OPEC bulletin

4/19

Special Edition

OPEC: energy, climate change and sustainable development

OPEC

Monthly Oil Market Report

Download
the OPEC MOMR App free of charge!

- **Essential information on the oil market**
- **100+ interactive articles and tables detailing crude price movements, oil futures, prices and much more**
- **Analysis of the world economy, world oil supply and demand**
- **Compare data interactively and maximize information extraction**

The climate change challenge

Climate change is an undeniable issue affecting each and every one of us on this planet. Indeed it is one of the greatest challenges facing mankind both today and in the future.

The need to address climate change is not only clear in recent reports of the international scientific community, but also in increasingly extreme weather patterns and other disastrous events, which are already affecting many vulnerable communities worldwide.

The year 2015 brought the world two giant steps forward in addressing both climate change and sustainable development, through adoption of the landmark Paris Agreement and the 2030 Agenda for Sustainable Development.

The Paris Agreement is truly a milestone in global efforts to combat climate change, and has set the stage for humanity to contribute to supporting this cause. The Agreement, to be implemented under the objectives and principles of the United Nations Framework Convention on Climate Change (UNFCCC), is an achievement of multilateral effort, and is based on the truism that collective action is required to face a collective cause.

Each country is expected to play a role in meeting the long-term goal of the Paris Agreement and ensuring a sustainable future for present and future generations. Actions to be implemented under the Paris Agreement are also expected to contribute to achieving the 17 sustainable development goals (SDGs) of the 2030 Agenda.The SDGs recognize *inter alia* that energy is a driving force behind sustainable development and economic prosperity for all countries.

Climate actions should, therefore, pave the way toward sustainable development. This means the energy transition should be pursued while prioritizing the billions of people in developing countries that continue to suffer from energy poverty. It entails a transition to a more inclusive world in which every person has access to affordable, reliable, sustainable and modern energy, without discriminating against any energy source.

OPEC's efforts to confront climate change include constructive participation in UN negotiation sessions and a deepening and expanding relationship with the UNFCCC Secretariat over the past few years. As per a joint press release issued on the occasion of an official OPEC visit in Bonn, Mohammad Sanusi Barkindo, OPEC Secretary General, and Patricia Espinosa, Executive Secretary of the UNFCCC, agreed that enhancement of cooperation between the two organizations is beneficial, considering the importance of inclusiveness and participation by all actors involved in implementing the Paris Agreement.

The key role of oil in economic development and the right of developing countries to develop was stressed. In this regard, OPEC's efforts towards sustainable market stability were recognized as a contribution to a healthy global economy and helping implementation of the UN Convention, and the Paris Agreement, as well as the transition to a low-emission economy.

Many of these principles were further emphasized by Espinosa at the 7th OPEC International Seminar in Vienna, Austria, on June 20, 2018, when she underlined the important role oil has played in the development of mankind.

"It's an important one. We recognize the central role the oil and gas industry has played — and continues to play — in the lives of people everywhere. It has fueled our greatest achievements and helped us surpass our greatest challenges. It has created jobs for millions throughout the world and raised its standard of living. It has helped build our cities, communities and infrastructure."

OPEC shares a similar view. Barkindo — a veteran of the UN process on climate change negotiations, who has been involved since their inception — stated something similar at the UN Climate Change Conference (COP24) in December 2018 in Katowice, Poland.

"Let me begin by stating unequivocally: the oil industry must be part of the solution to the climate change challenge…

"The scale of the challenge means that no single energy source is a panacea; nor can the contribution of an entire industry or group of countries be overlooked. This is not a race to renewables alone; it's a race to lower greenhouse gas emissions.

"The industry possesses know-how and experience for reducing our environmental footprint: working practices and fuel efficiency standards have improved exponentially over the decades … the industry's capacity for technological innovation must be harnessed within this process."

The Secretary General brought up another point in Katowice: that energy poverty remains a massive issue which faces mankind, including one billion people without access to electricity and three billion people lacking clean cooking fuels.

In this context, the OPEC Secretariat, as a centre of excellence, is fully engaged in climate change negotiations and provides support for its Member Countries, facilitating their effective participation in UN sessions and providing technical support on climate change actions and opportunities for sustainable development.

The industry has also started to address this challenge in a number of ways, some of which are discussed in this special edition of the *OPEC Bulletin* on climate change. We also focus on OPEC's sister organization's successes in south-south cooperation — OFID — as well as industry best practices.

OPEC believes that like all major challenges facing mankind, a multilateral platform for dialogue is the best way forward. OPEC and its Member Countries are honored and privileged to be part of that dialogue.

Contents

UNFCCC

Climate Change Special

4 OPEC ready and willing to continue participating in climate change talks

8 25 years of the UN climate change regime

14 The United Nations makes climate change a priority in 2019

16 OPEC Secretariat: Instrument for Member Country sustainable development advocacy

20 OPEC Members: a force in the field of environmental sustainability

24 Industry solutions to climate change issues

28 Evolving multilateralism in climate change negotiations

30 OAPEC and climate change: hand in hand for a better future

34 International Maritime Organization 2020 regulation

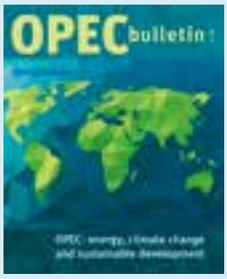
38 Addressing climate-related financial disclosures at IEA-IEF-OPEC Technical Meeting

42 OFID: Proud of its past, focused on its future

48 A bold new vision: Development finance organization OFID is poised for significant growth and efficiency gains

OFID/Rupert Steiner

OPEC bulletin



Cover
This month's cover reflects the special edition of the OPEC Bulletin *on energy, climate change and sustainable development (see features starting on p4).*

Vol L, No 4, April 2019, ISSN 0474–6279

Publishers
OPEC
Organization of the Petroleum Exporting Countries
Helferstorferstraße 17
1010 Vienna
Austria
Telephone: +43 1 211 12/0
Telefax: +43 1 216 4320
Contact: Editor-in-Chief, OPEC Bulletin
Fax: +43 1 211 12/5081
E-mail: prid@opec.org
Website: www.opec.org

Website: www.opec.org
Visit the OPEC website for the latest news and information about the Organization, and for back issues of the *OPEC Bulletin,* which are available free of charge in PDF format.

OPEC Membership and aims
OPEC is a permanent, intergovernmental Organization, established in Baghdad, on September 10–14, 1960, by IR Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. Its objective — to coordinate and unify petroleum policies among its Member Countries, in order to secure a steady income to the producing countries; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the petroleum industry. Today, the Organization comprises 14 Members: Libya joined in 1962; United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); Nigeria (1971); Angola (2007); Equatorial Guinea (2017). Ecuador joined OPEC in 1973, suspended its Membership in 1992, and rejoined in 2007. Qatar joined in 1961 and left on December 31, 2018. Indonesia joined in 1962, suspended its Membership on December 31, 2008, reactivated it on January 1, 2016, but suspended its Membership again on December 31, 2016. Gabon joined in 1975 and left in 1995; it reactivated its Membership on July 1, 2016. The Republic of the Congo joined the Organization on June 22, 2018.

Dialogue

52 APPO Conference: Equatorial Guinea and the 'Year of energy'

Award

60 OPEC Secretary General receives Euro-Knowledge Leadership Award

Newsline

64 Intra-OPEC cooperation: Nigeria in talks on downstream projects with Saudi Arabia

65 Angola's Sonangol plans to focus on core business

66 Saudi Arabia plans oil refinery, petrochemicals plant in South Africa

66 UAE's ADNOC inks pact for base oil sales in India

Arts & Life

68 Saving the Persian cheetah

70 **Briefings**

Visits to the OPEC Secretariat

72 **Vacancy Announcements**

Job opportunities at the OPEC Secretariat

74 **Noticeboard**

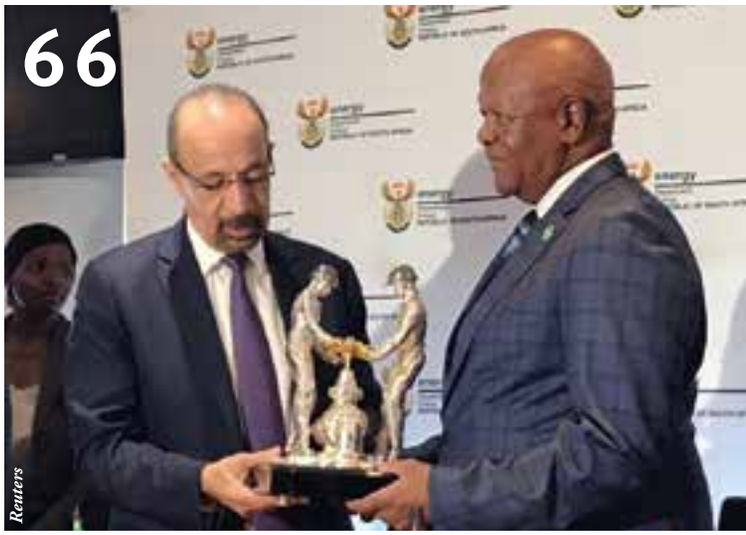
Summer oil market outlook

75 **Market Review**

Oil market highlights

81 **OPEC Publications**

Reading material about OPEC



Reuters

Reza Goudarzi

Secretariat officials
Secretary General
Mohammad Sanusi Barkindo
Director, Research Division
Dr Ayed S Al-Qahtani
Head, Data Services Department
Dr Adedapo Odulaja
Head, PR & Information Department
Hasan Hafidh
Head, Finance & Human Resources Department
Jose Luis Mora
Head, Administration & IT Services Department
Abdullah Alakhawand
Head, Energy Studies Department
Dr Abderrezak Benyoucef
Head, Petroleum Studies Department
Behrooz Baikalizadeh
General Legal Counsel
Leonardo Sempértegui Vallejo
Head, Office of the Secretary General
Shakir Mahmoud A Alrifaiey

Contributions
The *OPEC Bulletin* welcomes original contributions on the technical, financial and environmental aspects of all stages of the energy industry, as well as research reports and project descriptions with supporting illustrations and photographs.

Editorial policy
The *OPEC Bulletin* is published by the OPEC Secretariat (Public Relations and Information Department). The contents do not necessarily reflect the official views of OPEC or its Member Countries. Names and boundaries on any maps should not be regarded as authoritative. The OPEC Secretariat shall not be held liable for any losses or damages as a result of reliance on and/or use of the information contained in the *OPEC Bulletin*. Editorial material may be freely reproduced (unless copyrighted), crediting the *OPEC Bulletin* as the source. A copy to the Editor would be appreciated.

Editorial staff
Editor-in-Chief
Hasan Hafidh
Editor
Maureen MacNeill
Associate Editors
James Griffin, Scott Laury, Mathew Quinn
Contributors
Ayman Almusallam
Production
Diana Lavnick
Design and layout
Carola Bayer, Tara Starnegg
Photographs (unless otherwise credited)
Herwig Steiner, Wolfgang Hammer
Distribution
Mahid Al-Saigh

Indexed and abstracted in PAIS International

Printed in Austria

printed according to the Austrian Ecolabel criteria for printed matter (UZ 24), UW-No 715

PEFC Certified
This product is from sustainably managed forests and controlled sources
PEFC
PEFC/06-39-10
www.pefc.org

Mohammad Sanusi Barkindo, OPEC Secretary General, speaking at an early climate change conference session.

OPEC ready and willing to continue participating in climate change talks

***Mohammad Sanusi Barkindo**, OPEC Secretary General, thanked the* OPEC Bulletin *for inviting him to contribute to the special edition on energy, climate change and sustainable development. He extended his appreciation to his colleagues from the Public Relations and Information Department and the Environmental Matters Unit for producing this special edition, and stated that perhaps it is the first such edition to be dedicated to this important theme: energy, climate change and sustainable development.*

I would like to go down memory lane, when OPEC from its inception identified and gave special recognition and priority to matters related to climate change and sustainable development. Being an Organization of exclusively developing countries, our Member Countries (MCs) have identified themselves with the need for the world community to rise in unison and face the challenges of our time, that some even describe as a scourge of our time, the challenge of climate change, which goes hand in hand with the opportunity of sustainable development.

Following this recognition and various decisions taken at national levels by MCs and collectively in OPEC, we joined the international community under the auspices of the United Nations to establish and actively participate in the **Intergovernmental Negotiating Committee (INC)**. The INC was set up by the UN General Assembly in 1990 to produce the framework convention on climate change. This was followed by the **Rio Earth Summit in 1992.** OPEC delegates participated actively in these negotiations in the INC in New York at the UN Headquarters,

which finally produced the draft Convention placed before the **first Conference of the Parties (COP1)** to the **United Nations Framework Convention on Climate Change (UNFCCC)** in Berlin in **1995**.

The Convention itself was the first attempt to mobilize the global community, both developed and developing countries, including least-developed countries (LDCs) and the alliance of small island states, to jointly combat the challenge of climate change either through adaptation or mitigation, or a combination of both, depending on the classification of the Parties to the **UNFCCC**, with developed countries asked to take the lead in quantified emissions limitations and reductions.

Initial steps

From these initial steps that the global community took in New York and Berlin at the **COP1**, OPEC and its MCs launched themselves into this process with the clear view that we are all developing countries that are impacted — often severely — by climate change, and at the same time impacted negatively by some of the policy measures undertaken by developed countries in mitigating the impacts of climate change.


Shutterstock

The **Intergovernmental Panel on Climate Change (IPCC)** that feeds into the deliberations and decisions of the **UNFCCC** had from its first assessment report acknowledged the disadvantaged situation of developing countries, including OPEC MCs. Hence, special provisions were made in the Convention. Although MCs are dependent on the extraction, processing and export of hydrocarbons for sustainable development, we are also cognizant of the fact that we need to adapt to the challenges of climate change through diversification of our economies, as well as participating in adaptation measures in accordance with the core principles of the **UNFCCC**, including the core principal of common but differentiated responsibilities and respective capabilities of Parties.

From the first **Conference of the Parties, COP1 of the UNFCCC** in Berlin, it was obvious that more ambitious targets and additional measures by Parties were needed. In particular, developed countries, sometimes referred to as **Annex 1 Parties to the UNFCCC**, needed to take the lead, by not only taking up new and additional targets for greenhouse gas (GHG) reductions, but also by meeting the responsibility to provide **non-Annex I Parties** — developing countries, including OPEC MCs — with the appropriate technology and adequate financial resources for them to be able to contribute to global efforts in combatting the effects of climate change.

This was the basis of the **Kyoto Protocol**, which adapted new targets for **Annex I Parties** and sought to also operationalize two key commitments of these Parties to developing countries, ie technology and financial resources. Unfortunately, the developed countries, who not only have the commitment under the Convention and the **Kyoto Protocol**, as well as historic responsibility through their industrial processes, have not met up to global needs and expectations. Today, we are in the process of migrating from **Katowice COP** conclusions and directions within the **Talanoa Dialogue Platform**, **25 years** after the Berlin conference and **four years** after the Paris Agreement. OPEC and other developing countries continue to march ahead within the confines of the **Paris Agreement, UNFCCC** and various COP decisions, although the much-expected partnership from developed counties has not yet fully materialized.

Despite the sharp words, because we are also citizens of this world, we have our own obligations to our

peoples to shape our development paths in the most sustainable manner possible. All OPEC MCs have signed the **Paris Agreement** and **ten** have ratified it. Several of our MCs have embarked on major non-regret measures to diversify our economies from a mono-cultural state, and to deploy technologies to address the environmental footprint of our development paths.

With the current state of the **Paris Agreement**, and the continuous scientific evidence being provided by the **IPCC**, it has become abundantly clear that no group of countries can alone adequately and in a timely fashion combat this scourge of our time. The global community has no viable option other than to remain within the multilateral process under the **UNFCCC**. This process has to be further strengthened in a holistic manner by continuing to provide and ensure all-inclusive participation by all Parties.

Involvement of Mohammad Sanusi Barkindo, OPEC Secretary General, in climate change talks

The OPEC Secretary General has been a delegate of climate change talks since their inception. "I have spent almost all my working life in this process," he says.

He has been a member of the Bureau, the highest body of the UNFCCC several times, and has served as Vice-President of the Conference of the Parties (COP), including COP15 in 2009 in Copenhagen, COP14 in 2007 in Boznan, Poland, COP13 in 2006 in Bali, and COP6 in 2001 in Bonn. He has chaired the Group of 77 and China (G77), as well as the OPEC Task Force on UNCSD (United Nations Commission on Sustainable Development).

He has led technical delegations from his country (Nigeria) many times since the inception of UNFCCC talks in 1991.

He has participated in the Intergovernmental Negotiating Committee (INC), which led to the adoption of the UNFCCC. The Kyoto Protocol is to be implemented under the UNFCCC. Barkindo has attended most of the COPs, being the only Nigerian delegate to attend all COPs from COP1 in Berlin to COP15 in Copenhagen in 2009. He has also attended all COPs since becoming the Secretary General of OPEC, where he made statements on OPEC's behalf.

OPEC Member Countries

OPEC and its MCs will continue to play their part for reasons we have stated, but that will not be sufficient to address this global challenge. Our coordination meetings held at OPEC on the climate change talks are one of our efforts to get MCs involved, and this has been expanded to include members of the **'Declaration of Cooperation'.**

The energy transition is a necessary transition going forward. This transition is not a transition from one energy source to another. All energy sources will be required in the energy basket for the foreseeable future. Oil and gas will continue to dominate this energy basket. In terms of available underground resources, there are around **1.696 trillion barrels of proven oil reserves** globally, and over **80 per cent** of this resides in OPEC MCs. **Proven gas reserves** total **6,831.7 trillion cubic feet**. I want to relate this topic to our ***OPEC World Oil Outlook***, which projects that oil and gas are still expected to make up more than **50 per cent** of the global energy mix by **2040**.

Access to energy

Energy poverty is at the core of underdevelopment in many regions of the world, including OPEC MCs. Access to reliable energy resources, including oil and gas, is essential to combatting energy poverty. At the moment, the data continue to indicate that not much progress has been made to providing access to over **three billion** people without clean cooking fuels and **one billion** without access to electricity in the developing world.

In addition, demographic dynamics continue to indicate that nearly **two billion** more human souls will come into this world between now and **2040**, the vast majority of them from the developing world. It is a right as agreed by the UN under the **UN 2030 Agenda for Sustainable Development** and its **sustainable development goals (SDGs)** for these people from poor developing countries to have access to energy and ensuing social development. In global efforts to combat climate change and ensure sustainable development, oil and gas are part of the solution, not part of the challenge.

The challenge is how we can join together globally in a timely fashion, effectively and efficiently, to significantly reduce GHG emissions. OPEC MCs continue to play a part and rightly urge the global community to continue to work together as dedicated partners for a global solution.

25 years of the UN climate change regime

Climate change is seen as a multiplier of risks that results in challenges for all countries worldwide, with a wide range of adverse impacts that are likely to be highly inequitable, disproportionately affecting the most vulnerable people in developing countries.

Already in 1985, at a conference held in Villach, Austria, the World Meteorological Society, United Nations Environment Programme (UNEP), and the International Council of Scientific Unions called on policymakers to collaborate in the assessment of policies to mitigate anthropogenic (human-induced) climate change.

International consensus soon developed on the need for a climate change convention, and a UN body that periodically assesses the scientific basis of climate change, its impacts and future risks, as well as options for adaptation and mitigation, was established in 1988. It is entitled the Intergovernmental Panel on Climate Change (IPCC).

The IPCC completed its First Assessment Report in time for the World Climate Conference, which was held from October 29 to November 7, 1990, in Geneva, Switzerland. This led to calls for an international climate change agreement. Indeed, the UN General Assembly established the Intergovernmental Negotiating Committee (INC) for a Framework Convention on Climate Change in December 1990.

Following intense negotiations that lasted for almost a year and a half, the UN Framework Convention on Climate Change (UNFCCC) was adopted at the UN Headquarters in New York, in June 1992. The Convention entered into force on March 21, 1994, with the objective to "stabilize greenhouse gas [GHG] concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

Having near-universal membership (197 Parties), the Convention established a framework with core principles — including those of equity, sustainable development, and common but differentiated responsibilities and respective capabilities, providing the foundation for actions related to mitigation, adaptation and support for finance and technology.

In particular, the Convention calls on developed countries, listed as Annex I Parties, to lead the way in implementing measures to mitigate climate change. It also aims to help developing countries limit emissions in ways that will not hinder their economic progress. Recognising the need to adapt to the impacts of climate change, the Convention further established a financial mechanism to provide support to developing countries to assist them in their climate change actions.

Since 1995, Parties to the Convention meet annually at the Conference of the Parties (COP) to monitor its implementation, take stock of progress, and negotiate multilateral responses to climate change. Already at the first COP (COP1), Parties established a process

COP18 took place in 2012 at the Qatar National Convention Centre in Doha, Qatar. The Doha Amendment to the Kyoto Protocol was adopted at this event.

UNFCCC

Shutterstock

Headquarters of the IPCC.

to negotiate strengthened commitments for developed countries, thus laying the groundwork for the Kyoto Protocol.

Recognizing the historical responsibility of developed countries, the Kyoto Protocol was adopted on December 11, 1997, setting binding emission reduction targets. The Protocol entered into force on February 16, 2005, and since then the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) holds annual sessions in conjunction with the COP to review the implementation of the Protocol.

The Marrakesh Accords, adopted at COP7, set the rules for the implementation of the Kyoto Protocol, and its first commitment period lasted from 2008 to 2012. Over this period, developed countries committed to reducing GHG emissions to an average of five per cent against 1990 levels. Nevertheless, some developed countries (eg USA) decided to retreat from the Protocol for emission reductions.

On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted at COP18, with developed countries agreeing to take on commitments in a second commitment period for the years 2013–20. A revised list of GHGs to be reported on by Parties in this period was also agreed, yet the Doha Amendment has still not entered into force. A total of 126 Parties have currently ratified the Amendment, however 144 instruments of acceptance are required for its entry into force.

In the pre-2020 period, developed countries are expected to meet their emission targets under the Kyoto Protocol primarily through national measures. The Protocol also offers additional means in the form of market-based mechanisms. These are:

(a) International Emissions Trading;
(b) Clean Development Mechanism (CDM); and
(c) Joint Implementation (JI).

