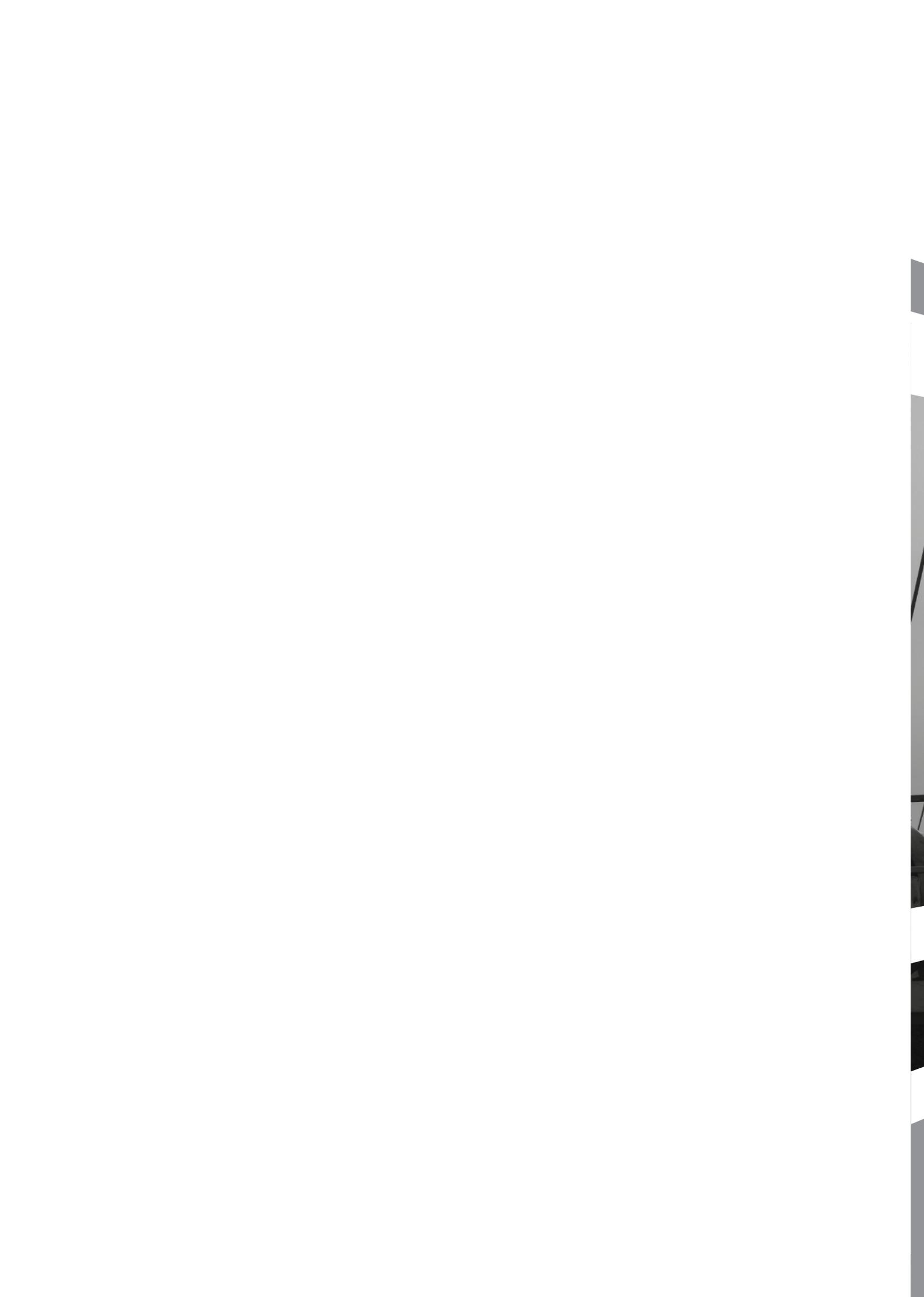




Organization of the Petroleum Exporting Countries



Annual Report 2019





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**Organization of the Petroleum Exporting Countries
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Foreword



Mohammad Sanusi Barkindo

OPEC Secretary General

The year 2019 was another excellent one for OPEC, as the value of the landmark **'Declaration of Cooperation'** (DoC) proved itself once again three years on. Though there were some worrying indicators in the world economy in 2019, the oil market remained relatively balanced, helping alleviate concerns.

A main highlight for 2019 at the OPEC Secretariat was undoubtedly the signing of the milestone **'Charter of Cooperation between Oil Producing Countries'** ('Charter') to much fanfare on 2 July at the **6th OPEC and non-OPEC Ministerial Meeting**. The 'Charter', creates a permanent platform for the extensive work and collaboration undertaken under the DoC.

A draft text of the 'Charter' was signed by all 24 original countries of the DoC. According to the 'Charter', it is a **"high-level commitment** to facilitate **dialogue** among participating countries, aimed at **promoting oil market stability, cooperation in technology** and other areas, for the benefit of oil producers, consumers, investors and the global economy... The 'Charter' promotes the **principles of transparency, equity** and **fairness**. It also has at its core the concept of **multistakeholderism**."

Oil producing and consumer countries outside of the DoC were also invited to join, to continue to expand the **energy dialogue** amid myriad **changes** and **challenges** that face the **oil industry** and **energy security** in general.

The **success** of the DoC since its implementation in **January 2017** remained undisputed, with **strong world economic growth** following in both **2017** and **2018**. The world oil market faced various challenges in **2019**, and once again this group of dedicated oil producers helped **stabilize** it through a regime of **monitoring, collaborating** and **cooperating**.

This could be seen at the **6th OPEC and non-OPEC Ministerial Meeting** in July when Ministers agreed to **extend voluntary adjustments** of **2018 (1.2 million barrels per day [mb/d])** for an additional period of nine months to **31 March 2020**. At the **7th Ministerial Meeting** on **6 December** an **additional adjustment** of **500 thousand barrels per day** was determined, for a total of **1.7 mb/d**. Several participating countries, mainly Saudi Arabia, continued their additional **voluntary contributions**, leading to total adjustments of more than **2.1 mb/d**. Partners' **unwavering dedication** to the process was clearly seen through **overall conformity** of **126%** achieved from **January 2017** to **December 2019**, while in **2019** the conformity level on average reached a **staggering 145%**.

OPEC also continued with a busy schedule of **dialogues** between **energy stakeholders** in **2019**, long recognized by the Organization as **essential** in addressing **critical energy issues, economic prospects** and **environmental challenges**. The Organization was **proactive** in its attempts to further **enhance** these communication channels through organizing and participating in **international dialogues** via high-level and technical meetings, joint studies, workshops and memberships.

This included active engagement by the Research Division in the **environmental debate** under the United Nations Framework Convention on Climate Change. In particular, **2019** was called the **year of action** for **climate change** and **sustainable development** and a number of high-level events were held. Many issues critical to the **operationalisation** of the **Paris Agreement** continued to be under debate. Alongside the submission of policy-relevant research outcomes of importance to **OPEC Member Countries**, the Secretariat provided ongoing **information** and **support** to Member Countries regarding their participation in climate change talks.

In terms of **key market fundamentals**, global economic growth weakened somewhat in **2019** to **2.9%** from **3.5%** in **2018**. The overarching **uncertainty** came from a **slowdown** in **global trade**, primarily due to trade disputes, which dragged on investment. However, domestic and external **challenges** in the Euro-zone and Japan accentuated the slowdown, as well as the **tapering-off** of significant US fiscal stimulus. This was **exacerbated** by **Brexit** and geopolitical tensions.

The global **oil market** remained rather **stable** through the effective implementation of **DoC decisions**, despite an easing economy. World **oil demand** increased by **0.83 mb/d** in 2019 to average **99.67 mb/d**, albeit **lower** than initially projected. The world's liquids supply remained unchanged, averaging **99.1 mb/d** in **2019**, despite a drop of **2 mb/d** year-on-year in OPEC crude oil production.

The relative **stability** of stocks, which saw a minor build, attested once again to the **power of cooperation** through the DoC.

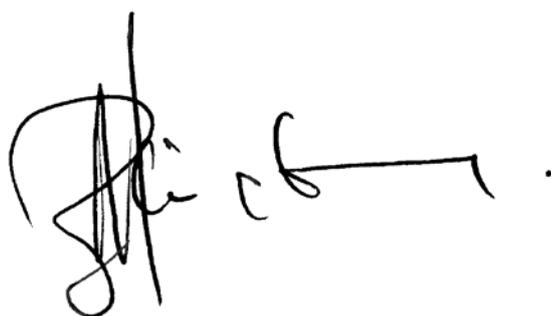
Industrialist and Philanthropist Andrew Carnegie said:

“Teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results”.

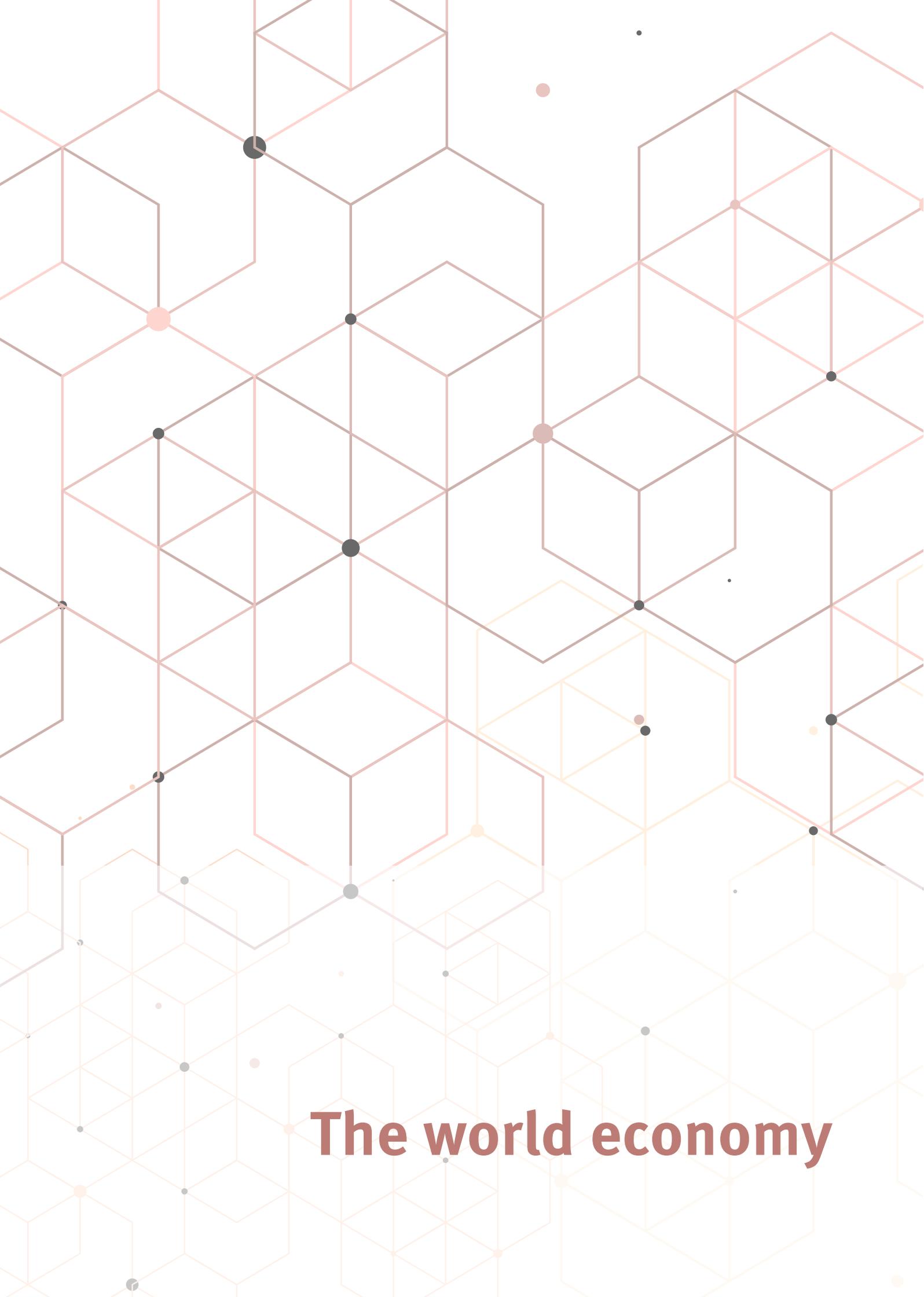
The DoC has surely proven the **value of teamwork** from **2016** through **2019**. One can hope that the world can look back on the achievements of this time and – agreeing on the irreplaceable value of **multilateral dialogue** – strive to work with one another for the **betterment** not only of the oil market and the world economy, but of **mankind**.

I would like to finally mention the great loss to the OPEC family of an industry icon and one of the petroleum industry's most esteemed leaders, **Dr Fadhil J. Chalabi**, who passed away late in the year. Dr Chalabi served OPEC with great distinction for more than a decade, including as Deputy Secretary General of the Organization from **1978–1989** and also as Acting Secretary General from **1983–1988**.

We, as OPEC, will always be here. Striving to attain oil market **stability** for the benefit of oil **producers, consumers** and the **world economy**, including **development** for millions on our shared planet who still struggle to climb out of the trap of energy poverty.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end, followed by a period.

Mohammad Sanusi Barkindo
OPEC Secretary General



The world economy

After relatively strong growth in the preceding two years, global economic growth weakened in 2019 to stand at an estimated level of 2.9%. This represents a slowdown from growth levels of 3.7% in 2017 and 3.5% in 2018. While the reasons for the slowdown were manifold and to some extent country specific, an overarching topic was the slowdown in global trade, largely as an outcome of US-centred ongoing trade disputes. This created significant business uncertainty, leading to a large negative impact on investment. The tapering-off of significant US fiscal stimulus, initiated in 2017 and 2018, was another reason for a slowdown in US consumption, additionally impacting global economic developments. A combination of domestic and external challenges in the Euro-zone

and Japan in 2H19 accentuated the OECD slowdown. However, an important stabilizing factor in 2019 was the ongoing OPEC-led balancing of the oil market, which played a vital role in global economic growth momentum. Most importantly, the increasingly stable oil market provided support to consumers via reasonable support for consumer price inflation and ongoing investment into oil supply. Moreover, major crude oil exporters within the 'Declaration of Cooperation' (DoC) benefitted considerably from these developments, as well as large OECD producers, such as the US and Canada, among others.

Brexit developments and various geopolitical tensions across the globe were also important elements, providing some dampening effect to global economic growth.

Table 1

World economic growth rates, 2018–2019 (% change over previous period)

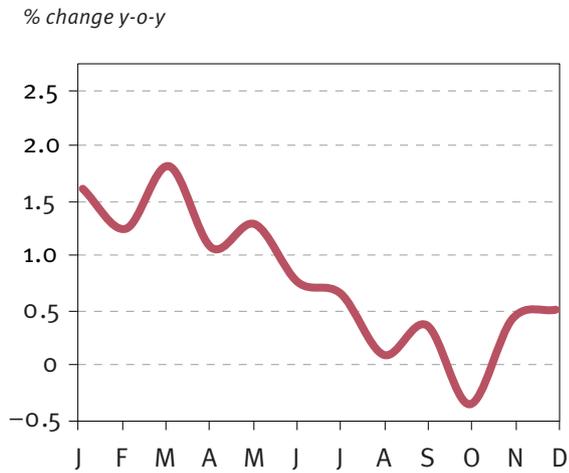
Grouping/country	2018	2019
OECD	2.3	1.6
Other Europe	3.8	3.6
Developing countries	3.7	2.9
Africa	3.5	2.9
Latin America and Caribbean	0.4	0.2
Asia and Oceania	4.6	3.6
Asia-Pacific	4.5	3.7
OPEC	-0.7	-1.0
China	6.6	6.1
FSU	2.9	2.0
Total world	3.5	2.9

Sources

OPEC, OECD, IMF and International Financial Statistics.

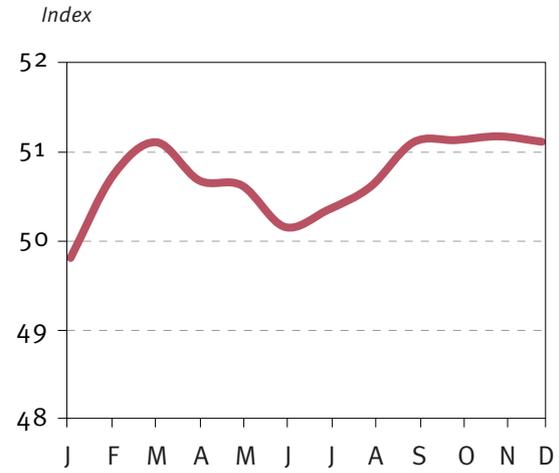
Note: Figures based on March 2020 Monthly Oil Market Report.

Figure 1
Global industrial production, 2019



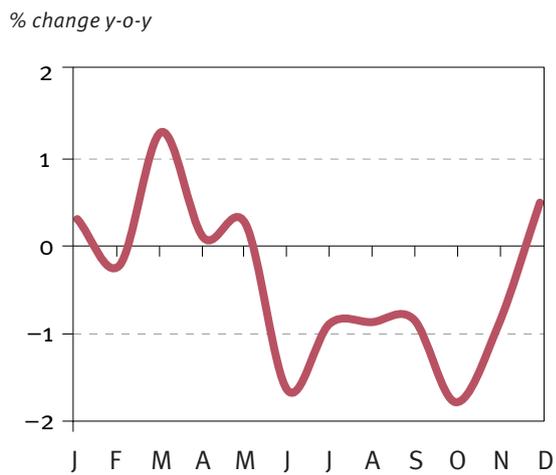
Sources
Netherlands Bureau for Economic Policy Analysis and Haver Analytics.

Figure 2
Global manufacturing PMI, 2019



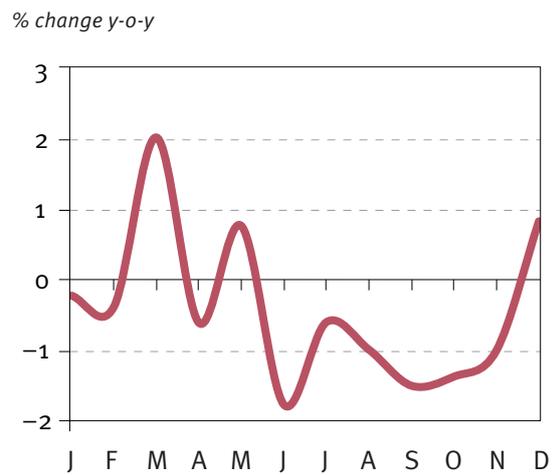
Sources
IHS Markit and Haver Analytics.

Figure 3
World trade volume, 2019



Sources
Netherlands Bureau for Economic Policy Analysis and Haver Analytics.

Figure 4
World exports volume, 2019



Sources
Netherlands Bureau for Economic Policy Analysis and Haver Analytics.

Table 2
Comparison: OPEC and total world, 2018–2019

	OPEC 2018	Total world 2018	OPEC 2019	Total world 2019
Real GDP growth rate (%)	-0.7	3.5	-1.0	2.9
Petroleum export value (\$ bn)	711.2	1,861.8	610.8	1,650.7
Value of non-petroleum exports (\$ bn)	384.6	17,115.2	349.6	16,867.3
Oil exports (as percentage of total exports %)	64.9	9.8	63.6	8.9
Value of imports (\$ bn)	687.6	19,165.9	682.4	18,719.0
Current account balance (\$ bn)	199.5	364.2	88.1	290.5
Crude oil production (mb/d)	31.34	75.91	29.33	75.19
Reserves, excluding gold (\$ bn)	915.9	11,796.6	919.9	12,195.9

*2019 data are preliminary estimates.

Note

Figures are partly estimated.

Sources

IMF, EIU, World Bank Development Indicators and OPEC.

Table 3
OPEC Member Countries' real GDP growth rates, 2018–2019 (% change over previous period)

Member Country	2018	2019
Algeria	1.4	1.0
Angola	-1.2	-0.5
Congo	1.6	3.0
Equatorial Guinea	-5.7	-2.5
Gabon	0.8	2.5
IR Iran	-4.8	-5.0
Iraq	-0.6	3.5
Kuwait	1.2	1.8
Libya	17.9	4.0
Nigeria	1.9	2.2
Saudi Arabia	2.4	0.3
UAE	1.7	1.8
Venezuela	-18.0	-22.0
Total OPEC	-0.7	-1.0

Sources

IMF, EIU, official OPEC Member Countries' statistics and OPEC.

After various deadlocks in the UK parliament throughout the year over the direction of negotiations between the UK and the EU, developments culminated in a UK general election in December, which provided a solid majority to the Prime Minister, thus at least providing direction for further negotiations with the EU.

In the emerging economies, developments showed a clear slowdown as well, most significantly in India, which faced numerous domestic challenges that led to slowing demand at home. Gross domestic product (GDP) growth in India stood at only 5.3% in 2019, after reaching 7.4% in 2018. China also continued to see a slowing growth trend, down to 6.1%, compared with 6.6% in 2018. This was mainly due to ongoing challenges in its export markets, particularly in the US, and was counterbalanced to some extent by domestically oriented efforts by the government via fiscal and monetary stimulus. Brazil remained affected by slowing domestic demand, posting growth of only 1.1% in 2019, compared with 1.3% in 2018. Russia also saw a sharp deceleration in its growth rate amid sanctions and slowing domestic demand, leading to 2019 GDP growth of 1.1%, compared with 2.3% in 2018.

Central bank policies had pointed to some normalization in 2018 and a more accommodative stance was again taken in 2019. The US Federal Reserve (Fed) lowered its key policy rate by 75 basis points (bp) in the second half of the year in anticipation of a cooling US economy. The European Central Bank (ECB) and the Bank of Japan (BoJ) also continued with quantitative easing measures, though the ECB did this at a lower rate. Moreover, the central banks in emerging economies provided further monetary easing. Brazil started lowering its policy rate in 2H19, revising it down significantly by 2 per-

centage points (pp). Russia started doing the same in June, bringing it down by 1.5 pp until December, while India started lowering its rate already in February, revising it down by 1.35 pp up to December. China increased its monetary supply via a variety of measures, among them utilizing the benchmark of its medium-term standing lending facility, which it lowered by 5 bp over the year for the 1-year facility. The one-year loan prime rate was lowered by 16 bp.

OECD

OECD growth stood at 1.6% in 2019, compared with 2.3% in 2018. This marked a sharp decline, which was visible across the most important OECD economies. US growth was reported at 2.3%, compared with 2.9% in 2018. The Euro-zone showed less dynamic growth of 1.2%, compared with 1.9% in 2018. Japan reported 2019 GDP growth of 0.7%, after showing growth of only 0.3% in 2018. A very important factor pushing growth rates down was the slowdown in global trade, triggered by the US-China centred trade dispute, which led to rising business uncertainty and negatively impacted investment. This very much triggered the downward slope in major OECD exporting economies, among them Japan and Germany. Some weakening in domestic demand exacerbated the deceleration. While the US held up relatively better, the phasing out of fiscal stimulus measures, which had supported growth strongly in 2018, was another important factor for the slowdown in the US. In the meantime, sovereign debt levels in major OECD debtor economies – including the US, Japan and Italy – remained at record highs, hence providing limited space for further fiscal response to the slowdown.

OECD Americas

US

The US unemployment rate fell to a record low of 3.5% in December. Average hourly earnings growth for the private sector stood at 3.3% in 2019, a new record high compared with an already high level of 3.0% in 2018. The improving labor market supported both consumer spending and sentiment. Private household consumption increased by 2.5% in 2019, albeit slightly below the 2018 level of 2.8%. However, gross capital formation, broadly understood as investment into the economy, slowed, growing by only 2.3% compared with 4.6% year-on-year (y-o-y) in 2018. This is another area that may have responded negatively to rising business uncertainties amid ongoing US-centred trade disputes. The slowdown in economic activity also translated into somewhat decelerating inflation, which stood at 1.8% in 2019, compared with growth of 2.4% in 2018.

OECD Europe

Euro-zone

The Euro-zone reported growth of only 1.2% in 2019, the lowest level since 2014, and down from 1.9% in 2018. Germany, as the largest economy, was particularly hit by a global slump in car sales, as well as a significant decline in global investment, considering the country is among the largest exporters of investment goods. Growth risks in Italy rose again in 2019, with nearly flat growth for the full year, turning negative on a quarterly basis in 4Q19. A review of available data made it clear that the slowing trend in the Euro-zone gained momentum in 2H19, though France did much better, due to ongoing stimulus

measures. Nevertheless, the French economy slowed towards the end of the year, showing a mild decline in this period. Another important factor not only for the UK, but also for the Euro-zone, was inconclusive Brexit negotiations adding another layer of uncertainty throughout the year.

OECD Asia-Pacific

Japan

Japan grew by 0.7% in 2019, representing a slight pickup from only 0.3% in 2018. This despite the fact that the government implemented a largely anticipated sales-tax increase from 8% to 10% in October, which reduced growth significantly in 4Q19. Although the yearly comparison shows a pickup in economic growth for 2019, external and domestic factors were not significantly favourable for the Japanese economy. Moreover, 2Q19 and 3Q19 were strongly negatively affected by weather conditions that even disrupted supply chains and production in major hubs, including Tokyo. Though Japan continued to grow at a slow pace of below 1% on average, the average 2019 unemployment rate remained low, at only 2.4%, the same as in 2018. Hence the economy seemed to continue growing at around its growth potential, given that it already enjoys very low unemployment and high industrial utilization rates. Wage pressure seems to have been low in 2019, despite a tight labour market; average earnings fell slightly in 2019 by 0.2%, compared with a rise of 1.2% in 2018. Inflation also only rose mildly, increasing by 0.5% compared with 1% in 2018. The low inflation rate, in combination with ongoing challenges in the Japanese economy, kept the BoJ's accommodative monetary policy intact.

Non-OECD

BRICS

Brazil

GDP growth in 2019 stood at 1.1%, the same as in 2018. Imports stood at \$1.3 billion in December, lower by 2.8% y-o-y. Imports of primary products, semi-manufactured products, and manufactured products all fell in December. Exports dropped by 6.2% y-o-y in December, registering \$1.8 bn. The trade balance posted a surplus of \$5.6 bn in December 2019, compared with \$6.4 bn in the same month a year earlier. The ongoing financial meltdown in Argentina and the high likelihood of a deeper recession in 2019 and 2020 are expected to further hit to Brazilian exports to the country, which dropped by 34% y-o-y on average in 2019. The country's total foreign reserves stood at \$357 bn in December 2019, down from \$377 bn in January 2019.

