The Commonwealth

Discussion Note

COP26 Side Event: Methane

8 November 2021, 14:30-16:00, Commonwealth Pavilion

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November 2021

Commonwealth Collaboration to Combat Climate Crises

"Accelerating Methane Reductions in the Petroleum Sector"

Curbing methane emissions: the single greatest lever available in the short term

- **Methane is the second largest contributor to global warming**, accounting for over 30% of the global rise in temperatures to date. Its global warming effect is over **80 times more potent than CO2.**
- **Methane levels have more than doubled** since pre-industrial times. Urgent reductions are required to keep a 1.5C warming limit within reach.
- **Using available technology we can avoid nearly 0.3°C of global warming** by the 2040s if we reduce human-caused methane emissions by 45% by 2030.
- **Reductions in the oil and gas sector can be achieved quickly, using existing proven solutions which are cost-effective and, in many cases, even profitable**. According to the International Energy Agency (IEA) more than 70% reduction is possible with today's technology, and over 45% could be done at no net cost.
- Reducing methane is a **win-win for all - climate, health, energy, food and economies.**
- **Governments have a critical role to play** in making the needed methane reduction a reality. Addressing the barriers developing countries face, especially small states and least developed countries, is critical for success.
- **Commonwealth countries have already shown international leadership** in working to reduce methane and many more have ambitious plans.
- **However, challenges exist**, including regulatory frameworks, institutional capacity and technical expertise (e.g.to create a methane emissions and abatement profile).
- **The side event, Monday, 08 November, 14:30-16:00, COP26 Commonwealth Pavilion**, will be a critical dialogue and steppingstone for Commonwealth countries and partners to:
  - *Enable acceleration* of national methane emissions reduction;
  - Explore areas where *greater support and cooperation* is needed;
  - Identify opportunities for collaboration, including a proposed *new action group* under the Commonwealth Sustainable Energy Transitions (CSET) Agenda.

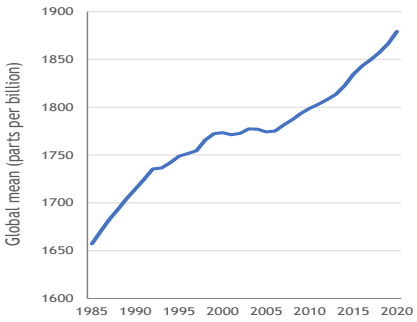
1. Introduction - Methane and the climate crisis

Methane (CH4) is a colourless, odourless, highly flammable gas and is the primary component of natural gas. It is a potent greenhouse gas that has a direct influence on climate and indirect effects on human health, food production and ecosystems.

The atmospheric concentration of methane has **more than doubled** since pre-industrial times[1]. After almost a decade of relative stability, global methane levels are now again increasing dramatically[2] (Figure 1).

According to the Intergovernmental Panel on Climate Change's (IPCC) 6th Annual Assessment Report (AR6) methane has contributed to 30-50% of the global rise in temperatures to date[3]. The report calls for "strong, rapid and sustained reductions" in methane emissions to keep a 1.5C warming limit within reach.

Figure 1: Global methane level



Source: Ed Dlugokencky, NOAA/ ESRL (www.esrl.noaa.gov/gmd/ccgg/trends_ch4/)

Methane's climate impact: a more potent pollutant than carbon dioxide

Greenhouse gases (GHGs) warm the earth by absorbing energy and slowing the rate at which the energy escapes to space – they act like a blanket insulating the earth. Different GHGs such as carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O), have different effects on the earth's warming. Two features which are particularly important are their ability to absorb energy ("radiative efficiency" or "radiative forcing"), and how long they stay in the atmosphere ("lifetime"). The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. GWPs measure the radiative efficiency or, the warming effect that one ton of the GHG has relative to 1 ton of carbon dioxide (CO2) over a specified time horizon. GWPs are often presented for 20-year (GWP_{20}), 100-year (GWP_{100}) and 500-year (GWP_{500}) time periods.

Methane stays in the atmosphere for about 10 years (which is a very short lifetime compared to the hundreds to thousands of years for carbon dioxide) but it has a radiative efficiency approximately 120 times more than CO2 immediately after it is emitted. As it decays (less and less of the methane gas remains in the atmosphere), its radiative forcing decreases rapidly. Its warming power is 84 times higher than carbon dioxide over 20 years and 28 times higher over 100 years. This is illustrated in Figure 2.