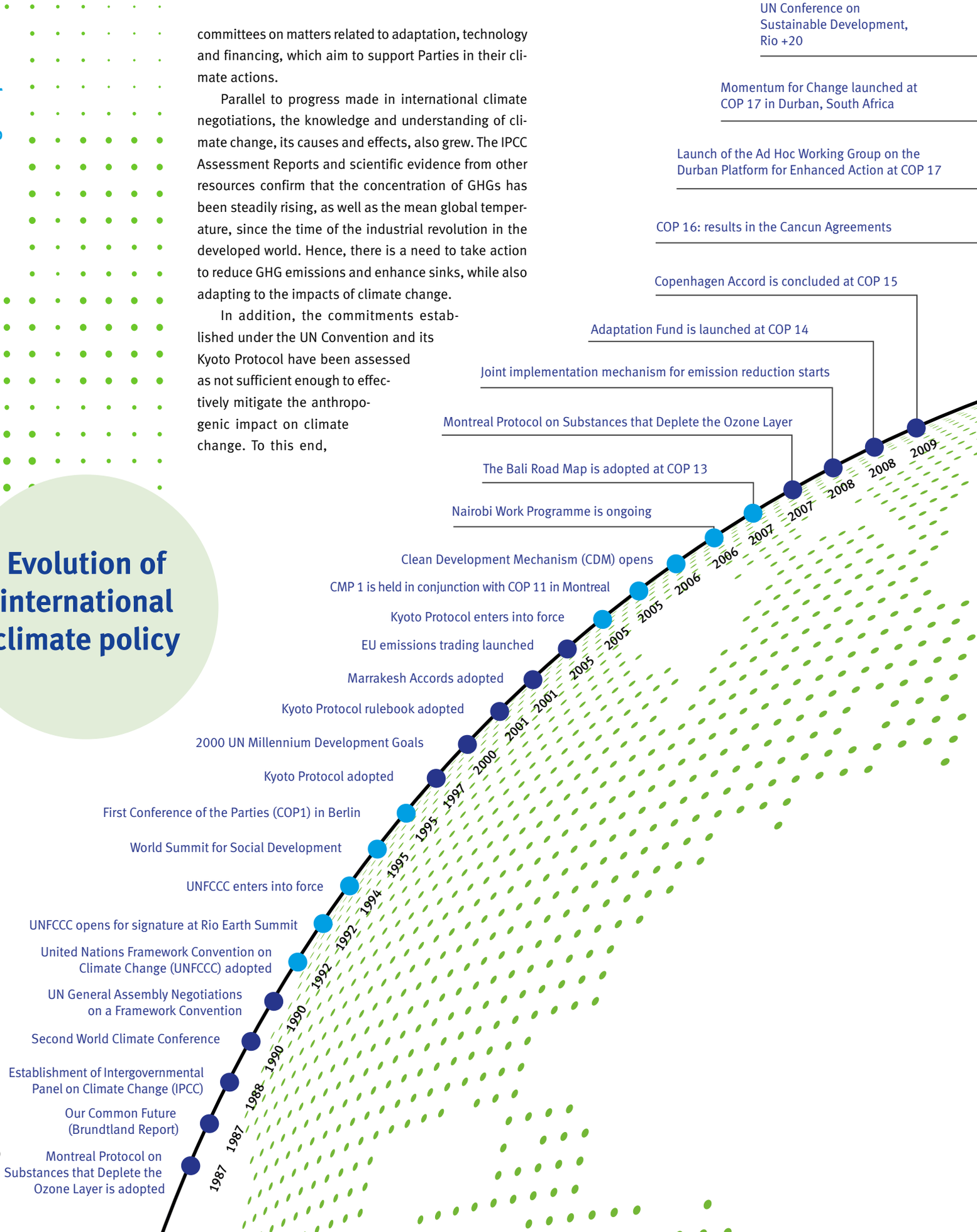
Aside from the two permanent subsidiary bodies of the Convention; namely, the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA), the COP and CMP also established a number of institutional arrangements and constituted bodies for the effective implementation of the Convention and its Protocol. These include

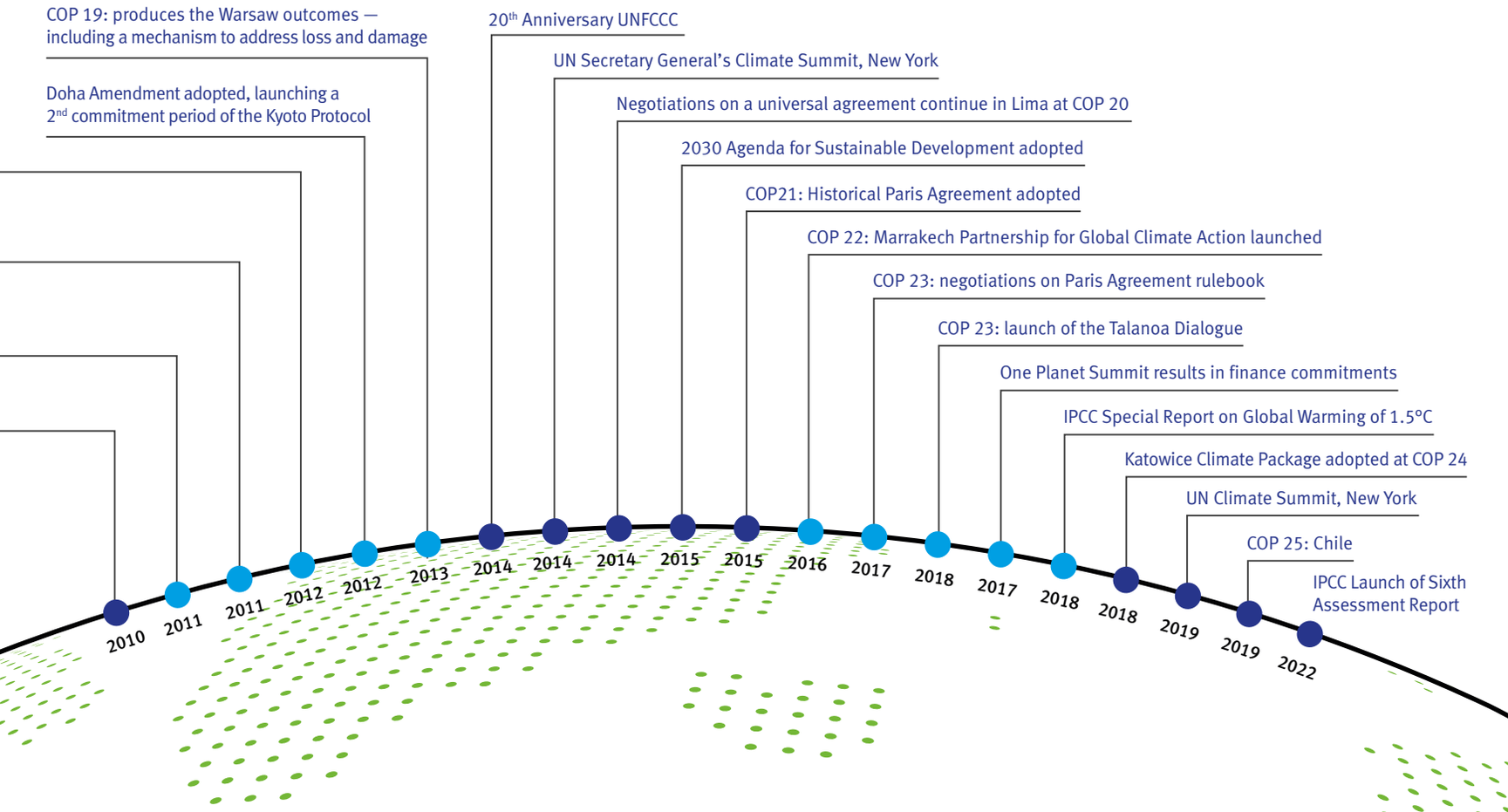
committees on matters related to adaptation, technology and financing, which aim to support Parties in their climate actions.

Parallel to progress made in international climate negotiations, the knowledge and understanding of climate change, its causes and effects, also grew. The IPCC Assessment Reports and scientific evidence from other resources confirm that the concentration of GHGs has been steadily rising, as well as the mean global temperature, since the time of the industrial revolution in the developed world. Hence, there is a need to take action to reduce GHG emissions and enhance sinks, while also adapting to the impacts of climate change.

In addition, the commitments established under the UN Convention and its Kyoto Protocol have been assessed as not sufficient enough to effectively mitigate the anthropogenic impact on climate change. To this end,

Evolution of international climate policy





COP17 led to the launch of the Ad Hoc Working Group on the Durban Platform for Enhanced Actions (ADP), having Parties commit to a universal climate change agreement by 2015 for the post–2020 period.

A new negotiation process evolved for the next three years and up to COP21, in December 2015. UNFCCC Parties eventually agreed on a landmark agreement, the Paris Agreement, to combat climate change and enhance actions for a sustainable future. The Paris Agreement builds on the Convention and brings together for the first time all nations, both developed and developing countries, with a common cause to strengthen the global response to climate change by "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C."

To achieve this long-term temperature goal, Parties are called to implement their nationally determined contributions (NDCs) and increase their efforts in the years ahead. The Paris Agreement sets a five-year cycle for Parties' contributions, aiming to increase their ambition. The Agreement also called for a facilitative dialogue in 2018 (the so-called Talanoa Dialogue), to have an early assessment of NDCs, and for the first global stocktake in 2023. The global stocktake will continue to be taken in five-year cycles and two years prior to the periodic submission of NDCs. In addition, the Paris Agreement considers the need to be high for appropriate and adequate financial resources, a new technology framework, and enhanced capacity-building to support action by developing countries.

The Paris Agreement entered into force on November 4, 2016, and a total of 185 Parties have currently ratified it. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) met for the first time in conjunction with the COP and CMP in Marrakesh, in November 2016.

At this COP, Parties agreed that the subsidiary bodies of the Convention, SBI and SBSTA, and the Ad Hoc Working Group on the Paris Agreement (APA) will work against a two-year deadline to develop the guidelines for Paris Agreement implementation, or the so-called Paris Agreement Work Programme, by November 2018.

Meeting the deadline, Parties adopted the Katowice Climate Package at COP24, which sets out the essential procedures and mechanisms that will make the Paris

Agreement operational. It enables a dynamic approach for Paris Agreement implementation, establishing new arrangements, a number of review mechanisms and timelines for revisiting the guidelines.

To agree on the operational mechanisms of the Paris Agreement, Parties had to overcome long-standing differences, complex technical issues and divergent interpretations of the Agreement. Apart from some contentious issues left for future negotiations, Parties are also expected to submit the next round of their NDCs by 2020.

In light of the above, it is apparent that over the last 25 years, a complex architecture for global climate governance has been developed. Global efforts to combat climate change are guided by the UN climate change regime and under the supreme bodies of the COP, CMP, and CMA, with its three instruments: the UNFCCC, the Kyoto Protocol, and the Paris Agreement.

The UN process of climate change negotiations continues to use scientific information on climate change through a number of work streams, including the IPCC. The IPCC is currently in its *Sixth Assessment Cycle*, expected to be completed in April 2022 — in time for the first global stocktake under the Paris Agreement.

Playing a key role in the process of climate change negotiations, COP21 invited the IPCC to provide a special report in 2018 on the impacts of global warming of 1.5°C above pre-industrial levels and related global GHG emission pathways, with a view to informing the Talanoa Dialogue. The special report was meant to be prepared in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.

In October 2018, the Special Report on Global Warming of 1.5°C was released, highlighting that climate change is already affecting people, ecosystems and livelihoods around the world. Limiting global warming to 1.5°C is not impossible, but would require unprecedented transitions in all aspects of society. To achieve the subject temperature target, UNFCCC Parties are expected to enhance climate actions inscribed in their future NDCs.

Recognizing that stabilising the global climate is one of the most urgent challenges facing our planet, it is important to consider different national circumstances, evoke the principles of the Convention, balance mitigation, adaptation and means of implementation, and take into account the overriding priority of sustainable development.

This should appreciate what the term energy transition means for those billions of people in developing countries that continue to suffer from energy poverty. It entails a transition to a more inclusive world in which every person has access to affordable, reliable, sustainable and modern energy, without discriminating against any energy source.

COP15 UNFCCC Climate Change opening ceremony, 2009. The Copenhagen Accord was concluded at this event.

L–r: Francois Hollande, President of France; Laurent Fabius, President of COP21/CMP11; and Ban Ki-moon, UN Secretary General; open the Comité de Paris meeting on the morning of December 12, at COP21, 2015. The Paris Agreement was historically adopted at this event.

It is also vital to use energy efficiently and constantly develop and adopt cleaner energy technologies, such as CCUS (carbon capture, utilization and storage). Coordinated actions should be enhanced, supporting research and development, innovation and technology transfer, while providing sufficient financial support and enhancing capacity building.

In this context, world leaders and other stakeholders are calling 2019 the year of climate action, and the UN Secretary General's Climate Action Summit on September 23, 2019, is considered a milestone event to mobilize political and economic impetus with the aim to advance climate action.

Being involved in the UN process of climate change negotiations for many years, OPEC and its Member Countries remain fully engaged and supportive of the Convention and Paris Agreement. To date, all OPEC Member Countries have signed the Paris Agreement and ten Member Countries have ratified it.

To this end, the OPEC Secretariat has a dedicated research team, the Environmental Matters Unit, which provides policy-relevant research outcomes, a platform for coordination to OPEC Member Countries, and technical support to Member Country negotiators through active involvement and participation in the UN process of climate change negotiations and issues related to sustainable development.

COP24 was held in Katowice, Poland, in December 2018.

The United Nations makes climate change a priority in 2019

UN Secretary-General António Guterres is determined to tackle climate change and is making it a focus in the United Nations system in 2019. This has been echoed by world leaders at the UN General Assembly high-level meeting on the relationship between climate change and sustainable development, held in late March of this year.

The UN is holding a Climate Action Summit on September 23, 2019, to meet the climate challenge by boosting ambition and accelerating actions to implement the Paris Agreement, and Guterres is calling on all leaders to attend "with concrete, realistic plans to enhance their nationally determined contributions."

The last four years have seen the hottest temperatures on record, while winter temperatures in the Arctic have risen by 3°C since 1990, according to the UN, with the impact of climate change already having very real consequences on people's lives.

The Summit will showcase a leap in political will and collective national ambition and aims to demonstrate massive movements in the real economy in support of the Paris Agreement agenda. Together, these developments are expected to send strong market and political signals and inject momentum in the "race to the top" among countries, companies, cities and civil

Road map to Climate Action Summit 2019

Version: March 6, 2019

March

UN Environment Assembly (UNEA-4)
March 11–15,
Nairobi

One Planet Summit
March 14
Nairobi

Africa Climate Week
March 18–22
Accra

Friends of Paris Agreement: high level dialogue
March 25–26
Beijing

April

Africa CEO Forum
March 25–26
Kigali

High-Level Meeting on Protection of the Global Climate convened by the PGA
March 28
UN headquarters

Global Conference on Paris Agreement and 2030 Agenda (UNFCCC/DESA)
April 1–3
Copenhagen

WB/IMF Spring Meetings
April 12–14
DC

Belt and Road Initiative Summit
April 25–27
Beijing

May

Just Transition Summit
May 9–10
New Zealand

Global Platform for Disaster Risk Reduction
May 13–17
Geneva

International Conference on Climate Action
May 22–23
Heidelberg

Clean Energy Ministerial
May 27–28
Vancouver

International Chamber of Commerce Centenary Event
May 27–28
Paris

June

G20 Finance Ministerial
June 8–9
Fukuoka

International Labor Organization Centenary Meeting
June 10–21
Geneva

G20 Minister Meeting on Environment and Energy
June 15–16
Nagano

UNFCCC Session
June 17–27
Bonn

ASEAN Summit
June 22–23
Thailand

G20 Summit
June 28–29
Osaka

June/July

Stocktaking Meeting 2019 Climate Action Summit
June 30–July 1
Abu Dhabi

Montreal Protocol
July 1–5
Montreal

HLPF on Sustainable Development (under auspices of ECOSOC)
July 9–18
UN headquarters

August

Latin American & Caribbean Climate Week
August 19–23
Salvador de Bahia

G7 Summit
August 24–26
Biarritz

September

Asia Pacific Climate Week
September 2–6

51st Session IPCC: Special Report on Oceans
September 16–20

2019 Climate Action Summit of the Secretary-General
September 23
UN headquarters

society that is needed to achieve the objectives of the Paris Agreement and the Sustainable Development Goals.

Meanwhile, at the UN General Assembly in March, General Assembly President María Fernanda Espinosa Garcés of OPEC Member Country Ecuador stated: "We are the last generation that can prevent irreparable damage to our planet." Espinosa called for an intergenerational approach to climate change. "Climate justice is intergenerational justice," she said.

Guterres said during the March meeting that no country or community is immune to climate-related devastation, with the poor and vulnerable the first to suffer and the hardest hit.

He also said that humankind has the tools to address the crisis in the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change. "But tools are no use if you don't use them," he stressed, adding: "We need action, ambition and political will."

The Global Conference on the Paris Agreement and 2030 Agenda was held in Copenhagen, April 1–3, 2019.

Meetings after the Summit

UNFCCC COP25
January (tbc)
Chile

SDG 13 targets

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.2 Integrate climate change measures into national policies, strategies and planning

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.A Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of jointly mobilizing $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

13.B Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

SUSTAINABLE DEVELOPMENT GOALS

OPEC Secretariat: Instrument for Member Country sustainable development advocacy

Since its establishment in 1960, OPEC has been a dedicated centre of excellence, serving its diverse Member Countries with reliable, quality scientific insights into the energy sector. These insights help Members reach the most fitting decisions regarding emerging matters, such as sustainable development and environmental issues, while enjoying a complete understanding of the industry and global developments.

Mohammad Sanusi Barkindo (l), OPEC Secretary General, met with Patricia Espinosa, Executive Secretary of the UNFCCC, in Katowice, Poland, at COP24.

Global agreements

The Paris Agreement and the UN 2030 Agenda for Sustainable Development are two internationally historical milestones, joining virtually all citizens of the globe in supporting the initiative of putting the world on a sustainable pathway. Energy — being the engine for growth in various economic sectors and enhancing social development — plays a critical role in propelling this global movement and enabling sustainable development.

The early entry into force of the Paris Agreement allowed the UN Framework Convention on Climate Change (UNFCCC) negotiation bodies to develop an operational mechanism, known as the Paris rulebook, by November 2018, in order to enable its implementation.

In this regard, the UNFCCC Parties agreed at COP24 in Katowice, Poland, on the modalities, procedures and guidelines of the Paris Agreement, with the aim of achieving the objectives of the UN Convention and strengthening the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty.

To achieve the temperature target of the Paris Agreement, Parties have submitted their ambitions

in their nationally determined contributions (NDCs), which are the anchor point for climate actions — many of which feature mitigation efforts focusing on the energy sector.

At the same time, the 2030 Agenda for Sustainable Development, underpinned by its 17 Sustainable Development Goals (SDGs), is in its early years of implementation, incorporating a holistic vision that aims to achieve economic well-being, social inclusion and environmental sustainability in an integrated manner.

Energy has a prominent place in the 2030 Agenda, as well as being fundamental to human development and a cross-cutting issue for socio-economic prosperity and environmental sustainability. Access to affordable, reliable, sustainable and modern energy is the focus of SDG7.

Role of OPEC's EMU

In light of the above, the work of the Environmental Matters Unit (EMU) of the OPEC Secretariat has been focusing on the UNFCCC negotiation processes, as well as on matters related to sustainable development. These include the UNFCCC negotiation sessions of its subsidiary bodies, the UN Climate Change Conferences (COPs), and the annual sessions of the High-Level Political Forum (HLPF), which acts as the central UN body for the assessment and review of the progress made in the implementation of the 2030 Agenda, including the SDGs.

On an annual basis, the EMU provides OPEC Member Countries with relevant research outcomes, a platform for discussion, the exchange of views and coordination, and ad hoc advice and technical support to Member Country negotiators through active involvement and participation in multilateral fora, including the UNFCCC, HLPF and Intergovernmental Panel on Climate Change (IPCC).

To reach these objectives, the Unit closely reviews recent developments, as well as the latest opportunities and challenges arising from international climate change negotiations and actions implemented, focusing on sustainable development and attainment of the SDGs.

It also produces a number of research studies, reports and briefing notes to provide OPEC Member Countries, along with their officials and negotiators, with an extensive understanding of issues of great importance and relevance.

Besides research, the OPEC Secretariat also organizes a number of coordination meetings and technical

A Climate Change Negotiations Coordination Meeting, at the OPEC Secretariat, May 19, 2009.

A preparatory meeting at the OPEC Secretariat on the IEA/OPEC Workshop on the use of CO_2 for Enhanced Oil Recovery, October 17, 2011.

OPEC Member Countries Experts Coordination Meeting on the UNFCCC, at the OPEC Secretariat, October 27–28, 2011.

An OPEC Member Countries Coordination Meeting on Climate Change at the OPEC Secretariat, May 16–17, 2013.

An OPEC Member Countries' Coordination Meeting in the run-up to COP19, at the OPEC Headquarters, on October 28, 2013.

Coordination Meeting with Member Countries in the Run-up to COP-20 CMP10, November 11–12, 2014.

workshops for Member Countries, aiming to provide a valuable platform for discussion and comparing notes on climate-related issues as they arise, as well as on sustainable development matters. The key objectives of these events are developing a knowledge network, providing platforms for dialogue and the identifying research topics for future studies and reports.

The research areas primarily focussed upon in EMU technical reports and studies over the last years include inter alia the following:

- Negotiation issues in the run-up to COP meetings;
- Analysis of intended nationally determined contributions (INDCs);
- Analysis of the adverse effects of response measures;
- The architecture of the post-2020 climate change regime;
- Market-based mechanisms in the post-2020 climate agreement;
- CCS deployment in meeting long-term climate change objectives;
- Financing mechanisms in climate change negotiations;
- Forestry and climate change negotiations;
- Energy issues in the context of sustainable development;
- Challenges related to energy poverty eradication;
- Review of IPCC Special Reports and Working Group's contributions to its Fifth Assessment Report.

In addition to the above, the OPEC Secretary General, Mohammad Sanusi Barkindo, regularly leads delegations and attends various global meetings related to climate change, such as COP meetings, where he delivers statements.

The OPEC Secretary General also participates in high-level ministerial meetings held on the sidelines of the COPs, such as the Talanoa Dialogue High-Level Ministerial Round Table, which was held in Katowice in December 2018.