Russia

GDP growth is estimated at 1.1% y-o-y in 2019, down from 2.3% in 2018. GDP expanded by 1.8% y-o-y in 3Q19, up from 0.9% in the previous quarter, according to the Federal State Statistics Service. Household consumption increased by 3.1% y-o-y in 3Q19 from 2.8% in the previous quarter. Government consumption rose by 0.2% y-o-y in 3Q19, holding the same rate as in 2Q19. Consumer price inflation posted 3.1% y-o-y in December, down from 3.5% in November.

At the beginning of 2019, inflation stood at 5.0% y-o-y, because of a VAT increase. In March 2019, inflation reached its highest rate since the end of 2016 at 5.3% y-o-y. Consumer price inflation posted 3.1% y-o-y in December, down from 3.5% in November. The Central Bank reduced its benchmark one-week repo rate to 6.25% in December from 6.50% in November.

Table 4

Summary of macroeconomic performance of the 'BRIC' countries in 2019

	GDP growth rates	Consumer price index	Current account balance	Governmental fiscal balance	Net public debt
		% y-o-y change	\$ bn	% of GDP	% of GDP
Brazil	1.0	3.7	-41.6	-5.7	78.4
Russia	1.1	4.5	79.5	1.8	10.2
India	5.3	3.6	-53.9	-3.9	44.3
China	6.1	2.9	210.7	-4.3	18.4

Sources

OPEC, Consensus Forecast and Economist Intelligence Unit.

Table 5

Average quarterly and yearly spot prices for selected crudes, 2018–2019

\$/b

	2018	1Q19	2Q19	3Q19	4Q19	2019	% Change 2019/18
OPEC Reference Basket	69.78	62.90	68.03	62.26	63.01	64.04	-8.2
OPEC Basket crudes							
Arab Light	70.59	63.88	68.85	63.11	64.05	64.96	-8.0
Basrah Light	68.62	62.42	67.79	61.85	62.53	63.64	-7.3
Bonny Light	72.11	64.40	70.35	63.51	64.35	65.63	-9.0
Djeno	68.59	60.48	66.22	59.19	61.39	61.80	-9.9
Es Sider	69.78	62.19	68.23	61.37	63.51	63.81	-8.6
Girassol	71.72	64.06	70.66	64.34	65.43	66.11	-7.8
Iran Heavy	67.97	60.53	65.90	60.28	60.73	61.85	-9.0
Kuwait Export	68.90	63.03	68.10	62.51	63.41	64.25	-6.7
Merey	64.47	54.75	57.47	57.60	46.34	54.04	-16.2
Murban	72.20	64.74	68.12	62.52	63.59	64.72	-10.4
Qatar Marine	69.50	63.33	66.82	61.09	61.77	63.21	-9.1
Rabi Light	70.30	62.33	68.07	61.04	61.36	63.18	-10.1
Saharan Blend	71.44	63.24	69.19	61.56	64.04	64.49	-9.7
Zafiro	71.36	63.98	70.21	63.64	65.18	65.74	-7.9
Other OPEC crudes							
Arab Heavy	68.79	62.74	67.49	62.26	62.97	63.85	-7.2
Dubai	69.68	63.38	67.55	61.10	62.00	63.48	-8.9
Dukhan	71.22	63.81	66.79	61.42	62.74	63.65	-10.6
Forcados	72.56	64.85	70.62	64.02	65.47	66.19	-8.8
Iran Light	69.10	61.89	67.20	60.27	61.83	62.74	-9.2
Other non-OPEC crudes							
Zueitina	70.22	62.18	68.02	61.16	63.00	63.57	-9.5
Brent Dated	71.22	63.08	68.82	61.79	63.14	64.19	-9.9
Isthmus	68.74	62.73	67.56	61.48	60.33	63.00	-8.4
Oman	70.10	63.59	67.81	61.91	62.78	64.00	-8.7
Suez Mix	68.47	61.76	67.07	60.14	61.70	62.61	-8.6
Tapis	73.78	66.96	73.02	66.60	70.04	69.15	-6.3
Urals	70.13	63.46	68.88	61.81	63.47	64.38	-8.2
West Texas Intermediate	65.16	54.87	59.87	56.41	56.92	57.02	-12.5
West Texas Sour	57.38	53.93	57.98	55.94	57.25	56.29	-1.9
Differentials							
Bonny Light – Arab Heavy	3.32	1.66	2.86	1.25	1.38	1.78	
Bonny Light – Saharan Blend	0.67	1.16	1.16	1.95	0.31	1.14	
Brent Dated – WTI	6.06	8.21	8.95	5.38	6.22	7.17	
Brent Dated – Dubai	1.54	-0.30	1.27	0.69	1.14	0.71	

Notes

Quarterly and yearly averages based on daily quotations.

Sources

Platts, Argus, direct communications and OPEC.

India

India's 2019 GDP growth rate declined to 5.0%. The country's economic growth has been decelerating since mid-2018, mainly due to weak consumption demand and slow employment growth, as well as modest manufacturing sector performance. India's inflation generally rose sharply in 2019, especially in the second half of the year, due to a strong increase in vegetable prices by 7.3% y-o-y in December 2019, above the upper boundary of the Reserve Bank of India's (RBI) target range.

The RBI cut its policy rate five consecutive times in 2019 in an effort to boost India's slowing consumption and GDP growth, but an inflation rate surge in 4Q19 restrained any further monetary policy easing. As a result, the Monetary Policy Committee voted in its last meeting in favour of maintaining the status quo on the key interest rate for the short term at 5.15%. The Non-Banking Financial Companies and the Infrastructure Leasing & Financial Services Ltd default is still stressing the financial sector and negatively impacting the future economic outlook.

India's yearly average composite Purchasing Managers' Index (PMI) stood at 52.2 in 2019, the same level as in 2018. Meanwhile, the average manufacturing PMI dropped slightly to 52.2 in 2019 compared with 52.3 in 2018 and the average services PMI was 51.4 in 2019 compared with 51.5 in 2018.

China

China's GDP grew by 6.1% in 2019, a 0.6 pp deceleration from 2018. It was the lowest growth rate since the global financial crisis amid an intense trade dispute with the US, weakening domestic demand and consider-

able off-balance-sheet borrowing by local governments. In 2019, Chinese exports, investment, as well as consumer confidence, remained under pressure due to trade tension with the US, tight monetary policy, real estate market challenges, occasional liquidity crunches and the slow reform of state-owned industrial and banking sectors. However, news of a Phase 1 trade deal late in the year sent a positive signal, resulting in a minor improvement in 4Q19.

China's yearly average composite PMI stood at 53.1 in 2019 compared with 53.7 in 2018. The country's yearly average manufacturing PMI was 49.7 in 2019 compared with 50.9 in 2018. Meanwhile, China's average services PMI was 53.1 in 2019 compared with 53.4 in 2018.

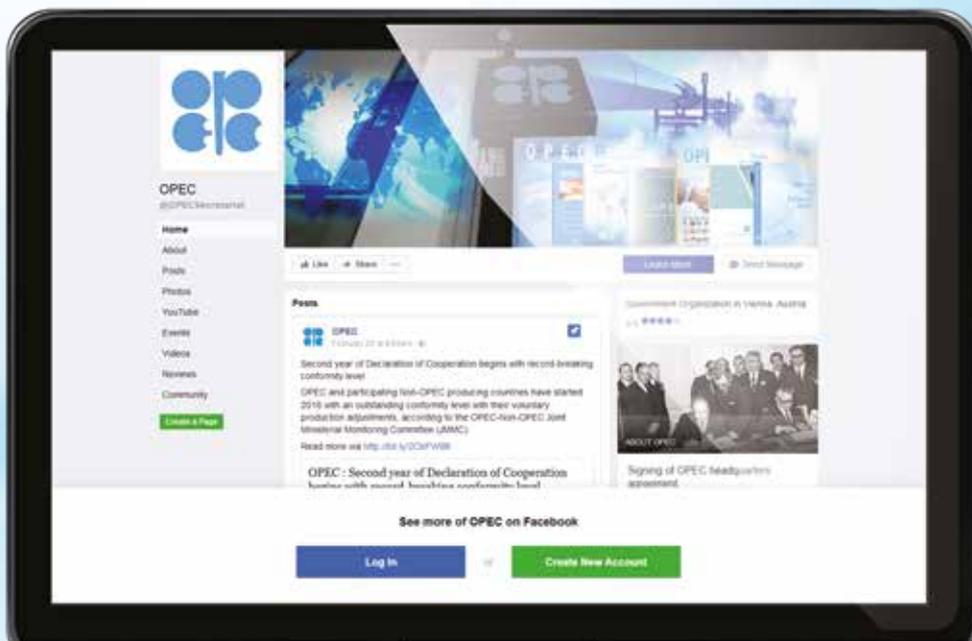
Developing Countries

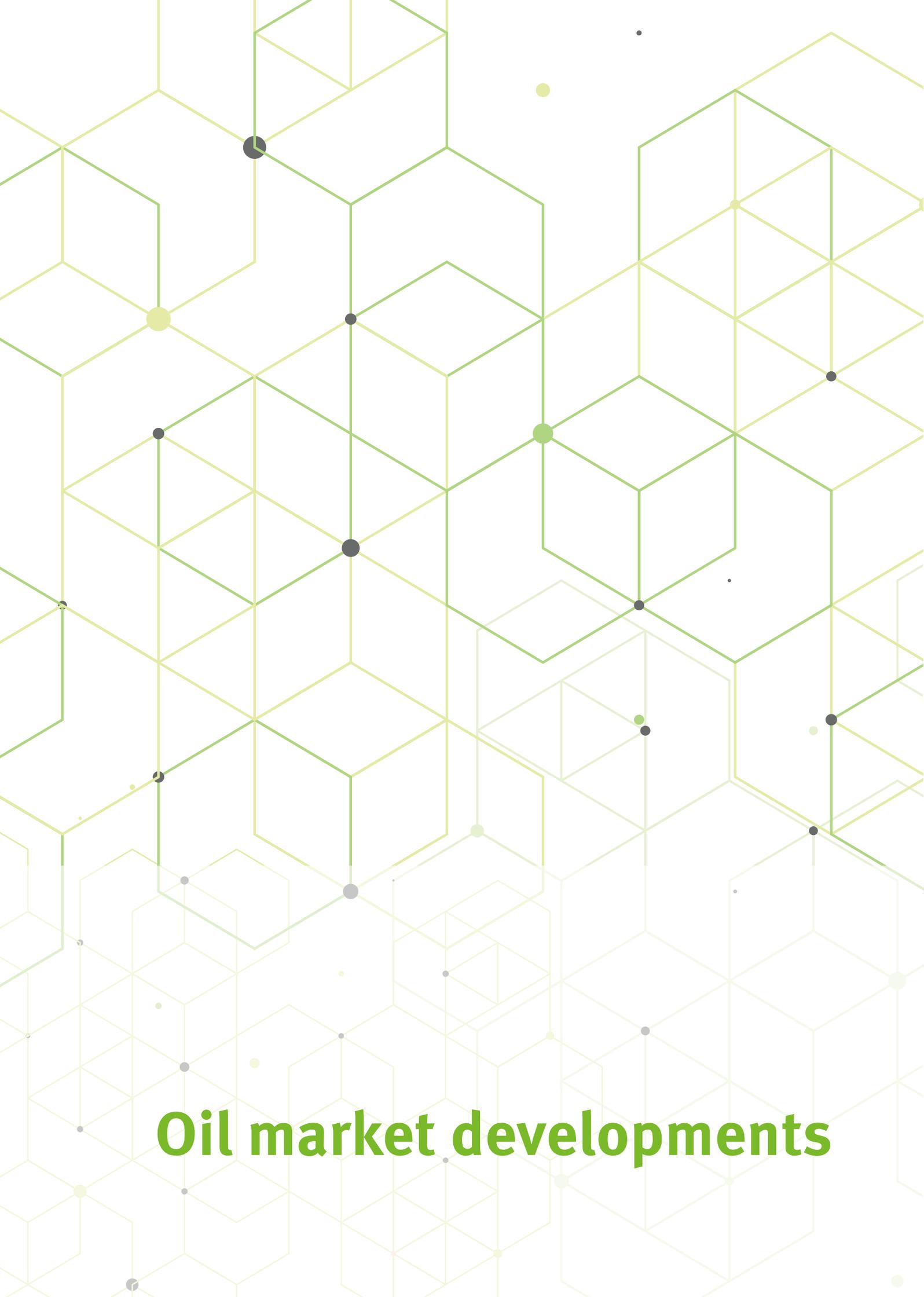
Economic growth in developing countries is estimated to have reached 2.9% y-o-y in 2019. Africa posted slower growth in 2019 of 2.9% from 3.5% in 2018. Latin America also saw a slower pace of growth of 0.2% in 2019, down from 0.4% in 2018. Other Asia grew by 1.8% in 2019, compared with 2.0% in 2018. GDP growth in the Middle East and North Africa region stood at 0.8% y-o-y in 2019.



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Oil market developments

Crude oil price movements

After rising for two consecutive years, crude oil prices averaged lower in 2019, y-o-y, on weakening global economic and oil demand growth. Crude prices were negatively impacted by escalating trade disputes between the US and China, combined with rising non-OPEC oil supply, particularly US crude oil production, which continued to grow strongly last year. Oil prices also witnessed some volatility in 2019 due to rising geopolitical tensions in several oil producing countries, as well as trade tensions between major economies. Nonetheless, oil prices ended 2019 higher compared with levels registered in late-2018.

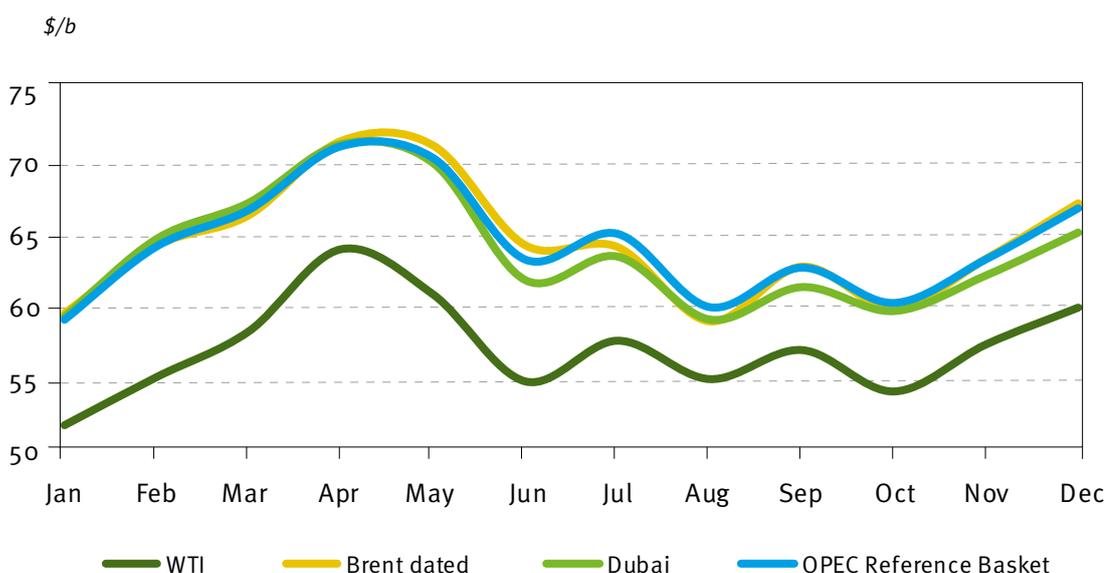
OPEC Reference Basket

In 2019, the OPEC Reference Basket (ORB) value fell by \$5.74, or 8.2%, compared with 2018 to settle at \$64.04/b (\$/b), its lowest

level in three years. The ORB value declined, along with all other spot benchmarks, despite healthy physical crude demand, as the oil market was heavily impacted by concerns about slowing global oil demand growth, amid weakening economic indicators and an escalating trade dispute between the US and China.

The ORB value rose in 1Q19 and extended its gains in April, increasing by around 38% throughout the January–April period, to reach more than \$74/b on a daily basis. It registered the biggest first-quarter gain in a decade, as the global oil market steadily recovered from a turbulent 4Q18, supported by positive market momentum. The global oil market continued to move towards balance amid strong efforts exerted by OPEC and non-OPEC oil producing countries participating in the DoC to restore oil market stability. However, oil prices witnessed a downward trend in 2Q19 and 3Q19 as the market continued to be affected by concerns about slowing

Figure 1
Monthly oil price movements, 2019



Source
Argus Media, OPEC Secretariat and Platts.

global oil demand growth, amid weakening economic indicators and the escalating trade dispute between the US and China. The decline in oil prices took place despite robust physical market fundamentals that were reflected in crude benchmark term structures continuing their shift to deeper backwardation, high official selling prices (OSPs) and healthy crude oil differentials. The physical crude market was supported by improving crude demand, specifically in Asia, and by tightening crude supply in Latin America, the Middle East and North Africa due to planned and unplanned outages. In September, oil prices spiked following attacks on Saudi Arabia's oil processing facilities at Abqaiq and Khurais, which caused a temporary supply disruption of about 5.7 million barrels per day (mb/d), adding concern to the tightening physical crude market. However, oil prices came down and the risk premium faded after Saudi Arabia swiftly restored production and fulfilled all scheduled shipments to customers. The ORB value recovered in 4Q19 on improved oil market fundamentals and continued market stabilization efforts conducted under the DoC, in addition to an improving global economic outlook, after trade tensions eased between the US and China. The two parties announced in December they had reached an interim Phase 1 trade deal which would reduce tariffs on imports between the two and suspend any further escalation.

All ORB component values dropped alongside their perspective crude oil benchmarks, despite increasing OSPs and crude differentials showing multi-year highs on robust crude demand. Crude oil physical benchmarks Dated Brent, WTI and Dubai spot prices fell by \$7.03, \$8.14 and \$6.19, respectively in 2019, to average \$64.19/b, \$57.02/b and \$63.48/b.

Premiums for light sweet grades over heavy sour continued to increase in 2019 in Asian and US Gulf Coast (USGC) markets as sweeter grades were supported by higher demand ahead of new, stricter sulphur regulations by the International Maritime Organization (IMO 2020). Global refiners started raising output of compliant shipping fuel in 4Q19 ahead of IMO 2020, and market participants started building stocks. Therefore, margins for very low sulphur fuel oil rose strongly higher, while margins for HSFO suffered a significant decline in 4Q19, contributing to and widening sweet/sour spreads. The crude differential values of light, medium and heavy sweet crudes increased compared with sour grades. Nonetheless, the tightening of the global heavy sour market, due to voluntary production adjustments and involuntary production cuts, and the rise of US light tight oil production, offset the anticipated impact of IMO 2020 regulations on spreads. However, in Europe, the Brent/Ural spread narrowed on a strengthening Urals value, which benefited from lower flows of sour crude from other regions to Europe, as well as increasing demand from Asia. Furthermore, Urals value was supported by supply disruptions of the grade via the Druzhba pipeline to Eastern Europe and Germany due to crude contamination by organic chlorides, which suspended Urals flows and reduced availability of the grade.

For the year, the Brent/Ural spread narrowed by \$1.29 to average 20¢/b, while in Asia, the Tapis premium over Dubai increased by a hefty \$1.65, to \$5.67/b on healthy demand for Asian-Pacific light sweet grades from local refiners amid healthy light distillate refining margins, while the supply of heavier grades remained high in the region. On the USGC, the Light Louisiana Sweet

premium over Mars also widened in 2019, by 67¢ to \$5.66/b.

Crude oil futures

Crude oil futures prices averaged lower in 2019, with international benchmark ICE Brent crude futures declining by \$7.53, or 10.5%, y-o-y to average \$64.16/b, and the US NYMEX WTI benchmark falling by \$7.86, or 12.1%, y-o-y to average \$57.04/b.

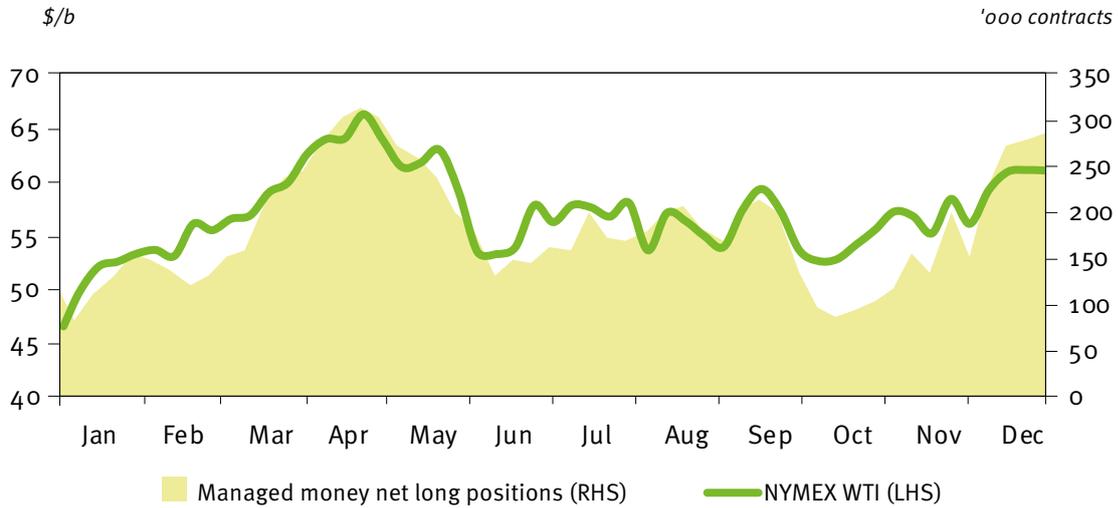
Oil prices rose in the first half of 2019, reaching their highest level in late April, supported by a more balanced global oil market and heightened geopolitical tensions in the Middle East. OPEC and non-OPEC participating countries in the DoC played an important role in helping balance the global oil market in 2019. However, oil prices experienced a sharp decline in the second half of the year due to the weakening global economy and oil demand growth amid escalating trade tensions between the US and China. Oil futures declined significantly in 3Q19 with ICE Brent falling by more than \$6/b on a quarterly basis, recording the largest decline since 4Q18. However, oil futures prices ended the year on a strong note, with ICE Brent crude futures closing 2019 with a rise of almost 23% compared with levels registered in late 2018, while NYMEX WTI was up by 34%. US benchmark NYMEX WTI rose firmly in 4Q19, underpinned by new pipeline capacity, which contributed to the easing of a market overhang in Cushing, Oklahoma and in the Permian Basin. In December, crude futures prices continued to rise on greater optimism about the outlook for oil market fundamentals, after OPEC and non-OPEC participating countries decided to proceed with an additional production adjustment in order to help balance the global oil market. Oil futures rose further in the second half of the month after

the US and China agreed on an interim Phase 1 trade deal, which added more confidence to the market.

The spread between the ICE Brent and NYMEX WTI benchmarks widened again in 2019, by 33¢/b to average \$7.12/b, as WTI's value declined more than Brent, pressured by sustained growth in US oil supply and crude oil stocks amid a lack of transportation capacity to move crude oil from the Permian Basin. However, the Brent/WTI spread narrowed to below \$6/b in 4Q19 after the opening of two major crude oil pipelines from the Permian to the USGC, which eliminated the congestion in the Permian Basin and Cushing.

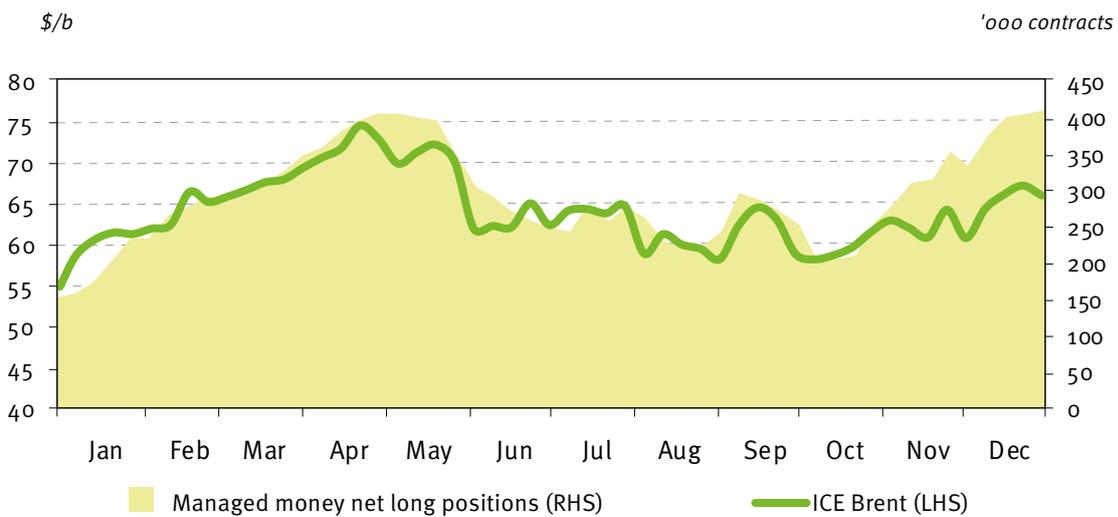
Hedge funds and other money managers significantly reduced their net length positions in both ICE Brent and NYMEX WTI contracts during the period May to September 2019 to their lowest level since January 2019 on concerns about global economic and oil demand growth in 2019 amid intensifying trade tension and uncertainty about trade negotiations between the US and China. Speculators also reduced bullish positions on uncertainty about geopolitical developments in the Middle East and Latin America. Money managers recovered their net long positions in 4Q19 after oil prices started increasing, supported by expectations of a more balanced global oil market, and on growing optimism about the world economy and oil demand growth after the US and China reached an interim Phase 1 trade deal. In one month, money managers raised their bullish positions by a hefty 44% to reach 694,253 contracts in late December. In December, hedge funds and other money managers raised their combined net long positions in futures and options in NYMEX WTI by a hefty 89%, or 133,412 contracts, to 283,723 lots during the four weeks of the month, according to the

Figure 2
NYMEX WTI price versus managed money net long positions, 2019



Sources
 Commodity Futures Trading Commission, CME Group and OPEC Secretariat.

Figure 3
ICE Brent price versus speculative activity, 2019



Sources
 Intercontinental Exchange and OPEC Secretariat.

US Commodity Futures Trading Commission. Similarly, hedge funds and money managers made bullish bets on rising ICE Brent crude oil prices, increasing their combined futures and options net length positions to 410,530 contracts in the last week of December. This was the highest level in 2019, and a rise of about 23% over the month, according to the Intercontinental Exchange. Long-to-short ratio speculative positions in ICE Brent rose to about 7:1 in December, on average, and the NYMEX WTI long-to-short ratio rose to 8:1 for the week ending 31 December. Total futures and options open interest volume on the two exchanges rose by 118,020 contracts from early December to stand at 5.8 million contracts in the week ending 31 December.

