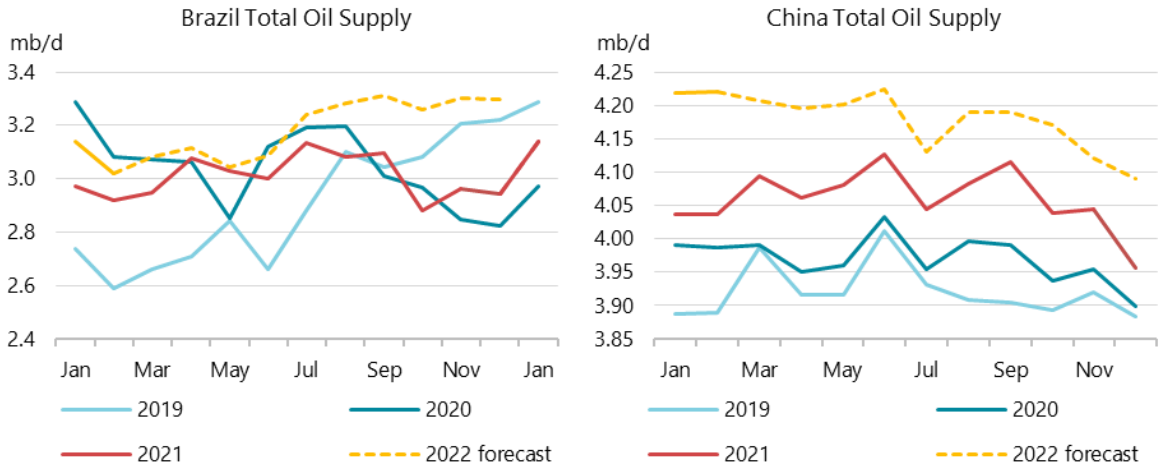
Source:s Reuters, Energy Intelligence

Data from the **Norwegian** Petroleum Directorate indicates that production rose by 20 kb/d in February to 2 mb/d. Supply is estimated to have increased by 80 kb/d in March. For the year as a whole, production is forecast to average 2 mb/d, on par with 2021 levels. Equinor's large maintenance programme, originally scheduled for May and June, has been postponed until September, lessening the previous supply deficit over the summer months and helping Europe meet their gas demand.

Brazilian supply rose by 70 kb/d m-o-m to 3.1 mb/d in March, according to provisional daily data from the Agencia Nacional do Petroleo (ANP). In February, production fell by 120 kb/d to 3 mb/d due to outages at Marlim Sul and the Atapu P-70 FPSO. Brazil's 2022 output is expected to increase year-on-year (y-o-y) by 180 kb/d, down 20 kb/d from last month's *Report,* following news that the Equinor-operated Peregrino field's return to production will be delayed until August.

Elsewhere in Latin America, ExxonMobil made its final investment decision for the Yellowtail development offshore **Guyana** on 4 April, the fourth, and largest, project in the prolific Stabroek block. The project, estimated to cost $10 billion, is expected to produce up to 250 kb/d from 2025. The ExxonMobil-led consortium, which includes Hess and China's CNOOC, is due start its third development in the Stabroek Block, the 220 kb/d Payara project, in 2024. Based on company reports, the project is currently producing 110 kb/d with volumes expected to ramp up to 360 kb/d by the end of 2022. Some of the increased volumes are planned to be sent to Europe as an Urals alternative.

Ecuador's state-owned Petroecuador has requested bids to workover more than 1 000 closed oil wells as part of the country's ambitious plans to boost supply by 100 kb/d by the end of 2022. The company currently accounts for approximately 80% of the country's 460 kb/d production. **Argentina's** total oil production rose marginally in March to 690 kb/d, near a ten-year high.

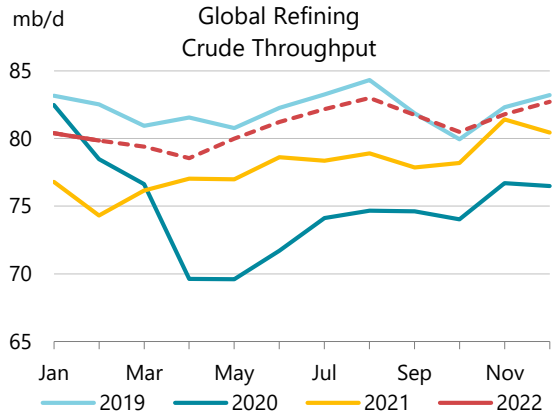


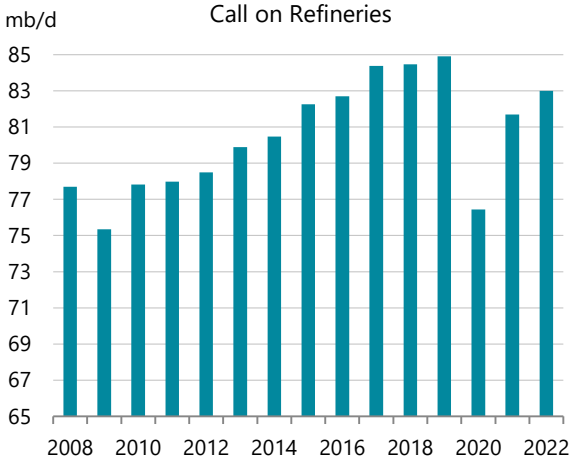
Chinese production data for the first two months of 2022 show an upwards step-change in baseline crude output in offshore fields, increasing the country's total oil supply by 260 kb/d from December 2021 levels and 210 kb/d from 4Q21 levels. As a result we have revised Chinese production up by 80 kb/d annually to 4.2 mb/d in this month's *Report*. The Chinese National Offshore Oil Corporation (CNOOC) is expected to bring on 10 new domestic projects this year with a combined peak production of 110 kb/d, in addition to their stake in three overseas projects – notably Mero in Brazil (10% working interest) and the Liza project in Guyana (25% working interest).

Refining

Overview

Downgrades to our demand forecast have set 2022 global refined product consumption back to pre-2017 levels. Under normal circumstances, this would be bearish for refinery margins and activity. In reality, the disruption of Russian exports, capacity constraints and low inventories point to continued tightness in global product markets. While the incorporation of the latest data resulted in a 430 kb/d upward revision to global refinery throughput in January, our March estimate was revised down on earlier-than-expected run cuts in Russia, where crude processing fell 570 kb/d m-o-m to its lowest level since the start of the pandemic. Despite 1Q22 global refinery throughput being 4.1 mb/d higher y-o-y, product markets were still undersupplied.





Global Refinery Crude Throughput[1]
(million barrels per day)

	2019	2020	4Q21	2021	Jan-22	Feb-22	Mar-22	1Q22	Apr-22	May-22	2Q22	3Q22	4Q22	2022
Americas	**19.2**	**16.6**	18.2	**17.8**	18.2	18.0	18.7	18.3	19.0	19.2	19.2	19.2	18.6	**18.8**
Europe	**12.2**	**10.7**	11.5	**11.0**	11.2	11.2	11.1	11.2	11.1	11.2	11.4	12.0	11.9	**11.6**
Asia Oceania	**6.8**	**5.9**	6.0	**5.8**	6.3	6.3	5.7	6.1	5.4	5.4	5.3	6.1	6.0	**5.9**
Total OECD	**38.1**	**33.2**	35.7	**34.5**	35.7	35.5	35.6	35.6	35.5	35.8	35.9	37.3	36.5	**36.3**
FSU	**6.8**	**6.4**	6.8	**6.7**	6.9	6.7	6.1	6.6	5.1	5.2	5.1	5.1	5.3	**5.5**
Non-OECD Europe	**0.5**	**0.4**	0.4	**0.4**	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	**0.4**
China	**13.4**	**13.8**	14.1	**14.2**	14.2	14.0	13.8	14.0	13.8	14.1	14.2	14.7	14.7	**14.4**
Other Asia	**10.3**	**9.2**	9.9	**9.5**	10.1	10.3	10.2	10.2	10.3	10.6	10.5	10.8	10.7	**10.5**
Latin America	**3.2**	**3.0**	3.3	**3.2**	3.3	3.3	3.3	3.3	3.4	3.5	3.5	3.5	3.5	**3.4**
Middle East	**7.8**	**6.9**	7.8	**7.5**	7.7	7.6	8.0	7.7	8.2	8.4	8.4	8.6	8.6	**8.4**
Africa	**2.0**	**1.9**	1.9	**1.8**	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.9	**1.9**
Total Non-OECD	**44.0**	**41.6**	44.2	**43.3**	44.6	44.2	43.7	44.2	42.9	44.1	43.9	44.9	45.1	**44.5**
Total	**82.1**	**74.8**	79.9	**77.8**	80.3	79.8	79.3	79.8	78.5	79.9	79.8	82.2	81.6	**80.9**
Year-on-year change	***-0.1***	***-7.2***	*4.3*	***3.0***	*3.6*	*5.5*	*3.2*	*4.1*	*1.5*	*3.0*	*2.4*	*3.9*	*1.7*	***3.0***

[1] Preliminary and estimated runs based on capacity, known outages, economic runcuts and global demand forecast.

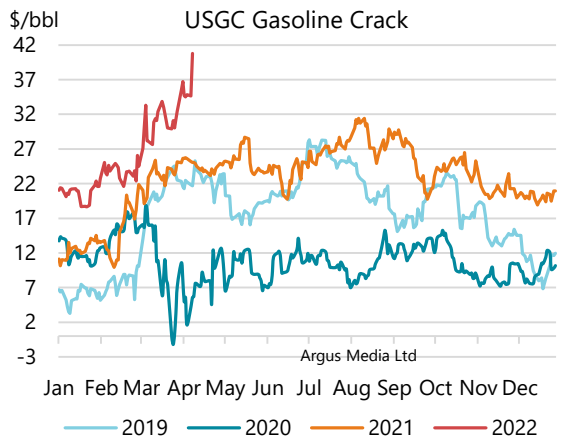
Nevertheless, in 3Q22 we could see the first restocking in two years, provided that refinery runs ramp up by 4.4 mb/d between April and August, as assumed in our current forecast. Seasonal increases and new capacity coming online in the Middle East and China lead the growth.

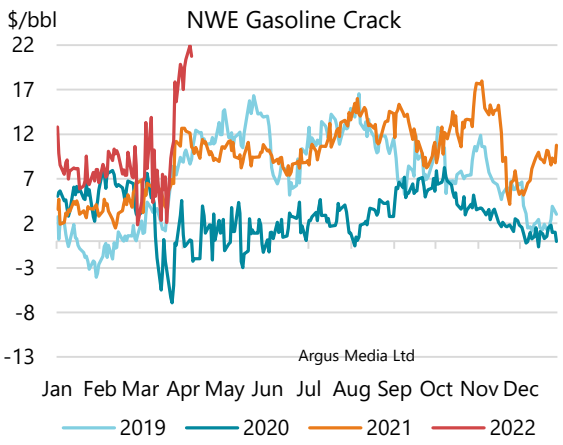
Russian refinery intake is a key uncertainty in our forecast. So far, refineries exporting mostly heavier products and secondary feedstocks through the Black Sea have borne the brunt of run cuts. In principle, export reductions through the southern routes stem not only from buyers' abstention but also from higher shipping and insurance costs, and other challenges in the region immediately adjacent to the military action. While some of these flows may resume when the active phase of the war is finished, for now we assume that product export cuts will deepen, rather than ease. Refiners shipping products from the Baltic Sea will also likely be affected, resulting in a 1 mb/d y-o-y fall in Russian refinery throughputs in 2022. In the rest of the world, higher utilisation rates and new refineries step in to fill the gap, allowing global product markets to exit the year with no overall stock draws.

Product cracks and refinery margins

Russia's invasion into Ukraine is shaping up to be the most significant shock in oil markets since the early 1980s. Oil markets have whirled through several major milestones within a space of only a few weeks in the wake of surging volatility, price dislocations, extreme widening of time spreads and upheaval in crude and product interregional arbitrage. Product prices, while taking cues from crude oil, are also subject to the idiosyncrasies of their own local and regional markets, all of which have been affected by the war and the international reactions to it.

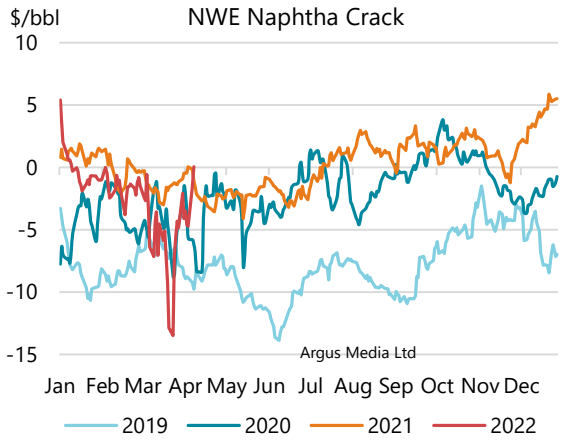
US Gulf Coast gasoline cracks surged past $30/bbl, a mark that is usually breached only during hurricanes which trigger major refinery outages in the US Gulf Coast region. Currently, gasoline cracks need to be sufficiently high to limit the extent of refining yield switching to diesel. In March, Renewable Volume Obligation (RVO) prices fell slightly m-o-m, with all the $7/bbl increase in nominal gasoline cracks attributed to the underlying petroleum gasoline prices. In April, the US Environmental Protection Agency (EPA) issued a waiver to allow the sale and consumption of E15 gasoline this summer, which contains 15% ethanol. Normally, a 10% ethanol limit is set for summer gasoline to reduce smog during hot weather.

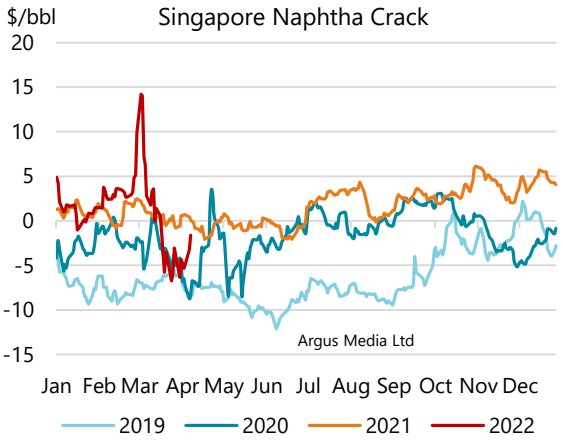




Northwest Europe gasoline cracks rose to record daily rates at the end of March due to a combination of lower crude oil prices and the switch to summer-specification product that has a

more expensive makeup. Europe is still a net exporter of gasoline given that almost half of the personal vehicle fleet is run on diesel. Refineries almost always operate in the maximised diesel mode.





Spot Product Prices

(monthly and weekly averages, $/bbl)

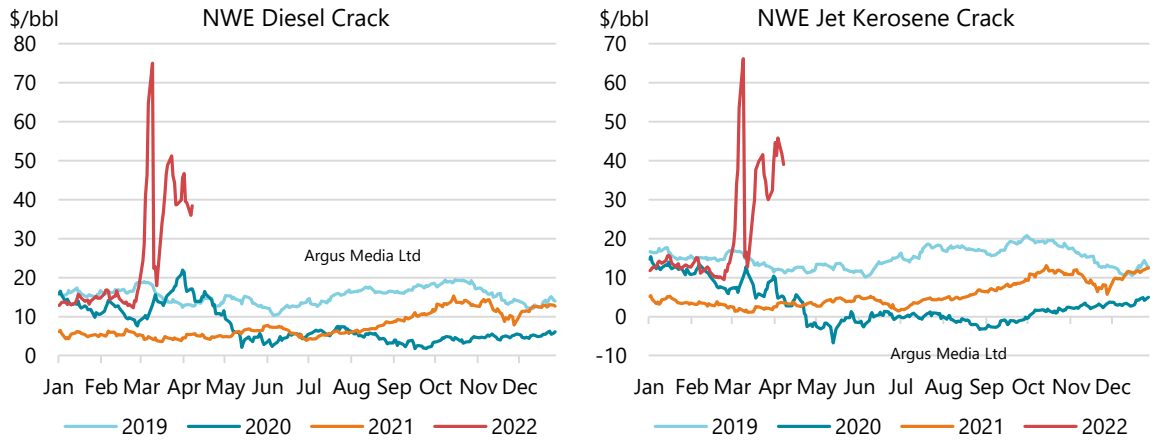
	Jan	Feb	Mar	Mar-Feb *Chg*	%	Week Ending 11 Mar	18 Mar	25 Mar	01 Apr	08 Apr	Jan	Feb	Mar	Chg
Rotterdam, Barges FOB											**Differential to North Sea Dated**			
Gasoline EBOB oxy	94.85	106.55	127.41	20.85	19.6	136.85	117.30	130.15	129.10	123.50	7.75	8.54	8.66	0.11
Naphtha	86.87	96.44	113.24	16.79	17.4	122.16	105.47	113.18	108.17	100.71	-0.23	-1.57	-5.51	-3.94
Jet/Kerosene	100.65	109.98	150.44	40.46	36.8	170.70	131.16	162.02	145.84	146.03	13.54	11.97	31.69	19.72
ULSD 10ppm	101.18	112.77	156.47	43.71	38.8	173.01	137.34	170.07	153.76	143.53	14.08	14.76	37.73	22.97
Gasoil 0.1%	99.18	110.26	151.41	41.14	37.3	169.44	133.78	163.28	145.31	136.59	12.08	12.25	32.66	20.41
VGO 2.0%	87.75	97.83	124.68	26.85	27.4	130.05	115.41	131.85	127.61	123.53	0.65	-0.18	5.93	6.11
Fuel Oil 0.5%	95.85	106.08	129.40	23.33	22.0	142.17	119.72	131.57	127.86	122.72	8.75	8.07	10.65	2.59
LSFO 1%	83.98	91.90	110.94	19.03	20.7	123.18	106.08	109.19	107.08	99.39	-3.13	-6.11	-7.81	-1.70
HSFO 3.5%	75.42	81.00	97.98	16.98	21.0	105.33	93.11	101.02	97.70	93.04	-11.69	-17.01	-20.77	-3.76
Mediterranean, FOB Cargoes											**Differential to Urals**			
Premium Unl 10 ppm	96.68	108.01	128.55	20.54	19.0	136.99	119.89	132.57	127.26	124.17	9.92	13.07	35.96	22.89
Naphtha	84.89	93.90	110.29	16.38	17.4	118.67	102.47	110.76	105.69	98.20	-1.87	-1.04	17.69	18.73
Jet Aviation fuel	99.21	108.03	148.12	40.09	37.1	167.74	128.75	160.36	144.14	144.29	12.45	13.09	55.53	42.44
ULSD 10ppm	99.81	110.31	153.21	42.90	38.9	169.62	135.65	165.41	150.19	139.67	13.05	15.37	60.61	45.24
Gasoil 0.1%	99.18	109.08	146.07	36.99	33.9	162.61	127.51	156.72	141.39	134.17	12.42	14.14	53.48	39.33
LSFO 1%	86.30	93.09	115.65	22.57	24.2	127.00	111.17	113.86	113.73	106.05	-0.46	-1.85	23.06	24.91
HSFO 3.5%	73.78	78.87	95.64	16.78	21.3	102.95	90.43	98.32	96.23	90.26	-12.99	-16.07	3.05	19.12
US Gulf, FOB Pipeline											**Differential to WTI Houston**			
Super Unleaded	105.10	116.98	140.78	23.80	20.3	144.12	134.65	146.28	138.12	136.21	20.48	23.75	30.52	6.77
Jet/Kerosene	102.12	112.50	145.78	33.28	29.6	145.82	130.68	160.42	153.91	147.59	17.50	19.27	35.52	16.25
ULSD 10ppm	106.71	118.06	151.09	33.03	28.0	156.81	138.07	163.75	147.67	148.65	22.09	24.83	40.84	16.01
Heating Oil	94.52	104.17	136.20	32.03	30.7	140.59	123.41	152.20	132.11	125.79	9.90	10.94	25.95	15.00
No. 6 3%*	74.91	80.13	93.44	13.31	16.6	100.94	86.24	97.50	90.90	86.78	-9.71	-13.10	-16.81	-3.72
Singapore, FOB Cargoes											**Differential to Dubai**			
Premium Unleaded	98.04	110.72	131.07	20.35	18.4	142.23	124.98	132.89	126.28	123.51	14.70	18.25	20.58	2.34
Naphtha	84.56	95.75	111.42	15.66	16.4	123.32	104.17	107.43	102.59	97.69	1.22	3.28	0.93	-2.35
Jet/Kerosene	95.78	106.17	134.32	28.15	26.5	145.33	120.96	143.11	137.33	131.41	12.44	13.69	23.83	10.13
Gasoil 0.001%	99.19	110.70	142.57	31.87	28.8	159.63	126.79	149.66	142.45	142.58	15.85	18.22	32.08	13.86
Fuel Oil 0.5%	99.08	111.24	134.07	22.84	20.5	146.95	125.07	134.99	130.04	124.36	15.74	18.76	23.58	4.82
HSFO 180 CST	76.17	82.63	103.13	20.50	24.8	109.86	96.64	106.59	108.49	110.19	-7.17	-9.85	-7.36	2.49
HSFO 380 CST 4%	74.15	81.08	99.20	18.12	22.3	106.69	92.64	101.88	102.88	103.84	-9.19	-11.40	-11.29	0.10

 * Waterborne

Weaker naphtha cracks were affected by rising crude prices in the first half of the month, even as Russian exports, one of the largest suppliers in the global naphtha market, were also at the risk of disruption. High naphtha prices lead to sharply narrower petrochemical margins, with cracker

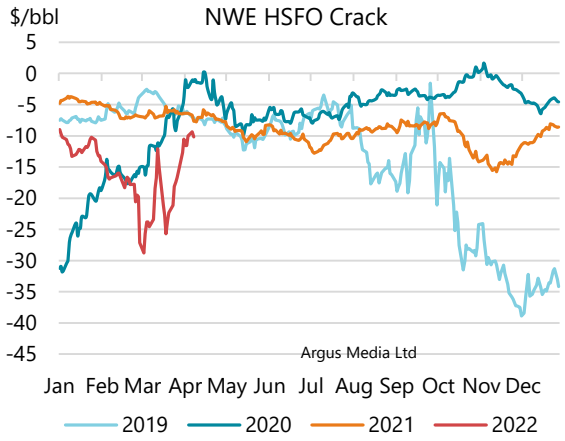
run-cuts reported in several regions. Monthly average Singapore naphtha cracks fell to their lowest level since November 2020.

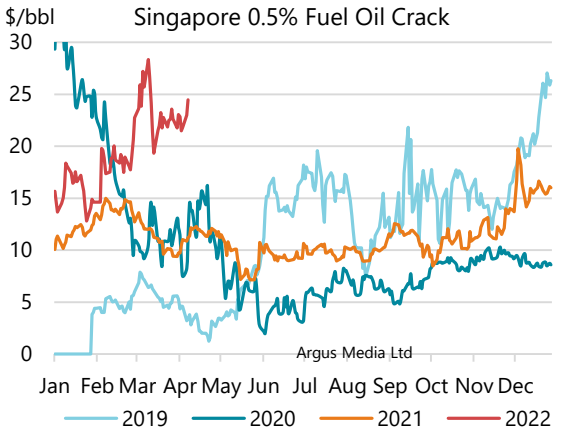
The middle distillates complex was shaken by a knee-jerk reaction in early March to the likelihood of Russian oil imports bans. On ICE gasoil futures expiry, the diesel crack in Northwest Europe leapt past historical record levels from 2Q08. Abrupt gyrations continued throughout the month, also driven by crude price volatility. Cracks averaged $37.60/bbl in March, up by $24/bbl m-o-m. Price-reporting agencies responded to market needs by introducing origin differentiation to exclude Russian diesel and naphtha from benchmark quotes. As a result, in Europe's Amsterdam-Rotterdam-Antwerp region a two-tier diesel market has formed, with Russian-origin cargoes effectively trading at significant discounts, in unreported trades, to official assessments. Blending of Russian material with other products has emerged as a way of masking the product's origin to appeal to buyers that avoid lifting Russian cargoes.



Northwest Europe jet cracks almost tripled m-o-m from $11.60/bbl in February to $30/bbl in March. The continued recovery in air traffic is putting additional pressure on the middle distillates market. While Russia is not a significant exporter of jet fuel, European diesel yields would need to decrease to accommodate the demand for higher jet kerosene output. This would reverse the effect of the switch from jet to diesel that had started with the Covid-19 pandemic.

Fuel oil cracks also went through some violent swings in March, generally inversely correlated to crude oil prices, with a net result of a m-o-m fall in Northwest Europe by $4/bbl to -$20.70/bbl. At the end of the month several vessels that had bunkered in Singapore reported mechanical problems and engine losses at sea, proven to result from high sulphur fuel oil contaminated with organic chlorides. This effectively narrowed the pool of on-spec material, as buyers became increasingly nervous about quality issues and supported prices in an already tightening market due to Russian export cuts.





IEA/KBC Global Indicator Refining Margins[1]

($/bbl)

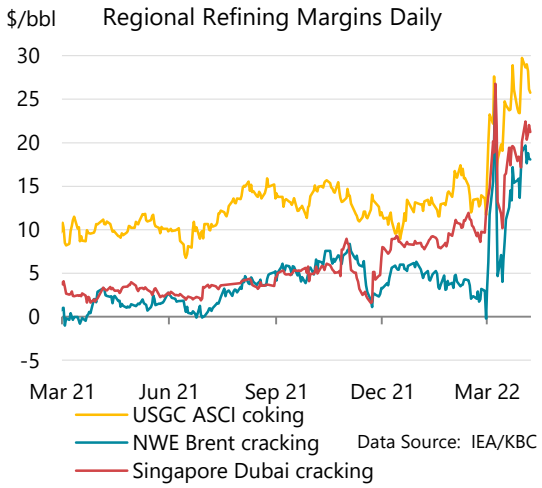
	Monthly Average					Change	Average for week ending:				
	Dec 21	Jan 22	Feb 22	Mar 22		Mar-Feb	11 Mar	18 Mar	25 Mar	01 Apr	08 Apr
NW Europe											
Brent (Cracking)	5.11	4.29	3.28	11.84	↑	8.56	15.71	7.48	14.61	16.25	18.48
Urals (Cracking)	5.14	4.14	7.04	38.78	↑	31.74	41.51	36.15	44.10	45.92	51.63
Brent (Hydroskimming)	2.89	1.29	-0.37	6.26	↑	6.62	10.05	3.79	7.29	9.97	11.48
Urals (Hydroskimming)	0.53	-0.84	0.76	29.76	↑	29.00	31.42	29.00	34.26	37.03	43.24
Mediterranean											
Es Sider (Cracking)	6.52	5.66	4.21	15.62	↑	11.40	21.01	11.08	17.88	18.90	20.02
Urals (Cracking)	5.31	4.21	5.16	38.66	↑	33.50	41.43	35.41	44.92	45.77	50.80
Es Sider (Hydroskimming)	4.58	2.95	0.79	9.46	↑	8.68	13.99	7.26	9.39	13.05	13.77
Urals (Hydroskimming)	-0.31	-2.05	-2.40	26.15	↑	28.55	26.85	25.56	30.63	34.24	39.35
US Gulf Coast											
Mars (Cracking)	6.04	7.84	8.11	11.76	↑	3.65	11.05	12.17	13.93	15.09	15.95
50/50 HLS/LLS (Coking)	14.18	15.17	17.29	27.01	↑	9.72	25.38	25.99	31.01	29.98	32.11
50/50 Maya/Mars (Coking)	10.70	11.43	12.33	18.13	↑	5.79	16.74	18.18	20.74	20.56	22.23
ASCI (Coking)	11.21	13.01	14.73	22.13	↑	7.40	20.53	21.87	25.70	25.51	27.56
US Midwest											
30/70 WCS/Bakken (Cracking	10.65	8.21	9.14	16.10	↑	6.96	14.66	17.36	20.52	17.26	19.53
Bakken (Cracking)	11.45	9.29	11.05	20.22	↑	9.17	17.45	21.08	25.77	21.97	24.71
WTI (Coking)	11.87	10.74	11.89	22.74	↑	10.85	19.65	24.84	27.00	26.01	28.74
30/70 WCS/Bakken (Coking)	13.59	10.49	12.22	21.75	↑	9.53	19.27	22.94	27.36	23.24	26.02
Singapore											
Dubai (Hydroskimming)	-1.12	-1.31	-1.47	2.11	↑	3.58	2.95	0.19	4.04	6.21	10.81
Tapis (Hydroskimming)	3.45	1.02	-0.76	2.82	↑	3.58	6.96	0.44	2.22	6.98	13.55
Dubai (Hydrocracking)	8.24	8.56	10.35	16.87	↑	6.51	20.19	13.32	19.09	18.36	21.41
Tapis (Hydrocracking)	3.23	0.95	-1.02	3.12	↑	4.14	7.20	0.51	3.26	7.77	15.21

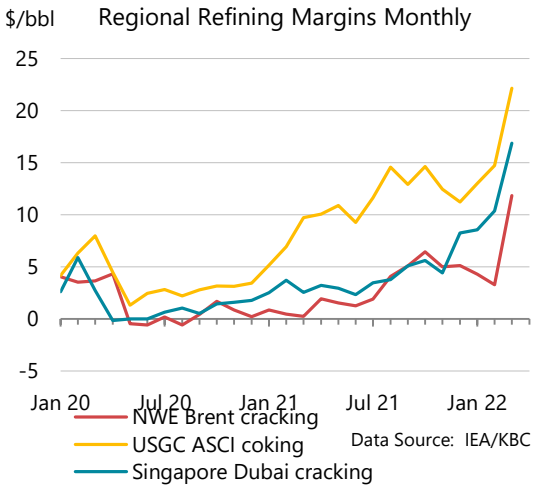
[1] Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crude for pricing purposes.

Sources: IEA, KBC Advanced Technologies (KBC).

Refinery margins surged to multi-year highs in March on exceptionally strong diesel and gasoline cracks. In Singapore, Dubai cracking margins hit a monthly average record, while in the Atlantic

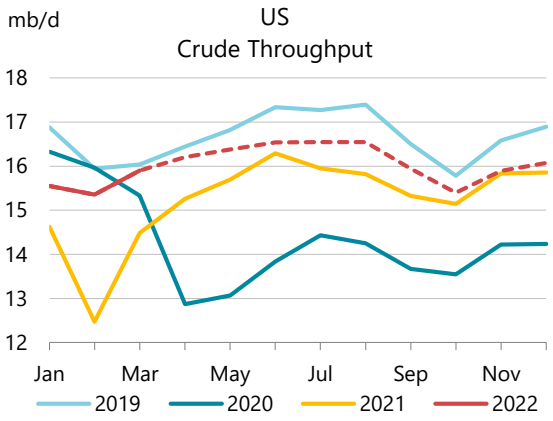
Basin they were only below the levels registered during the 2008 and 2012 hurricane seasons. We continue assessing Urals margins in European hubs, which show extremely high readings, due to the wide discounts assessed by price provider *Argus*. These levels are similar to those observed in the US Midcontinent in 2012, when Canadian grades were heavily discounted due to logistical bottlenecks. While there are still refineries in Europe procuring and processing Urals, notably those that depend on the Druzhba pipeline, it is clear that Urals margin indicators are losing relevance for the high-level assessment of European refinery economics.





Regional refining developments

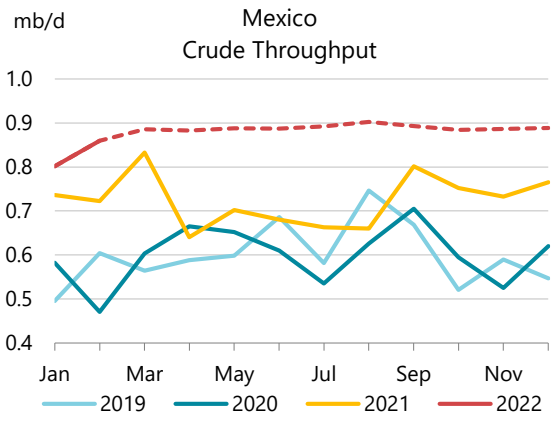
US throughput in March gained 550 kb/d m-o-m with refiners responding to higher margins. Domestic demand for premium fuels (gasoline, diesel and jet kerosene) was estimated stable from February, but there were increased product exports out of the Gulf Coast, particularly as European importers sought to switch away from Russian products. Diesel/gasoil loadings from the US Gulf Coast increased by almost 50% m-o-m in March, to 910 kb/d, the highest level since August 2020, according to *Kpler* data. Overall, Latin America and Mexico combined still account for the lion's share of the export destinations of US products, but the weekly data show a significant increase of flows to Europe, from an average of 40 kb/d at the start of the year to 145 kb/d in the last week of March. For European consumers, US diesel is the most suitable replacement for Russian barrels in terms of quality and properties, but in recent years, more than 90% of the volumes have traditionally found outlets on the Americas continent.



