



**GLOBAL METHANE INITIATIVE  
OIL & GAS SUBCOMMITTEE  
MEETING**

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Oil & Gas Subcommittee  
22 March 2023  
Geneva, Switzerland

**MEETING SUMMARY**

The Global Methane Initiative (GMI) Oil & Gas Subcommittee Meeting held a hybrid meeting (in-person and virtual attendees) in Geneva, Switzerland, on 22 March 2023. The meeting was held in conjunction with the United Nations Economic Commission for Europe (UNECE) [10<sup>th</sup> Session of the Group of Experts on Gas](#). Mr. James Diamond of Environment and Climate Change Canada (ECCC) and Co-Chair of the GMI Oil & Gas Subcommittee led the meeting and was joined by representatives from 20 countries, including Azerbaijan, Belgium, Bosnia and Herzegovina, Brazil, Canada, Colombia, France, India, Malaysia, Mexico, Nigeria, Portugal, Qatar, Russia, Saudi Arabia, Slovakia, South Africa, Switzerland, United Kingdom, and the United States. Representatives from 10 GMI Partner Countries participated, including Brazil, Canada, Colombia, India, Mexico, Nigeria, Russia, Saudi Arabia, United Kingdom, and the United States. A list of the participants is provided in Annex I.

The purpose of the meeting was to provide participants with updates on the activities of the Subcommittee, including progress on the [2022-2025 Oil & Gas Subcommittee Action Plan](#), and to hear from Partner Countries and Project Network members about their recent methane mitigation work. The featured PowerPoint presentation is available on the [GMI website](#). The agenda is included in Annex II.

**Welcome and Adoption of the Agenda**

Mr. James Diamond, GMI Oil & Gas Subcommittee Co-Chair, ECCC (Canada), opened the meeting by welcoming participants that were able to attend in person or virtually. Mr. Francisco de la Flor García, Chair of the UNECE Group of Experts on Gas, provided background on the goals of UNECE and the Group of Experts on Gas and welcomed GMI Oil & Gas Subcommittee members to join the event beginning 23 March. He emphasized that he looks forward to continuing to build a relationship with GMI. Mr. Diamond then reviewed the meeting agenda.

**GMI Secretariat Update**

Ms. Denise Mulholland, Director, GMI Secretariat, provided an update on recent GMI activities. She highlighted GMI accomplishments and methane mitigation activities since 2021, including the Global Methane, Climate and Clean Air Forum held in September 2022. Secretariat priorities through 2023 include assisting countries working to reduce methane emissions, supporting Subcommittee Co-Chairs, enhancing promotion of GMI through targeted communications, and planning the 2024 Global Methane Forum in Geneva, Switzerland. Ms. Mulholland also reviewed GMI's support of signatories of the Global Methane Pledge and reminded attendees how to engage with GMI.

**Oil & Gas Subcommittee Updates: Action Plan/Activities**

### ***Action Plan Update***

Mr. Diamond provided an update on the Oil & Gas Subcommittee's progress towards meeting the objectives of the [2022-2025 Action Plan](#). Activities conducted over the past year included hosting six oil and gas technical sessions led by 29 speakers at the Global Methane, Climate and Clean Air Forum, regular promotion of oil and gas events on the GMI website and sharing of oil and gas-related news on GMI's social media platforms. GMI also continues to provide technical assistance to Partner Countries such as Colombia, Kazakhstan, Indonesia, Nigeria, and Mexico to improve inventories, identify mitigation opportunities, and advance methane policy.

### ***Key Messages from the Global Methane, Climate and Clean Air Forum***

Mr. Diamond reviewed key messages from participants of the oil and gas joint technical sessions at the Global Methane, Climate and Clean Air Forum. Key messages included emphasizing the importance of turning data into action, planning a science- and policy-focused forum with the "right players" involved, hosting workshops to facilitate technology transfer between experienced operators and operators beginning their mitigation journey, encouraging the sharing of more success stories about implemented methane mitigation projects, and involving financial institutions in future forums to learn about opportunities and application requirements for methane abatement projects.

### ***Partner Country Updates***

Oil & Gas Subcommittee delegates from three GMI Partner Countries gave updates on their recent efforts to mitigate methane in the oil and gas sector.