Market structure

The market structure for ICE Brent improved in 1Q19, slipping from contango in January to backwardation over February and March as market fundamentals were rebalancing, while the WTI structure remained in significant contango, reflecting US market developments. However, the DME Oman forward curve structure remained in backwardation, with the front of the curve steepening further. Futures market structures for both ICE Brent and DME Oman continued to move deeper into backwardation in 2H19, as the global oil market was supported by healthy crude oil demand, reduced supply due to unplanned outages and heightening geopolitical tensions in the Middle East. The production adjustments from OPEC and participating non-OPEC countries in the DoC also contributed to a more balanced market. Furthermore, the NYMEX WTI structure flipped into backwardation in August on the back of easing congestion in Cushing and the Permian area following the

start of two crude oil pipelines carrying crude from the Permian to the USGC in mid-August, in addition to US crude oil stocks declining from high levels registered in June. In December, the market structure of all three crude benchmarks, ICE Brent, NYMEX WTI and DME Oman, remained in backwardation, reflecting oil market rebalancing and improving oil fundamentals. Tightening supply in the market due to voluntary and involuntary measures, as well as healthy seasonal oil demand, contributed to a further widening of the backwardation over the course of the month.

In terms of the M1/M3 structure, North Sea Dated M1/M3 backwardation widened by 61¢ in December to average \$2.55/b, as prompt prices continued to see support from strong physical markets and healthy crude demand in the Atlantic Basin. Crudes in the North Sea and West Africa enjoyed sustained demand as refiners looked for sweeter grades to comply with the IMO 2020 sulphur limitation rule. Tight supply in Northwest Europe also added support, and Forties crude differentials rose to multi-year highs. Similarly, in the US, the WTI M1/M3 backwardation spread widened by 26¢ to 38¢/b in December on lower US crude oil stocks and rising domestic demand, as US refinery runs increased. High demand for exports also played a role. However, the Dubai crude backwardation narrowed slightly, as rising freight rates limited arbitrage opportunities for export and dampened prompt prices. In December, the Dubai M1/M3 premium narrowed to \$2.63/b, down by a monthly average of 12¢.

The impact of the US dollar and inflation on oil prices

On the currency markets, the US dollar was mixed. Against the euro, the dollar

advanced by 2.5% y-o-y, mainly related to the outperformance of the US economy relative to the Euro-zone economy. Meanwhile, the dollar declined by 0.8% y-o-y against the Swiss franc. Against the pound sterling, the dollar declined by 3.5% y-o-y, with the Brexit agreement between the EU and the UK supporting the pound towards the end of the year. Against the yen, the dollar declined by 3.0% y-o-y, mainly due to safe haven demand because of uncertainties generated by the trade dispute between the US and China.

The dollar generally advanced against emerging market currencies. It advanced by 1.9% y-o-y against China's yuan, as the Peoples' Bank of China guided the currency lower to stem the impact of the trade dispute on the economy. Against the Indian rupee, it increased by 0.7%. Against the Brazilian real, the dollar rose by 5.8% y-o-y, with uncertainties regarding the approval of economic reforms weakening the real, with further weakness added by major trading partner Argentina. Against the Russian ruble, however, the dollar declined by 6.8% y-o-y, mainly due to a recovery in oil prices during the year from the lows observed in December 2018.

World oil demand in 2019

World oil demand is assumed to have grown by 0.83 mb/d y-o-y in 2019, for an average of 99.67 mb/d.

In OECD Americas, despite solid growth in light distillate demand in line with firm expansion in the petrochemical sector, slower industrial activity, improved efficiency in newly sold vehicles, and substitution by other fuels impacted gasoline and diesel consumption. Additionally, slower economic activity, turnaround in petrochemical plants and a milder winter season in OECD Europe and

Asia-Pacific resulted in lower-than-expected oil demand growth in the OECD region.

In the non-OECD region, oil demand was steady in China, despite lower diesel fuel requirements for most of the year. Firm light distillate and gasoline requirements drove demand, due to continued growth in the petrochemical and transportation sectors. In Other Asia, demand was also softer than initially expected, particularly in India. During 2Q19, demand in India weakened amid slower-than-expected bitumen requirements in the construction sector, particularly road construction, while main products, namely gasoline and diesel fuel, recorded relatively steady growth. Economic conditions in Latin America and major economic reforms in the Middle East lowered oil demand in these regions.

OECD America

In OECD Americas, 2019 oil demand in the US saw sluggish performance, posting declines in total product demand led by weakness in gasoline and diesel requirements. This was slightly counterbalanced by gains in light distillates and aviation fuels. Oil demand seems to have been impacted by ongoing displacement programmes and efficiency improvements, especially in transportation fuels, which saw gasoline declining, while jet fuel saw modest growth. Residual fuel oil registered significant declines of 14%. Conversely, petrochemical feedstock, particularly natural gas liquids/liquefied petroleum gas (NGL/LPG), grew steadily by over 2% y-o-y.

OECD Europe

Oil demand in OECD Europe lacked direction in 2019. However, total product demand remained in positive territory, despite strong y-o-y declines during the months of Febru-

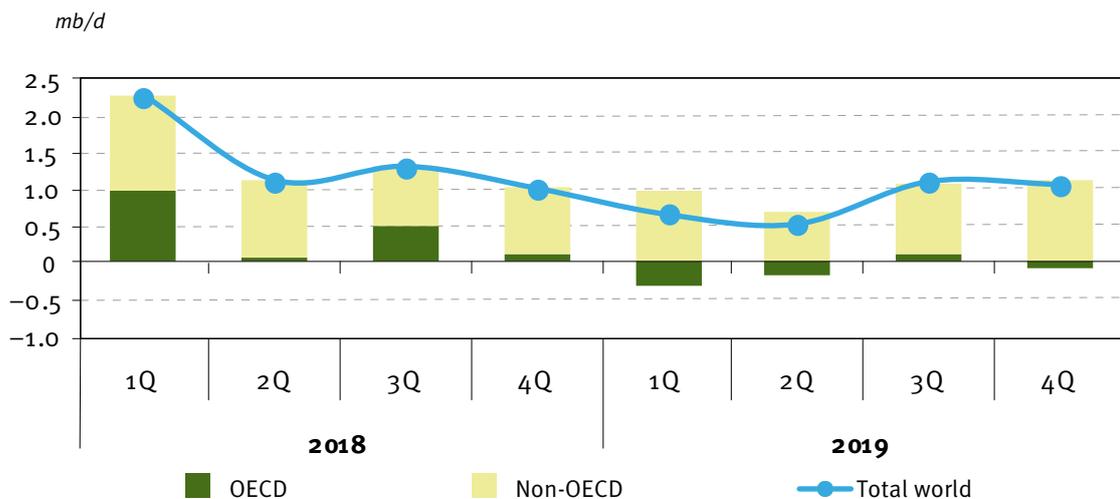
ary, March and June. Total oil consumption for the big four consumers on the continent (France, Germany, Italy and the UK) stood at 7.11 mb/d, marginally dropping by 0.01 mb/d y-o-y. Diesel demand rose y-o-y in all of OECD Europe. The increase likely came from a number of fronts, including improved commercial vehicle sales, diesel stocking in preparation for higher demand due to the introduction of IMO regulations in January 2020 and heating oil restocking. This took place despite weakness in manufacturing activity, particularly in Germany, which was anticipated to limit diesel requirements. Gasoline demand also grew y-o-y in 2019 across OECD Europe, led by increases in Belgium, France, Spain, Sweden and the UK. LPG and naphtha demand fell y-o-y. This decline is attributed to unfavorable crack margins for both feedstocks, exacerbated by considerable maintenance activities, which picked up sharply during 2Q19, weighing on petrochemical feedstock demand.

OECD Asia-Pacific

Oil demand in the Asia-Pacific region was negatively influenced by lower-than-expected performance from Japan and South Korea during 1H19. Additionally, oil demand in Australia dropped y-o-y after seeing steady annual increases since 2017. Demand fell every month of the year in OECD Asia-Pacific, with all products declining with the exception of diesel, which was flat y-o-y. Residual fuel oil consumed in power generation and bunkering steadily declined starting at the beginning of 2019.

Moreover, transportation fuels and industrial fuels exhibited negative performance compared with the same period last year. A slowdown in macroeconomic indicators, stemming largely from trade tensions, increasing petrochemical plant maintenance activities during 2Q19, as well as a milder winter in 1Q19, contributed negatively to oil demand growth in the region.

Figure 4
World oil demand by main region, y-o-y growth, 2018–2019



Source
OPEC Secretariat.

Non-OECD

China

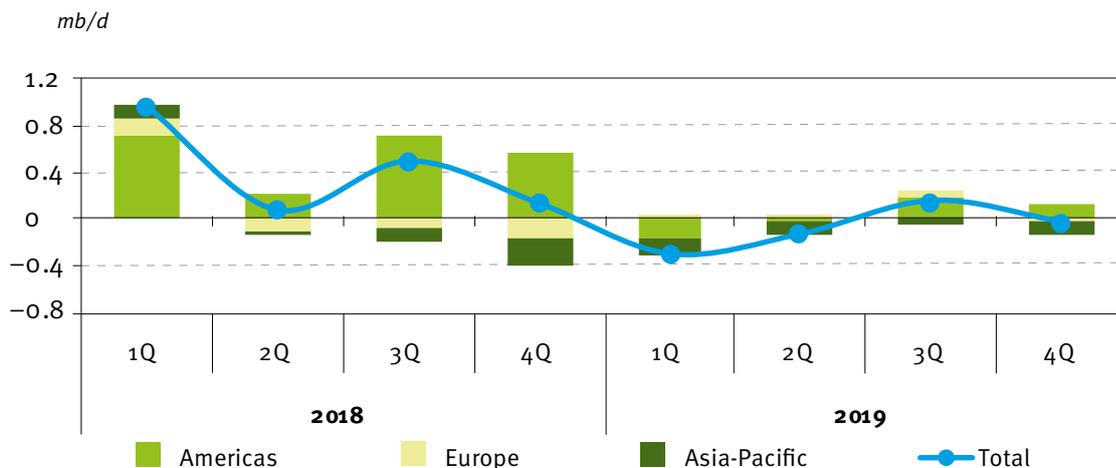
Despite trade-related issues, China's oil demand remained robust in 2019. The distribution of oil demand growth in main petroleum product categories is in fact a reflection of economic developments within the country. The light ends of the barrel, LPG/NGLs and naphtha, continued to show solid growth as a result of healthy petrochemical feedstock demand and expanding road transportation and residential sectors. Gasoline demand grew, echoing steady increases in miles travelled in the road transportation sector and despite a slowdown in vehicle sales. The number of vehicles on the road remained high, which led to a decent increase in gasoline consumption. Diesel demand shrank y-o-y. Manufacturing activities in general were slower y-o-y, with the manufacturing PMI posting levels

below the 50 threshold during 1H19. In line with bullish air travel activities, jet kerosene demand remained strong and was one of the main contributors to Chinese oil demand growth in 2019, adding around 0.09 mb/d y-o-y. Residual fuel oil demand was flat y-o-y.

India

In India, positive developments in oil demand for 2018 were supported by a number of healthy macroeconomic indicators, as the country's strong economic growth outpaced that of China's. Industrial production experienced a robust increase, new vehicle registrations rose sharply, and the petrochemical industry enjoyed fast growth. The country's historically low oil demand per capita also supported increased requirements in 2018. As such, LPG, gasoline and diesel fuel demand registered healthy gains for most of the year.

Figure 5
OECD oil consumption by quarter and region, y-o-y growth, 2018–2019



Source
OPEC Secretariat.

Other Asia

Other Asia is traditionally one of the main contributors to world oil demand, with average growth of around 0.4 mb/d over the last 10 years, accounting for almost one-third of total growth. In 2019, oil demand growth in Other Asia was foreseen to be lower than the historical norm, mainly due to lower oil requirements in India during 2Q19, in addition to Hong Kong and Taiwan. Nevertheless, oil demand growth remained solid for other large oil consumers in the region, including Indonesia, Thailand and Malaysia.

In India, oil demand increased compared with 2018, largely determined by solid LPG/NGLs, gasoline and to a lesser extent diesel requirements. Gasoline rose in line with steady development in car sales in recent years, additionally supported by increasing mileage, in combination with a growing road network system. The usage of LPG/NGLs is mainly reflected in the residential and indus-

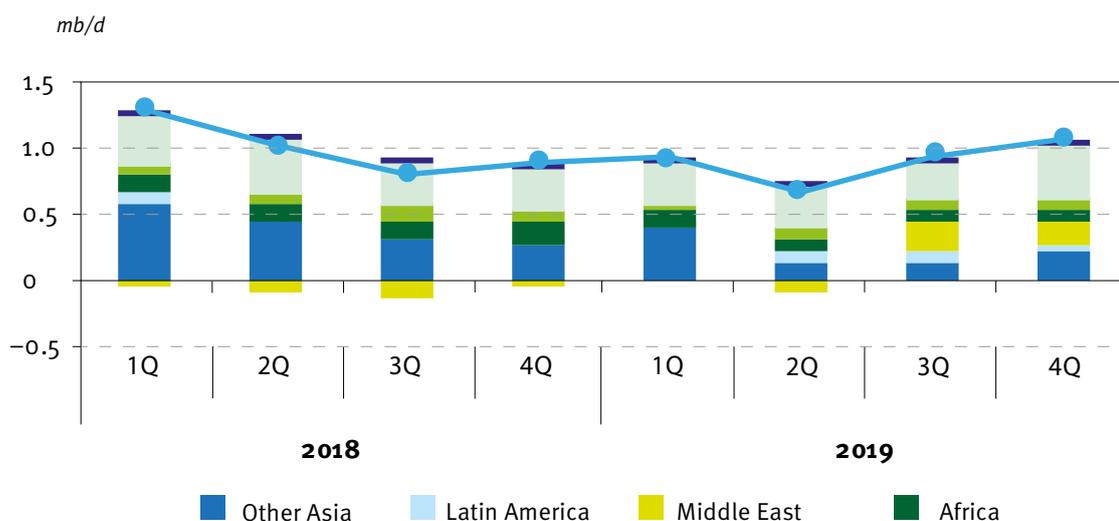
trial sectors; growing requirements for the residential sector relate to largely subsidized LPG and a fast-growing petrochemical industry. Diesel benefitted from ongoing improvements in manufacturing activities in 2019. According to the Ministry of Statistics and Programme Implementation of India, industrial production increased in 2019 by 0.79% y-o-y.

Latin America

In 2019, oil demand in Latin America recorded the highest level of increase since 2015. Increasing Brazilian and Ecuadorian oil demand were slightly offset by declines in Argentina and Venezuela. In Brazil, oil demand increases were due to rising gasoline, ethanol and diesel requirements, which were partly offset by declines in demand for residual fuel oil, as a result of substitution with natural gas and jet kerosene. In Ecuador, the transportation sector accounted for the bulk

Figure 6

Non-OECD oil consumption by region and quarter, y-o-y growth, 2018–2019



Source
OPEC Secretariat.

of increases. Argentinean oil demand was in declining territory in line with sluggish economic developments. Oil demand losses were found in requirements for all petroleum product categories, notably LPG/NGLS, gasoline, diesel and residual fuel oil. Oil demand in Venezuela declined for the sixth consecutive year.

Middle East

Following y-o-y declines in oil demand in 2018, resulting mainly from fuel substitution and fuel efficiency gains, Middle East oil demand registered positive growth of around 0.08 mb/d in 2019. The structure of oil demand in the region has evolved, as the majority of countries already apply energy efficiency programmes. Furthermore, fuel substitution with natural gas, replacing residual fuel oil and crude direct use for electricity generation, has been significantly established within the energy mixture of the region. Subsidy reductions have been undertaken in most countries of the region, though further steps may be possible. Rising demand for LPG/NGL and diesel for the industrial and transportation sectors, in addition to gains in gasoline and jet kerosene, have been almost solely offset by declines at the heavy end of the barrel, notably crude direct use in Saudi Arabia, Iraq and Kuwait. Energy efficiency measures and substitution of oil by natural gas will continue to be major factors curbing oil demand in the Middle East.

World oil supply in 2019

According to preliminary estimates, world liquids supply remained flat y-o-y in 2019 at an average of 99.1 mb/d. OPEC crude production decreased by 2.0 mb/d y-o-y to average 29.9 mb/d. Despite lower oil prices compared with

2018, liquids output from non-OPEC producers grew by 1.97 mb/d, particularly in the US but also in Brazil, Canada, Russia, China and Australia. OPEC NGLs and unconventional liquids output averaged 4.80 mb/d, representing growth of 0.04 mb/d, y-o-y.

Non-OPEC countries produced an average of 64.43 mb/d of liquids, including processing gains, indicating growth of 1.97 mb/d in 2019. In terms of breakdown, non-OPEC countries produced 45.33 mb/d of crude oil (+1.28 mb/d, y-o-y), 10.45 mb/d of NGLs (+0.50 mb/d, y-o-y) and 6.38 mb/d of unconventional liquids (+0.16 mb/d, y-o-y). Processing gains grew by 0.02 mb/d to average 2.28 mb/d in 2019.

Non-OPEC supply

Non-OPEC liquids supply averaged 64.43 mb/d in 2019, an increase of 1.97 mb/d over the previous year. Growth was driven by OECD Americas (1.68 mb/d), OECD Asia-Pacific (0.08 mb/d), Latin America (0.26 mb/d), former Soviet Union (FSU) (0.08 mb/d) and China (0.07 mb/d). In contrast, oil supply decreased in OECD Europe (-0.13 mb/d) and Other Asia (-0.09 mb/d), while oil production in the Middle East, Africa and Other Europe remained unchanged at 3.21 mb/d, 1.50 mb/d and 0.12 mb/d, respectively.

OECD Americas

OECD Americas liquids supply experienced the greatest growth among all non-OPEC regions in 2019 at 1.68 mb/d. US supply rose by 1.69 mb/d followed by Canada at 0.14 mb/d. In terms of crude oil production, US output rose by 1.24 mb/d y-o-y in 2019, a slowdown compared with growth of 2.31 mb/d in 2018. US tight crude output was the main component for growth at 1.19 mb/d,

Table 1
World oil demand and supply balance, 2016–2019

	2016	2017	2018	1Q19	2Q19	3Q19	4Q19	2019
World demand (mb/d)								
OECD	47.1	47.6	48.0	47.7	47.1	48.5	48.3	47.9
OECD Americas	24.9	25.1	25.6	25.1	25.3	26.0	26.0	25.6
OECD Europe	14.0	14.4	14.3	14.1	14.2	14.8	14.2	14.3
OECD Asia-Pacific	8.1	8.2	8.1	8.5	7.6	7.7	8.1	8.0
DCs	31.6	32.1	32.6	33.0	32.8	33.4	33.1	33.1
FSU	4.6	4.6	4.8	4.7	4.7	5.0	5.0	4.8
Other Europe	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.8
China	11.8	12.3	12.7	12.6	13.2	13.0	13.5	13.1
(a) Total world demand	95.7	97.4	98.8	98.8	98.6	100.5	100.8	99.7
Non-OPEC supply (mb/d)								
OECD	24.9	25.7	28.3	29.3	29.6	29.7	31.1	29.9
OECD Americas	20.6	21.5	24.1	25.1	25.6	25.7	26.7	25.8
OECD Europe	3.9	3.8	3.8	3.8	3.6	3.5	3.9	3.7
OECD Asia-Pacific	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
DCs	14.1	13.9	14.0	14.0	14.1	14.2	14.5	14.2
FSU	13.9	14.0	14.3	14.6	14.2	14.3	14.4	14.4
Other Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.1	4.0	4.0	4.0	4.1	4.0	4.0	4.1
Processing gains	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Total non-OPEC supply	59.2	60.0	63.0	64.4	64.3	64.8	66.4	65.0
OPEC NGLs + NCOs	4.6	4.6	4.8	4.8	4.8	4.7	4.8	4.8
(b) Total non-OPEC supply and OPEC NGLs + NCOs (mb/d)	63.8	64.6	67.7	69.2	69.2	69.5	71.2	69.8
OPEC crude oil production¹	31.7	31.5	31.3	30.0	29.5	28.9	29.1	29.3
Total supply (mb/d)	95.5	96.1	99.1	99.1	98.6	98.3	100.3	99.1
Balance (stock change and misc.)	-0.2	-1.3	0.2	0.4	0.0	-2.2	-0.5	-0.6
OECD closing stock level (outside FCPEs) (mb)								
Commercial	3,007	2,860	2,873	2,877	2,936	2,945	2,902	2,902
SPR	1,601	1,569	1,552	1,557	1,549	1,544	1,535	1,535
Total	4,608	4,428	4,425	4,434	4,485	4,489	4,437	4,437
Oil-on-water	1,102	1,025	1,058	1,013	995	1,012	1,011	1,011
Days of forward consumption in OECD								
Commercial onland stocks	63	60	60	61	61	61	61	61
SPR	34	33	32	33	32	32	32	32
Total	97	92	92	94	93	93	94	93
Memo items (mb/d)								
Difference (a – b)	31.9	32.8	31.1	29.6	29.4	31.0	29.6	29.9

Note

Non-OPEC liquids production includes Ecuador.
Totals may not add up due to independent rounding.

Sources

OPEC Secretariat.
¹Secondary sources.

followed by production from the Gulf of Mexico with y-o-y growth of 0.13 mb/d. US NGLs production also rose by 0.44 mb/d, about 0.43 mb/d of which came from unconventional sources, including shale and tight formations through fracking and horizontal drilling. The preliminary US liquids supply in 2019 averaged 18.40 mb/d, excluding processing gains. Canada's oil supply saw growth of 0.14 mb/d y-o-y to average 5.42 mb/d, about one third of the growth seen in 2018. Mexico encountered an annual decline of 0.15 mb/d y-o-y to average 1.92 mb/d, approximately the same annual decline rate of 7% witnessed in 2018.

OECD Europe

In OECD Europe, annual oil supply in 2019 is estimated to have contracted by 0.13 mb/d y-o-y to average 3.71 mb/d. Oil production in the North Sea decreased mainly in Norway by 0.12 mb/d, or 6.3%, y-o-y to average 1.74 mb/d, mainly due to limited new field startups and

steep natural declines. In the UK, oil supply is estimated to have risen by 0.03 mb/d y-o-y to average 1.15 mb/d in 2019, which was lower than growth maintained in 2018 of 0.10 mb/d. Production from new projects was mostly offset by heavy declines in mature fields, as well as consecutive field shutdowns. Denmark's oil production declined by 10 tb/d y-o-y to average 0.11 mb/d, while Other Europe's production fell by 0.03 mb/d to average 0.72 mb/d.

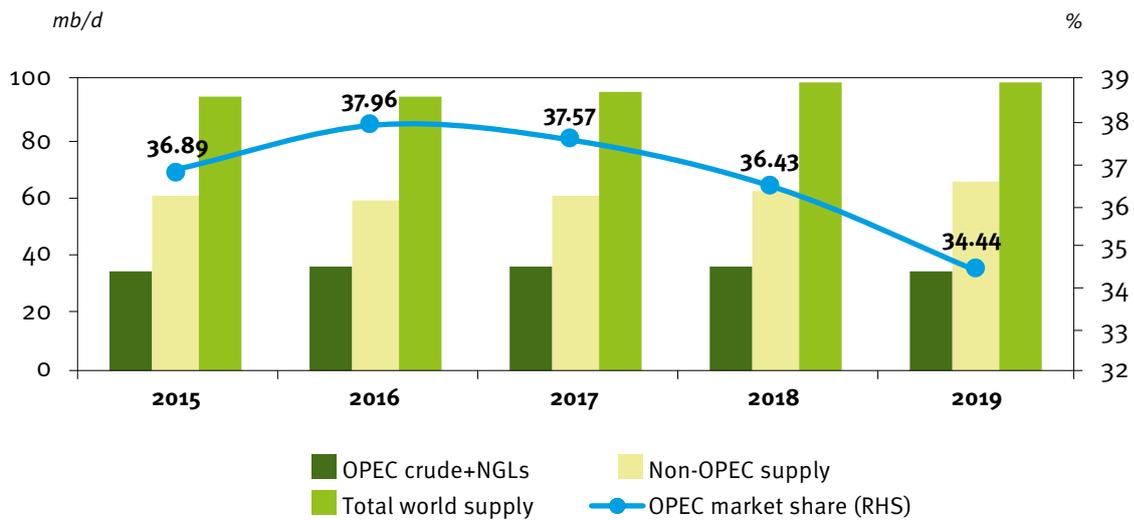
OECD Asia-Pacific

In OECD Asia-Pacific, oil output grew by 0.08 mb/d in 2019 to average 0.48 mb/d, following an increase in condensate output from the Ichthys and two other offshore gas fields in Australia.

Non-OECD

Oil production in developing countries (DCs) experienced growth of 0.18 mb/d y-o-y, to

Figure 7
OEPC¹, non-OPEC² and total world supply, as well as OPEC market share, 2015–2019



Notes
¹ Including OPEC NGLs+non-conventional oils.
² Including processing gains.

Source
 OPEC Secretariat.

average 14.20 mb/d in 2019. Liquids production mainly grew by 0.27 mb/d y-o-y in Latin America to average 6.01 mb/d. Meanwhile, oil production decreased by 0.09 mb/d to average 3.48 mb/d in Other Asia, with the fall coming mainly from India and Malaysia. Oil supply in the Middle East and Africa remained unchanged at an average of 3.21 mb/d and 1.50 mb/d, respectively.

FSU oil supply experienced growth of 0.08 mb/d y-o-y in 2019, to average 14.37 mb/d, one-third of the growth achieved in 2018. Russia's liquids supply rose by 0.09 mb/d to average 11.44 mb/d for the year. Oil production in Kazakhstan remained unchanged at 1.82 mb/d due to heavy maintenance in the main giant fields, despite a production ramp-up in Kashagan field, while Azerbaijan's output declined by 0.02 mb/d y-o-y to average 0.79 mb/d. In FSU others, the production decline remained stagnant at an average of 0.32 mb/d.