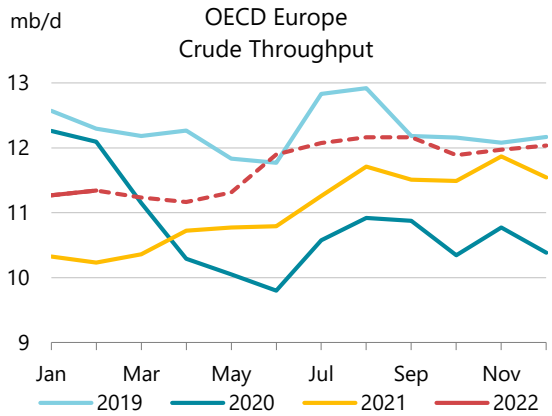
With Washington banning imports of Russian oil, US refiners need to find replacements for the country's heavier crude and, more importantly, secondary feedstocks such as fuel oil and vacuum gas oil in order to maintain higher yields of diesel and gasoline. In principle, the release of Strategic Petroleum Reserve (SPR) crude oil, which consists of about half of medium-sour quality

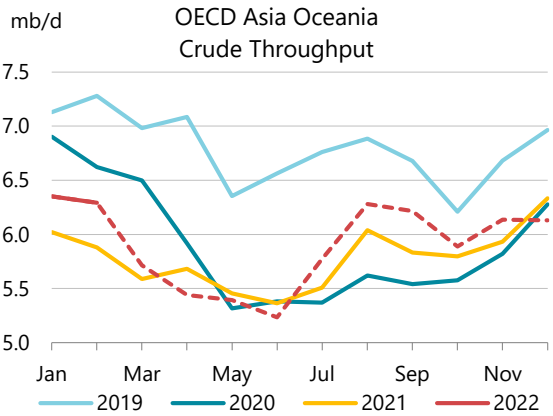
barrels, may help alleviate the shortage of this particular feedstock material. The US administration has also said it plans to expedite the processing of Jones Act waiver requests, allowing for SPR barrels coming out of the US Gulf Coast to also be accessible for refiners in other US regions.

Mexican throughputs edged up 60 kb/d to 850 kb/d in February, the highest level in five years. Further gains may be limited by the ongoing refinery rehabilitation work. The government has decided to construct a coker unit for the 330 kb/d Salina Cruz refinery as it plans to eventually cut crude oil exports and divert the flow to domestic refining. Mexican crudes are heavy and require coking units to produce the desired makeup of lighter products.



February preliminary data for Europe were 430 kb/d below expectations, with an additional downgrade for January throughputs in **Germany** in the finalised numbers. Refinery intake in the region was still up 75 kb/d m-o-m, which is counter-seasonal, and 1.1 mb/d higher y-o-y. After a 1.5 mb/d y-o-y fall in 2020, European runs recovered only 260 kb/d last year. The growth this year is expected to reach 660 kb/d, but there is a possible downside to this forecast in the event of a full ban on Russian feedstocks. Urals accounts for about 20% of OECD Europe refinery intake, with several refineries geared to processing the grade. A complete switch to other crudes by refiners that currently use Urals could cut European runs by up to 300 kb/d due to constraints in downstream processing units such as light ends fractionation, hydrotreatment and heavy residue upgrading. The expected restart of TotalEnergies' 220 kb/d Donges refinery in France has been pushed back due to a union protest that did not allow crude cargoes to discharge.





Japanese throughputs fell by a small 30 kb/d m-o-m in February, to 2.8 mb/d, up 295 kb/d y-o-y. In mid-March, a major earthquake shut two Eneos refineries with a combined capacity of 275 kb/d. The company plans to bring them back online in April. The Ministry of Trade and Industry extended the refining subsidy first introduced in January this year for another month until end-April, but lowered it to 20.70 yens/litre ($27/bbl). Refinery intake in **Korea** and **Australia**

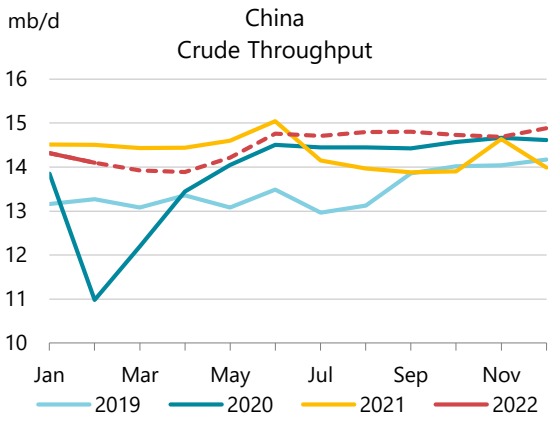
fell slightly m-o-m in February. Korean runs are forecast to increase by a strong 185 kb/d to 2.8 mb/d in 2022, but will remain below pre-pandemic levels. Historical peak runs were recorded in 2017 at 3.1 mb/d, the last full year of sanction-free imports of Iranian feedstocks, mostly of condensate, for the country's vast petrochemical sector. Lighter US grades have gradually replaced missing Iranian volumes, but overall crude imports remain 400 kb/d below their peak levels.

Refinery Crude Throughput and Utilisation in OECD Countries
(million barrels per day)

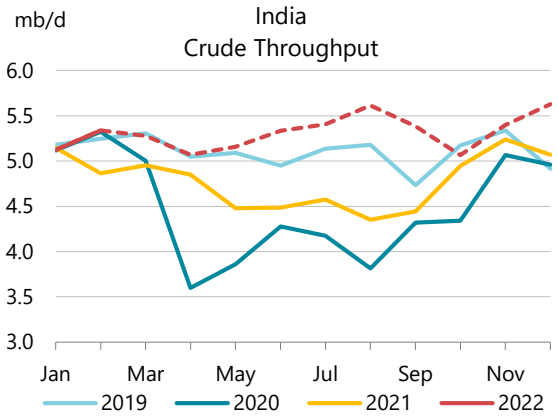
							Change from		Utilisation rate	
	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	*Jan 22*	*Feb 21*	Feb 22	Feb 21
US[1]	15.23	15.05	15.73	15.76	15.45	15.25	-0.20	2.88	87%	69%
Canada	1.69	1.63	1.83	1.82	1.80	1.70	-0.09	0.04	90%	83%
Chile	0.20	0.18	0.14	0.19	0.19	0.21	0.02	-0.01	93%	83%
Mexico	0.79	0.74	0.72	0.76	0.79	0.85	0.06	0.14	52%	100%
OECD Americas[1]	**17.91**	**17.60**	**18.43**	**18.52**	**18.23**	**18.02**	**-0.22**	**2.93**	**84%**	**69%**
France	0.75	0.72	0.79	0.78	0.80	0.78	-0.01	0.21	69%	50%
Germany	1.73	1.90	1.93	1.88	1.71	1.83	0.12	0.23	91%	79%
Italy	1.33	1.38	1.39	1.25	1.13	1.11	-0.02	0.16	64%	55%
Netherlands	1.04	1.13	1.05	0.95	0.96	0.91	-0.06	-0.24	75%	95%
Spain	1.22	1.12	1.20	1.23	1.23	1.22	-0.02	0.11	86%	79%
United Kingdom	0.94	0.91	1.04	1.03	1.04	1.02	-0.02	0.33	85%	58%
Other OECD Europe[2]	4.39	4.23	4.38	4.32	4.29	4.38	0.09	0.33	90%	79%
OECD Europe	**11.41**	**11.39**	**11.77**	**11.44**	**11.17**	**11.24**	**0.08**	**1.11**	**83%**	**73%**
Japan	2.62	2.50	2.62	2.93	2.85	2.82	-0.03	0.29	82%	73%
South Korea	2.65	2.72	2.71	2.81	2.91	2.87	-0.04	0.23	81%	75%
Other Asia Oceania[3]	0.56	0.56	0.58	0.58	0.58	0.59	0.01	-0.11	91%	81%
OECD Asia Oceania	**5.82**	**5.79**	**5.92**	**6.32**	**6.34**	**6.28**	**-0.06**	**0.41**	**82%**	**75%**
OECD Total	**35.14**	**34.78**	**36.12**	**36.29**	**35.74**	**35.54**	**-0.20**	**4.46**	**84%**	**72%**

1 US includes US50, OECD Americas include Chile and US territories
2 Includes Lithuania
3 Includes Israel

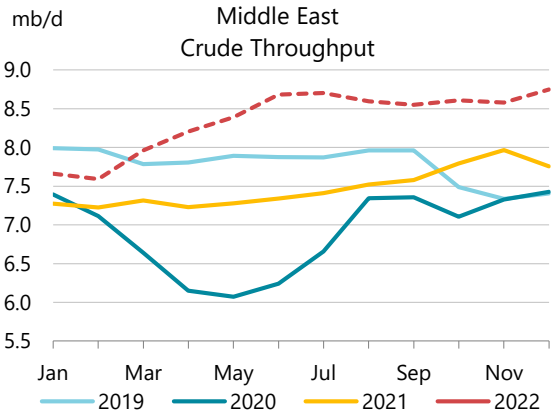
No new data have been reported for **China** since our last *Report*. However, anecdotal evidence suggests run cuts in March and April as refiners were faced with lower domestic demand due to a new wave of Covid lockdowns. We have revised down our estimate for March and forecast for 2Q22 on demand downgrades. Chinese refiners have so far shown muted interest in incremental Russian crude oil purchases, possibly due to lower margins at home. Moreover, the trading arm of Sinopec, China and the world's largest refiner, has reportedly instructed its traders to refrain from new deals involving Russian crude oil beyond existing contracts. In 2022, Chinese refinery throughputs are forecast to gain just 150 kb/d y-o-y, the slowest rate in two decades as demand growth for refined product also sharply slows to 50 kb/d. The government is gradually tightening export control of refined products and moving to stricter regulations of the petrochemical sector. In rules issued by several agencies in recent months, there are minimum size and utilisation requirements for petrochemical operators, recommendations to decrease transport fuel output and consider direct crude to chemical projects.

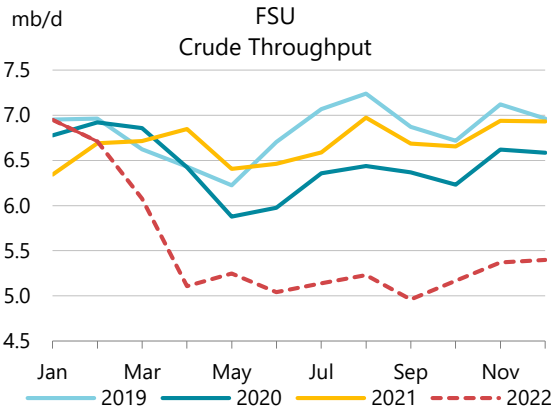


India reported record monthly throughputs in February, with runs at 5.3 mb/d and 99% utilisation rates. Three refineries are expected to finalise expansion projects, adding 270 kb/d of total capacity by the end of this year. In our 2022 forecast, India is the second largest source of refinery throughput growth in the world, after the US, with runs up 530 kb/d y-o-y. Plans for higher throughputs could explain the increased appetite of Russian crude oil by Indian refiners in recent weeks. On the other hand, the growth in refinery intake is in excess of our forecast for refined product demand growth, and will result in higher exports.



Refinery throughputs in the Middle East in January were assessed at 7.7 mb/d, 100 kb/d lower m-o-m on a turnaround in Oman, which does not report refinery throughput data. **Saudi Arabian** intake was reported at just under 2.8 mb/d, the highest since November 2018. Crude deliveries to the 400 kb/d Jazan refinery remain at around 200 kb/d, indicating that the full ramp-up is yet to be achieved. It may coincide with the start of processing at **Kuwait**'s Al-Zour site, possibly towards the end of the current quarter. If so, crude oil intake in the Middle East will surge by 875 kb/d from 1Q22 to 3Q22.





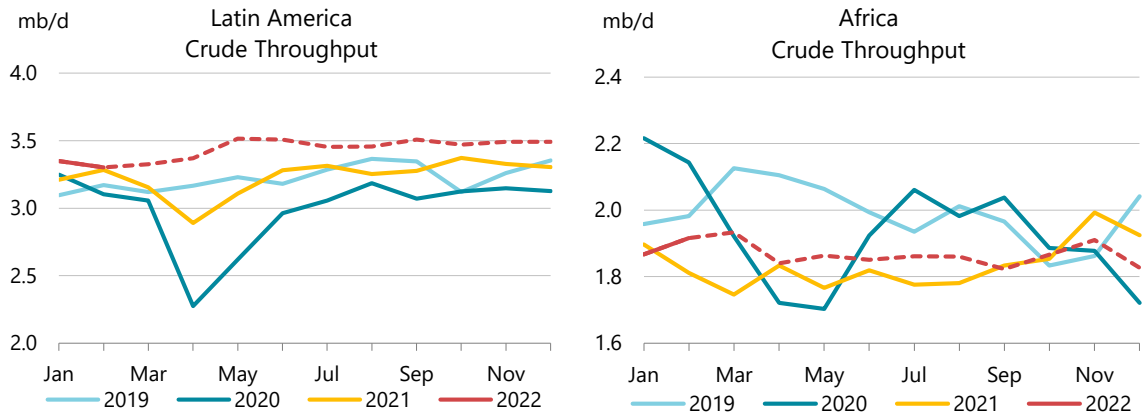
Russian refinery throughputs plunged by 570 kb/d m-o-m in March to just 5.2 mb/d, the lowest since July 2020, according to preliminary data. Runs were set for a seasonal slowdown with the start of spring maintenance in March, but the fall was largely due to overstocking at refineries, particularly in the southwest of the country. Product exports from the Black Sea were affected by both buyer and shipowners' reluctance, and war-caused disruption of the navigation. Loadings nearly halved from the 1.2 mb/d shipped out in February. By contrast, product loadings out of the Baltic Sea were down by a more modest 10% m-o-m.

Lukoil, the second-largest Russian refiner, asked the government to lift environmental fines for using fuel oil in power generation, in order to find outlets for its heavier products. Refiners need to process at certain rates to be able to produce gasoline for the domestic market. And this may result in oversupply of mostly export-oriented products such as fuel oil, vacuum gasoil and diesel.

Gasoline accounts for 23% of Russian demand, slightly less than diesel's 27% share, but refinery output is strongly skewed towards diesel, with its yields more than double gasoline's 17.4%. While Russia is a large exporter of diesel, fuel oil and naphtha, the domestic gasoline market tends to be tightly balanced, with frequent shortages of on-spec material during the peak summer season. Based on our assumption of a 1 mb/d Russian product export reduction, we expect refinery throughputs to fall another 940 kb/d to 4.3 mb/d in April and fluctuate below 4.5 mb/d throughout our forecast period, down 1 mb/d y-o-y. Should full reallocation of trade flows turn out to be possible, with product exports rerouting to destinations other than Europe/North America or OECD Asia, there could be an upside potential to our Russian refinery throughput forecast.

At the same time, in **Ukraine**, the last remaining operating refinery, Kremenchuk, has suffered damage from Russian strikes. Previously, we assumed the refinery would resume operations in August, but have now excluded its restart this year. Elsewhere in the region, **Belarus** crude processing was lower in February and March on the Mozyr refinery turnaround. The city of Mozyr is located just 50 km from the border with Ukraine and has served as a base for Russian troops in the recent invasion. The country's throughputs are likely to be at only half of the pre-war 300-350 kb/d levels. Belarus normally exports about two-thirds of product output, half of which goes to Ukraine. The latter barred product imports from Belarus at the start of the war. **Kazakhstan** refineries processed 355 kb/d in February, at close to 100% utilisation rates, with limited room to increase domestic crude processing in the light of the CPC terminal outage since 22 March. Meanwhile, SOCAR shut its 150 kb/d Baku refinery in **Azerbaijan** for maintenance in April.

Brazil refinery throughput edged up 60 kb/d m-o-m in February, and **Argentinian** runs fell by the same amount. The owner of the 330 kb/d **Curaçao** refinery has shortlisted three bids for the operatorship of the site that was closed in 2019 and is expected to finalise its decision by June. The refinery was previously operated by PDVSA.

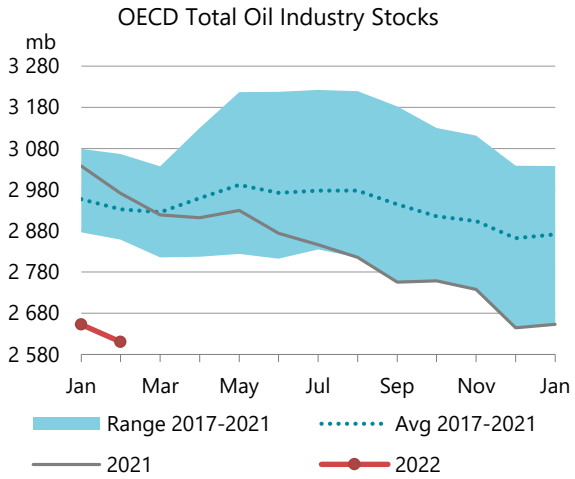


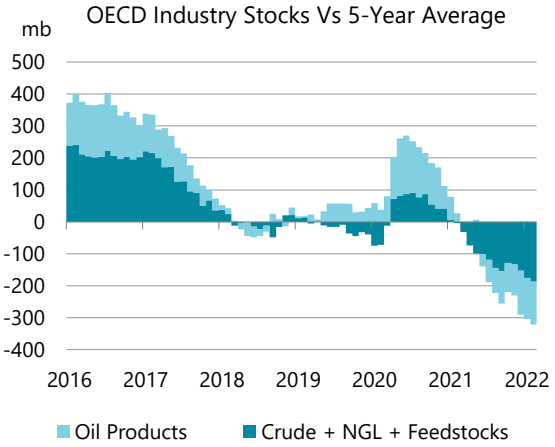
In **South Africa**, the 180 kb/d Shell and BP joint venture SAPREF refinery was set to permanently shut by end-March, but the 110 kb/d Astron refinery is expected back online in 2H22 after a two-year outage. **Nigeria**'s Lekki refinery, which is in the final stage of construction, was the target of an armed attack at the end of March in a raid attempting to steal unfixed equipment. No damage or theft at the site was reported.

Stocks

Overview

Global oil inventories have declined for 14 consecutive months, with stocks in February 714 mb below the end-2020 level and OECD countries accounting for 70% of the drawdown. OECD total industry stocks fell by 42.2 mb (1.51 mb/d) to 2 611 mb in February, nearly double the seasonal trend of a 24.8 mb draw. Oil products led the decline that took overall industry inventories 321.3 mb below their five-year average. In terms of forward demand, end-March industry stocks covered 57.7 days, a decrease of 10.7 days y-o-y and 8.3 days below the 2017-2021 average.





OECD industry crude inventories were mostly unchanged in February, compared with a typical build of 12.6 mb. At 967 mb, they were 167.8 mb below their five-year average. In February, crude stocks in OECD Europe increased by 1.8 mb, while OECD Asia Oceania decreased by 1.6 mb. Industry crude stocks in OECD Americas were unchanged month-on-month (m-o-m), but US government stocks drew by 9.5 mb.

OECD oil product inventories declined by 42.6 mb to 1 359 mb, compared with a seasonal draw of 36.5 mb. Other product stocks led the way, falling by 22.3 mb, notably in the Americas (-18.1 mb). Middle distillates were down 14.7 mb across OECD regions. Gasoline inventories also fell, by 6.8 mb, in line with the five-year average. Fuel oil stocks built counter-seasonally by 1.3 mb.

March preliminary data show OECD industry inventories rose by 8.8 mb, led higher by builds in Europe. Stocks in the US were down by 8.6 mb, with lower refined products more than offsetting crude increases. Data from the US EIA show product stocks fell by 11.6 mb, with declines in gasoline (-8.3 mb) and middle distillates (-5.8 mb). European inventories rose by 18.2 mb, led by a 12.4 mb increase in middle distillates along with a 5.1 mb build in crude oil, according to Euroilstock data. Oil stocks in Japan were largely unchanged, data from the Petroleum Association of Japan show. Crude stocks rose 2.2 mb in line with the trend, while total product stocks fell by 2.2 mb, led by a 1.6 mb decrease in middle distillate stocks.

Preliminary Industry Stock Change in February 2022 and Fourth Quarter 2021												
	February 2022 (preliminary)								Fourth Quarter 2021			
	(million barrels)				(million barrels per day)				(million barrels per day)			
	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total
Crude Oil	**0.0**	**1.8**	**-1.6**	**0.1**	**0.0**	**0.1**	**-0.1**	**0.0**	**0.0**	**0.1**	**-0.1**	**-0.1**
Gasoline	-3.9	-1.7	-1.2	-6.8	-0.1	-0.1	0.0	-0.2	0.1	0.1	0.0	0.1
Middle Distillates	-5.2	-7.5	-2.1	-14.7	-0.2	-0.3	-0.1	-0.5	-0.3	-0.1	-0.1	-0.5
Residual Fuel Oil	0.8	-0.5	0.9	1.3	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	-0.1
Other Products	-18.1	0.1	-4.3	-22.3	-0.6	0.0	-0.2	-0.8	0.0	-0.4	-0.1	-0.5
Total Products	**-26.4**	**-9.5**	**-6.6**	**-42.6**	**-0.9**	**-0.3**	**-0.2**	**-1.5**	**-0.3**	**-0.4**	**-0.2**	**-1.0**
Other Oils[1]	2.8	0.6	-3.2	0.2	0.1	0.0	-0.1	0.0	0.0	-0.1	0.0	-0.2
Total Oil	**-23.7**	**-7.1**	**-11.5**	**-42.2**	**-0.8**	**-0.3**	**-0.4**	**-1.5**	**-0.4**	**-0.5**	**-0.4**	**-1.2**

[1] Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD stock data for January were revised up by a large 31.7 mb to 2 653 mb since last month's *Report* upon the receipt of more complete information. Crude oil inventories were revised down in the OECD Americas (-8.1 mb) but this was largely offset by an increase in OECD Europe stocks (+7 mb). Total products were adjusted higher by 33.1 mb across the three regions, with upward revisions to gasoline (+9.8 mb), middle distillates (+6.6 mb), residual fuel oil (+3.7 mb) and other products (+13.7 mb). December 2021 figures were also marginally higher.

Revisions versus March 2022 Oil Market Report								
(million barrels)								
	Americas		Europe		Asia Oceania		OECD	
	Dec-21	Jan-22	Dec-21	Jan-22	Dec-21	Jan-22	Dec-21	Jan-22
Crude Oil	**3.9**	**-8.1**	**-0.1**	**7.0**	**0.0**	**-0.1**	**3.8**	**-1.2**
Gasoline	0.0	6.1	0.0	2.5	0.0	1.2	0.0	9.8
Middle Distillates	0.0	0.4	0.1	6.3	0.0	-0.1	0.1	6.6
Residual Fuel Oil	0.0	1.6	0.0	2.5	0.0	-0.4	0.0	3.7
Other Products	0.0	10.9	0.0	1.2	0.0	1.0	0.0	13.1
Total Products	**0.0**	**19.0**	**0.1**	**12.4**	**0.0**	**1.7**	**0.1**	**33.1**
Other Oils[1]	-2.0	-1.3	0.0	1.1	-0.1	0.0	-2.1	-0.2
Total Oil	**1.9**	**9.6**	**0.0**	**20.5**	**-0.1**	**1.6**	**1.8**	**31.7**

[1] Other oils includes NGLs, feedstocks and other hydrocarbons.

Implied balance

In February, the global supply and demand balance shows an implied stock draw of 1.9 mb/d. Preliminary data indicate observed inventory changes of -2.19 mb/d. Global observed oil stocks at end February were 714 mb below the end-2020 level, with the OECD accounting for 70% of the decline, non-OECD countries 19% and oil on water 11 %. In February, OECD industry crude oil, NGLs and feedstock inventories were largely unchanged, while oil products stocks fell by 1.52 mb/d. OECD government stocks drew by 360 kb/d, mainly in the US as a part of a 50 mb SPR release announced in November 2021.

In non-OECD economies, crude oil inventories fell by 690 kb/d in February, according to satellite data from *Kayrros*. China accounted for more than 70% of the draw. Crude and oil products on water, including floating storage, increased by 510 kb/d, reflecting the high demand for seaborne crude, based on tanker tracking data from *Kpler*.

Global Oil Balance and Observed Stock Changes (mb/d)										
	2020	1Q21	2Q21	3Q21	4Q21	**2021**	Jan-22	Feb-22	Mar-22	1Q22
Global oil balance	**1.89**	-1.97	-2.18	-2.41	-2.58	**-2.29**	0.76	-1.90	1.35	0.14
Observed stock changes										
OECD total stocks	**0.41**	-1.31	-0.74	-1.42	-1.51	**-1.25**	0.02	-1.86	-0.16	-0.63
Non-OECD crude stocks*	**0.35**	0.40	-0.38	-0.58	-1.01	**-0.39**	1.43	-0.69	-0.27	0.18
Selected non-OECD product stocks**	**0.12**	0.15	-0.08	-0.18	-0.01	**-0.03**	0.54	-0.14	-0.12	0.10
Oil on w ater	**0.01**	-0.50	-0.52	-0.35	1.09	**-0.06**	-2.20	0.51		
Total observed stock changes	**0.88**	-1.27	-1.73	-2.53	-1.44	**-1.73**	-0.20	-2.19		
Unaccounted for balance	**1.04**	-0.79	-0.46	0.11	-1.13	**-0.57**	0.96	0.29		

*Crude stock change data from *Kayrros*. Data are available for selected countries and include only, and not all, above-ground storage.

***JODI* data adjusted for monthly gaps in reporting, latest data for Jan 2021 plus Fujairah and Singapore inventories.

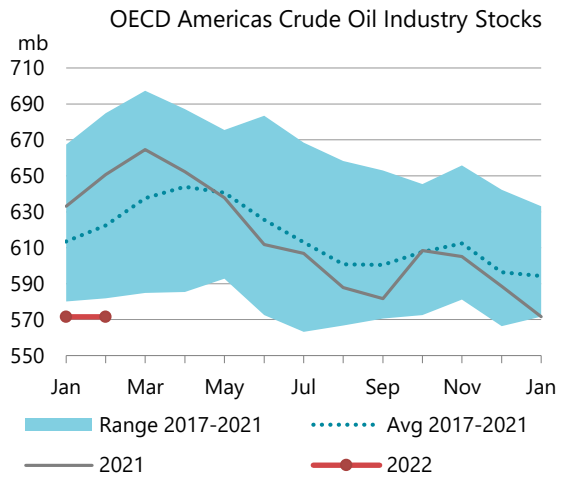
Sources: IEA, EIA, PAJ, Euroilstock, *Kayrros* , JODI, *Kpler* , *FEDCom/S&P Global Platts* , *Enterprise Singapore* .

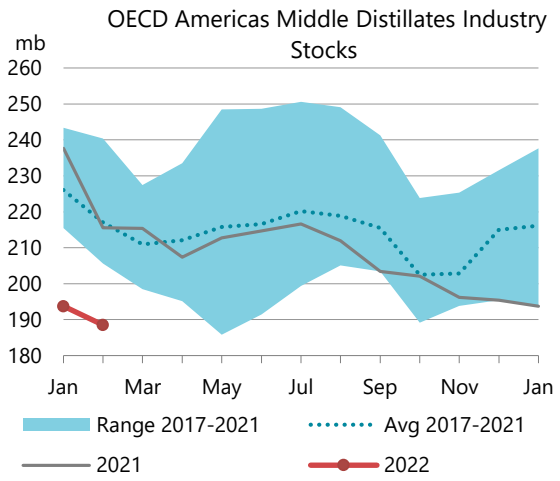
Recent OECD industry stock changes

OECD Americas

In February, industry stocks in the OECD Americas drew by 23.7 mb m-o-m, in line with the seasonal trend. At 1 430 mb, they stood 106.7 mb below the five-year average. Industry crude oil stocks were largely unchanged, compared with typical builds of 9 mb, while government stocks fell by 9.5 mb. On the other hand, NGLs and feedstocks stocks were up by 2.8 mb.

Oil products drew by 26.4 mb, in line with the seasonal trend of -28.7 mb. Motor gasoline and middle distillates posted smaller declines (-3.9 mb and -5.2 mb, respectively) than the trend but other products fell by 18.1 mb compared with a more normal draw of 10.4 mb.





Weekly data from EIA show that crude oil stocks marginally decreased in March, despite the release of 13.8 mb of crude from the SPR. US crude oil stocks typically build by 11.9 mb in March.

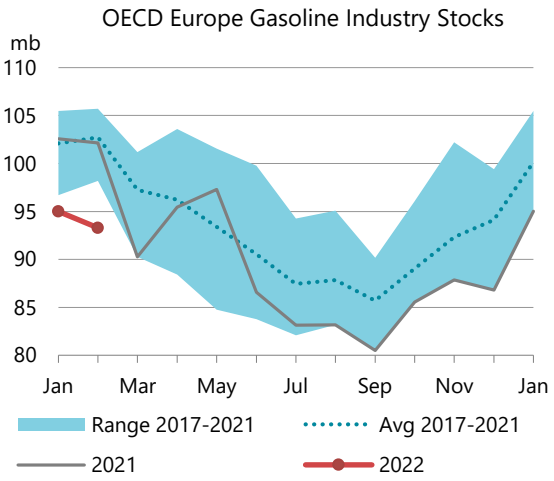
Total product stocks fell by 11.6 mb versus a more typical 14.9 mb decrease. Gasoline and middle distillates fell by 8.3 mb and 5.8 mb, respectively, slightly less than the seasonal trend. Residual fuel oil stocks increased by 1.7 mb. Other refined product stocks rose by 0.8 mb.

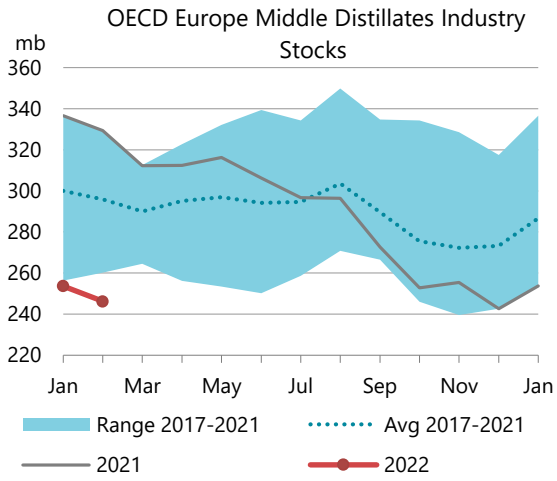
OECD Europe

In February, industry stocks in OECD Europe drew by 7.1 mb m-o-m to 869 mb, 136.3 mb below the five-year average. Crude oil, NGLs and feedstocks increased by 2.5 mb, in line with the seasonal pattern, but stocks are 58.5 mb below the five-year average.

Oil products decreased by 9.5 mb, led by a 7.5 mb decline in middle distillates. Motor gasoline stocks fell counter-seasonally by 1.7 mb. The steepest declines came from Italy, which saw middle distillates and gasoline fall by 2.6 mb and 1.4 mb, respectively.

In terms of forward demand, end-February industry stocks covered 65 days, a decrease of 18.4 days compared with a year ago. Crude oil, NGLs and feedstocks covered 27.8 days of forward demand, 6.8 days lower than a year ago, while middle distillates covered 33.3 days, down 16.4 days y-o-y.



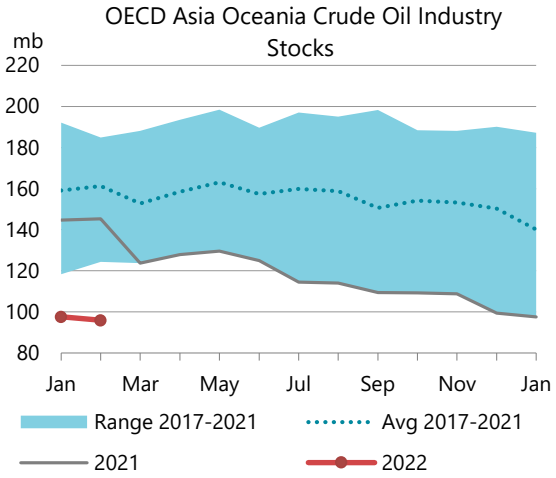


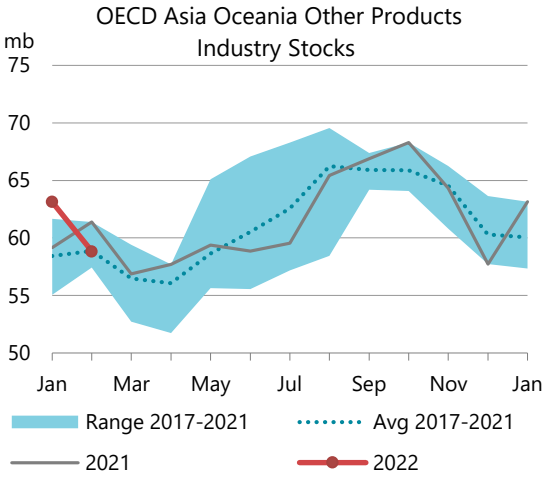
Preliminary data from Euroilstock showed total oil stocks increased by 18.2 mb in March. Crude oil inventories rose by 5.1 mb while products built by 13.1 mb. Middle distillate stocks rose by 12.4 mb with a large build of 14.3 mb in the Italy and 4.1 mb of decline in France. Fuel oil and naphtha stocks merely rose in the region by 2 mb and 0.1 mb, respectively. Gasoline was the only product which showed a decline (-1.3 mb).

