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# Statistical Review of World Energy

2021 | 70th edition



70

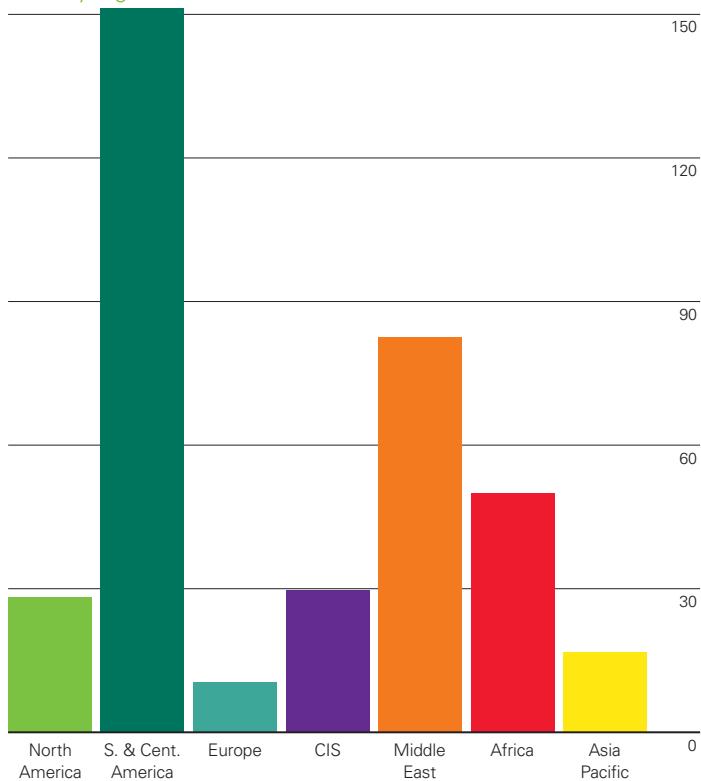
Reviewing world energy  
data for 70 years