Methane is a much more potent pollutant than CO2 – its global warming potential is over 80 times higher. Curbing methane emissions is one of the most powerful levers in reducing near-term warming.

[1] Preindustrial value of ~715 parts per billion (ppb) to ~1880 ppb in 2020

[2] Global Methane Assessment 2021 - https://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions

[3] See figure SPM.2 of IPCC's Report available at https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf

Methane's indirect effects: health, food security and ecosystems

Methane is a key precursor in the formation of another gas, tropospheric ozone - a short lived climate pollutant (SLCP) with an atmospheric lifetime of hours to weeks. Tropospheric (low elevation) ozone absorbs radiation and consequently acts as another strong greenhouse gas further warming the planet. In addition, it is a harmful local air pollutant and is a main element of smog.

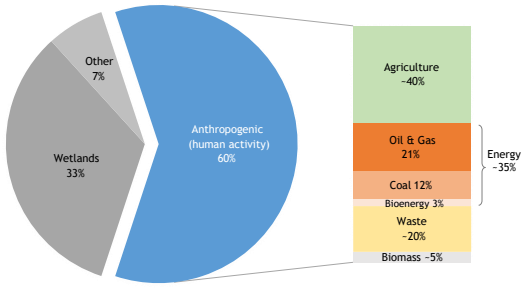
Breathing ozone damages human lung tissues and the range of its potential health impacts include reduced lung function, asthma, and chronic lung diseases. Studies have estimated that tropospheric ozone is responsible for about a million premature respiratory deaths globally per year, of which methane is responsible for roughly half[4].

Tropospheric ozone is also toxic to plants. It can interfere with the process of photosynthesis and damages leaves, resulting in slow growth and increased risk of diseases in plants. This has serious implications for food security. Tropospheric ozone causes annual losses of approximately 110 million tonnes of major staple crops: wheat, rice, maize and soybean. This represents around 4% of the total annual global crop production, and up to 15% in some regions[5]. Tropospheric ozone is estimated to cause around 15% annual yield losses in soy, wheat, rice and maize. The damage caused to plants also compounds the negative climate impact as it reduces their ability to sequester CO2. Other knock-on impacts caused by weakened plants include less protection against soil erosion, avalanches and flooding.

2. Sources of methane: why focus on the petroleum sector?

Around 60% of global methane emissions come from human activities (anthropogenic) with the rest coming from natural sources including wetlands, fresh waters, geologic seepage, wild animals, termites, wildfires, permafrost and vegetation.

Figure 3: Global Methane Emissions



Source data: IEA Methane Tracker 2021

Multiple benefits from methane reduction

According to the Global Methane Assessment, available targeted measures can reduce human-caused methane emissions by as much as 45% by 2030. This will avoid nearly 0.3°C of global warming by the 2040s. It could also prevent 255 000 premature deaths, 775 000 asthma related hospital visits, 73 billion hours of lost labour from extreme heat, and 26 million tonnes of crop losses each year. **The global monetized benefits for all market and non-market impacts are approximately US$ 4,300 per tonne of methane reduced.**

As shown in Figure 3, agriculture is the largest single source of manmade emissions, primarily livestock and rice cultivation. Addressing methane emissions from this sector is complex as it is deeply intertwined with food security, consumption patterns, culture, lifestyle and behaviours and solutions are often not technically straight-forward.

The energy sector (oil, gas, coal, bioenergy) accounts for around 35% of man-made methane emissions and the UN estimates that a 50% methane emissions reduction can be achieved at a low cost by 2030 (UNEP, 2021). The oil and gas industry, the second largest emitter, has been identified as a key priority area. The Global Methane Assessment estimates that readily available targeted measures could reduce emissions by 29–57 Mt/year with up to 80 per cent of measures could be implemented at negative or low cost. This is because the value of the captured gas is higher than the cost of the abatement measure.

Reductions in the oil and gas sector can be achieved relatively quickly, using "tried and tested" existing proven solutions which are cost-effective - even profitable.

[4] Methane | Climate & Clean Air Coalition (ccacoalition.org)

[5] Short-lived climate pollutants and food security | Climate & Clean Air Coalition (ccacoalition.org)

Methane emissions in the Petroleum sector – state of play

There are broadly three ways methane is released into the atmosphere in the petroleum value chain – flaring (controlled burning of natural gas), venting (direct release of natural gas) and leaks (fugitive emissions).