An OPEC Member Countries' Coordination Meeting at the OPEC Headquarters, July 7–27, 2015.

OPEC Member Countries' Coordination Meeting, held at the OPEC Headquarters, November 10–11, 2015.

OPEC Member Countries' Coordination Meeting, held at the OPEC Headquarters, October 18–19, 2016.

OPEC Members: a force in the field of environmental sustainability

While oil remains one of the main sources of energy in the years ahead, OPEC Member Countries have undertaken various vital steps to diversify their energy spectrum and identify other sustainable energy sources, irrespective of their impressive hydrocarbon reserves.
Branching into other energy forms has the dual benefit of tackling environmental matters, while at the same time reducing economic dependence on crude oil. The 14 OPEC Member Countries have consistently demonstrated their solid efforts to ride the train of sustainable development, as well as to actively participate in global efforts to combat climate change.
In the following pages, OPEC Bulletin's ***Ayman Almusallam*** *investigates some prominent projects in the field of sustainability and development in OPEC Member Countries.*

CCS projects (Algeria, Saudi Arabia and the UAE)

Major oil exporters have a key role to play in carbon capture and storage (CCS). CCS is a practice that aims to capture carbon dioxide (CO_2) generated through processing energy sources, thus preventing its emission into the atmosphere. The generated gases are usually collected and stored in underground geological formations, or used in enhanced oil recovery (EOR), where it then remains trapped underground.

In general, the process helps reduce greenhouse gas emissions.

CCS is an area that holds great promise. The Intergovernmental Panel on Climate Change (IPCC) estimates that the economic potential of CCS could be between ten per cent and 55 per cent of the total carbon mitigation effort until the year 2100.

The Global CCS Institute is a leading authority on CCS. The organization's mission is to boost the deployment of CSS technologies to overcome the issue of climate change.

It stated that 2018 may be the year that the "stars started to align again for CCS." In light of efforts to deliver on the Paris Agreement signed in 2015, "it became increasingly clear that the world will need all the technologies, mechanisms and approaches available to curb ever-increasing emissions.

"In the past year, and for the first time in quite a long time, we have seen decisive action from a number of governments to include CCS in their armoury."

Several OPEC Member Countries are already ahead of the curve. OPEC Members Algeria, Saudi Arabia and the UAE have been leading examples in use of this technology to support emerging environmental initiatives.

In addition to being an important oil producer, Algeria also engages in activities aiming to protect the environment and promote best practices across its operations.

The pioneering In Salah carbon capture and storage (CCS) initiative is a stellar example of capturing carbon

The Krechba gas treatment plant, about 1,200 km (746 miles) south of Algiers, Algeria.

dioxide that would have normally been released into the atmosphere, but was instead returned to its original location, a depleted gas reservoir about two kilometres below the ground.

The successful storage of CO_2 in the Krechba Formation over seven years up to 2011 has provided valuable insight into how CO_2 can be stored in analogous carboniferous sandstone wells.

The launch of Saudi Arabia's Uthmaniyah demonstration project in the Eastern Province of Saudi Arabia was announced in July 2015. The plan is to capture 0.8 MTPA of CO_2 at the Hawiyah natural gas processing plant and transport it 85 kilometres by pipeline to the depleted Uthmaniyah area of the Ghawar field. It is expected to have a total duration of three to five years.

The project will consist of four injection wells, two observation wells and four productions wells. Saudi Aramco will apply any lessons learned to other facilities and fields around Saudi Arabia.

Saudi Aramco states on its website, "At one of the Middle East's largest CO_2 capture and storage demonstration projects, we are proving it's possible to capture CO_2, inject it in our reservoirs, and test the feasibility of EOR in the process."

Every day the plant has the capability to capture and process 45 million standard cubic feet of CO_2. Since the initial injection of CO_2 in 2015, Aramco has doubled the oil production rate from four of its wells.

The company's work was recognized at the Abu Dhabi International Petroleum Exhibition and conference in 2016, where it received the top award for Best Oil & Gas Health, Safety and Environment Project. It additionally won the Energy Institute Environment Award.

Abu Dhabi, United Arab Emirates, started the world's first fully commercial CCS steel project, taking carbon dioxide from the Emirates Steel plant in Musaffah, and using it for EOR at the Bab and Rumaitha oil fields southeast of the capital. The project is operated by Al Reyadah, a joint venture of Abu Dhabi oil firm Adnoc and Masdar, the capital's renewable energy firm.

The Abu Dhabi National Oil Company plans to expand its carbon capture programme to a six-fold increase in the use of CO_2 EOR in maturing oil fields. This would free up gas currently injected for other use, and boost oil recovery rates, it said at the beginning of 2018. Adnoc will start to increase utilization of CO_2 in2021 to reach 250 million standard cubic feet per day by 2027.

Use of EOR, including carbon capture, use and storage (CCUS) can boost recovery in oil fields up to 70 per cent, while providing a sink for CO_2 from Emirates Global

Saudi Arabia's solar plant in Uyayna, north of Riyadh.

Aluminium facilities from 2024, as well as from the Taweelah power plant from 2030 onwards, said Suhail Mohamed Al Mazrouei, United Arab Emirates's Minister of Energy and Industry.

The global CCS Institute writes that Angola and Equatorial Guinea have good prospects for CCS in depleted oil and gas fields, while Angola has good prospects for storage in deep saline aquifers.

AMAK (IR Iran)

AMAK is the largest gas gathering and treatment project in OPEC Founding Member, IR Iran.

The mega project is planned to avert the flaring of around 180 million cubic feet of gas/day. The costs of the project were estimated at around $500 million, while another $100m was invested in developing pressure-boosting stations in the fields of Maroun and Koupal.

Ramin Hatami, production manager at the National Iranian South Oil Company (NISOC), commended the importance and size of the strategic project. He said: "AMAK, as the first mechanized no-flare project, is being implemented by domestic experts in the area covered by NISOC."

In its first phase, AMAK collects harmful gasses, then dehydrates them. This is followed by an injection process in the gas pipeline network. The gas is eventually sweetened at special gas processing plants for further consumption.

"Besides this, NISOC injects part of the associated gases to oil wells as part of its drive to implement its no-flare programme and preserve the environment," the production manager added.

The project name — AMAK — is derived from the fields from which gases are gathered, including Abtimour, Mansouri, Maroun, Ahvaz and Kopal.

Solar EOR (Kuwait)

OPEC Member Country Kuwait has found a perfect and unique match between crude oil and alternative sources of energy.

The project, which serves as a model for using clean energy to oil-producing countries, aims to use solar energy in extracting crude oil from beneath the surface, setting the path for a greener instrument in enhanced oil recovery.

A specialized company in identifying low-cost solar solutions to power industrial processes has entered into agreement with Kuwait to expedite the realization of Kuwait's ambitious 2020 and 2030 strategies.

Solar steam is a viable alternative to natural gas for EOR. This is especially relevant in Kuwait because meeting Kuwait's goals for heavy oil production would require burning more natural gas for EOR than Kuwait currently burns for power generation.

Kuwait represents one of the largest market opportunities for solar-powered oil production worldwide, according to the CEO of the company.

The cutting-edge technology is set to reduce dependence on burning natural gas to boost EOR applications in Kuwait, allowing the OPEC Member Country to use gas for other purposes, save on required investments, and support its climate change goals.

Solar energy (Saudi Arabia)

Since its foundation in 1932, the Kingdom of Saudi Arabia has taken solid steps toward the development of its renewable energy facilities, progressing from one milestone to another, irrespective of the difficulties

and hindrances that typically accompany such a critical journey.

Under the leadership of the Custodian of the Two Holy Mosques, King Salman Bin Abdulaziz Al-Saud, and the direction of its Crown Prince, Deputy Prime Minister and Minister of Defence, Prince Mohammad Bin Salman, Saudi Arabia has continued developing its renewable energy assets, as part of the Kingdom's ambitious roadmap — Vision 2030.

In March 2018, the Kingdom announced its efforts to develop a major solar energy project, which is set to generate to power worth 200 gigawatts by 2030. The total costs are estimated at around $200 billion. The project's various components will be manufactured inside the Kingdom, creating around 100,000 new jobs.

One year later, Saudi Arabia expressed its intention to enhance its wind energy assets to become the largest wind power market in the Middle East. Between 2019 and 2028, the Kingdom plans to increase its wind energy capacity by an impressive 6.2 gigawatts.

The Custodian of the Two Holy Mosques, while envisaging the nation's promising future, highlighted the primary aim of Vision 2030:

"My primary goal is to be an exemplary and leading nation in all aspects, and I will work with you in achieving this endeavour."

Masdar City (UAE)

The United Arab Emirates (UAE) has been an active leader and advocate in the domains of sustainable development and renewable energy.

Being a true believer in 'leading by example', the UAE has invested tireless effort to develop the remarkable City of Masdar, which is a planned city dependent on renewable energy, to serve as a benchmark in the global community.

Located in the south-eastern part of Abu Dhabi, the unmatched initiative was launched in 2006 with the aim to build the most ecological and sustainable city worldwide. Its first tenant was the Masdar Institute of Science and Technology, which has been based in Masdar City since 2010.

The city signifies the smart investment and forward-thinking mind-set of Emirati leaders, as the project has over time led to a decrease in the use of energy and water, as well as the production of waste. It has also accommodated the increasing demands of modern urbanization.

Masdar City has continued to add schools, houses and restaurants to its resilient blueprint since its establishment, in addition to attracting local and international investors and business leaders.

In January 2019, the company emphasized its interest in doubling its renewable energy capacity within five years. Mohamed Jameel Al Ramahi, CEO of Masdar, commented: "We are a growing company, we will be doubling our capacity in the next five years or less. We are pursuing opportunities globally and will be entering new geographies in Asia and the Americas."

The city is managed by Masdar Company, a subsidiary of Mubadala Development Company.

The streets of Masdar City, projected to be the first city in the world to be totally sustainable.

Industry solutions to climate change issues

It has become absolutely essential that the world community consider the climate change challenge and sustainable development in the context of discussions on the energy transition. The urgent need to address this problem has spilled over in some very definite ways into fossil fuels, including the oil and gas sector, where programmes have started to address this issue.

Mohammad Sanusi Barkindo, OPEC Secretary General, at COP24 in Katowice.

The launch on October 8, 2018, of an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways brings home the urgency of efforts to address climate change. However, one must consider that solutions should come via several channels, and that those most at risk of the greatest impact remain disadvantaged populations, particularly in the developing world.

This massive challenge affecting everyone on the planet cannot be faced alone. Only a collaborative and collective response is going to guide mankind in significantly eliminating the amount of carbon dioxide emissions required to reach the temperature target of at least 2°C.

To this end, the oil industry has a very important role to play and should be part of the solution to the climate change challenge, as the Secretary General of OPEC said to COP24 in Katowice, Poland, on December 12.

"Of course, more needs to be done. Nevertheless, the industry's capacity for technological innovation must be harnessed within this process," he said.

One cannot leave behind those facing energy poverty, which holds so many back from attaining even the bare essentials, such as power and light, and a means to develop a sustainable future for their families. Among these are the approximately 3 billion people without clean cooking fuels and about 1bn without access to electricity.

To meet the dual global challenges of climate change and energy poverty, all energy sources will be needed,

combined with technologies to minimize and eventually remove the greenhouse gases being released. This should not be about choosing one energy source over another. Each has an essential role to play. The oil industry can play a critical role both in meeting the needs of those facing energy poverty, and combatting climate change.

To this end, the oil industry has always been a technology leader and must continue to be a part of the solution to the climate change challenge. Civilization's economic growth and social progress is based largely on the contribution of oil.

The oil industry's cumulative experience and know-how, along with the capacity for technological innovation upon which it is built, can and must be leveraged to help meet these goals.

Below are some fine examples of the corporate world joining hands with governments, organizations and civil society to find solutions; and the results to date show that through enhancing synergies by strong partnership, elimination of emissions is indeed feasible. Thus, international cooperation and a just transition should be considered vital for the implementation of the Paris Agreement, whereas partnerships are important to increase synergies and share stories and best practices. We hope very much to see such initiatives increase in size and speed of delivery in the future.

International Petroleum Industry Environmental Conservation Association (IPIECA)

The global oil and gas industry association for environmental and social issues, IPIECA, intends to enable industry to improve its environmental and social performance. It is mapping the path for the oil and gas industry to meet the Sustainable Development Goals (SDGs), and the long-term aims of the Paris Agreement. Its membership comprises the world's leading oil and gas companies (37), service companies, and regional and national industry associations. It was set up in 1974.

The non-profit association undertakes its mission through developing, sharing and promoting good practices and solutions; enhancing and communicating knowledge and understanding; engaging members and others in the industry; working in partnership with key stakeholders; and pooling expertise across a range of environmental and social issues.

According to its website: "We do this with the understanding that the issues that dominate the sustainable development agenda — climate and energy, environmental and social issues — are too big for individual companies to tackle alone. The industry must work together to achieve improvements that have a real impact."

IPIECA has a working group on each of the following topics: biodiversity and ecosystem services; climate change; health; oil spill preparedness; fuels and products; reporting; social responsibility; and water.

"Of course, more needs to be done. Nevertheless, the industry's capacity for technological innovation must be harnessed within this process." — Barkindo

Oil and Gas Climate Initiative (OGCI)

The OGCI is a bottom-up, voluntary, industry-driven initiative, which is expected to enable the oil and gas industry to work collaboratively to address climate concerns. It is a unique collaboration, launched in 2014, that serves as a platform to advance technological solutions and to catalyse meaningful action and coordination on climate change. Rather a young initiative, its inception dates back to 2014.

This group of 13 CEOs of major oil companies — which represent about 30 per cent of global oil and gas production — is leading a voluntary initiative to "leverage the industry's collective strength to lower the carbon footprints of energy, industry and transportation value chains via engagements, policies, investments and deployment." Chief executives are personally invested in steering and leading the initiative. This engagement and leadership has transformed the way in which these companies approach collaboration on climate-related issues.

They are dedicated to the ambition of the Paris Agreement to reach net zero emissions in the second half of this century. This group has already established an investment fund of more than $1bn to lower the carbon footprint of the energy and industrial sectors. Four priority areas have been identified:

i) reducing methane emissions;
ii) accelerating the deployment of carbon capture, utilization and storage (CCUS);
iii) improving industrial energy efficiency;
iv) contributing to transportation efficiency.

The OGCI companies announced, for example, a

target to reduce collective average methane intensity of aggregated upstream oil and gas operations to below 0.25 per cent by 2025 in September of 2018. The initiative supports carbon capture and storage developments, an incentive that could greatly reduce the carbon footprint of the industry.

International Energy Agency Greenhouse Gas (IEAGHG)

The IEAGHG, formed in 1991, is an autonomous and independent framework within the International Energy Agency. It currently has 15 member countries, along with the European Commission, OPEC and 16 multi-national sponsors. The IEA GHG's R&D programme assesses the role that technology can play in reducing greenhouse gas emissions from both the power system and industrial processes.

This is done through employing academic institutions and technical consultancy firms from around the world to undertake detailed techno-economic research of different technology options — with a focus on carbon capture and storage (CCS) — and how these can cost-effectively reduce greenhouse gas emissions. These technical reports are available to the public.

It also hosts regular conferences on post-combustion capture and greenhouse mitigation technologies, summer training and other events.

OPEC has been a long-standing member of IEAGHG and attends the executive committee meetings held twice a year; it has also hosted some of these meetings in its capacity as a member. The aim of participation is to be active in promoting CCUS in the oil and gas industry, to assist oil and gas businesses in reducing their environmental footprint, as well as for OPEC Member Countries to benefit from IEAGHG collaborative R&D publications.

Some recent and upcoming publications focus inter alia on sustainability in petrochemicals as well as the refinery industry and electricity production. The Secretariat is still diligently assessing the opportunities and benefits of this membership.

Zero Routine Flaring by 2030

The World Bank Group started a *'Zero Routine Flaring by 2030'* initiative four years ago, meant to remove associated gas produced from reservoirs together with oil. It emphasises capturing this valuable energy source, while at the same time eliminating the CO_2 emissions caused by flaring.

Governments that endorse the initiative agree to provide a legal, regulatory, investment and operating environment conducive to upstream investments and the development of viable markets for captured the gas and bring it to market. There are currently 77 endorsers — including seven OPEC Member Country government partners — covering about 60 per cent of the total gas flared around the world. A number of oil companies from OPEC Member Countries and the OPEC Fund for International Development (OFID) also endorse this initiative.

As of July 2018, new satellite data shows a significant decline in gas flaring at oil production sites around the world in 2017. Most OPEC Member Countries have taken ambitious steps to seriously reduce flaring.

Follow the OPEC Secretariat on Social Media

Facebook

facebook.com/OPECSecretariat

Twitter

twitter.com/opecsecretariat

Evolving multilateralism in climate change negotiations

By Dr Mohammad Taeb, Director, Directorate of International Energy Fora, Ministry of Petroleum, IR Iran; IR Iran's Acting National Representative to OPEC; and former Environmental Coordinator of the Environmental Matters Unit (EMU) at the OPEC Headquarters.

Dr Mohammad Taeb, Director, Directorate of International Energy Fora, Ministry of Petroleum, IR Iran, and IR Iran's Acting National Representative to OPEC.

On April 24, the United Nations celebrated the *'International day of multilateralism and diplomacy for peace.'* The UN Secretary General underscored in his message "the value of international cooperation for the common good." One of the most important "common goods" is containing climate change, under which multilateralism and cooperation in their broadest sense are being sought. OPEC, as an intergovernmental organization among developing countries with almost 60 years of experience in multilateral engagements, appreciates the significance of multilateralism.

OPEC has been at the front end of multilateral negotiations on climate change for many years, and consistently seeks full implementation of the UN Framework Convention on Climate Change (UNFCCC). Over the years, OPEC has positively contributed to global efforts in finding solutions for climate change in the context of sustainable development for all countries.

Paris Agreement

For a very long time, and since the adoption of the UNFCCC in 1992, climate change negotiations have centred and been focused on negotiations among the Parties, or signatory governments. However, the adoption of Paris Agreement at COP21 in 2015 introduced a paradigm shift in climate change negotiations by involving non-Party stakeholders in the implementation of the Paris Agreement. This approach is expected to re-write our understanding of multilateralism in climate change negotiations. Involvement of non-Party stakeholders in the Paris Agreement is expected to not only expand or

even alter "representation", but also to influence "governance" and the way the Paris Agreement will be implemented, with consequential impacts on how climate change is addressed.

Decision 1/CP.21, which gave effect to the Paris Agreement, calls for mobilization and climate actions not only by the Parties, but also by a broad range of non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples. At the UNFCCC portal on Non-State Actor Zone for Climate Action (NAZCA), so far about 12,400 climate actions by non-Party stakeholders have been registered.

Awareness

The broad range of non-Party stakeholder involvement in the implementation of the Paris Agreement reflects the broad range of interests among them. Such interests may range from profit-for to non-profit-for climate actions, from public awareness to policy awareness on climate actions, from coordination to consolidation of efforts, etc.

The Paris Agreement provides a continuum of opportunity for interaction between non-Party and Party stakeholders. This interaction is expected to evolve gradually over time, with the possibility of a "phase transition" from Party to non-Party and *vise versa*. A critical challenge in this process would be to address the temperature target of the Paris Agreement, while keeping its implementation consistent with the Convention. Another would be to ensure non-Party stakeholders from all countries, particularly developing countries, are equally represented and engaged in this process.

Achieving the temperature target of the Paris Agreement requires a significant reduction in emissions, beyond what Parties have announced as intended nationally determined contributions (INDCs) or nationally determined contributions (NDCs). Current emissions reduction actions in NDCs or INDCs are mostly low-hanging fruits, thus enhancing them would require considerable effort. For developing countries, many of which are already grappling with underdevelopment in its many faces, the magnitude of the challenge is even bigger.

Crossroads

The energy sector is at a crossroads: on one side, much of future emissions reductions is expected to come from the energy sector, whereas on the other side, assisted by new technologies, many countries are opting to exploit their unconventional fossil fuel reserves, most of which have well-to-tank emissions exceeding those of conventional oil and gas.

The broad array of interests in the energy sector and their relation to climate change issues will continue to dominate the policy arena for many years to come. OPEC, as a centre of excellence in research on energy matters, and as a non-Party stakeholder in the UNFCCC, has a critical role to play in providing a developing country perspective and solutions to climate change.

OPEC Headquarters in Vienna, Austria.

OAPEC and climate change: hand in hand for a better future

*This article by **Abbas Ali Al-Naqi**, Secretary General of the Organization of Arab Petroleum Exporting Countries (OAPEC), focuses on two main topics. The first demonstrates the role of OAPEC in dealing with the climate change issue. The second shows the significance of OAPEC members in the international oil and natural gas markets based on some main energy indicators.*

Abbas Ali Al-Naqi, Secretary General, of the Organization of Arab Petroleum Exporting Countries (OAPEC).

I. Role of OAPEC member countries in dealing with climate change issues

COP-21 endorsed the Paris Agreement with the consensus of 195 countries. It is an ambitious and binding global agreement. It was deposited at the UN in New York and opened for signature for one year starting April 22, 2016. The agreement entered into force after 55 countries, which accounted for at least 55 per cent of global emissions, had completed their instruments of ratification. The Paris Agreement will replace the Kyoto Protocol, which expires in 2020.

The most important features of the Paris Agreement include:

- Forming of a specialized team on the Paris Agreement under the name 'Paris Committee' after making the required amendments to electing office members, etc. It should submit regular reports on the work in progress.
- Reaching a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels, while maintaining efforts to limit the increase to 1.5°C.
- Committing developed countries to provide sufficient support to help developing countries protect the environment. They should work on a clear roadmap to provide funding of $100 billion by 2020, while encouraging other Parties (individual countries or a group of countries) to provide support on a voluntary basis.
- Boosting international cooperation on environment-

Map of OAPEC member countries.

friendly techniques, and building the capabilities of developing countries to face climate change.

- Countries should submit national climate action plans (INDCs), with a mechanism to review their INDCs every five years; these INDCs remain optional. There will be a compulsory review in 2025, and following reviews should show progress.
- Stresses transparency on mitigation and adaptation in developing countries and providing support, while recognizing that less developed and small developing countries face special conditions.
- Boosts the existing Warsaw International Mechanism on Loss and Damage.
- Successfully concluded some technical issues, in addition to executing issues relevant to technology, adaptation, and work on building capacities.