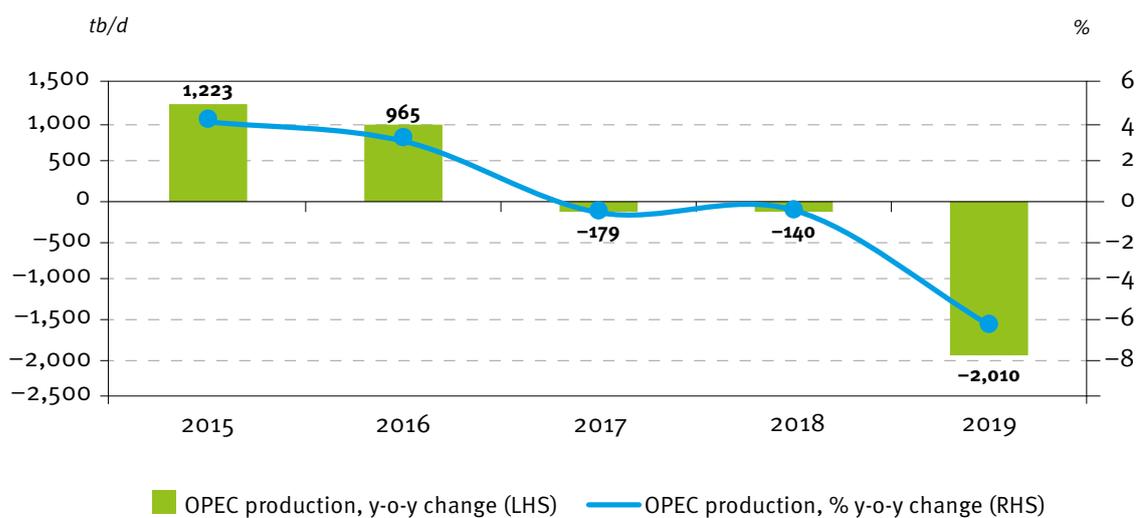
Oil production from countries in Other Europe remained unchanged at an average of 0.12 mb/d y-o-y in 2019.

China's oil production in 2019 grew by 0.07 mb/d y-o-y to average 4.05 mb/d.

OPEC crude oil production

According to secondary sources, OPEC crude oil production averaged 29.34 mb/d in 2019, a drop of 2 mb/d over the previous year. OPEC crude oil output averaged 29.71 mb/d in 1H19, some 1.79 mb/d lower compared with 2H18, and it fell by 0.73 mb/d in 2H19 to average 28.98 mb/d compared with 1H19. Y-o-y, production in 2019 decreased in the Islamic Republic of Iran (IR Iran) by 1.20 mb/d, Venezuela by 0.56 mb/d, Saudi Arabia by 0.54 mb/d, Angola by 0.10 mb/d, Kuwait by 0.06 mb/d, Algeria by 0.02 mb/d and in Equatorial Guinea by 7 tb/d. At the same time, production increased y-o-y in Libya by

Figure 8
Year-on-year percentage change in OPEC production, 2015–2019



Source
OPEC Secretariat.

0.15 mb/d, Iraq by 0.13 mb/d, the United Arab Emirates (UAE) by 0.11 mb/d, Nigeria by 0.07 mb/d, Gabon by 0.02 mb/d and Congo by 8 tb/d. OPEC crude's share in global liquids supply in 2019 decreased by 2.02% to 29.61%, from 31.63% in the previous year.

OPEC NGLs and non-conventional oil

OPEC NGLs and non-conventional oil are estimated to have averaged 4.80 mb/d in 2019, including 4.69 mb/d of NGLs and 0.11 mb/d of non-conventional oil, representing annual growth of 0.04 mb/d. Production increased in the UAE (57 thousand barrels per day [tb/d]), IR Iran (32 tb/d), Kuwait and Libya (each 14 tb/d) and Iraq (3 tb/d), while in other Member Countries it declined or remained unchanged.

Transportation

Dirty tanker freight rates

After stellar performance in the first two months of 2019, dirty tanker freight rates languished below levels seen the previous year through to the end of September. A steady stream of new deliveries concentrated in the first half of the year inflated tonnage lists and weighed on the market in all major regions. However, the market saw some support from a pickup in US crude exports to Asia, as well as Chinese independent refiners' preferences for Brazilian crude, which increased opportunities for longer-haul voyages.

In October, a host of factors pushed dirty freight rates to their highest level on record on all major routes. The market had expected a seasonal pickup in demand and some

Table 2

OPEC crude oil production based on secondary sources, 2015–2019 (tb/d)

	2015	2016	2017	2018	1Q19	2Q19	3Q19	4Q19	2019	Change 2019/18
Algeria	1,113	1,105	1,047	1,042	1,026	1,019	1,021	1,022	1,022	-20
Angola	1,769	1,718	1,634	1,505	1,443	1,420	1,390	1,350	1,401	-104
Congo	232	216	252	317	326	332	325	315	325	8
Equatorial Guinea	185	160	133	125	115	114	119	122	118	-7
Gabon	214	221	200	187	209	212	204	209	208	22
Iran, I.R.	2,836	3,515	3,813	3,553	2,726	2,403	2,189	2,113	2,356	-1,197
Iraq	3,974	4,392	4,446	4,550	4,635	4,699	4,752	4,633	4,680	129
Kuwait	2,764	2,853	2,708	2,745	2,715	2,692	2,655	2,688	2,687	-58
Libya	404	389	811	951	965	1,154	1,103	1,163	1,097	146
Nigeria	1,838	1,556	1,658	1,718	1,736	1,786	1,842	1,777	1,786	67
Saudi Arabia	10,142	10,406	9,954	10,311	10,019	9,769	9,452	9,846	9,770	-541
UAE	2,908	2,979	2,916	2,986	3,068	3,076	3,096	3,135	3,094	108
Venezuela	2,319	2,154	1,911	1,354	975	776	714	714	793	-560
Total OPEC	30,698	31,663	31,484	31,344	29,958	29,452	28,862	29,087	29,336	-2,008

Note

Totals may not add up due to independent rounding.

Source

OPEC.

Table 3

OPEC crude oil production based on direct communication, 2015–2019 (tb/d)

	2015	2016	2017	2018	1Q19	2Q19	3Q19	4Q19	2019	Change 2019/18
Algeria	1,157	1,146	1,059	1,040	1,027	1,017	1,025	1,023	1,023	-17
Angola	1,767	1,722	1,632	1,473	1,421	1,424	1,318	1,345	1,377	-97
Congo	n/a	225	263	323	345	340	333	309	332	8
Equatorial Guinea	n/a	n/a	129	120	108	114	109	110	110	-10
Gabon	n/a	229	210	193	214	225	220	212	218	24
Iran, I.R.	3,152	3,651	3,867	n/a						
Iraq	3,504	4,648	4,469	4,410	4,540	4,565	4,630	4,568	4,576	166
Kuwait	2,859	2,954	2,704	2,737	2,712	2,681	2,636	2,683	2,678	-59
Libya	n/a									
Nigeria	1,748	1,427	1,536	1,602	1,689	1,721	1,794	1,702	1,727	125
Saudi Arabia	10,193	10,460	9,959	10,317	10,053	9,752	9,503	9,929	9,808	-509
UAE	2,989	3,088	2,967	3,008	3,055	3,050	3,068	3,058	3,058	50
Venezuela	2,654	2,373	2,035	1,510	1,289	1,045	864	859	1,013	-498
Total OPEC	n/a									

Note

Totals may not add up due to independent rounding.

tightness in tanker availability, as tankers were scheduled to be taken out of service to have scrubbers installed ahead of IMO 2020. However, geopolitical developments, such as the announcement of sanctions on two subsidiaries of one of the largest shippers in the world, China Ocean Shipping Company Limited, led to some panic fixing and rates surged.

After falling back in November, the tanker market experienced a general strengthening trend in the final month of the year. On average, dirty tanker spot freight rates rose by 29% from the previous month on the back of increased tonnage requirements, tonnage tightening and high bunker prices. Enhanced market activities were seen to drive rates higher in all areas, affecting all tanker sectors in the market.

Dirty tanker spot freight rates saw a slight improvement over the previous year, with all classes showing gains, led by very large crude carriers.

Clean tanker freight rates

Clean tanker spot freight rate performance was muted for most of the year, as ample availability prevented the strengthening seen in dirty rates at the start of the year. However, upward tightening started at the end of September and lifted all boats, leading to a spike in clean tanker spot freight rates, amid reports of some clean ships being repurposed to carry dirty cargoes. Ship owners enjoyed an across-the-board increase in October, with spot freight rates rising both East and West of Suez. Clean spot freight rates fell back in November, mirroring the trend in

the products market, but saw a final upward climb in December, ahead of the implementation of IMO 2020 regulations.

In annual terms, clean tanker spot freight rates rose in East and West of Suez y-o-y, with gains concentrated on Mediterranean routes, while the Northwest Europe to US East Coast route was flat.

Oil trade

Major trends in 2019

The year 2019 saw notable shifts in crude and product trade flows, driven by a number of factors. For crude, the key shift was in the emergence of the US as a major exporter of crude, which came on the back of strong supply growth and massive developments in midstream takeaway capacity in the USGC, following the lifting of an export ban on crude at the end of 2015. A steady rise in Chinese crude oil demand amid considerable expansion in Chinese refinery capacity, was another key market feature in 2019.

On the product side, a steady rise in Chinese refinery capacity pushed the country to become a net product exporter, while strong growth in India's domestic product demand reduced its net product exports. The US remained a major exporter, which – combined with the surge in crude exports – turned the country into a net liquid exporter for the first time in monthly terms in September 2019, according to EIA data going back to 1973.

The following provides further details on the annual developments in crude and product trade in selected countries:

US

US crude exports averaged just under 3.0 mb/d in 2019, representing an increase of more than 0.9 mb/d or 45% from the previous

year, supported by a massive expansion in export infrastructure, particularly in the USGC.

Japan

Japan's crude imports averaged 3.0 mb/d, some 1% lower than the previous year's average. In 2019, total product imports averaged 896 tb/d, representing a decline of 80 tb/d, or 8%, compared with 2018, while product exports averaged 609 mb/d, an increase of just over 11% over the same period.

China

China's crude oil imports averaged a record high of 10.2 mb/d in 2019, representing a gain of 0.9 mb/d over the previous year. In 2019, China's product imports averaged 1.40 mb/d, broadly in line with the previous year, while product exports averaged 1.46 mb/d, an increase of 187 tb/d or 15% over 2018, reflecting in part a strong increase in the country's refinery capacity over last two years.

India

India's crude oil imports averaged 4.5 mb/d in 2019, broadly in line with the previous year. The country's product exports in 2019 averaged 1.4 mb/d, representing a gain of 1% over the 2018 average. India's product exports averaged 1.4 mb/d, representing a gain of 1% over the 2018 average. As a result, India's net product exports averaged 382 tb/d in 2019, some 33% lower than in 2018, as the increase in imports vastly outpaced a marginal rise in exports.

Refinery industry

US

Product markets in the US started the year with robust performance, as refinery

margins in the US recovered sharply from the weakness witnessed at the end of the previous year. In 1Q19, US refinery margins benefitted from lower product output due to spring maintenance season, which triggered bullish market sentiment and supported prices. Refinery margins soared in 2Q19, peaking at a new all-time high of \$19.62/b in May. This positive outcome was a result of product supply disruptions in the Midwest, which led to inventory drawdowns. This was caused by extremely heavy rain, floods and tornadoes in May, as well as the permanent closure of the 335 tb/d Philadelphia Energy Solutions refinery located on the East Coast following a fire in June. In 3Q19, refinery margins eased and in 4Q19 fell further as supplies and inventory levels recovered, despite a sharp jump in high sulphur fuel oil (HSFO) crack spreads around September, supported by a hike in demand following the attacks in Saudi Arabia, amid an already tight fuel oil market. During 2019, product markets in the US exhibited positive y-o-y growth in all quarters except the last, with gasoline and jet fuel primarily driving the strength.

Europe

In Europe, refining margins rebounded from lows witnessed at the end of 2018 and showed a rising trend at the beginning of 2019, reaching a year-to-date high of \$7.35/b in May. In 2Q19, additional support came from middle distillate inventory drawdowns due to a reduction in refinery throughputs, as operations were affected by contaminated Urals. Additionally, stronger gasoline exports to the US and Africa led to an extension of the positive upward trend. At the bottom of the barrel, in contrast to other markets, fuel oil cracks in Europe moved upward due to a pickup in exports to Asia, while arrivals from Russia declined,

which together provided additional support for refining margins. Refinery turnarounds in the region during the quarter limited product supplies and kept prices sustained. Product markets in Rotterdam saw their strongest positive performance in 3Q19, as refining margins peaked at \$7.75/b in August, the highest level recorded in 2019 after three quarters of consecutive gains, as stronger fundamentals contributed to considerable gains at the top of the barrel amid solid export opportunities for products derived from the middle and bottom sections of the barrel. However, in 4Q19 refinery margins fell due to rising Amsterdam-Rotterdam-Antwerp product inventory levels and remained under pressure, despite an uptick in October attributed to peak maintenance season. On a y-o-y basis, refining margins in Europe were in negative territory during the first quarter, but were slightly positive in the quarters thereafter, as weakening at the top of the barrel limited further growth.

Asia

Asian product markets lost ground in the first quarter, affected by weaker naphtha and jet/kerosene markets, while a growing gasoline surplus pushed gasoline margins to new multi-year lows of \$2.04/b in 1Q19. Asian refining economics reversed trend and strengthened slightly in 2Q19 on the back of positive performance in the gasoline and naphtha markets, supported by a pickup in product requirements within the region, in particular in India and Indonesia, which in turn exerted pressure on inventory levels and helped ease the region's gasoline surplus. As in the other main trading hubs, product prices – particularly gasoline – rose at the start of the quarter supported by lower availability, lending further support to Asian product markets. Margins continued to trend

upward in 3Q19, supported by higher product prices as supplies declined due to strong maintenance activities. However, in the last quarter, the y-o-y rise in product outputs regionally, as well as the completion of heavy turnarounds globally, led to rising product inventory levels in Asia and a slowdown in product exports. At the same time, fuel oil cracks suffered a major hit during 4Q19, as strong negative market sentiment pressured high sulphur fuel oil (HSFO) prices amid the countdown to the implementation of the IMO's 2020 0.5% sulphur cap. Concerns over a downturn in HSFO demand led to a sharp fall in HSFO cracks, which reached an unprecedented low of minus \$23.50/b in November and averaged minus \$19.61/b in 4Q19. As a result of severe weakness in the top and bottom sections of the barrel, Asian refining margins against Oman entered negative territory in November and reached an all-time low of minus \$1.23/b in December. Product market performance y-o-y was consistently negative in all quarters of 2019, reaching its lowest level in 1Q19, down by \$4.78/b y-o-y.

Stock movements

OECD

OECD stocks

Total OECD inventories – including commercial and government stocks – rose by 12 mb at the end of 2019 from the same time the previous year to stand at 4,437 mb. This stock build was attributed to a build in commercial oil inventories, which increased by 29 mb, while the Strategic Petroleum Reserve (SPR) declined by 16 mb.

On a regional basis, OECD Americas and Asia-Pacific stocks declined by 19 mb

and 12 mb respectively, while OECD Europe stocks rose by 44 mb. On a quarterly basis, the first, second and the third quarters of 2019 saw a build in total commercial stocks of 4 mb, 59 mb and 9 mb, respectively, while the fourth quarter experienced a stock draw of 43 mb.

At the end of 2019, OECD commercial stocks finished the year 13 mb above the five-year average. It should be noted that the overhang was reduced by more than 287 mb since the implementation of the DoC.

Within the OECD region, at the end of 2019, OECD Americas and OECD Europe experienced a surplus of 15 mb and 19 mb above the latest five-year average, while OECD Asia-Pacific indicated a deficit of 22 mb below the latest five-year average.

Within components, OECD commercial crude witnessed a stock build of 6 mb, while product stocks saw a higher build of 23 mb at the end of 2019, compared with the previous year at the same time. Crude stocks stood at 8 mb above the latest five-year average, while product stocks witnessed a surplus of around 5 mb, compared with the seasonal norm. Gasoline indicated a surplus of 8 mb above the latest five-year average, while middle distillates witnessed a deficit of around 18 mb below the latest five-year average.

Days of forward cover

In terms of days of forward cover, OECD commercial stocks stood at 61.4 days at the end of 2019, 1.2 days higher than was observed 12 months before, and 0.3 days above the latest five-year average. It should be noted that the overhang with the five-year average was reduced by 5.1 days since the end of December 2016, when the DoC was implemented. In terms of regions, OECD Americas

was 0.3 days below the historical average to stand at 61.0 days at the end of 2019. Meanwhile, OECD Asia-Pacific stood 0.1 days above the latest five-year average to finish the year at 48.1 days and OECD Europe indicated a surplus of 1.1 days, averaging 70.0 days.

Strategic Petroleum Reserves

Total SPR in the OECD at the end of 2019 fell by 16 mb from the previous year to stand at 1,535 mb. This drop came mainly from OECD North America, which decreased by 14 mb to stand at 637 mb, followed by OECD Asia-Pacific, declining by 4 mb to 416 mb, while OECD Europe increased by 1 mb to stand at 482 mb at the end of 2019.

Non-OECD

Non-OECD stocks

Estimated total non-OECD stocks – including commercial and SPR – stood at 2,154 mb at the end of 2019, down by 50 mb from the end of 2018. Crude and products experienced a stock draw of 5 mb and 45 mb, respectively. Within the regions, the picture was mixed. China and the FSU saw a build of around 41 mb and 22 mb to stand at 789 mb and 310 mb, respectively. In contrast, stocks in non-OECD Asia and the Middle East experienced draws of 30 mb and 59 mb to stand at 309 mb and 362 mb, respectively.

Balance of supply and demand

World oil demand grew by around 0.8 mb/d in 2019, lower than initial projections, averaging total demand of 99.7 mb/d. Non-OECD countries contributed to this growth with an increase of 0.9 mb, while the OECD saw a

contraction of 0.1 mb/d. Meanwhile, the forecast for non-OPEC supply growth in 2019 also experienced a downward revision from initial projections. Non-OPEC supply registered growth of 2.0 mb/d to stand at 65.0 mb/d. US oil supply saw the largest increase among all non-OPEC countries in 2019, followed by Canada and Brazil. Growth of OPEC NGLs and non-conventional oils in 2019 remained almost unchanged from the initial forecast to stand at 4.8 mb/d.

Based on these revisions, the forecast demand for OPEC crude in 2019 was revised down from the initial forecast to stand at 29.9 mb/d. This represents a decline of 1.2 mb/d from 2018 levels. This downward revision reflects higher non-OPEC supply outpacing world oil demand. On a quarterly basis, required OPEC crude in 2019 stood at 29.6 mb/d and 29.4 mb/d in the first and second quarters, respectively, and 31.0 mb and 29.6 mb/d in the third and fourth quarters, respectively.

Meanwhile, according to secondary sources, OPEC crude production averaged 30.0 mb/d in 1Q19, about 0.4 mb/d higher than the demand for OPEC crude in the same period, while in 2Q19 OPEC crude production averaged 29.5 mb/d, in line with its demand. In 3Q19, OPEC crude production averaged 28.9 mb/d, around 2.2 mb/d lower than its demand, and in 4Q19, OPEC crude oil production stood at 29.1 mb/d, around 0.5 mb/d below its demand. For 2019, OPEC crude oil production, therefore, averaged 29.3 mb/d, around 0.6 mb/d below its demand for the year.



Charter of Cooperation

Hard work. Commitment. Sacrifice. These are some of the sentiments which brought OPEC Member Countries and their non-OPEC partners in the ‘Declaration of Cooperation’ to a new high in 2019 – the signing of the ‘Charter of Cooperation’. Another step forward in this amazing process which has reached goals never before thought possible.

The focus on working together with non-OPEC countries to achieve market stability sharpened greatly in 2016 after a long and painful downturn which started in mid-2014. After months of meetings and diplomacy involving many countries and parties, the historic ‘Declaration of Cooperation’ (DoC) was signed on 10 December 2016, and entered into force on 1 January 2017.

“I would like to take a moment and reflect on the very significant and noble achievements we have made since the beginning of our cooperation back in January 2017,” **2019 President of the OPEC Conference, Manuel Salvador Quevedo Fernandez, Venezuela’s People’s Minister of Petroleum**, said in his opening remarks to the 6th OPEC and non-OPEC Ministerial Meeting on 2 July. “Thanks to your loyal support and active contributions, we have achieved a great deal of success in restoring the oil market to balance and stability. Together, through this equitable and transparent framework for cooperation, we brought hope back to this industry at a time when it had lost its way.

“We have proven to the world...that together we are stronger than working in silos. And, in the end, this is the only way to overcome our common challenges and achieve our common goals...We will thus march forward, arm in arm, shoulder to shoulder, to support a stable oil market, a healthy economy and prosperity for future generations,” he



President of the OPEC Conference in 2019, Manuel Salvador Quevedo Fernandez, Venezuela’s People’s Minister of Petroleum.

told the Ministers, dignitaries and journalists attending the Conference.

The first step in making the ‘Charter of Cooperation’ (Charter) a reality came to pass on 1 July 2019, when the OPEC Conference approved the draft text of the historic document during its 176th Ministerial Meeting at the OPEC Secretariat in Vienna. The next day, the draft Charter was introduced at the 6th OPEC and non-OPEC Ministerial Meeting, where it was also endorsed by the participating non-OPEC producers of the DoC.

Ongoing platform for dialogue

In considering the proposal for the Charter, both the OPEC Conference and the OPEC and non-OPEC Ministerial Meeting recognized the ongoing success of the landmark DoC and lauded the staunch support and commitment displayed by all participating nations.

Building on this success, the Ministers regard the Charter as a high-level voluntary commitment, which will provide an ongoing platform for pro-active dialogue and cooperation between countries of the DoC at both the ministerial and technical levels.

Referring to the draft text of the Charter in his remarks, **Khalid A. Al-Falih, Saudi Arabia's Minister of Energy, Industry, and Petroleum Resources and Chairman of the Joint Ministerial Monitoring Committee (JMMC)**, described the day as "historic."



Khalid A. Al-Falih, Saudi Arabia's Minister of Energy, Industry, and Petroleum Resources and Chairman of the Joint Ministerial Monitoring Committee.

"Together we have put into place a long-term Charter that will be ceremonially recognized and endorsed here, which has created one of history's strongest producer partnerships, spanning the entire world from east to west, and which has committed itself to promoting market stability on a sustained and ongoing basis."

Continuing his remarks, Al-Falih said: "This is great news not just for the market producers but equally – as I have repeatedly said over the last three years – for consumers as well, as our objectives to deliver market stability are now matched by the horsepower needed to deliver them via the formalized OPEC/non-OPEC framework

that we will celebrate endorsing later this morning."

He noted there is reason to be cautious and to maintain cooperation between OPEC and non-OPEC producers.

"I would like to reiterate our belief and recognition that market volatility will not disappear and that complex and rapidly changing dynamics are here to stay. This highlights the need for an institutional framework to pragmatically intervene when required. But to be effective such a framework must be sufficiently flexible and include more producer power than OPEC alone can provide," Al-Falih said. "Thus the importance of attracting and retaining our non-OPEC colleagues to continue working under the new Charter. That is why the longer-term OPEC-plus partnership is vital for the stability of the market."

Co-chairman of the JMMC, Alexander Novak, Minister of Energy for the Russian Federation, welcomed the cooperation and efforts to stabilize the market in his remarks to the 6th OPEC and non-OPEC Ministerial Conference. Novak urged non-OPEC delegates to support the Charter. A show of hands by the Ministers confirmed unanimous support and they proceeded to sign the draft Charter. The Meeting request-



Co-chairman of the JMMC, Alexander Novak, Minister of Energy for the Russian Federation.

ed all participating countries to take the draft text through their respective national processes.

Amid applause, **Mohammad Sanusi Barkindo, OPEC Secretary General** said: “Congratulations to all, excellencies and distinguished delegates, for this historic milestone. We are very proud to be part of this history.”



Mohammad Sanusi Barkindo, OPEC Secretary General.

Later, during a 50-minute press conference, Novak praised the endorsement by OPEC and non-OPEC countries of the draft text of the Charter.

“We have been speaking about this document for quite some time now, and I can say that I am very glad that we have come today to a consensus around this document and that we have signed it,” Novak said. “It is not only a historic document which solidifies our cooperation in the long run, but it also gives us a very solid foundation for future joint analysis of the market and a platform for making decisions needed to stabilize the market.”

Responding to a journalist’s question, Barkindo told the news conference that the DoC was entered into in December 2016 to restore balance to the oil market and has been implemented with tremendous success. “In the course of time,” the Secretary

General said, “we all agreed that we should begin to think how to institutionalize this cooperation and hence the discussions on the Charter, which was endorsed this morning. So the objective remains – the need to have these like-minded producing countries continue to work together in order to sustain market stability.”

The Secretary General added: “The continuous headwinds, the continuous extraneous factors that we have been witnessing interfering with the fundamentals of the oil market, show we badly need this type of organization, or gathering of producers, working together on a continuous basis, and hence the unanimous adoption of this Charter.”

Quevedo Fernandez praised the accomplishments of this evolving international energy cooperation in his speech.

“I would like to take a moment and reflect on the very significant and noble achievements we have made since the beginning of our cooperation back in January 2017,” he said.

He also spoke of the significant attention this process had garnered since its inception and stressed it is a framework that is open to other oil-producing countries.

“The clear success of this unprecedented energy cooperation has attracted much interest, not only within our industry, but among the global media and other energy stakeholders across the world,” he stated. “I would like to emphasize here that this framework for cooperation remains open to all oil producers interested in joining our efforts to help maintain a balanced oil market and sustainable stability.”

At the conclusion of the signing of the Charter, a jubilant atmosphere pervaded the OPEC Conference room as a poem composed specifically for the event was recited.

The poem chronicles the rich history of the DoC and the adverse circumstances that led to its founding, namely the oil market crisis of 2014–2016.

Ministers' comments

Ministers at the event also praised the adoption of the Charter in OPEC interviews on the sidelines of the 6th Ministerial Meeting:

Iraq Minister of Oil Thamir Abbas Al-Ghadhban: “There are many positive sides in this arrangement, in this DoC between the two groups, and we expect that there will be further cooperation and that the relationship between OPEC and non-OPEC MCs will be enhanced by this Charter... The atmosphere is really very good.”



Tamir Abbas Al-Ghadhban, Minister of Oil, Iraq.

Dr Folasade Yemi-Esan, Permanent Secretary, Ministry of Petroleum Resources, Nigeria, and Head of Delegation to the 176th Meeting of the Conference: One of the many benefits of the DoC is that it has given Nigeria the opportunity to deepen relationships with other countries – even beyond energy, she said. “Going beyond just the meetings, we facilitate with one another and talk about these issues to make sure we are all on the

same page. We are happy that OPEC works with consensus, so we really have to talk with one another and make new friends and develop relationships with other countries, with other Ministers, so that we can achieve that consensus.”



Dr Folasade Yemi-Esan, Permanent Secretary, Ministry of Petroleum Resources, Nigeria, and Head of Delegation to the 176th Meeting of the Conference (left).

Suhail Mohamed Al Mazrouei, Minister of Energy and Industry, United Arab Emirates: Mazrouei said he sees the DoC, and the endorsement of the draft Charter, as great successes.

“The need for balancing the market has brought this group of responsible producers together, and many institutions and countries were thinking this is short term,” Al Mazrouei said. Instead, “We are seeing it



Suhail Mohamed Al Mazrouei, Minister of Energy and Industry, United Arab Emirates.

moving and evolving to become an arrangement that is going to last longer.” Referring to the draft Charter, he added: “I think that’s the most exciting thing that happened to OPEC and to the OPEC Countries since the inception.”