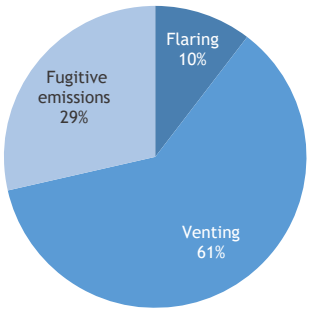
Flaring occurs when the natural gas that is generated as a by-product from oil production (associated gas) is burned because it cannot be used, recovered economically or re-injected into the subsurface. Depending on the circumstances, flaring durations can range from 1 hour to 1 year[6].Properly designed, maintained and operated flare systems can achieve 98% combustion efficiency (or higher) which would emit minimal amount of methane. Whilst flaring for operational and safety reasons will be needed from time to time, "routine" flaring is no longer an acceptable practice. Venting is also not a viable option for dealing with associated gas as it would release even larger quantities of methane into the atmosphere (no combustion). Despite this, significant routine flaring and venting still occurs. Although there are high ambitions to eliminate these practices, a lack of strategy, poor planning as well as commercial, regulatory, and some technical barriers stymie efforts.

Vented methane emissions occur from intentional releases of natural gas into the air, often for safety reasons, due to the design of the facility or equipment (e.g. pneumatic controllers) or operational requirements (e.g. venting a pipeline for inspection and maintenance). 'Fugitive' methane emissions occur from leakages that are not intended, for example because of a faulty seal or leaking valve. Leaks happen across all parts of the petroleum value chain and as methane is colourless and odourless, they can go undetected without regular inspection. As natural gas is predominantly made up of methane, its value chain is especially prone to fugitive emissions, as compared to oil.

The following analysis is based on data from the IEA's Methane Tracker Database which classifies emissions into upstream (production, gathering and processing) and downstream (refining, transmission and distribution including liquefaction of natural gas and regasification of same).

In 2020, the estimate of global methane emissions from the oil and gas sector was around 75 million tonnes - 61% was vented, 29% from fugitive emissions and the remainder, incomplete combustion from flares (Figure 4).

Figure 4: Sources of methane emissions in petroleum sector (2020)



Source: IEA (2021) Methane Tracker 2021

Flaring from upstream oil operations generated almost 8 million tonnes worldwide and was predominantly from onshore conventional activities (70% onshore, 20% offshore, 10% unconventional). 95% or roughly 7.5 million tonnes could have been avoided[7].

85% of fugitive emissions emanated from gas operations, split roughly evenly between the upstream and downstream (Figure 5).

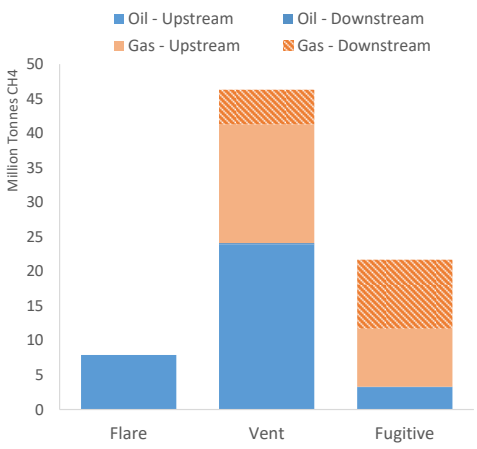
Venting occurs across both oil and gas value chains. For oil, upstream activities are the main source of vented methane emissions. Within the gas value chain, venting occurs at roughly the same scale in both the upstream and downstream activities (Figure 5).

The top 15 emitting countries represent around 80% of total absolute methane emissions. There is, however, an extremely wide range of methane intensity amongst countries when production volumes are considered (Figure 5(v)). This indicates significant scope for reductions if all countries were able to operate on the lowest possible emission intensity levels.