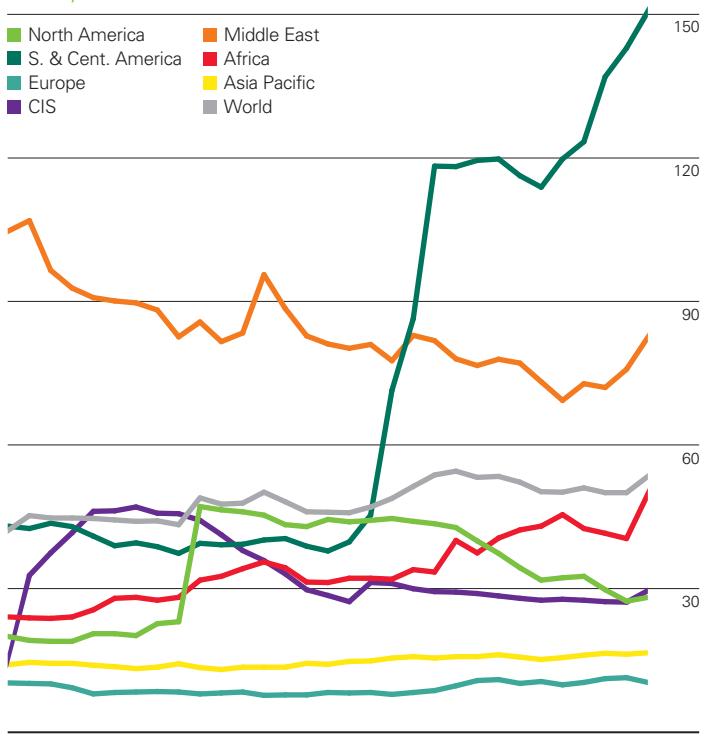
## Reserves-to-production (R/P) ratios

Years

### 2020 by region



### History

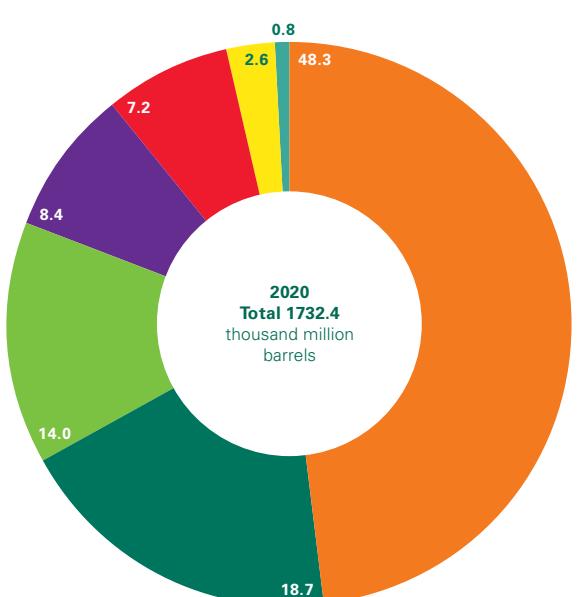
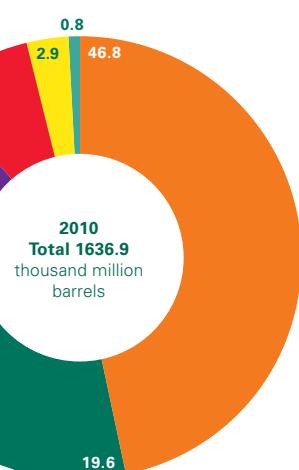
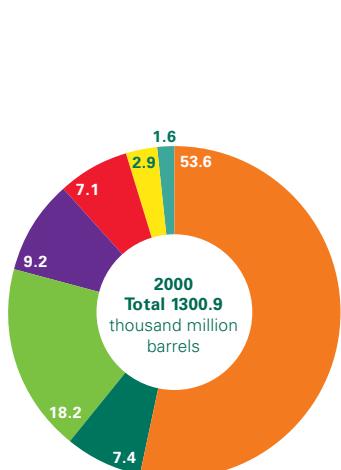


Global proved oil reserves were 1732 billion barrels at the end of 2020, down 2 billion barrels versus 2019. The global R/P ratio shows that oil reserves in 2020 accounted for over 50 years of current production. OPEC holds 70.2% of global reserves. The top countries in terms of reserves are Venezuela (17.5% of global reserves), closely followed by Saudi Arabia (17.2%) and Canada (9.7%).

## Distribution of proved reserves in 2000, 2010 and 2020

Percentage

- Middle East
- S. & Cent. America
- North America
- CIS
- Africa
- Asia Pacific
- Europe