Eng. Carlos Pérez, Minister of Energy and Non-Renewable Resources, Ecuador: The decision to extend production adjustments through March 2020 and signing the draft Charter were important steps in supporting stability of the market, said Pérez. Compared with market conditions before the DoC, today the DoC partners are “making a little bit of sacrifice for the benefit of the whole industry. The expectations for the price of oil to skyrocket as it has in the past, I don’t think it’s in our sight at this point in time.” The benefit of cooperation, Pérez explained, is “to have a more stable price for the industry and prices that are reasonable for companies to operate and produce.”



Eng. Carlos Pérez, Minister of Energy and Non-Renewable Resources, Ecuador (first row right).

Mustafa Sanalla, Chairman of the National Oil Corporation, Libya: Sanalla heaped praise on Al-Falih, Novak and Barkindo for their efforts on the DoC and the draft Charter. “They have done a lot of work for the past three years. They really rescued the oil sector, they rescued the energy supply



Mustafa Sanalla, Chairrman of the National Oil Corporation, Libya.

and they rescued the consumer and producer as well. They did good work for all. And with time they gained more experience, and we can see that right now.”

Yang Berhormat Dato Seri Setia Dr Awang Haji Mat Suny bin Haji Md Hussein, Minister of Energy, Manpower and Industry, Brunei Darussalam: He is impressed by the work he has seen through the DoC. “OPEC and the non-OPEC members are very united and I am very confident that the objective of market stability will be achieved,” he said.

He also expressed confidence in the draft Charter, which will enable continued proactive dialogue between countries in the DoC at both the ministerial and technical levels. “I feel quite comfortable with what has been



Yang Berhormat Dato Seri Setia Dr Awang Haji Mat Suny bin Haji Md Hussein, Minister of Energy, Manpower and Industry, Brunei Darussalam (right).

proposed and I look forward to the outcome in the coming years.”

Dr Mohammed Bin Hamad Al Rumhy, Minister of Oil and Gas, Sultanate of Oman:

Oman has been a DoC partner since the beginning and Al Rumhy has served on the JMMC. He says the OPEC/non-OPEC cooperation has brought crucial stability to the market. “It doesn’t matter if you are a big producer or a small producer, stability is essential for us to move forward. To support investment, to have a sustainable business. It’s affecting many of us if not all of us in the world.” Besides helping to bring stability to the market, the level of cooperation between the 14 OPEC countries and ten other producing nations also helps build strong relations in other areas. “There’s a common denominator among us all, we do the same



Dr Mohammed Bin Hamad Al Rumhy, Minister of Oil and Gas, Sultanate of Oman (right).

thing, whether we do it on a small scale or a large scale,” said Al Rumhy. “We are facing the same challenges, we are facing the same issues. It’s not just about the economics of what we do, there are other socioeconomic challenges, environmental challenges that we are all interested in.”



Ministers display their copies of the draft 'Charter of Cooperation'.



The Charter of Cooperation

As we enter a new phase of the Declaration of Cooperation,

It's time to reaffirm and advance our application;

The focus is clear, our goal is stability,

Guided by fairness, transparency and equity;

Cooperation has worked, it has entered folklore,

But now we need to strengthen the bonds even more;

We look to the future, but recall the scene,

In the run-up to December 2016;

Back then things had been bad for a while,

Investments were shrinking, the market volatile;

Negotiations were long and there were plenty of fears,

But there was positive momentum after Algiers;

An agreement was reached, the atmosphere euphoric,

What we achieved was truly historic;

Commitments are judged on their implementation,

And that's been a success for the Declaration of Cooperation;

Seeking a stable balance twixt demand and supply,

Participants navigated a path to comply;

To measure this, we needed a barometer,

Two committees were established, the purpose to monitor;

We meant what we said, and said what we did,

Conformity was high, and inventory levels eventually slid;

Uncertainties remain, the challenge gets harder,

But the future is bright, now we've a Charter.

The 'Charter of Cooperation' poem.



Activities of the Secretariat

Office of the Secretary General

Mohammad Sanusi Barkindo was unanimously reappointed as Secretary General for a further three years in July 2019 during the Meeting of the 176th OPEC Conference.

The Secretary General participated as a keynote speaker and panellist in a number of high-profile international conferences and events throughout the year, the majority of which were undertaken in Member Countries (MCs) and ‘Declaration of Cooperation’ (DoC) participating countries, such as Equatorial Guinea, IR Iran, Iraq, Kazakhstan, the Russian Federation, Kuwait, and the United Arab Emirates (UAE). Furthermore, the Secretary General delivered keynote remarks in international conferences and forums, including the 49th World Economic Forum in Davos; 3rd Dundee Energy Forum; 24th World Energy Congress; 35th Asia Pacific Petroleum Conference; 40th Oil & Money Conference; and 3rd India Energy Forum. He also participated at the important energy dialogue platform of the IEF 8th Asian Ministerial Energy Roundtable.

These activities enabled outreach and interaction at highest government and policy levels, promoting higher visibility of OPEC among producers, consumers and the industry in international fora. In fact, the broader recognition of OPEC’s importance, role and contributions resonated throughout effective bilateral and informal meetings, as well as productive networking. This was also reflected in exploration of enhanced cooperation opportunities with major stakeholders.

The Office of the Secretary General (SGO) was strongly involved in organizing the Secretary General’s participation in all of these events, coordinating his busy schedule and arranging courtesy visits at the Secretariat. It was also actively involved in organizing and

supporting the OPEC and non-OPEC Ministerial Conferences, the Board of Governors (BoG) Meetings, as well as the OPEC and non-OPEC Joint Ministerial Monitoring Committee (JMMC). The SGO documented these meetings, drafting and editing formal minutes, writing *précis* of the discussions that took place and preparing summaries of the decisions taken for distribution to Ministers, Governors and Management, as appropriate. Additionally, the SGO was responsible for coordinating the Secretariat’s protocol.

The Legal Office

In line with its objectives and responsibilities, grounded in the Long-Term Strategy (LTS) and detailed in the Mid-Term-Programme IV, the Legal Office (LO) contributed to the conduct of the Organization’s affairs by promoting the rule of law within the Organization and in its relations with governments, organizations, enterprises and individuals.

As a main deliverable, it provided legal advice to the Secretary General and OPEC governing bodies, supervised the Secretariat’s legal and contractual affairs, and evaluated legal issues of concern to the Organization, reporting its findings to the Secretary General.

Specifically, the LO’s main tasks and accomplishments were provided as follows:

Internal legal support

- The LO provided legal advice to the Secretary General on various procedural matters regarding the BoG and the Meetings of the Conference.
- Support was provided to the Internal Audit function for proper execution of the audits planned throughout the year (focusing on: “Review of Policies

and Guidelines Management and Procurement” and “Fraud Detection and Prevention Plan”). As a result of discussions in the ensuing Audit Committee, and in line with approvals from the BoG, the LO was instrumental in updating various regulations within the Secretariat (e.g. Financial Regulations, etc.).

- The LO closely monitored Austrian, European and international legal cases relating directly/indirectly to OPEC, participated in interpreting relevant articles of the Host Agreement between OPEC and the Republic of Austria in cooperation with the Austrian Federal Ministry for European and International Affairs, and reported to the Secretary General.
- After a detailed study, a Data Protection Policy was put into place in the Organization.
- A new Internal Dispute Resolution Mechanism was created and incorporated into the OPEC Staff Regulations, in line with the principles of the European Convention on Human Rights.
- A new set of Contracting Guidelines was designed, applying best international organization practices, in coordination with other departments of the Secretariat.
- Contracts and agreements with external entities and individuals were reviewed and guidance in related legal matters was provided to different user departments.
- The LO participated in the Personnel Committee, Contracts Committee and 60th Anniversary Organizing Committee, providing legal support for their activities, as established by the

Organization’s rules and the Secretary General’s instructions.

Improvement of internal LO work

- The processes of the main activities of the LO were duly established, as well as formats for permanent reporting and reviewing of work progress.
- A process was established for the yearly review of rules and regulations, in order to keep them duly up to date.
- Key Performance Indicators were defined for LO activities.
- The support position of the LO is progressively enhancing, in order to become a Legal Operations Support Service, aligned with best practices for the provision of legal services.

Development of cooperation with non-OPEC countries

- With regard to the ‘Charter of Cooperation’ (CoC) (Proposed Framework for Regular and Sustainable Cooperation between OPEC and non-OPEC Producing Countries), the LO provided legal advice and support on the process of engagement with the 24 participating countries, as well as in reports and presentations to the Secretary General and the Secretariat’s governing bodies. The CoC was successfully signed on 2 July 2019.
- With the input of other OPEC departments, the LO prepared a preliminary Work Programme for the CoC.
- Permanent legal support was provided for the implementation of the DoC and functioning of its bodies, including OPEC and non-OPEC Ministerial Meetings, the JMMC and the Joint Technical Committee (JTC).

Information and analysis products

- Developments of legal aspects pertaining to the energy sector were monitored and reported, as relevant, to the Secretary General, generally in preparation for OPEC dialogues.
- The LO prepared a NOPEC Monthly Report, distributed until November 2019 (temporarily suspended).
- A Monthly Legal Report, comprising relevant legal energy issues, was designed, to be distributed within the OPEC Legal Network of Member Country lawyers and delegates.
- Legal documents and information were collected in order to organize an Energy Legal Database, slated to start operation in 2020.

Training

- In an effort to promote the Secretariat's endeavour to serve as a platform of cooperation and a forum for the exchange of ideas between OPEC and other international organizations and institutions, the LO organized the 1st OPEC-Energy Charter Secretariat-OFID Annual Legal Workshop on Energy, Law and Development. The Workshop offered an interactive exchange among speakers and attendees on various topics, such as policies, regulations and contractual frameworks in the energy industry, climate change, international cooperation, dispute resolution, the future of legal projects and legal department working models.

Task Forces/committees

The LO participated in several regulatory and legal projects and tasks forces

involving third parties, which will be developed in 2020, including:

- Regulation of the energy transition (ECS-OECD).
- Regulation of gas flaring (WBG).
- Update of the transparency standard (EITI).
- Carbon pricing regulation (WBG).
- Update of investor state dispute settlement rules (UNCITRAL).
- Energy contract drafting and negotiation workshops (CONNEX-GIZ-Chatham House-NPPDG).
- Energy governance (NRGI).

Research Division

The Secretariat's Research Division (RD) continued to undertake its intensive research programme, tailored specifically to meet the requirements of the Organization and its MCs, with particular emphasis on energy and related matters. This has been achieved through close teamwork and well-coordinated work streams, along with efforts among the Petroleum Studies (PSD), Energy Studies (ESD) and Data Services (DSD) departments, as well as the Environmental Matters Unit (EMU) within the Division. The Division provided full technical, research, and analytical support to ensure a seamless and enabling environment for relevant meetings.

In line with the LTS, the RD continued monitoring developments in the oil and product markets. In addition, specific energy- and oil-related studies, as well as intensified modelling efforts and scenario analyses, significantly contributed to obtaining enhanced insight into recent and future developments. Emphasis on data systems and documentation, including direct communication with

MCs and active involvement in multilateral fora and dialogue, have remained integral elements of the Division's activities.

Regarding short-term oil market developments, ongoing analysis of the drivers behind oil price developments, fundamental and non-fundamental factors, including analysis through leading indicators, continued. Structural change, trends and cyclical fluctuations in the world economy, with emphasis on the emerging economies as dynamic growth regions, were further analysed.

Energy dialogues with the EU, Russia, China and India, as well as with other important oil producing and consuming countries, were actively pursued. This was complemented by additional meetings to facilitate cooperation among MCs in the run-up to and during important international meetings and negotiations, and continuing ongoing dialogues and technical exchanges with various international organizations and bodies, as well as with other producer and consumer governments. Systematic efforts in recent years have been effective in shaping the image of the OPEC Secretariat as a centre of competence for oil-related matters. In this respect, the visibility and accessibility of OPEC's research publications further increased.

'Declaration of Cooperation'

RD's contribution in 2019 included extensive engagement in and support to meetings of the JTC, JMMC and other technical expert meetings under the OPEC and non-OPEC DoC. In 2019, there were five JMMC Meetings and 12 JTCs. Following extensive analysis of conditions in the market by the JMMC and JTC, the DoC partners were able to modify course as market conditions required. The partners were committed, responsive and responsible. This was best exemplified by ministerial

meeting decisions taken on 2 July and 6 December 2019, when participating countries decided to make necessary adjustments and voluntary contributions and strove to adhere fully to overall conformity levels.

Throughout 2019, the unwavering resolve of participating countries to rebalance the market was amply demonstrated, and the DoC partners remained committed to realizing the full benefit of their cooperation, in the interest of producers, consumers and the global economy. Future cooperation also took a huge step forward with the endorsement of a newly established framework – the CoC – signed on 2 July 2019, which institutionalized regular and lasting cooperation between oil-producing countries.

As an integral part of this cooperation, two technical meetings for OPEC and non-OPEC producing countries were held in 2019. The 5th Technical Meeting of OPEC and non-OPEC Producing Countries took place on 19 June at the OPEC Secretariat. The event was dedicated to discussion of the impact of crude quality changes and International Maritime Organization (IMO) 2020 regulations on the global oil market, and featured the UAE, including its major bunkering, storage and trading hub at Fujairah. It also analysed the latest observed investment trends in the oil industry. The 6th Technical Meeting of OPEC and non-OPEC Producing Countries was held on 29 November at the OPEC Secretariat. The main theme of this meeting was to explore the latest developments in growing North American liquids supplies and crude exports, as well as the implications of changing oil trade patterns.

International dialogues

OPEC has long been aware of the importance of dialogue between energy stakeholders.

The interconnectedness of global markets, as well as the global impact of critical energy issues such as security of supply and demand, economic prospects and environmental issues, make such dialogues necessary to preserve balance in the oil and gas industry.

Taking this into consideration, OPEC strives to enhance its current partnerships and develop future opportunities for cooperation. The Secretariat is proactive in organizing and participating in international dialogues via many high-level meetings, technical meetings, joint studies, workshops and memberships. The following provides a summary of the key developments in 2019 regarding OPEC's international dialogues and collaboration.

OPEC has been instrumental in organizing events with the International Energy Agency (IEA) and the International Energy Forum (IEF) under the framework of regular joint activities. The 9th IEA-IEF-OPEC Symposium on Energy Outlooks focused on the latest OPEC and IEA energy outlooks and a comparative analysis of short-, medium- and long-term energy outlooks released by the IEA and OPEC in 2018. It was complemented by industry views on short-, medium- and long-term energy outlooks, including perspectives on the post-'Paris Agreement' landscape. The Symposium coincided with back-to-back meetings of the 5th IEF-KAP-SARC Thought-Leaders' Roundtable, and the 3rd IEF-EU Energy Day.

The 7th IEA-IEF-OPEC Workshop on Interactions between Physical and Financial Energy Markets was held in Vienna on 28 March 2019. The joint IEA-IEF-OPEC meeting covers the evolving inter-linkages between physical and financial energy markets and has developed into a unique, high-level technical event, bringing together a diverse range of market participants to discuss technical issues. They

focus on algorithmic and swap trading, the emergence of new crude oil benchmarks and their impact on regional markets, and climate-related financial disclosures.

OPEC attended meetings of the IEF Executive Board held in Rabat, Morocco, on 28 June 2019, and in Riyadh, Saudi Arabia, on 18 December 2019 as a regular member.

Additionally, a Technical Meeting was held among IEA, IEF, OPEC and US Energy Information Administration (EIA) experts on 28 February 2019 in Riyadh, Saudi Arabia, to discuss specific issues pertaining to data and projections. It was acknowledged that significant progress has been made with regard to ironing out definition and baseline differences, and that there is a renewed spirit of goodwill to continue and deepen the technical collaboration between these key agencies. Specifically, a number of areas were identified where work will continue to bridge gaps and reconcile differences, as well as more generally enhancing communication between the Agencies and relevant analysts. In this regard, a conference call with representatives from the IEA and the IEF was held on 23 May 2019 to discuss Historical Baseline Data and the Comparability of Energy Outlooks.

The Secretariat, as one of the main Joint Organizations Data Initiative (JODI) contributors and in line with its commitment to energy data transparency, continued its active stance in promoting JODI by significantly contributing to both JODI-oil and JODI-gas initiatives through data submissions from OPEC MCs and various other related activities, such as meetings, training events and international conferences. OPEC hosted a JODI Inter-Secretariat Meeting at the OPEC headquarters in Vienna in March 2019 and participated in the Joint APEC Training Workshop on Oil and Gas Statistics (June 2019) and the 3rd JODI

Data User Seminar (June 2019), both held in Tokyo, Japan. Furthermore, the Secretariat and several OPEC MCs attended the 14th JODI International Conference (October 2019) in Cairo, Egypt.

The main activities of JODI-oil and JODI-gas relate to enhancing the quality of JODI oil and gas data, expanding the current data collection to also cover other energy commodities, and underscoring the importance of JODI and data transparency in the international energy market scene. The initiative aims particularly to address specific challenges, such as resources in some countries and organizations, and the overall performance of OPEC MCs. OPEC's participation in JODI-oil and JODI-gas remains very good. It is also worth noting that both the oil and gas databases face some challenges concerning overall quality (coverage and timeliness) of data for some major non-OPEC oil and gas producing and consuming countries, despite significant improvement in recent years.

An OPEC-IEA-IEF-EIA technical meeting on Historical Data and Outlooks took place in Vienna in April 2019. Conference calls on the same matter focused on understanding the differences among countries and fuel classifications used by the organizations and on exchanging historical baseline data on oil supply and demand.

An OPEC delegation regularly participates in both bi-annual International Monetary Fund/World Bank meetings – in 2019, this included the Spring Meetings in March and October in Washington DC, USA. This included participation in meetings of the International Monetary and Financial Committee (IMFC) and G24 meetings. As a regular feature on the occasion of the IMFC Meetings, the Secretariat provided written statements on the oil market to distinguished delegates, highlight-

ing OPEC's efforts in stabilizing the oil market and emphasizing its positive effect on the global economy.

OPEC has continued to build on its proactive engagement in the G20 Energy Initiatives to arrive at broader and more inclusive outcomes. An OPEC delegation attended the Second Meeting of the G20 Energy Transformations (ETWG) Working Group held in Toyama, Japan on 18–19 April 2019. The second and final meeting of the ETWG was held in Karuizawa, Japan on 15–16 June 2019, followed by the G20 Energy Ministerial on 28–29 June 2019 in Osaka. OPEC provided its perspective on the energy transition, transparency in the energy market and enhancing energy security. The OPEC Secretariat will enhance its engagement during Saudi Arabia's G20 Presidency in 2020.

OPEC's continued active participation in bilateral dialogues with different countries and groups, including producers and consumers, continues to expand and flourish. The 3rd High-level meeting of the OPEC-China Energy Dialogue took place at the OPEC Secretariat on 21 October 2019, attended by a large delegation of representatives from China's Energy Administration and the private sector. This successful meeting addressed the state of affairs of the oil and energy markets as well as other important issues such as trade between China and OPEC MCs. The Secretariat also received visits from the Chinese Academy of Social Sciences on 11 October 2019 and from the Permanent Mission of China to Austria on 28 May 2019.

The Secretariat welcomed two interns from Indian oil companies as part of the OPEC-India Energy Dialogue. The Secretariat additionally hosted an intern from the Russian Energy Ministry in 2019 and the Deputy Prime Minister of the Russian Federation for a bilateral meeting on 8 November 2019.

Furthermore, on 18 November 2019, the Secretariat hosted the 5th Technical Meeting on Asian Energy and Oil Outlooks in Vienna. The meeting was an invaluable opportunity to have an Asia-wide, focused discussion on current energy developments and prospects, including related policy milestones. The meeting allowed for informal technical interactions among experts from major Asian countries, as well as the Economic Research Institute for ASEAN and East Asia, the Institute of Energy Economics, Japan and the Korea Energy Economics Institute. Discussions evolved around energy and oil outlooks, regional energy and policy market analysis, as well as trends in oil product demand, adjustments for IMO regulations, crude oil trade patterns and the petrochemical sector outlook.

A representative from OPEC took part in an EU Workshop on the role of the euro in energy transactions as a follow-up to the 13th High-level Meeting, which took place in December 2018. No official dialogue meetings were held in 2019 due to the changeover of the EU Commission following the European Union's parliamentary elections. However, the Secretariat established contact with the new Commissioner, Ms Kadri Simson, and her team, and shared a background note on the energy dialogue to lay the groundwork for productive meetings in 2020.

Further to the Secretariat's interest in pursuing dialogue with producers, the engagement of the Secretariat with several government agencies and think tanks in the US, which started in December 2016, continued in 2019. These included active participation in CERAWEEK in March in Houston. The Secretary General participated in various high-level panels and press conferences, this time including some OPEC Ministers and high-level

delegations from other producing countries participating in the DoC.

Environmental debate

The 'Paris Agreement' was adopted in 2015 by the United Nations Framework Convention on Climate Change (UNFCCC); Parties stated the objective to limit the global temperature rise to well below 2°C above pre-industrial levels. The UN 2030 Agenda for Sustainable Development was also adopted in 2015, aiming to put the world on a sustainable pathway to ensure no one is left behind.

Four years later, UNFCCC Parties have set the majority of modalities, procedures and guidelines needed for the full implementation of the 'Paris Agreement'. At the same time, UN Member States have completed the first progress review of the Sustainable Development Goals (SDGs), including SDG7 on achieving universal energy access.

In particular, 2019 was called the year of action for climate change and sustainable development. A number of high-level events were held, including the 'UN Climate Action Summit' hosted by the UN Secretary General, aiming to give new impetus to the economic and political will of member states for them to enhance ambition and advance action for the mitigation of greenhouse gas (GHG) emissions. Heads of State and Government also resolved at the SDG Summit to realize their vision to achieve all SDGs by 2030, including those related to access to affordable, reliable, modern and sustainable energy.

The year ended with the UN Climate Change Conference (COP25), held unexpectedly in Madrid under the Chilean Presidency, leaving many critical issues related to the operationalisation of the 'Paris Agreement' unresolved.

Parties to the 'Paris Agreement' were called to submit their new or updated

nationally determined contributions (NDCs), considering the long-term temperature target of the agreement. Parties' NDCs are expected to incorporate enhanced mitigation actions with a focus on the energy sector (similar to the first NDCs), while the UN Deputy Secretary-General announced the beginning of a 'Decade of Action' that will prioritize solutions to catalyse progress on the SDGs – including those on climate change and energy poverty.

In this context, challenges and opportunities were created by climate change actions, aspirations for sustainable development, as well as realization of the SDGs for all countries, especially developing countries. These developments could also have a profound impact on various economic sectors, including the energy sector, with significant implications on future energy demand and the energy mix.

In light of the above, the latest challenges arising from the UN climate change negotiations and actions implemented in the context of sustainable development were closely followed. The policy-relevant research outcomes were submitted to the relevant OPEC bodies and officials with the objective of providing a better understanding on issues of importance to the collective interests of OPEC MCs and allowing for adoption of common positions on matters of concern.

Besides research, the platform for coordination among OPEC MCs was kept intact in multilateral fora, including regarding technical advice and support to MC experts and negotiators. To facilitate this process, a technical workshop on climate finance, two coordination meetings prior to respective UNFCCC negotiation sessions, as well as a number of *ad hoc* coordination meetings were held in the course of UNFCCC sessions. *Ad hoc* advice and technical support was provided to

MC representatives by staff prior to and during relevant UN negotiation processes.

In particular, work during 2019 focused on the UNFCCC negotiation processes, mainly on the negotiations related to finalizing and adopting the deferred and unresolved issues related to the 'Paris Agreement' Work Programme (PAWP), which contains the modalities, procedures and guidelines for implementation of the 'Paris Agreement'. These were discussed at the Bonn Climate Change Conference held in June 2019, and the UN Climate Change Conference in December 2019 in Madrid (COP25).

The Secretariat actively participated in the Bonn session and organized two *ad hoc* coordination meetings to discuss progress regarding climate change talks, with a focus on matters of interest to OPEC MCs.

Moreover, the Secretariat attended the 49th session of the Intergovernmental Panel on Climate Change (IPCC) held in May in Kyoto, Japan to follow up important technical issues in the context of the IPCC and to provide technical support to MC representatives.

A modelling study was conducted to empirically assess the effects of mitigation and response measures on OPEC MCs, taking into consideration alternative options within the energy sector and the broader economy for them to diversify. A brief report on forest fires and climate change was also developed, owing to recent developments in regard to this matter.

The Secretariat proactively participated in the IEAGHG Programme. In addition to the above reports produced during 2019, a technical workshop on climate finance, two coordination meetings, as well as a number of *ad hoc* coordination meetings were organized, with the aim of providing MC representatives with advice and technical support in the course of relevant UN negotiation processes.

The objective of the 2nd OPEC Technical Workshop on Climate Finance held on 11 June was to provide a conducive platform for discussion on the provision of financial assistance to developing countries for climate actions.

OPEC publications

The OPEC *Monthly Oil Market Report (MOMR)* focuses on short-term oil market developments. It represents the Organization's most-viewed report and is frequently quoted and referred to by major media outlets, as well as a wide range of respected industry analysts. The *MOMR* contains ten chapters covering a wide range of information pertaining to the oil market, from oil prices and futures markets, to commodity markets, the world economy, oil demand and supply, the downstream segment of refining and product markets, transportation, trade, oil inventories and the balance of supply and demand.

The feature articles in the *MOMR* provide concise and in-depth analyses of important events and outlooks, focusing on global oil demand, non-OPEC supply, summer and winter product markets as well as an assessment of timely economic issues. The July *MOMR* and its feature article present new forecasts for the economy, world oil demand and non-OPEC supply for the following year. In addition, feature articles review crude and product prices and, of course, there is an assessment of global oil inventories, as a direct result of the difference between global oil supply and total world oil demand.

The February 2019 *MOMR* attracted the highest number of views on the OPEC website, with 31,362 views recorded. For the year, website views averaged around 27,000 per monthly issue.

The *MOMR* video continued to be produced each month in 2019, and is uploaded

to the OPEC website at the time of report's publication, highlighting key changes from the previous month's forecasts. The *MOMR* App has also become a very popular feature, as it presents a concise and comprehensive overview of the report's key messages, enhanced and supported by graphs and tables containing the latest relevant data sets. The *MOMR* App can be downloaded free of charge from any play store.

Additionally, regular daily and weekly reports were prepared, providing a concise and timely summary of oil market trading news and other relevant headlines directly related to short-term market developments.

The 13th edition of the annual *World Oil Outlook (WOO)* highlights future developments in the oil and energy scene, as well as identifying the main challenges and opportunities facing the oil industry in the years to come.