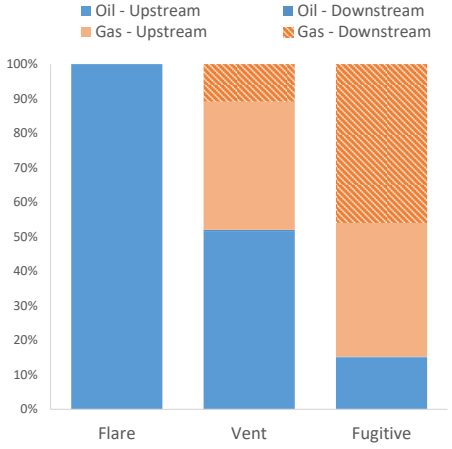
[6] Non-Routine Flaring Management: Modeling Guidance, Alberta Environment & Sustainable Resource Development, pp. 3, available at: http://environment.gov.ab.ca/info/library/8848.pdf
[7] IEA Curtailing Methane Emissions from Fossil Fuel Operations Report (2021)

Figure 5: 2020 Global petroleum sector methane emissions across the value chain

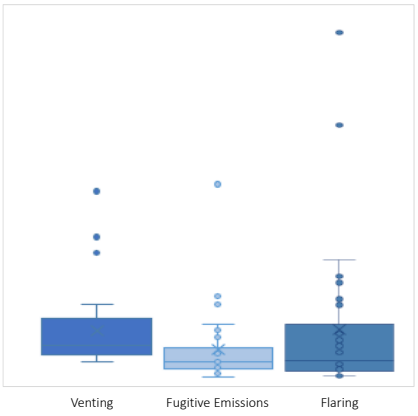
(i) Sources of methane emission: absolute basis



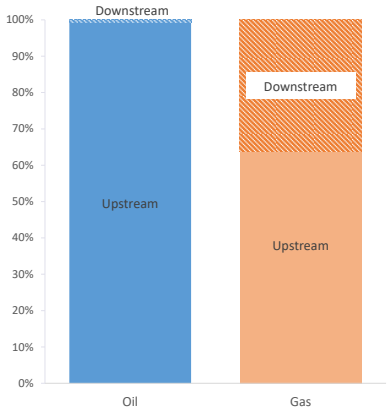
(ii) Sources and percentage across value chain



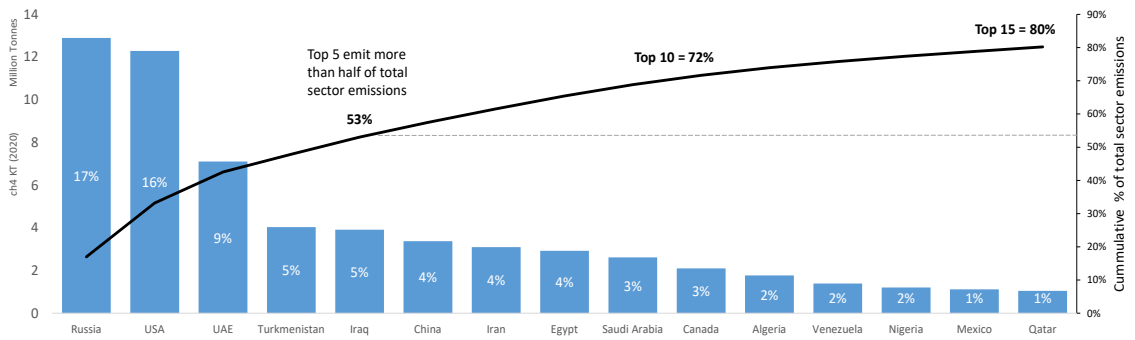
(iii) Range of emission intensity by source type



(iv) % emissions in value chain by resource type



(v) Top 15 countries on absolute total methane emissions and percentage of world's total. Cumulative contribution to total global emissions shown in black (RHS)



Source: IEA (2021), Methane Tracker 2021, IEA, Paris https://www.iea.org/reports/methane-tracker-2021, BP Statistical Review Statistical Review of World Energy 2021, author's calculations

Opportunity to increase energy access and government revenues

Methane emissions wastes a valuable energy resource that can generate social and economic benefits.

More than 2.6 billion people lack access to clean cooking facilities, and almost 790 million people around the world do not have access to electricity. Instead of being emitted into the atmosphere as methane, if the gas was captured and used in power generation or for clean cooking it could improve the lives of millions of people. If half of the amount of gas flared annually was used for power generation, it could provide about 400 billion kilowatt-hours of electricity – that's roughly the annual electricity consumption of Sub-Saharan Africa[8].

Depending on the fiscal regime governing the petroleum sector, the government does not receive any royalties when gas is flared. Minimising volumes should translate into increased government revenues. The state also participates in petroleum activity either through National Oil Companies (NOCs), by holding ownership interests or receiving a share of production. Volumes of gas that are lost across the systems can be significant and would have financial implications to the government.