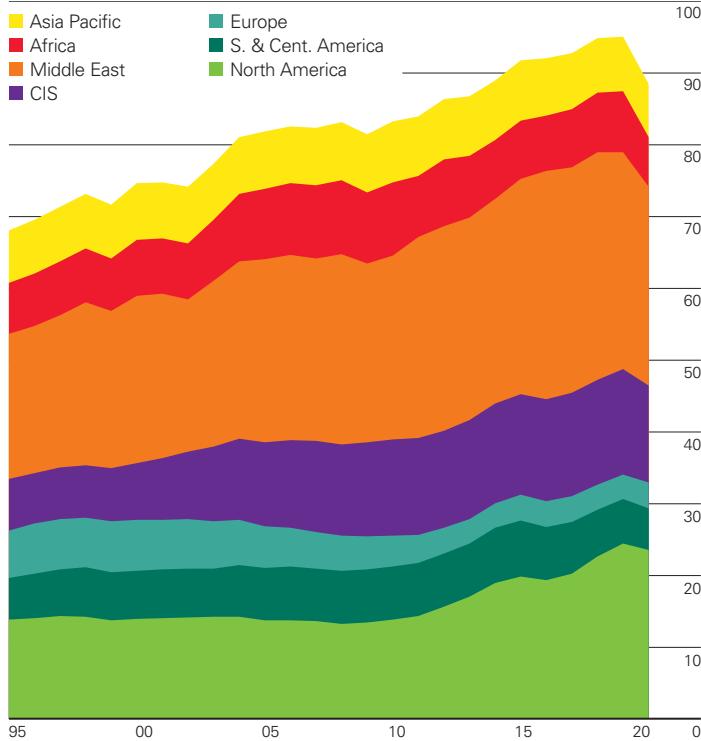






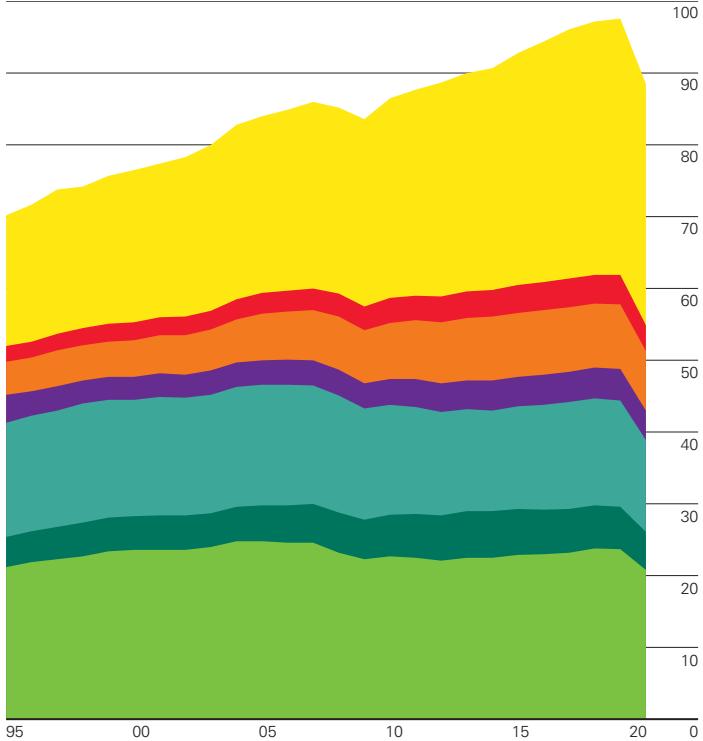
### Oil: Production by region

Million barrels daily



### Oil: Consumption by region

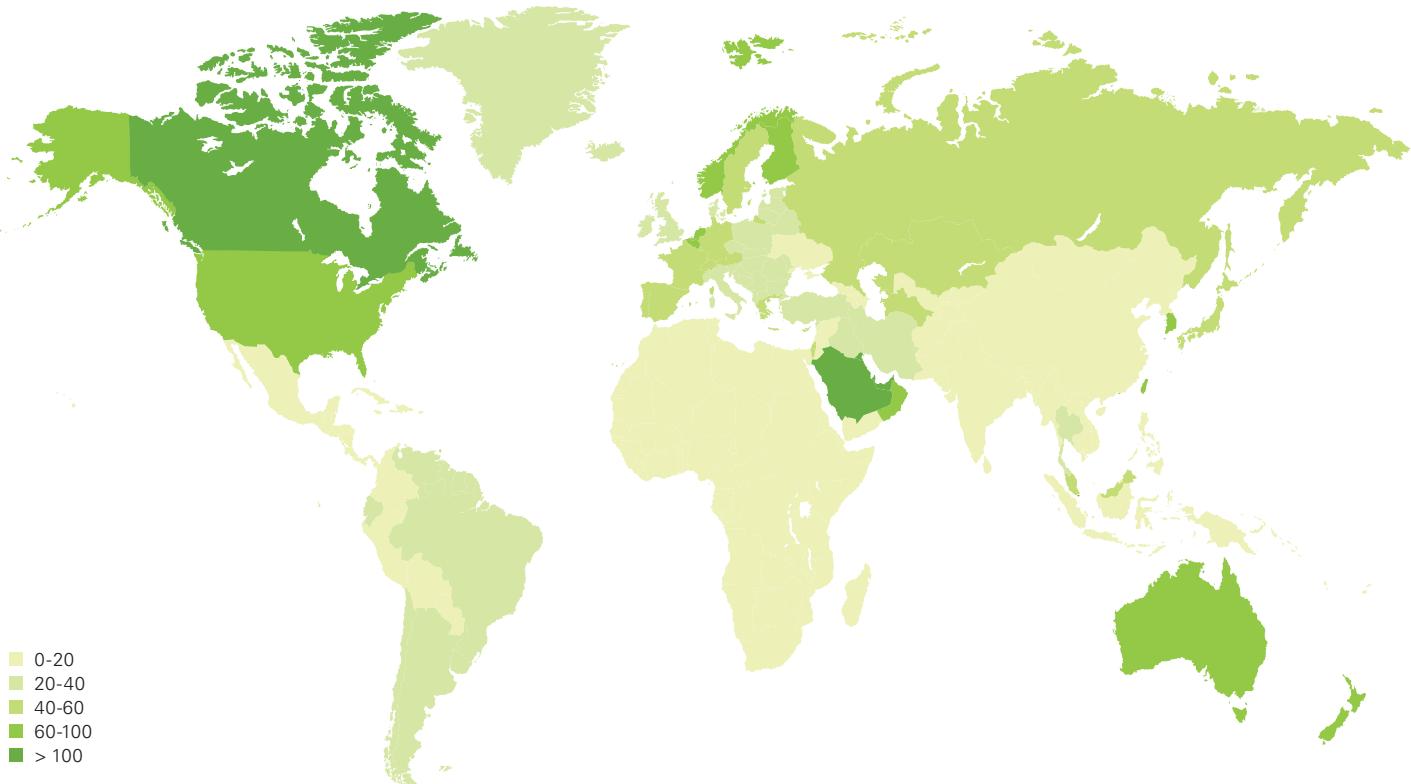
Million barrels daily



World oil production fell for the first time since 2009 by 6.6 million b/d in 2020 driven by both OPEC (-4.3 million b/d) and non-OPEC (-2.3 million b/d). Country wise, Russia (-1 million b/d), Libya (-920,000 b/d) and Saudi Arabia (-790,000 b/d). Production only increased in a few countries, mainly Norway (260,000 b/d) and Brazil (150,000 b/d). Oil consumption also dropped for the first time since 2009 by a massive 9.1 million b/d. The decline was in both the OECD (-5.8 million b/d) and the non-OECD (-3.3 million b/d). The US (-2.3 million b/d), the European Union (-1.5 million b/d) and India (-480,000 b/d) reported the largest declines. China was one of the few countries where demand increased in 2020 (220,000 b/d).