The 13th edition of the *WOO* was launched at the Boersensaele in Vienna on 5 November 2019. The roll-out programme included presentations at the Abu Dhabi International Petroleum Exhibition and Conference in Abu Dhabi, the IEA and Institut Français du Pétrole in Paris, the Vienna University of Economics and Business in Vienna and the 5th Technical Meeting on Asian Energy and Oil Outlook at the OPEC Secretariat.

The 2019 version of the *WOO* presented a comprehensive outlook for oil demand, supply and the downstream for the medium (2018–2024) and long term (2025–2040).

Future developments in energy and oil markets will be driven by a number of factors, including population growth, changing demographics, the assumed path of economic growth, policy changes, technology advancements and energy and oil prices. The global population is estimated to increase from 7.6 billion (bn) in 2017 to 9.2 bn in

2040, with the majority of this growth coming from developing countries. Global gross domestic product (GDP) between 2018 and 2040 is expected to increase at an average rate of 3.3% per annum (p.a.). Most of the global growth will be driven by non-OECD countries, which on average are expected to grow by 4.2% p.a.

Recently enacted energy policies focus primarily on measures aimed at emissions reductions. The substitution of coal by natural gas and renewables in the power generation sector will continue to be at the centre of policy discussions. Furthermore, several policies are aimed at limiting oil use, especially in the transportation sector.

Reflecting the underlying assumed developments of the key drivers, total primary energy demand is forecast to increase from nearly 286 million barrels of oil equivalent a day (mboe/d) in 2018 to more than 357 mboe/d in 2040, with average growth of about 1% p.a. in this period. Energy demand in non-OECD countries is expected to increase by almost 75 mboe/d, while demand in the OECD is estimated to drop by around 3 mboe/d.

Oil is forecast to remain the largest contributor to the energy mix by 2040, accounting for a share of more than 28%. Between 2018 and 2040, global gas demand is anticipated to rise from 65.5 mboe/d to just above 90 million barrels a day (mb/d). Consequently, natural gas is expected to become the second-largest energy source, reaching a share of 25% in the total primary energy mix in 2040. Demand increases for gas will come primarily from Asia, led by China and India, as well as OPEC MCs.

Coal will remain the largest cause of CO₂ emissions, despite falling demand after 2030. It is estimated to account for almost

40%, or 14.9 billion tonnes (bt), of total energy-related emissions in 2040. Although the pace of growth is forecast to decelerate over this period, energy-related emissions will continue to increase to more than 38 bt in 2040, 4 bt higher than in 2018.

'Other renewables', which includes solar, wind and geothermal power, are expected to be the fastest-growing source of energy, expanding on average by 6.9% (18 mboe/d between 2018 and 2040). Nuclear and biomass are expected to see demand growth of approximately 7 mboe/d each, and hydro-power, 3 mboe/d.

Global oil demand is expected to continue growing at relatively healthy rates in the medium term, reaching 104.8 mb/d by 2024. This represents an increase of 6.1 mb/d above the 2018 level. Average growth will be about 1 mb/d over the medium-term period, declining from a projected 1.1 mb/d in 2019 to 0.9 mb/d in 2024. Incremental demand is forecast to come primarily from non-OECD countries (+6.6 mb/d). Oil demand in the OECD is projected to gradually shift from slight growth during the initial years of the medium term to declining demand after 2020, partially offsetting growth in the non-OECD region.

The new IMO regulation limiting sulphur content in marine fuels to a 0.5% maximum on a weight basis, effective from 1 January 2020, is expected to be a disruptive event, not only for the shipping sector, but also for the global refining sector. However, recent assessments indicate that the global refining system will have sufficient flexibility to address these changes in the maritime sector's fuel mix. Nevertheless, the impact on high-sulphur fuel oil (HSFO) prices, the gas-oil/HSFO spread, as well as HSFO-rich crude oil prices, will be significant, albeit less severe than previously expected.

Long-term global oil demand is expected to increase by about 12 mb/d, rising from 98.7 mb/d in 2018 to 110.6 mb/d in 2040. From a regional perspective, there is a contrast between declining OECD demand and expanding non-OECD demand. Non-OECD oil demand is expected to increase by 21.4 mb/d between 2018 and 2040, with India projected to be the country with the fastest oil demand growth and the greatest additional demand. OECD demand is expected to plateau at around 48 mb/d for the next few years before declining to around 38 mb/d by 2040. At the global level, growth is forecast to slow from 1.4 mb/d in 2018 to around 0.5 mb/d towards the end of the next decade.

The largest incremental demand growth (+4.1 mb/d) is expected to come from the petrochemical sector, although road transportation will remain the largest demand sector in terms of absolute volumes. Despite an overall increase of close to 3 mb/d, road transportation's overall share is forecast to drop by 2%. Significant demand growth is also expected in the aviation sector, with oil demand expanding on average by 1.5% p.a. Some growth is also projected in the marine sector, as well as in rail and domestic waterways.

Road transportation is estimated to account for 43% of total demand by 2040. However, this sector is forecast to witness strong decoupling between oil demand, transport services and the number of vehicles on the road. This will primarily be a result of efficiency improvements driven by technological developments, a tightening of energy policies, and the increasing penetration of alternative-fueled vehicles. The total vehicle fleet is estimated to grow by more than 1 bn between 2018 and 2040, to reach 2.4 bn. A large majority of this increase (953 million) comes from non-OECD countries. Electric

vehicles (EVs), including battery electric vehicles and plug-in hybrids, are estimated to reach around 320 million units in 2040, or 13% of the global fleet. The majority of EVs (305 million) are expected to be passenger cars, representing 15% of all passenger cars in 2040.

Non-OPEC total liquids supply is projected to grow by 9.9 mb/d between 2018 and 2024 to reach 72.2 mb/d. This is mainly driven by the return of modest increases in upstream investment and healthy demand. US tight oil is forecast to continue to expand at a strong pace, contributing just over 60% to medium-term non-OPEC supply growth. In addition, a cyclical recovery elsewhere sees meaningful contributions from Brazil, Norway and Canada, as well as expected barrels from newcomer Guyana.

US tight oil will expand sharply, by 6.7 mb/d, in the medium term, before slowing thereafter and showing only modest increases. It is expected to peak at 17.4 mb/d in 2029. Tight oil production elsewhere has potential, but is estimated to remain at relatively modest volumes. US total liquids are forecast to peak at 22.8 mb/d in the mid-2020s. Total non-OPEC supply is forecast to reach 72.6 mb/d in 2026, but gradually decline thereafter to a level of 66.4 mb/d by 2040. Beyond the mid-2020s, only two non-OPEC countries are expected to show meaningful output growth, namely Brazil and Kazakhstan. Virtually all other non-OPEC producers are anticipated to see a decline in long-term liquids production.

Almost 70% of distillation capacity additions are projected to occur in the first three years of the forecast period, with average annual additions estimated at around 1.8 mb/d in the period 2019–2021. However, the rate of capacity additions is expected to level off

in the years thereafter, dropping to only 0.4 mb/d. The majority of expansions are seen in the Asia-Pacific and the Middle East (5.7 mb/d, or more than 70% of global additions). Significant additions are also expected in Africa, with one large project in Nigeria accounting for the largest share.

Potential medium-term crude throughput is estimated at a surplus of almost 4 mb/d relative to incremental refined product demand by 2024. While the gap is still moderate in 2019, it widens gradually from 2020 onwards, illustrating a rising surplus of distillation capacity at the global level. The largest surplus is expected for the Middle East, US and Canada, Europe and China. This may lead to more downstream competition post-2020 and, potentially, refinery closures. Refinery closures amounting to 2.1 mb/d are expected in the medium term due to lower demand in several regions, as well as the addition of highly competitive new refinery units. The only region with a projected medium-term deficit of distillation capacity is Latin America.

Total crude distillation capacity additions are projected to reach 16.5 mb/d by 2040, mostly in developing countries (Asia-Pacific, the Middle East, Africa and Latin America). Projections for secondary capacity additions indicate the need to add some 8.8 mb/d of conversion units, 18 mb/d for desulphurisation and 5 mb/d of octane units in the period to 2040. The majority of these are expected to materialize before 2030, in line with product demand growth and the implementation of stricter product specifications.

Projected global upstream investments required to sustain production according to the *WOO* are estimated to be \$8.1 trillion (tn) (\$2019) over the period 2019–2040. Another \$1 tn is seen as required in the midstream

sector. Global downstream investments are estimated at around or slightly above \$1.4 tn. Combined, this indicates that nearly \$10.4 tn of investment will be needed globally over the long term to sustain projected oil supply requirements.

In the medium term, overall crude trade is seen relatively stable near 38 mb/d. In terms of regional exports, the biggest change is a significant increase in crude exports from the US and Canada; they are expected to climb to a level of just under 5 mb/d in 2025, up by around 3 mb/d from 2018. In the long term, the outlook changes fundamentally, with exports rising by 4.5 mb/d from 2025–2040 to reach almost 42 mb/d. Total Middle East exports are set to increase by around 7 mb/d between 2025 and 2040 to reach levels of around 23 mb/d.

For energy-exporting developing countries, the imperative to re-orient their economies is due to a stringent regulatory framework on climate change action and the associated adverse impacts of response measures. Achieving diversification is considered vital for their long-term socio-economic sustainability. A diversified portfolio could help such economies increase their resilience, while taking into consideration the importance of local and regional contexts in policymaking. Energy-exporting developing countries could use their comparative advantage and diversify within the energy sector. Policymakers could also pursue actions and measures that extend existing capabilities into industries of added higher value and complexity. Governments could play a vital role in the economic and structural reforms needed to achieve diversification. International cooperation could contribute to the identification and sharing not only of best practices but also ways in which the international community could facilitate increased trade, foreign investment,

and support in the form of technology transfer and finance.

The *Annual Statistical Bulletin (ASB)* is a comprehensive publication and an excellent reference source for historical oil data. It contains historical time series of major oil and gas flows, based largely on official sources. It also functions as an important source of reliable information for the benefit of different stakeholders in the oil industry. The 2019 *ASB* contains key statistical data on oil and natural gas activities in each of OPEC's 14 MCs: Algeria, Angola, Congo, Ecuador, Equatorial Guinea, Gabon, the IR Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the UAE and Venezuela. In addition, it provides valuable data for many other countries grouped by geographical region, and covers the major economic zones all over the world. It also provides useful information about other non-OPEC oil producing countries, bringing together important data on the upstream and the downstream, exports, imports, production, refineries, pipelines and shipping. In regularly publishing the *ASB* and making such data publicly available, OPEC seeks to ensure greater data transparency and increased sharing of information about the oil and gas industry and its many stakeholders. The 2019 edition of the *ASB* includes a separate, interactive online version, which is freely available on the OPEC website, with historical time-series data going back to 1960. A pocket-version is available, as well as a Smart App version, with many advanced features. It is worth mentioning that the 2019 *ASB* release was the earliest in the history of the publication as well as the first annual statistical book in the industry.

Internal reports, studies and workshops

During 2019, the Division continued its research into energy-related subjects and produced a number of reports and studies ad-

ressing questions related to future market developments, technology and policy.

The Secretariat hosted a Workshop on Information Technology and a Workshop on Energy Technology on 16 and 17 September 2019. The workshops were positively received and deemed timely, given the urgent need to address new challenges in terms of technology, digitalization and new business models.

The **1st Workshop on Information Technology** was held at the OPEC Secretariat on 18 September 2019. The workshop was structured into three sessions. The first dealt with the phenomenon of "Digital Transformation" in the oil and gas sectors. The second introduced "Blockchain", a disruptive technology for the distributed recording of information in electronic ledgers, aimed at creating trust between peers (e.g. participants in a market) without the need of intermediaries. The last session featured speakers who presented a set of pilot projects applying blockchain technology in the energy and financial sectors.

The **1st Workshop on Energy Technology** demonstrated its value as an informal forum for experts to discuss state-of-the-art developments, as well as their implications for the energy and oil business. A broad range of participants presented and discussed expected future technological advancements in road and marine transportation, which could influence oil demand. It was noted that these industries are already researching ways to diversify powertrains and develop new propulsion technology, which could help to reduce the carbon footprint of transportation. Meeting participants found the workshop provided valuable insights into the topics discussed and expressed interest in further workshops.

'Assessing a regional supply/demand balance for crude': This study undertakes an assessment of the global crude oil balance,

as opposed to a global liquids balance, given that the share of non-crude (NGLs) liquids has increased significantly over the last years, distorting the balance for crude. Following the emergence of tight oil production in the US, this very timely issue has so far not seen adequate coverage by agencies or consultants routinely reporting on oil markets. The global crude oil balance in this study is defined as the difference between crude oil and condensate volumes, and global demand for crude oil in terms of refinery intake, condensate requirements and crude for direct use.

An assessment of the evolution of the global crude oil balance is based on a bottom-up methodology, compiling data on an annual and regional basis. The resulting global implied stock change in the crude oil balance was compared with the implied stock change in the total liquids balance. While certain years showed that a surplus in crude production, leading to builds in crude oil inventories, coincided with the collapse of crude prices, a deficit was observed in the crude balance of 2018, following production adjustments by the countries participating in the DoC, which did not match the observed surplus in the global liquids balance in the same year. This observed divergence in global crude *versus* global liquids balances is mainly due to the increase of non-crude supply, with stock builds observed in non-crude components of the balance in contrast to draws in crude stocks. However, as the process lacks a unified methodological approach in gathering data, it makes assessing a strictly crude oil balance very challenging.

'Impact of oil price shock on the global economy, oil demand and supply': There is sufficient empirical evidence to suggest that supply and demand shocks are not alike and do not have the same impact on oil prices,

either in terms of magnitude nor duration. Supply shocks arise due to output distortions from natural disasters, geopolitical tension and oil producers' decisions involving their ability and/or willingness to counter unexpected market imbalances by adjusting supply. Shocks to oil demand are associated with fluctuations in the global business cycle. Speculative demand shocks are based on the expectations of market participants, primarily with regard to anticipated oil stock changes.

The study found that while changes in the oil price are not expected to significantly impact global GDP growth in 2019, such an impact could well become significant in 2020. In terms of oil demand, changes in the oil price would have only a slight impact on oil demand in either direction in 2019. The impact in 2020, however, could be much more significant. In terms of non-OPEC supply, oil price changes have so far not seen a significant impact, but if the price changes continue in 2020, it would likely have a significant supply side impact. The study concluded that the DoC has affected the global oil market balance. Furthermore, globally, oil demand increases by less due to a lower oil price than it decreases in the case of a higher oil price in 2020. At the same time, globally, if oil supply decreases by more due to a lower oil price, it increases due to a higher oil price in 2020. Generally, in oil producing countries an increasing oil price has a positive impact on the real GDP and consumer price index (CPI) inflation of a respective country, and *vice versa*. And finally, generally, in oil consuming countries, an increasing oil price has a negative impact on the real GDP of the country, but a positive impact on CPI inflation and *vice versa*.

'Analysis of non-OECD inventories': Growth in non-OECD economies in recent

years has led to an increase in oil demand. To meet this demand growth, many developing countries are building pipelines, refineries and storage tanks that need to be filled to make them operational. Moreover, many of these emerging economies are building strategic petroleum reserves to secure their future oil needs, in addition to commercial stockpiling. These developments in storage infrastructure have resulted in higher inventory levels. While there is no regular data reporting system to evaluate the actual level of oil stocks held in non-OECD countries, estimates for these stocks are largely based on monthly data for main producer/consumer countries as published by JODI, combined with official sources from a number of main oil-producing and consuming non-OECD countries. The Secretariat's assessment for non-OECD stocks is for almost all quarters within the calculated 95% statistical confidence interval, which is based on implied stock changes from the difference between world oil supply and demand.

Business strategies of tight oil companies in the US focused on the strategies and business practices used by companies active in the US tight oil sector to overcome the challenges faced in recent years. It analysed the top independent producers, as well as IOCs active in shale production, finding that all of these companies have aggressively pursued mergers and acquisitions to increase their resource base. Another effective strategy has been strong investment into researching, developing and deploying new technology and using new techniques to increase shale oil output.

The study *'Gas supply outlook and implications on NGL supply'* indicated that total gas supply is expected to increase by around 1.5 trillion cubic metres (tcm) between 2018 and 2040. Supply in OPEC countries is ex-

pected to increase by around 335 billion cubic metres (bcm) in the projection period, while OECD Americas' gas supply is expected to increase by around 310 bcm in the same period. The only region where gas supply is expected to decline in the long term is OECD Europe. It also concludes that NGLs supply is set to increase by almost 6.5 mb/d in the long term, with global NGLs supply in 2040 estimated at around 21 mb/d.

'Energy efficiency evolution and the impact on energy demand' reviewed historical trends in energy efficiency with the objective of analyzing the potential demand impact of further expected developments. The study noted that the most impressive reductions in energy intensity in developing countries have been seen in China and India, while energy intensity has also been declining in the OECD regions, largely as a result of efforts in the residential and service sectors. It was nonetheless noted that current efforts will not be sufficient to meet the targets set out in SDG 7.3.

'Implications of Russia's new profit-based fiscal policy and oil strategy' explores the new tax system in Russia and its possible effects on oil production, the downstream sector, investment and government revenue. The 'Excess Profits Tax' will be charged on oil profits after deducting the cost of oil production, with a pilot programme being applied to four groups of fields. At the same time, the 'End-of-Tax Maneuver' (ETM) is expected to have a direct impact on the refining sector, both domestic and within the Eurasian Economic Union. The ETM is expected to incentivize Russian refineries to modernize and improve the quality of their refined product output.

The report *'Oil demand prospects in the marine sector'* discussed the various technology developments in the marine sector,

which may affect oil demand in the foreseeable future. LNG displacement of oil-based fuels was one focus of the investigations, as was the use of waste heat recovery systems and technological improvements to engines and hulls. The study concluded that oil demand from the marine sector in the long term may be in the range of 4.2 mb/d to 6.0 mb/d in 2040.

The study entitled *'The Run-up to COP25/ CMP15/CMA2 (SB50 in Bonn)'* focuses on various dimensions of the main subjects under negotiation in the context of the PAWP, the process of negotiation in Katowice, the divergence of views and differences among the parties on different agenda items, the major issues that parties agreed upon under the 'Katowice Climate Package', and the deferred issues of COP24, which needed further attention in SB50 and the climate change conference in Madrid.

The report *'Review of AR6 Reports: Global Warming of 1.5°C (updated) and 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories'* provides an update on the current state of the climate system, including the current level of warming, and assesses the impacts and risks of 1.5°C global warming above pre-industrial levels on natural and human systems, considering different mitigation and development pathways compatible with a 1.5°C temperature target and their impact on the energy transition and interests of OPEC MCs. The report also addresses various aspects of the 2019 refinement, elaborating on its focus and expectations to improve the measurement, reporting, and verification of GHG emissions and removals for 'Paris Agreement' implementation.

The *'Modelling study: Monitoring implementation of the 'Paris Agreement' in the*

context of sustainable development' considers a renewed sense of urgency around economic diversification in OPEC MCs in the context of sustainable development. The study is intended to provide a quantitative analysis of different options for energy-exporting developing countries, e.g. OPEC MCs, to diversify their economies, including within and outside the energy sector. Scenarios developed on economic diversification consider options both within the energy sector and in the wider economy. The objective of analysing scenarios and sensitivities is to examine whether and to what extent the estimated adverse impacts for OPEC economies related to the implementation of stringent climate change measures could be offset through economic diversification options in energy exporting developing countries.

The report *'Climate change financial mechanism'* seeks to undertake a comprehensive analysis of the developments related to the role of funds and arrangements under the financial mechanism in the provision of financial resources to address climate change, and the contribution of funds in addressing mitigation and adaptation in developing countries. In addition, this report addresses the Standing Committee on Finance contribution to institutional arrangements for mobilizing climate finance and the provision of financial resources to developing countries. Furthermore, it assesses the origin and channels of provision of climate finance and the amount and figures of financial flows from various channels, addressing the emerging trend to scale-up risks and uncertainties to crowd out financial flows to specific economic sectors, including the oil and gas industry.

'Enhancing oil and gas flaring data collection' provides background on the sources and volume of flaring by various countries and

decoupling of gas flaring from energy consumption, as well as the role of research institutions in monitoring GHG emissions from gas flaring at the global level. The report also highlights the role of relevant initiatives such as the ‘Global Gas Flaring Reduction Partnership’ and the ‘Zero Routine Flaring by 2030’ in encouraging governments, companies and the private sector to take action to reduce flaring.

The report **‘Update on climate change negotiations and the ‘Paris Agreement’** undertakes a comprehensive analysis of the most recent developments regarding international climate change negotiations under the UNFCCC, and some of the deferred issues in the major agenda items of the PAWP which were discussed under the Subsidiary Bodies during the SB50. This report also addresses the process, objectives and organizational matters of the UN Climate Action Summit, which was held in conjunction with the High-level Segment of the General Assembly at the UN headquarters in New York.

The report **‘Run-up to COP25/CMP15/CMA2 (Madrid Climate Change Conference)’** examines recent developments regarding climate change negotiations under the UNFCCC, with a focus on the outcome of the SB50, held in June in Bonn. Negotiation issues that needed more attention in the run-up to COP25, especially deferred and other unresolved issues related to the PAWP and operationalization of the ‘Paris Agreement’, are presented in detail. This report also addresses the two special IPCC reports on land and ocean, as well as the key messages of a series of UN high-level events which convened in September 2019 with the objective to enhance climate actions and endeavours to achieve internationally agreed goals in the context of sustainable development – e.g. the Climate Action Summit and the SDG Summit.

Database and communications

In 2019, the Statistics, IT Development and Information Centre (IC) teams provided data services to the Organization and its MCs. Statistical databases were updated and maintained to extend coverage. Data quality was also improved through continued automation of data processing and validation.

A new financial accounting system (OaSys) was developed in-house using state-of-the-art technology and deployed featuring a modern design, with the aim to increase the level of automation and enhance the auditability of financial processes.

The payroll system received new functionality and was upgraded in order to comply with legal changes in the Austrian Social Insurance Law passed in 2018. The attendance system was upgraded with new reports that allow for more control and easier monitoring of staff overtime and annual leave consumption. The procurement system was enhanced to support new types of service requests, as well as improve the audit of vendor master data.

Additionally, an application for requesting business cards was integrated into the procurement system. The physical inventory and the OPEC Intranet were updated and received additional functionality. The homepage of the IC, as well as the new Library System were updated and all databases were maintained.

Two new Mobile Apps, for the *WOO* and the *MOMR*, were maintained content-wise through back-end content management systems and received updates in order to further improve user experience and stability.

Interactive websites and download pages for *WOO*, *MOMR* and *ASB* publications have been updated regarding their contents and adapted to request consent from the user for

the collection of information. This was done in order to comply with the EU Regulations on Data Privacy.

As part of the Information Security Programme, some information management policies were updated to regulate new processes introduced by the expansion of the OPEC archive to digital repositories.

In order to increase the awareness of information security issues among the staff of the Secretariat, information security training has been offered for all staff members through the OPEC Intranet. The software development process has been improved by introducing tool support in code versioning, code review and the build and deployment process.

The OPEC Big Data project completed Phase 3 with the inclusion of natural gas data. The project enhanced the user-friendly interface, incorporating fundamental oil and gas data such as demand, production and trade, and introducing basic analytical methods. Additionally, the visual and navigation aspects of the Big Data tool were improved. All information was made available on a monthly, quarterly and yearly basis and the option to choose and combine multiple time series was expanded.

The 18th Annual Statistical Meeting (ASM) was held at the OPEC Secretariat in Vienna during 24–25 April 2019. The main aim of the ASM was to continue the ongoing process of improving the flow of regular oil, gas and other energy-related statistical data submitted directly by MCs to the Secretariat, and to exchange technical knowledge/experience with MCs regarding energy databank management practices and their utilization of the Secretariat's statistical database. The 18th ASM focused particularly on reviewing initial MC data submissions through the newly developed OPEC Annual Questionnaire, in

combination with further elaborations on all related data-reporting methodologies.

The meeting also underlined the vital role of timely and accurate data, as well as the importance of efficient cooperation and communication between the Secretariat and MCs in order to continuously improve the performance quality of data submissions. It was agreed to further enhance data quality and data submissions and continue strong cooperation in the form of training workshops tailored for individual MCs in the near future.

In 2019, the IC assisted OPEC Staff members, delegates from OPEC MCs, as well as external users by providing research support and reference services, providing access to online databases, offering electronic delivery of subscribed reports and fulfilling reference and Help Desk requests. The IC continued developing its print and digital collection during the year, through the purchasing of books and reports, as well as its management of subscriptions to online databases, reports, journals and newspapers.

In 2019, the OPEC IC continued with its regular activities, as well as the completion and implementation of initiated projects. The main focus in 2019 was to enhance research support. At the beginning of 2019, in order to further support research activities in the RD, the IC took the initiative to carry out comprehensive bibliographical research in order to identify books and other open source publications relevant to planned studies as indicated in the 2019 Work Programme.

The number of research requests from internal and external users has significantly increased, and the IC provided in total 671 publications in response to 61 research requests in 2019.

In 2019, the IC also successfully conducted an annual assessment of OPEC

subscriptions, which resulted in improved cost and usage efficiency. Numerous titles were transformed from print to online format, in order to reduce cost and offer users easily accessible online content. This brought new cost savings for the upcoming year.

New technologies were sought to improve the IC's services and make information retrieval more accessible to its users. Hence, in September 2019 a new research platform – EBSCO Discovery Service – was implemented. The EBSCO Discovery Service is a platform which provides a streamlined search of all subscribed content through a single search box. The benefits of the implementation of this platform include not only cost savings and more content for users, but the ability to meet demand when users require publications which are not part of the IC collection. This significantly increased the number of Inter-library Loan (ILL) orders in 2019, to a total of 45 for publications provided to users from other libraries.

Collaboration with other libraries in terms of resource sharing and intensifying ILL was initiated. The IC has established collaboration with the OFID library.

The IC also provided research and reference support to delegates and analysts from MCs, researchers from academic institutions, international organizations and students throughout the year.

Training and knowledge transfer

The annual Multi-Disciplinary Training Course (MDTC) is designed to provide MC participants with a thorough overview and first-hand information about OPEC's role in assessment of the energy supply and demand balance. It also informs participants about the Secretariat's wide range of activities, as a service provider to MCs and its role as a rep-

resentative for MCs in international relations. The 18th MDTC was held at the OPEC Secretariat from 12 to 16 February 2019.