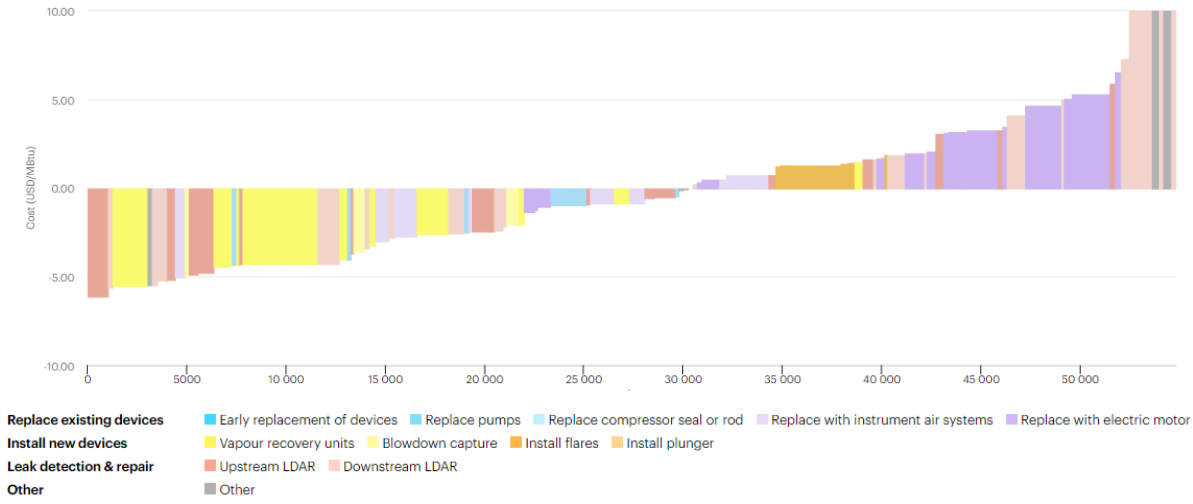
Mitigation of methane emissions

The International Energy Agency (IEA) estimates that more than 70% reduction in methane emissions from oil and gas operations is possible with today's technology, and over 45% could be done at no net cost. These "abatement" measures are mainly

- Replacing or retrofitting existing equipment that release methane with lower emitting ones. For example, seals, pumps, use of electric motors instead of gas.
- Installing new devices can reduce or avoid large sources of vented emissions. For example, efficient flare systems,
- Implementing leak detection & repair (LDAR) programme, and in particular, addressing "super-emitters"
-

Whilst there will be initial cash outlay for the above measures, in most cases there will be a net monetary benefit in the long term. Higher cash flows in subsequent years– either from increased revenues from the captured gas, or avoidance of penalties/fees for methane emissions, will exceed the initial investment (Figure 6).

Figure 6: IEA estimated abatement potential



Source: Source: IEA (2021), Methane Tracker 2021, IEA, Paris https://www.iea.org/reports/methane-tracker-2021

[8] We can end routine gas flaring by 2030. Here's how (worldbank.org)

Key barriers

The following are some of the key barriers which, if overcome in a timely manner, could accelerate methane reductions in the sector.

- Awareness of the scale of the issue and the potential remedies. Prior to COP26, methane in O&G was not at the forefront of climate and political discussions. It was often conscripted to technical discussions. Growing awareness across all stakeholders – politicians, civil servants, companies, citizens etc. could help increase urgency and prioritisation of addressing methane emissions.
- Weak regulatory and enabling frameworks. Whilst standards and best practices are emerging from international initiatives these are voluntary and do not apply to all petroleum operations in a country. Regulations would ensure that the standards apply across all companies and facilities and allow the government to ensuring compliance. Appropriate policies and structures (e.g. pricing of carbon, measures for non-compliance) are also often needed to incentivise action. Associated gas is a particular challenge where oil fields are remote. Dealing effectively requires effective strategies, financing, infrastructure and commercial arrangements.
- Limited regulatory capacity to design rules and regulations and enforce compliance
- Fast tracked developments presents a lost opportunity if well-known design practices are not adhered to. For example, installation of vapour recovery units, use of electric motors (versus natural gas). Given relatively low awareness of the challenge of methane emissions, it may not be a priority for the company submitting the Field Development Plan (FDP) nor for government officials reviewing and approving the FDP. This is especially the case in situations where there are weak regulatory and institutional capacities.
- Difficulties in estimating methane emissions. Methane is odourless and colourless and is notoriously difficult to detect and measure. Although many of the mitigation actions is as simple as fixing leaks, finding them can often prove difficult. This also limits the ability of the regulator to monitor performance and enforce compliance. Where there are fees/penalties, calculations are often based on company estimates which are difficult for the regulator to verify. These issues are commonly referred to as Monitoring, Reporting and Verification.