OECD Asia Oceania

Total industry stocks in the OECD Asia Oceania region fell by 11.5 mb to 312 mb in February, led by a 10.7 mb drawdown in Japan. Korea's stocks declined by 0.7 mb compared with a typical increase of 4.3 mb. Regional crude oil inventories fell by 1.6 mb to 96 mb, 65.3 mb below the five-year average.

Oil products stocks fell by 6.6 mb, twice the normal decline. Following a sharp counter-seasonal increase in January, other products drew by 4.3 mb in February. Motor gasoline and middle distillates decreased by 1.2 mb and 2.1 mb, respectively, in line with seasonal patterns.



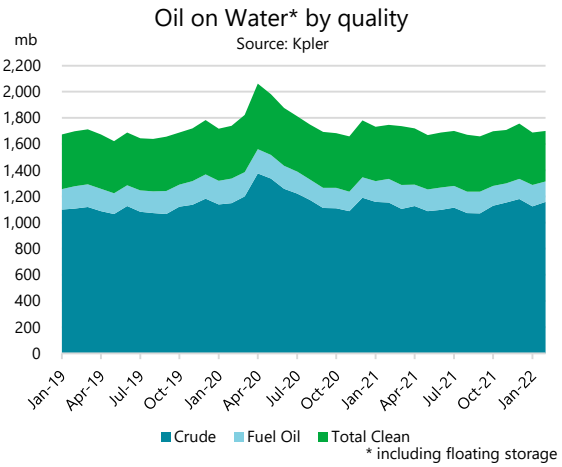


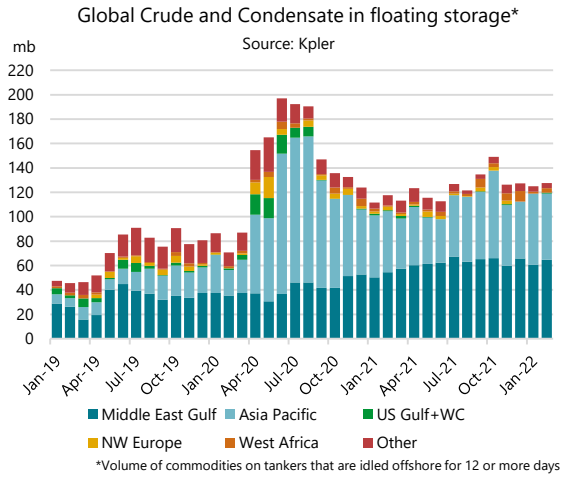
Preliminary data from the Petroleum Association of Japan show crude oil inventories increasing by 2.2 mb m-o-m in March, in line with the seasonal pattern for the month (+3 mb). Total product stocks fell by 2.2 mb, led by a 1.6 mb decrease in middle distillate stocks. Gasoline, residual fuel oil, and other products stocks declined by 0.1 mb, 0.5 mb and 0.1 mb, respectively.

Other stock developments

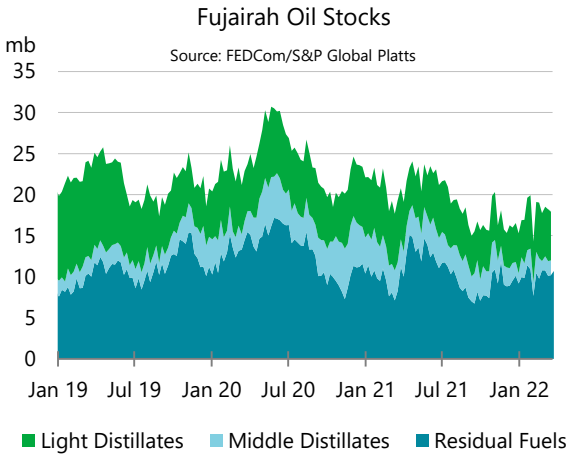
The total volume of oil on the water (including floating storage) rose by 12.6 mb in February, according to *Kpler*. Crude oil increased by 32.3 mb due to higher exports from some Middle Eastern countries, while diesel and LPG decreased by 10.8 mb and 11.5 mb, respectively.

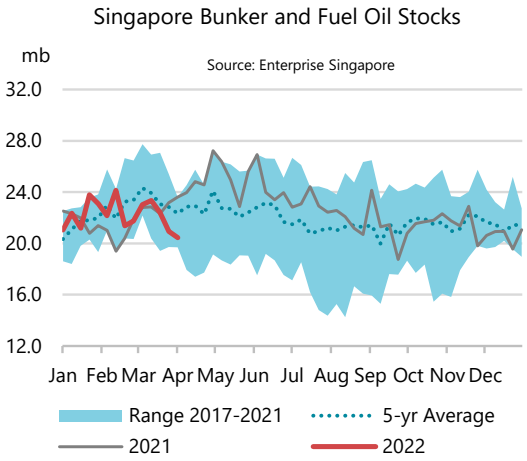
Crude oil held in short-term floating storage rose by 2.7 mb to 127.7 mb. The Middle East and West African regions led the increase at 4 mb and 2.3 mb, respectively, while volumes held in the Asia Pacific fell by 4 mb.





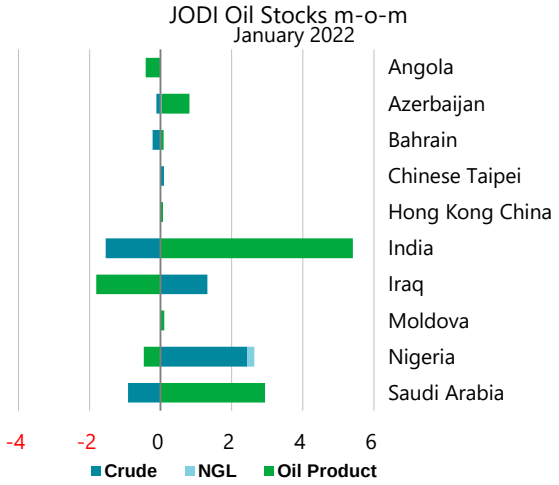
In Fujairah, independent product stocks fell by 2 mb in March to 17.1 mb, according to data from *FEDCom and S&P Global Platts*. Light Distillates stocks led the way with a 1.9 mb decline. Middle distillates decreased by 0.6 mb, while heavy distillates built by 0.6 mb. Middle distillates stocks temporally fell to 1.1 mb, at the beginning of March as reported by the weekly data, its lowest level since our records begin in January 2017.





Independent product stocks in Singapore, the world's largest bunkering hub, were down by 1.8 mb in February, according to data from *Enterprise Singapore*. Residual fuel oil stocks declined by 0.8 mb. In addition, light and middle distillate inventories fell by 0.3 mb and 0.7 mb, respectively. Middle distillates stocks fell to 7 mb, its lowest level since August 2013.

Total oil stocks in 12 non-OECD economies reported to the *JODI-Oil* database rose 7.9 mb m-o-m in January, led by a 6.6 mb increase in oil products inventories. Crude stocks increased by 1.3 mb and 2.4 mb in Iraq and Nigeria, respectively. Indian crude stocks decreased by 1.5 mb while product stocks rose by 5.4 mb. Saudi Arabia posted a decline in crude oil inventories of 0.9 mb and a 2.9 mb build in product stocks.



Box 3. IEA will release another 120 mb from emergency reserves

IEA member countries agreed on 1 April to release an additional 120 mb of their emergency oil reserves. Combined with the IEA's collective stock action announced on 1 March and Washington's decision to make additional barrels available from its strategic reserve, total stocks available to the market over the next six months are equivalent to well over 1 mb/d.

The collective action agreed in April, which is the largest in IEA history, comes on top of the 62.7 mb release agreed in March. The total of 182.7 mb accounts for about 9% of total emergency reserves that IEA member countries held at the start of Russia's invasion, consisting of 1.5 billion barrels of government stocks and 575 million barrels under obligations with industry.

In addition to the IEA's two stock releases, the US will contribute additional barrels from its SPR. All in all, roughly 240 mb of oil is expected to be drawn down from May to October. IEA members will clarify details of their contributions over the coming weeks, depending on the specific stockholding

system used and market needs in each country. The US has already scheduled 20 mb for release in May and announced at the beginning of April another 70 mb sales for between May and July. The remaining 90 mb will be released between August and October.

Contribution to the IEA collective stock draw

	March			April		
	Crude	Products	Total	Crude	Products	Total
OECD Americas	30.00	-	30.00	60.56	-	60.56
United States	30.00	-	30.00	60.56	-	60.56
OECD Europe	6.10	12.59	18.68	9.22	25.91	35.13
Austria	0.39	-	0.39	-	-	-
Belgium	-	0.25	0.25	-	-	-
Estonia	-	0.04	0.04	-	0.07	0.07
Finland	0.38	-	0.38	0.37	-	0.37
France	-	1.83	1.83	-	6.05	6.05
Germany*	2.13	1.07	3.20	4.32*	2.16*	6.48
Greece	-	0.30	0.30	-	0.62	0.62
Hungary	0.27	-	0.27	0.53	-	0.53
Ireland	-	0.22	0.22	-	0.45	0.45
Italy	1.18	0.87	2.04	2.98	2.02	5.00
Lithuania*	0.06*	0.06*	0.12	0.18	-	0.18
Luxembourg	0.11	-	0.11	-	-	-
Netherlands*	0.41	0.41	0.82	-	1.60	1.60
Norway	-	0.40	0.40	-	-	-
Poland	0.74	0.97	1.71	-	2.30	2.30
Spain	-	2.00	2.00	-	4.00	4.00
Sweden	-	0.55	0.55	-	-	-
Switzerland	-	0.35	0.35	-	-	-
Turkey	-	1.51	1.51	-	3.07	3.07
United Kingdom	0.45	1.75	2.20	0.85	3.56	4.41
OECD Asia Oceania	9.63	4.35	13.98	18.32	6.00	24.32
Australia	1.69	-	1.69	-	1.61	1.61
Japan*	3.15*	4.35*	7.50	11.51*	3.49*	15.00
Korea	4.42	-	4.42	6.63	0.60	7.23
New Zealand	0.37	-	0.37	0.18	0.30	0.48
Total IEA	45.72	16.94	62.66	88.10	31.91	120.00

Unit: million barrel

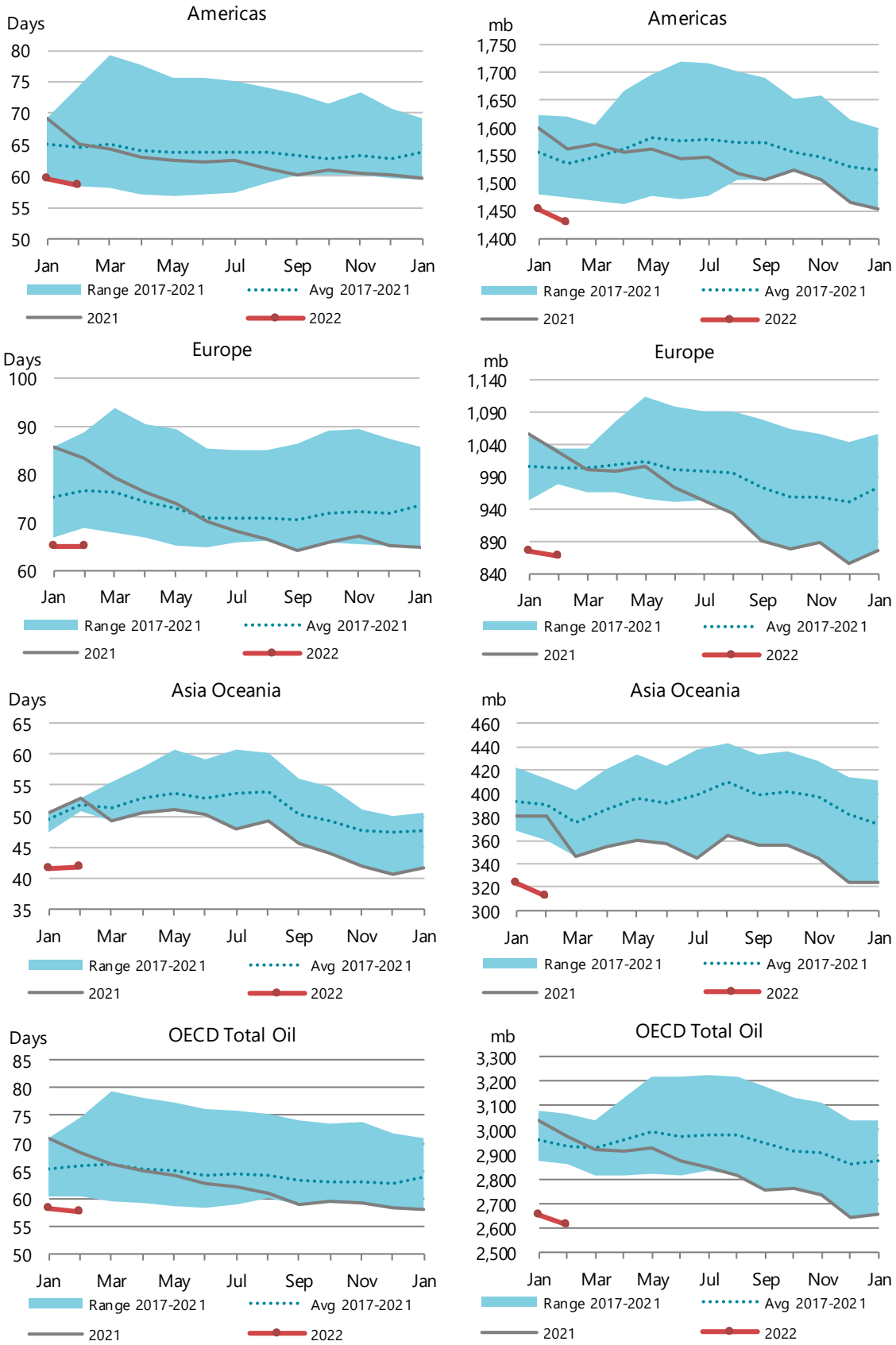
** The breakdown in crude and product has been estimated*

The latest announced 120 mb stock release will consist of roughly 88 mb of crude oils and 32 mb of oil products. The United States, Japan and Korea will release mostly crude oil, due to the composition of their government stocks. Importantly, Japan will also tap into its government stocks for the first time, after having previously contributed to IEA collective actions entirely through lowering stockholding obligations on its industry. By contrast, most of the stocks made available in Europe will consist of oil products and particularly diesel. Diesel markets were already tight before Russia's invasion of Ukraine.

Regional OECD End-of-Month Industry Stocks

(in days of forward demand and million barrels of total oil)

Days[1] **Million Barrels**



[1] Days of forward demand are based on average OECD demand over the next three months.

Prices

Overview

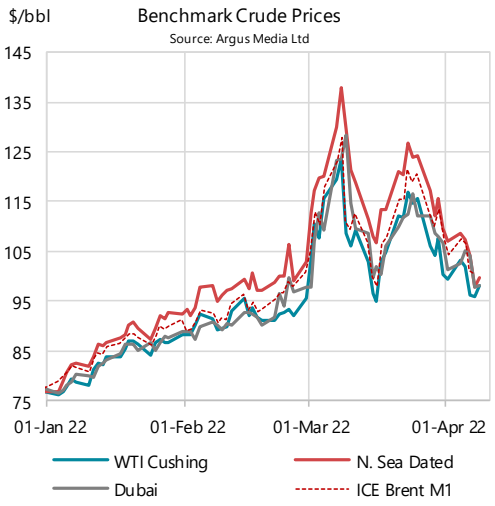
Since the onset of the war, oil prices have risen towards record levels, with North Sea Dated crude surging by almost $40/bbl to a peak of $137.80/bbl on 8 March, before plunging back to near pre-invasion levels of around $98/bbl from 7 to 11 April. The combination of two successive IEA collective actions to provide crude and product stocks aimed at offsetting the loss of Russian oil, that include a portion of a massive US release of strategic reserves, led to the easing of price tensions and tempered market volatility. In physical crude markets, the steep premiums to futures prices seen over the past six weeks have now turned to discounts as the release of strategic stocks provide a much needed supply buffer. Futures prices for ICE Brent were trading around $104/bbl as this *Report* went to print, down nearly $10/bbl following the announcements of strategic stock releases and more than $20/bbl below the peaks.

As Russia's invasion grinds on, causing destruction and misery in Ukraine and massive risks for the world economy, persistent and extreme uncertainties remain for international oil markets. The resulting supply disruptions in Russia and Ukraine will continue to weigh heavily in key commodity markets for energy, metals, fertilizers and food. Prolonged supply deficits and price volatility across all these goods threaten trade volumes, credit and financing as well as economic growth.

Crude Prices and Differentials ($/bbl)

	Month			Week of	Last	Chng Mar-22	
	Mar-21	Feb-22	Mar-22	04 Apr	08 Apr	m-o-m	y-o-y
Crude Futures (M1)							
NYMEX WTI	62.36	91.63	108.26	99.15	98.26	16.63	45.90
ICE Brent	65.70	94.10	112.46	103.72	102.78	18.36	46.76
Crude Marker Grades							
North Sea Dated	65.56	98.01	118.75	103.58	99.90	20.74	53.19
WTI (Cushing)	62.35	91.74	108.52	99.15	98.26	16.78	46.17
Dubai	64.40	92.48	110.49	101.66	98.30	18.01	46.09
Differential to North Sea Dated							
WTI (Cushing)	-3.21	-6.28	-10.23	-4.43	-1.64	-3.95	-7.02
Dubai	-1.16	-5.53	-8.26	-1.92	-1.60	-2.73	-7.10
Differential to ICE Brent							
North Sea Dated	-0.14	3.91	6.29	-0.14	-2.88	2.38	6.43
NYMEX WTI	-3.34	-2.47	-4.20	-4.57	-4.52	-1.73	-0.86

Sources: Argus Media Ltd, ICE, NYMEX (NYMEX WTI = NYMEX Light Sweet Crude)



The cumulative hit from reduced Chinese oil demand due to Covid lock downs and the release of massive new oil from IEA member strategic reserves has tempered market tensions for now, with the focus of supply shifting from an imminent dislocation to the medium and longer term balancing of demand.

The progressive wind-down in Russian exports only began at end-March as the last cargoes of pre-invasion spot purchases rolled-off. Real declines in Russian crude and product exports are only now becoming apparent. Yet crude prices are easing in parallel as buyers have already taken steps to meet requirements from other sources, facilitated now by access to strategic reserves. Crude prices have fallen at the front of the curve while rising in outer months on commitments to

replenish strategic reserves in the future that support long-dated futures. After holding a wide premium to futures prices over most of the past six weeks, physical prices have flipped to discounts not seen since December 2021.

Recent prices for marker crudes have fallen to below $100/bbl, but remain a serious threat for the inflation and economic outlook. Consumer price increases in February and March hit levels not seen in decades. While many central banks have already begun to raise interest rates over the past six months, the US Federal Reserve bank initiated its policy tightening cycle on 17 March with a 0.25% increase, its first since 2018. It also announced in April at least two 0.5 percentage point interest rate hikes in 2022. Higher interest rates boosted the US dollar, depressing oil prices with which they correlate negatively, though likely not enough to have any significant impact on inflation.

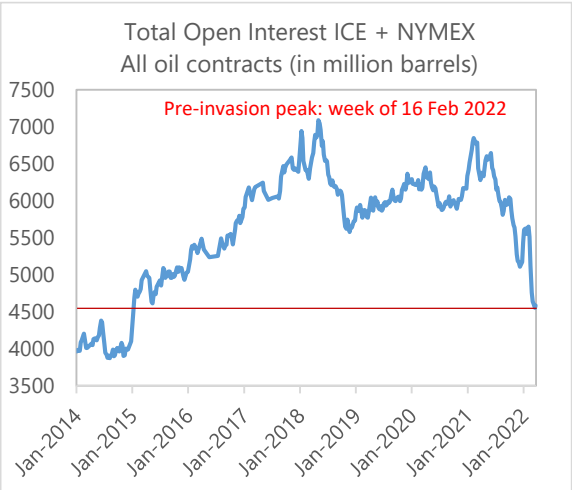
The conflict in Ukraine has undermined Russian exports of many commodities beyond energy and notably food and fertilizers. Rising costs for food and energy have boosted inflation, weighing on world economic growth, while pressuring the financial resources and currency reserves of governments, particularly in emerging markets. Higher food and fertilizer prices have also contributed to increased biofuel prices. Several countries have already reconsidered or adjusted biofuel-blending mandates to reduce end-user energy price tensions. However, biofuels are a large share of the transportation fuels pool and are roughly 2% by volume of world oil demand. Any reduction in mandates would therefore increase oil demand and security of supply issues even further. Moreover, ethanol plays a key role in enhancing the octane of gasoline blends. Finding non-bio high-octane gasoline components to replace ethanol will be complex in a global refining system that is already tight overall in capacity.

Futures markets

Crude futures rose sharply overall in March as events over the month whipsawed markets. Price action since 24 February has been dominated by large intra-day swings and weekly price ranges of up to $15/bbl. ICE Brent futures rose $18.40/bbl m-o-m to $112.50/bbl and NYMEX WTI by $16.60/bbl to $108.30/bbl in March. Both contracts peaked on 8 March (NYMEX WTI at $123.70/bbl, ICE Brent at $127.98/bbl), with ICE Brent exceeding $130/bbl in intraday trade on news that the US and UK would ban imports of Russian oil. Prices fell below $100/bbl for both contracts on 15-16 March as the rising wave of Covid cases in China undermined the demand outlook and as the US Federal Reserve Bank (Fed) hiked interest rates by +0.25%. Prices then rebounded by ~$10/bbl in the week to 23 March as President Biden headed to Europe to discuss new sanctions on Russia, including an oil embargo, while US crude stocks drew sharply. From 31 March through 1 April, prices fell almost ~$10/bbl following the announcement of a US SPR release of 1 mb/d over the six months of May to October, and the subsequent IEA coordinated action of 120 mb that includes 60 mb contributed from the US as part of its overall SPR draw. The momentum from these announcements and details on the allocation of stocks to be released drove futures prices to lows on 7 April of $100.60/bbl for ICE Brent and $96/bbl for NYMEX WTI, before an end-week bounce of $2/bbl.

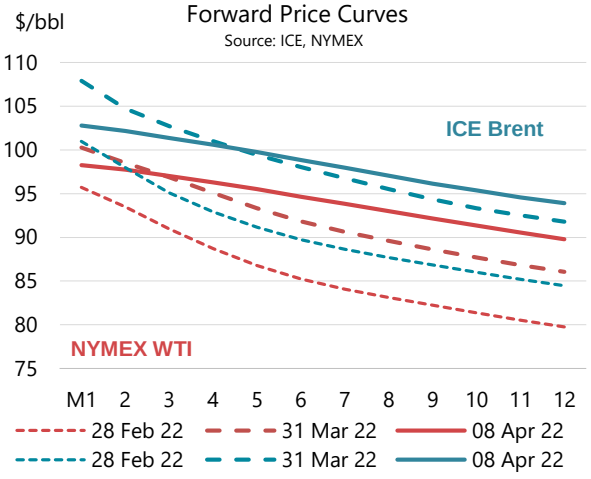
Extreme price volatility has persisted since early March. Clearing houses ICE and NYMEX, that channel this volatility between counterparties for different contracts and types of instruments, increased the margin calls required to hold positions. On 24 March ICE boosted margin calls on Brent by 19% and on gasoil +90%. CME raised ULSD margins. This increased the cost of trading oil futures, contributing to reduced lower open interest and futures trading activity.

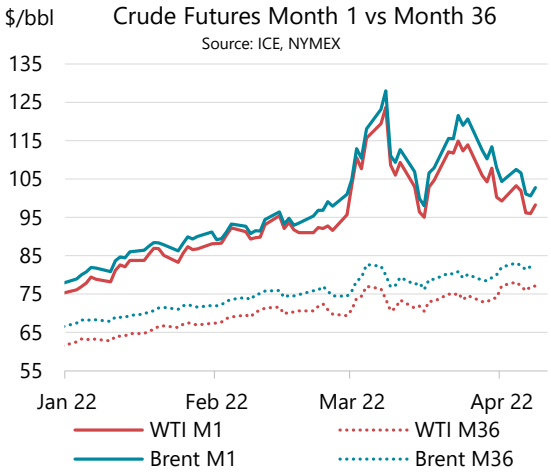
Margin calls cover the shared risk of non-performance between counterparties for exchanges and brokers. As prices for gas, oil, coal, metals and agricultural markets have soared, margins required have risen to offset the increased risk of default. The latter has amplified not only due to sharply higher price volatility but also to credit costs and other constraints. Companies have had to cut trading volumes as large price moves tightened liquidity. The issue of credit availability became so acute during the month that major commodity trading houses requested relief from central banks.



Central bank aid was, unsurprisingly, not forthcoming but the banks remain vigilant to a convergence of commodity and financial market risks. In late March, the Governor of the Bank of England, Andrew Bailey, indicated that the post-invasion commodity market price swings pose a risk to financial stability in a context where the world economy faces greater challenges than in the global financial crisis. The European Central Bank also indicated it is keeping an eye on commodity price volatility and stress in related commodity derivatives markets. In both physical and paper markets, oil is the largest commodity.

Since end-February, the combined US SPR release and successive IEA collective actions to release strategic crude and product stocks have given welcome relief from high oil prices. The barrels act as a backstop, easing price tensions and anchoring expectations for physical buyers, giving them time to assess the market rather than rushing to buy. Less volatility diminishes both margin calls and the tension on credit markets, easing the broader macro concerns for central bankers.





Announcing the US release of barrels from the SPR on 31 March, President Biden indicated that, "The Department of Energy will use the revenue from the release to restock the Strategic Petroleum Reserve in future years." Following the announcement, the forward crude price structure flattened as prompt contract tensions eased and long-forward contracts rose in anticipation of additional future demand. The effect was equally pronounced on NYMEX WTI and on ICE Brent.

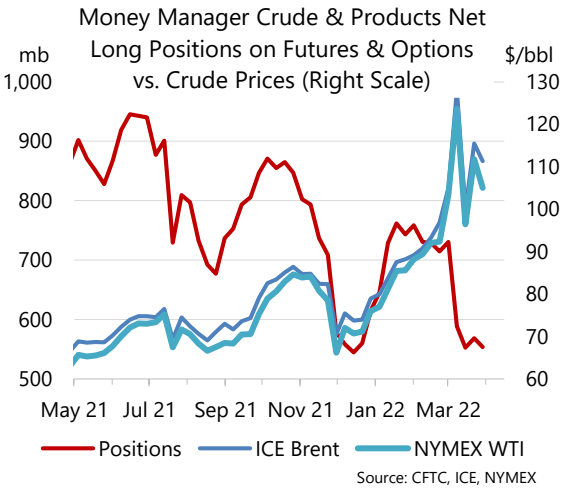
The 12 month backwardation rose by ~$9.50/bbl m-o-m for both crude contracts, peaking twice at around $24-$26/bbl on a weekly average basis, reflecting supply anxieties. However, the release of oil from strategic reserves rapidly deflated the price structure, pushing the backwardation below February's average levels in the first week of April, particularly in the US for NYMEX WTI.

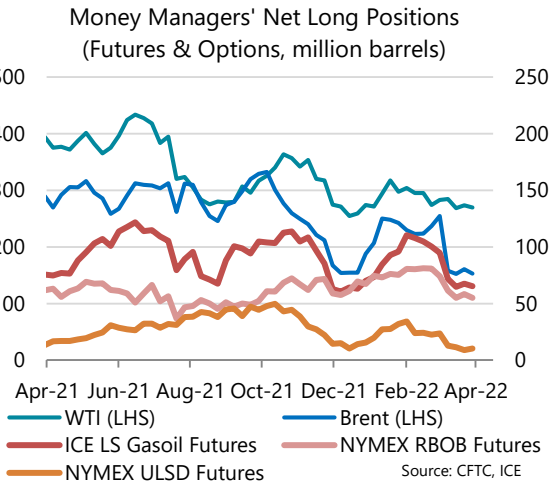
The ICE Brent premium to NYMEX WTI rose $1.73/bbl m-o-m to $4.20/bbl in March, highlighting the supply tensions in the European market. The premium peaked at $6.18/bbl on average in the week of 28 March with the announced SPR release, but then eased to $4.57/bbl in the week of 4 April as the IEA collective action was revealed.

Cracks for product futures increased sharply over the month, reflecting concern about the loss of Russian product exports as well as the impact of lower Russian crude exports on refining activity. With Russian gasoil exports difficult to replace, cracks rose the most for ICE Gasoil at +$23.90/bbl m-o-m to $41.48/bbl followed by NYMEX ULSD at +$17.20/bbl to $45.13/bbl. NYMEX RBOB cracks rose $8.90/bbl to $30.10/bbl. ICE Gasoil cracks averaged $67/bbl in the week of 7 March but eased lower to $36-38/bbl in late March and early April with the release of gasoil from Europe's strategic stocks. The NYMEX ULSD crack peaked at $55/bbl the week of 21 March and eased only slightly to $41-43/bbl at end month.

Money Managers' net long positions in futures and options, covering crude and products, dropped further over March as traders reduced market exposure due to rising costs. Net long positions fell across all contracts.

Over the four weeks to 29 March, net long position on crude futures fell by 21%, down 40% for ICE Brent futures and -5% for WTI futures. Almost all the changes occurred in the week of 4 March. Both long and short positions were cut on all contracts except ICE Brent where shorts rose by ~50%. Money Managers' net long positions on product futures contracted by 31% in the four weeks up to 4 March. The largest reductions came for diesel contracts on ICE (-47%) and NYMEX (-33%), though NYMEX RBOB also fell significantly (-23%). Large reductions were made to both outright longs and shorts as price volatility and margin calls jumped.





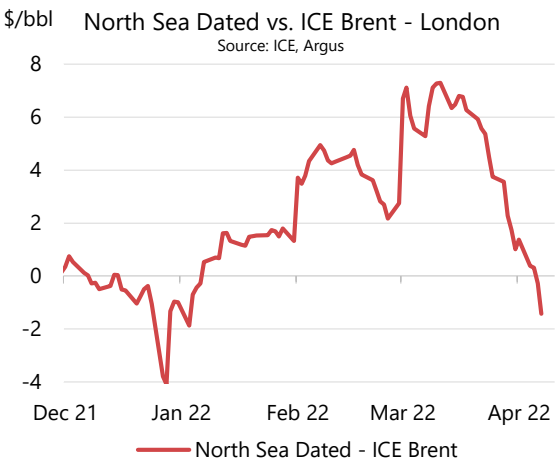
Prompt Month Oil Futures Prices
(monthly and weekly averages, $/bbl)

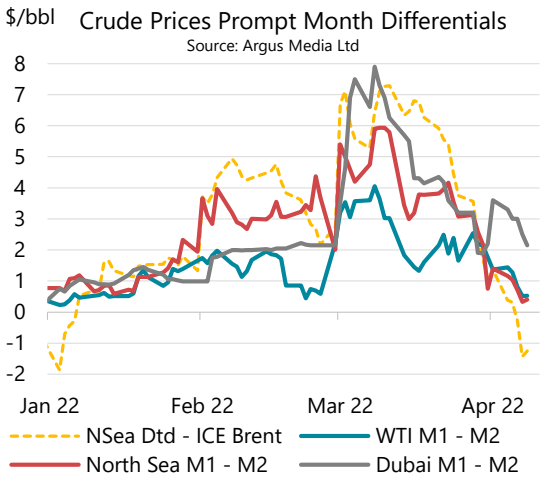
	Mar-21	Jan-22	Feb-22	Mar-22	Mar-22		Week Commencing:						Last
					m-o-m Chg	y-o-y Chg	28 Feb	07 Mar	14 Mar	21 Mar	28 Mar	04 Apr	08 Apr
NYMEX													
Light Sweet Crude Oil (WTI) 1st contract	62.36	82.98	91.63	108.26	16.63	45.90	106.62	113.43	100.43	113.01	103.51	99.15	98.26
Light Sweet Crude Oil (WTI) 12th contract	57.45	74.52	79.20	86.41	7.21	28.96	84.36	87.63	83.30	89.25	86.53	89.28	89.77
RBOB	84.31	100.90	112.84	138.40	25.56	54.09	134.59	142.95	131.12	142.81	135.16	130.88	131.53
ULSD	77.95	109.56	119.57	153.39	33.83	75.44	142.29	155.71	138.53	168.40	154.75	142.34	139.34
ULSD ($/mmbtu)	13.75	19.32	21.09	27.05	5.97	13.30	25.09	27.46	24.43	29.70	27.29	25.10	3.32
Henry Hub Natural Gas ($/mmbtu)	2.62	4.26	4.46	4.98	0.52	2.36	4.70	4.65	4.77	5.26	5.56	6.08	6.28
ICE													
Brent 1st contract	65.70	85.57	94.10	112.46	18.36	46.76	109.49	116.87	103.88	118.48	109.69	103.72	102.78
Brent 12th contract	60.77	77.85	82.62	91.40	8.78	30.63	89.16	92.80	87.75	94.30	91.95	93.72	93.90
Gasoil	70.15	100.19	111.67	153.94	42.28	83.79	138.71	183.83	131.78	160.92	145.85	141.50	136.86
Prompt Month Differentials													
NYMEX WTI - ICE Brent	-3.34	-2.59	-2.47	-4.20	-1.73	-0.86	-2.87	-3.44	-3.45	-5.47	-6.18	-4.57	-4.52
NYMEX WTI 1st vs. 12th	4.91	8.46	12.43	21.85	9.42	16.94	22.26	25.80	17.13	23.76	16.98	9.87	8.49
ICE Brent 1st - 12th	4.93	7.72	11.48	21.06	9.58	16.13	20.33	24.07	16.13	24.18	17.74	10.00	8.88
NYMEX ULSD - WTI	15.59	26.58	27.94	45.13	17.20	29.54	35.67	42.28	38.10	55.39	51.24	43.19	41.08
NYMEX RBOB - WTI	21.95	17.92	21.21	30.14	8.93	8.19	27.97	29.52	30.69	29.80	31.65	31.73	33.27
NYMEX 3-2-1 Crack (RBOB)	19.83	20.80	23.45	35.14	11.69	15.30	30.53	33.77	33.16	38.33	38.18	35.55	35.87
NYMEX ULSD - Natural Gas ($/mmbtu)	11.13	15.07	16.62	22.07	5.45	10.95	20.40	22.81	19.67	24.44	21.73	19.02	-2.96
ICE Gasoil - ICE Brent	4.45	14.62	17.57	41.48	23.92	37.03	29.22	66.96	27.90	42.44	36.16	37.78	34.08

Source: ICE, NYMEX.