When COP21 endorsed the Paris Agreement with the consensus of 195 countries, oil-exporting countries, including OAPEC member countries (all are developing countries), adopted a transparent and objective approach. They announced very clearly that they share in international efforts aimed at tackling climate change according to international agreements signed in this regard. They also reiterated their commitment to improving energy efficiency, shifting from liquid fuel to gas, encouraging clean energy research, expanding the use of carbon capture and storage (CCS) techniques, as well as promoting public trends on the use of renewable energy, such as solar, thermal and wind as complementary energies to fossil fuels.

Within such an atmosphere, and following long and tough negotiations within which OAPEC member countries and the Arab Negotiating Group on Climate Change played an important role, the world managed to conclude the 'Paris Agreement', which aims mainly to reach a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels, while maintaining efforts to limit the increase to 1.5°C.

The General Secretariat of OAPEC, having participated as an observer in COP21, lauded this historical step, describing it as an ambitious global agreement. The General Secretariat of OAPEC hoped that international conditions would allow for the agreement to progress and achieve its goals, and that developed countries would deliver on their commitments stipulated in the framing agreement on supporting developing countries in their climate change efforts.

OAPEC also participated in COP22 in Marrakesh, Morocco, from November 7–18, 2016, in its capacity as an inter-governmental organization (IGO). COP22 and its negotiators mainly reviewed progress in the international arena post-Paris COP21.

During and after Paris COP21 in 2015, OAPEC contributed via various activities to integrate efforts in supporting the climate change cause. Here is a summary of three key climate change events organized by OAPEC:

1. The General Secretariat of OAPEC, in collaboration with the Saudi Ministry of Petroleum and Mineral Resources, held a seminar on December 5, 2015, on *'The role of oil and gas technology in facing climate change'* on the sidelines of COP21 in Paris.

The seminar aimed at presenting oil and natural gas technologies used in Arab countries and their role in fighting the impact of climate change. It also highlighted how CCS technology has rapidly matured.

A number of scientific papers have been presented by member countries as follows:

- **United Arab Emirates:**

The Emirates steel project sponsored by Riyadh

A joint venture between MASDAR and ADNOC, the first commercial facility in the Middle East adopting CCS. It is expected to capture 800,000 tons of CO_2-rich steam to recover oil.

- **Kingdom of Saudi Arabia (KSA):**

Aramco's CO_2 project

A pilot carbon capture and enhanced oil recovery project for 40 million cubic feet of CO_2/day. It also highlights the pioneering nature of its observation and monitoring system.

- **Qatar:**

Gas recovery project

The project is expected to help in recovering 29 billion cu ft of gas/annum, which is sufficient to produce 750 MW to serve 300,000 households.

- **Kuwait:**

Limiting GHG to conserve energy

- **Egypt:**

Egypt's experience in using vehicles operated by compressed gas

The project encourages taxis and private vehicles to shift to using natural gas, which benefits consumers and the environment alike. There are plans to increase the use of compressed natural gas between 2016–19.

2. On November 10, 2016, the General Secretariat of OAPEC organized an event in collaboration with the Qatari Ministry of Energy and Industry and the Saudi Ministry of Energy, Industry and Mineral Resources, on the sidelines of COP22 in Marrakech under the title 'Creating value-added from CO_2 emissions." The event aimed at reviewing current CCS technology developments and aspects available for the sustainability of technology in the oil, gas and petroleum downstream industries, food industries, waste treatment, and other industries. OAPEC Secretary General, Al-Naqi, took part in this event as a keynote speaker, along with a group of experts from KSA, Kuwait and Qatar. Current and future challenges facing CCS technology were tackled, along with proposed solutions. A large group of Arab and foreign environmental experts also participated in the event.

Having participated in COP22, the General Secretariat of OAPEC expressed appreciation for Arab countries' efforts during international negotiations on climate change, and praised the content of the *Marrakech action proclamation for our climate and sustainable development,* which forms an important part of progress in international efforts on environment, climate change, and their implications for developing and least-developed countries. OAPEC also appreciated the efforts of all those who contributed to making this important international conference a success.

3. The General Secretariat of OAPEC has also been following up environmental, climate change, and UNFCCC issues in line with the Ministerial Council's directives, by preparing periodical reports. In this vein, the OAPEC Secretary General took part in COP24 in Katowice, Poland, in December 2018. On the sidelines of COP24, the General Secretariat of OAPEC organized an important seminar in collaboration with the Saudi Ministry of Energy, Industry and Mineral Resources, on *'Using modern technology to cut CO_2 emissions'*. A group of speakers from KSA, Bahrain, and Kuwait presented at the seminar in the presence of a group of Party experts and negotiators.

It is worth mentioning that the General Secretariat of OAPEC has been preparing specialized studies on the oil, gas and energy industries for years. It also prepares studies on health, safety, environment, and petroleum product quality improvement methods. Environment and climate change are usually on the agenda at scientific conferences and seminars held by the organization.

As for environment, the General Secretariat of OAPEC monitors ongoing developments of the UNFCCC, the Kyoto Protocol and the Paris Agreement on Climate Change as per the directives of the OAPEC Council of Ministers. This is done in order to clarify member countries' stance on these issues in continued cooperation with the Arab Negotiating Group, League of Arab States (LAS), OPEC, and the Gulf Cooperation Council (GCC). Coordination meetings are usually organized with these entities to discuss draft resolutions and topics under negotiation to impede any resolutions that might cause harm to any member country interests and economies.

Conclusion

OAPEC member countries are sparing no effort in supporting climate change activities. As such, OAPEC adopts the stance of the Arab Negotiating Group, which agreed to activate climate change committees in Arab countries; review the outcome of COP24 in Katowice with the concerned authorities of each individual country to draw national plans; and coordinate with research institutions and concerned Arab and regional organizations on this issue.

This is done in addition to working on the sustainability of national and regional institutional actions to serve climate change issues in Arab countries, as well as monitoring climate change activities and documents; providing full support to Palestine during its presidency of the Group of 77 and China; and ensuring Arab participation in the Katowice Experts Committee on evaluating the impact of response measures.

Additionally, OAPEC is looking into the future by preparing specialized studies on climate change, along with other energy-related topics, to provide analysis and projections that help decision-makers have a clearer view of these issues.

OAPEC member countries' delegates played a great role during negotiations in the preparation of the UNFCCC, the Kyoto Protocol and the Paris agreement. They contributed to adding articles to these agreements that protect the interest of countries that highly depend on fossil fuels in their economies and revenues.

II. The significance of OAPEC member countries in the international oil and natural gas markets

OAPEC is a regional inter-governmental organization established by an agreement signed in Beirut on January 9, 1968, by the State of Kuwait, the Kingdom of Saudi Arabia and the State of Libya; it is located in Kuwait. At present, (OAPEC) members include ten active countries in addition to Tunisia, namely: Algeria, Bahrain, Egypt, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, Syria, and the United Arab Emirates.

The main objectives of OAPEC are cooperation and coordination among its member countries in the development of policies and joint ventures in the field of oil, gas, and other sources of energy in general.

OAPEC members occupy a significant position in the international oil and natural gas markets, which is emphasized by the following main energy indicators: reserves, production and exports.

Regarding oil reserves and production, OAPEC members held about 705 billion barrels of proven oil reserves in 2018, accounting for almost 47.9 per cent of total world oil reserves. With respect to production, OAPEC members produced around 24.7 million barrels/day of oil in 2018, representing 28 per cent of the world's total production.

Regardless of the fact that energy consumption in OAPEC countries has been progressively rising above the world average over the last years, OAPEC still represents the largest oil-exporting region in the world. OAPEC's export of crude oil and products was estimated at 21.2m b/d, representing 28 per cent of the world's total in 2018.

As for natural gas, OAPEC members hold around 53 trillion cubic metres of proven gas reserves, which represent some 26.4 per cent of the world's total reserves. Marketed gas production in OAPEC is reaching a level of 549.5 billion cu m or 15 per cent of the world's total output.


Shutterstock

On the other hand, renewables are expected to grow significantly. It should be noted that many OAPEC member countries are making significant investments in renewables, given their vast solar and wind resources. However, renewables can only complement rather than supplant hydrocarbon fuels, which will remain OAPEC's main business and the world dominant source of energy for decades to come.

The oil sector remains the engine of economic growth and development in most OAPEC member countries, despite efforts to diversify their economies. Oil exports generate the bulk of foreign revenue needed to meet producers' import requirements. They also generate the bulk of the government revenues needed to implement key developmental and social projects and to diversify and industrialize their economies to achieve sustainable and stable economic growth and to create employment opportunities for the hundreds of thousands of workers entering their labour force each year.

International Maritime Organization 2020 regulation

The shipping industry will be facing challenges in 2020 when the International Maritime Organization (IMO) global 0.5 per cent fuel sulphur content cap regulation begins to be enforced. Currently the limit is 3.5 per cent.

The move is taking place in response to growing environmental considerations, of which emissions from ships also play a role. The 2020 deadline was confirmed in October 2016 at the 70th session of the IMO's Marine Environment Protection Committee.

This move will change the bunker fuel supply and availability landscape, and shipowners are expected to comply with the regulation, while refiners are expected to make changes to refinery configuration and production to meet this changing demand. Affected parties are currently seeking the best approach to suit their operations and remain commercially viable over time.

Both fuel suppliers and fuel buyers are facing a challenging situation. Shipowners do not know how much product will be needed, which makes it tough for suppliers to plan.

On top of this, there is an already existing 0.1 per cent sulphur cap in designated Emission Control Areas (ECAs).

Already back in 1997, the IMO was addressing environmental impacts from ships, with a global sulphur cap of 4.5 per cent which first came into effect in 2005; this was lowered to 3.5 per cent in 2012. It also created ECAs in designated sea areas with stricter sulphur content limits of 0.1 per cent, in place since 2015; this is reduced from one per cent when ECAs were introduced in 2010.

Heavy fuel oil (HFO) has traditionally been used to power ships, and is high in sulphur content. As late as 2016, HFO demand accounted for 70 per cent of mixed grade bunker fuels.

There are several ways that the shipping industry can comply with the IMO regulation:

- Switch to 0.5 per cent compliant fuel (either low sulphur fuel oil (LSFO), middle distillates or a compliant fuel blend)
- Continue to consume high-sulphur fuel oil (HSFO) while running an exhaust gas cleaning system, ie a scrubber
- Switch to an alternative fuel (LNG or biofuels).

In practical terms, the last option is only relevant in the longer term. Thus, ships will have to comply either by using low-sulphur fuel (LSFO, middle distillates or a compliant blend) or by installing scrubbing facilities onboard. Given the variety of options, there is significant uncertainty as to how shippers and the global refining system will react and adjust.

According to the OPEC *World Oil Outlook 2018,* the

Shutterstock

IMO

Kitack Lim, IMO Secretary-General.

Kitack Lim, IMO Secretary-General, received Ms Christiana Figueres, former Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), at IMO Headquarters, London, in April 2018.

IMO regulations will affect the overall product demand mix, with rising middle distillate and low-sulphur fuel oil demand and a simultaneous decline in high-sulphur fuel oil demand. At the same time, the Reference Case assumes a certain level of non-compliance, despite efforts to enforce the regulation, especially in the early years of its implementation. It is highly probable that some regions may see lower compliance due to a lack of compliant fuel and a lack of scrubbers.

The uncertainty regarding compliance with the IMO rule makes any early IMO-related investment in the shipping and/or refining industry difficult (although there are some limited IMO-driven refinery developments), which again supports the view that the first year following the rule's entry into force may cause turmoil in the markets. According to the International Energy Agency (IEA): "Global refiners will be put under enormous strain by the shifting product slate."

On the positive side, a slowdown in global product demand growth, as well as increase in low-sulphur tight oil supplies may lower pressure on the global refining system and provide more flexibility regarding base refinery throughputs to switch to IMO-compliant fuels.

Due to the sudden switch in the product mix, it is expected that the impact of the IMO regulation on HSFO prices, as well on the gasoil/HSFO spread, will be significant. This would result in a negative impact on the differentials of HSFO-rich, medium and heavy-sour crudes, especially in 2020.

In general, it remains to be seen how the refining industry and the tanker sector will adapt to this new challenge once regulations are implemented next year.

Addressing climate-related financial disclosures at IEA-IEF-OPEC Technical Meeting

The Secretariat held a special session on climate-related financial disclosures as part of its 3rd Joint IEA-IEF-OPEC Technical Meeting on the Interactions between Physical and Financial Energy Markets, held on March 28, 2019. The session was greeted with interest among participants and generated much discussion.

The technical meeting is part of a series of joint events held by the three organizations as part of a trilateral work programme, established by the three at the 12th International Energy Forum in 2010. The meetings have become highly successful pillars of the producer-consumer dialogue, attracting top analysts and experts to share perspectives and knowledge.

For the first time, a special session was held on climate-related financial disclosures and their impact on global investment in the oil industry. This is a very timely subject and likely to impact the pace of investment, particularly in long-term cycles of the oil industry.

The unprecedented political frameworks that have been ratified by the larger international community were stressed, emphasizing the scale of the challenge for energy demand that lies ahead. It was argued that global carbon emissions need to be reduced by roughly 50 per cent over the next 20 years in order to meet the Paris Agreement's long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels and to limit the increase to 1.5°C. Paris Agreement, Article 2(c) reads that global financial flows should be made consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

Physical risks

It was also highlighted that there is a need to understand what is required to make such a commitment happen, including the physical risks and unintended consequences stemming from climate change.

In ensuing presentations, it was stated that the current drive for climate-related action is less of a policy

L–r: Dr Sun Xiansheng, Secretary General of the International Energy Forum; Mohammad Sanusi Barkindo, OPEC Secretary General; Neil Atkinson, Head of the Oil Industry and Markets Division at the International Energy Agency.

issue than a grass-roots movement prompted by environmental concerns, which has been taken up by several highly influential leaders and organizations. It was also explained that the Financial Stability Board (FSB) had created a Task Force on Climate-related Financial Disclosures, which published a report in June 2017. Thus, while environmental, social and governance (ESG) criteria are gaining traction, and this is further supported by shareholder activism, it could become a challenge for energy security.

The issue of climate risk and capital requirements needed to address these was also covered. The key issue identified to alleviate climate change is the pursuit of a reduction of GHG emissions. It was suggested that oil companies could contribute to this by sharing and employing their extensive knowledge and expertise on carbon capture technologies. In addition, the oil industry could review its exploration and production (E&P) processes to identify ways and means of reducing GHG emissions, also in terms of flaring.

Finance necessary measures

When examining the capital required to finance climate change solutions, it was found that the current investment in clean energy (around $334 billion in 2017) would need to triple in order to be able to finance necessary measures, with the largest burden placed on developing countries (DCs). While the OECD and BRIC countries would only need to double current efforts to reach required investment levels, DCs would need to raise their current expenditure levels by a factor of 19. It was also stated that funding for the energy transition will not come from the public, but rather the private sector,

L–r: Dr Sun Xiansheng, Secretary General of the International Energy Forum; Mohammad Sanusi Barkindo, OPEC Secretary General; Neil Atkinson, Head of the Oil Industry and Markets Division at the International Energy Agency.

with banks possibly playing an important leading role in channelling funds.

Green bonds have been issued, totalling $167bn globally in 2018, representing a revolutionary change in bond markets, since they have been issued by the industry — not governments — and their success will also depend on the wide-spread acceptance of a common definition of standards rather than strict national government regulation, which could deter investment on a broader scale.

Reduce carbon intensity of fuels

Discussion also focused on seeking out oil projects with a low breakeven cost, expanding these along the value chain and developing profitable and sizeable low-carbon electricity businesses. Emissions produced by energy companies during operations come from flaring, methane, energy use during production, as well as electricity used in the process of distribution. At the same time, emissions are generated by consumers' use of these energy products. It is the aim of the particular company which spoke at the session to reduce the carbon intensity of fuels provided, improve operation efficiency, promote sustainable biofuels and invest in carbon sink businesses.

In his closing speech, OPEC Secretary General Mohammed Sanusi Barkindo, stated that the group learned how climate-related financial disclosures are impacting global investment in the oil industry. "This is of special significance in terms of long-term investments, which have been recovering at a slower-than-expected pace in most areas of the world, except in the US shale basins," he said.

The session's main takeaways included the fact that climate-related financial disclosures are becoming a key challenge for the oil industry and companies. The importance of the industry in engaging with international stakeholders and emphasizing the importance of oil and gas in the decades ahead will be key. Finally, stated the Secretary General, it was also observed that climate-related financial disclosures are a key part of the energy transition, although an agreement must still be reached on what the energy transition actually means.

The 3rd Joint IEA-IEF-OPEC Technical Meeting on the Interactions between Physical and Financial Energy Markets, was held on March 28, 2019. It was greeted with interest among participants and generated much discussion.

Delegates take time out for a group photograph.

OFID:

Proud of its past, focused on its future

For more than four decades, OPEC has proudly identified the OPEC Fund for International Development (OFID) as its sister institution. Over the following pages, the OPEC Bulletin's ***Ayman Almusallam*** *profiles the organization and provides an overview of how it operates and its bold plans for the future ...*

OPEC Fund for International Development (OFID)

OFID/Lukas Hüller/Child of Play

OFID's vision

To aspire to a world where sustainable development, centred on human capacity-building, is a reality for all.

OFID's mission

To foster south-south partnership with fellow developing countries worldwide with the aim of eradicating poverty.

The headquarters of the OPEC Fund for International Development in Vienna, Austria.

A historic decision

The OPEC Fund for International Development (OFID) is the intergovernmental development finance institution established in 1976 by the Member States of the Organization of the Petroleum Exporting Countries (OPEC). OFID was conceived at the Conference of the Sovereigns and Heads of State of OPEC Member Countries, which was held in Algiers, Algeria, in March 1975. A Solemn Declaration of the Conference "reaffirmed the natural solidarity which unites OPEC countries with other developing countries in their struggle to overcome underdevelopment," and called for measures to strengthen cooperation between these countries.

South-South solidarity

OFID promotes partnerships between OPEC Member Countries and other developing countries as an expression of South-South solidarity. It is unique in supporting socioeconomic progress in all developing countries apart from its own. The organization does this in a number of ways:

- By extending concessionary financial assistance in the form of loans for development projects and programmes, and trade financing.
- By participating in the financing of private sector activities in developing countries.
- By providing grants in support of technical assistance, food aid, research and similar activities, and humanitarian emergency relief.
- By contributing to the resources of other development institutions whose work benefits developing countries.

OFID partners

To optimize the impact of its contribution to international development, OFID cooperates closely with the bilateral and multilateral agencies of its member countries, the World Bank Group, the regional development banks and the specialized agencies of the United Nations, as well as a host of non-governmental and other organizations.

All developing countries, with the exception of OFID member countries, are in principle eligible for development assistance. The least developed countries, however, are accorded higher priority. So far, 134 countries worldwide have benefited from OFID's financial assistance.

On the verge of a bold growth chapter

After evolving from a temporary 'Special Fund' in 1976, to a permanent development agency known as the OPEC Fund for International Development in 1981, to launching private sector and trade finance operations in 1998 and 2006 respectively, OFID is now on the verge of a bold and ambitious growth chapter *(see the interview with OFID's new Director-General on page 48 for more)*.

OFID and the SDGs

OFID has reaffirmed its support for the United Nations 2030 Agenda for Sustainable Development. Every project the organization supports has a development objective. The SDGs are a global agreement and serve to focus the world's development efforts. OFID's developing country partners have signed up to the SDGs, too, and the organization's finance and support helps them to achieve national development plans and other SDG-linked priorities.

In March 2019, the 166th Session of OFID's Governing Board approved over $303 million of new funding to benefit developing countries across the globe.