**Colombia.** Ms. Lina María Castaño Luján, Ministry of Mines and Energy, provided background on Colombia's action on methane since 2004. In 2020, Colombia revised its Nationally Determined Contributions (NDC) to reduce greenhouse gas (GHG) emissions by 51 percent by 2030 and become carbon neutral by 2050. In 2022, the Ministry of Mines and Energy adopted a resolution that established technical requirements for leak detection and repair (LDAR) and the use, burning, and venting of natural gas during exploration. This resolution made Colombia the first South American country to regulate methane emissions from the oil and gas sector. Ms. Castaño Luján noted that Colombia still faces challenges regarding the implementation of this resolution and this year they are focused on specific improvements. Improvements to the resolution include defining an accreditation standard for organizations that intend to carry out verification activities, allowing evaluations to be carried out by first or third parties, and requirement that quantification instruments be calibrated by accredited laboratories. Ms. Castaño Luján then reviewed next steps for Colombia to continue addressing methane emissions from the oil and gas sector.

**Saudi Arabia.** Mr. Faisal Al Qurooni, Ministry of Energy, noted that Saudi Arabia has reached an upstream methane intensity of 0.05 percent in 2021 through flare minimization, leak detection, and repair programs. Moving forward, the Ministry of Energy plans to continue to reduce methane emissions through commitments and pledges that Saudi Arabia is a part of. Mr. Al Qurooni explained that Saudi Arabia is also working to reduce its flaring intensity with a commitment to reach zero routine flaring no later than 2030. Saudi Arabia is using the Master Gas System, developed in the 1970s, to capture and reuse gas, through the flare minimization roadmaps that identify priorities across Saudi Aramco operations, and with flare minimization technologies, including innovative flare gas recovery systems and high integrity pressure protection systems. Mr. Al Qurooni gave an overview of the methane Leak Detection and Repair (LDAR) program, a comprehensive program applied in all operating facilities to detect and repair leaks, which are then verified by an independent reviewer. The Ministry of Energy continues to enhance their methane reduction program in the oil and gas sector by

using methane-detecting cameras and drones, as well as geospatial solutions. Mr. Al Qurooni then described Saudi Arabia's commitments under the Oil and Gas Climate Initiative's Aiming for Zero Methane Emissions Initiative and the Global Methane Pledge.

**United States.** Ms. Paz Aviles, U.S. Environmental Protection Agency (EPA), reviewed EPA's proposed requirements for oil and natural gas operations. The supplemental rule proposes updated New Source Performance Standards, which require methane reductions from new, modified, and reconstructed sources. It also includes emission guidelines to provide specificity for states that will be required to prepare plans to implement and enforce performance standards for existing sources across the country. States will have to set their reductions based on EPA's Best System of Emission Reduction. Lastly, Ms. Aviles explained that the supplemental rule has proposed revisions to the Clean Air Act which will be complementary to the new resources and programs in the Inflation Reduction Act. She also provided an update on the methane emissions reduction program in the Inflation Reduction Act. The Inflation Reduction Act allocates \$1.55 billion to reduce methane emissions through financial and technical assistance. These funds can be used to prepare and submit GHG reports, monitor methane emissions, reduce methane and other GHG emissions by deploying equipment, supporting innovation, plugging wells, supporting environmental restoration, and more. Ms. Aviles also noted that the Inflation Reduction Act establishes a waste emissions charge on methane from applicable upstream and midstream oil and gas facilities.

#### **GMI Oil and Gas Sector Activities in Southeast Asia**

Mr. Andrew Meluch, EPA, (United States) gave an overview of how countries can leverage GMI's expertise to reach climate goals. Mr. Meluch emphasized that GMI can provide assistance at various stages in the project plan, including assessing needs and strategies in the planning phase, helping develop tools and resources in the implementation phase, or building capacity in the evaluation phase of a project. He provided an overview of GMI's work in Southeast Asia, beginning with activities and methane mitigation actions in Indonesia. Since Indonesia joined GMI in 2010, GMI has conducted approximately 12 workshops, trainings, field studies, and measurement campaigns across the country. In 2019, the Ministry of Energy and Mineral Resources in Indonesia issued a new rule to improve their GHG inventory as well as mitigation of GHG emissions from the energy sector. GMI is currently providing technical support to develop a reliable GHG emissions database to help refine Indonesia's national inventory.