Spot crude oil prices

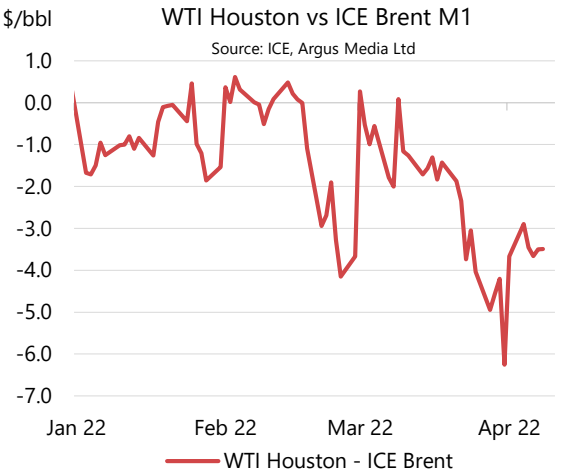
Physical crude markets have suffered massive stress since Russia's invasion of Ukraine. Refiners who rapidly abandoned Russian crude and products sought immediately available alternatives while pursuing medium- to longer- term solutions. The IEA coordinated release of strategic reserves played a key role in easing market tensions throughout the month. Arbitrage drew in barrels from West Africa and the US by early April. Crude price discounts to marker grades widened with surging freight costs, as tanker demand rose sharply to move replacement barrels to Europe while storing Urals or shipping to new destinations. North Sea Dated rose $20.74/bbl m-o-m to $118.75/bbl with a peak on 8 March of $137.80/bbl. It fell to $98/bbl on 7 April with rapidly improving availability of crude supply for European refiners. Dubai rose by $18.01/bbl m-o-m to $110.49/bbl and WTI prices at Cushing by $16.78/bbl to $108.52/bbl.

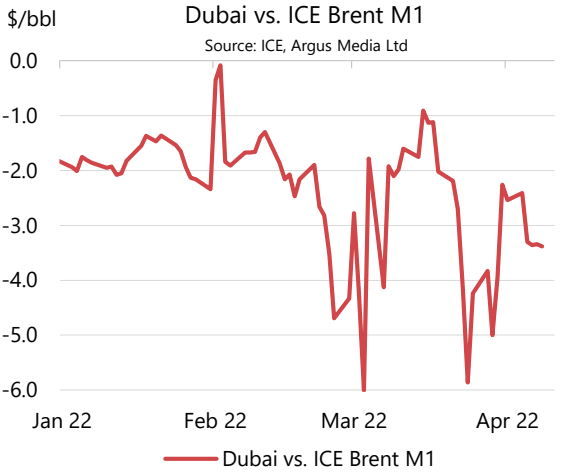




The North Sea Dated premium to ICE Brent futures rose sharply with the burst in demand for short-haul supply. It averaged $5.44/bbl in March (+$1.59/bbl m-o-m), but peaked at $6.67/bbl in the week of 7 March as liquidity in the physical market diminished. Equity holders offered fewer North Sea barrels into the market, preferring to keep them for their own refineries. Tensions eased dramatically after mid-month as barrels from strategic reserves became available. With confirmation on 6 April of the second IEA coordinated action after Russia's invasion of Ukraine,

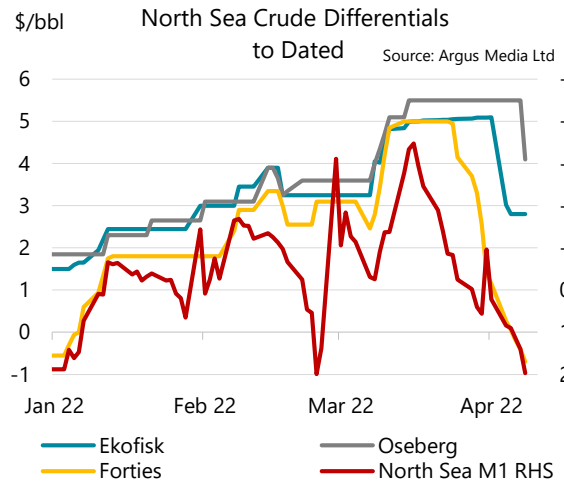
the physical market flipped to a discount versus futures. The release of reserves ensures that buyers have an alternative to the physical market if barrels cannot be sourced as needed.

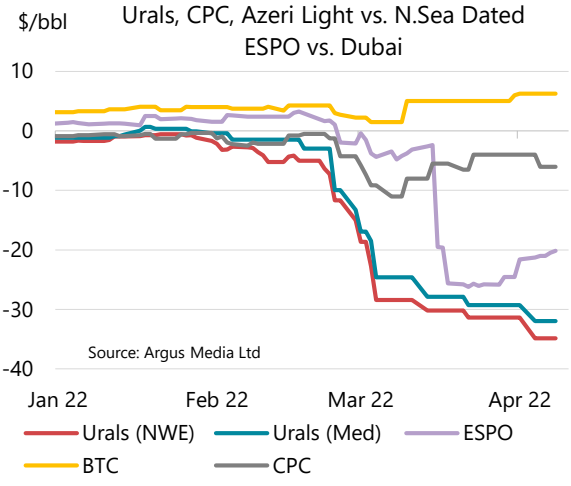




Dubai prices did not keep pace with the initial rise North Sea grades, but discounts narrowed as European and Asian refiners pursued Middle East crudes to replace foregone Urals barrels. Subsequently, the arrival of these Urals barrels East of Suez reduced demand for Middle East grades from Asian refiners, notably in India, depressing Dubai values versus North Sea prices. The widening Dubai discount to ICE Brent has facilitated the arbitrage of Middle East barrels to Europe.

The WTI discount to ICE Brent remained narrow until around 20 March, notably due to the US embargo of Russian energy, including crude, imposed on 8 March. US crude stocks remain tight and had already limited the transatlantic arbitrage in recent months. The release of SPR barrels following the first IEA collective action of 1 March delivered 13 mb to local US buyers by end-month, contributing to a wider WTI discount to ICE Brent. With the additional SPR release of 1 mb/d of crude for the coming six months announced by the US government on 31 March, the transatlantic arbitrage remains open to move US barrels to Europe.





North Sea grade premiums to North Sea Dated increased significantly as offers into the market declined while demand rose. Towards end-month the differentials declined. Arbitrage cargoes to Asia blocked by the recent strong backwardation, combined with arrivals from West Africa and the US, reversed supply tensions. Forties, the principal price-setting grade for North Sea Dated,

rose by $1.23/bbl m-o-m to $3.92/bbl. It peaked at over $5/bbl in the second week of March before falling in the first week of April to discounts not seen since late December. Ekofisk and Oseberg premiums were sustained throughout the month, only declining in the first week of April.

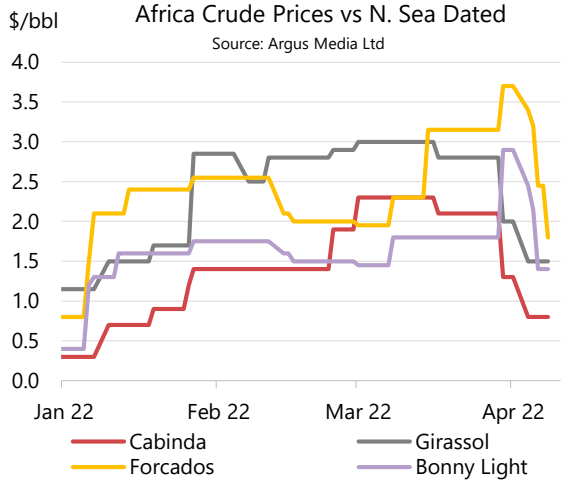
Urals discounts to North Sea Dated in Northwest Europe fell $23.32/bbl m-o-m to -$28.83/bbl in March. With European and North American refiners balking at buying Russian crude, Urals prices spun into freefall, losing around $25/bbl by the first week of March. They continued to deteriorate over the month, and reached -$34.85/bbl in the first week of April. Spot dealing has stalled with a much smaller number of buyers and the majority of transactions are now undisclosed. Indian refiners have become a major destination for Urals, with transactions reported for some 16 mb of Russian crude since the invasion (as compared to an estimated 11 mb for over the whole of 2021, based on tanker tracking). They have reportedly been purchasing cargoes on a delivered basis rather than FOB, leaving the shipping costs and risks to the sellers who are frequently holders of term contracts of Russian crude for trading and marketing purposes. Chinese companies have also been buying Urals, albeit more discretely and in modest volumes. Russian Foreign Minister Lavrov visited China and India in the last week of March to encourage Russian crude purchasing, amongst other things.

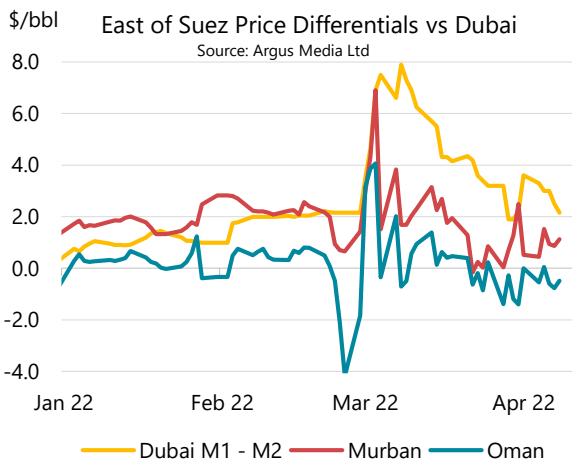
CPC discounts to North Sea Dated widened following the invasion with rising freight costs and shipping uncertainties in the Black Sea. The CPC terminal at Novorossiysk handles both Kazakh crude (1.2 mb/d) and Russian barrels, leading to concerns about comingling and exposure of buyers to sanctions. CPC prices fell to discounts of over $10/bbl in the second week of March before recovering with buying by Indian and Chinese refiners. On 21-22 March, storm damage partially shut down the CPC terminal (-300 kb/d) for several weeks. However, this had minimal impact on prices, which have also come under pressure from rising freight rates.

BTC premiums to North Sea Dated have benefitted overall from demand for alternatives to Russian crude for European refiners. The premium initially narrowed as backwardation on the North Sea benchmark rose steeply in early March. It recovered after 9 March, tracking the rebound of other regional grades.

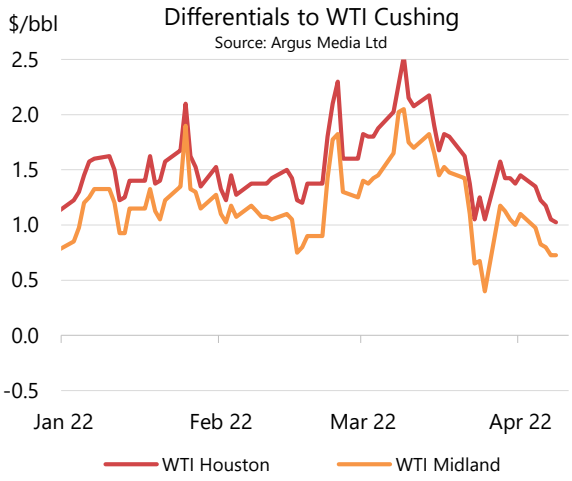
ESPO swung from a premium to a deep discount versus Dubai over the course of the month. Chinese refiners, the principal buyers of ESPO and Sokol grades out of East Russian ports, held back from buying following the invasion due to the threat of sanctions and an absence of banks willing to provide letters of credit. Prices for ESPO tipped lower in mid-month as some Chinese refiners who bought the crude before the invasion attempted to resell their cargoes into the market. Private negotiations and a move to cash dealing eventually put a floor under differentials.

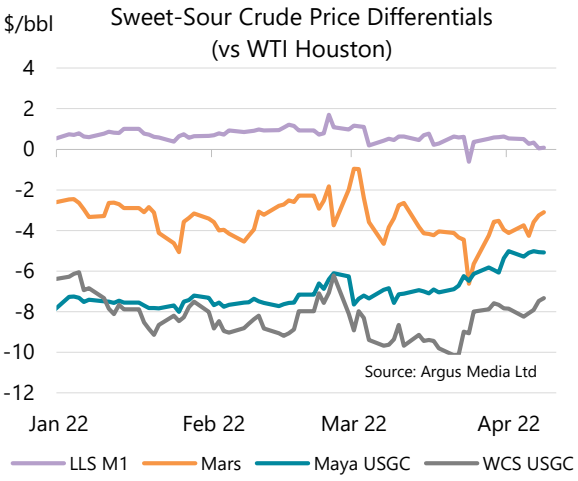
West African crude price differentials benefitted from buyers seeking alternatives to Russian grades but suffered from the strong crude price backwardation and the rise in freight costs. Forcados premiums to North Sea Dated rose $0.49/bbl to $2.75/bbl, Bonny Light +$0.20/bbl to $1.82/bbl and Cabinda +$0.66/bbl. Demand came with a lag, after European refiners covered prompt requirements from North Sea barrels while seeking light sweet grades from Nigeria as well as medium Angolan grades that are richer in fuel (to replace Urals' heavy cuts). Differentials rose through early April when supply tensions eased with the arrival in Europe of cargoes from the US and following the IEA collective action. The absence of traditional Asian clients weighed on West African crude price differentials. Indian refiners who typically buy a large share of light sweet Nigerian grades shifted to Urals. Chinese refiners, the main buyers for medium heavy sweet Angolan grades, reduced their uptake as Covid lockdowns undermined demand.





Middle East crude price premiums to Dubai rose sharply after the invasion with European and Asian refiners seeking alternatives to Russian crude. Oman gained +$0.52/bbl to $0.47/bbl and Upper Zakum rose +$0.48/bbl to $0.48/bbl while Murban was flat. The continued slow rise in OPEC production provided no supply relief. Despite steep term-contract price increases for April, Saudi crude buyers reportedly took all their allocated barrels. Middle East crude price differentials corrected lower after mid-month as Indian refiners boosted uptake of Urals, as Chinese refiners eased back with Covid lockdowns reducing demand and as an earthquake in Japan pushed some refining capacity offline.





Despite very low crude stock levels at Cushing, supply tensions on the international market boosted premiums for WTI at Midland and Houston versus Cushing. They rose by around $0.20/bbl m-o-m to $1.36/bbl and $1.73/bbl in March, respectively. Premiums peaked in the second week of March but subsequently eased, reaching levels in early April that were last seen in December 2021. Grade premiums versus WTI at Houston fell over the month as they competed with barrels released from the US SPR. Crude differentials also suffered from strong demand for WTI for export to the European market. LLS premiums to WTI at Houston fell $0.41/bbl m-o-m to $0.55/bbl. Discounts widened for Mars by -$0.55/bbl to -$3.75/bbl, and WCS by -$0.63/bbl to -$8.96/bbl.

Spot Crude Oil Prices and Differentials
(monthly and weekly averages, $/bbl)

	Mar-21	Jan-22	Feb-22	Mar-22	Mar-22		Week Commencing:						Last
					m-o-m Chg	y-o-y Chg	28 Feb	07 Mar	14 Mar	21 Mar	28 Mar	04 Apr	08 Apr
Crudes													
North Sea Dated	65.56	87.10	98.01	118.75	20.74	53.19	114.55	127.52	110.69	123.22	112.31	103.58	99.90
North Sea Mth 1	66.18	87.14	97.35	117.45	20.10	51.27	112.86	126.67	107.69	122.17	112.35	104.83	101.87
North Sea Mth 2	65.98	86.00	94.16	113.46	19.30	47.48	108.62	121.01	104.25	118.46	110.35	104.10	101.47
WTI (Cushing) Mth 1	62.35	83.13	91.74	108.52	16.78	46.17	106.62	113.43	100.43	114.20	103.51	99.15	98.26
WTI (Cushing) Mth 2	62.32	82.30	90.31	106.01	15.70	43.69	103.50	109.96	98.86	112.08	101.51	98.23	97.73
WTI (Houston) Mth 1	63.50	84.62	93.23	110.25	17.03	46.76	108.40	115.64	102.31	115.47	104.96	100.32	99.29
Urals (NWE)	63.51	86.00	92.50	89.92	-2.58	26.41	93.85	99.07	80.49	92.06	80.91	68.73	65.05
Dubai (1st month)	64.40	83.34	92.48	110.49	18.01	46.09	104.84	119.88	103.40	112.58	107.32	101.66	98.30
Differentials to Futures													
North Sead Dated vs. ICE Brent	-0.27	1.42	3.85	5.44	1.59	5.70	5.64	6.67	6.53	5.02	1.99	-0.45	-1.25
WTI (Cushing) Mth1 vs. NYMEX	-0.01	0.14	0.11	0.26	0.15	0.27	0.00	0.00	0.00	1.19	0.00	0.00	0.00
Differentials to Physical Markers													
WTI (Houston) versus North Sea Mth 1	-2.68	-2.52	-4.13	-7.20	-3.07	-4.52	-4.47	-11.03	-5.38	-6.70	-7.39	-4.51	-2.59
WTI (Houston) versus WTI (Cushing) Mth 1	1.15	1.50	1.49	1.73	0.24	0.59	1.78	2.21	1.88	1.27	1.45	1.16	1.02
Urals (NWE) versus North Sea Dated	-2.06	-1.11	-5.52	-28.83	-23.32	-26.78	-20.70	-28.45	-30.20	-31.16	-31.40	-34.85	-34.85
Dubai versus North Sea Mth 2	-1.58	-2.66	-1.68	-2.97	-1.29	-1.39	-3.78	-1.13	-0.85	-5.88	-3.03	-2.44	-3.17
Dubai versus WTI (Cushing) Mth 2	2.08	1.04	2.17	4.48	2.31	2.40	1.35	9.92	4.54	0.50	5.80	3.42	0.57
Prompt Month Differentials													
Forward North Sea Mth1-Mth2	0.20	1.14	3.20	4.00	0.80	3.80	4.24	5.66	3.44	3.71	2.01	0.73	0.40
Forward WTI Cushing Mth1-Mth2	0.03	0.82	1.43	2.51	1.08	2.48	3.12	3.47	1.57	2.11	2.00	0.92	0.53
Forward Dubai Mth1-Mth2	0.56	1.04	2.04	4.76	2.72	4.19	4.94	6.99	4.79	3.75	2.56	2.79	2.15

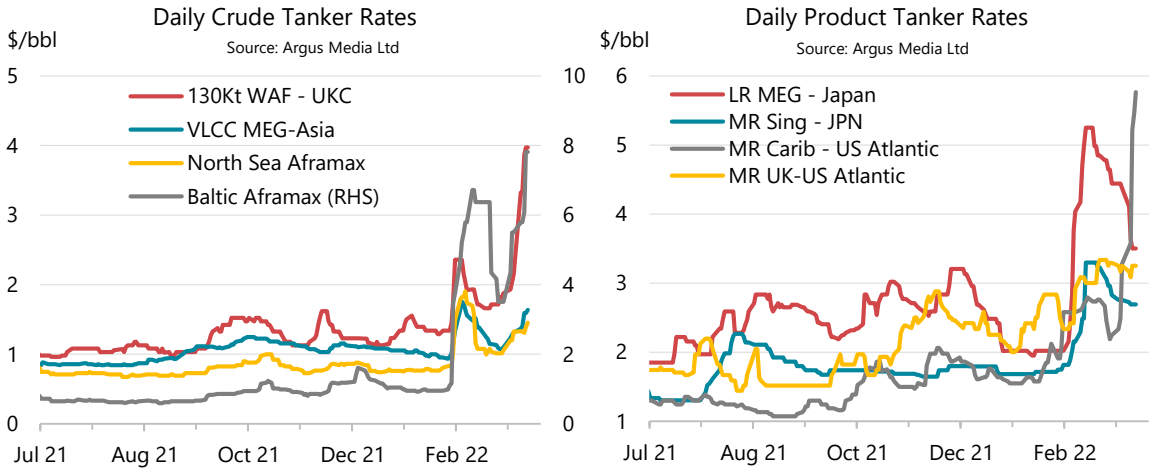
Source: Argus Media Ltd, ICE

Freight

Freight rates continued to rise over the month with higher bunker prices, heightened demand for tankers to meet longer routing requirements and Russian vessels sidelined by sanctions or embargoes.

The initial spike in crude tanker rates following in the invasion eased in the following two weeks. Shipowners who had held back on chartering their vessels, awaiting clarity on market conditions, engaged the market which eased tensions. However, in the third decade of March, prices pushed higher on stronger chartering requirements and very tight availability of Suezmax tankers. The fleet of Suezmax tankers remains limited (reduced in part by sanctions on Russian vessels) versus increased long-haul requirements to move US crude to Europe, as well as CPC and in some cases Russian cargoes to Asia. Baltic Aframax rates remained under extreme pressure due to the lack of ships willing to load Russian crude and as sanctions on Russian vessels limited the availability of ice-class tankers.

Suezmax vessels on the West Africa to UK-Continent route saw their rates rise $0.37/bbl m-o-m to $1.86/bbl in March and to $3.69/bbl in the first week of April. The rising rates for Suezmaxes spilled over into other segments, pulling-up rates for VLCCs and Aframaxes. VLCC rates on the Middle East Gulf to Asia route rose $0.28/bbl m-o-m to $1.33/bbl and reached $1.52/bbl in the first week of April. North Sea Aframax rates for crude cargoes rose $0.38/bbl m-o-m to $1.27/bbl. The rates peaked at $1.81/bbl in the first week of March before dropping back as the Aframax split into Russian and non-Russian related chartering. Accordingly, Baltic Aframax rates rose $3.92/bbl m-o-m to $5.37/bbl and reached $6.66/bbl in the first week of April.



Clean tanker rates also continued to rise month on month. Increased shipping requirements to move clean product from the US Gulf Coast or the Middle East to Europe and Asia underpinned strong rates. Higher bunker prices also provided steady support.

LR rates on the Middle East Gulf to Japan route rose $2.50/bbl m-o-m to $4.50/bbl reflecting the increased call for long-haul shipments from the Middle East toward both the east and west. In Asia, the dearth of Chinese product exports has sustained requirements for long-haul cargoes of middle distillate and gasoline. MR rates in Asia rose $1.07/bbl m-o-m to $2.80/bbl with higher bunker prices and generally strong chartering demand. Similarly MR rates in the Atlantic Basin gained $0.50-$0.80/bbl over the month. Rates on the MR Caribbean to US Atlantic Coast route rose $0.78/bbl m-o-m to $2.80/bbl but surged in early April to $4.71/bbl with strong European demand for middle distillate cargoes from the US Gulf Coast and from Caribbean storage.

Freight Costs
(monthly and weekly averages, $/bbl)

				Mar-22			Week Commencing					
	Mar-21	Jan-22	Feb-22	Mar-22	*m-o-m chg*	*y-o-y chg*	28-Feb	07-Mar	14-Mar	21-Mar	28-Mar	04-Apr
Crude Tankers												
VLCC MEG-Asia	0.81	1.07	1.05	1.33	0.28	0.5	1.66	1.46	1.21	1.09	1.27	1.52
130Kt WAF - UKC	1.32	1.25	1.49	1.86	0.37	0.5	2.17	1.82	1.67	1.79	2.04	3.69
Baltic Aframax	1.09	1.14	1.45	5.37	3.92	4.3	5.39	6.51	5.97	3.64	5.12	6.66
North Sea Aframax	0.84	0.77	0.89	1.27	0.38	0.4	1.81	1.32	1.04	1.02	1.24	1.36
Product Tankers												
LR MEG - Japan	2.39	2.40	2.02	4.50	2.48	2.1	3.04	4.87	4.98	4.66	4.42	3.65
MR Sing - JPN	1.81	1.74	1.73	2.80	1.07	1.0	2.01	2.77	3.27	2.98	2.76	2.70
MR Carib - US Atlantic	1.20	1.64	1.83	2.61	0.78	1.4	2.57	2.70	2.74	2.37	2.70	4.71
MR UK-US Atlantic	2.11	2.24	2.55	3.06	0.51	0.9	2.50	3.05	3.12	3.30	3.23	3.20

Source: Argus Media Ltd

Tables

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2018	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
OECD DEMAND																	
Americas	25.4	25.5	24.4	20.0	22.7	23.1	22.6	22.8	24.4	24.8	25.0	24.3	24.4	24.8	25.1	24.9	24.8
Europe	14.3	14.3	13.3	11.0	12.9	12.5	12.4	11.9	12.6	13.8	13.9	13.1	13.1	13.4	13.9	13.7	13.5
Asia Oceania	8.0	7.9	7.9	6.6	6.8	7.3	7.1	7.7	7.0	7.1	7.8	7.4	8.0	7.3	7.4	7.9	7.6
Total OECD	**47.7**	**47.8**	**45.6**	**37.6**	**42.3**	**43.0**	**42.1**	**42.4**	**44.0**	**45.8**	**46.8**	**44.8**	**45.4**	**45.5**	**46.4**	**46.5**	**45.9**
NON-OECD DEMAND																	
FSU	4.7	4.7	4.6	4.1	4.7	4.7	4.5	4.6	4.7	4.9	5.0	4.8	4.6	4.3	4.5	4.5	4.5
Europe	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.7
China	13.1	13.9	12.2	14.8	15.0	15.2	14.3	15.0	15.7	15.7	15.7	15.5	15.4	15.4	16.0	16.0	15.7
Other Asia	14.0	14.0	13.5	11.3	12.3	13.4	12.6	13.5	12.9	12.6	13.6	13.1	13.9	13.8	13.3	13.9	13.7
Americas	6.3	6.3	5.8	5.0	5.7	5.9	5.6	5.8	5.9	6.2	6.1	6.0	5.9	6.0	6.2	6.1	6.1
Middle East	8.7	8.7	8.4	7.6	8.6	8.3	8.2	8.3	8.5	8.9	8.4	8.5	8.5	8.5	9.0	8.5	8.6
Africa	4.2	4.3	4.1	3.5	3.7	3.9	3.8	4.1	4.0	4.0	4.1	4.0	4.1	4.1	4.0	4.2	4.1
Total Non-OECD	**51.7**	**52.7**	**49.3**	**46.9**	**50.7**	**52.2**	**49.8**	**51.9**	**52.2**	**53.0**	**53.8**	**52.7**	**53.1**	**52.8**	**53.7**	**54.0**	**53.4**
Total Demand[1]	**99.5**	**100.4**	**94.9**	**84.5**	**93.0**	**95.1**	**91.9**	**94.3**	**96.3**	**98.8**	**100.5**	**97.5**	**98.5**	**98.3**	**100.1**	**100.5**	**99.4**
OECD SUPPLY																	
Americas	23.0	24.8	25.9	22.6	23.2	23.7	23.8	23.3	24.3	24.4	25.3	24.3	25.0	25.6	26.2	26.6	25.8
Europe	3.5	3.4	3.7	3.6	3.4	3.5	3.6	3.6	3.1	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.4
Asia Oceania	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total OECD[4]	**26.9**	**28.6**	**30.1**	**26.7**	**27.1**	**27.8**	**27.9**	**27.4**	**27.8**	**28.3**	**29.2**	**28.2**	**28.8**	**29.5**	**30.0**	**30.5**	**29.7**
NON-OECD SUPPLY																	
FSU	14.6	14.6	14.8	13.2	12.8	13.2	13.5	13.4	13.7	13.7	14.3	13.8	14.4	11.8	11.5	11.7	12.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.8	3.9	4.0	4.0	4.0	3.9	4.0	4.1	4.1	4.1	4.0	4.1	4.2	4.2	4.2	4.1	4.2
Other Asia	3.4	3.3	3.2	3.0	2.9	3.0	3.0	3.0	2.9	2.8	2.8	2.9	2.8	2.8	2.7	2.7	2.8
Americas	5.1	5.3	5.6	5.1	5.4	5.2	5.3	5.3	5.3	5.4	5.2	5.3	5.4	5.5	5.8	5.8	5.6
Middle East	3.1	3.0	3.1	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2
Africa	1.5	1.5	1.4	1.4	1.4	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Total Non-OECD[4]	**31.6**	**31.8**	**32.2**	**29.9**	**29.6**	**29.7**	**30.3**	**30.2**	**30.5**	**30.5**	**30.8**	**30.5**	**31.4**	**28.9**	**28.8**	**29.1**	**29.5**
Processing gains[3]	2.4	2.4	2.3	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Global Biofuels	2.7	2.8	2.3	2.5	3.1	2.6	2.6	2.2	2.9	3.2	2.7	2.8	2.5	3.0	3.3	2.9	2.9
Total Non-OPEC Supply	**63.5**	**65.6**	**66.8**	**61.1**	**61.9**	**62.2**	**63.0**	**61.9**	**63.5**	**64.3**	**65.0**	**63.7**	**65.0**	**63.7**	**64.4**	**64.8**	**64.5**
OPEC[2]																	
Crude	31.4	29.6	28.2	25.6	24.1	24.9	25.7	25.3	25.5	26.9	27.8	26.4	28.4				
NGLs	5.4	5.3	5.3	5.1	5.0	5.0	5.1	5.1	5.1	5.1	5.2	5.1	5.3	5.4	5.4	5.4	5.4
Total OPEC	**36.8**	**35.0**	**33.5**	**30.6**	**29.1**	**29.9**	**30.8**	**30.4**	**30.6**	**32.0**	**32.9**	**31.5**	**33.7**				
Total Supply	**100.3**	**100.6**	**100.3**	**91.7**	**90.9**	**92.2**	**93.8**	**92.3**	**94.1**	**96.4**	**98.0**	**95.2**	**98.7**				
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	1.0	2.6	-0.4	-1.6	0.4	-1.3	-0.5	-1.3	-1.2	-1.1					
Government	-0.1	0.0	0.0	0.3	-0.1	-0.1	0.0	0.0	-0.2	-0.1	-0.3	-0.2					
Total	**0.0**	**0.0**	**1.1**	**2.9**	**-0.5**	**-1.7**	**0.4**	**-1.3**	**-0.7**	**-1.4**	**-1.5**	**-1.2**					
Floating storage/Oil in transit	0.1	0.1	0.4	0.6	-2.0	1.0	0.0	-0.5	-0.5	-0.4	1.1	-0.1					
Miscellaneous to balance[5]	0.6	0.0	3.9	3.8	0.4	-2.3	1.4	-0.2	-0.9	-0.6	-2.2	-1.0					
Total Stock Ch. & Misc	**0.8**	**0.1**	**5.4**	**7.3**	**-2.1**	**-3.0**	**1.9**	**-2.0**	**-2.2**	**-2.4**	**-2.6**	**-2.3**	**0.1**				
Memo items:																	
Call on OPEC crude + Stock ch.[6]	30.6	29.5	22.8	18.3	26.2	27.9	23.8	27.3	27.7	29.3	30.3	28.7	28.3	29.2	30.3	30.2	29.5

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply. Includes biofuels.
2 OPEC data based on today's membership throughout the time series.
3 Net volumetric gains and losses in the refining process and marine transportation losses.
4 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
5 Includes changes in non-reported stocks in OECD and non-OECD areas.
6 Total demand minus total non-OPEC supply minus OPEC NGLs.