Newly-approved development finance

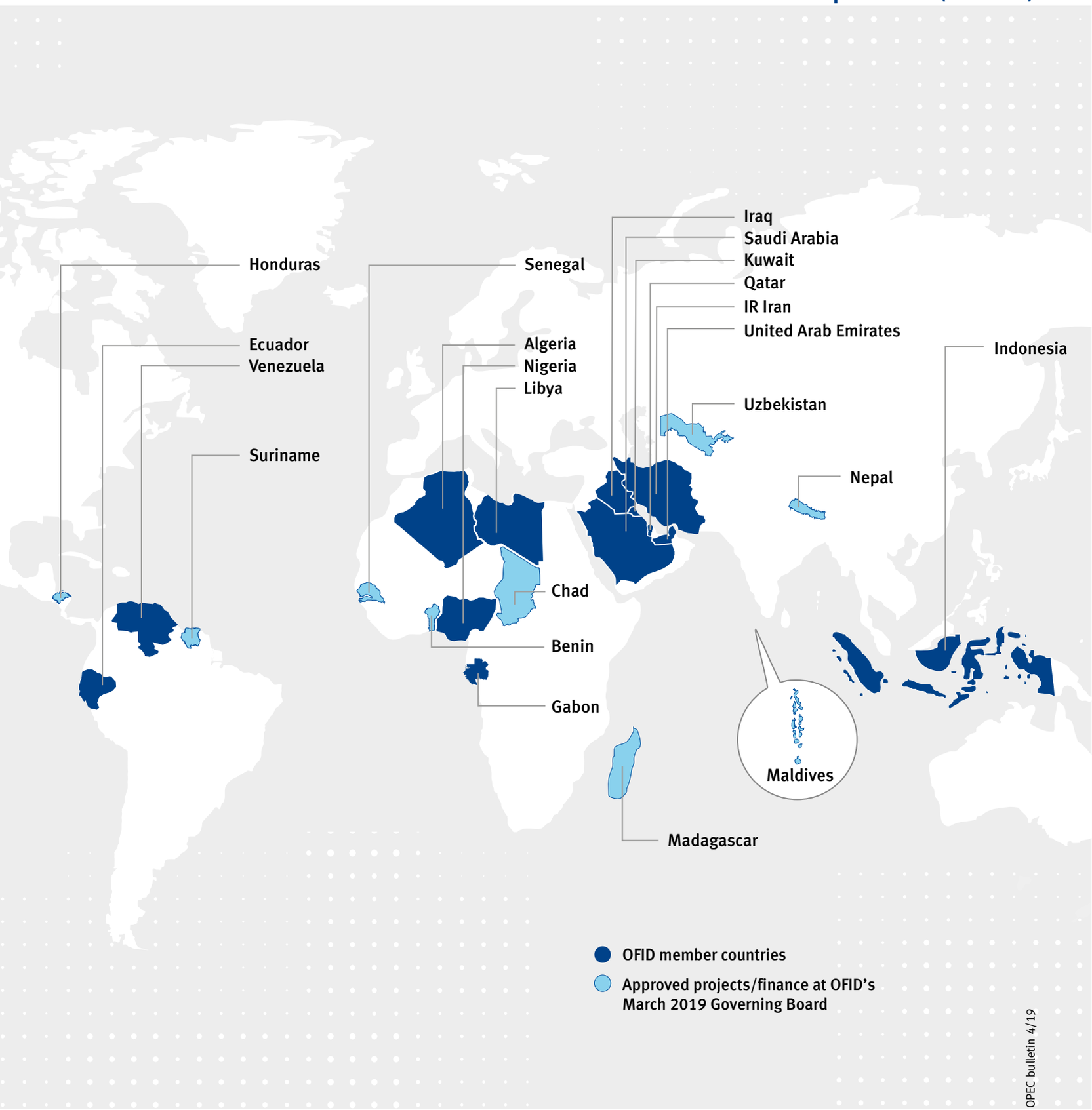
In March, the 166th Session of OFID's Governing Board approved over $303 million of new funding to benefit developing countries across the globe. Most of the approved funds will finance projects in the transportation, water and energy sectors. Public sector loans, amounting to approximately $225m, will support the following projects:

Country	Project	Amount ($ million)
Honduras	**Northeastern small producers' economic and social inclusion project — PROINORTE** To increase the incomes and improve the living conditions of about 70,000 people through organizational strengthening, technical assistance, and building and/or upgrading rural infrastructure, including providing over 10,000 cookstoves.	20.00
Madagascar	**Mangoky river bridge construction** To help reduce rural poverty and promote inclusive economic growth in the south-west through the construction of a bridge to improve the transport network. Access roads and other social infrastructure will also be built, benefiting about 2.4 million people.	10.00
Maldives	**Outer islands harbours, water supply and sewerage facilities** To improve the living conditions of approximately 20,000 people residing on 13 islands. A harbour will be reconstructed to improve inter-island travel and the importation of goods, and to aid the local fishing industry.	50.00
Senegal	**Dakar — St Louis coastal highway (Dakar — Tivaouane section)** To improve access to public services and jobs by constructing, among other things, a 63.1 km highway and seven interchanges, benefitting approximately 1.4 million people.	65.00
Suriname	**Expansion of power generation, transmission and distribution systems** To build a new 36 MW power plant and upgrade an existing one, as well as upgrade and expand transmission and distribution networks. The project will benefit about 320,000 people.	26.00
Uzbekistan	**Improvement of water supply in Yangikurgan District and the City of Namangan** To construct/reconstruct water supply infrastructure thereby improving the health and living conditions of approximately 185,000 people.	53.96
Total		**224.96**

The Governing Board also approved a $300,000 grant for a project aimed at enhancing access to safe drinking water for the rural population in Chad's pastoral areas.

$80m was approved under OFID's private sector facility: €30m (approximately $34m) to help strengthen the energy sector in Benin; $30m to help Nepal boost its energy sector; and $15m to support micro-, small- and medium-sized enterprises and the renewable energy sector in Nepal.

OPEC Fund for International Development (OFID)



A bold new vision:

Development finance organization OFID is poised for significant growth and efficiency gains

OFID

In 1975, the Heads of State and Government of OPEC Member Countries called for the establishment of multilateral financial institution to support sustainable development in other, non-OPEC developing nations. A year later, the OPEC Fund for International Development (OFID) was born. Since then, from its Vienna headquarters, this unique development finance institution has committed a cumulative total of more than $23 billion in support of socioeconomic progress across the globe. In November 2018, Saudi Arabia's ***Dr Abdulhamid Alkhalifa*** *was elected as the new OFID Director-General. Here, Dr Alkhalifa talks with the* OPEC Bulletin *about the organization's ambitious new vision, sustainable development and how OFID hopes to move the development agenda forward.*

"My first few months as OFID Director-General have been characterized by progress. I am working with all staff — as well as our Governing Board — to define and implement a new strategy. This strategy will enable OFID to become more efficient, more sustainable, to grow and to increase its development assistance.

It's no secret that fundamental organizational change is challenging work. To give us the best possible chance of success, we have listened, responded to and incorporated feedback from as many stakeholders as possible. We are a relatively small organization but our ambitions are big; there is a tremendous potential for growth.

A new way of communicating

Among the changes is how we will communicate our strengths to the outside world — a particularly relevant point for an OPEC audience. OFID is unique in supporting all developing countries apart from our own. This is a point we should make even clearer to an external audience since it sets us apart. Similarly, that our member countries remain together more than 40 years on, despite changing politics and priorities, is, we believe, something to be grateful for. As are the figures: OFID has committed a cumulative total of more than $23 billion to development operations since its inception.

There's no doubt that our monetary commitments to international development are impressive. But we would also like to tell the world more about the development impact of our work. We will be sharing our human-centred stories more widely: about individual people and families that have benefited from our support; about the schools we've helped build and equip to provide children with opportunities for more fulfilling and productive lives; about the women we've helped access finance to start and grow their businesses; and about hospitals that we've helped treat and prevent more complex health issues — and save more lives than before.

A recent example in this respect is OFID's support of the construction and rehabilitation of healthcare facilities in Suriname, which includes a major renovation of the Academic Hospital Paramaribo (AZP) — the country's main referral and teaching hospital that is now serving some 350,000 patients per year. The AZP is the only facility in Suriname that provides emergency and trauma services, and intensive care, in addition to surgical procedures related to cardiology, neurology, ophthalmology and more. This is just a glimpse of one of a vast array of stories that we will be sharing in the months ahead so that our stakeholders better understand the reach and impact of our work.

> "We are a relatively small organization but our ambitions are big; there is a tremendous potential for growth."

Clarity about who and what we are

OFID's new strategic vision calls for better transparency: we want to be clear about who we are and what we are. We will be reaffirming our support for the United Nations 2030 Agenda for Sustainable Development. Recent development-related debate has questioned whether the SDGs can sometimes be used for promotion purposes; to justify what is already being done. It's true that OFID's development aims were in place long before the SDGs were agreed — and even before their predecessors the Millennium Development Goals were launched. OFID was born in the 1970s — before much of today's development language existed — to finance essential infrastructure, strengthen social services and promote productivity, competitiveness and trade in developing regions.

Every project we support has a development objective. That OFID is led by the demands of developing countries in their quest for progress is not at odds with the SDGs. The goals are a global agreement and serve to focus the world's development efforts. Our developing country partners have signed up to the SDGs, too, and our finance and support on the ground helps them to achieve national development plans and other SDG-linked priorities. Like other development actors, though, we recognize that there is more scope to further develop our SDG expertise, to share best practice, to measure the impact of our work and to align our financing more efficiently. These are some of the big issues we are focusing on in line with our new vision.

OFID understands the importance of engaging in collective action and practicing a new multilateralism in support of the global goals. We will also do more to publicize the work with our partners such as the World Bank, specialized agencies of the United Nations, regional development banks and the bilateral and multilateral agencies of OFID member countries. We are determined, as an organization, to shine an even brighter light onto the innovative approaches and successes of our partners and the work that we do together. This, ultimately, helps share best practice across the global development arena and is in line with SDG17, which calls for us all to revitalize the global partnership for sustainable development.

> "OFID is unique in supporting all developing countries apart from our own. This is a point we should make even clearer to an external audience since it sets us apart. Similarly, that our member countries remain together more than 40 years on, despite changing politics and priorities, is, we believe, something to be grateful for."

Agile and far-reaching development

We also aim to better publicize the range and agility of our development finance solutions. OFID launched private sector and trade finance operations in 1998 and 2006, respectively. Since then, these operations have supported projects and companies across Africa, Asia, Latin America and Europe. Financing has benefited more than 500,000 micro-, small- and medium-sized enterprises, as well as trade activities through financial institution intermediaries. Via risk-sharing programmes, OFID has supported more than 7,000 beneficiaries through more than 300 issuing banks in 60 countries. More than one-quarter of these countries are classified as low income.

Again, we aim to bring these numbers to life by focusing on how life has improved for people and communities on the ground. How has the 3.6 GW of electricity capacity we've helped introduce changed the way people live and work? Right now, we're working with the African Development Bank, the European Investment Bank, local banks and other partners to develop, construct and operate a 420 MW hydropower plant in Cameroon. Once in operation, it will be Cameroon's largest generator of


OFID/Rupert Steiner

Dr Abdulhamid Alkhalifa
Director-General, OFID


OFID

Before being elected as OFID Director-General, Dr Abdulhamid Alkhalifa was Deputy Secretary General of the Saudi Arabian Public Investment Fund and held a number of leadership positions at the World Bank Group. Dr Alkhalifa holds a PhD in Economics from the University of Miami, Florida, and a Master's in Applied Economics from Southern Methodist University in Dallas, Texas.

"There's no doubt that our monetary commitments to international development are impressive. But we would also like to tell the world more about the development impact of our work. We will be sharing our human-centered stories more widely."

electricity, meeting about one-third of the country's electricity needs. An estimated nine million people, including the vast majority of Cameroon's rural population, currently lacks access to electricity. The economic and development impact of this project will be huge, and it is up to us to share the success stories — as well as the lessons learned — far and wide.

Adapting how we do development

OFID is now on the verge of an important milestone. This phase in our own story represents a bold and ambitious growth chapter. We are committed to continuing our evolution toward becoming a more sustainable, efficient and transparent development finance institution to serve a growing partner base. All this will allow us to increase our development activities and assistance, which is our ultimate goal. As I wrote recently in a blog post for the Bretton Woods@75 initiative — a global dialogue to honor 75 years of economic progress — OFID was established to support the global struggle to overcome development challenges, by: extending concessionary financial assistance; participating in the financing of private sector activities in developing countries; providing grants; and contributing to the resources of other development institutions. This will not change going forward. What may change is how we do it and how we talk about doing it."

See www.ofid.org for more.

APPO Conference

Equatorial Guinea and the 'Year of energy'

Under the auspices of ***Teodoro Obiang Nguema Mbasogo,*** *President of Equatorial Guinea, the African Petroleum Producers Organization's (APPO) Cape VII Congress and Exhibition took place in Equatorial Guinea, Malabo, from April 2–5. Bringing together many of the continent's energy ministers, its top oil and gas executives, and with* ***Mohammad Sanusi Barkindo,*** *OPEC Secretary General, in attendance, the* OPEC Bulletin *reports on one of Africa's premier industry gatherings.*

As part of its 'Year of energy' initiative in 2019, Equatorial Guinea is focusing on shining a light on new and innovative petroleum projects in the country, promoting its companies and accomplishments, supporting cooperation and the agenda of Africa's oil and gas countries, and bringing together industry leaders at a series of energy-focused events.

It is an initiative built on the leadership of President Obiang Nguema Mbasogo and supported by Gabriel Mbaga Obiang Lima, Equatorial Guinea's Minister of Mines and Hydrocarbons, who said in launching the campaign: "As I have said many times, Equatorial Guinea is a small country with big ambitions. With the 'Year of Energy' we want to make a big impact in bringing together global leaders in Malabo to promote cooperation and encourage new investments."

Obiang Nguema Mbasogo, President of Equatorial Guinea.

The Secretary General also noted in his remarks at the congress that the 'Year of energy' actually sits between two landmark milestones: "the 50th anniversary of Equatorial Guinea's Independence Day on October 12, 2018, and the 60th Anniversary of OPEC and the historic Baghdad Conference that will take place from September 10–14, 2020: two significant events for developing nations asserting their sovereign and legitimate independence over their natural resources."

The APPO Cape VII congress and exhibition is one of a number of flagship energy events taking place in Malabo in 2019, which also includes the 5th Gas Exporting Countries Forum (GECF) Summit in November.

On the sidelines of the congress, the Secretary General met with Yury Sentyurin, Secretary General of the GECF; and Dr Sun Xiansheng, Secretary General of the International Energy Forum.

Official opening and gala dinner

The congress and exhibition at the Sipopo International Conference Hall was officially opened by President Obiang Nguema Mbasogo, with attendees from more than 38 countries.

The OPEC Secretary General personally welcomed the

Gabriel Mbaga Obiang Lima (r), Equatorial Guinea's Minister of Mines and Hydrocarbons; with Mohammad Sanusi Barkindo, OPEC Secretary General.

President, the country's Prime Minister, Francisco Pascual Obama Asue, and Obiang Lima to the OPEC stand at the exhibition hall and expressed his gratitude to the leaders of Equatorial Guinea as key advocates for OPEC.

Barkindo also had the opportunity to deliver some words at a gala dinner evening on April 2. He began by saying that the APPO CAPE Congress and Exhibition had become an integral event for Africa "in terms of bringing people, companies and governments together, underscoring the importance of an African vision and unity, and in helping harness the incredible potential of this great continent."

He stated that the evening event, and the following three days, had been "made possible by a great number of people all of whom deserve profuse thanks, but I would like to take this opportunity to recognize a distinguished few.

"Teodoro Obiang Nguema Mbasogo, President of Equatorial Guinea, who has ably and with great courage led his country for the past 38 years. Under his capable and visionary leadership, Equatorial Guinea has been transformed into a stable, peaceful and prosperous nation.

"I had the distinct honour of an audience with the President in July 2017, shortly after his country joined OPEC. I was extremely grateful for his wise insights, his welcome views on the positive face of OPEC in attracting new members and his full support for OPEC and its objectives."

The OPEC Secretary General also acknowledged Obiang Lima, "my friend, brother and compatriot who has proven to be an important addition to the OPEC Ministerial Conference and the 'Declaration of Cooperation' since his country became part of the 'Declaration' in December 2016 and an OPEC Member in May 2017.

"His passion and enthusiasm for OPEC, his home country and Africa are clear for all to see. He has been a driving force behind the modernization of Equatorial Guinea's resources; he has been a great advocate of enhancing cooperation in the region; and at OPEC he

Yury Sentyurin, Secretary General of the Gas Exporting Countries Forum (GECF).

Dr Sun Xiansheng, Secretary General of the IEF.

continues to impress us with his astute insights and judicious views; long may this continue!"

The Secretary General stated at the congress that "it is clear that the country's leadership recognizes the value in working through organizations like OPEC, which can empower African countries with a voice on the international stage."

Moreover, under Equatorial Guinea's visionary leadership, the country's oil and gas sector is continuing to evolve and expand to help further energize its economy, said Barkindo, whilst also noting that the country's evolving business environment was recently commended by the African Energy Chamber.

Barkindo thanked APPO, its President Emmanuel Ibe Kachikwu, Nigeria's Minister of State for Petroleum Resources, and Mahaman Laouan Gaya, the Secretary General of the African Petroleum Producers Organization, who "over the past two years or so has shown great support for the historic 'Declaration of Cooperation'."

APPO "is also a great champion and initiator of bringing together African petroleum producing countries to cooperate, collaborate, and share knowledge and competencies. The APPO Congress and Exhibition is a clear testament to this vision."

OPEC and APPO

The OPEC Secretary General also took the opportunity to underscore the intertwined history of OPEC and APPO.

He said that "the idea of creating an African Petroleum Producers Organization dates back to the 1980s during informal meetings between Africa's OPEC Members, then Algeria, Gabon, Libya and Nigeria.

"These talks were then taken further in 1986 on the sidelines of an OPEC Ministerial Meeting on Brioni Island, in the former Yugoslavia, now in Croatia, and then at a meeting in Algiers in the early part of 1986.

"The Algiers meeting was decisive in leading to eight African Countries — Algeria, Angola, Benin, Cameroon, Congo, Gabon, Libya and Nigeria — holding a meeting in Lagos, Nigeria, to create the African Petroleum Producers Association in January 1987."

In terms of goals and objectives, he noted, there are evidently similarities to OPEC. In fact, Barkindo said, "the idea for the Organization that I humbly represent today was conceived in Africa, specifically Egypt. It was at the Maadi Yacht Club in Cairo, in April 1959 — 60 years ago this month — where the Gentleman's Agreement was forged that paved the way for the establishment of OPEC in Baghdad in September 1960."

L–r: Mohammad Sanusi Barkindo, OPEC Secretary General; Mahaman Laouan Gaya, Secretary General of the African Petroleum Producers Organization (APPO); Gabriel Mbaga Obiang Lima, Equatorial Guinea's Minister of Mines and Hydrocarbons; and APPO President, Emmanuel Ibe Kachikwu, Nigeria's Minister of State for Petroleum Resources.

The unstoppable momentum generated in Cairo would eventually culminate in the setting up of the Organization in Baghdad in September 1960 by the five Founding Members — Iraq, Iran, Kuwait, Saudi Arabia and Venezuela — around the premise of cooperation.

What is also evident today, the OPEC Secretary General said, is that there are a number of countries that are common to OPEC, APPO and the 'Declaration of Cooperation' — Algeria, Angola, the Republic of the Congo, Equatorial Guinea, Gabon, Libya, Nigeria and Sudan — and "over the past few years we have seen an intensification of OPEC's engagement with Africa."

He stated that "what the formation of OPEC and APPO underscore, and what is clearly evident here in Equatorial Guinea through the country's esteemed leadership, is the value placed on collaboration and cooperation," something that would be at the fore of his keynote address to the congress the following day.

Keynote address

The Secretary General emphasized this aspect by stressing that "it is much easier to collaborate when we are united; when we find common cause and goals. As the famous English poet John Donne once said: 'No man is an island, entire of itself; every man is a piece of the continent'."

It provided an apt lead in to talk of the historic 'Declaration of Cooperation' and how this, as Barkindo noted, helped "reinforce the mantra that 'together we can do so much'."

The Secretary General began by turning the audience's minds back to the period 2014–16. "It is not a time that conjures up happy thoughts for the industry. The severe three-year downturn brought the industry to its knees."

He recalled that throughout 2016 there was

Mohammad Sanusi Barkindo, OPEC Secretary General, receives Obiang Nguema Mbasogo (l), President of Equatorial Guinea, at the OPEC stand.

recognition that it would take a monumental effort to turn this situation around, but it was a "herculean task that needed to be undertaken."

Through numerous and extensive bilateral and multilateral consultations with many OPEC Ministers, non-OPEC Ministers, as well as some Heads of State and Governments, Barkindo said, "24 OPEC and non-OPEC producing nations eventually drafted and agreed on the landmark 'Declaration of Cooperation' in December 2016."

Firsts and positives

It was a first in many ways, he noted. "It brought together 24 sovereign producing nations, which is unparalleled in the history of the oil industry.

"It focused on a key industry metric, the five-year average for OECD commercial oil stocks, which was both definable and measurable.

"And from the beginning, it was a transparent and fully accessible platform, through its key functioning

Obiang Nguema Mbasogo (r), President of Equatorial Guinea; received Mohammad Sanusi Barkindo (c), OPEC Secretary General; and Yury Sentyurin, Secretary General of the Gas Exporting Countries Forum (GECF).

bodies, the Joint Ministerial Monitoring Committee (JMMC) and the Joint Technical Committee (JTC), all supported by the OPEC Secretariat."

Barkindo noted that "it took some time to reverse the pathway the industry had been on, but there is no doubt that the 'Declaration' has had a transformational impact on the global oil industry and has received the backing of other producers, as well as consumers.

"It has broken long-standing barriers and turned a new glorious page in the history of oil. The change we have seen over the past two years or so is like night and day."

The Secretary General emphasized that "it took us around 18 months to assist the oil market in returning OECD inventory levels to the five-year average, which helped return balance to the market and reintroduced a long-absent element of stability. There is now far more optimism and confidence in our industry."

Moreover, he stated, participants in the 'Declaration' have been agile and flexible enough to modify course and stay ahead of the curve. "When the market has appeared skewed to oversupply, we reacted accordingly, and equally, when concerns were expressed regarding demand outpacing supply, the partners in the 'Declaration' took the appropriate action."

The stimulus of the 'Declaration', he said, has also had a positive impact on the global economy, and trade worldwide has responded positively too. Additionally, "the financial markets, in general, and the financial oil market, in particular, have welcomed the forward guidance provided by the 'Declaration'. It has given them a sense of understanding and security, helping to avoid any crisis like that seen in 2008."

Mission ongoing

The Secretary General was also keen to point out that "the challenge of balancing the market and maintaining

stability is a continuous process, which was in evidence at the most recent meeting of the JMMC in Baku, Azerbaijan, on March 18."

He noted that "the Committee recognized the current, critical uncertainties surrounding the global oil market throughout 2019, and stressed the shared responsibility of all participating countries in the 'Declaration of Cooperation' to sustain market stability and prevent the recurrence of any market imbalance.

"While we have seen a marked improvement in market conditions in the first quarter of 2019, compared with the turbulence and volatility of the fourth quarter of 2018, with the market steadily moving towards a more balanced state, we still believe we need to see inventory levels drop further.

"We also recognize the fact that underlying risks remain, such as ongoing trade negotiations, monetary policy developments, as well as increasingly complex geopolitical challenges and climate change-related concerns."

A key concern Barkindo also reiterated was the importance of seeing a further pick-up in industry investments, particularly for long-cycle projects. "We need to remind ourselves that exploration and production spending fell by an enormous 27 per cent in both 2015 and 2016, and only increased by eight per cent in both 2017 and 2018."

It is why we continue to take a very measured approach through the 'Declaration of Cooperation', said the Secretary General, "we look at the economic and market outlook, and we listen to consumers and other stakeholders."

The 'Declaration', he said "is not about short-termism. We are focused on continuity; we are steadfast and completely unwavering; we have long-term objectives and goals aimed at sustainable stability in the oil market. This was exemplified in Baku through further statements of support by participating countries for a permanent intergovernmental platform, under the Charter of Cooperation between Oil Producing Countries."

African participation

Given that he was speaking in Equatorial Guinea, and on the continent of Africa, Barkindo also underscored that it gives him great pleasure to say that over one-third of the 24 participants in the 'Declaration of Cooperation' are from Africa: Algeria; Angola; the Republic of the Congo; Equatorial Guinea; Gabon; Libya; Nigeria; Sudan; and South Sudan. Moreover, he said, half of OPEC's Membership comes from Africa.

"This underscores the vital role this great continent plays within OPEC, within the 'Declaration of Cooperation', and within the global oil industry."