#### **Ecopetrol's Participation in the Oil and Gas Methane Partnership (OGMP) 2.0**

Ms. Martha Herrera, representing Ecopetrol in Colombia, began by outlining the Company's actions to reduce methane emissions since 2013. Ecopetrol has partnered with GMI since 2013 and received technical assistance and training that enabled the Company to join OGMP in 2019. In 2021, Ecopetrol joined OGMP 2.0 and carried out a bottom-up measurement campaign in 95 percent of its upstream facilities. Ms. Herrera described their future goals, which include reducing methane emissions by 45 percent by 2025. Ecopetrol is also working with national authorities to address methane emissions. Ms. Herrera explained that Ecopetrol continues to focus on its sustainability reporting and greenhouse gas inventory to ensure that all emissions from their operations are captured. As of 2022, the Colombian government has enforced new regulations that will facilitate Ecopetrol's compliance with reports required by OGMP 2.0. Ms. Herrera provided an overview of the challenges and lessons learned around the emission reduction goal and fugitive emissions and flaring when implementing OGMP 2.0.

#### **PETRONAS Methane Emissions Management Journey**

Mr. Hasnor Hashim, representing PETRONAS in Malaysia, provided an overview of how PETRONAS is strengthening methane emissions management since joining the Methane Guiding Principles partnership in 2020. Mr. Hashim explained that PETRONAS' systematic approach supports their goal to reach net zero carbon emissions by 2050 and zero routine flaring by 2030. In 2021, Malaysia joined the Global Methane Pledge. PETRONAS is supporting Malaysia's efforts to achieve the goals of the Global Methane Pledge and conducted the first ASEAN Energy Sector Methane Roundtable in 2021. PETRONAS also participates in OGMP 2.0 and is actively making progress in the program. Highlights in PETRONAS' OGMP 2.0 delivery include improving quantification, reducing methane emissions from the oil and gas sector, exploring and piloting methane measurement technologies, and advocating for methane reduction efforts in Asia. Mr. Hashim invited the attendees to participate in the upcoming [Energy Asia conference](#) on 26-28 June 2023 in Kuala Lumpur, Malaysia.

### **The Methane Alert and Response System (MARS)**

Mr. Manfredi Caltagirone, United Nations Environment Programme, introduced the goals of the International Methane Emissions Observatory (IMEO) which exists to provide open, reliable, and actionable data to individuals that can act to reduce methane emissions. IMEO created MARS to use satellites to provide this type of actionable data to stakeholders. MARS was launched at COP27 and is the first system to coordinate and collect data on methane events to promote mitigation action. MARS uses public satellite data to identify large methane plumes and methane hot spots. Further analysis allows IMEO to attribute the methane emissions to a specific site. Mr. Caltagirone explained that, after methane plumes are identified, MARS notifies relevant stakeholders of the super emitting event. If the event is attributed to an OGMP company, IMEO will inform the government where the super emitting event and the asset manager. OGMP companies are expected to provide feedback on the event after receiving preliminary notice. If an OGMP company is not involved in the super emitting event, IMEO reaches out to the government to request that the government facilitates a connection between IMEO and the company. After 45-75 days, all non-proprietary data and metadata is made public, an activity that aligns with IMEO's goal to improve global transparency on methane emissions. The public launch of MARS is planned for the second half of 2023.

### **Wrap Up and Next Steps**

Mr. Diamond closed the meeting by reviewing upcoming oil and gas-related events and encouraging participants to provide feedback on how GMI can be a resource to them. He emphasized that Subcommittee members should look for opportunities where GMI can participate at oil and gas events, noting that the Oil & Gas Subcommittee would be happy to help develop content and participate in methane events. He thanked the participants, encouraged members to attend the UNECE 10th Session of the Group of Experts on Gas, and adjourned the meeting.