### Oil: Consumption per capita 2020

GJ per capita







## Spot crude prices

US dollars per barrel	Dubai \$/bbl*	Brent \$/bbl†	Nigerian Forcados \$/bbl	West Texas Intermediate \$/bbl‡
1985	27.53	27.56	27.75	27.98
1986	13.10	14.43	14.46	15.05
1987	16.95	18.44	18.39	19.19
1988	13.18	14.92	15.00	15.98
1989	15.59	18.23	18.30	19.67
1990	20.21	23.73	23.85	24.46
1991	16.70	20.00	20.11	21.53
1992	17.18	19.32	19.61	20.57
1993	14.99	16.97	17.41	18.45
1994	14.69	15.82	16.25	17.21
1995	16.08	17.02	17.26	18.42
1996	19.26	20.67	21.16	22.16
1997	18.31	19.09	19.33	20.61
1998	12.30	12.72	12.63	14.39
1999	16.90	17.97	17.98	19.31
2000	26.27	28.50	28.42	30.37
2001	22.78	24.44	24.23	25.93
2002	23.60	25.02	25.04	26.16
2003	26.75	28.83	28.68	31.06
2004	33.51	38.27	38.13	41.49
2005	46.78	54.52	55.69	56.59
2006	61.48	65.14	67.07	66.04
2007	67.92	72.39	74.48	72.20
2008	94.28	97.26	101.43	100.06
2009	61.14	61.67	63.35	61.92
2010	77.78	79.50	81.05	79.45
2011	105.93	111.26	113.65	95.04
2012	109.06	111.67	114.21	94.13
2013	105.47	108.66	111.95	97.99
2014	97.02	98.95	101.35	93.28
2015	51.22	52.39	54.41	48.71
2016	41.02	43.73	44.54	43.34
2017	53.02	54.19	54.31	50.79
2018	70.15	71.31	72.47	65.20
2019	63.71	64.21	64.95	57.03
2020	42.41	41.84	42.31	39.25

\*1973-1985 Arabian Light, 1986-2020 Dubai dated.

†1976-1983 Forties, 1984-2020 Brent dated.