From this perspective, he also highlighted the continent's enormous resources; ever-expanding financial, industrial and business sectors; growing and dynamic population; and still huge untapped potential.

"In terms of oil," he said, "Africa has around 130 billion barrels of proven crude oil reserves, an increase of around 50 per cent since the end of last century. And in terms of proven natural gas reserves, the figure is over 15 trillion standard cubic metres, a number that has more than doubled since the mid-1980s.

"It is irrefutable evidence of the petroleum potential of Africa, the exciting and abundant opportunities, and the role that this industry can play in unleashing tremendous economic development and prosperity across the continent."

Additionally, according to the United Nations, he stated that "more than half of global population growth between now and 2050 is expected to occur in Africa. It underlines the fact that the continent will continue to have a young and vibrant population; a wealth of human capital needed to develop available resources; and the ability to ensure that the continent takes its leading position on the global stage."

The Secretary General said: "We need to harness what we have — in terms of resources and our people — to ensure that everyone benefits, and that no one is left behind."

Cooperation to the fore

In this regard, he once again emphasized the value of "collaboration, and the promotion of intra-African cooperation and pan-African alliance building. To conclude, he put forward an African proverb:

'Keep your head and heart going in the right direction and you will not have to worry about your feet.'

"At times the challenges before us can appear daunting" he said, "but experience has repeatedly shown us that visionary leadership, teamwork, the enduring principle of cooperation and the bravery to try something new, can bring about great success."

OPEC Secretary General receives EuroKnowledge Leadership Award

OPEC Secretary General, ***Mohammad Sanusi Barkindo,*** *was presented with the EuroKnowledge Oil and Gas African Icon Award at the historic House of Lords in London on April 29, 2019. The award was given in acknowledgment of the vital role he has played in further developing OPEC since he assumed office in August 2016, his leadership in bringing about the landmark 'Declaration of Cooperation', his long-term role in UN climate change negotiations and his remarkable efforts in promoting dialogue and cooperation. The* OPEC Bulletin's ***Ayman Almusallam*** *reports on the event.*

In accepting the award on behalf of the Secretary General, James Griffin, editor/speechwriter at the OPEC Secretariat, said that Barkindo was "deeply honoured and humbled to receive this prestigious award," which he interpreted as recognition of a number of factors, all focused on the key words: "cooperation, cooperation, cooperation."

In fact, these words, as well as the value of inspirational leadership, were on view throughout the annual awards ceremony that celebrates distinguished individuals with exceptional achievements across the globe. EuroKnowledge, an international strategic communication consultancy, stresses that the awards look to recognize and honour exemplary, iconic leaders that have made pivotal contributions and had a constructive impact in their own sectors.

Teamwork

The OPEC Secretary General expressed his genuine gratitude and appreciation for all leaders and key figures from the strategic partners in the 'Declaration of Cooperation'. He said that "working with statesmen, leaders and representatives of OPEC Member Countries and non-OPEC producing countries has been the honour of a lifetime."

He commended the outcome of the continuous cooperation among these countries that has resulted in improving oil market conditions. He added that: "the oil industry is in a much healthier place than it was when the 'Declaration of Cooperation' was initiated in January 2017."

Barkindo recognized that this development, "as well as the rejuvenation of OPEC, has occurred at the same

Mohammad Sanusi Barkindo, OPEC Secretary General, was presented with the EuroKnowledge Oil and Gas African Icon Award.

James Griffin (r), OPEC editor/speechwriter, received the award on behalf of the OPEC Secretary General from Alex Itkin, Chairman Euroknowledge.

time as the intensification of OPEC's engagement with Africa." Today, half of OPEC's Membership comes from Africa.

The Secretary General also referenced "the unflagging efforts and the diligent and expert work of the team he leads at the OPEC Secretariat in Vienna," who he described as "the backbone of the Organization."

Looking to the future, Barkindo stated that "OPEC will never cease to advocate for cooperation, collaboration and fraternity among nations as the best solutions to overcoming challenges."

Long list of achievements

The award comes in the third year of Barkindo's impressive tenure as OPEC Secretary General. However, the Nigerian national has been involved with the Organization and the oil and gas industry for many decades.

For more than 23 years, he worked at the Nigerian National Petroleum Corporation, culminating in his appointment as Group Managing Director and CEO in January 2009. Additionally, as leader of Nigeria's technical delegation to the UN climate change negotiations since 1991, Barkindo served as Chair of the Group of 77 and China at the UNFCCC and was elected to serve three terms as Vice President of the Conference of the Parties.

At OPEC, Barkindo worked in several key roles between 1986 and 2010. In 1986, he was appointed to Nigeria's delegation to OPEC, and from 1993 to 2008, served as Nigeria's

National Representative on the Organization's Economic Commission Board. In 2006, he was Acting Secretary General of OPEC, and represented Nigeria on OPEC's Board of Governors from 2009–10.

Recipients of 2019 Awards

In addition to the OPEC Secretary General, a number of dignitaries and distinguished officials from OPEC Member Countries were celebrated at the ceremony in London. This included:

- Zulfiquar Ghadiyali, CEO at the Royal Office of Sheikh Tahnoon bin Saeed bin Tahnoon Al Nahyan of the UAE, who has been a pioneer in social entrepreneurship and in supporting companies from around the world to establish a presence in the Middle East.
- Sir Kesington Adebukunola Adebutu, a business leader and philanthropist.
- Yakuba Dogara, the speaker at Nigeria's House of Representatives.
- John Momoh, Chairman of Channels Media Group and Chairman and CEO of Channels Television.
- Akande Onikepo, the former Minister of Trade and Investment of Nigeria.
- Eniola Fadayomi, Chairman of Africa Prudential and former Attorney General and Commissioner of Justice of Lagos State, Nigeria.

The EuroKnowledge Oil and Gas African Icon Award was presented at the historic House of Lords in London on April 29, 2019.

Shutterstock

Intra-OPEC cooperation: Nigeria in talks on downstream projects with Saudi Arabia

Nigeria's Minister of State for Petroleum Resources, Emmanuel Ibe Kachikwu, hosts Saudi Arabia's Energy Minister, Khalid Al-Falih in Abuja, Nigeria, in November 2018.

Ongoing talks between fellow OPEC Member Countries Nigeria and Saudi Arabia may lead to a major overhaul of Nigeria's petroleum downstream sub-sector, especially refineries and pipelines.

The Minister of Energy Industry and Mineral Resources of the Kingdom of Saudi Arabia, Khalid A Al-Falih, expressed his country's readiness to invest in Nigeria's petroleum industry and others across the African continent as part of efforts to expand its business operations.

Al-Falih previously expressed interest in Nigeria during a visit last year, and this was renewed when President Muhammadu Buhari sent a delegation, headed by Minister of State for Petroleum Resources, Emmanuel Ibe Kachikwu, to discuss areas of mutual collaboration, especially in the midstream and downstream sectors.

With the new development, Nigeria could address a oil and gas infrastructure shortfall hovering at around $50 billion and stabilize economic development, particularly by plugging leakages and spurring industrial activities through an enhanced gas sector.

During a welcome dinner, Al Falih reassured President Buhari that the two countries will enjoy better bilateral ties in the future. He noted that Nigeria's role remains critical in the stabilization of global oil price.

In his remarks, Kachikwu implored the host nation to explore areas of — cooperation and collaboration in the downstream — refineries and petrochemicals, gas and midstream infrastructure.

Angola's Sonangol plans to focus on core business

Reuters — Angola's state oil company Sonangol plans to divest 52 joint ventures, reduce staff and focus on its core business, part of an ongoing reorganization and package of reforms designed to lure back investors, its chairman said recently.

"We are going to sell, close or put out of our group a lot of companies," Carlos Saturnino, Chairman of the Board of Directors of Sonangol, told an oil conference in Paris. "Last year, we identified 52 joint ventures in which we want to sell our equity."

"Instead of investing in Australia, United States etc, Sonangol wants to become an oil company of reference on the African continent. This is major change for us," he said, adding the objective was to make Sonangol more robust and agile.

Oil accounts for 95 per cent of exports and around 70 per cent of government revenues in Africa's second-largest producer.

Production has been in steep decline due to maturing fields and lack of investment. Angola's oil production fell to 1.478 million barrels/day in 2018 from 1.632m b/d in 2017.

Industry veteran Saturnino was brought back by Angolan President, Joao Lourenco, in September 2017 to help turn around Sonangol and reform the sector.

"Lack of efficiency in approving projects led to a backlog of around $5 billion in projects between 2015 and 2017," Saturnino said, adding the logjam had been mostly cleared and the number of projects gaining approval was rising.

He said Angola had put in place reforms to relaunch exploration and attract oil majors to invest.

Sonangol has carried out analysis on oil blocks with Total and ENI, and has held talks and signed initial agreements with Exxon Mobil. Most recently, it met with Shell to try to lure it back to Angola, Saturnino said.

"We have 10 to 12 potential blocks up for exploration in Angola, so the potential is there," he said.

Sonangol headquarters in Luanda, Angola.

Saudi Arabia plans oil refinery, petrochemicals plant in South Africa

Reuters — Saudi Arabia plans to build an oil refinery and a petrochemicals plant in South Africa as part of $10 billion of investment in the country, Saudi Minister of Energy, Industry and Mineral Resources Khalid A Al-Falih said recently.

Saudi oil would be used in the planned refinery, construction of which would be led by state energy company Saudi Aramco, Al-Falih said in comments following a meeting with South African Energy Minister, Jeff Radebe in Pretoria.

"There have been exchanges of talks by Saudi Aramco teams and they have been supported by the South African energy ministry," Al-Falih said.

The exact location of the refinery and petrochemicals plant will be finalized in the coming weeks, Radebe said.

Saudi Arabia was also interested in using South Africa's major oil storage facilities, Al-Falih said, adding that Saudi utility developer Acwa Power was looking at investing in South Africa's revamped renewable energy programme.

Eng Khalid A Al-Falih (l), Minister of Energy, Industry & Mineral Resources, Saudi Arabia, with his counterpart, Jeff Radebe, South Africa's Energy Minister during their bilateral meeting in Pretoria, South Africa.

UAE's ADNOC inks pact for base oil sales in India

Economic Times — The total Indian market for finished lubricants is two million tonnes and is growing at a rate of 2.4 per cent per annum. To help meet its needs, the UAE's state-run oil company ADNOC has signed a long-term sales agreement with the Indian Oil Corporation for its high-quality base oil ADbase.

Indian Oil will use the ADbase oils to manufacture high-end engine oils for India's growing automotive sector, said Abu Dhabi National Oil Company (ADNOC).

"The signing of this important sales agreement with another major base oil consumer in a large and growing market is testament to the quality and reliability of ADNOC's Group III base oil ADbase," said Ahmad Bin Thalith, Acting Senior Vice President of Refined Products Sales, in ADNOC's Marketing, Supply and Trading directorate.

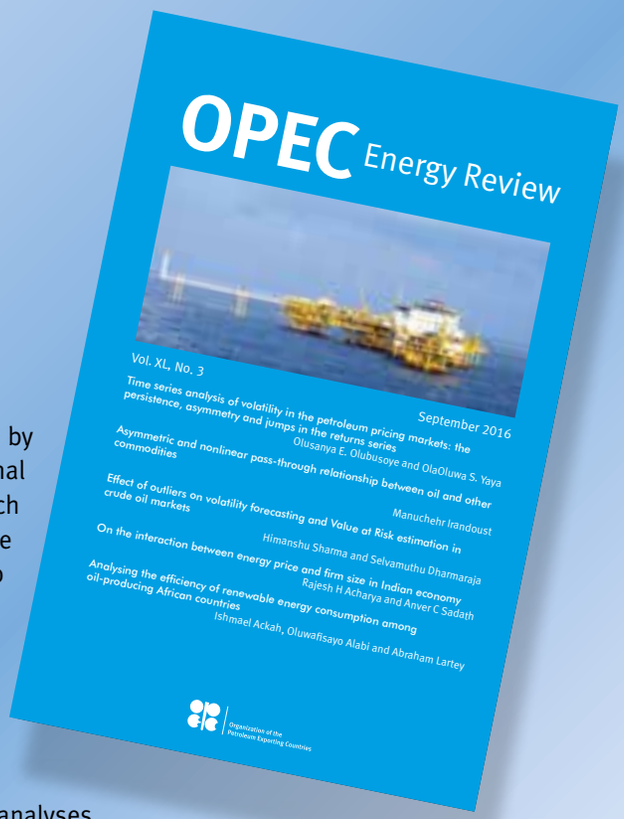
Indian Oil is the largest seller of finished lubricants in the Indian market with approximate volume of 450,000 tonnes/annum. The total Indian market for finished lubricants is two million tonnes and is growing at a rate of 2.4 per cent/annum.

Subimal Mondal, Executive Director at Indian Oil said: "Indian Oil is a long-standing partner of ADNOC and we look forward to building on and strengthening the links between our two companies. The high quality of ADNOC's ADbase product, combined with strong logistics support and the proximity of the UAE to India, was key in our decision to sign this agreement."

The signing of this agreement follows a recent signing with Xiamen Sinolook Oil Company to supply ADbase in China, and the 2017 and 2018 exclusive agreements with Penthol C V, and Chemlube for the supply of ADbase in the US and Europe.

ADNOC Refining, an ADNOC subsidiary, produces up to 500,000 metric tonnes/year of Group III base oil and around 100,000 metric tonnes/year of Group II base oil, at its Ruwais refinery.

CALL FOR PAPERS



The OPEC Energy Review is a quarterly energy research journal published by the OPEC Secretariat in Vienna. Each issue consists of a selection of original well-researched papers on the global energy industry and related topics, such as sustainable development and the environment. The principal aim of the OPEC Energy Review is to provide an important forum that will contribute to the broadening of awareness of these issues through an exchange of ideas. Its scope is international.

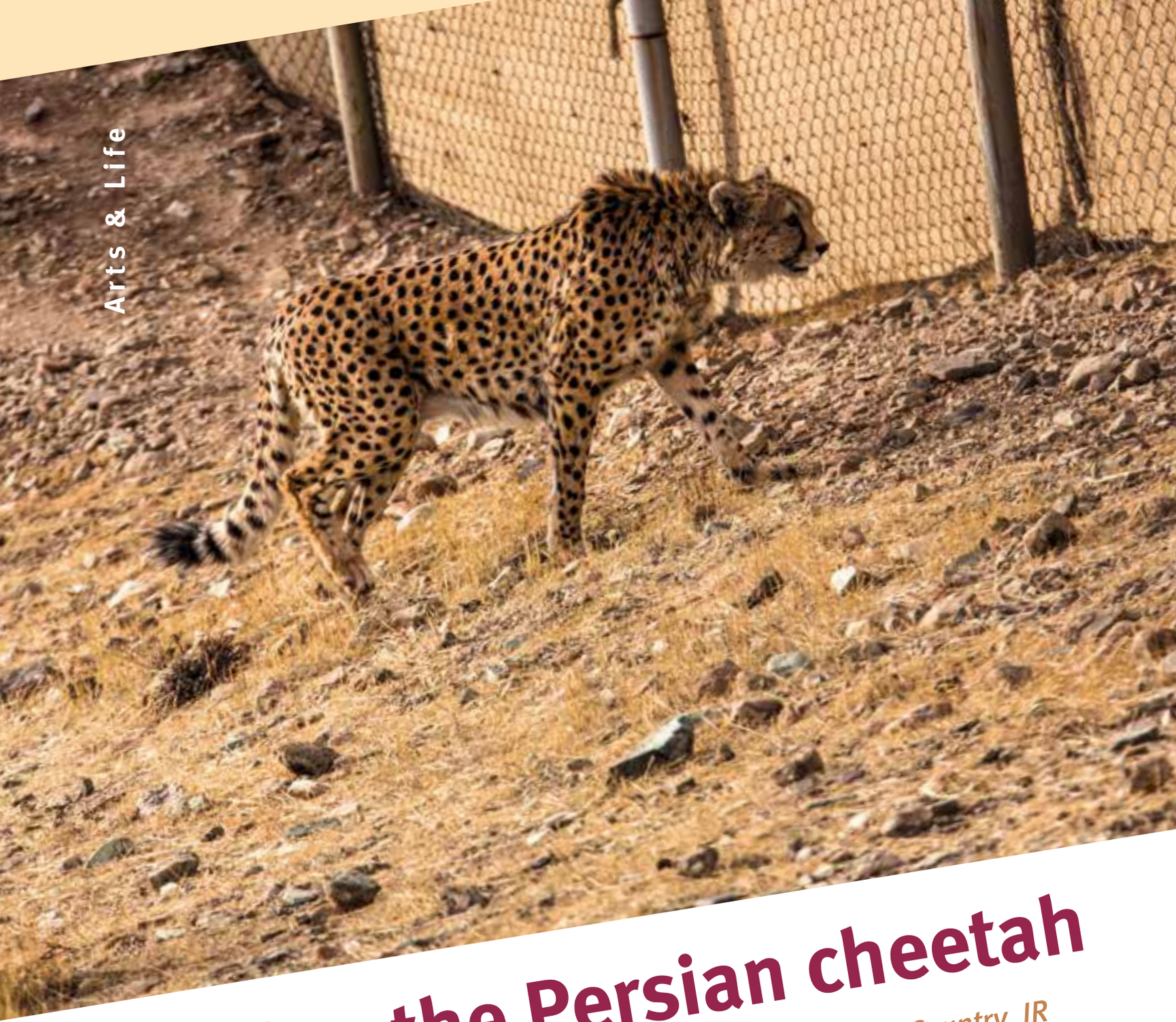
The three main objectives of the publication are to:

1. Offer a top-quality platform for publishing original research on energy issues in general and petroleum related matters in particular.
2. Contribute to the producer-consumer dialogue through informed robust analyses and objectively justified perspectives.
3. Promote the consideration of innovative or academic ideas that may enrich the methodologies and tools used by stakeholders.

Recognizing the diversity of topics related to energy in general and petroleum in particular which might be of interest to the journal's readership, articles will be considered covering relevant economics, policies and laws, supply and demand, modelling, technology and environmental matters.

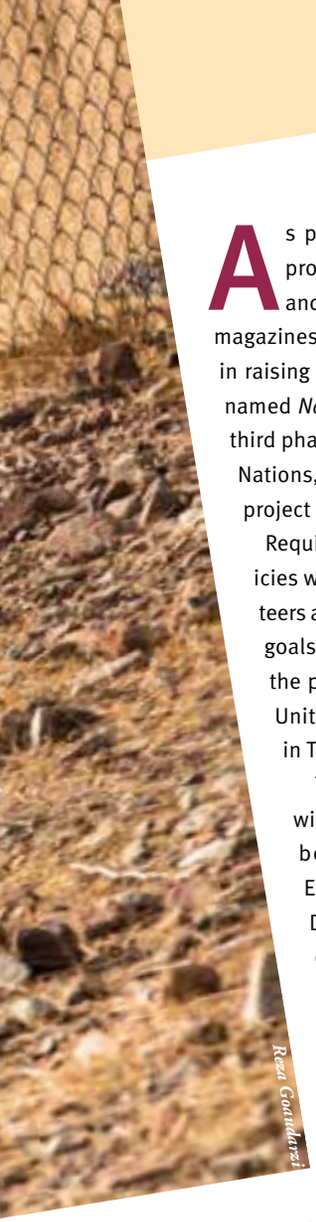
The OPEC Energy Review welcomes submissions from academics and other energy experts.
Submissions should be made via Scholar One at: https://mc.manuscriptcentral.com/opec (registration required).
A PDF of "Author Guidelines" may be downloaded at Wiley's OPEC Energy Review page at:
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1753-0237/homepage/ForAuthors.html

All correspondence about subscriptions should be sent to John Wiley & Sons, which publishes and distributes the quarterly journal on behalf of OPEC *(see inside back cover)*.



Saving the Persian cheetah

*A diligent and ambitious photographer from OPEC Member Country, IR Iran, **Reza Goudarzi**, has produced brilliant pictures, not least to support the cause of the Persian cheetah (Asiatic), which formerly roamed over a vast area in Asia from India to Caucasus and nowadays can only be found in Iran and whose number is below 50 throughout the country.*



Reza Goudarzi

As part of the campaign to save the cheetah and provide training and information on the condition and risk of this animal, Goudarzi has produced four magazines on Persian cheetahs, and has been involved in raising the profile of the animal. August 31 has been named *National Persian Cheetah Day* as the start of the third phase of the Persian cheetah project by the United Nations, according to Goudarzi. The third phase of the project was set to begin in late 2018.

Requirements, opportunities, threats and project policies were also proposed by a team of experts, volunteers and project partners, he states. A draft, including goals, activities, indicators and expected outputs of the project in the third phase was presented to the United Nations Development Programme (UNDP) in Tehran.

The third phase of the project will be initiated with a memorandum of understanding signed between the UNEP and the Department of Environment, with the financial support of the Department of Environment and international organizations.

It intends to expand the focus to include not only protected areas, but also monitoring of cheetah immigration corridors. Indeed, the lack of fencing and underpasses for the animals around busy roads has been a cause of death for some of the few remaining animals.

Phase three emphasizes the involvement of all affected parties, in particular the local communities and their sustainable livelihoods. The expected outcome of the third phase is the compilation and implementation of a comprehensive plan for the management of cheetah habitats with local beneficiaries, along with the systematic monitoring of the population of cheetahs and prey in all potential natural habitats and migration tracks.

Additionally, improving the protection of cheetahs and their prey by training human resources and game guards, establishing a plan for protection outside of the natural arena, and establishment of a comprehensive plan for raising public awareness in local communities and within the general public, are also goals.

Strengthening cooperation between national and provincial beneficiaries and raising awareness and capacity building for national, provincial and local officials are also among the outcomes expected from the third phase.

The Persian cheetah (Asiatic) is now considered a world heritage and we hope everyone will work together so that upcoming generations can also enjoy seeing this beautiful animal in nature.

Reza Goudarzi

Students and professional groups wanting to know more about OPEC visit the Secretariat regularly in order to receive briefings from the Public Relations and Information Department (PRID). PRID also visits schools under the Secretariat's outreach programme to give them presentations on the Organization and the oil industry. Here we feature some snapshots of such visits.

Visits to the Secretariat

March 8 Students from the University of Debrecen, Hungary; and from the University of Michigan, US.

March 11 Officials from the Moscow Petroleum Institute, The Russian Federation.

March 12 Students from the Franklin University, Lugano, Switzerland.