Table 1a
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1
(million barrels per day)

	2018	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
OECD DEMAND																	
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-0.3	-	-	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	0.1	0.1	-	-
Total OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.1**	**-**	**-0.5**	**0.1**	**0.1**	**0.1**	**-0.1**
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.6	-0.1	-	-0.2
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1
Americas	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**	**-**	**-**	**0.1**	**-0.5**	**-0.2**	**-0.2**	**-0.2**
Total Demand	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**	**-**	**-**	**-0.4**	**-0.4**	**-0.1**	**-0.1**	**-0.3**
OECD SUPPLY																	
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-0.5	-0.2	0.1	0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	0.2	-0.2	-0.1	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.6**	**-**	**-0.1**	**-**	**-0.2**
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-0.1	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	-	0.1
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.1**	**0.4**	**-**	**-**	**0.1**
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-0.1	-	-
Total Non-OPEC Supply	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.3**	**0.4**	**-0.2**	**-0.1**	**-0.1**
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-					
NGLs	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1
Total OPEC	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**	**-0.1**	**-0.1**	**-0.1**					
Total Supply	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**	**-0.1**	**-0.1**	**-0.1**					
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-					
Government	-	-	-	-	-	-	-	-	-	-	-	-					
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**					
Floating storage/Oil in transit	-0.1	0.1	-0.1	-	-0.3	0.3	-0.1	0.1	-0.1	-	0.1	-					
Miscellaneous to balance	0.1	-0.1	0.1	-	0.4	-0.3	0.1	-0.1	0.1	-	-0.2	-0.1					
Total Stock Ch. & Misc	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**	**-**	**-0.1**	**-0.1**					
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	0.1	-	-0.8	0.2	-	-0.2

Note: When submitting monthly oil statistics, OECD member countries may update data for prior periods. Similar updates to non-OECD data can also occur.

Table 1b
WORLD OIL SUPPLY AND DEMAND (Including OPEC+ based on current agreement[1])
(million barrels per day)

	2018	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
Total Demand	**99.5**	**100.4**	**94.9**	**84.5**	**93.0**	**95.1**	**91.9**	**94.3**	**96.3**	**98.8**	**100.5**	**97.5**	**98.5**	**98.3**	**100.1**	**100.5**	**99.4**
OECD SUPPLY																	
Americas[2]	20.9	22.8	23.9	20.7	21.3	21.8	21.9	21.4	22.3	22.4	23.3	22.4	23.0	23.6	24.2	24.5	23.8
Europe	3.5	3.4	3.7	3.6	3.4	3.5	3.6	3.6	3.1	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.4
Asia Oceania	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total OECD (non-OPEC+)	**24.8**	**26.7**	**28.1**	**24.8**	**25.2**	**25.9**	**26.0**	**25.5**	**25.9**	**26.4**	**27.2**	**26.2**	**26.9**	**27.5**	**27.9**	**28.5**	**27.7**
NON-OECD SUPPLY																	
FSU[3]	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.8	3.9	4.0	4.0	4.0	3.9	4.0	4.1	4.1	4.1	4.0	4.1	4.2	4.2	4.2	4.1	4.2
Other Asia[4]	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1
Latin America	5.1	5.3	5.6	5.1	5.4	5.2	5.3	5.3	5.3	5.4	5.2	5.3	5.4	5.5	5.8	5.8	5.6
Middle East[5]	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0
Africa[6]	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.1
Total Non-OECD (non-OPEC+)	**15.1**	**15.3**	**15.5**	**14.9**	**15.1**	**14.8**	**15.1**	**15.1**	**15.1**	**15.2**	**14.8**	**15.0**	**15.2**	**15.2**	**15.5**	**15.5**	**15.4**
Processing Gains	2.4	2.4	2.3	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Global Biofuels	2.7	2.8	2.3	2.5	3.1	2.6	2.6	2.2	2.9	3.2	2.7	2.8	2.5	3.0	3.3	2.9	2.9
Total Non-OPEC+	**44.9**	**47.2**	**48.2**	**44.3**	**45.5**	**45.4**	**45.9**	**44.9**	**46.1**	**47.0**	**47.0**	**46.3**	**46.8**	**48.1**	**49.0**	**49.2**	**48.3**
OPEC+ CRUDE																	
Algeria	1.0	1.0	1.0	0.9	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0
Angola	1.5	1.4	1.4	1.3	1.2	1.2	1.3	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.1
Azerbaijan	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Bahrain	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Brunei	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Congo	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Equatorial Guinea	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Gabon	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Iran	3.6	2.4	2.0	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.5	2.4	2.6	2.6	2.6	2.6	2.6
Iraq	4.6	4.7	4.6	4.1	3.7	3.8	4.0	3.9	3.9	4.1	4.2	4.0	4.3	4.4	4.6	4.7	4.5
Kazakhstan	1.6	1.6	1.7	1.5	1.4	1.4	1.5	1.5	1.5	1.4	1.7	1.5	1.6	1.5	1.5	1.6	1.6
Kuwait	2.7	2.7	2.7	2.4	2.2	2.3	2.4	2.3	2.4	2.4	2.5	2.4	2.6	2.7	2.8	2.8	2.7
Libya	1.0	1.1	0.3	0.1	0.1	0.9	0.4	1.2	1.2	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.2
Malaysia	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Mexico	1.8	1.7	1.7	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7
Nigeria	1.6	1.7	1.8	1.6	1.4	1.3	1.5	1.4	1.3	1.3	1.2	1.3	1.3	1.4	1.4	1.4	1.4
Oman	0.9	0.8	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8
Russia	10.4	10.4	10.4	9.2	8.9	9.1	9.4	9.3	9.5	9.7	10.0	9.6	10.0	7.6	7.2	7.3	8.0
Saudi Arabia	10.3	9.9	9.8	9.3	8.8	9.0	9.2	8.5	8.6	9.6	9.9	9.2	10.2	10.5	10.9	11.0	10.7
South Sudan	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1
Sudan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
UAE	3.0	3.2	3.2	2.9	2.8	2.5	2.9	2.6	2.6	2.8	2.9	2.7	3.0	3.0	3.1	3.2	3.1
Venezuela	1.4	0.9	0.8	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.8	0.6	0.7	0.8	0.8	0.8	0.7
OPEC+ Crude	**47.8**	**45.9**	**44.6**	**40.2**	**38.2**	**39.3**	**40.6**	**40.0**	**40.5**	**41.9**	**43.3**	**41.4**	**44.0**	**42.3**	**42.7**	**43.1**	**43.0**
OPEC+ NGLs & Condensate	7.4	7.4	7.4	7.1	7.1	7.3	7.2	7.4	7.4	7.3	7.5	7.4	7.7	7.8	7.9	8.0	7.9
OPEC+ Nonconventionals	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total OPEC+	**55.3**	**53.4**	**52.1**	**47.5**	**45.4**	**46.7**	**47.9**	**47.5**	**48.0**	**49.3**	**50.9**	**48.9**	**51.8**	**50.3**	**50.7**	**51.2**	**51.0**
Total Supply Oil	**100.3**	**100.6**	**100.3**	**91.7**	**90.9**	**92.2**	**93.8**	**92.3**	**94.1**	**96.4**	**98.0**	**95.2**	**98.7**	**98.3**	**99.7**	**100.4**	**99.3**
Memo items:																	
Call on OPEC+ crude + Stock ch	47.0	45.8	39.1	33.0	40.3	42.3	38.7	42.0	42.7	44.3	45.8	43.7	43.9	42.3	43.1	43.2	43.1

1 From Apr 2022, OPEC+ supply reflects latest OPEC+ deal and individual country's sustainable capacity. Libya, Iran, Venezuela held at most recent level through 2022.

2 OECD Americas excludes Mexico

3 FSU excludes Russia, Kazakhstan, Azerbaijan

4 Other Asia excludes Brunei, Malaysia

5 Middle East excludes Oman, Bahrain

6 Africa excludes Sudan, South Sudan

Table 2
SUMMARY OF GLOBAL OIL DEMAND

	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
Demand (mb/d)																
Americas	25.53	24.40	19.98	22.70	23.13	22.56	22.82	24.38	24.83	25.05	24.27	24.38	24.76	25.05	24.94	24.79
Europe	14.31	13.33	11.02	12.87	12.51	12.43	11.91	12.64	13.85	13.90	13.08	13.09	13.44	13.87	13.65	13.52
Asia Oceania	7.93	7.86	6.60	6.75	7.35	7.14	7.67	7.04	7.11	7.82	7.41	7.98	7.28	7.45	7.88	7.65
Total OECD	**47.78**	**45.59**	**37.59**	**42.33**	**42.99**	**42.13**	**42.40**	**44.05**	**45.79**	**46.76**	**44.76**	**45.45**	**45.48**	**46.37**	**46.48**	**45.95**
Asia	27.90	25.72	26.04	27.24	28.66	26.92	28.49	28.54	28.28	29.37	28.67	29.32	29.18	29.33	29.94	29.45
Middle East	8.71	8.36	7.58	8.62	8.27	8.21	8.26	8.47	8.90	8.45	8.52	8.47	8.51	8.97	8.47	8.60
Americas	6.29	5.77	5.04	5.72	5.91	5.61	5.80	5.86	6.20	6.12	6.00	5.90	6.00	6.17	6.14	6.05
FSU	4.72	4.57	4.09	4.67	4.66	4.50	4.56	4.67	4.90	4.98	4.78	4.58	4.30	4.47	4.49	4.46
Africa	4.25	4.13	3.48	3.75	3.92	3.82	4.09	3.99	3.95	4.10	4.03	4.12	4.11	4.03	4.18	4.11
Europe	0.78	0.72	0.66	0.72	0.74	0.71	0.72	0.72	0.75	0.75	0.74	0.72	0.74	0.76	0.76	0.75
Total Non-OECD	**52.66**	**49.26**	**46.88**	**50.71**	**52.16**	**49.76**	**51.92**	**52.25**	**52.98**	**53.77**	**52.73**	**53.10**	**52.84**	**53.73**	**53.98**	**53.42**
World	**100.44**	**94.85**	**84.47**	**93.04**	**95.15**	**91.89**	**94.31**	**96.30**	**98.77**	**100.53**	**97.50**	**98.55**	**98.32**	**100.10**	**100.46**	**99.37**
of which:																
United States[1]	20.46	19.50	16.07	18.45	18.72	18.19	18.45	20.03	20.21	20.41	19.78	19.77	20.05	20.19	20.23	20.06
Europe five[2]	8.20	7.62	5.93	7.11	7.03	6.92	6.68	7.08	7.67	7.82	7.32	7.46	7.50	7.69	7.68	7.58
China	13.90	12.22	14.75	14.99	15.21	14.30	14.97	15.68	15.68	15.74	15.52	15.43	15.39	15.99	15.99	15.70
Japan	3.74	3.78	2.93	3.06	3.53	3.33	3.73	3.08	3.18	3.67	3.42	3.83	3.25	3.33	3.66	3.52
India	4.99	4.92	3.89	4.25	5.10	4.54	4.99	4.45	4.48	4.93	4.71	5.14	5.08	4.72	5.15	5.02
Russia	3.57	3.52	3.08	3.58	3.50	3.42	3.50	3.58	3.76	3.76	3.65	3.57	3.26	3.40	3.36	3.40
Brazil	3.08	2.95	2.64	2.99	3.13	2.93	2.97	2.98	3.19	3.12	3.07	2.96	2.99	3.10	3.11	3.04
Saudi Arabia	3.59	3.40	3.23	3.77	3.48	3.47	3.24	3.54	3.76	3.45	3.50	3.30	3.38	3.73	3.40	3.45
Canada	2.63	2.51	2.10	2.31	2.29	2.30	2.26	2.24	2.50	2.40	2.35	2.40	2.41	2.56	2.46	2.46
Korea	2.60	2.53	2.45	2.36	2.40	2.44	2.55	2.50	2.59	2.70	2.59	2.73	2.56	2.66	2.72	2.67
Mexico	1.96	1.85	1.40	1.50	1.58	1.58	1.62	1.64	1.60	1.71	1.64	1.71	1.81	1.82	1.77	1.78
Iran	1.93	2.01	1.79	1.84	1.87	1.87	2.02	1.93	1.93	1.93	1.95	2.04	1.96	1.95	1.93	1.97
Total	**70.64**	**66.80**	**60.25**	**66.21**	**67.86**	**65.29**	**66.98**	**68.72**	**70.56**	**71.64**	**69.49**	**70.35**	**69.64**	**71.14**	**71.46**	**70.65**
% of World	**70.3%**	**70.4%**	**71.3%**	**71.2%**	**71.3%**	**71.1%**	**71.0%**	**71.4%**	**71.4%**	**71.3%**	**71.3%**	**71.4%**	**70.8%**	**71.1%**	**71.1%**	**71.1%**
Annual Change (% per annum)																
Americas	0.5	-3.4	-21.2	-12.4	-9.5	-11.7	-6.5	22.0	9.4	8.3	7.6	6.8	1.6	0.9	-0.4	2.1
Europe	0.0	-5.4	-22.8	-12.7	-11.6	-13.1	-10.6	14.7	7.6	11.1	5.2	9.9	6.4	0.1	-1.8	3.3
Asia Oceania	-1.0	-6.0	-12.6	-12.3	-9.6	-10.0	-2.5	6.7	5.4	6.4	3.8	4.2	3.4	4.7	0.9	3.2
Total OECD	**0.1**	**-4.5**	**-20.3**	**-12.5**	**-10.2**	**-11.8**	**-7.0**	**17.2**	**8.2**	**8.8**	**6.3**	**7.2**	**3.3**	**1.3**	**-0.6**	**2.6**
Asia	2.9	-6.8	-6.9	-1.4	0.9	-3.5	10.8	9.6	3.8	2.5	6.5	2.9	2.3	3.7	2.0	2.7
Middle East	-0.1	-1.6	-11.3	-5.6	-4.7	-5.8	-1.1	11.8	3.3	2.2	3.9	2.5	0.5	0.8	0.2	1.0
Americas	0.6	-6.5	-19.8	-10.4	-6.8	-10.9	0.4	16.4	8.4	3.7	6.9	1.7	2.3	-0.4	0.3	0.9
FSU	0.8	1.6	-11.9	-4.8	-3.8	-4.8	-0.2	14.2	5.1	6.8	6.3	0.4	-7.8	-8.9	-9.9	-6.7
Africa	0.8	-4.2	-19.0	-9.6	-7.9	-10.2	-1.1	14.8	5.5	4.7	5.6	0.9	3.1	2.1	1.8	2.0
Europe	3.4	-4.9	-16.4	-9.5	-6.5	-9.4	1.0	9.8	3.7	1.9	4.0	-0.9	2.6	1.5	1.3	1.2
Total Non-OECD	**1.8**	**-4.9**	**-10.7**	**-4.3**	**-2.2**	**-5.5**	**5.4**	**11.5**	**4.5**	**3.1**	**6.0**	**2.3**	**1.1**	**1.4**	**0.4**	**1.3**
World	**1.0**	**-4.7**	**-15.3**	**-8.2**	**-6.0**	**-8.5**	**-0.6**	**14.0**	**6.2**	**5.7**	**6.1**	**4.5**	**2.1**	**1.4**	**-0.1**	**1.9**
Annual Change (mb/d)																
Americas	0.12	-0.87	-5.39	-3.20	-2.44	-2.98	-1.58	4.40	2.13	1.91	1.72	1.55	0.39	0.23	-0.10	0.51
Europe	0.00	-0.76	-3.24	-1.87	-1.64	-1.88	-1.42	1.62	0.97	1.39	0.65	1.18	0.81	0.02	-0.24	0.43
Asia Oceania	-0.08	-0.50	-0.95	-0.95	-0.78	-0.80	-0.19	0.44	0.36	0.47	0.27	0.32	0.24	0.34	0.07	0.24
Total OECD	**0.05**	**-2.14**	**-9.59**	**-6.02**	**-4.86**	**-5.65**	**-3.19**	**6.45**	**3.46**	**3.77**	**2.64**	**3.05**	**1.43**	**0.58**	**-0.28**	**1.19**
Asia	0.79	-1.86	-1.93	-0.39	0.26	-0.98	2.77	2.49	1.03	0.71	1.75	0.83	0.64	1.05	0.58	0.78
Middle East	-0.01	-0.13	-0.96	-0.51	-0.41	-0.50	-0.09	0.89	0.29	0.18	0.32	0.20	0.04	0.07	0.02	0.08
Americas	0.04	-0.40	-1.24	-0.67	-0.43	-0.68	0.02	0.82	0.48	0.22	0.39	0.10	0.14	-0.03	0.02	0.06
FSU	0.04	0.07	-0.55	-0.24	-0.19	-0.23	-0.01	0.58	0.24	0.32	0.28	0.02	-0.36	-0.43	-0.49	-0.32
Africa	0.03	-0.18	-0.82	-0.40	-0.34	-0.43	-0.04	0.52	0.21	0.18	0.21	0.04	0.12	0.08	0.08	0.08
Europe	0.03	-0.04	-0.13	-0.08	-0.05	-0.07	0.01	0.06	0.03	0.01	0.03	-0.01	0.02	0.01	0.01	0.01
Total Non-OECD	**0.92**	**-2.55**	**-5.63**	**-2.27**	**-1.16**	**-2.90**	**2.65**	**5.37**	**2.27**	**1.62**	**2.97**	**1.19**	**0.59**	**0.75**	**0.21**	**0.68**
World	**0.97**	**-4.69**	**-15.22**	**-8.29**	**-6.02**	**-8.55**	**-0.54**	**11.83**	**5.73**	**5.38**	**5.61**	**4.23**	**2.03**	**1.33**	**-0.07**	**1.87**
Revisions to Oil Demand from Last Month's Report (mb/d)																
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	-0.35	-0.01	-0.01	0.02	-0.08
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.05	0.03	0.03	0.03	0.01
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.10	0.08	0.07	0.02	0.02
Total OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.00**	**0.06**	**0.01**	**-0.50**	**0.10**	**0.10**	**0.06**	**-0.06**
Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.01	0.01	-0.07	-0.64	-0.13	-0.10	-0.24
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.04	-0.02	-0.01	-0.01
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.04	0.03	0.05
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.03	-0.01	-0.01	0.10	0.15	-0.03	-0.06	0.04
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.01	-0.01	-0.01	-0.01	-0.01
Europe	0.00	-0.02	-0.03	-0.05	-0.03	-0.03	-0.02	-0.02	-0.08	0.00	-0.03	-0.03	-0.03	-0.06	-0.01	-0.03
Total Non-OECD	**0.00**	**-0.02**	**-0.03**	**-0.05**	**-0.03**	**-0.03**	**-0.02**	**-0.03**	**-0.08**	**-0.01**	**-0.04**	**0.10**	**-0.54**	**-0.21**	**-0.16**	**-0.20**
World	**0.00**	**-0.02**	**-0.03**	**-0.05**	**-0.03**	**-0.03**	**-0.02**	**-0.03**	**-0.08**	**0.05**	**-0.02**	**-0.40**	**-0.44**	**-0.11**	**-0.09**	**-0.26**
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	-0.02	-0.03	-0.05	-0.02	-0.03	0.00	0.00	-0.03	0.07	0.01	-0.38	-0.40	-0.04	-0.14	-0.24

1 US figures exclude US territories.
2 France, Germany, Italy, Spain and UK

Table 2a
OECD REGIONAL OIL DEMAND[1]
(million barrels per day)

	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22 [2]	Latest month vs. Dec 21	Latest month vs. Jan 21
Americas											
LPG and ethane	3.56	3.71	3.71	3.58	3.59	3.94	3.96	4.44	4.50	0.06	0.29
Naphtha	0.25	0.25	0.23	0.27	0.26	0.24	0.25	0.28	0.24	-0.04	-0.01
Motor gasoline	9.55	10.34	9.45	10.57	10.73	10.58	10.66	10.63	9.48	-1.15	0.46
Jet and kerosene	1.23	1.55	1.28	1.48	1.72	1.72	1.73	1.77	1.62	-0.14	0.33
Gasoil/diesel oil	4.93	5.08	5.08	5.05	5.02	5.16	5.39	5.07	5.17	0.10	0.19
Residual fuel oil	0.40	0.53	0.52	0.49	0.54	0.58	0.61	0.61	0.54	-0.07	0.07
Other products	2.64	2.82	2.55	2.93	2.96	2.83	2.72	2.70	2.60	-0.10	-0.01
Total	**22.56**	**24.27**	**22.82**	**24.38**	**24.83**	**25.05**	**25.32**	**25.50**	**24.15**	**-1.34**	**1.33**
Europe											
LPG and ethane	1.08	1.09	1.12	1.06	1.10	1.07	1.02	1.14	1.02	-0.12	-0.11
Naphtha	1.07	1.14	1.23	1.02	1.11	1.19	1.17	1.19	1.28	0.08	-0.02
Motor gasoline	1.75	1.92	1.57	1.92	2.19	2.01	2.01	1.98	1.73	-0.25	0.29
Jet and kerosene	0.73	0.84	0.61	0.67	1.01	1.05	1.00	1.08	0.92	-0.15	0.31
Gasoil/diesel oil	5.96	6.26	5.70	6.13	6.52	6.68	6.72	6.55	5.62	-0.94	0.48
Residual fuel oil	0.68	0.71	0.69	0.69	0.73	0.71	0.71	0.73	0.74	0.00	0.06
Other products	1.15	1.13	1.00	1.14	1.19	1.18	1.23	1.04	1.03	-0.01	0.10
Total	**12.43**	**13.08**	**11.91**	**12.64**	**13.85**	**13.90**	**13.86**	**13.72**	**12.33**	**-1.39**	**1.11**
Asia Oceania											
LPG and ethane	0.78	0.79	0.86	0.77	0.73	0.79	0.77	0.90	0.94	0.04	0.05
Naphtha	1.82	1.99	1.97	1.86	2.02	2.09	2.06	2.20	2.06	-0.14	0.18
Motor gasoline	1.35	1.36	1.32	1.37	1.36	1.40	1.37	1.49	1.30	-0.19	0.07
Jet and kerosene	0.61	0.61	0.82	0.47	0.43	0.72	0.65	0.93	0.97	0.04	0.02
Gasoil/diesel oil	1.79	1.83	1.82	1.82	1.77	1.92	1.88	2.03	1.83	-0.20	0.12
Residual fuel oil	0.43	0.46	0.50	0.41	0.44	0.49	0.49	0.52	0.56	0.04	0.04
Other products	0.35	0.37	0.37	0.35	0.36	0.40	0.41	0.46	0.35	-0.10	-0.01
Total	**7.14**	**7.41**	**7.66**	**7.04**	**7.11**	**7.82**	**7.63**	**8.54**	**8.02**	**-0.51**	**0.47**
OECD											
LPG and ethane	5.43	5.58	5.70	5.41	5.43	5.80	5.75	6.48	6.46	-0.02	0.23
Naphtha	3.14	3.37	3.42	3.15	3.38	3.53	3.48	3.67	3.57	-0.10	0.15
Motor gasoline	12.66	13.62	12.34	13.86	14.29	13.99	14.05	14.11	12.52	-1.59	0.82
Jet and kerosene	2.57	3.00	2.70	2.62	3.16	3.49	3.38	3.78	3.52	-0.26	0.67
Gasoil/diesel oil	12.68	13.17	12.61	13.00	13.30	13.76	13.98	13.65	12.62	-1.03	0.80
Residual fuel oil	1.50	1.70	1.71	1.59	1.71	1.79	1.81	1.86	1.84	-0.02	0.17
Other products	4.14	4.32	3.92	4.42	4.52	4.41	4.36	4.20	3.98	-0.22	0.08
Total	**42.13**	**44.76**	**42.40**	**44.05**	**45.79**	**46.76**	**46.81**	**47.75**	**44.51**	**-3.24**	**2.92**

1 Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils. North America comprises US 50 states, US territories, Mexico, Canada and Chile.
2 Latest official OECD submissions (MOS).

Table 2b
OIL DEMAND IN SELECTED OECD COUNTRIES[1]
(million barrels per day)

	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22 [2]	Latest month vs. Dec 21	Latest month vs. Jan 21
United States[3]											
LPG and ethane	2.74	2.85	2.85	2.76	2.73	3.07	3.08	3.50	3.62	0.12	0.30
Naphtha	0.18	0.19	0.16	0.21	0.20	0.18	0.19	0.21	0.16	-0.04	-0.01
Motor gasoline	8.05	8.80	8.00	9.07	9.13	8.96	8.99	8.95	7.98	-0.97	0.32
Jet and kerosene	1.08	1.38	1.14	1.34	1.52	1.49	1.50	1.53	1.44	-0.09	0.30
Gasoil/diesel oil	3.78	3.94	3.97	3.93	3.87	4.00	4.17	3.93	4.08	0.15	0.15
Residual fuel oil	0.21	0.31	0.26	0.25	0.33	0.41	0.43	0.42	0.33	-0.08	0.09
Other products	2.13	2.32	2.05	2.47	2.43	2.30	2.23	2.23	2.11	-0.12	-0.01
Total	**18.19**	**19.78**	**18.45**	**20.03**	**20.21**	**20.41**	**20.59**	**20.76**	**19.73**	**-1.03**	**1.14**
Japan											
LPG and ethane	0.41	0.42	0.50	0.40	0.37	0.43	0.42	0.51	0.52	0.01	0.01
Naphtha	0.68	0.73	0.74	0.68	0.70	0.79	0.78	0.83	0.72	-0.11	-0.01
Motor gasoline	0.76	0.74	0.71	0.71	0.78	0.76	0.72	0.80	0.69	-0.12	0.02
Jet and kerosene	0.36	0.36	0.55	0.24	0.21	0.45	0.39	0.62	0.64	0.01	-0.03
Diesel	0.40	0.40	0.41	0.39	0.39	0.42	0.40	0.44	0.38	-0.06	0.01
Other gasoil	0.30	0.31	0.35	0.28	0.27	0.33	0.31	0.37	0.35	-0.02	0.01
Residual fuel oil	0.21	0.24	0.27	0.21	0.23	0.26	0.26	0.28	0.30	0.02	0.01
Other products	0.20	0.22	0.20	0.18	0.23	0.25	0.24	0.27	0.21	-0.06	0.00
Total	**3.33**	**3.42**	**3.73**	**3.08**	**3.18**	**3.67**	**3.52**	**4.13**	**3.80**	**-0.33**	**0.02**
Germany											
LPG and ethane	0.11	0.12	0.12	0.13	0.12	0.11	0.10	0.11	0.11	0.00	0.01
Naphtha	0.29	0.34	0.35	0.31	0.32	0.36	0.34	0.37	0.38	0.01	0.02
Motor gasoline	0.45	0.45	0.40	0.44	0.48	0.46	0.47	0.44	0.40	-0.04	0.05
Jet and kerosene	0.10	0.13	0.09	0.11	0.16	0.16	0.16	0.16	0.13	-0.03	0.05
Diesel	0.71	0.71	0.60	0.71	0.77	0.75	0.78	0.70	0.61	-0.08	0.09
Other gasoil	0.36	0.28	0.22	0.26	0.26	0.36	0.35	0.35	0.26	-0.10	0.07
Residual fuel oil	0.05	0.05	0.05	0.04	0.05	0.06	0.06	0.06	0.07	0.01	0.02
Other products	0.08	0.07	0.05	0.06	0.07	0.08	0.08	0.06	0.05	-0.01	-0.01
Total	**2.15**	**2.14**	**1.89**	**2.07**	**2.23**	**2.34**	**2.35**	**2.26**	**2.02**	**-0.24**	**0.31**
Italy											
LPG and ethane	0.09	0.10	0.11	0.09	0.09	0.11	0.10	0.14	0.11	-0.02	0.01
Naphtha	0.10	0.10	0.11	0.10	0.09	0.11	0.12	0.11	0.11	0.00	-0.02
Motor gasoline	0.14	0.17	0.13	0.17	0.19	0.18	0.18	0.17	0.14	-0.03	0.04
Jet and kerosene	0.04	0.04	0.02	0.04	0.07	0.05	0.05	0.04	0.05	0.00	0.04
Diesel	0.42	0.49	0.44	0.49	0.52	0.52	0.52	0.53	0.44	-0.09	0.04
Other gasoil	0.06	0.06	0.05	0.06	0.07	0.06	0.05	0.06	0.02	-0.04	-0.01
Residual fuel oil	0.06	0.06	0.05	0.05	0.06	0.06	0.06	0.05	0.05	-0.01	0.00
Other products	0.14	0.15	0.14	0.16	0.16	0.16	0.17	0.15	0.13	-0.02	0.00
Total	**1.05**	**1.18**	**1.04**	**1.15**	**1.25**	**1.25**	**1.24**	**1.26**	**1.05**	**-0.21**	**0.09**
France											
LPG and ethane	0.11	0.12	0.12	0.13	0.11	0.10	0.10	0.12	0.12	0.00	0.00
Naphtha	0.12	0.14	0.15	0.12	0.13	0.15	0.15	0.15	0.15	0.00	-0.01
Motor gasoline	0.17	0.21	0.18	0.20	0.24	0.22	0.22	0.22	0.19	-0.04	0.03
Jet and kerosene	0.09	0.09	0.08	0.07	0.11	0.11	0.11	0.10	0.10	0.00	0.00
Diesel	0.67	0.73	0.68	0.72	0.78	0.76	0.76	0.73	0.64	-0.09	0.02
Other gasoil	0.14	0.13	0.17	0.09	0.11	0.15	0.14	0.17	0.17	0.00	-0.01
Residual fuel oil	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.01	0.01
Other products	0.09	0.09	0.07	0.09	0.12	0.09	0.10	0.08	0.06	-0.01	0.01
Total	**1.42**	**1.54**	**1.47**	**1.45**	**1.63**	**1.61**	**1.60**	**1.59**	**1.46**	**-0.14**	**0.05**
United Kingdom											
LPG and ethane	0.13	0.11	0.13	0.09	0.10	0.11	0.12	0.10	0.11	0.01	-0.02
Naphtha	0.02	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.01	0.01
Motor gasoline	0.22	0.25	0.20	0.26	0.28	0.28	0.28	0.28	0.26	-0.02	0.05
Jet and kerosene	0.19	0.18	0.17	0.14	0.16	0.24	0.22	0.29	0.22	-0.07	0.04
Diesel	0.43	0.48	0.42	0.50	0.50	0.50	0.50	0.50	0.44	-0.06	0.07
Other gasoil	0.11	0.13	0.11	0.14	0.14	0.12	0.12	0.11	0.10	-0.02	0.00
Residual fuel oil	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.00	0.00
Other products	0.10	0.11	0.09	0.11	0.11	0.10	0.11	0.10	0.10	0.00	0.00
Total	**1.21**	**1.27**	**1.16**	**1.25**	**1.31**	**1.37**	**1.37**	**1.40**	**1.27**	**-0.13**	**0.16**
Canada											
LPG and ethane	0.47	0.50	0.51	0.49	0.50	0.49	0.49	0.53	0.51	-0.02	-0.02
Naphtha	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.00	0.00
Motor gasoline	0.77	0.80	0.75	0.78	0.87	0.80	0.86	0.81	0.75	-0.06	0.05
Jet and kerosene	0.07	0.08	0.06	0.05	0.10	0.11	0.11	0.12	0.08	-0.04	0.01
Diesel	0.27	0.27	0.27	0.27	0.27	0.26	0.27	0.26	0.26	0.00	0.00
Other gasoil	0.34	0.35	0.33	0.33	0.37	0.35	0.37	0.32	0.34	0.02	0.01
Residual fuel oil	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.04	0.05	0.02	0.02
Other products	0.32	0.31	0.28	0.27	0.35	0.34	0.32	0.29	0.31	0.02	0.02
Total	**2.30**	**2.35**	**2.26**	**2.24**	**2.50**	**2.40**	**2.47**	**2.41**	**2.33**	**-0.08**	**0.09**

1 Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils.
2 Latest official OECD submissions (MOS).
3 US figures exclude US territories.