The OPEC Secretariat also conducted the long-standing Lecture Series with leading analysts, researchers and company officials to allow for an active and timely exchange of views. In 2019, participants included:

- Prof Dr Ewald Nowotny, Head of Market Development, ICE Futures Europe.
- Mike Davis, Senior Director of the Oil Price Group, Platts.
- Spencer Dale, Head Economist, British Petroleum.
- Luciano Battistini, Senior Specialist, Platts Data Availability.
- Matthew Revell, Head, European Commodity Sales, Bloomberg.
- Daniel Hendling, President of PMI, Project Management Institute.
- Andrew Ellis, Managing Director of Global Analytics, IHS Markit.
- James New, Industrial Development Officer, UNIDO.
- James Gooder, Vice-President of Crude, Argus.
- Trevor Sloan, Co-Head of Research and Advisory, RS Energy Group.
- Dr Atul Ayra, Chief Energy Strategist, HIS.
- Jarand Rystad, CEO, Rystad Energy.
- Patrick Von Pattay, Project Manager, Wintershall.
- Martin Tallet, President, EnSys Energy.
- Prof Dr Nebojsa Nakicenovic, Deputy Director General, International Institute for Applied Systems Analysis.
- Dr Mark Schwartz, Managing Director, S&P Global Platts.
- Stephane Guy, Head of Enterprise Sales and Business Development, Kpler.

- Ahmed Khamassi, Vice President, Equinor.

The Visiting Research Fellow Programme (VRFP) has become a valuable platform for professionals from OPEC MCs to improve their research expertise and technical skills in an array of energy-related issues, and become involved in the Secretariat's research operations through practical experience. In 2019, two research fellows participated in the programme, creating two reports:

'Updating short-term non-OPEC supply parameters – 2020' further elaborated on the OPEC Secretariat's short-term forecast for non-OPEC liquid supply by identifying new upstream project start-ups, assessing the progress of production ramp-ups, and recording the production decline of mature fields. The study investigated the possibility of using the Decline Curve Analysis theory and its applications to evaluate the decline rate of mature fields, systematically identified and evaluated new project start-ups, and assessed the underlying assumptions in terms of sensitivity to oil prices, and investment level requirements.

'A crucial element for a forward-looking methodology on long-term price and margin calculations' concluded that crude oil and petroleum products are co-integrated in selected markets, but it is not the same for long-run relations between refined products in these markets. Use of the Granger causality test implied that causality flows from crude oil benchmarks to products. Furthermore, the Herfindahl-Hirschman Index indicated that the global refining industry is moderately concentrated. Based on results from the Granger test, higher refinery margins in the US Gulf Coast compared with Europe and Asia mean it is not possible for newly built refiner-

ies in the East of Suez to play a price-setter role in the market.

The Summer Fellowship Programme (SFP) is designed to provide professionals from OPEC MCs with the opportunity to improve their expertise and technical skills through engaging in the Secretariat's research activities. Summer Fellows have the opportunity to participate in research and studies, as well as to perform other tasks undertaken by the Organization which could further enhance their knowledge and expertise in fields relevant to their professions and future careers. At the same time, OPEC benefits from the SFPs through increased networking with MCs. The RD hosted four Summer Fellows in 2019. The following studies were prepared under the 2019 Summer Fellowship programme:

'Gas demand in Africa' concluded that although several gas projects are underway in Africa, they continue to be constrained by inadequate infrastructure, slow finance mobilization, a lack of security and uncertainty regarding hydrocarbon regulations. This casts into doubt the continent's anticipated 128% increase in gas demand through to 2040. Among current producers, Algeria is expected to face mounting challenges over the coming decade due to maturing fields and insufficient foreign investment. Egypt, on the other hand, may be able to begin liquefied natural gas (LNG) exports as early as 2020 following development of the Zohr field. Nonetheless, throughout the continent, more commitment is needed by governments to make Africa a preferred LNG supplier.

'Africa: refining versus product demand': The research was aimed at investigating refining capacity and petroleum product balance in Africa, with a particular focus on African countries with major refining capacity. Furthermore, the research assessed the

relationship between the supply and demand of petroleum products in the African market. The results of the retrospective analysis pointed to relatively weak productive refinery capacity compared with other regions of the world. The subsequent low supply of petroleum products, due to generally low investment in the refining sector, has led to a growing increase in the import of petroleum products.

‘Crude oil differentials and their implication on the refining sector’: The paper examined recent increases in South Korean oil imports from the US and how these relate to the WTI/Dubai price differential. Furthermore, the paper addressed the correlation between the price differential and the average API gravity change in Korea’s import portfolio, which also affected the domestic refining sector. The results show a strong negative correlation between the price differential and average API gravity of imported crudes to Korea. The narrower the WTI/Dubai differential (on an annual basis), the more attractive it is for a South Korean refiner to process lighter crudes, leading to higher volumes of imported lighter crudes, and thereby an increase in refinery product output.

‘Economic and market impacts of using non-dollar currencies in oil trading’: The paper aimed to measure possible effects that a significant change in the use of the US dollar, as the dominant invoicing currency in oil trading, would cause in purchasers’ economies and in the global oil market via the transmission of macroeconomic shocks in the form of exchange rate pass-through (ERPT). The paper includes an econometric analysis of ERPT for oil imports in consumer countries, specifically China, India and the EU. It shows the percentage of total OPEC oil exports likely to use non-dollar currencies for invoicing and to produce an effective impact on the global

economy. The results of the analysis show that the exchange rate is highly correlated with the price of oil imports and its fluctuations transmit to the economy to a large degree, proving that the use of consumer currencies would bring stability to import prices in those countries, minimizing the risk of demand destruction.

The Internship Programme is intended to offer participants on-the-job practical training and promote their understanding of the Organization’s goals and objectives, as well as its areas of focus and research activities. Participants in the Internship Programme (‘interns’) primarily support and assist Secretariat staff within the framework of a specific subject and within a limited period of time. The RD hosted four interns in 2019. The following studies were prepared under the 2019 Internship Programme:

‘IMO regulation on the sulphur content of marine bunker’ provided a detailed analysis of the impact of the IMO regulation enforcing a sulphur limitation for marine bunkers by reducing the maximum amount of permitted sulphur in the fuel mix to 0.5% m/m as of 1 January 2020. The report addressed consequences and challenges related to the new IMO regulation and its effects on the marine and refinery industries and the oil market.

‘Global liquids supply and refining outlooks: Implications for trade flows’ noted that the global crude oil slate is projected to be 0.7° API lighter in 2024 compared with 2018. Furthermore, over the medium term the volume of light, sweet crude oil produced will surpass that of light, sour crude. At the same time, the former Soviet Union and Caspian is forecast to overtake the Middle East as the largest-producing region of medium, sour crude. On the refining side, 50% of expected global capacity

additions are projected to be in the Asia-Pacific region, with the Middle East accounting for 22% of projected additional capacity. As the centre of demand growth shifts eastward, India is expected to see a deficit in refining capacity additions, which will translate into lower product exports. The report identified prominent changes in global oil markets, which will have an impact on refining margins and crude and product economics, notably: a slowdown in US demand resulting in the US becoming a net oil exporter; implementation of the IMO's 2020 sulphur regulations; booming petrochemical feedstock demand in Asia; continued production growth in US light tight oil, and the declining supply of medium-heavy crude oil.

The study '*India's energy and oil demand outlook*' highlighted India's response to its rapidly growing demand for energy and oil. It discussed the Indian government's policy measures to combat energy poverty, noting that this will make it more difficult for India to lower its reliance on fossil fuels, coal in particular. Road transportation was also seen as a sector where rapid growth in oil demand can be expected, with relatively low penetration of electric vehicles expected in the medium term, despite potential policy measures to increase their uptake. The report also noted that although demand in the petrochemical sector is expected to be robust, rising awareness about the environmental impact of certain types of plastics could lead to a moderation in demand growth. Thus, it is likely that the petrochemical market will remain intensely competitive and access to cheap feedstock will be crucial.

The study '*Russian refining sector outlook to 2030*' provided a detailed analysis of the transition in the Russian refining sector over the past decade, as well as projections for the future development of the sector.

Three scenarios were presented, assessing current plans for 0.44 mb/d of conversion capacity, 0.17 mb/d of octane capacity and 0.45 mb/d of desulphurisation capacity to be built by 2030. The base case indicates that these are not all likely to materialize, with estimates of an additional 0.32 mb/d of conversion, 0.07 mb/d of octane and 0.35 mb/d of desulphurisation capacity to come online by 2030. Model estimates for Russian domestic product demand indicate growth of 0.6 mb/d by 2030, with most of that coming from petrochemical feedstock, mainly naphtha, liquefied petroleum gas (LPG) and ethane. Gasoline and diesel demand are expected to see growth in line with expanding vehicle fleets, however this will be curbed by increases in fuel efficiency.

PR and Information Department

In 2019, the staff of the Public Relations and Information Department (PRID) contended with a very heavy schedule. The extra duties which started in the second half of 2016 and led up to the signing of the historical DoC on 10 December 2016 continued throughout 2017, 2018 and 2019. Meetings associated with the DoC continued throughout the year. These included five regular meetings of the JMMC and 12 JTC meetings, along with two technical meetings and two OPEC and non-OPEC Ministerial Meetings, which required extensive support by PRID staff.

The public image of OPEC and its enhancement was the focus of PRID throughout the year. This was done by targeting of specific areas and outputs and reflected in the Department's manifold activities.

OPEC's most recent LTS identified improving and enriching the image of the

Organization as a key challenge, thus PRID activities have focused on this. The Department carried out manifold tasks – from editorial writing and speechwriting, to public relations and outreach programmes, to the design, editing and production of materials and publications, to audio-visual (AV) activities, workshops and the distribution of key publications. PRID made certain that the Organization was presented to the public in a positive and desirable manner at all times.

Fine-tuning the message of the Secretariat was also a part of PRID's contribution throughout the year, while working towards the achievement of departmental priorities and generating high-quality output. Specific interrelated themes were included consistently in the Organization's messaging through its various outreach channels, including 'openness and transparency', 'dialogue and cooperation' and 'stability and security'.

Although PRID was primarily responsible for editing, designing, producing, printing and distributing materials, the content of this output varied greatly, depending on publication type.

As in previous years, there was especially close cooperation between PRID and the Secretariat's RD in the area of publications throughout the year. The work of PRID also required close cooperation with other Departments and Units, including the SGO, the LO, the DSD, the PSD, the ESD and the EMU, as well as MCs themselves. All departments within the Secretariat benefitted in one way or another from the expertise of PRID's three subsections – editorial, public relations (including AV), and design and production (D&P).

In 2019, PRID sent out a media questionnaire as part of a consultation process to assess the condition of media access to the opening session of ministerial meetings. The target audience was more than 200 journalists

and analysts from various local and global organisations interested in the meetings of OPEC and the DoC. The results will be out in 2020.

Also during the year, PRID embarked on preparations to mark OPEC's 60th Anniversary, to take place in September 2020. Some of the celebration's key components are the production of a special issue of the *Bulletin* and a special book on the history of the Organization, as well as a documentary film depicting OPEC's successful journey.

Editorial

The Editorial Unit directly supported the OPEC Secretary General and other Members of Management in carrying out their duties in 2019 through the provision of speeches, press releases, news items, video scripts, background information for interviews and commentaries and managing the press. Articles were written for various magazines, as well as for the Organization's own magazine, the *OPEC Bulletin*. Additionally, a great deal of time and effort was spent editing, revising and proofreading research documents, presentations and reports and offering support at various meetings.

Speeches and statements

In 2019, just over 120 speeches were written for the Secretary General, the Director, Research Division and other OPEC officials, compared with just over 100 in 2018.

The Secretary General attended a great number of major industry events throughout the year and delivered keynote speeches, statements and interventions at, *inter alia*: the Atlantic Council's Global Energy Forum 2019 in Abu Dhabi (Abu Dhabi, UAE); World Economic Forum (Davos, Switzerland); 2019 Egypt Petroleum Show; CERAWEEK 2019

(Houston, Texas); 7th African Petroleum Congress & Exhibition APPO CAPE VII (Malabo, Equatorial Guinea); 24th Oil, Gas, Refining and Petrochemical Exhibition (Tehran, IR Iran); 3rd Energy Forum at Dundee (Dundee, Scotland); 24th Abu Dhabi World Energy Congress (Abu Dhabi, UAE); IEF 8th Asian Ministerial Roundtable (AMER) (Abu Dhabi, UAE); 5th Iraq Energy Forum (Baghdad, Iraq); Kazakhstan Energy Week (Nur Sultan, Kazakhstan); Valdai Discussion Club (Sochi, the Russian Federation); Russian Energy Week (Moscow, the Russian Federation); Oil and Money Conference (London, UK); Kuwait Oil & Gas Show and Conference (2019 KOGS) (Kuwait); CER-AWeek India (New Dehli, India); Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) (Abu Dhabi, UAE); Jour Fixe event of the Austrian-Russian Friendship Society (ORFG) (Vienna); GEFCF 5th Summit of Heads of State (Malabo, Equatorial Guinea); and UNFCCC COP25 (Madrid, Spain).

PRID also worked closely with RD to produce speeches for various conferences, seminars, workshops and meetings. These messages were delivered by the Secretary General, senior OPEC officials, as well as high-level members of MC delegations to representatives from all sectors of the energy industry, as well as government, academia and the media.

The Secretariat additionally hosted former UN Secretary General Ban Ki-moon, who spoke to a broader audience of OPEC staff, as well as privately with the Secretary General.

There is a high level of interest in OPEC's activities and messages, as can be seen by the reporting and analysis of speeches, statements and interventions delivered at various events. The subsequent publication of many of these on the OPEC website continues to be very useful in generating traffic, attracting

positive coverage and disseminating the Secretariat's message.

In 2019, guest editorials, articles and Q&As were provided for the following publications: Q&A FIN publication; Q&A Oil and Gas Year; Q&A Iraq Energy Forum; Q&A IP Week London; Q&A Pipeline Oil & Gas News, ADIPEC, Abu Dhabi; interviews with the Secretary General for OFID magazine; Bloomberg Magazine; Kyodo News Agency; Top Tier: "100 Leading Upstream Companies in Nigeria" and an article for the WPC Strategic Review 2019.

The Organization's media exposure continued to be strong globally through the Secretary General's many appearances and interventions, as well as through the Secretariat's ongoing research and public relations activities.

JMMC and JTC

There were 12 JTC and five JMMC meetings in 2019, each of which required editorial and speechwriting support. The editorial team prepared speeches for the Secretary General, the Chairman of the JMMC and the President of the Conference for these occasions; drafted press releases for each monthly meeting; and provided editorial assistance for the finalization of committee reports. The JMMC meetings were extensively covered in the *OPEC Bulletin* throughout the year.

Videos

In addition to the editorial section's regular activities, it began in recent years to produce a large number of scripts and voice-overs for videos. This activity increased significantly over 2018 and 2019, with 20 scripts/videos being written in 2019. Additionally, videos were made each month on the *MOMR* for the OPEC website.

Publications

OPEC publications in 2019 included the regularly produced, flagship *MOMR*, which is closely followed by the oil industry, as well as many other external and internal documents. Editorial staff also attended various meetings and assisted in drafting internal write-ups and reports. They produced articles, as needed, based on these meetings for OPEC's monthly magazine, the *OPEC Bulletin*. In addition, staff produced content for the OPEC website, including press releases and news items, and assisted in providing editorial advice and input of various kinds for other departments within the Secretariat upon request throughout the year. Editorial staff travelled to various industry events, generating articles and providing coverage for both the website and the *Bulletin*.

Another regular feature of PRID's Annual Work Programme is the annual OPEC Diary. The editorial content for this publication is generated and edited by PRID, and then approved by the Secretary General. In addition, the *ASB* continues to be published annually, providing accurate, reliable and timely historical data on various aspects of the global oil and gas industry. The *WOO* came out in record time in 2019. First published in 2007, the *WOO* offers a thorough review and assessment of the medium- and long-term prospects to 2040 for the global oil industry, as well as analysis of various sensitivities that have the potential to impact the petroleum industry in the years ahead. The 13th edition of the *WOO* was launched at a distinguished gathering at the Wiener Boersensaele – the old Vienna Stock Exchange – in early November. The 2019 launch was supported by OMV, the Austrian oil, gas and petrochemical company. This document has become a useful reference tool for people in the industry, and

interactive versions of the *WOO* have been available for a few years.

Large parts of the *Annual Report* are produced by the editorial section, and its editing and production are undertaken in house.

The monthly *OPEC Bulletin* continued to highlight the activities of the Secretariat and the Organization's MCs. Its coverage is comprised of articles of interest on various topical issues, as well as informative analytical features. In 2019, the editorial staff wrote a total of around 200 articles and features for the *Bulletin*.

Of note in 2019 were articles on the following topics: in January, coverage of the 175th Meeting of the OPEC Conference and 5th OPEC and non-OPEC Ministerial Meeting, including ministerial interviews and impressions, as well as the Gala Dinner; a visit to Venezuela; 12 years of achievements in Angola; and coverage from COP 24. The February *Bulletin* was a special edition on energy dialogues, covering the EU-OPEC; OPEC-Russia; OPEC-India; OPEC-China; Asia Energy; OPEC-US; IEA-IEF-OPEC dialogues; Joint Organisations Data Initiative; OPEC and AFREC Collaboration Initiative; IMF/World Bank meetings; OECD international regulatory cooperation; Vienna Energy Club; G20 Energy Initiative; energy and technology companies; and OPEC-KAPSARC. There was also a spotlight on the Davos World Economic Forum and Atlantic Council Global Energy Forum. In March special coverage of Azerbaijan followed a trip there by the Secretary General. The US, Atlantic Council, CSIS and CERAWEEK dialogues were also covered. There was additionally a spotlight on the 3rd Egypt Petroleum Show and the country's historical link to OPEC; 40 years of IR Iran; the IEA-IEF-OPEC Symposium; UAE Minister of Energy and Industry Suhail Mohamed Al Mazrouei's recognition as

‘international oil diplomacy person of the year’; an interview with Dr Manouchehr Takin; and a story on Azerbaijan and the Grand Prix. The April *Bulletin* was a special edition on energy, climate change and sustainable development. In May/June, the JMMC in Saudi Arabia received extensive coverage, as did the country itself. There was also the 24th Iran Oil Show; and the 4th IEF-OFID Symposium on energy poverty; as well as the *ASB* launch. The July/August edition covered the 176th Meeting of the Conference and 6th OPEC and non-OPEC Ministerial Conference; there was a focus on the CoC, which was signed at that meeting; a technical workshop on climate change was held and MCs Venezuela, IR Iran and Iraq were in focus. There was also a special article on text-mining techniques. September’s issue covered the World Energy Congress in Abu Dhabi, as well as the Iraq Energy Forum; a special visit from former UN Secretary-General Ban Ki-moon; an inaugural technology workshop; RAG Austria; the energy giant ADNOC; as well as the Persian leopard and racing in Abu Dhabi. The October/November *Bulletin* covered KOGS; AD-IPEC; Khazakhstan Energy Week; Russian Energy Week; and the *World Oil Outlook (WOO)* launch. Oil and Money, CERA Week and the World Energy Congress were also featured.

Meetings of the Conference, OPEC and non-OPEC Ministerial meetings and JMMC meetings are always heavily covered from many angles, and a series called Focus on Cities explored Caracas, Venezuela and Jeddah, Saudi Arabia in 2019.

Media relations and news monitoring

Another tool used to help improve and enhance the image of the Organization was media relations, which includes the coordination of media coverage through one-on-one

interviews with the Secretary General, press conferences and briefings, speeches and statements, as well as the proactive seeking of further networking opportunities among media outlets and journalists. This has helped to ensure that journalists have better and more timely information about – as well as a better understanding of – the Organization’s activities, serving to improve overall coverage of OPEC.

The editorial staff provided background information upon request to journalists from various media outlets, as well as contextual information for the Secretary General in preparation for various interviews and bilateral meetings.

The editorial section continued throughout the year to produce the Daily News Summary, which has become part of a restructured, broader daily package of information, coordinated by RD. This mailing/publication is distributed by e-mail, and serves to provide a quick overview every weekday morning of the latest energy-related news.

Public Relations Unit

As part of achieving OPEC’s strategy, aims and objectives, and as part of PRID’s overall work programme, the PR Unit has conducted many activities to reach a wider and more varied audience, raising awareness about OPEC, enhancing its image and perspectives, and addressing any misconceptions about the Organization.

Conference preparations

Press accreditation: During OPEC Conferences and main events, the Organization receives a large number of journalists, analysts and others from the industry who are eager to attend such events personally and witness the unfolding of history, in addition to meet-

ing decision makers within the Organization and its MCs. A special area on the OPEC webpage has been designed for accreditation requests with an application form. The details of each request are checked and applicants are separated into groups to which badges are then issued permitting them to enter the Secretariat so they may cover events and talk to OPEC Ministers and the Secretary General.

Before and during each Conference, PR staff work together with Administration to facilitate Conference organization and logistics regarding visitors – including the press and analysts from all over the world – in terms of applications, permission and badges. In addition to that, the PR team attends to journalists' various requests and needs during and after the meeting, and provides an adequate working environment for journalists and analysts within the press conference room, as well as assisting in coordinating interviews with the Secretary General and Ministers from MCs, upon request.

Outreach programme

As part of achieving OPEC's strategy, aims and objectives, and as part of PRID's work programme, the PR Unit has conducted many activities under the umbrella of the Outreach Programme to reach a wider audience, raising awareness of OPEC, enhancing its image and perspectives, and addressing any misconceptions about the Organization.

The outreach programme focused on the local community and host country Austria in 2019. The main purpose of the outreach programme is to have two-way communication with the local community in order to achieve overall organizational objectives, mainly related to raising awareness about the Organization's mission, enhancing perception and creating support within the host country, Austria.

The programme has so far focused on the following areas:

1. Education.
2. International community events.
3. City of Vienna.
4. Cultural events.

The PR Unit received many enquiries and requests from the general public, as well as from MCs, regarding the provision of AV material and publications, and answered many questions related to OPEC activities and background information.

The main activities conducted in 2019 are summarized as follows:

Briefing programme

Briefings are important in establishing two-way communication with the public, receiving opportunities to uncover how the public perceives OPEC and how to better address such perceptions, while raising awareness about the objectives and goals of the Organization and promoting the Organization's publications. They also provide an opportunity to disseminate the Organization's key messages and create a better understanding of the Organization's decisions and actions.

The briefing programme identifies the target groups for a particular year. The PR team then sends invitations to different audiences with various backgrounds and knowledge. Upon receiving an online request, the team identifies the goals and messages to be disseminated at a particular visit, depending on a group's background and knowledge of both the industry and OPEC. In 2019, the Secretariat received more than 150 requests from more than 35 countries. Briefings start with an introduction and brainstorming session, followed by a general presentation

about OPEC, the screening of various films produced by the PR Unit and conclude with a Q&A session. A group picture is usually taken during such visits and a guided tour through the main conference room is offered, depending on availability and time. A survey is also conducted and filled out by the group to enable PRID to improve and address any other expectations. The briefing programme normally lasts between 1½ to 2 hours.

In 2019, the request for visits and briefings increased by almost 25%. Due to the heavy schedule of the Secretariat, it was not possible to accommodate all requests. Despite this, a total number of 3,130 visitors were received. Joint presentations were made together with other departments – primarily the RD, HR and LO. The PR team conducted more than 118 briefings and visitors came to the Secretariat from countries in Europe, Asia, Africa and the Americas, and from both the public and private sector, as well as from government ministries, universities, schools and research institutes, other organizations and MCs' national oil companies. Individuals were also received. The age of visitors ranged from 8–78 and they came from a variety of backgrounds. The year 2019 witnessed an increase in the number of the groups visiting from the Russian Federation and China.

Visits

During 2019, a visit was undertaken to the Diplomatic Academy in Vienna, as part of the OPEC Outreach Programme, to lecture to students from Montan Universitaet. The university is considered one of the top-ranking mining and petroleum engineering universities in Europe and has around 3,700 students.

The relationship to Montan Universitaet goes back some years, when the Organization paid the university a visit and estab-

lished regular group visits by its students to the OPEC Secretariat.

Two presenters represented the Organization, from ESD and PRID. A joint lecture was held about OPEC in general and the *WOO* in particular. The visit was part of a one-day training programme for more than 24 students from the university. The title of the programme was “Global Economy and International Organizations”. OPEC also has a long relationship with the Diplomatic Academy, which regularly visits the headquarters with international students. OPEC welcomes more than 50 students from all over the world during these visits.

Workshops, seminars and exhibitions

A very important task performed by the PR Unit is representation of the Organization at different events, both inside and outside of Austria. OPEC publications are displayed at such events, where opportunities routinely present themselves for OPEC staff to explain the role and work of the Organization in the oil industry and to provide information about its MCs.

These events are attended by high-level delegations and petroleum leaders. To this end, the Secretariat regularly arranges for a booth to be located at such events, which is then staffed by PRID representatives. These events also provide an opportunity for direct, face-to-face interaction with both the public and high-level officials. They further allow individuals to have a closer look at specific activities undertaken by OPEC.

In 2019, PRID participated in 12 key industry events, in which it hosted its own stand. These were: EGYPS 2019 in Cairo; a meeting of the JMMC in Baku; VIS S&E Fair 2019 in Vienna; APPO Cape VII in Malabo; a meeting of the JMMC in Jeddah; Iran Oil Show in Tehran; WEC24 in Abu Dhabi; a meeting of the JMMC in Abu Dhabi; Iraq Energy Forum in

Baghdad; KEW in Nur Sultan; KOGS in Kuwait; and ADIPEC in Abu Dhabi.

Science and Engineering Fair: As part of the Public Relations Outreach Programme, OPEC sponsored the Science and Engineering Fair as an exhibitor, displaying important publications and showing the film “Instrument of Change”. In an attempt to raise awareness and enhance knowledge about the Organization in general and the oil industry in particular, the PR team also conducted a short quiz about OPEC and the oil industry, inviting students to participate. Students used the film and OPEC publications to answer questions. OPEC’s stand was well attended by students, teachers, parents, judges and staff members from OPEC, the OPEC Fund, United Nations in Vienna, and other local organizations.

United Nations Women’s Guild Bazaar: As part of promoting the Organization’s aims and objectives within the outreach programme, this charity event was identified as a good opportunity. The event was attended by many embassies and diplomatic bodies in Austria, including OPEC MC embassies. It attracted more than 2,500 visitors from both international and local communities. OPEC’s participation was highlighted in all publications and documented in the event’s programme and activities at this UN-organized event.

Webster University: OPEC has participated as a platinum sponsor in this event, at which OPEC’s flagship publications, corporate gifts and other related material were donated. Participation underlines OPEC’s role in supporting youth in particular and educational events in general.

Other special events

Monitoring public perception of OPEC: The PR Unit conducted a comprehensive sur-

vey with more than 2,000 participants to analyse and monitor general public perception about OPEC. The outcome of the analysis was used to enhance current PR activities within the Outreach Programme.