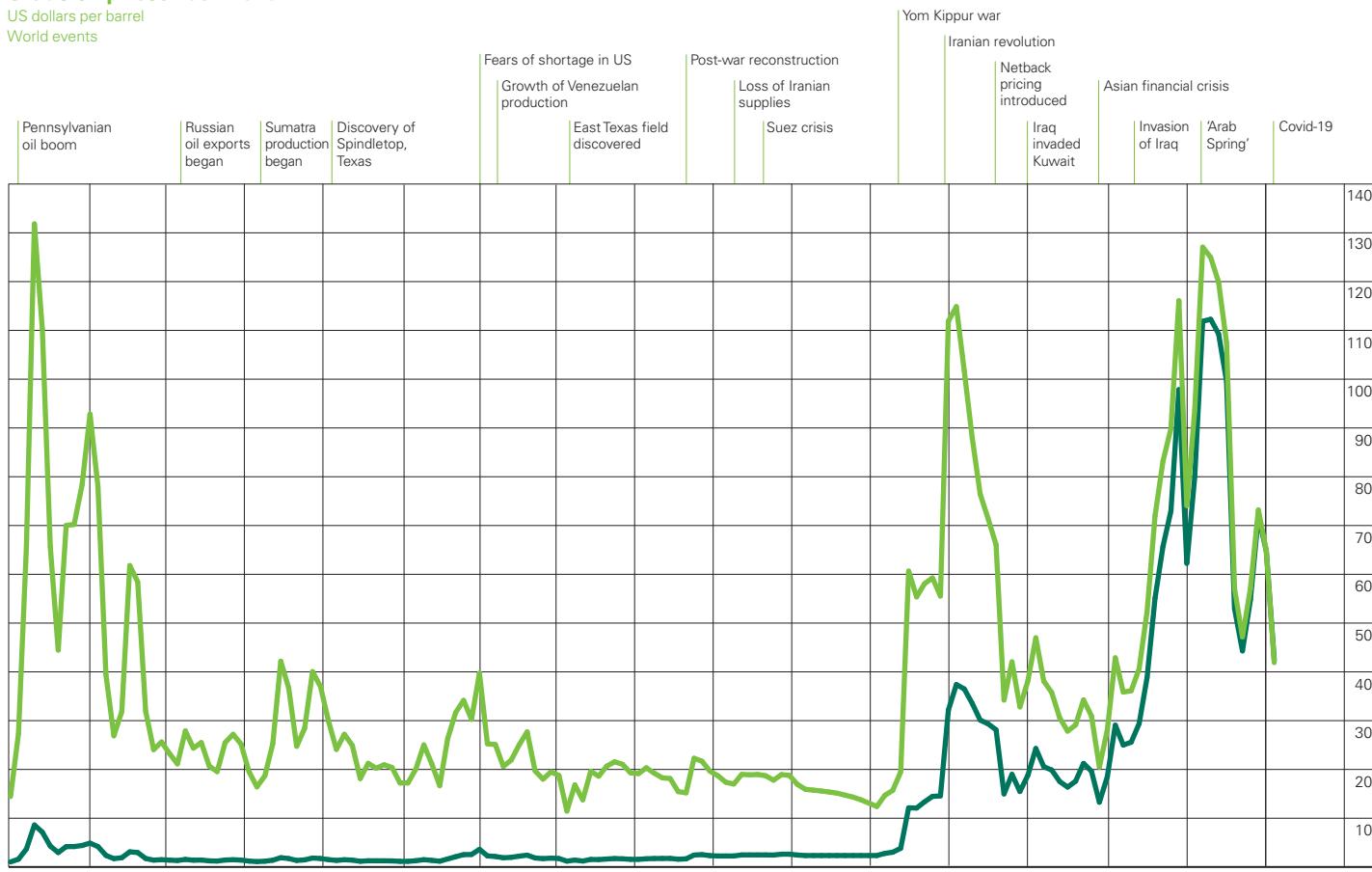
‡1976-1983 Posted WTI prices, 1984-2020 Spot WTI (Cushing) prices.

Source: S&P Global Platts, © 2020, S&P Global Inc.

## Crude oil prices 1861-2020

US dollars per barrel

World events



■ \$ 2020 (deflated using the Consumer Price Index for the US)

■ money of the day

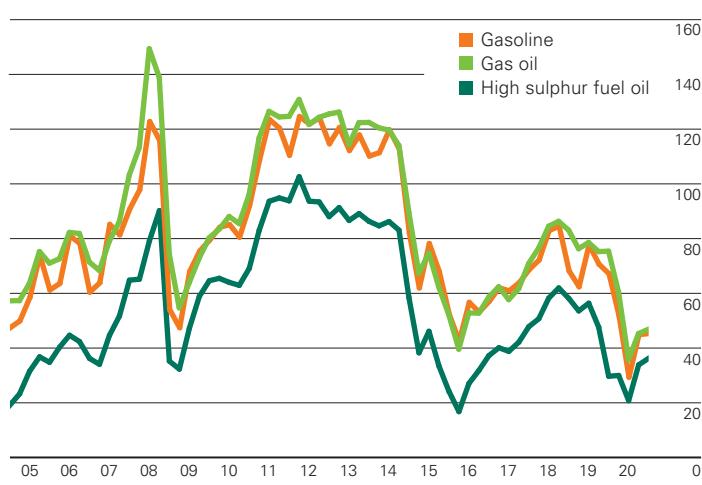
1861-1944 US average.

1945-1983 Arabian Light posted at Ras Tanura.

1984-2020 Brent dated.