Global Methane Initiatives

There are several initiatives that are focussed on reducing methane emissions, the table below provides an overview of key international efforts.

Year	Initiative	Focus/Commitments / aims
2004	**Global Methane Initiative (GMI)** A multilateral public- and private-sector initiative to advance the recovery and use of methane as a clean energy source.	Focus areas include ○ Technical support to deploy methane-to-energy projects ○ Information resources ○ Global collaboration efforts
2014	**Oil & Gas Methane Partnership (OGMP)** Led by UNEP, in partnership with the European Commission, the UK Government, the Environmental Defense Fund, and leading oil and gas companies working to improve methane emissions reporting. The 72 member companies operate in over 50 countries and represent ~30% of global production. UNEP collects, aggregates, and publishes company reporting, as well as the progress towards announced targets.	Member companies **commit** to ○ **reporting on methane emissions** from all sources at both operated and non-operated assets ○ a **reduction target** periodically reviewed for its ambition ○ **survey for nine core emissions sources** that account for the bulk of methane emissions in typical upstream operations The updated reporting framework (OGMP 2.0) standardizes emissions accounting practices making it simpler to track and compare performance across companies

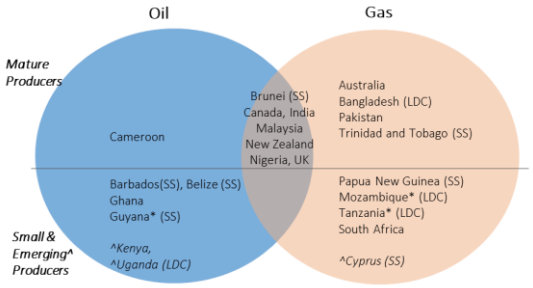
2014	**Oil and Gas Climate Initiative (OGCI)** Voluntary, CEO-led coalition of 12 companies which aims to lead the industry response to climate change. The members contribute $100m each to an investment fund, with reducing methane emissions as one of the four main areas of focus.	OGCI ambition to achieve a collective average 0.20% **methane intensity[9] target** by 2025. Enabling actions for reducing methane emissions include ○ **Development of open source guidance** ○ Compendium of **methane detection technologies** ○ **Defining a methane intensity target** ○ Supporting **zero routine flaring by 2030** ○ Expanding outreach by **engaging in policy, capacity building and advocacy** ○ Supporting inclusion of the methane target in revised Nationally Determined Contributions (NDCs).
2015	**Zero Routine Flaring (ZRF) by 2030** World Bank global initiative through its Global Gas Flaring Reduction Partnership (a multi-donor trust fund). Endorsed by 80 oil companies and governments, representing almost 60% of global flaring.	Governments and companies that endorse ZRF **commit** to ○ **no routine flaring** in any **new oil field** developments, and ○ **end routine flaring** at **existing (legacy) oil production sites** as soon as is possible.
2017	**Methane Guiding Principles (MGP)** Voluntary, international multi-stakeholder partnership between industry and non-industry organisations.	MGP's **toolkit** includes: ○ a suite of guidelines, including best practice strategies for reducing methane emissions and detailed mitigation strategies ○ Gap Assessment Tool ○ Methane Cost Model
2019	**Global Methane Alliance (GMA)** Supporting countries that commit to ambitious methane reduction targets in the oil and gas sector.	Member countries **commit** to ○ include methane reduction targets from the oil and gas sector in their Nationally Determined Contribution. ○ Choice of either an **absolute reduction target** (of >45% reduction in methane emissions by 2025 and 60%-75% by 2030) or a **methane intensity target** of "near-zero" methane emissions (<0.25%).
2021	**Global Methane Pledge (GMP)** First announced by the US and EU in September 202, it is expected to garner support by over 80 countries ahead of official launch at COP26.	Countries commit to cut emissions by 30% by 2030 (from 2020 levels)

[9] Methane emissions intensity is a measure of methane emissions relative to natural gas throughput

3. The Commonwealth and O&G methane emissions

There are currently 23 Commonwealth countries (CWC) who are either mature petroleum producers or "emerging" producers – recent material discoveries are underway or expected to begin production in the near future (Figure 7).