March 18 Students from the University of Debrecen, Hungary.

March 25 Students from the Institute for International Edcuation of Students (IES Vienna), Vienna, Austria.

Head, Data Services Department

The Department collects, retrieves and provides statistical data as support to the research and analytical studies in the other RD Departments and other activities of the Secretariat. The Department also develops up-to-date IT applications and database systems, and provides specialized relevant documents and references. The Department thus has the responsibility to a central, timely provider of reliable up-to-date data, documentation and information pertaining to oil markets in particular and energy markets and related issues in general as well as rendering IT development services.

Objective of position:

To plan, organize, coordinate, manage and evaluate the work of the Department in accordance with the work programme and programmed budget so as to optimize its support to the Secretariat in achieving its overall objectives. The work covers the provision of statistical data as needed by the Member Countries and by researchers for research purposes, the supporting IT programs and the provision of library services.

Main responsibilities:

- Plans, organizes, coordinates, manages and evaluates the work in the Statistics and IT Development Groups and Information Centre covering:
  Statistical data verification and documentation of information pertaining to oil markets; review and clearance of the research results and reports produced by the Department; advancement of the technical equipment on computer and information technology; coordination of the information exchange project between the Secretariat and the Member Countries, Member Countries' institutions and oil companies via internet/intranet; as well as continuous re-designing and security of the OPEC Web page; development of IT applications and database systems, database administration and software installation; provision of library services in accordance with the Medium-Term Programme and Work Programme and Budget of the Research Division.
- Maintains and/or strengthens the cooperation with external institutions such as APERC, Eurostat, IEA, OLADE and the UN Statistics Division, to improve the quality of oil data in the Secretariat. To this end maintains the DSD database on the Joint Oil Data Exercise.
- Ensures full response to requests by the Conference, BOG, ECB and standing committees for data and information relevant to the work of the Department.
- Arranges presentations at relevant OPEC meetings and international forums representing the Secretariat as required.
- Develops and maintains networks with external experts and institutions in fields relating to the work of the Department.
- Keeps the Director of Research Division fully informed on all aspects of the work of the Department, and draws his/her attention to important analyses performed by it.
- Evaluates the performance of the staff of the Department, and recommends to the Director of Research Division, staff development, salary increase, promotion and separations as appropriate.
- Ensures that the staff of the Department receives the supervision and guidance necessary to broaden and deepen their skills and continuously improve their performance.
- Prepares the annual budget for the Department.
- Carries out any other tasks assigned to him/haer by the Director of Research Division.

Required competencies and qualifications:

Education:

Advanced University degree in fields related to statistics, computer applications, or informatics. PhD in either field preferred.

Work experience:

Advanced degree: 12 years in field of Statistics and/or Information Management and Analysis in the energy and oil sector, as well as in System Development and use of computers in Statistical Analysis with a minimum of four years in a managerial position, preferably at large national, regional, or international institutions. PhD: Ten years.

Training specializations:

Oil related statistical data; software application development; systems analysis and design; project management; professional management & leadership.

Competencies:

Managerial & leadership skills; communication skills; decision making skills; strategic orientation; analytical skills; presentation skills; interpersonal skills; customer service orientation; negotiation skills; initiative and integrity.

Language:

English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade B reporting to the Director of Research Division. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in an application form which can be downloaded from the OPEC website.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **June 30, 2019,** quoting the job code: 3.1.01 *(see www.opec.org — Employment)*.

Economic Analyst

The prime objectives of the Petroleum Studies Department are: to provide pertinent and reliable information and analyses in support of decision-making and policy-making in Member Countries; to carry out, on a continuous basis, research programmes and studies on short-term petroleum market developments with the aim of issuing reports on a regular (ie daily, weekly, monthly and bi-monthly), as well as ad hoc basis highlighting important issues for their use and consideration; to conduct regular forecasts, elaborate and analyse oil market scenarios and prepare and publish reports on these findings; to promote OPEC views and technical analysis on short-term oil market developments to the industry at large and general public via the *OPEC Monthly Oil Market Report* (especially the feature article), as well as other reports, presentations and related pod casts; to prepare and contribute to reports to be submitted to the ECB, the BOG and the MMSC, as well as papers for various OPEC publications.

Objective of position:

To analyze key indicators and forecast global economic development in the short- to medium- term with emphasis on developing countries and countries in transition; to consolidate findings for inclusion in the *Monthly Oil Market Report,* as well as reports for OPEC Governing Bodies; to prepare occasional and topical reports/studies as requested.

Main responsibilities:

- Analyses leading indicators of world economic development including trade, commodity prices and investments and on this basis monitors and forecasts short- to medium- term developments with particular focus on developing countries and countries in transition.
- Prepares and comments on an economic outlook for developing countries, including OPEC Member Countries, for the *Monthly Oil Market Report* and other reports. Prepares and presents associated materials to meetings of the ECB.
- Contributes to economic studies in support of PSD analyses of oil demand in developing countries; monitors and assesses the impact of oil price, subsidies and taxation policies on the demand for oil.
- Builds up and pursues collaborative networks with Member Countries' and other countries' academic and business institutions to enhance pertinent data gathering and analysis.
- Participates in relevant task forces, external meetings and conferences in particular on subjects relating to analysis on and cooperation with oil consuming developing countries.
- Carries out any other tasks assigned by the relevant superiors as pertain to his/her background, qualifications and position.

Required competencies and qualifications:

Education:

University Degree in Economics; advanced degree preferred.

Work experience:

University degree: eight years; advanced degree: six years.

Training specializations:

Macroeconomics, international trade and/or development economics. Knowledge of applied econometrics and quantitative methods an asset. Knowledge of the oil industry an asset.

Competencies:

Communication skills; analytical skills; presentation skills; interpersonal skills; customer service orientation; initiative and integrity.

Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade E reporting to the Head of the Petroleum Studies Department. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in an application form which can be downloaded from the OPEC website.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **July 1, 2019,** quoting the job code: 4.2.01 *(see www.opec.org — Employment)*.

Forthcoming events

Argus Rio crude conference, May 20–22, 2019, Rio de Janeiro, Brazil. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; email: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/rio-crude.

World gas and power series: Brazil and the Americas summit, May 21–22, 2019, Rio de Janeiro, Brazil. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: www.cwcbrazilgas.com.

Canada LNG export conference and exhibition, May 21–23, 2019, Vancouver, Canada. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 3615 2873; fax: +44 20 3615 0679; e-mail: conferencemarketing@dmgevents.com; website: https://canadagaslng.com.

Caspian oil and gas exhibition and conference, May 29–June 1, 2019, Baku, Azerbaijan. ITE Group plc, Oil and Gas Division, 105 Salusbury Road, London NW6 6RG, UK. Tel: +44 207 596 5233; fax: +44 207 596 5106; e-mail: oilgas@ite-exhibitions.com; website: https://caspianoilgas.az.

Iberia gas and LNG conference and exhibition, June 10–11, 2019, Madrid, Spain. Details: Praxis Events Ltd, 3 Stirling Court, Stirling Way, Borehamwood WD6 2FX, UK. Tel: +44 075 85 60 10 50; e-mail: connect@praxisevents.co.uk; website: www.iberiagas.com.

Global petroleum show, June 11–13, 2019, Calgary, Canada. Details: Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 3615 2873; fax: +44 20 3615 0679; e-mail: conferencemarketing@dmgevents.com; website: https://globalpetroleumshow.com.

Pumps, valves and pipes Africa, June 11–13, 2019, Johannesburg, South Africa. Details: dmg :: events, PO Box 650302, Benmore 2010, Johannesburg, South Africa. Tel: +27 11 783 72 50; fax: +27 11 783 72 69; e-mail: info@indutecafrica.com; website: www.pumpsvalvesandpipesafrica.com.

US fuels markets and refining strategy conference, June 12–13, 2019, Houston, TX, USA. Details: Active Communications International, 5–13 Great Suffolk Street, 4th Floor, London SE1 0NS, UK. Tel: +44 207 981 98 00; fax: +44 207 593 00 71; e-mail: claire@acieu.net; website: www.wplgroup.com/aci/event/fuel-market-refining-strategy-conference-usa.

Energy in data, June 17–19, 2019, Austin, TX, USA. Details: Society of Petroleum Engineers, 10777 Westheimer, Suite #335, Houston, TX 77042, US. Tel: +1 713 779 9595; fax: +1 713 779 4216; e-mail: spehou@spe.org; website: https://energyindata.org.

Argus Mediterranean solid fuels, June 18–19, 2019, Istanbul, Turkey. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/mediterranean-solid-fuels-europe.

Atlantic Canada petroleum show, June 18–19, 2019, Newfoundland & Labrador, Canada. Details: Atlantic Canada Petroleum Show, c/o EventWorx Corporation, 100–342, 111 5 Avenue SW, Calgary, AB T2P 3Y6 Canada. Tel: +1 403 971 32 27; website: https://atlanticcanadapetroleumshow.com.

Asian oil gas and petrochemical engineering exhibition, June 18–20, 2019, Kuala Lumpur, Malaysia. Details: UBM ES, A-8-1, Level 8, Hampshire Place Office, 157 Hampshire, 1 Jalan Mayang Sari, 50450 Kuala Lumpur, Malaysia. Tel: +60 3 21 76 87 88; fax: +60 3 21 64 87 86; website: www.oilandgas-asia.com.

Oil and gas Philippines, June 18–20, 2019, Pasay, Philippines. Details: Fireworks Trade Exhibitions and Conferences Philippines, Inc, 12th Fl, The Trade & Financial Tower U1206 32nd Street and 7th Avenue, Bonifacio Global City Taguig City, Metro Manila 1634, Philippines. Tel: +632 90 20 90 0 ext 115; fax: +632 90 20 949; e-mail: phil@asiafireworks.com; website: http://oilgasphil.com.

East Africa oil and gas summit and exhibition, June 20–21, 2019, Nairobi, Kenya. Details: Global Event Partners Ltd, London Office, 20–22 Bedford Row, London WC1R 4JS, UK. Tel: +44 203 488 11 91; e-mail: enquiries@gep-events.com; website: Tel: +254 20 60 00 823; e-mail: info@eastafricanchamber.org; website: http://eaogs.com.

Africa assembly conference, June 24–25, 2019, Paris, France. Details: Oil and Gas Council, Bedford House, 69–79 Fulham High Street, London SW6 3JW, UK. Tel: +44 20 73 84 80 56; website: https://oilandgascouncil.com/event-events/africa-assembly-and-dinner.

11th CWC world LNG and gas series: Asia Pacific summit, June 24–27, 2019, Singapore. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: https://asiapacific.cwclng.com.

Brazil offshore, June 25–28, 2019, Rio de Janeiro, Brazil. Details: Reed Exhibitions, Gateway House, 28 The Quadrant, Richmond, Surrey TW9 1DN, UK. Tel: +44 208 271 2134; fax: +44 208 910 7823; e-mail: rxinfo@reedexpo.co.uk; website: www.brasiloffshore.com.

Argus Kazakhstan and Central Asia oil and gas, June 27–28, 2019, Almaty, Kazakhstan. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; email: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/kazakhstan-and-central-asia-oil-and-gas.

Iraq petroleum, June 27–28, 2019, London, UK. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: www.cwciraqpetroleum.com.

Summer oil market outlook

April 2019

The performance of product markets typically follows seasonal patterns, with refining margins recovering during the driving season in the Northern Hemisphere. Last summer, refinery margins across the globe saw some support, but exhibited only mixed performance year-on-year.

US refinery margins showed solid gains in the summer months of 2018 compared with the previous year, averaging $5.63 higher. This was mainly attributed to robust diesel demand, as well as strong gasoline exports and operational adjustments that contributed to higher margins. US diesel inventories reached record lows during the summer and remained below the five-year average in 2018. Moreover, diesel exports were considerably lower, showing a declining trend since 2015. At the same time, the pace of growth in US gasoline consumption weakened y-o-y. This was attributed to fuel efficiency gains, reduced consumer spending and a trend toward fuel substitution toward EV's and natural gas.

In contrast to diesel stocks, gasoline inventories in 2018 remained well above the five-year average for most of the year, reaching record highs during the last quarter. Gasoline exports are generally moderate over the summer to accommodate domestic consumption, but have grown considerably y-o-y since 2015. As a result of these diverging trends, the US product market has been increasingly sustained by robust diesel consumption, with some support from gasoline exports.

In Europe, refinery margins showed a negative performance y-o-y over the summer, averaging minus $1.5, pressured mainly by weaker diesel cracks. Europe has been diesel's biggest market in past years but this has changed in recent years. Governments have enacted bans on older diesel cars in selected city streets in Germany, Spain, France and Italy. As a consequence, diesel consumption for passenger cars has declined, while gasoline cracks have seen a moderate upside as new car buyers switch from diesel- to gasoline-fuelled engines.

In Asia, refinery margins also showed a negative performance of minus $1.5 y-o-y over the summer. Although Asian gasoline and diesel consumption softened in 2018, diesel remained well supported, as demand more closely followed economic growth due to its use in industry, mining and farming sectors, in addition to the transportation sector. In contrast, recent additions to refining capacity in the region have led to a downturn in the gasoline market, where cracks dropped from near parity to gasoil in August 2017 to a $14.08 discount in February 2019. This was attributed to a growing gasoline surplus as gasoline demand got slower regionally and globally.

Looking ahead, product markets are expected to come under pressure as refineries resume operations following peak spring maintenance due to higher product availability. However, with the start of the driving season, some support is expected from a mild pick-up in transport fuels, mainly driven by gasoline. While US gasoline demand growth is expected to continue to slow, refining economics should remain well sustained, amid healthy exports. Meanwhile, diesel demand for both transportation and the industrial sector will remain robust and jet fuel cracks are set to gain some upward momentum during the peak travel season across the globe. However, expectations for a slight slowdown in economic growth for the current year point to some weakening in demand growth for middle distillates.

MOMR ... oil market highlights

April 2019

Crude oil price movements — In March 2019, the OPEC Reference Basket (ORB) rose by $2.54, or 4.0 per cent, month-on-month (m-o-m), settling at $66.37/b, amid strengthening oil market fundamentals and improving market sentiment, which were supported by the commitment of OPEC and participating non-OPEC countries to restore global oil market stability. Crude oil futures prices extended gains in March, with both ICE Brent and NYMEX WTI reaching their highest point since last October, amid uncertainties about the supply outlook from several regions. ICE Brent averaged a m-o-m rise of $2.60, or 4.0 per cent, to $67.03/b, while NYMEX WTI rose $3.19, or 5.8 per cent, m-o-m to $58.17/b. However, year-to-date (y-t-d), ICE Brent was $3.40, or 5.1 per cent lower, at $63.83/b, and NYMEX WTI was $7.99, or 12.7 per cent, lower at $54.90/b. The ICE Brent price structure flipped into backwardation, the NYMEX WTI price structure remained in steep contango, while DME Oman continued to see significant backwardation. Hedge funds and other money managers further raised their bullish positions in both ICE Brent and NYMEX WTI, reaching the highest level since October 2018.

World economy — The global economic growth projection remains estimated at 3.6 per cent for 2018, while for 2019 it is revised slightly downward to 3.2 per cent from the 3.3 per cent projected last month. The main downward revisions were made for the OECD economies. US 2018 growth remains unchanged at 2.9 per cent, but 2019 growth was revised down from 2.5 per cent to 2.4 per cent. Euro-zone 2018 growth remains unchanged at 1.8 per cent, while 2019 growth was revised down from 1.3 per cent to 1.2 per cent. Similarly, GDP growth in Japan was revised lower from 0.7 per cent to 0.6 per cent for 2019, compared with 0.8 per cent in 2018. In the non-OECD economies, the main 2018 and 2019 forecasts remain unchanged. China's growth forecast remains at 6.1 per cent, after reaching 6.6 per cent in 2018. India's growth forecast remains at 7.1 per cent, following 7.3 per cent in 2018. Growth in Brazil remains unchanged at 1.8 per cent in 2019, after seeing 1.1 per cent in 2018, while Russia's 2019 GDP growth forecast is also unchanged at 1.6 per cent, following an upward revision of 2.3 per cent for 2018.

World oil demand — In 2018, global oil demand growth was revised down by 20,000 b/d from last month's assessment amid weaker 4Q18 oil demand data from OECD Asia Pacific. Global oil demand in 2018 is now estimated to have increased by 1.41m b/d y-o-y, reading 98.70m b/d. Similarly, global oil demand in 2019 was revised downward by 30,000 b/d from 1.24m b/d to around 1.21m b/d compared with last month's projection; this is due to slower-than-expected economic activity compared with the expectations of a month earlier. As a result, total world demand for the year is now expected to reach 99.91m b/d and exceed the 100.00m b/d threshold during 2H19. OECD oil demand growth is projected to reach 210,000 b/d, with OECD Americas leading the increase, while oil demand in the non-OECD region is projected to rise by around 1.0m b/d, with Other Asia and China being the primary contributors to growth.

World oil supply — Non-OPEC oil supply growth in 2018 was revised upward by 160,000 b/d from the previous month's report and is now estimated at 2.90m b/d to average 62.37m b/d. The adjustment was mainly due to upward revisions in the UK, Brazil and China. The main drivers of growth for the year were the US with 2.26m b/d, along with Canada, Russia, the UK, Kazakhstan, and Qatar. Meanwhile Mexico, Norway and Vietnam are estimated to have seen the largest declines. In contrast, non-OPEC oil supply growth in 2019 was revised downward by 60,000 b/d to average 2.18m b/d, mainly due to extended maintenance in Kazakhstan, Brazil and Canada, which was partially offset by upward revisions to the US and Russia. Total non-OPEC supply in 2019 is now forecast to average 64.54m b/d, with the US, Brazil, the UK, Australia and Ghana being the major contributors to growth, while Mexico, Kazakhstan, Norway, Indonesia and Vietnam are projected to see the largest declines. OPEC NGLs and non-conventional liquids are estimated to have grown by 40,000 b/d in 2018, unchanged from the previous estimate, to average 4.98m b/d, and are forecast to grow by 90,000 b/d in 2019 to average 5.07m b/d. In March 2019, OPEC crude oil production decreased by 534,000 b/d to average 30.02m b/d, according to secondary sources.

Product markets and refining operations — Global product markets showed solid gains over the month of March 2019. Refining margins saw an extension of the upward trend recorded in the previous month, reaching the highest levels seen y-t-d, and boosted by a sharp recovery in gasoline cracks after steep multi-month declines. In the US, a combination of planned and unplanned refinery outages affected gasoline production, resulting in considerable declines in inventory levels and lending strong support to refining economics. In Europe, strength emerged from larger gasoline exports to the US and Africa, despite weaker middle distillate fundamentals due to narrower arbitrage opportunities. Meanwhile, in Asia, robust performance at the top of the barrel, supported by scheduled and unscheduled refinery maintenance, provided relief to the oversupply environment witnessed in recent months.

Tanker market — Average dirty tanker spot freight rates declined further in March 2019, continuing the negative trend seen so far in the first quarter of 2019. Lower rates were seen in most reported dirty classes. This was mainly attributed to high vessel supply, while market activities remained thin in general. Clean tanker spot freight rates showed some improvement in the West, supported mainly by higher rates in Northwest Europe on the back of balanced tonnage availability and occasional shortages in prompt vessel supply. In the East, a lack of activity dominated different classes, resulting in a drop in rates across several routes.

Stock movements — Preliminary data for February showed that total OECD commercial oil stocks fell by 18.3m b m-o-m to stand at 2,863m b. This was 7.0m b higher than the same time one year ago, and 7.5m b above the latest five-year average. Compared with the latest five-year average, crude indicated a surplus of 25m b, while product stocks showed a deficit of 17.5m b. In terms of days of forward cover, OECD commercial stocks rose by 0.4 days m-o-m in February to stand at 60.6 days. This was 0.2 days above the same period in 2018, but 1.1 days below the latest five-year average.

Balance of supply and demand — Demand for OPEC crude in 2018 is estimated at 31.4m b/d, 1.5m b/d lower than the 2017 level. In 2019, demand for OPEC crude is forecast at 30.3m b/d, around 1.1m b/d lower than the estimated 2018 level.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for April 2019. Published by the Secretariat's Petroleum Studies Department, the publication may be downloaded in PDF format from our Website (www.opec.org), provided OPEC is credited as the source for any usage. The additional graphs and tables on the following pages reflect the latest data on OPEC Reference Basket and crude and oil product prices in general.