## **Oil product prices (Rotterdam)**

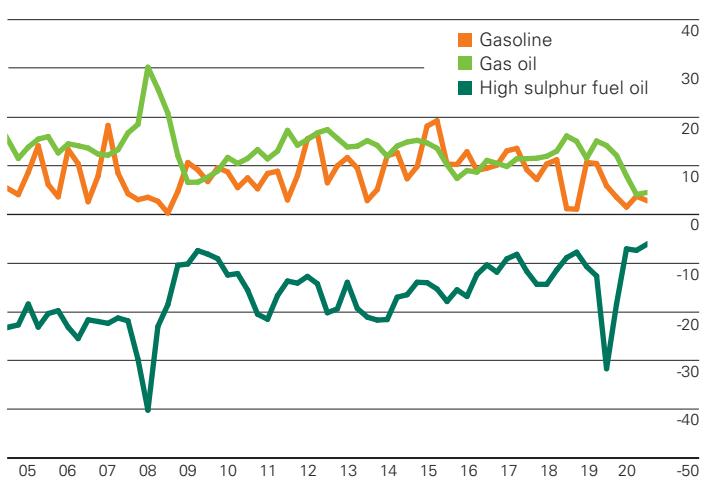
US dollars per barrel



## **Product differentials to crude**

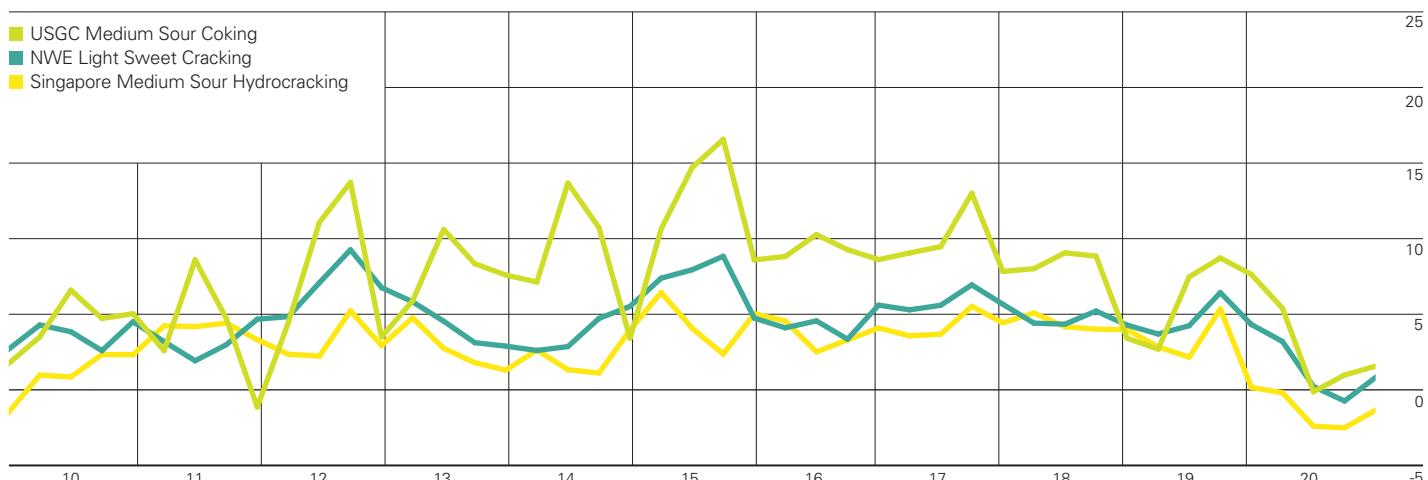
(Rotterdam products minus Dated Brent)

US dollars per barrel



## **Regional refining margins**

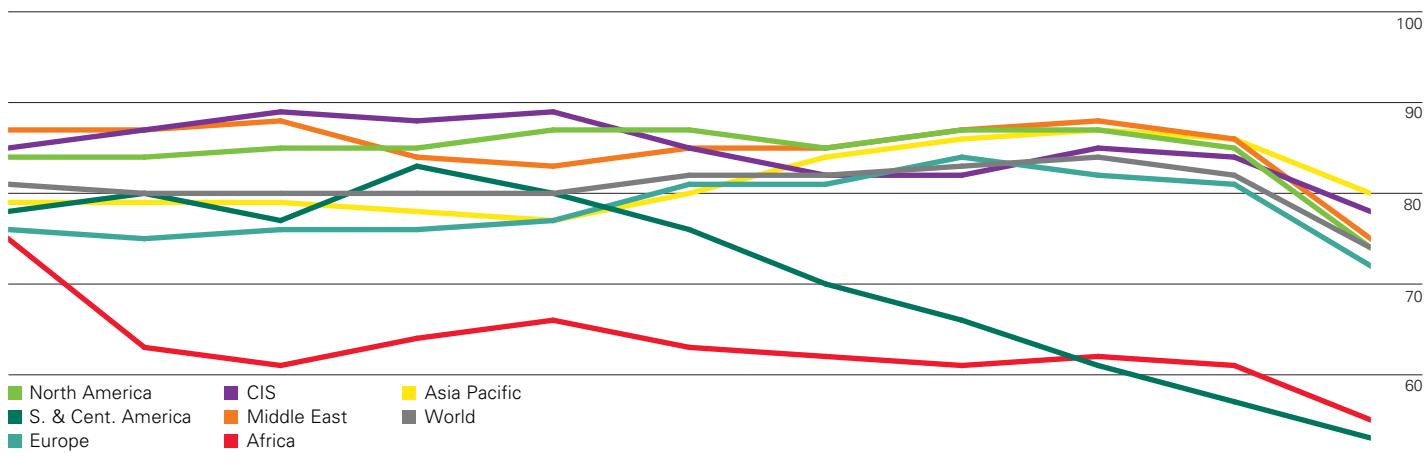
US dollars per barrel



**Note:** The refining margins presented are benchmark margins for three major global refining centres. US Gulf Coast (USGC), North West Europe (NWE – Rotterdam) and Singapore. In each case they are based on a single crude oil appropriate for that region and have optimized product yields based on a generic refinery configuration (cracking, hydrocracking or coking), again appropriate for that region. The margins are on a semi-variable basis, i.e. the margin after all variable costs and fixed energy costs.