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2020	2021	2022	4Q21	1Q22	2Q22	3Q22	4Q22	Jan 22	Feb 22	Mar 22
OPEC											
Crude Oil											
Saudi Arabia	9.21	9.15		9.91	10.20				10.10	10.23	10.28
Iran	2.00	2.42		2.48	2.56				2.52	2.58	2.58
Iraq	4.05	4.03		4.24	4.27				4.26	4.27	4.29
UAE	2.86	2.72		2.86	2.97				2.96	2.96	2.99
Kuwait	2.41	2.42		2.53	2.61				2.57	2.61	2.64
Angola	1.27	1.12		1.12	1.16				1.19	1.16	1.14
Nigeria	1.49	1.31		1.24	1.30				1.38	1.27	1.25
Libya	0.35	1.15		1.12	1.08				1.00	1.16	1.10
Algeria	0.90	0.91		0.96	0.99				0.98	0.98	1.00
Congo	0.30	0.27		0.26	0.27				0.28	0.26	0.26
Gabon	0.20	0.18		0.19	0.19				0.18	0.19	0.20
Equatorial Guinea	0.11	0.10		0.08	0.09				0.09	0.09	0.09
Venezuela	0.53	0.61		0.76	0.71				0.69	0.72	0.72
Total Crude Oil	**25.69**	**26.39**		**27.76**	**28.40**				**28.20**	**28.48**	**28.54**
of which Neutral Zone [1]	*0.11*	*0.25*		*0.28*	*0.27*				*0.30*	*0.22*	*0.28*
Total NGLs[2]	**5.09**	**5.12**	**5.37**	**5.16**	**5.29**	**5.37**	**5.41**	**5.41**	**5.25**	**5.27**	**5.35**
Total OPEC[3]	**30.78**	**31.51**		**32.92**	**33.69**				**33.45**	**33.75**	**33.89**
NON-OPEC[4]											
OECD											
Americas	23.84	24.31	25.84	25.29	24.96	25.58	26.18	26.59	24.74	24.92	25.23
United States	16.56	16.73	17.97	17.54	17.22	17.86	18.23	18.56	16.99	17.21	17.47
Mexico	1.93	1.95	2.02	1.97	1.99	2.00	2.03	2.07	2.00	1.98	1.98
Canada	5.35	5.63	5.83	5.77	5.74	5.70	5.92	5.96	5.74	5.71	5.77
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	3.56	3.38	3.37	3.38	3.37	3.42	3.27	3.44	3.35	3.34	3.41
UK	1.08	0.89	0.90	0.88	0.91	0.89	0.91	0.90	0.91	0.92	0.90
Norway	2.01	2.04	2.03	2.04	2.00	2.08	1.92	2.11	1.97	1.98	2.06
Others	0.47	0.46	0.44	0.46	0.46	0.44	0.44	0.43	0.48	0.44	0.45
Asia Oceania	0.52	0.50	0.51	0.51	0.51	0.51	0.51	0.50	0.49	0.52	0.52
Australia	0.45	0.43	0.44	0.45	0.44	0.44	0.44	0.43	0.42	0.45	0.45
Others	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Total OECD	**27.92**	**28.20**	**29.72**	**29.19**	**28.84**	**29.51**	**29.96**	**30.54**	**28.58**	**28.78**	**29.16**
NON-OECD											
Former USSR	13.50	13.77	12.35	14.31	14.41	11.80	11.48	11.73	14.44	14.46	14.35
Russia	10.61	10.87	9.43	11.24	11.37	9.03	8.65	8.71	11.37	11.40	11.35
Azerbaijan	0.70	0.70	0.70	0.71	0.70	0.69	0.69	0.71	0.70	0.69	0.70
Kazakhstan	1.84	1.85	1.89	1.99	1.98	1.76	1.81	2.00	2.00	2.00	1.95
Others	0.36	0.36	0.33	0.36	0.36	0.32	0.32	0.32	0.36	0.37	0.34
Asia	6.99	6.91	6.94	6.81	7.01	6.98	6.92	6.85	6.97	7.05	7.00
China	3.97	4.06	4.18	4.01	4.22	4.21	4.17	4.13	4.22	4.22	4.21
Malaysia	0.60	0.57	0.57	0.55	0.58	0.57	0.57	0.57	0.55	0.60	0.59
India	0.75	0.73	0.70	0.72	0.71	0.70	0.69	0.68	0.71	0.72	0.71
Indonesia	0.73	0.68	0.65	0.67	0.66	0.66	0.65	0.64	0.67	0.66	0.66
Others	0.93	0.88	0.83	0.85	0.84	0.84	0.83	0.82	0.82	0.85	0.83
Europe	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.11
Americas	5.32	5.30	5.65	5.18	5.42	5.51	5.79	5.85	5.47	5.38	5.43
Brazil	3.04	3.00	3.18	2.93	3.08	3.08	3.28	3.29	3.14	3.02	3.08
Argentina	0.61	0.64	0.70	0.67	0.69	0.70	0.70	0.70	0.69	0.69	0.69
Colombia	0.79	0.74	0.74	0.75	0.75	0.74	0.74	0.74	0.75	0.75	0.75
Ecuador	0.48	0.48	0.47	0.40	0.47	0.48	0.47	0.46	0.46	0.49	0.48
Others	0.40	0.43	0.55	0.42	0.43	0.52	0.61	0.66	0.42	0.43	0.43
Middle East	3.01	3.09	3.22	3.13	3.16	3.23	3.24	3.24	3.16	3.13	3.19
Oman	0.96	0.98	1.07	1.01	1.05	1.07	1.08	1.08	1.04	1.05	1.06
Qatar	1.77	1.82	1.85	1.83	1.82	1.85	1.85	1.85	1.85	1.79	1.83
Others	0.28	0.29	0.30	0.29	0.30	0.31	0.30	0.30	0.28	0.30	0.31
Africa	1.39	1.31	1.28	1.30	1.29	1.26	1.29	1.29	1.31	1.29	1.27
Egypt	0.60	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Others	0.79	0.74	0.72	0.73	0.72	0.69	0.72	0.72	0.74	0.72	0.70
Total Non-OECD	**30.33**	**30.50**	**29.53**	**30.84**	**31.41**	**28.89**	**28.82**	**29.06**	**31.45**	**31.42**	**31.35**
Processing gains[5]	2.11	2.25	2.29	2.32	2.29	2.29	2.29	2.29	2.29	2.29	2.29
Global biofuels	2.63	2.75	2.93	2.69	2.46	3.03	3.29	2.92	2.46	2.45	2.46
TOTAL NON-OPEC	**63.00**	**63.71**	**64.47**	**65.04**	**64.99**	**63.71**	**64.35**	**64.81**	**64.78**	**64.94**	**65.25**
TOTAL SUPPLY	**93.78**	**95.21**		**97.95**	**98.69**				**98.23**	**98.69**	**99.14**

1 Neutral Zone production is already included in Saudi Arabia and Kuwait production with their respective shares.
2 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. GTL in Nigeria and non-oil inputs to Saudi Arabian MTBE.
3 OPEC data based on today's membership throughout the time series.
4 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
5 Net volumetric gains and losses in refining and marine transportation losses.

Table 3a
OIL SUPPLY IN OECD COUNTRIES[1]
(thousand of barrels per day)

	2020	2021	2022	4Q21	1Q22	2Q22	3Q22	4Q22	Jan 22	Feb 22	Mar 22
United States											
Alaska	448	437	447	445	446	448	434	459	450	451	439
California	404	369	345	357	349	346	343	340	349	351	348
Texas	4854	4771	5230	4983	5031	5203	5338	5344	4867	5057	5172
Federal Gulf of Mexico[2]	1644	1701	1873	1729	1774	1894	1934	1889	1706	1786	1831
Other US Lower 48	3934	3908	4301	4113	4105	4243	4394	4457	3999	4151	4170
NGLs[3]	5175	5397	5598	5738	5347	5557	5604	5878	5446	5248	5337
Other Hydrocarbons	98	142	179	173	170	173	180	193	170	170	170
Total	**16556**	**16725**	**17973**	**17537**	**17223**	**17864**	**18228**	**18559**	**16987**	**17214**	**17468**
Canada											
Alberta Light/Medium/Heavy	423	436	458	459	461	460	458	455	450	467	465
Alberta Bitumen	1718	1921	2170	1963	2079	2133	2283	2185	2139	1955	2132
Saskatchewan	435	446	448	453	454	450	446	441	455	454	453
Other Crude	490	456	401	427	347	417	415	424	312	355	374
NGLs	949	1007	1031	988	1043	1027	1044	1010	1036	1041	1053
Other Upgraders	219	180	178	199	182	163	171	194	181	193	173
Synthetic Crudes	1116	1181	1144	1280	1174	1052	1102	1247	1169	1246	1116
Total	**5349**	**5626**	**5830**	**5769**	**5741**	**5701**	**5918**	**5956**	**5742**	**5711**	**5766**
Mexico											
Crude	1716	1780	1857	1803	1820	1836	1864	1909	1828	1812	1818
NGLs	206	170	160	167	165	162	159	156	166	166	162
Total	**1926**	**1954**	**2022**	**1975**	**1989**	**2002**	**2027**	**2069**	**1998**	**1983**	**1985**
UK											
Brent Fields	35	25	23	23	27	26	19	21	28	27	27
Forties Fields	297	212	217	245	242	208	199	221	246	241	238
Ninian Fields	31	24	18	20	20	19	18	17	20	19	19
Flotta Fields	51	50	40	44	42	38	41	40	45	41	41
Other Fields	575	512	532	480	507	530	561	529	501	515	507
NGLs	88	67	72	72	73	72	72	71	71	75	72
Total	**1078**	**889**	**903**	**885**	**911**	**893**	**910**	**900**	**912**	**918**	**904**
Norway[5]											
Ekofisk-Ula Area	132	141	127	141	134	128	117	129	132	136	134
Oseberg-Troll Area	234	212	230	224	239	234	195	252	237	236	242
Statfjord-Gullfaks Area	230	262	243	268	251	247	234	238	248	253	252
Haltenbanken Area	280	285	312	298	302	310	307	326	298	304	306
Sleipner-Frigg Area	743	822	867	862	872	870	823	901	874	869	871
Other Fields	101	67	50	22	-7	87	52	68	-42	-27	44
NGLs	288	249	200	231	211	203	190	197	218	208	206
Total	**2007**	**2037**	**2028**	**2044**	**2001**	**2080**	**1920**	**2112**	**1965**	**1980**	**2056**
Other OECD Europe											
Denmark	71	66	65	67	67	66	64	63	66	68	67
Italy	101	100	120	114	121	120	119	118	119	120	122
Turkey	62	66	64	67	64	65	65	64	63	66	65
Other	90	98	91	89	93	92	90	88	90	95	93
NGLs	7	7	7	6	8	7	7	7	9	7	7
Non-Conventional Oils	144	120	96	112	105	95	93	92	128	89	97
Total	**474**	**457**	**443**	**456**	**458**	**444**	**438**	**432**	**475**	**444**	**453**
Australia											
Gippsland Basin	8	4	4	4	4	4	4	3	4	4	4
Cooper-Eromanga Basin	35	23	19	21	20	20	19	19	20	20	20
Carnarvon Basin	106	112	112	118	116	113	111	108	116	116	115
Other Crude	202	195	203	202	197	206	205	203	173	211	208
NGLs	102	99	100	101	101	100	99	98	103	100	100
Total	**453**	**434**	**438**	**446**	**437**	**443**	**438**	**432**	**416**	**451**	**446**
Other OECD Asia Oceania											
New Zealand	21	18	17	18	17	17	17	16	16	17	17
Japan	4	4	4	4	4	4	4	4	4	4	4
NGLs	11	11	10	11	11	10	10	10	12	10	10
Non-Conventional Oils	34	37	39	35	40	39	39	39	42	38	39
Total	**71**	**71**	**70**	**68**	**71**	**70**	**69**	**69**	**73**	**69**	**70**
OECD											
Crude Oil	19475	19524	20888	20061	20198	20833	21174	21333	19816	20176	20601
NGLs	6834	7013	7188	7323	6967	7148	7195	7437	7069	6865	6957
Non-Conventional Oils[4]	1615	1665	1641	1804	1676	1526	1590	1769	1694	1740	1600
Total	**27923**	**28201**	**29717**	**29189**	**28841**	**29508**	**29958**	**30539**	**28579**	**28781**	**29158**

1 Subcategories refer to crude oil only unless otherwise noted.
2 Only production from Federal waters is included.
3 To the extent possible, condensates from natural gas processing plants are included with NGLs, while field condensates are counted as crude oil.
4 Does not include biofuels.
5 North Sea production is grouped by area including all fields being processed through the named field complex, ie, not just the field of that name.
6 Other North Sea NGLs are included.

Table 3b
WORLD OIL PRODUCTION (Including OPEC+ based on current agreement[1])
(million barrels per day)

	2020	2021	2022	1Q21	2Q21	3Q21	4Q21	1Q22	Jan 22	Feb 22	Mar 22
OPEC+											
Crude Oil											
Algeria	0.90	0.91	0.99	0.87	0.89	0.92	0.96	0.99	0.98	0.98	1.00
Angola	1.27	1.12	1.12	1.14	1.12	1.11	1.12	1.16	1.19	1.16	1.14
Azerbaijan	0.61	0.59	0.57	0.59	0.60	0.60	0.59	0.58	0.58	0.57	0.58
Bahrain	0.17	0.17	0.19	0.17	0.17	0.18	0.18	0.18	0.16	0.18	0.20
Brunei	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08
Congo	0.30	0.27	0.28	0.28	0.27	0.27	0.26	0.27	0.28	0.26	0.26
Equatorial Guinea	0.11	0.10	0.10	0.11	0.11	0.10	0.08	0.09	0.09	0.09	0.09
Gabon	0.20	0.18	0.18	0.17	0.18	0.18	0.19	0.19	0.18	0.19	0.20
Iran	2.00	2.42	2.57	2.32	2.40	2.47	2.48	2.56	2.52	2.58	2.58
Iraq	4.05	4.03	4.49	3.88	3.94	4.06	4.24	4.27	4.26	4.27	4.29
Kazakhstan	1.50	1.52	1.56	1.49	1.52	1.41	1.66	1.63	1.63	1.65	1.60
Kuwait	2.41	2.42	2.72	2.34	2.35	2.44	2.53	2.61	2.57	2.61	2.64
Libya	0.35	1.15	1.16	1.15	1.15	1.16	1.12	1.08	1.00	1.16	1.10
Malaysia	0.46	0.42	0.42	0.45	0.43	0.39	0.40	0.43	0.40	0.44	0.44
Mexico	1.66	1.66	1.67	1.67	1.69	1.65	1.65	1.64	1.65	1.63	1.64
Nigeria	1.49	1.31	1.36	1.39	1.34	1.27	1.24	1.30	1.38	1.27	1.25
Oman	0.76	0.75	0.84	0.73	0.74	0.76	0.78	0.82	0.81	0.82	0.83
Russia	9.42	9.62	8.03	9.26	9.54	9.72	9.95	10.04	10.07	10.05	10.00
Saudi Arabia	9.21	9.15	10.66	8.51	8.56	9.60	9.91	10.20	10.10	10.23	10.28
South Sudan	0.16	0.15	0.15	0.14	0.16	0.16	0.15	0.14	0.15	0.14	0.12
Sudan	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
UAE	2.86	2.72	3.08	2.61	2.64	2.76	2.86	2.97	2.96	2.96	2.99
Venezuela	0.53	0.61	0.74	0.55	0.55	0.59	0.76	0.71	0.69	0.72	0.72
Total Crude Oil	**40.57**	**41.43**	**43.02**	**39.98**	**40.50**	**41.94**	**43.27**	**43.99**	**43.80**	**44.10**	**44.09**
of which Neutral Zone	*0.11*	*0.22*		*0.23*	*0.26*	*0.24*	*0.28*		*0.30*	*0.22*	*0.28*
Total NGLs	**7.36**	**7.50**	**7.99**	**7.48**	**7.48**	**7.39**	**7.64**	**7.85**	**7.79**	**7.86**	**7.92**
TOTAL OPEC+	**47.9**	**48.9**	**51.0**	**47.5**	**48.0**	**49.3**	**50.9**	**51.8**	**51.6**	**52.0**	**52.0**
NON-OPEC+											
OECD											
Americas[2]	21.91	22.36	23.81	21.37	22.30	22.43	23.32	22.97	22.74	22.94	23.24
United States	16.56	16.73	17.97	15.68	16.88	16.79	17.54	17.22	16.99	17.21	17.47
Canada	5.35	5.63	5.83	5.69	5.42	5.63	5.77	5.74	5.74	5.71	5.77
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	3.56	3.38	3.37	3.63	3.13	3.39	3.38	3.37	3.35	3.34	3.41
UK	1.08	0.89	0.90	1.03	0.77	0.88	0.88	0.91	0.91	0.92	0.90
Norway	2.01	2.04	2.03	2.14	1.92	2.05	2.04	2.00	1.97	1.98	2.06
Others	0.47	0.46	0.44	0.47	0.45	0.46	0.46	0.46	0.48	0.44	0.45
Asia Oceania	0.52	0.50	0.51	0.51	0.46	0.54	0.51	0.51	0.49	0.52	0.52
Australia	0.45	0.43	0.44	0.44	0.39	0.46	0.45	0.44	0.42	0.45	0.45
Others	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07
Total OECD (non-OPEC+)	26.00	26.25	27.70	25.51	25.89	26.35	27.21	26.85	26.58	26.80	27.17
Non-OECD											
FSU	0.36	0.36	0.33	0.35	0.35	0.36	0.36	0.36	0.36	0.37	0.34
Asia	6.27	6.24	6.26	6.29	6.28	6.25	6.15	6.33	6.33	6.36	6.31
China	3.97	4.06	4.18	4.06	4.09	4.08	4.01	4.22	4.22	4.22	4.21
India	0.75	0.73	0.70	0.74	0.72	0.73	0.72	0.71	0.71	0.72	0.71
Indonesia	0.73	0.68	0.65	0.70	0.68	0.68	0.67	0.66	0.67	0.66	0.66
Others	0.82	0.77	0.73	0.79	0.79	0.76	0.74	0.74	0.73	0.76	0.73
Europe	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Americas	5.32	5.30	5.65	5.27	5.31	5.42	5.18	5.42	5.47	5.38	5.43
Brazil	3.04	3.00	3.18	2.95	3.04	3.10	2.93	3.08	3.14	3.02	3.08
Argentina	0.61	0.64	0.70	0.62	0.63	0.64	0.67	0.69	0.69	0.69	0.69
Colombia	0.79	0.74	0.74	0.75	0.72	0.75	0.75	0.75	0.75	0.75	0.75
Ecuador	0.48	0.48	0.47	0.51	0.50	0.49	0.40	0.47	0.46	0.49	0.48
Others	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Middle East	1.87	1.93	1.95	1.92	1.92	1.93	1.93	1.93	1.96	1.90	1.93
Qatar	1.77	1.82	1.85	1.82	1.82	1.82	1.83	1.82	1.85	1.79	1.83
Others	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11
Africa	1.2	1.1	1.1	1.11	1.11	1.08	1.09	1.09	1.10	1.09	1.09
Egypt	0.60	0.57	0.57	0.57	0.58	0.56	0.57	0.57	0.57	0.57	0.57
Others	0.57	0.53	0.51	0.54	0.53	0.52	0.52	0.53	0.53	0.53	0.53
Total non-OECD (non-OPEC+)	**15.11**	**15.03**	**15.37**	**15.06**	**15.09**	**15.15**	**14.82**	**15.24**	**15.32**	**15.20**	**15.21**
Processing gains	2.11	2.25	2.29	2.13	2.22	2.34	2.32	2.29	2.29	2.29	2.29
Global biofuels	2.63	2.75	2.93	2.18	2.94	3.19	2.69	2.46	2.46	2.45	2.46
TOTAL NON-OPEC+	45.85	46.28	48.27	44.88	46.14	47.03	47.04	46.84	46.65	46.74	47.13
TOTAL SUPPLY	93.78	95.21	99.29	92.34	94.12	96.36	97.95	98.69	98.23	98.69	99.14

1 From Apr 2022, OPEC+ supply reflects latest OPEC+ deal and individual country's sustainable capacity. Libya, Iran, Venezuela held at most recent level through 2022.

2 Excludes Mexico

Table 4
OECD STOCKS AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Oct2021	Nov2021	Dec2021	Jan2022	Feb2022[3]	Feb2019	Feb2020	Feb2021	1Q2021	2Q2021	3Q2021	4Q2021
OECD INDUSTRY-CONTROLLED STOCKS[1]												
OECD Americas												
Crude	608.5	605.1	588.5	571.7	571.6	598.3	596.4	650.8	0.25	-0.58	-0.33	0.07
Motor Gasoline	243.3	247.6	259.8	281.0	277.1	279.0	281.3	270.2	-0.08	-0.02	-0.13	0.07
Middle Distillate	202.1	196.2	195.4	193.8	188.5	209.4	205.6	215.6	-0.18	-0.01	-0.12	-0.09
Residual Fuel Oil	35.4	35.0	31.9	33.7	34.5	33.3	37.0	38.8	0.02	-0.01	-0.04	-0.03
Total Products[4]	751.9	739.9	725.9	725.9	699.5	740.5	761.1	744.1	-0.70	0.26	-0.03	-0.40
Total[4]	**1525.2**	**1505.1**	**1465.8**	**1453.6**	**1429.9**	**1504.0**	**1525.7**	**1561.1**	**-0.50**	**-0.29**	**-0.39**	**-0.45**
OECD Europe												
Crude	312.1	313.6	302.3	297.1	299.0	353.6	341.3	348.1	-0.20	-0.12	-0.38	-0.04
Motor Gasoline	85.6	87.8	86.8	95.0	93.3	104.8	98.2	102.1	-0.10	-0.04	-0.07	0.07
Middle Distillate	252.9	255.4	242.7	253.7	246.2	260.3	293.7	329.4	-0.06	-0.07	-0.36	-0.33
Residual Fuel Oil	58.6	60.8	58.9	60.4	60.0	59.4	66.4	65.9	0.00	-0.03	-0.01	-0.05
Total Products[4]	493.2	501.6	484.7	506.7	497.2	540.7	575.3	602.5	-0.26	-0.20	-0.44	-0.32
Total[5]	**878.1**	**887.7**	**855.4**	**875.7**	**868.7**	**977.8**	**1000.0**	**1029.3**	**-0.46**	**-0.32**	**-0.88**	**-0.40**
OECD Asia Oceania												
Crude	109.2	108.8	99.4	97.6	95.9	167.6	124.4	145.3	-0.33	0.01	-0.17	-0.11
Motor Gasoline	28.1	24.5	24.0	27.0	25.8	26.5	26.4	29.4	0.04	0.00	-0.03	-0.03
Middle Distillate	72.6	70.2	64.2	61.8	59.8	63.6	69.0	69.0	-0.03	0.02	0.07	-0.09
Residual Fuel Oil	16.4	16.0	16.9	16.9	17.8	20.8	20.0	17.3	0.02	0.00	0.02	-0.02
Total Products[4]	185.3	175.0	162.8	168.8	162.2	170.1	173.6	177.0	-0.02	0.05	0.15	-0.23
Total[5]	**355.6**	**344.9**	**323.7**	**323.7**	**312.2**	**396.3**	**359.9**	**380.6**	**-0.38**	**0.12**	**-0.02**	**-0.34**
Total OECD												
Crude	1029.8	1027.4	990.1	966.4	966.5	1119.5	1062.1	1144.1	-0.28	-0.69	-0.88	-0.08
Motor Gasoline	356.9	360.0	370.5	403.0	396.2	410.3	405.9	401.7	-0.14	-0.06	-0.22	0.11
Middle Distillate	527.6	521.8	502.4	509.3	494.5	533.3	568.3	613.9	-0.27	-0.05	-0.41	-0.50
Residual Fuel Oil	110.4	111.8	107.7	111.0	112.3	113.4	123.3	122.0	0.03	-0.04	-0.03	-0.10
Total Products[4]	1430.3	1416.5	1373.3	1401.4	1358.8	1451.3	1510.1	1523.6	-0.98	0.10	-0.32	-0.95
Total[5]	**2759.0**	**2737.8**	**2645.0**	**2653.0**	**2610.8**	**2878.1**	**2885.6**	**2971.0**	**-1.34**	**-0.49**	**-1.29**	**-1.20**
OECD GOVERNMENT-CONTROLLED STOCKS[6]												
OECD Americas												
Crude	610.7	601.5	593.7	588.3	578.8	649.1	635.0	637.8	0.00	-0.18	-0.04	-0.26
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
OECD Europe												
Crude	203.2	202.4	200.3	199.6	199.6	208.4	207.0	207.4	0.02	-0.02	0.00	-0.05
Products	274.7	275.2	277.0	276.5	276.5	276.0	276.1	281.9	0.03	-0.05	-0.01	-0.01
OECD Asia Oceania												
Crude	369.5	370.5	370.1	370.1	370.1	379.9	377.4	374.6	0.00	0.00	-0.05	0.01
Products	38.9	38.9	38.9	38.4	38.0	38.8	38.9	38.8	0.00	0.00	0.00	0.00
Total OECD												
Crude	1183.4	1174.3	1164.0	1158.0	1148.5	1237.5	1219.4	1219.7	0.02	-0.20	-0.10	-0.31
Products	315.6	316.1	317.9	316.9	316.4	316.8	317.0	322.7	0.03	-0.05	-0.01	-0.01
Total[5]	**1500.7**	**1492.4**	**1483.8**	**1476.4**	**1466.5**	**1557.1**	**1538.2**	**1544.3**	**0.05**	**-0.24**	**-0.12**	**-0.31**

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.
2 Closing stock levels.
3 Estimated.
4 Total products includes gasoline, middle distillates, fuel oil and other products.
5 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.
6 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 4a
INDUSTRY STOCKS[1] ON LAND IN SELECTED COUNTRIES

(million barrels)

	September			October			November			December			January		
	2020	2021	%	2020	2021	%	2020	2021	%	2020	2021	%	2021	2022	%
United States[2]															
Crude	497.7	420.4	-15.5	493.9	436.6	-11.6	500.8	434.0	-13.3	485.5	421.4	-13.2	475.9	414.3	-12.9
Motor Gasoline	227.6	227.0	-0.3	227.6	216.7	-4.8	241.2	220.6	-8.5	243.4	232.2	-4.6	255.1	251.8	-1.3
Middle Distillate	215.0	176.3	-18.0	196.4	175.5	-10.6	197.5	171.0	-13.4	202.5	168.0	-17.0	207.8	165.3	-20.5
Residual Fuel Oil	32.1	28.0	-12.8	31.2	28.4	-9.0	31.1	27.6	-11.3	30.2	25.4	-15.9	32.0	26.7	-16.6
Other Products	306.1	251.1	-18.0	292.7	250.8	-14.3	273.2	239.3	-12.4	241.9	217.2	-10.2	213.5	195.4	-8.5
Total Products	780.8	682.4	-12.6	747.9	671.4	-10.2	743.0	658.5	-11.4	718.0	642.8	-10.5	708.4	639.2	-9.8
Other[3]	144.7	137.9	-4.7	144.4	139.4	-3.5	144.9	136.1	-6.1	139.9	129.6	-7.4	145.7	136.4	-6.4
Total	**1423.2**	**1240.7**	**-12.8**	**1386.2**	**1247.4**	**-10.0**	**1388.7**	**1228.6**	**-11.5**	**1343.4**	**1193.8**	**-11.1**	**1330.0**	**1189.9**	**-10.5**
Japan															
Crude	90.2	70.8	-21.5	89.7	72.8	-18.8	79.6	78.1	-1.9	79.8	72.9	-8.6	77.0	69.2	-10.1
Motor Gasoline	12.2	10.2	-16.4	12.1	11.6	-4.1	12.5	10.4	-16.8	12.5	10.4	-16.8	13.5	11.3	-16.3
Middle Distillate	37.7	36.2	-4.0	38.3	36.6	-4.4	38.6	36.9	-4.4	34.6	33.0	-4.6	33.5	30.8	-8.1
Residual Fuel Oil	6.9	7.4	7.2	6.9	6.9	0.0	7.0	6.5	-7.1	6.6	7.3	10.6	6.9	7.0	1.4
Other Products	38.5	37.7	-2.1	36.0	39.1	8.6	35.5	36.4	2.5	32.3	33.0	2.2	31.0	34.6	11.6
Total Products	95.3	91.5	-4.0	93.3	94.2	1.0	93.6	90.2	-3.6	86.0	83.7	-2.7	84.9	83.7	-1.4
Other[3]	54.4	51.4	-5.5	52.5	49.9	-5.0	52.4	50.9	-2.9	49.9	51.1	2.4	50.1	47.6	-5.0
Total	**239.9**	**213.7**	**-10.9**	**235.5**	**216.9**	**-7.9**	**225.6**	**219.2**	**-2.8**	**215.7**	**207.7**	**-3.7**	**212.0**	**200.5**	**-5.4**
Germany															
Crude	49.6	45.5	-8.3	48.8	46.5	-4.7	50.1	47.0	-6.2	51.9	46.2	-11.0	52.7	46.1	-12.5
Motor Gasoline	9.3	9.6	3.2	10.2	10.6	3.9	11.7	10.6	-9.4	10.9	10.7	-1.8	12.6	11.0	-12.7
Middle Distillate	22.3	21.8	-2.2	21.7	21.2	-2.3	24.3	22.4	-7.8	23.3	21.8	-6.4	27.5	23.1	-16.0
Residual Fuel Oil	7.9	8.1	2.5	7.1	8.1	14.1	7.2	8.5	18.1	6.6	8.4	27.3	7.1	8.5	19.7
Other Products	9.7	10.4	7.2	9.7	10.8	11.3	9.1	10.5	15.4	9.3	10.7	15.1	9.3	10.2	9.7
Total Products	49.2	49.9	1.4	48.7	50.7	4.1	52.3	52.0	-0.6	50.1	51.6	3.0	56.5	52.8	-6.5
Other[3]	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	0.0	0.0
Total	**98.8**	**95.4**	**-3.4**	**97.5**	**97.2**	**-0.3**	**102.4**	**99.0**	**-3.3**	**102.0**	**97.8**	**-4.1**	**109.2**	**98.9**	**-9.4**
Italy															
Crude	40.0	33.6	-16.0	40.4	31.8	-21.3	36.7	36.1	-1.6	40.1	33.0	-17.7	37.4	29.9	-20.1
Motor Gasoline	11.5	9.6	-16.5	11.8	11.7	-0.8	12.8	11.3	-11.7	11.9	10.0	-16.0	11.6	12.7	9.5
Middle Distillate	30.1	26.6	-11.6	29.2	25.1	-14.0	29.3	23.8	-18.8	26.9	23.7	-11.9	29.0	26.4	-9.0
Residual Fuel Oil	7.9	7.0	-11.4	7.9	7.1	-10.1	7.6	7.5	-1.3	7.9	7.1	-10.1	8.4	7.5	-10.7
Other Products	19.9	11.0	-44.7	19.4	11.1	-42.8	19.9	10.9	-45.2	19.3	10.0	-48.2	16.2	11.2	-30.9
Total Products	69.4	54.2	-21.9	68.3	55.0	-19.5	69.6	53.5	-23.1	66.0	50.8	-23.0	65.2	57.8	-11.3
Other[3]	17.3	14.8	-14.5	16.1	15.4	-4.3	17.0	14.5	-14.7	16.6	13.1	-21.1	15.1	13.5	-10.6
Total	**126.7**	**102.6**	**-19.0**	**124.8**	**102.2**	**-18.1**	**123.3**	**104.1**	**-15.6**	**122.7**	**96.9**	**-21.0**	**117.7**	**101.2**	**-14.0**
France															
Crude	13.9	12.2	-12.2	9.4	12.6	34.0	13.3	11.9	-10.5	12.4	8.8	-29.0	13.4	9.2	-31.3
Motor Gasoline	4.9	4.0	-18.4	5.4	4.0	-25.9	6.1	4.1	-32.8	4.8	4.5	-6.3	4.9	5.1	4.1
Middle Distillate	24.7	19.5	-21.1	24.4	17.0	-30.3	24.1	18.0	-25.3	21.5	18.6	-13.5	23.4	20.1	-14.1
Residual Fuel Oil	1.6	2.0	25.0	1.5	1.6	6.7	1.7	1.7	0.0	2.3	0.9	-60.9	2.1	1.3	-38.1
Other Products	3.9	3.2	-17.9	4.1	3.3	-19.5	4.3	3.4	-20.9	3.4	3.4	0.0	3.5	3.4	-2.9
Total Products	35.1	28.7	-18.2	35.4	25.9	-26.8	36.2	27.2	-24.9	32.0	27.4	-14.4	33.9	29.9	-11.8
Other[3]	8.2	7.0	-14.6	8.2	7.0	-14.6	7.6	6.5	-14.5	6.5	6.9	6.2	7.0	7.2	2.9
Total	**57.2**	**47.9**	**-16.3**	**53.0**	**45.5**	**-14.2**	**57.1**	**45.6**	**-20.1**	**50.9**	**43.1**	**-15.3**	**54.3**	**46.3**	**-14.7**
United Kingdom															
Crude	27.7	24.9	-10.1	27.8	24.8	-10.8	26.1	23.4	-10.3	27.9	26.2	-6.1	27.5	22.5	-18.2
Motor Gasoline	9.9	8.7	-12.1	10.4	9.5	-8.7	10.7	9.8	-8.4	11.3	10.1	-10.6	12.1	10.6	-12.4
Middle Distillate	30.6	21.4	-30.1	32.5	21.3	-34.5	30.6	22.1	-27.8	30.7	21.0	-31.6	31.6	20.4	-35.4
Residual Fuel Oil	1.2	1.3	8.3	1.1	1.3	18.2	1.1	1.6	45.5	1.2	1.3	8.3	1.5	1.1	-26.7
Other Products	6.5	7.1	9.2	6.6	6.5	-1.5	6.5	6.1	-6.2	6.9	6.1	-11.6	6.8	6.0	-11.8
Total Products	48.2	38.5	-20.1	50.6	38.6	-23.7	48.9	39.6	-19.0	50.1	38.5	-23.2	52.0	38.1	-26.7
Other[3]	7.8	8.2	5.1	8.5	9.0	5.9	8.7	9.1	4.6	7.4	8.1	9.5	7.3	7.6	4.1
Total	**83.7**	**71.6**	**-14.5**	**86.9**	**72.4**	**-16.7**	**83.7**	**72.1**	**-13.9**	**85.4**	**72.8**	**-14.8**	**86.8**	**68.2**	**-21.4**
Canada[4]															
Crude	122.2	127.5	4.3	118.4	137.9	16.5	122.2	137.5	12.5	124.4	132.3	6.4	124.0	122.9	-0.9
Motor Gasoline	16.0	14.6	-8.8	16.6	15.1	-9.0	17.5	16.1	-8.0	17.3	16.0	-7.5	17.8	17.5	-1.7
Middle Distillate	16.8	17.5	4.2	18.0	16.7	-7.2	18.2	17.6	-3.3	19.6	18.3	-6.6	20.7	18.7	-9.7
Residual Fuel Oil	3.0	2.5	-16.7	2.7	2.7	0.0	2.6	2.2	-15.4	2.3	2.1	-8.7	2.7	1.7	-37.0
Other Products	10.9	11.0	0.9	11.0	10.7	-2.7	11.2	12.0	7.1	10.8	11.8	9.3	11.9	12.2	2.5
Total Products	46.7	45.6	-2.4	48.3	45.2	-6.4	49.5	47.9	-3.2	50.0	48.2	-3.6	53.1	50.1	-5.6
Other[3]	30.0	25.3	-15.7	30.3	25.3	-16.5	29.4	23.8	-19.0	27.3	21.7	-20.5	23.8	19.4	-18.5
Total	**198.9**	**198.4**	**-0.3**	**197.0**	**208.4**	**5.8**	**201.1**	**209.2**	**4.0**	**201.7**	**202.2**	**0.2**	**200.9**	**192.4**	**-4.2**

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.
2 US figures exclude US territories.
3 Other includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.
4 Canadian stock information for recent months is the administration's best estimate. Data are usually finalised three months after first publication.