Table 1: OPEC Reference Basket spot crude prices

$/b

Crude/Member Country	2018 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019 Jan	Feb	Mar	Weeks 9–13/2019 (week ending) Mar 1	Mar 8	Mar 15	Mar 22	Mar 29
Arab Light – Saudi Arabia	64.40	68.91	74.68	74.26	74.16	73.38	78.16	80.02	66.36	58.24	59.63	64.85	67.40	66.15	66.15	67.86	68.16	67.59
Basrah Light – Iraq	62.27	67.06	72.83	71.90	72.02	71.10	76.18	78.26	64.12	56.12	58.20	63.25	66.05	64.37	64.63	66.34	66.96	66.52
Bonny Light – Nigeria	67.05	72.75	77.73	74.86	75.06	73.29	79.45	82.09	65.90	57.82	60.51	65.19	67.71	65.74	65.86	67.37	68.98	69.09
Djeno – Congo*	64.08	69.31	73.84	70.58	70.91	69.66	76.18	78.52	62.06	54.36	56.77	61.40	63.48	61.86	61.63	63.14	64.75	64.86
Es Sider – Libya	64.89	70.43	75.25	72.27	72.43	70.74	77.10	79.62	63.11	55.66	58.27	63.15	65.38	63.64	63.53	65.04	66.65	66.76
Girassol – Angola	66.89	71.80	76.75	73.54	74.40	73.20	79.48	82.24	65.66	57.52	59.98	65.30	67.16	66.46	65.63	66.54	68.15	68.62
Iran Heavy – IR Iran	62.15	66.56	72.15	71.69	71.44	70.46	75.28	77.04	62.83	54.84	56.29	61.39	64.17	62.83	62.96	64.52	64.89	64.45
Kuwait Export – Kuwait	62.23	66.99	72.55	72.38	72.33	71.82	76.82	78.56	65.15	57.10	58.65	63.93	66.78	65.30	65.55	67.26	67.54	66.91
Merey – Venezuela	56.94	60.25	68.29	69.25	70.37	67.38	69.31	75.25	65.87	49.89	50.90	55.85	57.75	56.66	57.21	58.13	58.34	57.29
Murban – UAE	66.31	70.97	76.71	76.18	76.00	74.91	78.75	81.28	68.05	59.33	60.81	65.64	68.01	67.17	67.05	68.39	68.67	67.93
Oriente – Ecuador	61.16	65.37	70.39	70.05	69.11	69.39	74.12	75.48	59.76	51.26	55.10	60.42	63.66	61.30	61.95	64.45	64.57	64.29
Rabi Light – Gabon	64.92	70.61	75.88	73.11	73.07	71.86	78.04	80.37	63.91	56.21	58.62	63.25	65.33	63.71	63.48	64.99	66.60	66.71
Saharan Blend – Algeria	66.69	72.13	77.25	73.37	73.93	72.64	79.55	81.12	64.96	56.41	59.27	64.30	66.38	64.76	64.53	66.04	67.65	67.76
Zafiro – Equatorial Guinea	65.91	71.43	76.68	73.84	74.05	72.74	79.10	81.82	65.36	57.66	60.09	64.92	67.15	65.66	65.39	66.74	68.35	68.56
OPEC Reference Basket	**63.76**	**68.43**	**74.11**	**73.22**	**73.27**	**72.26**	**77.18**	**79.39**	**65.33**	**56.94**	**58.74**	**63.83**	**66.37**	**65.00**	**65.05**	**66.62**	**67.22**	**66.80**

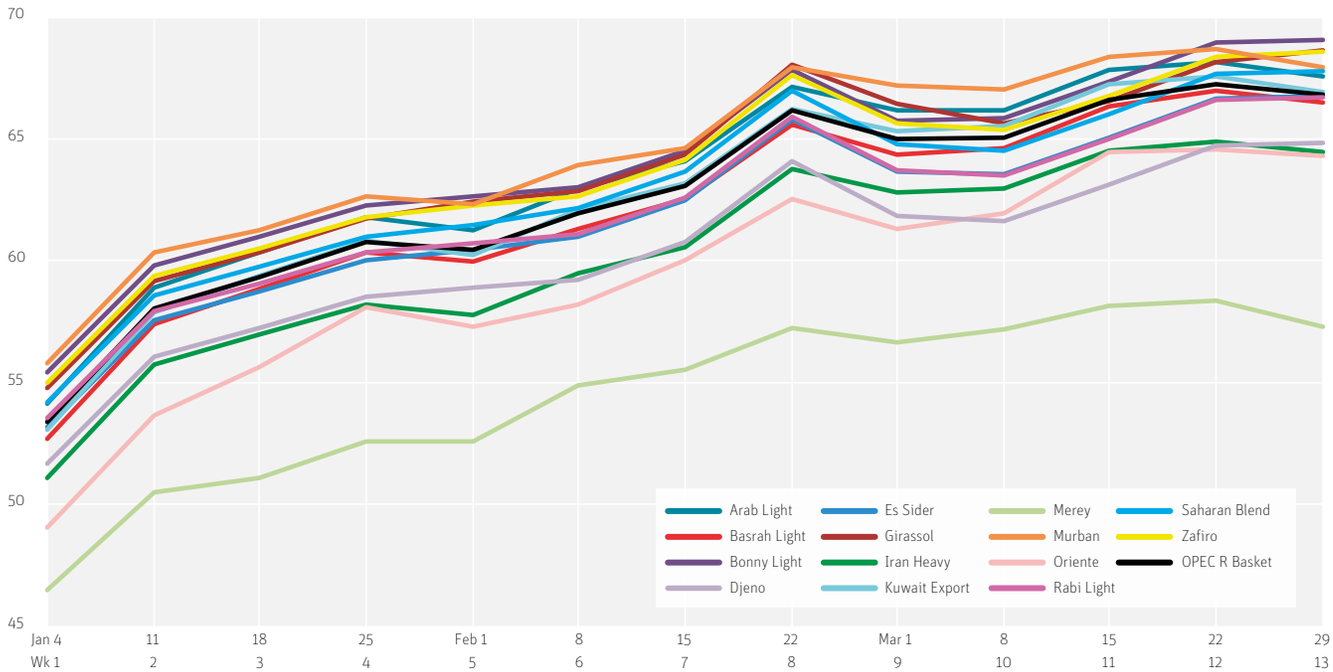
Table 2: Selected spot crude prices

$/b

Crude/country	2018 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019 Jan	Feb	Mar	Weeks 9–13/2019 (week ending) Mar 1	Mar 8	Mar 15	Mar 22	Mar 29
Arab Heavy – Saudi Arabia	61.49	66.47	72.24	72.30	72.50	72.35	77.14	78.47	65.40	57.24	58.58	63.57	66.31	65.00	65.14	66.80	67.05	66.33
Brega – Libya	65.64	71.33	76.35	73.47	73.63	71.94	78.00	80.42	63.91	56.16	58.72	63.49	65.63	63.97	63.78	65.29	66.90	67.01
Brent Dtd – North Sea	65.89	71.58	76.85	74.17	74.33	72.64	78.80	81.12	64.66	56.96	59.37	64.00	66.08	64.46	64.23	65.74	67.35	67.46
Dubai – UAE	62.76	68.29	74.20	73.61	73.09	72.47	77.22	79.40	65.79	57.29	59.07	64.42	66.91	65.84	65.72	67.39	67.69	66.92
Ekofisk – North Sea	66.63	72.61	78.28	73.99	74.54	72.84	79.30	82.13	65.04	57.83	60.23	64.93	66.73	65.15	64.78	66.09	68.10	68.44
Iran Light – IR Iran	63.44	68.76	74.60	72.56	72.10	70.34	76.40	78.08	62.79	55.96	58.69	62.53	64.64	62.64	62.64	64.22	65.83	66.44
Isthmus – Mexico	65.40	68.10	73.03	70.92	69.63	67.05	74.44	80.03	65.43	55.58	58.13	63.81	66.53	64.67	64.97	66.67	67.64	67.34
Oman – Oman	63.31	68.34	74.38	73.69	73.20	72.72	78.75	80.23	66.31	57.69	59.39	64.62	67.01	65.93	65.85	67.51	67.71	67.02
Suez Mix – Egypt	61.93	67.62	73.67	71.85	71.50	69.81	76.80	78.46	62.71	55.83	58.56	62.40	64.51	62.51	62.51	64.09	65.70	66.31
Minas – Indonesia*	58.90	63.53	68.26	76.72	73.51	66.90	72.02	73.66	59.17	50.28	51.72	56.94	59.63	58.11	57.63	59.64	60.82	60.61
Urals – Russia	63.63	69.16	75.23	73.55	73.20	71.62	78.50	80.16	64.41	57.18	60.26	64.10	66.21	64.21	64.21	65.79	67.40	68.01
WTI – North America	62.76	66.32	69.89	67.70	71.03	67.99	70.20	70.75	56.75	49.52	51.63	54.98	58.16	56.16	56.42	57.81	59.35	59.52

Notes:
Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.
* *The Republic of the Congo joined on June 22, 2018.*
Sources: Argus; Secretariat's assessments.

Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2018–19 $/b



Graph 2: Evolution of selected spot crude prices, 2018–19 $/b

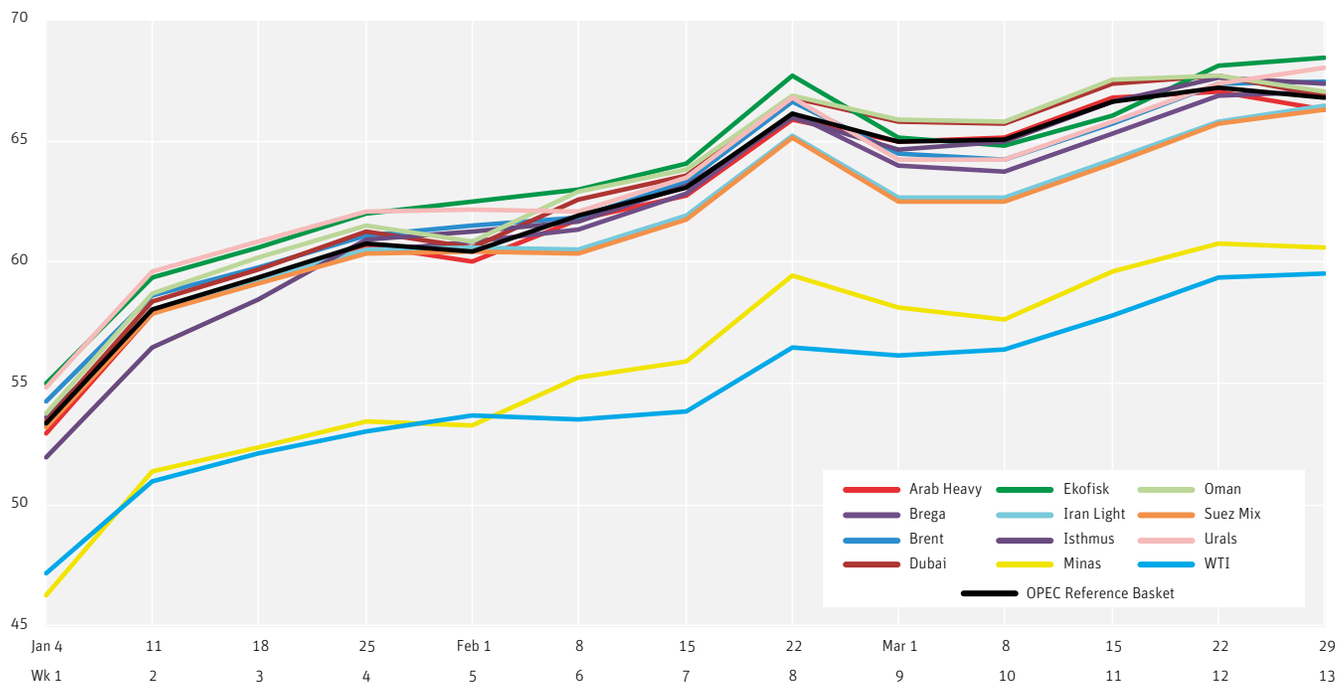


Table and Graph 3: North European market — spot barges, fob Rotterdam

$/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2018	March	63.29	79.34	78.64	82.03	55.15	52.00
	April	67.11	90.68	85.49	87.45	58.66	55.61
	May	73.73	96.58	91.30	93.03	65.69	62.64
	June	69.92	93.71	88.75	89.30	65.94	62.70
	July	71.04	93.79	88.00	88.79	67.51	64.45
	August	70.82	95.01	88.49	87.96	65.73	62.59
	September	74.71	95.03	92.86	92.51	67.75	64.72
	October	73.15	91.20	97.18	97.45	73.08	69.67
	November	55.86	76.78	86.35	85.10	62.61	58.71
	December	50.95	67.58	74.59	74.80	53.08	48.88
2019	January	50.52	68.23	75.24	76.07	54.90	50.38
	February	55.14	74.43	80.75	80.16	61.41	56.66
	March	58.80	81.08	81.82	81.57	62.98	59.73

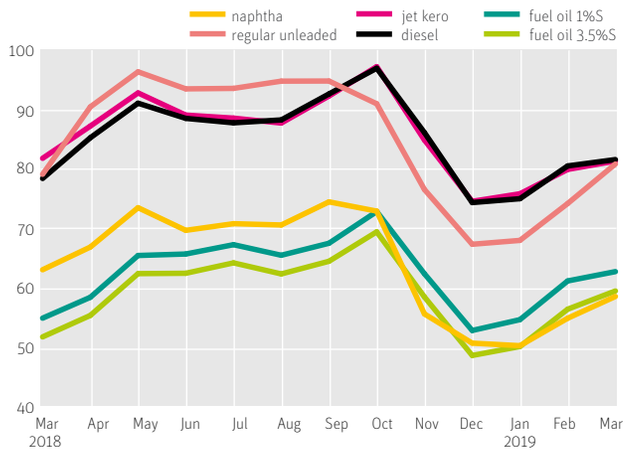


Table and Graph 4: South European market — spot cargoes, fob Italy

$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2018	March	62.41	74.83	79.81	56.38	53.47
	April	66.59	83.43	86.62	59.63	56.90
	May	73.32	88.50	92.52	66.57	63.80
	June	69.53	85.99	89.18	67.38	64.27
	July	70.74	86.82	89.12	68.37	65.88
	August	70.61	88.59	89.63	66.43	63.97
	September	74.54	88.22	93.93	68.74	66.11
	October	72.58	83.56	97.91	74.26	70.81
	November	54.99	68.63	86.34	64.22	60.01
	December	49.32	59.95	74.92	54.65	49.67
2019	January	49.09	60.56	76.38	57.80	51.91
	February	53.98	65.62	82.24	64.13	58.69
	March	57.61	73.78	83.12	64.50	61.11

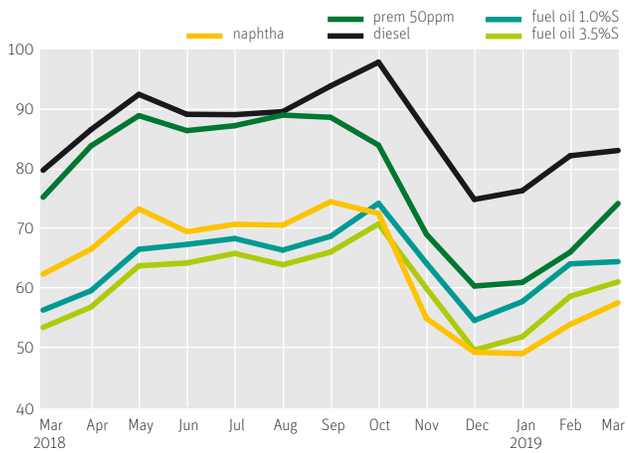
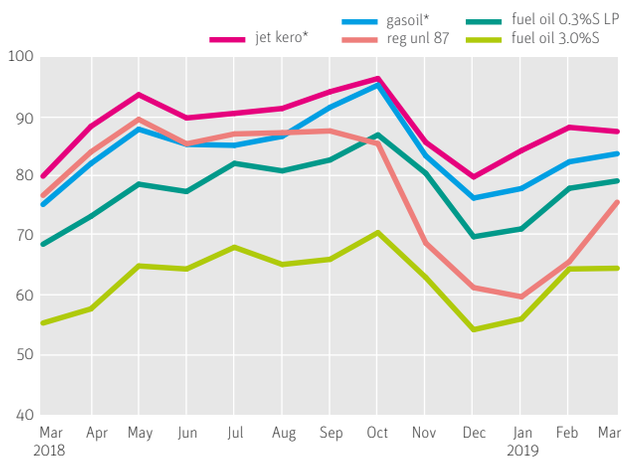


Table and Graph 5: US East Coast market — spot cargoes, New York

$/b, duties and fees included

		regular gasoline unleaded 87	gasoil*	jet kero*	fuel oil 0.3 per cent S	fuel oil 3.0 per cent S
2018	March	76.67	75.15	79.88	68.49	55.31
	April	83.93	82.00	88.20	73.16	57.68
	May	89.38	87.73	93.51	78.54	64.86
	June	85.29	85.21	89.62	77.31	64.35
	July	86.95	85.04	90.39	82.02	67.99
	August	87.15	86.55	91.21	80.77	65.11
	September	87.45	91.41	94.01	82.60	65.97
	October	85.32	95.12	96.22	86.79	70.44
	November	68.68	83.28	85.54	80.36	62.93
	December	61.24	76.22	79.75	69.75	54.20
2019	January	59.71	77.82	84.17	71.07	56.00
	February	65.58	82.29	88.05	77.85	64.36
	March	75.53	83.64	87.35	79.09	64.48



* *FOB barge spot prices.*

Source: Argus. Prices are average of available days.

Table and Graph 6: Singapore market – spot cargoes, fob

$/b

		naphtha	premium gasoline unl 95	premium gasoline unl 92	gasoil	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
2018	March	63.08	77.12	74.25	77.75	79.00	61.74	56.05
	April	67.14	81.50	78.45	83.72	85.16	64.41	59.63
	May	74.66	87.60	85.29	89.52	89.93	73.38	67.07
	June	70.89	83.53	81.50	86.87	86.91	74.47	68.15
	July	72.25	83.11	81.08	85.55	87.31	76.38	69.98
	August	71.76	84.83	82.44	87.61	87.31	75.76	68.57
	September	75.39	89.53	87.51	92.76	91.75	77.59	70.54
	October	74.90	87.64	85.66	95.97	95.16	83.63	76.59
	November	57.01	68.65	66.92	81.63	82.97	77.24	68.25
	December	52.13	60.02	57.98	69.03	71.17	64.16	56.63
2019	January	51.96	61.07	59.12	70.79	71.75	65.19	58.10
	February	56.54	66.27	64.36	77.78	77.93	69.07	63.79
	March	60.24	74.42	72.83	80.31	79.82	71.61	65.56

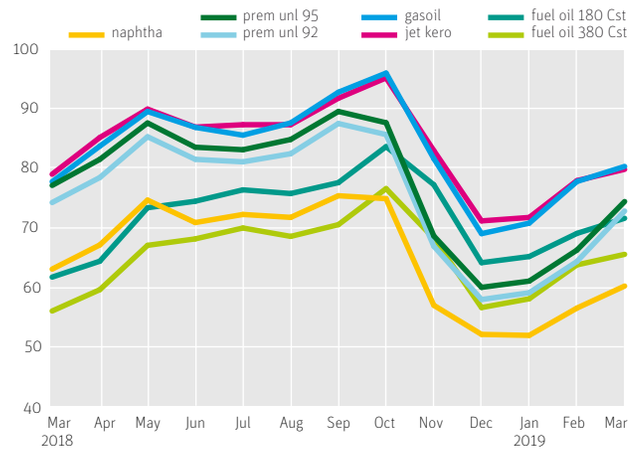
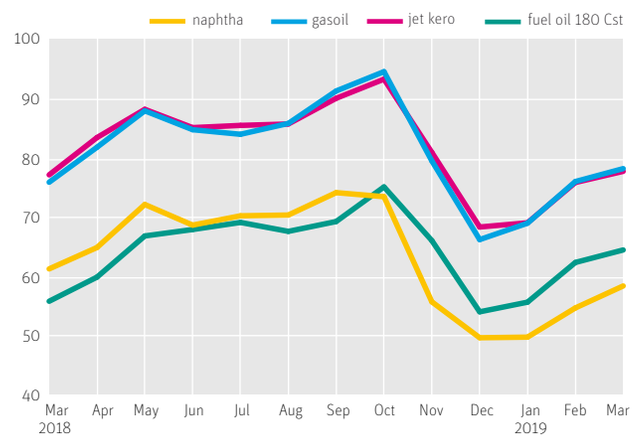


Table and Graph 7: Middle East Gulf market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2018	March	61.36	75.90	77.14	55.93
	April	64.95	81.77	83.40	59.98
	May	72.17	87.89	88.14	66.89
	June	68.71	84.72	85.07	67.97
	July	70.27	83.95	85.44	69.16
	August	70.40	85.77	85.68	67.66
	September	74.16	91.22	89.99	69.31
	October	73.48	94.46	93.20	75.12
	November	55.84	79.49	80.91	66.12
	December	49.81	66.28	68.39	54.16
2019	January	49.91	69.03	69.10	55.78
	February	54.81	76.02	75.86	62.44
	March	58.50	78.19	77.73	64.54

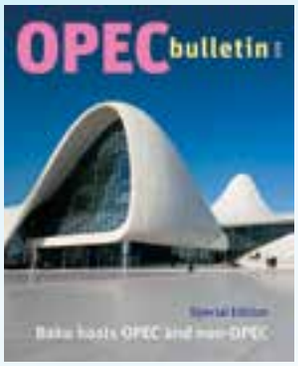
Source: Argus. Prices are average of available days.



OPEC offers a range of publications that reflect its activities. Copies can be obtained by contacting this Department, which regular readers should also notify in the event of a change of address:

PR & Information Department, OPEC Secretariat
Helferstorferstrasse 17, A-1010 Vienna, Austria
Tel: +43 1 211 12-0; fax: +43 1 211 12/5081; e-mail: prid@opec.org

OPEC Bulletin
(free of charge)

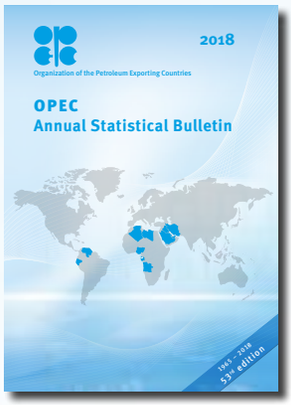


March 2019

February 2019

January 2019

Annual Statistical Bulletin 2018

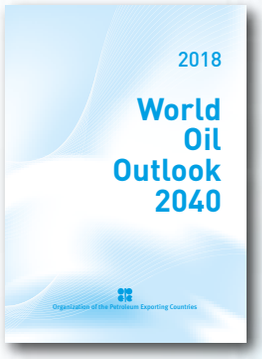


128-page book. A USB is also available (for Microsoft Windows only) which contains all the data in the book and much more.

- Easy to install and display
- East to manipulate and query

Interactive version available at http://asb.opec.org/

World Oil Outlook 2018
(free of charge)

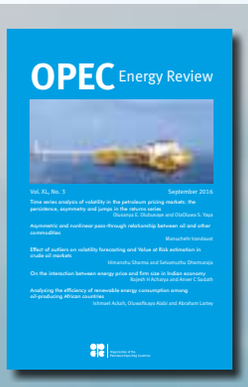


OPEC Monthly Oil Market Report *(free of charge)*

- Crude oil and product prices analysis
- Member Country output figures
- Stocks and supply/ demand analysis

Annual Report 2017
(free of charge)

OPEC Energy Review



Contains research papers by international experts on energy, the oil market, economic development and the environment. Available quarterly only from the commercial publisher. Annual subscription rates for 2015:

	Institutional			Personal
	Print	Online	Print & online	Print & online
Europe €	615	615	738	182
UK £	485	485	582	123
Americas $	814	814	977	203
Rest of world $	949	949	1,139	£123

Canadian residents, please add five per cent for GST.

Orders and enquiries:
John Wiley & Sons, 9600 Garsington Road, Oxford OX4 2DQ, UK.
Tel: +44 (0)1865 776868; fax: +44 (0)1865 714591; e-mail: cs-journals@wiley.com;
http://onlinelibrary.wiley.com/

www.opec.org