## **Refinery utilization**

Percentage (based on average annual capacity)



Global refinery throughput dropped by 7.4 million b/d (-9.0%) in 2020 reflecting the weakness in demand for oil products. This is the largest fall in crude runs on record, surpassing the previous record -5.4% fall in 1981. Reduced runs were seen in all regions and were greatest in North America (-2.6 million b/d, -13.6%), and Europe (-1.5 million b/d, -11.8%). Refining capacity rose by just 0.2 million b/d, with additions in Asia being offset by closures in the US and Europe. As a result, global refinery utilization also fell dramatically by 8.0 percentage points to 74.1%, the largest annual decline on record. Utilization in South and Central America and Africa fell to new all-time lows of 53.3% and 54.6% respectively.

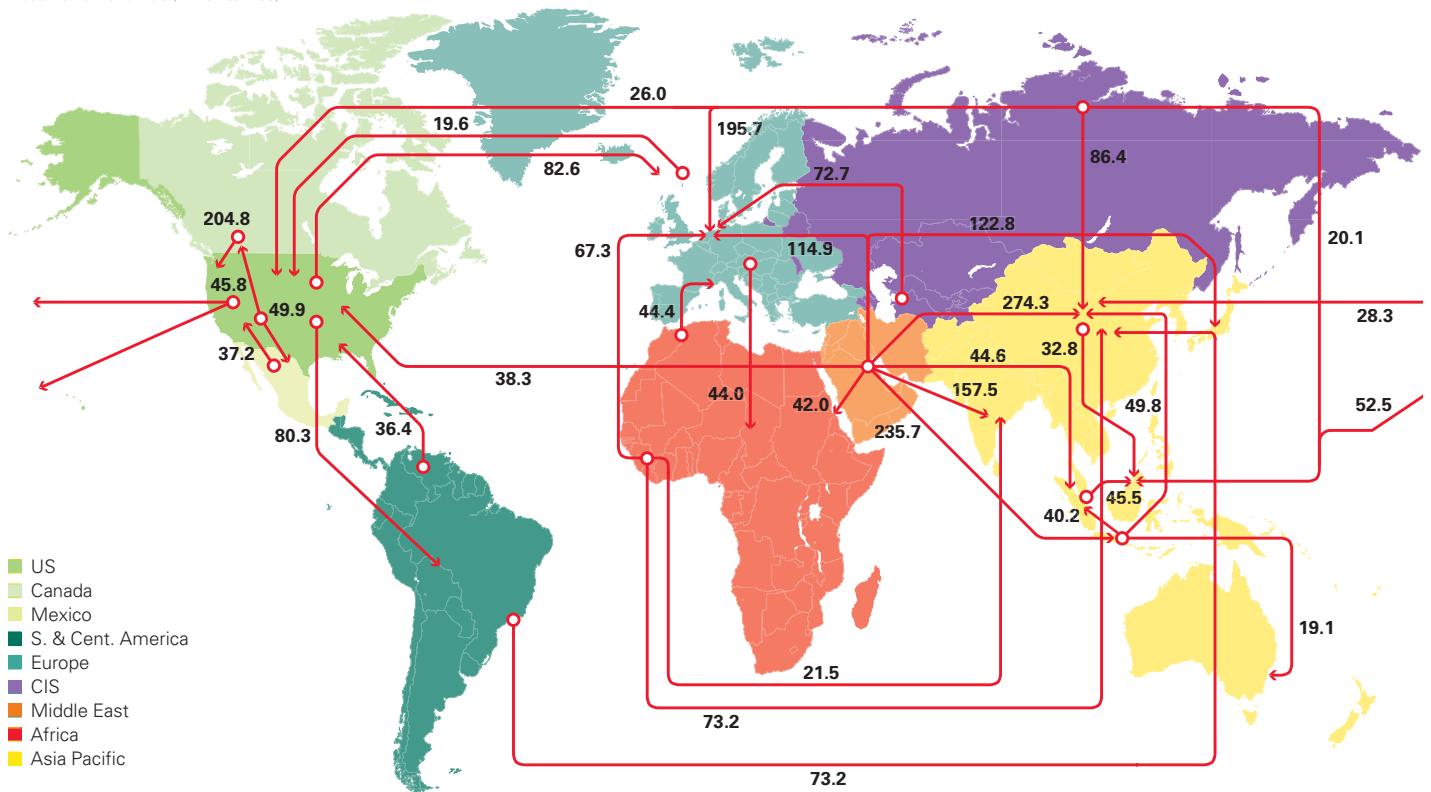






## Major trade movements 2020

Trade flows worldwide (million tonnes)