Table 5
TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]
('millions of barrels' and 'days')

	End December 2020		End March 2021		End June 2021		End September 2021		End December 2021 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
OECD Americas										
Canada	201.8	89	198.3	89	201.6	81	198.3	82	202.3	-
Chile	11.0	33	9.7	30	11.7	31	10.4	28	10.8	-
Mexico	36.3	26	38.1	27	36.4	26	36.0	24	36.7	-
United States[4]	1983.4	108	1941.5	97	1894.8	94	1860.5	91	1789.5	-
Total[4]	**2254.7**	**100**	**2209.7**	**91**	**2166.6**	**88**	**2127.3**	**86**	**2061.5**	**85**
OECD Asia Oceania										
Australia	40.2	39	43.5	40	39.8	40	41.1	38	37.8	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	532.4	143	506.5	164	528.6	166	525.1	143	519.4	-
Korea	213.3	84	201.5	81	194.9	75	189.3	70	168.8	-
New Zealand	8.0	51	8.3	57	7.6	56	8.3	54	6.8	-
Total	**793.8**	**104**	**759.7**	**108**	**770.9**	**108**	**763.7**	**98**	**732.8**	**92**
OECD Europe[5]										
Austria	23.6	113	23.6	97	23.0	84	21.1	83	20.9	-
Belgium	51.7	82	51.2	82	51.0	83	47.1	70	43.0	-
Czech Republic	23.8	134	23.1	108	21.8	93	21.7	97	22.5	-
Denmark	32.3	256	31.7	229	28.1	189	25.3	171	23.8	-
Estonia	3.7	150	2.9	107	2.9	99	2.7	102	2.5	-
Finland	38.5	235	39.1	230	39.5	209	37.3	191	36.2	-
France	158.4	107	162.1	112	163.0	100	157.3	98	151.6	-
Germany	278.2	147	278.0	134	275.7	123	270.4	116	268.9	-
Greece	35.0	153	34.4	144	30.5	100	26.4	92	28.4	-
Hungary	26.8	172	25.8	147	25.6	135	25.9	138	27.0	-
Ireland	11.9	94	11.7	87	12.0	83	10.6	66	10.8	-
Italy	135.8	130	126.8	110	128.9	103	118.0	94	112.5	-
Latvia	3.2	101	3.0	82	3.0	70	2.7	75	2.6	-
Lithuania	7.9	146	7.8	116	8.5	113	9.1	131	8.2	-
Luxembourg	0.6	13	0.6	13	0.8	14	0.5	9	0.6	-
Netherlands	156.6	195	158.1	196	147.2	181	125.8	160	109.5	-
Norway	30.1	114	28.2	146	23.6	99	20.2	81	21.4	-
Poland	81.6	131	82.7	126	80.0	103	78.1	104	80.6	-
Portugal	22.4	123	20.7	98	19.9	90	19.0	83	19.5	-
Slovak Republic	12.7	170	12.3	144	12.3	136	12.2	138	12.2	-
Slovenia	5.3	126	5.3	117	5.3	104	4.9	99	5.2	-
Spain	123.1	110	121.7	106	118.1	95	111.6	89	104.9	-
Sweden	62.7	219	48.8	162	45.2	144	38.3	123	30.1	-
Switzerland	34.0	206	33.7	192	32.9	178	33.4	156	31.5	-
Turkey	85.4	107	84.4	91	85.1	74	85.6	82	87.4	-
United Kingdom	85.5	74	76.9	61	76.2	58	71.6	52	72.8	-
Total	**1531.0**	**129**	**1494.9**	**118**	**1460.3**	**106**	**1377.0**	**99**	**1334.5**	**102**
Total OECD	**4579.4**	**109**	**4464.3**	**102**	**4397.7**	**97**	**4268.0**	**92**	**4128.8**	**91**
DAYS OF IEA Net Imports[6]	-	**245**	-	**241**	-	**167**	-	**160**	-	**156**

1 Total Stocks are industry and government-controlled stocks (see breakdown in the table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End December 2021 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions (see www.iea.org/netimports.asp). Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand*[2]		
4Q2018	4425	1552	2873	93	33	60
1Q2019	4430	1557	2874	94	33	61
2Q2019	4483	1549	2934	93	32	61
3Q2019	4488	1544	2944	94	32	62
4Q2019	4429	1535	2894	98	34	64
1Q2020	4519	1537	2982	121	41	80
2Q2020	4779	1561	3217	113	37	76
3Q2020	4733	1551	3182	111	36	74
4Q2020	4579	1541	3038	109	37	72
1Q2021	4464	1546	2919	102	35	67
2Q2021	4398	1524	2874	97	33	63
3Q2021	4268	1513	2755	92	33	59
4Q2021	4129	1484	2645	91	33	58

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 4Q2021 (where latest forecasts are used).

Table 6
IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS[1]
(million barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier change
Saudi Light & Extra Light												
Americas	0.20	0.26	0.34	0.18	0.31	0.45	0.43	0.49	0.45	0.36	0.18	0.18
Europe	0.68	0.59	0.48	0.43	0.40	0.55	0.55	0.52	0.53	0.51	0.50	0.01
Asia Oceania	1.42	1.39	1.30	1.41	1.12	1.18	1.48	1.41	1.77	1.65	1.42	0.22
Saudi Medium												
Americas	0.12	0.14	0.01	0.06	-	-	-	-	-	-	0.17	-
Europe	0.02	0.02	0.01	0.01	-	0.02	-	-	-	-	0.02	-
Asia Oceania	0.23	0.25	0.21	0.22	0.17	0.19	0.26	0.25	0.27	0.25	0.22	0.03
Canada Heavy												
Americas	2.27	2.39	2.59	2.62	2.43	2.47	2.82	2.94	2.89	2.49	2.62	-0.14
Europe	0.04	0.03	0.03	0.04	0.03	0.04	0.03	0.02	0.04	0.02	0.04	-0.02
Asia Oceania	0.00	0.00	0.02	0.01	0.04	0.01	0.00	0.01	-	-	-	-
Iraqi Basrah Light[2]												
Americas	0.31	0.11	0.08	0.06	0.05	0.04	0.17	0.11	0.26	0.21	-	-
Europe	0.85	0.58	0.62	0.56	0.63	0.60	0.68	0.79	0.49	0.30	0.49	-0.19
Asia Oceania	0.37	0.22	0.17	0.15	0.17	0.16	0.19	0.26	0.19	0.12	0.19	-0.06
Kuwait Blend												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.11	0.04	-	-	-	-	-	-	-	-	-	-
Asia Oceania	0.61	0.55	0.48	0.47	0.45	0.47	0.52	0.53	0.50	0.61	0.43	0.18
Iranian Light												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.00	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	0.00	-	-	-	-	-	-	-	-	-	-	-
Iranian Heavy[3]												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.04	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	0.14	-	-	-	-	-	-	-	-	-	-	-
BFOE												
Americas	0.00	-	0.00	-	0.00	0.01	-	-	-	-	-	-
Europe	0.37	0.42	0.36	0.39	0.28	0.36	0.40	0.38	0.46	0.48	0.42	0.06
Asia Oceania	0.01	0.03	0.05	0.08	0.07	-	0.05	0.00	0.06	-	0.17	-
Kazakhstan												
Americas	-	-	0.01	-	0.03	-	-	-	-	-	-	-
Europe	0.76	0.74	0.70	0.73	0.73	0.68	0.66	0.62	0.75	0.88	0.70	0.18
Asia Oceania	0.18	0.07	0.09	0.07	0.10	0.10	0.10	0.07	0.14	0.10	0.10	0.00
Venezuelan 22 API and heavier												
Americas	0.05	-	-	-	-	-	-	-	-	-	-	-
Europe	0.09	0.04	-	-	-	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
Americas	0.51	0.48	0.40	0.36	0.45	0.45	0.32	0.38	0.30	0.40	0.40	0.00
Europe	0.19	0.16	0.14	0.15	0.15	0.13	0.12	0.13	0.13	0.13	0.16	-0.03
Asia Oceania	0.13	0.12	0.14	0.15	0.12	0.14	0.13	0.14	0.10	0.09	0.15	-0.06
Russian Urals												
Americas	0.01	-	-	-	-	-	-	-	-	-	-	-
Europe	1.37	1.12	1.05	0.97	0.99	1.08	1.14	1.24	0.97	1.23	1.18	0.05
Asia Oceania	-	-	0.01	0.01	-	0.03	-	-	-	-	-	-
Cabinda and Other Angola												
North America	0.01	0.01	-	-	-	-	-	-	-	-	-	-
Europe	0.15	0.12	0.03	0.02	0.04	0.03	0.04	-	0.03	0.03	0.03	0.00
Pacific	0.00	-	-	-	-	-	-	-	-	-	-	-
Nigerian Light[4]												
Americas	0.03	-	0.02	-	0.06	0.03	-	-	-	-	-	-
Europe	0.51	0.49	0.41	0.41	0.30	0.40	0.52	0.49	0.48	0.38	0.31	0.07
Asia Oceania	0.02	0.02	0.01	0.00	0.01	-	0.01	-	-	-	0.01	-
Libya Light and Medium												
Americas	0.00	-	0.02	-	0.03	0.06	-	-	-	-	-	-
Europe	0.67	0.19	0.79	0.75	0.79	0.87	0.76	0.78	0.74	0.44	0.81	-0.37
Asia Oceania	0.03	0.01	0.02	0.01	0.02	0.01	0.03	0.03	0.03	0.03	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report. IEA Americas includes United States and Canada. IEA Europe includes all countries in OECD Europe except Estonia, Hungary, Slovenia and Latvia. IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.
2 Iraqi Total minus Kirkuk.
3 Iranian Total minus Iranian Light.
4 33° API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
REGIONAL OECD IMPORTS[1,2]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier % change
Crude Oil												
Americas	2726	1896	2077	1695	2109	2367	2129	2143	2178	2093	1586	32%
Europe	9872	8349	8510	7780	8382	8748	9115	9243	8755	8897	7855	13%
Asia Oceania	6542	5603	5529	5336	5459	5431	5883	5929	5912	6189	5562	11%
Total OECD	**19139**	**15848**	**16116**	**14812**	**15951**	**16546**	**17127**	**17315**	**16845**	**17180**	**15004**	**15%**
LPG												
Americas	26	28	21	21	16	22	25	24	31	30	15	96%
Europe	434	422	404	394	421	378	424	405	530	468	405	15%
Asia Oceania	582	559	563	642	555	528	528	482	584	664	646	3%
Total OECD	**1042**	**1009**	**988**	**1057**	**992**	**927**	**976**	**910**	**1144**	**1162**	**1067**	**9%**
Naphtha												
Americas	5	7	8	7	7	11	8	6	14	7	3	118%
Europe	347	409	512	526	514	445	563	564	538	426	626	-32%
Asia Oceania	993	1005	1149	1087	1076	1229	1201	1151	1284	1169	937	25%
Total OECD	**1345**	**1422**	**1669**	**1620**	**1597**	**1685**	**1773**	**1721**	**1836**	**1602**	**1566**	**2%**
Gasoline[3]												
Americas	822	577	803	597	1074	973	565	535	524	401	447	-10%
Europe	112	109	108	102	159	75	99	39	187	119	65	83%
Asia Oceania	114	126	157	155	196	135	140	110	167	166	128	30%
Total OECD	**1048**	**812**	**1068**	**854**	**1429**	**1183**	**804**	**685**	**878**	**686**	**640**	**7%**
Jet & Kerosene												
Americas	174	159	164	108	166	207	175	137	161	127	137	-7%
Europe	520	337	335	281	291	349	416	395	470	276	314	-12%
Asia Oceania	76	63	75	100	71	43	86	116	96	73	113	-36%
Total OECD	**770**	**559**	**574**	**489**	**528**	**600**	**677**	**648**	**727**	**476**	**564**	**-16%**
Gasoil/Diesel												
Americas	118	134	197	266	149	154	222	274	126	124	246	-50%
Europe	1300	1192	1177	1099	1172	1170	1263	1433	1085	1129	1105	2%
Asia Oceania	262	328	355	336	353	345	385	442	359	274	329	-17%
Total OECD	**1680**	**1655**	**1728**	**1701**	**1674**	**1668**	**1870**	**2149**	**1569**	**1527**	**1680**	**-9%**
Heavy Fuel Oil												
Americas	116	143	102	116	96	91	104	66	115	62	170	-63%
Europe	223	295	376	368	315	435	384	480	461	276	380	-27%
Asia Oceania	101	88	119	109	116	121	129	138	146	135	132	2%
Total OECD	**440**	**526**	**596**	**594**	**527**	**648**	**617**	**684**	**722**	**473**	**682**	**-31%**
Other Products												
Americas	716	591	580	505	698	607	510	506	486	442	563	-21%
Europe	865	574	578	515	512	583	700	755	606	571	510	12%
Asia Oceania	268	241	260	246	260	267	267	253	267	227	223	2%
Total OECD	**1849**	**1406**	**1418**	**1267**	**1470**	**1456**	**1477**	**1515**	**1359**	**1240**	**1296**	**-4%**
Total Products												
Americas	1978	1639	1875	1620	2205	2064	1607	1548	1457	1193	1581	-25%
Europe	3800	3339	3490	3286	3384	3435	3850	4071	3875	3265	3407	-4%
Asia Oceania	2397	2410	2676	2674	2627	2668	2736	2692	2903	2707	2508	8%
Total OECD	**8175**	**7388**	**8041**	**7580**	**8217**	**8167**	**8193**	**8311**	**8234**	**7165**	**7497**	**-4%**
Total Oil												
Americas	4703	3535	3952	3315	4315	4431	3736	3690	3634	3286	3168	4%
Europe	13672	11688	12001	11066	11766	12183	12965	13314	12630	12162	11262	8%
Asia Oceania	8939	8014	8205	8011	8087	8100	8619	8621	8815	8897	8071	10%
Total OECD	**27314**	**23236**	**24158**	**22392**	**24167**	**24713**	**25320**	**25626**	**25080**	**24345**	**22500**	**8%**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade.
3 Includes additives.

Table 7a
REGIONAL OECD IMPORTS FROM NON-OECD COUNTRIES[1,2]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier % change
Crude Oil												
Americas	2576	1835	1982	1613	2006	2275	2028	2081	2063	2028	1535	32%
Europe	8913	7115	7259	6643	7109	7455	7815	7832	7446	7586	6671	14%
Asia Oceania	5914	5076	4915	4710	4840	4785	5320	5299	5503	5559	4955	12%
Total OECD	**17403**	**14027**	**14157**	**12966**	**13956**	**14515**	**15163**	**15211**	**15012**	**15173**	**13162**	**15%**
LPG												
Americas	23	22	20	19	16	22	25	24	31	24	15	57%
Europe	303	252	242	244	229	245	250	248	274	228	252	-9%
Asia Oceania	74	57	46	58	60	35	33	20	44	74	84	-12%
Total OECD	**400**	**331**	**309**	**321**	**304**	**302**	**308**	**291**	**349**	**326**	**351**	**-7%**
Naphtha												
Americas	2	1	4	4	2	5	5	3	11	5	0	35141%
Europe	320	390	425	427	452	337	485	441	526	331	505	-35%
Asia Oceania	898	835	977	870	948	1012	1075	1020	1177	950	866	10%
Total OECD	**1220**	**1226**	**1406**	**1301**	**1402**	**1354**	**1565**	**1464**	**1714**	**1285**	**1371**	**-6%**
Gasoline[3]												
Americas	308	195	248	174	330	312	174	149	163	77	132	-41%
Europe	108	104	102	98	152	70	90	21	182	93	63	48%
Asia Oceania	88	109	152	144	189	135	140	110	167	166	104	61%
Total OECD	**504**	**408**	**502**	**417**	**671**	**518**	**405**	**281**	**511**	**337**	**298**	**13%**
Jet & Kerosene												
Americas	41	55	63	31	63	65	93	54	115	51	38	34%
Europe	464	297	299	248	273	309	367	327	425	275	251	10%
Asia Oceania	76	63	75	100	71	43	86	116	96	73	113	-36%
Total OECD	**581**	**415**	**437**	**378**	**406**	**418**	**545**	**496**	**636**	**399**	**403**	**-1%**
Gasoil/Diesel												
Americas	86	103	134	203	94	94	146	190	88	61	187	-67%
Europe	1126	1062	1095	1027	1095	1067	1188	1364	1005	1077	1026	5%
Asia Oceania	261	324	355	336	353	345	385	442	359	274	329	-17%
Total OECD	**1473**	**1489**	**1583**	**1566**	**1541**	**1506**	**1719**	**1996**	**1452**	**1412**	**1542**	**-8%**
Heavy Fuel Oil												
Americas	102	110	86	105	84	78	77	34	100	62	147	-58%
Europe	202	279	350	340	281	417	360	460	452	258	352	-27%
Asia Oceania	100	88	119	109	116	121	129	138	146	135	132	2%
Total OECD	**404**	**477**	**554**	**554**	**481**	**615**	**565**	**633**	**698**	**456**	**631**	**-28%**
Other Products												
Americas	543	513	530	469	631	556	463	444	437	403	535	-25%
Europe	629	352	401	358	337	396	512	578	406	405	345	17%
Asia Oceania	184	164	182	176	198	178	176	180	154	172	165	5%
Total OECD	**1356**	**1029**	**1113**	**1003**	**1166**	**1131**	**1151**	**1202**	**996**	**981**	**1045**	**-6%**
Total Products												
Americas	1106	1000	1084	1005	1219	1131	983	897	944	684	1055	-35%
Europe	3152	2735	2915	2742	2817	2842	3251	3439	3270	2667	2794	-5%
Asia Oceania	1681	1640	1906	1793	1934	1871	2023	2027	2143	1844	1792	3%
Total OECD	**5939**	**5375**	**5905**	**5540**	**5971**	**5844**	**6257**	**6363**	**6357**	**5196**	**5642**	**-8%**
Total Oil												
Americas	3682	2835	3067	2618	3225	3406	3010	2978	3007	2712	2590	5%
Europe	12064	9850	10174	9385	9927	10297	11066	11271	10716	10254	9465	8%
Asia Oceania	7595	6716	6821	6503	6775	6656	7343	7325	7646	7403	6748	10%
Total OECD	**23342**	**19401**	**20062**	**18506**	**19926**	**20359**	**21420**	**21574**	**21369**	**20369**	**18804**	**8%**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

Table 7b
INTER-REGIONAL OECD TRANSFERS[1,2]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier % change
Crude Oil												
Americas	149	60	95	83	104	92	101	62	115	66	51	28%
Europe	959	1234	1251	1137	1272	1293	1300	1412	1309	1310	1184	11%
Asia Oceania	628	527	614	627	619	646	563	630	409	630	607	4%
Total OECD	**1736**	**1821**	**1960**	**1846**	**1995**	**2031**	**1964**	**2103**	**1834**	**2007**	**1842**	**9%**
LPG												
Americas	3	6	1	3	0	0	0	0	0	6	0	na
Europe	131	171	162	150	193	132	174	157	255	240	154	56%
Asia Oceania	508	501	517	584	495	493	495	462	540	590	562	5%
Total OECD	**642**	**678**	**679**	**737**	**688**	**625**	**669**	**619**	**795**	**835**	**716**	**17%**
Naphtha												
Americas	3	6	4	3	4	6	2	3	3	2	3	-33%
Europe	27	20	87	99	62	108	79	123	11	95	121	-21%
Asia Oceania	96	170	172	217	128	216	126	130	107	219	71	208%
Total OECD	**125**	**196**	**263**	**319**	**195**	**330**	**207**	**256**	**122**	**317**	**195**	**62%**
Gasoline[3]												
Americas	514	382	555	423	744	661	391	386	362	323	315	3%
Europe	4	5	6	3	7	5	9	18	5	26	2	1081%
Asia Oceania	26	18	5	11	8	0	0	0	0	0	24	-100%
Total OECD	**544**	**404**	**565**	**437**	**759**	**665**	**399**	**404**	**367**	**349**	**342**	**2%**
Jet & Kerosene												
Americas	133	103	101	77	103	142	83	84	46	75	98	-23%
Europe	56	40	35	33	19	40	49	68	45	2	63	-98%
Asia Oceania	0	0	0	0	0	0	0	0	0	0	0	na
Total OECD	**190**	**144**	**137**	**110**	**122**	**182**	**132**	**152**	**91**	**77**	**162**	**-53%**
Gasoil/Diesel												
Americas	32	31	63	63	55	60	76	84	38	63	59	7%
Europe	174	131	82	72	77	103	75	68	80	52	79	-34%
Asia Oceania	1	4	0	0	0	0	0	0	0	0	0	na
Total OECD	**207**	**166**	**145**	**135**	**132**	**163**	**151**	**152**	**117**	**115**	**138**	**-17%**
Heavy Fuel Oil												
Americas	14	33	16	11	12	13	27	32	15	0	23	-100%
Europe	21	16	26	29	34	19	25	19	9	18	29	-38%
Asia Oceania	1	0	0	0	0	0	0	0	0	0	0	na
Total OECD	**36**	**49**	**42**	**39**	**46**	**32**	**52**	**51**	**24**	**18**	**51**	**-66%**
Other Products												
Americas	173	78	50	37	67	51	47	62	50	39	27	43%
Europe	236	222	177	157	175	187	189	178	200	166	165	0%
Asia Oceania	83	77	78	70	62	88	91	73	113	54	58	-7%
Total OECD	**493**	**377**	**305**	**263**	**304**	**326**	**326**	**313**	**362**	**259**	**251**	**3%**
Total Products												
Americas	872	639	790	615	986	933	625	651	513	509	526	-3%
Europe	649	604	576	543	566	593	599	632	605	598	613	-2%
Asia Oceania	716	770	771	881	693	797	712	665	760	863	716	21%
Total OECD	**2236**	**2013**	**2136**	**2040**	**2246**	**2323**	**1936**	**1948**	**1877**	**1970**	**1855**	**6%**
Total Oil												
Americas	1021	699	885	698	1090	1025	726	712	628	574	577	-1%
Europe	1608	1838	1827	1681	1839	1886	1899	2043	1914	1908	1797	6%
Asia Oceania	1343	1297	1384	1508	1312	1444	1275	1295	1169	1494	1323	13%
Total OECD	**3972**	**3835**	**4096**	**3886**	**4241**	**4354**	**3900**	**4051**	**3711**	**3976**	**3697**	**8%**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

Table 8
REGIONAL OECD CRUDE IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier change
OECD Americas												
Venezuela	81	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	868	745	719	648	689	809	731	756	762	768	673	96
North Sea	148	59	92	83	93	92	101	62	115	66	51	14
Other OECD Europe	2	1	3	-	11	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	192	91	229	128	295	307	185	209	132	63	116	-53
Saudi Arabia	621	588	427	331	370	483	520	605	574	553	230	323
Kuwait	45	21	21	7	20	36	20	25	12	46	-	-
Iran	-	-	3	12	-	-	-	-	-	16	-	-
Iraq	331	177	152	115	172	128	192	165	223	254	89	164
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	3	5	17	-	-	44	22	-	32	30	-	-
Other Middle East	-	-	-	-	-	-	-	-	-	-	-	-
West Africa[2]	267	145	228	206	272	255	180	184	180	142	284	-141
Other Africa	137	45	161	149	172	167	157	104	148	156	111	45
Asia	32	17	25	17	16	46	22	33	-	-	32	-
Other	0	3	-	-	-	-	-	-	-	-	-	-
Total	**2726**	**1896**	**2077**	**1695**	**2109**	**2367**	**2129**	**2143**	**2178**	**2093**	**1586**	**507**
of which Non-OECD	**2576**	**1835**	**1982**	**1613**	**2006**	**2275**	**2028**	**2081**	**2063**	**2028**	**1535**	**493**
OECD Europe												
Canada	60	95	83	108	81	89	55	76	45	88	122	-34
Mexico + USA	900	1139	1168	1029	1191	1204	1245	1335	1265	1222	1062	161
Venezuela	106	44	-	-	-	-	-	-	-	-	-	-
Other Central & South America	118	208	219	143	272	263	194	160	301	198	49	149
Non-OECD Europe	14	25	23	23	19	28	23	22	23	20	22	-2
Former Soviet Union	4239	3504	3524	3305	3466	3525	3797	3921	3674	4121	3371	750
Saudi Arabia	792	756	521	517	484	587	494	444	423	498	562	-64
Kuwait	97	48	0	-	-	0	0	-	0	-	-	-
Iran	74	6	1	-	-	6	-	-	-	-	-	-
Iraq	1124	814	895	783	916	927	951	1110	650	556	658	-102
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	2	-	-	-	-	-	-	-	-	-	-	-
Other Middle East	3	8	9	6	12	12	6	-	-	-	-	-
West Africa[2]	1140	1074	821	780	719	842	942	951	873	760	792	-32
Other Africa	1180	596	1185	1071	1204	1228	1233	1223	1007	874	1207	-332
Asia	-	0	0	-	-	0	-	-	-	-	-	-
Other	13	11	38	-	-	-	151	-	431	502	-	-
Total	**9863**	**8329**	**8487**	**7766**	**8364**	**8712**	**9091**	**9243**	**8690**	**8840**	**7844**	**995**
of which Non-OECD	**8913**	**7115**	**7259**	**6643**	**7109**	**7455**	**7815**	**7832**	**7446**	**7586**	**6671**	**915**
OECD Asia Oceania												
Canada	5	1	16	17	38	5	3	10	-	-	-	-
Mexico + USA	613	477	500	493	491	554	463	585	311	614	368	245
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	48	91	110	107	145	93	97	105	126	141	86	56
North Sea	10	49	98	116	90	87	97	35	98	17	238	-222
Other OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	435	300	335	328	372	265	376	333	360	423	365	58
Saudi Arabia	1878	1867	1766	1868	1574	1601	2020	1937	2392	2156	1897	260
Kuwait	666	584	506	482	484	493	563	571	549	633	457	176
Iran	137	-	-	-	-	-	-	-	-	-	-	-
Iraq	364	224	167	151	165	160	192	263	189	124	188	-63
Oman	59	22	32	15	43	49	22	-	16	16	43	-26
United Arab Emirates	1256	1096	1083	908	1094	1143	1184	1260	1256	1081	979	102
Other Middle East	449	387	362	396	383	371	301	252	335	471	407	64
West Africa[2]	56	65	80	46	119	77	79	79	45	60	14	45
Other Africa	90	42	50	59	35	68	39	22	61	50	55	-5
Non-OECD Asia	220	161	170	193	161	174	153	136	141	128	176	-48
Other	255	234	248	155	264	285	288	335	26	266	289	-23
Total	**6542**	**5602**	**5524**	**5336**	**5455**	**5424**	**5877**	**5923**	**5906**	**6181**	**5562**	**618**
of which Non-OECD	**5914**	**5076**	**4915**	**4710**	**4840**	**4785**	**5320**	**5299**	**5503**	**5559**	**4955**	**604**
Total OECD Trade	**19130**	**15826**	**16089**	**14798**	**15928**	**16502**	**17097**	**17308**	**16774**	**17113**	**14993**	**2120**
of which Non-OECD	**17403**	**14027**	**14157**	**12966**	**13956**	**14515**	**15163**	**15211**	**15012**	**15173**	**13162**	**2011**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes, and converted to barrels at 7.37 barrels per tonne. Data will differ from Table 6 which is based on submissions in barrels.
2 West Africa includes Angola, Nigeria, Gabon, Equatorial Guniea, Congo and Democratic Republic of Congo.

Table 9
REGIONAL OECD GASOLINE IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier change
OECD Americas												
Venezuela	4	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	83	40	41	10	67	37	51	28	52	9	16	-7
ARA (Belgium Germany Netherlands)	190	149	193	127	312	240	93	78	113	107	85	23
Other Europe	296	213	326	274	380	380	268	297	223	197	224	-28
FSU	79	57	82	83	98	92	57	71	42	12	54	-42
Saudi Arabia	7	6	24	4	50	41	-	-	-	-	-	-
Algeria	-	4	1	4	-	-	-	-	-	-	-	-
Other Middle East & Africa	14	13	13	23	12	15	4	11	-	5	25	-20
Singapore	5	1	4	4	3	8	3	1	-	-	-	-
OECD Asia Oceania	28	21	37	21	52	43	30	11	26	19	6	13
Non-OECD Asia (excl. Singapore)	116	72	81	47	99	116	60	38	68	52	36	16
Other	0	-	0	0	-	-	-	-	-	-	0	-
Total[2]	**822**	**577**	**803**	**597**	**1074**	**973**	**565**	**535**	**524**	**401**	**447**	**-47**
of which Non-OECD	**308**	**195**	**248**	**174**	**330**	**312**	**174**	**149**	**163**	**77**	**132**	**-54**
OECD Europe												
OECD Americas	3	3	5	2	5	3	8	17	5	23	2	21
Venezuela	0	0	2	1	1	5	-	-	-	4	4	0
Other Central & South America	3	4	7	8	2	11	5	3	-	5	4	1
Non-OECD Europe	18	16	10	9	16	10	6	6	9	9	5	5
FSU	54	31	8	13	7	9	3	2	4	12	11	1
Saudi Arabia	0	8	3	-	-	13	0	-	-	-	-	-
Algeria	0	1	-	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	8	3	5	8	6	3	2	2	1	3	15	-13
Singapore	3	2	0	-	-	0	0	0	0	1	-	-
OECD Asia Oceania	1	1	1	1	2	1	1	1	0	3	-	-
Non-OECD Asia (excl. Singapore)	0	0	3	3	2	2	3	3	3	3	4	-1
Other	21	37	65	57	117	15	70	6	165	57	21	36
Total[2]	**112**	**107**	**108**	**102**	**159**	**75**	**99**	**39**	**187**	**119**	**65**	**54**
of which Non-OECD	**108**	**104**	**102**	**98**	**152**	**70**	**90**	**21**	**182**	**93**	**63**	**30**
OECD Asia Oceania												
OECD Americas	6	4	1	2	0	0	0	0	0	-	0	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	14	4	4	9	7	0	0	0	0	0	24	-24
Other Europe	5	10	-	-	-	-	-	-	-	-	-	-
FSU	0	0	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	1	-	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	-	1	-	-	-	-	-	-	-	-	-	-
Singapore	46	51	100	86	98	97	121	90	148	124	46	78
Non-OECD Asia (excl. Singapore)	21	37	29	39	58	19	0	1	-	23	39	-15
Other	21	19	23	20	33	19	19	20	19	19	19	0
Total[2]	**114**	**126**	**157**	**155**	**196**	**135**	**140**	**110**	**167**	**166**	**128**	**38**
of which Non-OECD	**88**	**109**	**152**	**144**	**189**	**135**	**140**	**110**	**167**	**166**	**104**	**63**
Total OECD Trade[2]	**1048**	**810**	**1068**	**854**	**1429**	**1183**	**804**	**685**	**878**	**686**	**640**	**46**
of which Non-OECD	**504**	**408**	**502**	**417**	**671**	**518**	**405**	**281**	**511**	**337**	**298**	**39**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.
2 Total figure excludes intra-regional trade.