**ANNEX I**

**Meeting Participants**

<b>Name</b>	<b>Affiliation</b>	<b>Country</b>
Abiodun Abdurrahman	Nigerian Midstream and Downstream Petroleum Regulation Authority	Nigeria
Aidu Qi	Environment and Climate Change Canada (ECCC)	Canada
Alberto Fossa	Research Centre for Greenhouse Gas Innovation (RCGI)	Brazil
Andrei V Tchouvelev	Hydrogen Council	Brussels
Andrew Meluch	U.S. Environmental Protection Agency	United States
Asmau Jibril	Federal Ministry of Environment	Nigeria
Bernardino Gomes		Portugal
Branko Milicevic	United Nations Economic Commission for Europe	Switzerland
Brian Van Vliet	Spartan Controls	Canada
Celina N. Evbuomwan	Nigerian Midstream and Downstream Petroleum Authority (NMDPRA)	Nigeria
Clark Talkington	Advanced Resources International, Inc.	United States
David Creed	Sindicatum	United Kingdom
Denise Mulholland	Global Methane Initiative	United States
Emils Lagzdins	IOGP Europe	Belgium
Emir Kadric	KJKP Sarajevogas d.o.o.	Bosnia and Herzegovina
Emma Eichelman	Tetra Tech	United States
Eric Six	Heath Consultants	United States
Faisal Al Qurooni	Ministry of Energy	Saudi Arabia
Francisco Pablo de la Flor Garcia	United Nations Economic Commission for Europe	
František Šucha	Eustream, a.s.	Slovakia
Galia Fazeliyanova	Gas Exporting Countries Forum	Qatar
Hasnor Hashim	PETRONAS	Malaysia
Hugh Chisholm	Carbon Recovery Network LLC	United States
Ilham Akbarov	TAP AG	Azerbaijan
Jacqueline Peterson	Kathairos Solutions Inc.	Canada
James Diamond	Environment and Climate Change Canada (ECCC)	Canada
Jasmine Urisk	JTU Consulting Inc.	Canada
Javier Bocanegra	Consultant	Mexico
Jonathan Stern	Oxford Institute for Energy Studies (OIES)	United Kingdom
Julio R. Meneghini	Research Centre for Greenhouse Gas Innovation (RCGI)	Brazil
Karen Mascarenhas	Research Centre for Greenhouse Gas Innovation (RCGI)	Brazil
Kevin Pang	Qnergy	United States
Klara Zimmerman	U.S. Environmental Protection Agency	United States

<b>Name</b>	<b>Affiliation</b>	<b>Country</b>
Ksenia Romanovskaya	Gazprom VNIIGAZ LLC	Russia
Liberty Gura	EAP Engineering	South Africa
Lina María Castaño Luján	Ministry of Mines and Energy	Colombia
Linh Nguyen	Abt Associates	United States
Manfredi Caltagirone	United Nations Environment Programme	France
Martha Herrera	Ecopetrol S.A	Colombia
Melissa Allin	Baker Hughes	United States
Nicholas Thurston	Environment Agency	United Kingdom
Paul D. Wehnert	Heath Consultants Incorporated	United States
Paz Aviles	U.S. Environmental Protection Agency	United States
Robin Nava	SLB	United States
Samuel Hess	UniSieve	Switzerland
Sergio Garces	Universidad nacional de colombia	Colombia
Stephen Ramos	Pacific Gas & Electric Company	United States
Sunjay Sunjay	Seismic Imaging Centre Geophysics BHU Varanasi, India	India
Tomás de Oliveira Bredariol	International Energy Agency	France
Tony von der Mühl	CTTG ENERGY INTERNATIONAL (SINGAPORE), PTE., LTD.	United States
Volha Roshchanka	U.S. Environmental Protection Agency	United States
Yousef Alshammari	CMarkits	United Kingdom
Zitely Tzompa Sosa	Clean Air Task Force	France

## ANNEX II

### Agenda

GMI Oil & Gas Subcommittee Meeting

Wednesday, 22 March 2023

14:00 – 16:00 CET (UTC +1)

14:00 – 14:10	<b>Welcome and Opening Remarks; Adoption of the Agenda</b> <i>James Diamond, Co-Chair, Oil &amp; Gas Subcommittee, ECCC</i> <i>Francisco de la Flor García, UNECE Group of Experts on Gas</i>
14:10 – 14:20	<b>GMI Secretariat Updates</b> <i>Denise Mulholland, Director, GMI Secretariat</i>
14:20 – 14:30	<b>Oil &amp; Gas Subcommittee Updates: Action Plan/Activities</b> <i>James Diamond</i>
14:30 – 15:00	<b>Partner Country Updates</b> <i>Lina María Castaño Luján, Colombia; Faisal Al Qurooni, Saudi Arabia; Paz Aviles, United States</i>
15:00 – 15:10	<b>Discussion: Technical Topics of Interest to the Subcommittee</b>
15:10 – 15:20	<b>GMI Oil and Gas Sector Activities in Southeast Asia</b> <i>Andrew Meluch, U.S. Environmental Protection Agency</i>
15:20 – 15:30	<b>Ecopetrol's Participation in OGMP 2.0</b> <i>Martha Herrera, Ecopetrol</i>
15:30 – 15:40	<b>PETRONAS Methane Emissions Management Journey</b> <i>Hasnor Hashim, PETRONAS</i>
15:40 – 15:50	<b>The Methane Alert and Response System (MARS)</b> <i>Manfredi Caltagirone, UN Environment Programme</i>
15:50 – 15:55	<b>Preview of the UNECE Group of Experts on Gas Meeting</b> <i>James Diamond</i>
15:55 – 16:00	<b>Concluding Remarks and Next Steps; Adjourn</b> <i>James Diamond</i>