## Oil trade in 2019 and 2020

Million tonnes	2019				2020			
	Crude imports	Product imports	Crude exports	Product exports	Crude imports	Product imports	Crude exports	Product exports
Canada	34.8	32.8	197.7	34.4	27.9	28.7	189.3	30.5
Mexico	†	60.3	58.2	5.0	†	54.4	56.8	5.5
US	338.7	111.9	142.5	250.3	293.7	95.0	155.3	240.2
S. & Cent. America	21.1	109.4	146.8	24.6	17.8	94.5	145.7	25.7
Europe	556.0	177.0	28.1	123.6	475.9	147.7	28.2	104.4
Russia	†	0.6	289.0	123.3	†	0.7	260.0	106.8
Other CIS	18.5	1.7	93.9	12.0	15.2	2.4	93.2	9.9
Iraq	†	7.2	204.4	13.4	†	3.2	178.9	13.7
Kuwait	†	0.7	99.9	24.1	†	0.8	96.5	23.0
Saudi Arabia	0.1	10.0	366.0	53.7	0.1	13.6	349.1	49.7
United Arab Emirates	8.8	33.3	135.4	77.4	11.6	30.2	142.7	67.4
Other Middle East	26.0	18.8	120.5	60.7	22.3	16.4	107.7	58.4
North Africa	5.8	32.0	97.8	28.1	8.7	32.1	51.0	25.4
West Africa	0.4	36.1	226.8	8.4	0.5	38.1	203.7	7.9
East & S. Africa	19.6	41.6	5.5	2.6	16.3	38.6	3.8	2.7
Australasia	22.9	32.2	11.7	5.6	18.7	32.3	9.4	5.9
China	507.3	78.4	0.4	72.5	557.2	81.9	1.1	65.2
India	221.8	44.9	0.1	66.2	203.9	45.4	0.1	55.9
Japan	146.9	39.7	†	18.7	123.5	40.1	†	14.2
Singapore	49.6	112.4	1.9	76.9	46.1	97.1	1.7	71.5
Other Asia Pacific	287.3	210.4	39.0	110.1	269.0	201.9	34.6	111.5
<b>Total World</b>	<b>2265.6</b>	<b>1191.5</b>	<b>2265.6</b>	<b>1191.5</b>	<b>2108.6</b>	<b>1095.2</b>	<b>2108.6</b>	<b>1095.2</b>
Thousand barrels daily								
Canada	699	686	3971	719	558	598	3791	636
Mexico	‡	1261	1169	104	‡	1134	1138	114
US	6802	2340	2862	5233	5883	1981	3110	5007
S. & Cent. America	424	2287	2949	514	357	1969	2918	537
Europe	11167	3699	564	2583	9532	3079	564	2177
Russia	‡	13	5803	2577	‡	16	5207	2226
Other CIS	372	36	1885	250	304	50	1866	207
Iraq	‡	150	4105	280	‡	68	3583	285
Kuwait	‡	16	2005	503	‡	16	1933	479
Saudi Arabia	1	208	7351	1123	2	283	6991	1035
United Arab Emirates	177	696	2719	1618	233	629	2857	1405
Other Middle East	522	393	2421	1270	446	343	2156	1217
North Africa	116	669	1963	587	173	670	1021	529
West Africa	9	754	4555	175	11	795	4079	165
East & S. Africa	393	870	110	53	327	805	77	56
Australasia	459	672	234	117	374	673	187	122
China	10187	1639	9	1516	11158	1707	22	1360
India	4455	940	1	1384	4084	946	1	1165
Japan	2950	830	‡	391	2474	836	‡	295
Singapore	997	2350	39	1608	924	2025	33	1490
Other Asia Pacific	5769	4399	782	2302	5387	4210	693	2325
<b>Total World</b>	<b>45497</b>	<b>24907</b>	<b>45497</b>	<b>24907</b>	<b>42229</b>	<b>22832</b>	<b>42229</b>	<b>22832</b>

†Less than 0.05.

‡Less than 0.5.

**Notes:** Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded. Crude imports and exports include condensates.