Figure 7: Commonwealth countries



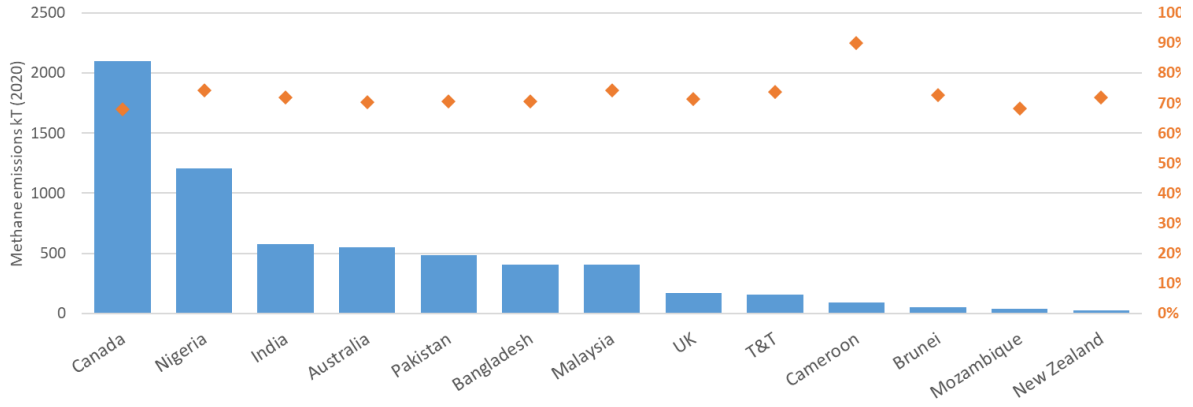
*^Emerging, * Significant new O&G projects*
Categorised as either predominantly oil or gas if production>75%

Snapshot: Methane emissions in CWC

In 2020, CWC emitted over 6 million tonnes of methane in similar proportion of venting, fugitive and flared. The IEA estimates that almost 4.5 million tonnes of this can be potentially reduced. Consistent with the global average, this is approximately 70% reduction of methane emissions. See Figure 8 for details by country.

However, for several CWC where there are oil and gas projects in development or expecting approvals, activity and production is set to increase. If care is not exercised, methane emissions could also increase. This is of particular relevance for gas producing countries, especially Liquified Natural Gas (LNG) exporters. Six CWC represent over 40% of global LNG trade (Australia, Brunei, Malaysia, Nigeria, Papua New Guinea, Trinidad & Tobago) and this is expected to increase with planned expansions as well as new entrants Cameroon, Mozambique and Tanzania. International efforts to decarbonise energy systems means that there are growing headwinds against expansion of the gas industry and projects/cargoes with high methane emissions footprint will be disadvantaged – for capital, access to markets and likely to receive lower prices (regulatory changes in large gas consuming countries). Conversely if CWC are amongst the top performers on methane intensity there are likely to be several benefits.

Figure 8: Commonwealth countries 2020 methane emissions and potential abatement



Source: IEA (2021), Methane Tracker 2021, IEA, Paris https://www.iea.org/reports/methane-tracker-2021P
Please note country level information was not available for Barbados, Belize, Ghana, Guyana, Papua New Guinea, South Africa and Tanzania

Snapshot: Commonwealth countries in action

The table below provides highlights for selected Commonwealth countries on some areas where methane emissions are being tackled.