Launching the WOO

The 13th edition of the WOO was launched at a distinguished gathering at the Wiener Børsensaele – the old Vienna Stock Exchange – in early November, and attended by many industry journalists. The PR Unit was involved in many of the organizational activities for this high-profile event.

OPEC diary

The OPEC Desk diary is an annual publication that the PR team produces to reach the public, targeting between 3,000–4,000 recipients from producing countries (including OPEC MCs), consuming countries, embassies, research institutes, academia, national oil companies, international oil companies, international organizations (including the OPEC Fund for International Development and OPEC employees), and others. The Diary includes some useful information about OPEC and its MCs.

Media response to OPEC’s public engagement

In 2019, a large number of media coverage reports were generated to monitor and evaluate the response of international media, Arabic-language and social media to OPEC engagements, particularly those of the Secretary General. A report was generated for every event at which OPEC participated.

News monitoring

What the Papers Say (WTPS) continues to be produced daily. It is prepared on the basis of two reports received in the morning and afternoon from trusted news

providers. The content of the WTPS includes news about energy in general, as well as petroleum, OPEC and its MCs, and a selection of the most important and informative articles from the international media. The WTPS is now part of a larger daily news package and is distributed to OPEC officials (Ministers, Governors and National Representatives) in addition to the Secretary General, Secretariat staff and some outside members of the industry.

Distribution of publications

Distribution of printed materials plays a very important role in disseminating information about the Organization's activities. To this end, PRID continued to review and update mailing lists and distribution networks for key publications, with additional input and more rigorous review recommended in order to expand and strengthen these. Mailing lists included the media, press analysts, news agencies, banks, investment companies, universities, government institutions and more. Along with the timely dispatch of publications, email alerts are sent out.

Distribution of publications is undertaken in coordination with related departments. PRID facilitates distribution of the *ASB* and the *WOO*, in addition to the *OPEC Bulletin* and the *Annual Report*, according to an updated mailing list supplied by the PR Unit.

Corporate gifts

Gifts are offered to visitors participating in briefing sessions and to general visitors to PRID, as well as to visitors from MCs. They facilitate the promotion of hospitality and help maintain a positive image of the Organization. It has also become a custom in all Departments to offer corporate gifts with the Organization's logo to almost all visitors. These gifts are pro-

vided by the PR Unit, which selects, negotiates and arranges with PRID's D&P, as well as local vendors, addressing logo design, quality control, invoice approval and gift handling.

Website

In 2019, PRID continued to maintain and update the content of its website in a timely and accurate manner with press releases, news items, speeches, statements, publications and reports, data and graphs, videos on demand, information about its MCs, employment opportunities and other content.

Over the year, 19 press releases were published and 14 news items. A huge number of photographs accompanied much of this website content and were added to the online photo gallery. Live streaming of OPEC meetings and other events was provided through the OPEC website.

New modules and applications were also introduced to enhance the usability, functionality, look and feel of the website. These were incorporated in order to make website browsing more user-friendly overall. PRID continued to monitor the number of views to the OPEC website's various pages and prepared monthly reports on this data. These reports are critical to website operations, as the Department continues to ensure that visitors find the information they require in an easy and practical manner, and works on enhancements, as needed. In general, the website attracted more than 4.5 million views in 2019.

PRID continued to maintain and update its email lists, which consist mainly of journalists, news agencies, investment banks and analysts. The lists include over 700 recipients and were used to forward such things as press releases, publications, website update alerts, daily and weekly basket price data, announcements and general press information.

They proved to be a timely and effective tool in informing the public about OPEC and its activities. Positive feedback was also received by the Department regarding this service.

Regular monitoring was undertaken of messages received through email and the website's 'Contact Data and Form' page as well as through various other means. These generally provided positive feedback to PRID on various issues and were attended to by the Secretariat.

Social media (Facebook, Twitter and YouTube)

Social media plays a critical role in the daily routine of many. It is also considered one of the main cornerstones of today's communication technologies.

In a concrete attempt by OPEC to expand its reach and improve its information dissemination practices, the Organization inaugurated its official Facebook page in 2017. Facebook followers rose to over 41,000 from the launch until the beginning of 2020. Impressions (total number of views and visits) exceeded 2 million, while the reach (total number of visitors) was at 843,000.

In line with plans to expand its social media outreach, OPEC officially launched a Twitter account in March 2018. The number of followers reached 14,300 by the start of 2020, while the number of impressions (total number of views including repeated visits) was at 5,469,000. Twitter has become the preferred social media platform for stakeholders in the energy and other related fields to exchange data and share ideas and views about the industry.

Highlights of press releases, speeches, news items, daily basket prices, interviews with the President of the Conference, the Secretary General, Heads of Delegations and Ministers of participating non-OPEC coun-

tries to the historic DoC, press conferences, meeting highlights and OPEC publications were posted in a consistent and continuous fashion on Facebook and Twitter for the effective dissemination of information. Various campaigns for the *MOMR*, *ASB* and *WOO* (books and apps) were launched to promote and widen the distribution of vital information and data in these essential publications on Facebook and Twitter. Content was specifically tailored and designed for social media messages in collaboration with respective departments within the Secretariat.

In furthering the promotion of OPEC and widening the Organization's presence on social media platforms, PRID, through the social media team, collaborated with organizers of many high-level industry gatherings to better coordinate and promote content during events. This has further improved confidence among stakeholders in the various tools the Organization is incorporating in its public relations strategy.

Additional Facebook and Twitter features were used to boost OPEC's presence on social media platforms. Events for Meetings of the OPEC Conference, as well as OPEC and non-OPEC Ministerial Meetings were created to highlight these key gatherings and promote them to the wider public. Paid promotion services provided by the social media platforms were used to further strengthen the presence of the Organization's accounts and reach a broader audience.

Noting the importance of YouTube as a leading video-based social media platform, PRID live-streamed the proceedings of December's Ministerial Meetings on this platform to reach a wider public and boost the meetings' followers worldwide.

PRID also continued its efforts to raise awareness and educate its audience on

the importance and uses of petroleum and its products through developing a special campaign for social media tailored for this purpose.

Audio-visual/multimedia services

PRID's AV services were in high demand in 2019. These included the production of the 'Year-in-Review' highlights and wrap-ups of the Ministerial Meetings and updating of official OPEC films on a regular basis. OPEC videos to accompany events have become common over the past few years and were more regularly requested and created for OPEC's social media activities.

The 176th and 177th Meetings of the OPEC Conference, as well as the 6th and 7th OPEC and non-OPEC Ministerial Meetings were broadcast live, and parts of these meetings and interviews were made available as on-demand videos on OPEC's official website. The traditional 'Oil Market Insight' sessions before the OPEC Ministerial Conferences were produced in-house. The launch of OPEC's *WOO* 2019 was also live-streamed from the historic Vienna Stock Exchange in Vienna via the OPEC multimedia section of the website. A special four-minute 3D animation promo key message video was produced to accompany OPEC's flagship release.

Intensive efforts were spent on media productions, including videos, interviews, photos and post-production for many events over the year, including five JMMC and 12 JTC meetings.

Photo and video coverage was undertaken for archival purposes of all official visitors to the Secretary General, as well as BoG and Economic Commission Board meetings, student briefings, the MDTC, workshops and roundtables. The AV team distributed photographs and videos to international media and editors for publication purposes.

Over the course of 2019, the AV team took a total of 119,663 pictures, 56 official videos were published on the OPEC website and 25 hours of programming were streamed live with over 50,000 total viewers per day.

Over the year, live interviews with OPEC officials and other international figures were filmed, while further interviews with analysts and journalists were conducted during live-streaming and published in the website's multimedia section.

The PR section arranged for AV facilities and accreditation for meetings, workshops, conferences and training courses.

Special AV projects

The AV unit produced a film documentary about the 3rd Anniversary of the DoC.

Design and Production

The *WOO* design was adapted in 2019, focusing on a layout that best supports its messages in the most effective way. The *WOO* launch was flanked by materials which could visually communicate at a glance the most important facts in the book and transfer the look and feel of the document to the audience in a memorable and easy-to-digest way, incorporating the sponsor's design elements in a fitting manner. Supporting materials such as rollups were designed in collaboration with ESD to highlight key takeaways. The Design and Production (D&P) team was responsible for designing, typesetting, producing and overseeing the entire printing process of various publications and additional materials.

The design, layout and finishing of the *ASB* continued. In addition to the 'full' version, a smaller pocket version was designed that displayed the most important tables and graphs in a consolidated form. The D&P team

was responsible for designing, typesetting, producing and overseeing the printing of this publication. The overall number of pages increased and the colour schemes of all major publications were streamlined. *ASB* messages were also presented on roll-ups in close cooperation with DSD to present the most relevant information at a glance.

The *Annual Report* was put together in cooperation with other departments at the Secretariat. In 2019, the overall number of pages increased. The D&P team was responsible for designing, typesetting, producing and overseeing the printing of this publication.

The *OPEC Bulletin* continues to be laid out, typeset and produced by the team, which coordinates and oversees its printing at an outside printing service. Throughout the year, the layout of the *Bulletin* is adapted to fit state-of-the-art corporate publication trends in an international and multicultural environment in coordination with the Editorial Unit. Special Editions covered OPEC international energy dialogues, Baku, Azerbaijan and environment and climate issues.

Numerous logo designs were also prepared throughout the year for in-house OPEC meetings and events, including logos for the CoC and OPEC's 60th Anniversary. Nameplates, programmes, badges, notepads, giveaways and corporate gifts were also designed and produced.

Additionally, the D&P team provided visuals for OPEC exhibition stands at various meetings and exhibitions in order to disseminate the Secretariat's key messages. Posters and roll-ups for internal and external use were designed to display information on MCs and highlight the Organization's key messages.

D&P team also contributed to the Anniversary of the DoC and the CoC by preparing various unique items and a design for the overall

event, which was well received by both OPEC and non-OPEC participating countries to the DoC. Items prepared included roll-ups, table decorations, bags, pins and much more.

In order to set up a corporate design for all JMMC meetings, as well as other high-level meetings, the Unit collaborated with host countries to streamline and prepare designs.

Many visuals published on social media were created by D&P team, which ensured consistent visual messaging throughout the media mix.

The designers also provided designs for and produced various gift items and photo albums.

Training

PRID staff undertook missions and training programmes throughout the year, accordingly producing reports on these activities, which were either published in the *OPEC Bulletin* or submitted to the Missions Committee. In addition, PRID staff participated in different organizational task forces and committees and worked closely on projects with other departments, including the OPEC Academy, the Task Force on Confidentiality and the Task Force on Facebook.

Administration & IT Services Department

The primary objective of the work of Administration staff is to ensure the provision of all necessary services in order to facilitate the smooth running of the day-to-day affairs of the Secretariat, and to allow various specialized activity areas to meet their targets. These services include, but are not limited to: procurement and disposal; travel and transportation services; arrangements for all meetings and entertainment functions in

Vienna; implementation of the Headquarters Agreement regarding visas; legitimation/diplomatic ID cards; import declarations and diplomatic license plates; office stationary supply; upkeep of the OPEC Secretariat and the Secretary General's residence; security and safety.

Highlights:

- High demand for various administrative and logistical services continued, which required team spirit, flexibility and work re-organization efforts, with a view to maintaining high quality services despite reduced staff strength and budget cuts.
- In addition to the organization of regular conferences and meetings throughout the year, Administration was involved in the planning and implementation of numerous extraordinary gatherings both at the Secretariat and abroad related to OPEC's DoC, *inter alia*:
 - OPEC and non-OPEC Ministerial Meetings.
 - JMMCM Meetings.
 - JTC Meetings.
 - Other technical meetings.
 - Missions and official visits.
- The DoC has increased the Administration's involvement in preparatory and organizational services such as logistical and visa support services for non-OPEC member delegations. Furthermore, these additional meeting participants have redefined the scope of Administration's cooperation and planning with local authorities, including security measures.
- With the professional support of DSD, Administration has launched a project

to upgrade the in-house store management system and integrate it into the e-procurement system, with the objective of further increasing overall efficiency within the Secretariat.

- The Administration Section provided organizational and logistical support for the global launch of the *WOO*, with around 200 participants in attendance at the historic Vienna Stock Exchange in November.
- A comprehensive in-house training course by a medical professional was organized in December for OPEC's First Aid Team to ensure swift and correct aid in case of a medical emergency at the Secretariat.
- Preparations for the next OPEC International Seminar commenced, including securing of the Hofburg Palace and the City Hall as main venues for the event.

IT Services Section

The IT Services Section is responsible for providing the Secretariat with secure and reliable IT services. It constantly explores and keeps abreast of new technological developments in order to provide the OPEC Secretariat with the most effective and up-to-date IT infrastructure.

It also provides professional printing/reproduction, telecommunication and mail/courier services at the OPEC Secretariat.

Apart from its routine activities, the Section carried out the following projects in 2019:

- Deployment of Windows 10 and Windows Server 2016 infrastructure, as well as new Desktop infrastructure.
- Processing of new lease contracts for Microsoft and Adobe software.

- New Forcepoint Firewall Infrastructure was put into operation.
- Procurement of additional capacity for the Datacentre UPS, refurbishment of the Datacentre Fire Prevention System.
- New CISCO Wireless infrastructure was put into operation.

Finance & Human Resources Department

The Finance and Human Resources Department continued to focus on delivering innovative human resources and financial strategies by ensuring the efficiency of each business process and the quality of its services, as well as providing world-class management of the Organization's human and financial assets in 2019.

The Finance Section monitored budget execution through monthly budget performance meetings; worked with DSD to develop alternatives to the legacy accounting system; monitored the flow of funds to meet the Secretariat's requirements; provided MCs and Management with timely reports; provided

support to the Internal Audit to strengthen internal controls; and assisted the External Audit during the statutory Audit of Annual Financial Statements.

In addition to providing personnel-related services to the Secretariat, the Human Resources Section continued to monitor all human resources processes with a view to improving the efficiency of each process, as well as the quality of services and accuracy of data provided by the section, by applying modern technology whenever possible. The section also continued its efforts to utilize the Secretariat's available manpower to the maximum extent possible to ensure efficiency and proficiency.

The Finance & Human Resources Section was further engaged in the Three-Year Salaries & Allowances Review, the results of which were first presented to the 151st Meeting of the BoG in 2018 and finally approved by the 154th Meeting in April 2019. The implementation of approved allowances, i.e. Education Grant, Family and Housing Allowances and Repatriation Grant, is planned for the first quarter of 2020.

Heads of Delegation

Algeria



Mohamed Arkab

Angola



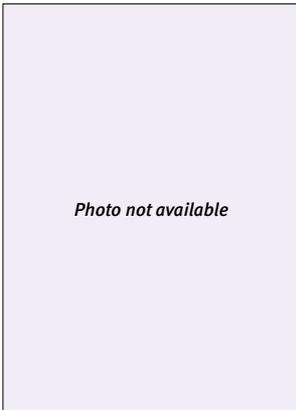
Eng Diamantino P. Azevedo

Republic of the Congo



Jean-Marc Thystere Tchicaya

Ecuador



Jose Augusto

Equatorial Guinea



Gabriel Mbaga Obiang Lima

Gabon



Noël Mboumba

IR Iran



Eng Bijan Namdar Zanganeh

Iraq



Thamir A. Al-Ghadhban

Kuwait



Dr Khaled A. Al-Fadhel

Libya



Mustafa Sanalla

Nigeria



Timipre Marlin Sylva

Saudi Arabia



HRH Prince Abdulaziz bin
Salman Al Saud

United Arab Emirates



Suhail Mohamed Al Mazrouei

Venezuela



Manuel Salvador Quevedo Fernandez
President of the Conference in 2019

Outgoing Heads of Delegation by country

Algeria



Mustapha Guitouni
(to April 2019)

Ecuador



Ing Carlos E. Pérez
(to November 2019)

Gabon



Pascal Houangni Ambouroue
(to June 2019)

Nigeria



Dr Emmanuel Ibe Kachikwu
(to August 2019)

Saudi Arabia



Khalid A. Al-Falih
(to September 2019)

Board of Governors



*The OPEC Board of Governors at their 155th Meeting in Vienna with
Mohammad Sanusi Barkindo, OPEC Secretary General.*

Algeria

Eng Mohamed Hamel

Iraq

Alaa K. Alyasri

Angola

Estêvão Pedro

Kuwait

Haitham Al-Ghais

Republic of the Congo

Térésa Goma

Libya

Imad Salem *(from June)*

Ecuador

Roberto Betancourt Ruales *(from May)*

Nigeria

Dr Omar Farouk Ibrahim, MCIPR

Equatorial Guinea

Agustin Mba Okomo
(Chairman of the Board in 2019)

Saudi Arabia

Eng Adeeb Al-Aama

Gabon

Etienne Lepoukou

United Arab Emirates

Eng Ahmed M. Alkaabi

IR Iran

Hossein Kazempour Ardebili

Venezuela

Eng Ángel González Saltrón

Economic Commission Board



Mohammad Sanusi Barkindo, OPEC Secretary General with National Representatives and Member Country delegates at the 132nd Meeting of the Economic Commission Board.

Algeria

Dr Achraf Benhassine

Iraq

Ali Nazar Faeq Al-Shatari

Angola

Ntika Mbiya Ricardo *(from August)*

Kuwait

Mohammad Khuder Al-Shatti

Republic of the Congo

No appointment has been made

Libya

Dr Taher Massoud Najah *(from June)*

Ecuador

Eng José Cepeda Altamirano

Nigeria

Mele Kyari

Equatorial Guinea

Florencio Oyono Eneme Obono

Saudi Arabia

Esam Al-Khalifa *(from September)*

Gabon

André-Brice Boumbendje

United Arab Emirates

Salem Hareb Al Mehairi

IR Iran

Dr Mohamed Taeb

Venezuela

Eng Ronny Romero Rodriguez

Officials of the Secretariat



Mohammad Sanusi Barkindo, officials and staff members of the OPEC Secretariat in December 2019.

Secretary General

Mohammad Sanusi Barkindo

Environmental Matters Unit

Mohammad Ali Zarie Zare

Office of the Secretary General

Shakir M. A. Alrifaiy

Legal Office

Leonardo Sempértegui
Dr Taiwo Adebola Ogunleye

Research Division

Dr Ayed S. Al Qahtani

Finance & Human Resources Department

Jose Luis Mora
Patrick Bongotha

Data Services Department

Dr Adedapo Odulaja
Mohamed Mekerba
Dr Hossein Hassani

Administration & IT Services Department

Abdullah Alakhawand
Badreddine Benzida *(left in December)*

Energy Studies Department

Dr Abderrezak Benyoucef
Mehrzaad Zamani *(left in April)*
Hend Lutfi *(left in June)*
Dr Erfan Vafaie Fard
Moufid Benmerabet
Dr Mohammad A. Alkazimi
Irene Etiobhio *(joined in February)*
Dr Mustapha Sugungun *(joined in February)*

Public Relations & Information Department

Hasan Hafidh
Tofol Al-Nasr

Petroleum Studies Department

Behrooz Baikalizadeh
Anisah Almadhayyan *(left in May)*
Dr Afshin Javan
Imad Alam Al-Khayyat
Hassan Balfakeih
Mohammad Ali Danesh
Hector Hurtado
Tona Ndamba
Yacine Sariahmed
Dr Asmaa Yaseen *(joined in October)*

The Secretary General's diary

- 10–11 January** Mission to Venezuela, Caracas, Venezuela
- 12–13 January** Atlantic Council Global Energy Forum, Abu Dhabi, United Arab Emirates (UAE)
- 22–25 January** World Economic Forum, Davos, Switzerland
- 11–13 February** Egypt Petroleum Exhibition and Show, Cairo, Egypt
- 6–8 March** Mission to Washington, Washington DC, United States (US)
- 11–15 March** CERAWEEK 2019, Houston, TX, US
- 2–5 April** 7th African Petroleum Congress & Exhibition APPO CAPE VII, Malabo, Equatorial Guinea
- 1–4 May** 24th Oil, Gas, Refining and Petrochemical Exhibition, Tehran, IR Iran
- 10 June** 3rd Energy Forum at Dundee, Dundee, Scotland, United Kingdom (UK)

Mission to Venezuela, Caracas, Venezuela.



Atlantic Council Global Energy Forum, Abu Dhabi, UAE.



- 9–12 September** 24th Abu Dhabi World Energy Congress, Abu Dhabi, UAE
- 10 September** 8th Asian Ministerial Roundtable (AMER), Abu Dhabi, UAE
- 14–15 September** 5th Iraq Energy Forum, Baghdad, Iraq
- 23–27 September** Kazakhstan Energy Week, Nur Sultan, Kazakhstan
- 30 September** Valdai Discussion Club, Sochi, The Russian Federation
- 2–5 October** Russian Energy Week, Moscow, The Russian Federation
- 8–10 October** Oil and Money Conference, London, UK
- 13–16 October** Kuwait Oil & Gas Show and Conference, Kuwait City, Kuwait
- 15 October** CERAWEEK in India, New Delhi, India
- 11–14 November** Abu Dhabi International Petroleum Exhibition and Conference, Abu Dhabi, UAE
- 19 November** Jour Fixe event of the Austrian-Russian Friendship Society, Vienna, Austria
- 29 November** GECF 5th Summit of Heads of State, Malabo, Equatorial Guinea
- 2–13 December** COP25, Madrid, Spain

Egypt Petroleum Exhibition and Show, Cairo, Egypt.



24th Oil, Gas, Refining and Petrochemical Exhibition, Tehran, IR Iran.



24th Abu Dhabi World Energy Congress, Abu Dhabi, UAE.



8th Asian Ministerial Roundtable (AMER), Abu Dhabi, UAE.



5th Iraq Energy Forum, Baghdad, Iraq.



Kazakhstan Energy Week, Nur Sultan, Kazakhstan.



Valdai Discussion Club, Sochi, The Russian Federation.



Russian Energy Week, Moscow, The Russian Federation.



Oil and Money Conference, London, UK.



KOGS, Kuwait City, Kuwait.



CERAWEEK, New Delhi, India.



ADIPEC, Abu Dhabi, UAE.



Jour Fixe event of the Austrian-Russian Friendship Society, Vienna, Austria.



COP25, Madrid, Spain.



Calendar 2019

21 January	25 th Meeting of the Joint Technical Committee (JTC), (Webinar)
18–19 February	OPEC High-level Meeting re Charter of Cooperation, HQ, Vienna, Austria
20 February	26 th Meeting of the JTC, HQ, Vienna, Austria
21 February	3 rd Meeting of the Audit Committee, HQ, Vienna, Austria
22 February	Non-OPEC High-level Meeting re Charter of Cooperation, HQ, Vienna, Austria
27 February	9 th IEA-IEF-OPECF Symposium on Energy Outlooks, Riyadh, Saudi Arabia
4–8 March	19 th Multi-Disciplinary Training Course, HQ, Vienna, Austria
17 March	27 th Meeting of the JTC, Baku, Azerbaijan
18 March	13 th Meeting of the Joint Ministerial Monitoring Committee (JMMC), Baku, Azerbaijan
28 March	3 rd IEA-IEF-OPEC Technical Meeting on the Interactions between Physical and Financial Energy Markets, HQ, Vienna, Austria
15 April	28 th Meeting of the JTC, Webinar
24–25 April	18 th Annual Statistical Meeting, HQ, Vienna, Austria
29–30 April	154 th Meeting of the Board of Governors (BoG), HQ, Vienna, Austria
17 May	29 th Meeting of the JTC, Jeddah, Saudi Arabia
19 May	14 th Meeting of the JMMC, Jeddah, Saudi Arabia
11 June	Workshop on Climate Change, HQ, Vienna, Austria
11–12 June	Member Countries' Coordination Meeting, HQ, Vienna, Austria
17–18 June	131 st Economic Commission Board (ECB) Meeting, HQ, Vienna, Austria

19 June	5 th Technical Meeting of OPEC and non-OPEC Participating Countries of the ‘Declaration of Cooperation’, HQ, Vienna, Austria
30 June	30 th Meeting of the JTC, HQ, Vienna, Austria
1 July	15 th Meeting of the JMMC, HQ, Vienna, Austria
1 July	176 th Meeting of the OPEC Ministerial Conference, HQ, Vienna, Austria
2 July	6 th OPEC and non-OPEC Ministerial Conference, HQ, Vienna, Austria
22 July	31 st Meeting of the JTC, Webinar
19 August	32 nd Meeting of the JTC, Webinar
11 September	33 rd Meeting of the JTC, Abu Dhabi, United Arab Emirates (UAE)
12 September	16 th Meeting of the JMMC, Abu Dhabi, UAE
17–18 September	Energy and Information Technology Workshop, HQ, Vienna, Austria
19–20 September	19 th Special ECB Meeting, HQ, Vienna, Austria
17 October	34 th Meeting of the JTC, Webinar
21 October	3 rd OPEC-China Energy Dialogue, HQ, Vienna, Austria
25 October	Audit Committee Meeting, HQ, Vienna, Austria
28–29 October	155 th Meeting of the BoG, HQ, Vienna, Austria
30–31 October	Annual Legal Workshop, HQ, Vienna, Austria
5 November	Launch of the 2019 WOO, Vienna, Austria
7 November	Workshop on Energy Pipelines, HQ, Vienna, Austria
11–14 November	Abu Dhabi International Petroleum Exhibition and Conference, Abu Dhabi, UAE
18 November	5 th Technical Meeting on Asian Energy & Oil Outlook with IEEJ, HQ, Vienna, Austria
19–20 November	17 th Coordination Meeting on Climate Change, HQ, Vienna, Austria

- 27–28 November 132nd ECB Meeting, HQ, Vienna, Austria
- 29 November 6th Technical Meeting of OPEC and non-OPEC participating countries of the ‘Declaration of Cooperation’, HQ, Vienna, Austria
- 3 December 35th Meeting of the JTC, HQ, Vienna, Austria
- 5 December 17th Meeting of the JMMC, HQ, Vienna, Austria
- 5 December 177th Meeting of the OPEC Ministerial Conference, HQ, Vienna, Austria
- 6 December 7th OPEC and non-OPEC Ministerial Conference, HQ, Vienna, Austria

Non-OPEC High-level Meeting re Charter of Cooperation.



9th IEA-IEF-OPEC Symposium on Energy Outlooks, Riyadh, Saudi Arabia.



13th Meeting of the Joint Ministerial Monitoring Committee.



3rd Joint IEA-IEF-OPEC Technical Meeting on the Interactions between Physical and Financial Energy Markets.



18th Annual Statistical Meeting.



14th Meeting of the Joint Ministerial Monitoring Committee.



Gala Dinner on the occasion of the 176th OPEC Conference and the 6th OPEC and non-OPEC Ministerial Meeting.



6th OPEC and non-OPEC Ministerial Meeting.



3rd OPEC-China Energy Dialogue.



Launch of the 2019 World Oil Outlook.





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