Table 10
REGIONAL OECD GASOIL/DIESEL IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier change
OECD Americas												
Venezuela	1	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	38	34	28	40	30	24	20	34	9	7	31	-24
ARA (Belgium Germany Netherlands)	5	11	34	51	31	30	22	21	-	24	58	-33
Other Europe	2	4	5	2	9	1	10	22	0	0	1	-1
FSU	6	12	25	35	21	10	33	50	11	-	22	-
Saudi Arabia	3	8	15	23	9	11	18	8	12	6	28	-22
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	2	9	25	48	8	18	26	26	26	-	78	-
Singapore	0	-	2	-	2	8	-	-	-	7	-	-
OECD Asia Oceania	24	16	25	10	15	29	44	41	38	39	-	-
Non-OECD Asia (excl. Singapore)	30	34	27	48	16	12	31	46	24	0	23	-23
Other	7	6	12	8	8	11	18	26	6	41	5	36
Total[2]	**118**	**134**	**197**	**266**	**149**	**154**	**222**	**274**	**126**	**124**	**246**	**-122**
of which Non-OECD	**86**	**103**	**134**	**203**	**94**	**94**	**146**	**190**	**88**	**61**	**187**	**-126**
OECD Europe												
OECD Americas	138	99	40	34	38	55	32	21	50	18	47	-29
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	0	3	1	-	1	1	3	0	9	-	-	-
Non-OECD Europe	41	30	29	28	30	27	32	28	33	40	36	4
FSU	608	627	611	698	687	546	514	580	484	550	672	-123
Saudi Arabia	205	193	134	131	114	142	150	176	119	174	156	18
Algeria	0	2	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	83	71	153	65	129	198	220	228	220	208	61	146
Singapore	27	17	18	10	18	24	21	16	27	1	12	-11
OECD Asia Oceania	36	32	42	38	39	48	43	48	29	34	32	2
Non-OECD Asia (excl. Singapore)	152	101	125	72	108	122	195	320	96	60	77	-17
Other	10	15	22	23	7	6	53	16	18	44	11	33
Total[2]	**1300**	**1190**	**1176**	**1099**	**1172**	**1170**	**1263**	**1433**	**1085**	**1129**	**1105**	**24**
of which Non-OECD	**1126**	**1062**	**1095**	**1027**	**1095**	**1067**	**1188**	**1364**	**1005**	**1077**	**1026**	**51**
OECD Asia Oceania												
OECD Americas	1	4	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	0	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	0	0	-	0	0	0	0	0	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	4	2	1	1	1	2	1	-	-	-	0	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	7	13	4	13	-	-	3	7	1	-	38	-
Singapore	111	91	110	82	92	153	115	133	108	90	71	19
Non-OECD Asia (excl. Singapore)	133	208	227	229	249	182	248	297	205	144	215	-71
Other	5	10	9	11	11	9	5	5	5	5	5	0
Total[2]	**262**	**328**	**351**	**336**	**353**	**345**	**371**	**442**	**319**	**239**	**329**	**-90**
of which Non-OECD	**261**	**324**	**355**	**336**	**353**	**345**	**385**	**442**	**359**	**274**	**329**	**-54**
Total OECD Trade[2]	**1680**	**1653**	**1725**	**1700**	**1673**	**1668**	**1856**	**2149**	**1529**	**1492**	**1680**	**-188**
of which Non-OECD	**1473**	**1489**	**1583**	**1566**	**1541**	**1506**	**1719**	**1996**	**1452**	**1412**	**1542**	**-130**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.
2 Total figure excludes intra-regional trade.

Table 11
REGIONAL OECD JET AND KEROSENE IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier change
OECD Americas												
Venezuela	0	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	7	5	1	3	-	-	-	-	-	-	4	-
ARA (Belgium Germany Netherlands)	-	-	5	4	0	14	-	-	-	-	11	-
Other Europe	0	4	6	6	5	6	7	-	-	-	17	-
FSU	-	0	4	-	0	0	16	11	28	2	-	-
Saudi Arabia	2	6	6	-	4	4	17	-	20	1	-	-
Algeria	-	1	4	9	0	3	5	2	8	-	2	-
Other Middle East and Africa	10	11	18	6	31	14	22	4	33	11	17	-6
Singapore	3	4	2	-	2	5	-	-	-	2	-	-
OECD Asia Oceania	133	100	91	67	98	122	76	84	46	75	71	5
Non-OECD Asia (excl. Singapore)	16	23	27	13	25	34	33	36	26	21	17	4
Other	3	4	1	-	-	4	-	-	-	14	-	-
Total[2]	**174**	**159**	**164**	**108**	**166**	**207**	**175**	**137**	**161**	**127**	**137**	**-10**
of which Non-OECD	**41**	**55**	**63**	**31**	**63**	**65**	**93**	**54**	**115**	**51**	**38**	**13**
OECD Europe												
OECD Americas	20	13	3	1	2	1	9	15	4	0	1	-1
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	1	0	0	-	-	-	1	2	-	-	-	-
Non-OECD Europe	2	0	0	-	-	-	0	-	-	-	-	-
FSU	41	21	27	34	24	30	21	13	28	15	27	-12
Saudi Arabia	105	40	27	36	39	11	21	30	34	46	25	20
Algeria	11	9	5	6	8	6	-	-	-	-	10	-
Other Middle East and Africa	199	155	154	137	136	180	165	151	177	161	151	10
Singapore	29	10	11	3	4	23	15	20	6	3	8	-5
OECD Asia Oceania	36	27	32	32	17	39	40	53	41	1	62	-61
Non-OECD Asia (excl. Singapore)	73	50	62	17	59	59	113	114	110	27	12	14
Other	2	10	11	12	2	1	30	-4	71	23	17	6
Total[2]	**520**	**336**	**334**	**278**	**291**	**349**	**416**	**395**	**470**	**276**	**314**	**-38**
of which Non-OECD	**464**	**297**	**299**	**248**	**273**	**309**	**367**	**327**	**425**	**275**	**251**	**24**
OECD Asia Oceania												
OECD Americas	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	-	-	1	3	-	-	-	-	-	-	8	-
Singapore	21	14	16	6	18	20	19	16	17	22	2	20
Non-OECD Asia (excl. Singapore)	29	28	33	55	37	15	27	57	22	17	60	-43
Other	26	21	24	36	17	8	37	43	49	32	44	-11
Total[2]	**76**	**63**	**74**	**100**	**71**	**43**	**83**	**116**	**88**	**71**	**113**	**-42**
of which Non-OECD	**76**	**63**	**75**	**100**	**71**	**43**	**86**	**116**	**96**	**73**	**113**	**-41**
Total OECD Trade[2]	**770**	**558**	**573**	**486**	**528**	**600**	**674**	**648**	**719**	**474**	**564**	**-90**
of which Non-OECD	**581**	**415**	**437**	**378**	**406**	**418**	**545**	**496**	**636**	**399**	**403**	**-4**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.
2 Total figure excludes intra-regional trade.

Table 12
REGIONAL OECD RESIDUAL FUEL OIL IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	Nov 21	Dec 21	Jan 22	Year Earlier Jan 21	Year Earlier change
OECD Americas												
Venezuela	7	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	50	52	34	29	25	39	44	12	61	13	18	-6
ARA (Belgium Germany Netherlands)	6	12	6	3	2	9	9	1	15	-	8	-
Other Europe	8	21	10	8	10	4	18	31	-	-	15	-
FSU	29	43	34	62	36	19	18	14	12	50	92	-43
Saudi Arabia	2	2	0	-	0	-	2	5	-	-	-	-
Algeria	8	2	7	8	4	3	13	4	27	-	20	-
Other Middle East and Africa	5	10	8	6	11	15	0	-	0	-	17	-
Singapore	1	1	0	-	-	2	-	-	-	-	-	-
OECD Asia Oceania	-	-	0	-	-	1	-	-	-	-	-	-
Non-OECD Asia (excl. Singapore)	0	-	2	-	8	0	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total[2]	**116**	**143**	**102**	**116**	**96**	**91**	**104**	**66**	**115**	**62**	**170**	**-108**
of which Non-OECD	**102**	**110**	**86**	**105**	**84**	**78**	**77**	**34**	**100**	**62**	**147**	**-85**
OECD Europe												
OECD Americas	7	12	24	28	32	14	20	12	9	18	29	-11
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	5	6	4	5	1	10	1	-	2	2	1	1
Non-OECD Europe	21	13	12	12	13	12	11	7	15	16	14	2
FSU	144	141	247	241	150	315	279	376	233	152	222	-71
Saudi Arabia	-	2	-	-	-	-	-	-	-	-	-	-
Algeria	0	2	2	3	-	2	3	-	-	-	8	-
Other Middle East and Africa	19	13	14	14	10	18	13	9	24	13	7	7
Singapore	1	3	3	2	7	2	2	-	0	-	7	-
OECD Asia Oceania	14	4	3	0	2	5	5	7	-	-	-	-
Non-OECD Asia (excl. Singapore)	3	-	-	-	-	-	-	-	-	-	-	-
Other	8	93	62	48	94	54	51	68	177	76	91	-15
Total[2]	**222**	**288**	**370**	**353**	**309**	**432**	**384**	**480**	**461**	**276**	**377**	**-101**
of which Non-OECD	**202**	**279**	**350**	**340**	**281**	**417**	**360**	**460**	**452**	**258**	**352**	**-93**
OECD Asia Oceania												
OECD Americas	1	-	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	0	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	6	5	0	1	-	-	-	-	-	-	4	-
Saudi Arabia	1	1	13	-	14	13	25	22	28	8	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	27	38	30	32	27	31	30	49	43	-	51	-
Singapore	25	18	29	27	44	22	23	27	13	63	28	35
Non-OECD Asia (excl. Singapore)	40	26	47	49	30	56	51	40	64	63	48	16
Other	1	-	-	-	-	-	-	-	-	-	-	-
Total[2]	**101**	**88**	**119**	**109**	**116**	**121**	**129**	**138**	**146**	**135**	**132**	**3**
of which Non-OECD	**100**	**88**	**119**	**109**	**116**	**121**	**129**	**138**	**146**	**135**	**132**	**3**
Total OECD Trade[2]	**439**	**519**	**590**	**579**	**521**	**645**	**616**	**684**	**722**	**473**	**679**	**-206**
of which Non-OECD	**404**	**477**	**554**	**554**	**481**	**615**	**565**	**633**	**698**	**456**	**631**	**-175**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

2 Total figure excludes intra-regional trade.

Table 13
AVERAGE IEA CIF CRUDE COST AND SPOT CRUDE AND PRODUCT PRICES
($/bbl)

	2019	2020	2021	2Q20	3Q20	4Q20	1Q21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22
CRUDE OIL PRICES													
IEA CIF Average Import[1]													
IEA Americas	56.93	37.31	64.78	24.30	39.34	40.17	53.66	75.59	75.73	68.22	74.94		
IEA Europe	64.25	42.91	69.96	28.30	43.29	44.02	60.10	80.48	80.33	74.41	84.07		
IEA Asia Oceania	66.38	46.28	70.41	30.10	42.99	44.27	57.82	78.50	82.51	81.65	81.59		
IEA Total	**62.75**	**42.19**	**68.55**	**27.58**	**42.11**	**43.01**	**57.60**	**78.61**	**79.55**	**74.52**	**80.89**		
FOB Spot													
North Sea Dated	64.12	41.76	70.82	29.57	42.82	44.03	61.07	83.54	81.37	74.01	87.10	98.01	118.75
Brent (Asia) Mth 1	64.86	44.86	71.49	36.46	44.20	45.86	61.55	84.27	82.58	74.82	86.18	97.89	117.53
WTI (Cushing) Mth 1	57.03	39.25	68.10	27.95	40.90	42.63	58.13	81.36	79.18	71.53	83.13	91.74	108.52
Urals (Mediterranean)	64.31	41.93	69.47	30.29	43.39	44.49	60.41	81.93	80.08	73.07	86.76	94.94	92.59
Dubai (1st month)	63.49	42.36	69.35	31.17	42.80	44.62	60.20	81.46	80.21	73.25	83.34	92.48	110.49
Tapis (Dated)	67.88	43.28	72.80	28.66	43.69	44.21	62.30	86.39	85.09	78.88	91.73	104.62	125.65
PRODUCT PRICES													
Rotterdam, Barges FOB													
Premium Unl 10 ppm	71.35	44.65	80.25	30.56	46.58	46.99	65.71	95.92	93.21	82.88	94.85	106.55	127.41
Naphtha	56.27	39.64	71.14	26.52	41.90	43.64	60.82	85.37	82.33	78.27	86.87	96.44	113.24
Jet/Kerosene	79.24	44.79	76.50	29.76	41.92	46.75	64.04	94.81	90.46	85.18	100.65	109.98	150.44
ULSD 10ppm	79.45	49.32	78.52	37.55	47.49	48.86	66.15	96.92	92.83	86.38	101.18	112.77	156.47
Gasoil 0.1 %	77.73	48.10	77.12	36.43	45.99	48.05	65.02	95.22	90.67	84.69	99.18	110.26	151.41
LSFO 1%	62.21	42.78	70.18	30.10	41.34	46.27	62.77	82.72	78.61	74.57	83.98	91.90	110.94
HSFO 3.5%	50.31	34.43	62.07	24.05	38.33	41.40	55.34	74.26	67.40	64.43	75.42	81.00	97.98
Mediterranean, FOB Cargoes													
Premium Unl 10 ppm	71.31	45.59	80.69	31.91	47.45	47.42	66.81	96.59	91.68	84.94	96.68	108.01	128.55
Naphtha	54.43	37.81	69.60	23.72	40.74	42.80	59.29	83.83	80.76	75.50	84.89	93.90	110.29
Jet Aviation Fuel	77.76	43.28	75.26	27.43	40.88	46.01	62.77	93.58	89.29	83.07	99.21	108.03	148.12
ULSD 10ppm	79.05	48.76	78.00	36.15	47.45	49.02	65.71	96.44	91.96	85.03	99.81	110.31	153.21
Gasoil 0.1 %	77.70	47.60	76.89	34.06	46.32	48.48	64.76	95.03	90.64	83.90	99.18	109.08	146.07
LSFO 1%	63.90	44.06	71.27	31.39	42.26	47.07	63.60	84.08	80.30	76.33	86.30	93.09	115.65
HSFO 3.5%	52.17	34.36	60.50	24.32	37.23	39.72	53.60	73.08	66.01	62.67	73.78	78.87	95.64
US Gulf, FOB Pipeline													
Super Unleaded	79.24	50.64	91.17	39.80	52.55	52.94	76.13	105.98	100.72	92.61	104.58	116.46	140.25
Unleaded	72.28	46.02	86.46	34.95	49.24	49.93	72.92	101.08	95.45	88.83	100.62	112.28	134.21
Jet/Kerosene	78.81	46.20	77.91	32.58	45.02	49.16	65.77	96.22	92.43	87.63	102.12	112.50	145.78
ULSD 10 ppm	79.09	50.17	84.69	38.27	48.59	52.24	71.63	103.07	97.70	91.78	106.71	118.06	151.09
No. 6 3%[2]	52.57	34.63	59.90	24.69	37.70	40.20	51.93	72.89	66.25	63.04	74.91	80.13	93.44
Singapore, FOB Cargoes													
Premium Unleaded	72.55	46.65	80.49	33.23	47.32	48.72	67.39	98.48	95.01	87.92	98.04	110.72	131.07
Naphtha	57.15	40.77	70.99	28.05	43.29	43.51	61.09	84.45	84.21	77.82	84.56	95.75	111.42
Jet/Kerosene	77.26	44.83	75.26	30.73	42.13	47.08	63.47	93.09	89.09	83.47	95.78	106.17	134.32
Gasoil 0.05%	77.23	48.43	76.12	36.58	47.00	48.38	64.93	93.38	90.84	84.94	97.84	109.91	138.51
HSFO 180 CST	58.62	39.32	64.53	29.24	40.35	44.09	56.74	77.52	71.15	65.86	76.17	82.63	103.13
HSFO 380 CST 4%	57.57	38.25	63.22	27.95	39.59	43.26	56.09	76.02	69.87	64.79	74.15	81.08	99.20

1 IEA CIF Average Import price for January is an estimate.
IEA Americas includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Estonia, Hungary and Slovenia.
IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.
2 Waterborne

Table 14
MONTHLY AVERAGE END-USER PRICES FOR PETROLEUM PRODUCTS

March 2022

	NATIONAL CURRENCY *						US DOLLARS					
	Total Price	% change from Feb-22	% change from Mar-21	Ex-Tax Price	% change from Feb-22	% change from Mar-21	Total Price	% change from Feb-22	% change from Mar-21	Ex-Tax Price	% change from Feb-22	% change from Mar-21
GASOLINE [1] (per litre)												
France	1.987	11.1	32.3	0.965	20.8	72.0	2.190	8.0	22.5	1.064	17.3	59.3
Germany	2.149	18.3	42.6	1.151	31.8	88.1	2.369	14.9	32.1	1.269	28.1	74.2
Italy	2.036	10.5	30.5	1.003	28.1	82.0	2.244	7.3	20.9	1.105	24.5	68.6
Spain	1.790	13.0	37.1	1.006	20.3	66.0	1.973	9.8	27.0	1.109	16.9	53.8
United Kingdom	1.602	8.5	29.4	0.768	18.2	69.9	2.110	5.6	23.0	1.012	15.0	61.5
Japan	174.6	1.6	18.1	102.1	2.4	31.2	1.473	-1.3	8.3	0.861	-0.5	20.3
Canada	1.806	12.3	42.0	1.289	16.2	56.6	1.427	12.8	41.0	1.018	16.8	55.6
United States	1.116	20.1	50.4	0.985	23.4	60.4	1.116	20.1	50.4	0.985	23.4	60.4
AUTOMOTIVE DIESEL FOR NON COMMERCIAL USE (per litre)												
France	2.029	18.8	46.8	1.082	32.9	99.3	2.236	15.4	36.0	1.193	29.1	84.6
Germany	2.174	29.3	65.6	1.357	43.9	114.4	2.396	25.6	53.4	1.496	39.8	98.6
Italy	1.992	16.2	39.3	1.078	36.6	94.2	2.195	12.8	29.0	1.188	32.7	79.9
Spain	1.758	19.5	49.4	1.074	28.3	80.8	1.938	16.1	38.4	1.184	24.7	67.5
United Kingdom	1.705	12.4	33.0	0.854	24.9	75.0	2.246	9.4	26.4	1.125	21.5	66.3
Japan	154.3	1.8	20.7	108.3	2.4	28.6	1.302	-1.1	10.7	0.914	-0.6	17.9
Canada	1.970	20.8	62.1	1.487	26.2	80.9	1.556	21.3	61.1	1.175	26.8	79.7
United States	1.349	26.7	61.9	1.198	31.1	75.1	1.349	26.7	61.9	1.198	31.1	75.1
DOMESTIC HEATING OIL (per litre)												
France	1.619	36.7	89.7	1.193	43.6	114.9	1.785	32.8	75.7	1.315	39.5	99.1
Germany	1.597	58.9	130.6	1.281	63.5	146.0	1.760	54.4	113.6	1.412	58.9	127.8
Italy	1.793	17.8	44.5	1.066	26.2	73.7	1.976	14.4	33.9	1.175	22.6	60.9
Spain	1.325	36.8	95.5	0.998	41.8	115.5	1.460	32.9	81.1	1.100	37.8	99.6
United Kingdom	1.154	47.8	112.1	0.987	56.3	142.9	1.520	43.9	101.7	1.301	52.1	130.9
Japan [2]	114.7	2.4	32.3	101.5	2.4	33.5	0.968	-0.6	21.3	0.856	-0.5	22.4
Canada	1.853	20.7	64.7	1.651	22.0	65.8	1.464	21.2	63.6	1.305	22.5	64.7
United States	-	-	-	-	-	-	-	-	-	-	-	-
LOW SULPHUR FUEL OIL FOR INDUSTRY [3] (per kg)												
France	0.877	16.6	51.6	0.738	20.4	68.0	0.967	13.3	40.5	0.813	17.0	55.6
Germany	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.826	19.5	61.4	0.794	20.4	65.4	0.910	16.1	49.5	0.876	17.0	53.2
Spain	0.636	14.8	51.3	0.619	15.3	53.4	0.701	11.6	40.1	0.682	12.0	42.1
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-

1 Unleaded premium (95 RON) for France, Germany, Italy, Spain, UK; regular unleaded for Canada, Japan and the United States.
2 Kerosene for Japan.
3 VAT excluded from prices for low sulphur fuel oil when refunded to industry.

* Prices for France, Germany, Italy and Spain are in Euros; UK in British Pounds, Japan in Yen, Canada in Canadian Dollars.

Table 15
IEA/KBC Global Indicator Refining Margins[1]
($/bbl)

	Monthly Average					Change	Average for week ending:				
	Dec 21	Jan 22	Feb 22	Mar 22		Mar-Feb	11 Mar	18 Mar	25 Mar	01 Apr	08 Apr
NW Europe											
Brent (Cracking)	5.11	4.29	3.28	11.84	↑	8.56	15.71	7.48	14.61	16.25	18.48
Urals (Cracking)	5.14	4.14	7.04	38.78	↑	31.74	41.51	36.15	44.10	45.92	51.63
Brent (Hydroskimming)	2.89	1.29	-0.37	6.26	↑	6.62	10.05	3.79	7.29	9.97	11.48
Urals (Hydroskimming)	0.53	-0.84	0.76	29.76	↑	29.00	31.42	29.00	34.26	37.03	43.24
Mediterranean											
Es Sider (Cracking)	6.52	5.66	4.21	15.62	↑	11.40	21.01	11.08	17.88	18.90	20.02
Urals (Cracking)	5.31	4.21	5.16	38.66	↑	33.50	41.43	35.41	44.92	45.77	50.80
Es Sider (Hydroskimming)	4.58	2.95	0.79	9.46	↑	8.68	13.99	7.26	9.39	13.05	13.77
Urals (Hydroskimming)	-0.31	-2.05	-2.40	26.15	↑	28.55	26.85	25.56	30.63	34.24	39.35
US Gulf Coast											
Mars (Cracking)	6.04	7.84	8.11	11.76	↑	3.65	11.05	12.17	13.93	15.09	15.95
50/50 HLS/LLS (Coking)	14.18	15.17	17.29	27.01	↑	9.72	25.38	25.99	31.01	29.98	32.11
50/50 Maya/Mars (Coking)	10.70	11.43	12.33	18.13	↑	5.79	16.74	18.18	20.74	20.56	22.23
ASCI (Coking)	11.21	13.01	14.73	22.13	↑	7.40	20.53	21.87	25.70	25.51	27.56
US Midwest											
30/70 WCS/Bakken (Cracking)	10.65	8.21	9.14	16.10	↑	6.96	14.66	17.36	20.52	17.26	19.53
Bakken (Cracking)	11.45	9.29	11.05	20.22	↑	9.17	17.45	21.08	25.77	21.97	24.71
WTI (Coking)	11.87	10.74	11.89	22.74	↑	10.85	19.65	24.84	27.00	26.01	28.74
30/70 WCS/Bakken (Coking)	13.59	10.49	12.22	21.75	↑	9.53	19.27	22.94	27.36	23.24	26.02
Singapore											
Dubai (Hydroskimming)	-1.12	-1.31	-1.47	2.11	↑	3.58	2.95	0.19	4.04	6.21	10.81
Tapis (Hydroskimming)	3.45	1.02	-0.76	2.82	↑	3.58	6.96	0.44	2.22	6.98	13.55
Dubai (Hydrocracking)	8.24	8.56	10.35	16.87	↑	6.51	20.19	13.32	19.09	18.36	21.41
Tapis (Hydrocracking)	3.23	0.95	-1.02	3.12	↑	4.14	7.20	0.51	3.26	7.77	15.21

1 Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crude for pricing purposes.
Source: IEA, KBC Advanced Technologies (KBC)

Table 16
REFINED PRODUCT YIELDS BASED ON TOTAL INPUT (%)[1]

	Nov-21	Dec-21	Jan-22	Jan-21	Jan 22 vs Previous Month	Jan 22 vs Previous Year	Jan 22 vs 5 Year Average	5 Year Average
OECD Americas								
Naphtha	1.2	1.1	1.1	1.3	-0.1	-0.2	-0.4	1.4
Motor gasoline	47.4	48.0	46.8	46.1	-1.2	0.7	-0.1	46.9
Jet/kerosene	7.8	8.1	8.5	7.3	0.4	1.2	-0.4	8.9
Gasoil/diesel oil	28.3	28.0	27.9	29.0	-0.1	-1.1	-0.5	28.4
Residual fuel oil	3.1	2.6	3.2	3.0	0.6	0.2	0.0	3.2
Petroleum coke	4.1	4.3	4.2	4.2	-0.1	0.0	-0.4	4.5
Other products	11.5	11.2	11.6	11.8	0.4	-0.2	0.8	10.8
OECD Europe								
Naphtha	8.2	8.5	8.5	9.7	0.0	-1.2	-0.4	8.9
Motor gasoline	21.8	21.3	21.3	21.1	0.1	0.2	0.3	21.1
Jet/kerosene	6.5	6.5	7.4	5.3	0.9	2.1	-0.6	8.0
Gasoil/diesel oil	41.3	41.3	39.9	41.2	-1.4	-1.3	-0.2	40.1
Residual fuel oil	8.2	8.7	9.3	8.2	0.6	1.1	-0.5	9.8
Petroleum coke	1.5	1.6	1.7	1.6	0.1	0.0	0.2	1.4
Other products	15.2	15.0	14.5	15.2	-0.6	-0.7	1.1	13.4
OECD Asia Oceania								
Naphtha	16.0	15.9	15.8	15.6	-0.1	0.2	-0.2	16.0
Motor gasoline	23.4	22.9	21.4	21.7	-1.6	-0.4	0.2	21.2
Jet/kerosene	12.9	13.5	14.3	14.2	0.9	0.1	-1.7	16.0
Gasoil/diesel oil	30.4	30.1	29.6	30.2	-0.5	-0.6	0.8	28.8
Residual fuel oil	8.2	8.3	8.4	7.5	0.1	0.9	1.2	7.3
Petroleum coke	0.5	0.5	0.4	0.4	0.0	0.0	0.0	0.4
Other products	12.4	12.2	12.2	12.9	0.0	-0.7	0.2	12.0
OECD Total								
Naphtha	6.0	6.0	6.1	6.5	0.1	-0.4	-0.4	6.5
Motor gasoline	35.0	35.2	34.1	33.9	-1.1	0.2	0.3	33.8
Jet/kerosene	8.2	8.6	9.2	8.0	0.7	1.3	-0.7	9.9
Gasoil/diesel oil	32.9	32.6	32.0	33.0	-0.6	-1.0	-0.2	32.2
Residual fuel oil	5.6	5.5	6.1	5.4	0.6	0.7	0.0	6.1
Petroleum coke	2.7	2.7	2.7	2.7	-0.1	0.0	-0.1	2.8
Other products	12.9	12.6	12.6	13.0	0.0	-0.4	0.8	11.8

1 Due to processing gains and losses, yields in % will not always add up to 100%

Table 17
WORLD BIOFUELS PRODUCTION
(thousand barrels per day)

	2019	2020	2021	3Q21	4Q21	1Q22	Jan 22	Feb 22	Mar 22
ETHANOL									
OECD Americas[1]	**1063**	**934**	**1010**	**993**	**1092**	**1036**	**1074**	**1016**	**1016**
United States	1029	906	979	963	1061	1001	1039	980	980
Other	34	28	30	30	30	35			
OECD Europe[2]	**97**	**93**	**103**	**118**	**117**	**109**	**117**	**104**	**104**
France	21	17	18	25	22	21	25	19	19
Germany	12	11	12	15	15	17	25	13	13
Spain	9	8	10	10	10	8	4	10	10
United Kingdom	5	5	9	9	16	11	16	8	8
Other	50	52	54	59	54	51			
OECD Asia Oceania[3]	**4**	**4**	**4**	**3**	**4**	**4**	**3**	**4**	**4**
Australia	4	4	4	3	4	4	3	4	4
Other	0	0	0	0	0	0			
Total OECD Ethanol	**1165**	**1031**	**1117**	**1114**	**1213**	**1149**	**1195**	**1124**	**1124**
Total Non-OECD Ethanol	**809**	**735**	**703**	**1130**	**515**	**313**	**328**	**303**	**308**
Brazil	621	560	515	942	327	101	116	91	96
China	67	69	76	76	76	79			
Argentina	19	15	18	18	18	21			
Other	102	91	94	94	94	112	212	212	212
TOTAL ETHANOL	**1974**	**1766**	**1820**	**2244**	**1728**	**1462**	**1522**	**1427**	**1432**
BIODIESEL									
OECD Americas[1]	**151**	**159**	**168**	**163**	**197**	**216**	**211**	**219**	**219**
United States	145	153	160	156	190	210	210	210	210
Other	7	6	7	7	7	6			
OECD Europe[2]	**295**	**281**	**313**	**328**	**314**	**305**	**256**	**331**	**331**
France	43	41	43	48	43	47	46	47	47
Germany	69	61	66	74	66	60	47	67	67
Italy	18	28	30	31	31	27			
Spain	42	30	39	40	38	36	26	41	41
Other	123	121	136	136	136	135	121	142	142
OECD Asia Oceania[3]	**15**	**12**	**12**	**15**	**8**	**11**	**9**	**12**	**12**
Australia	0	0	0	0	0	0	0	0	0
Other	15	12	12	15	8	11			
Total OECD Biodiesel	**461**	**452**	**493**	**506**	**520**	**533**	**475**	**563**	**563**
Total Non-OECD Biodiesel	**405**	**411**	**439**	**439**	**439**	**464**	**464**	**464**	**464**
Brazil	102	111	116	117	114	101	93	105	105
Argentina*	42	27	36	36	36	42			
Other	261	274	287	287	289	322			
TOTAL BIODIESEL	**866**	**863**	**932**	**945**	**959**	**996**	**939**	**1026**	**1026**
GLOBAL BIOFUELS	**2839**	**2630**	**2752**	**3190**	**2687**	**2458**	**2462**	**2454**	**2458**

* monthly data not available.

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International Energy Agency

Oil Market Team

Editor	Toril Bosoni +33 (0)1 40 57 67 18 Toril.Bosoni@iea.org	Data Management	Luis Fernando Rosa +33 (0)1 40 57 65 56 LuisFernando.Rosa@iea.org
Demand	Christophe Barret +33 (0)1 40 57 65 16 Christophe.Barret@iea.org		Tsuyoshi Deguchi +33 (0)1 40 57 65 78 Tsuyoshi.Deguchi@iea.org
	Ciarán Healy +33 (0)1 40 57 67 58 Ciaran.Healy@iea.org		
OPEC Supply	Peg Mackey +33 (0)1 40 57 65 81 Peg.Mackey@iea.org		
Non-OPEC Supply	Jacob Messing +33 (0)1 40 57 66 98 Jacob.Messing@iea.org		
Refining	Kristine Petrosyan +33 (0)1 40 57 66 05 Kristine.Petrosyan@iea.org	OIM Assistant	Deven Mooneesawmy +33 (0)1 40 57 65 03 Deven.Mooneesawmy@iea.org
Stocks	Yuya Akizuki +33 (0)1 40 57 67 30 Yuya.Akizuki@iea.org	Data Enquiries to Oil Market Report:	OilMarketReport@iea.org
Prices	Joel R. Couse +33 (0)1 40 57 67 22 Joel.Couse@iea.org	Subscription & Delivery Enquiries	+33 (0)1 40 57 66 90 OMRSubscriptions@iea.org
Analyst	Jenny Thomson +33 (0)1 40 57 67 11 Jenny.Thomson@iea.org	Media Enquiries/IEA Press Office	+33 (0)1 40 57 66 94 ieapressoffice@iea.org

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For information on the data sources, definitions, technical terms and general approach used in preparing the Oil Market Report (OMR), Market Report Series_Oil and Annual Statistical Supplement (current issue of the Statistical Supplement dated 12 August 2021), readers are referred to the Users' Guide at https://www.iea.org/articles/oil-market-report-glossary. It should be noted that the spot crude and product price assessments are based on daily Argus prices, converted when appropriate to US$ per barrel according to the Argus specification of products