	Voluntary frameworks	Policy /Regulatory environment	Emissions targets
Canada	• Founding member of the Climate and Clean Air Coalition (CCAC). Chairs technological demonstration component in CCAC's Oil and Gas Initiative. Lead partner of CCAC's Methane Partnership • Endorsed Global Methane Pledge	• 2020 Federal Regulations[10] for venting and fugitive emissions that introduce emission limits and inspect / repair equipment • Province regulations in British Columbia, Alberta and Saskatchewan	• In 2016, pledged to reduce methane emissions 40-45% by 2025 (vs 2012 levels) • Public report expected in 2021 on efficacy of actions • 2021 launch of C$750m Emissions Reduction Fund • Global Methane Pledge - reduction of at least 30% by 2030 • COP26 Pledge to reduce methane emissions from oil and gas by 75% by 2030
Ghana	• Founding member of CCAC • Member of the Global Methane Initiative • First country to include short-lived climate pollutants (SLCPs) which includes methane in their National GHG Inventory	• 2013 National Climate Change Policy included methane reduction strategies • 2018 National Action Plan to mitigate SLCPs which identifies 16 mitigation measures across seven sectors.	• Pledge to lower GHG emissions by 15% by 2030 • Conditional pledge to reduce 30% further by 2030 • Global Methane Pledge - reduction of at least 30% by 2030
Malaysia	• Member of Global Methane Principles (GMP)	• Developing standards for methane emissions measurements, quantification and reporting. • Improving accuracy of methane emissions quantification. initiated baseline study to measure methane emissions on LNG, gas processing and gas transmission facilities, covering both intended and unintended releases.	• PETRONAS Carbon Commitments specify that all new facilities to be designed to be zero continuous venting since 2013. • Cap GHG emissions to 49.5 mil tCO2e by 2024 (includes methane). • Zero continuous venting in upstream by 2024 or earlier.
Nigeria	• Founding member of CCAC • Member of the Global Methane Alliance • Member of Global Gas Flaring Reduction Partnership	• 2019 National Action Plan to mitigate SLCPs • 2021 updated National Climate Change Policy	• Endorsed ZRF by 2030. (has cut natural gas flaring ~70% since 2000) • 2021 NDC pledges to reduce methane emissions by 45% by 2025. Conditional pledge to reduce by 60-75% by 2030 • 2016 Nigeria Gas Flare Commercialisation Programme • Global Methane Pledge - reduction of at least 30% by 2030

[10] Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)

4. Conclusion – Potential opportunities for Commonwealth collaboration

The estimated monetary benefit to Commonwealth countries if the possible 4 million tonnes reduction in methane emissions were achieved is $19 billion[11]. It would:

- Prevent ~6,350 premature deaths per year
- Increase crop yields by ~645,000 tonnes every year (wheat, soybeans, maize and rice)
- Avoid the annual loss of ~1800 million hours of work due to extreme heat

Critical role of Government in tackling methane emissions

Having robust context appropriate national policies and regulations backed by government institutions that can effectively monitor and enforce compliance is the bedrock for effective management of the petroleum sector. Potential areas for collaboration for Commonwealth countries to consider as part of strategies and plans to reduce methane emissions are:

1) Strengthening carbon capacities within national institutions such as ministries (e.g. petroleum, environment, finance), regulators and National Oil Companies in order to:
    - Develop and enforce appropriate strategies, policies, regulations and guidelines for effective management and mitigation of methane across the O&G value chain
    - Effectively monitor, report and verify methane emissions
    - Enhance government revenues. For example, treatment of flared and vented gas for royalty. For LNG/gas exporters there may be the potential for countries with lower methane emission intensity to achieve pricing premiums or positions themselves advantageously to avoid/minimise imposition of carbon border tax adjustments.
2) Renewed focus on government's approval of Field Development Plans to ensure that new oil and gas projects will have near-zero methane intensity. The Commonwealth Secretariat has developed a model template that countries can use to create National FDP Submissions. It embeds requirements for companies to demonstrate how projects have been designed and will be operated to minimise methane emissions. This can be deployed relatively quickly and could serve as an effective mechanism in the absence of regulations.
3) Embedding best practice into national regulations to give legal force to:
    - Existing policy statements. For example, there are several countries that have adopted a Zero Routine Venting and Flaring Policy, however, without legally binding requirements that embed the policy positions (including penalties in cases of non-compliance) achieving the policy objective is often difficult.
    - Existing well-established transparent voluntary monitoring, reporting and verification. For example integrating the OGMP 2.0 Level 5 reporting guidelines into petroleum regulations would significantly enhance the government's ability to understand, track and compare performance of all companies.
    - Ensure that any new oil and gas project is designed, built and maintained to "near-zero" methane intensity.
4) Development of pilot projects and knowledge exchanges in specific areas. For example, associated gas, the use of technology such as satellite monitoring, emissions certification.

The Commonwealth Secretariat has for over 50 years provided technical assistance and support to member countries in the effective management of natural resources. The Secretariat stands ready to support member countries in their efforts reducing methane emissions.

[11] Based on monetized benefits of US$4300 per tonne of methane per Global Methane Assessment

5. References

Global gas flaring reduction partnership - gas flaring definitions (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/755071467695306362/Global-gas-flaring-reduction-partnership-gas-flaring-definitions

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