



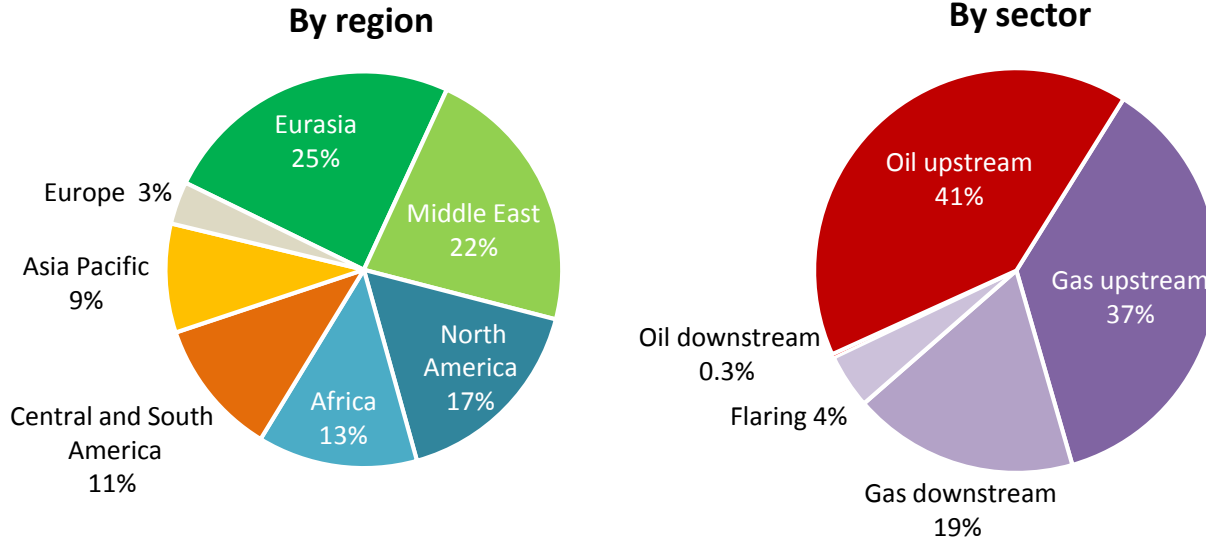
World Energy Outlook 2017

Dr Christophe McGlade
Global Methane Forum, Opening Plenary
Toronto, 17 April 2018

- WEO focus on natural gas highlights four factors that will be pivotal for the future role of gas in the global energy mix:
 - **Competitiveness** in a world of relatively cheap coal & ever-cheaper solar & wind
 - How a **new global gas order**, spurred by LNG, reshapes trade, investment & gas security
 - The **position of gas in policies & strategies**, notably in developing countries in Asia
 - Perceptions & reality of the **environmental case** for gas
- On the latter, broad consensus over combustion emissions of gas: but significant uncertainty over methane emissions from oil and gas operations
- *WEO-2017* aimed to investigate the sources of these emissions and explore what actions can be taken to mitigate them

Emissions come from a wide variety of sources along the oil and gas value chains

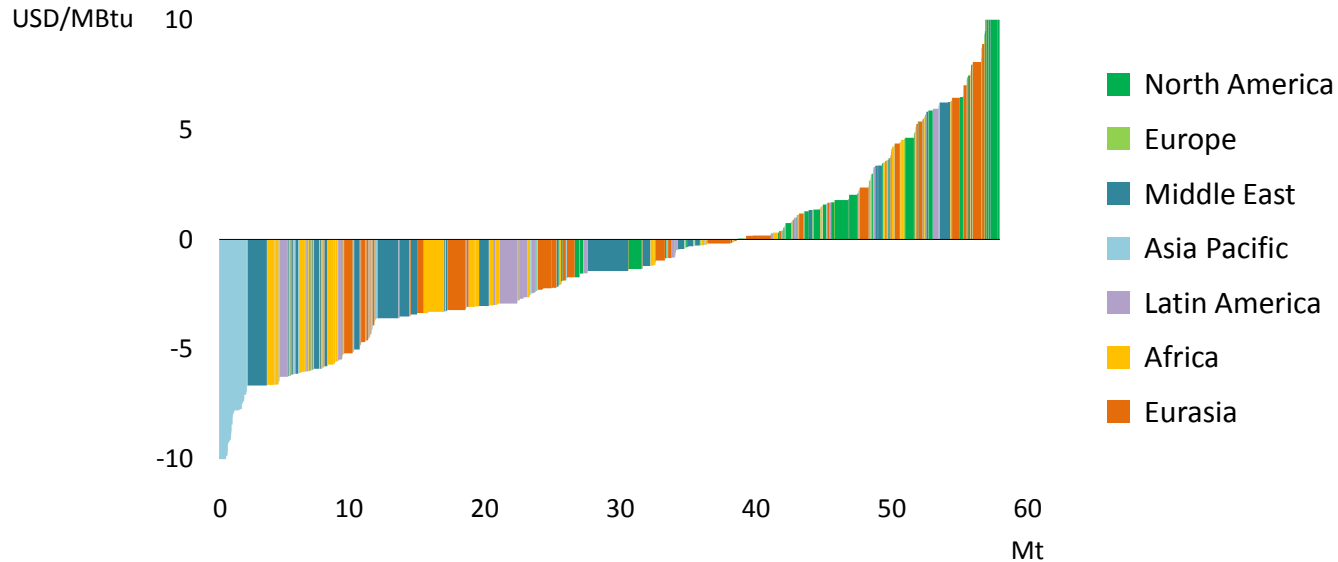
Regional and sectoral breakdown of methane from oil and gas operations, 2015



Natural gas operations account for around 55% of our estimated 76 Mt methane emissions in 2015, with Eurasia and the Middle East the largest emitting regions

Three quarters of current oil and gas methane emissions are technically avoidable

Global marginal abatement cost curve for oil and gas methane emissions, 2015



It is technically possible to reduce the 76 Mt current oil and gas emissions by 58 Mt; half (38 Mt) can be avoided using approaches with positive net present values

Failure to act on methane represents a clear risk to the environmental credentials of natural gas

- Actions required to tackle the methane emissions from oil and gas operations need ultimately to accomplish two goals: measure and abate
- Industry-led partnerships have been established – these generally focus on best practices, promoting awareness and encouraging use of abatement technologies.
- But achieving material reductions means stepping up the level of ambition; few countries have specific mitigation frameworks in place





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