

Executive Summary



IMEO is on the road

The International Methane Emissions Observatory (IMEO) of the United Nations Environment Programme (UNEP) was launched at the G20 meeting in November 2021; it is now fully operational. The announcement of the Global Methane Pledge, at which countries added their collective commitment to reduce methane emissions, further strengthened the methane ecosystem and affirmed IMEO's role.

In less than two years, membership of IMEO's flagship oil and gas reporting and mitigation programme, the Oil and Gas Methane Partnership 2.0 (OGMP 2.0), has expanded to more than 80 companies from around the world, with U.S. companies ConocoPhillips, Devon and Pioneer joining recently. IMEO's science programme is filling knowledge gaps with studies in Angola, Australia, Azerbaijan, Canada, Colombia, Gabon, Oman, Poland, and Romania, covering oil, gas, coal and waste operations. The U.S. government has joined IMEO's Implementation Committee, and additional funding discussions are under way with several other governments and foundations.

UNEP is supporting the implementation of the Global Methane Pledge, convened by the U.S. government and the European Commission, with IMEO and Climate and Clean Air Coalition appointed as core implementing partners. Moreover, IMEO is now covering sources of methane emissions beyond fossil fuels, including waste, rice cultivation and livestock.

At the 27th Conference of the Parties to the UN Framework Convention Climate Change (UNFCCC), to be held in Sharm El-Sheikh, Egypt in November 2022, IMEO will launch the

first iteration of its public "data to action" platform, the Methane Alert and Response System (MARS). IMEO will use this platform to bring together and release emission data collected and integrated from diverse data streams. MARS will be ready to integrate other data as new measurement-based approaches (e.g., newer satellites) become available. This integrated dataset will provide actionable data to companies and governments. It will allow IMEO to corroborate the emissions reported by companies and to characterize changes in emissions over time – thereby tracking progress towards mitigation targets.

OGMP 2.0 is delivering a community for collective action

This report covers the second year of reporting by OGMP 2.0 member companies. Sixty members are on the programme's "Gold Standard" pathway – having committed in their implementation plans to sequentially improve the quality of their reported data – and are showing progress in moving towards measurement-based estimates of methane emissions. Twelve member companies are not on the Gold Standard pathway this year: two lost it compared to last year, seven did not achieve it either year, and three companies reporting for the first time this year did not achieve it.

As committed by the companies, the quality level of measurement and reporting has continued to increase, on the way to full Level 4 and Level 5 reporting by the end of the commitment period (three years for operated assets and five years for non-operated assets). However, further progress is needed to be able to reliably quantify industry emissions. Recently published studies set the



estimate for total global methane emissions from industry at 80-140 million tons per year, based on a combination of atmospheric inverse modelling and isotope source apportionment (Schwietzke *et al.* 2016; Hmiel *et al.* 2020; Saunio *et al.* 2020). The International Energy Agency's (IEA) methane tracker estimates emissions at the lower end of this range (IEA 2022).

Total emissions from this year's reporting by OGMP 2.0 member companies are 1.3 million tons of methane for both operated and non-operated assets. This represents a large discrepancy between the estimates of global industry emissions and the proportional share reported by OGMP 2.0 member companies. Although the quality of reported data has improved, the majority of assets are not yet reporting measurement-based emission estimates (i.e., OGMP 2.0 Level 4 and Level 5). Moreover, a significant amount of assets non-operated by OGMP 2.0 member companies were not yet reported.

Continued improvements in measurement-based reporting from member companies and expanding OGMP 2.0 membership is expected to reduce the gap between estimated global emissions and the sum of the companies reported emissions. IMEO's approach to multi-scale emission data will further characterize this discrepancy by integrating OGMP 2.0 data with satellite remote sensing data, and by commissioning science studies in regions with limited data.

OGMP 2.0 is already establishing itself as a robust Measurement, Reporting and Verification (MRV) framework. For it to fully succeed, however, reported data must point directly to effective mitigation actions. In line with this vision, OGMP 2.0 has been built as a platform for collective action. Companies share practices and challenges and evolve new industry norms on methane management, as occurred in the past on improving safety and handling spills. Member companies are encouraging non-members to join, and peer relationships are being established between companies around the world to overcome specific challenges. The interaction between study results and company practice is starting to take flight.

In 2022, IMEO was engaged in jointly designing a second industry partnership framework with the global metallurgical coal industry. Whereas thermal coal has clear low-carbon alternatives, and the United Nations Secretary-General has called for a rapid end to the practice of burning coal for power, metallurgical coal will likely remain in the energy mix for longer as a basis for steel production. As is the case for oil and gas, under any decarbonization scenario, accurate measurement and substantial mitigation of metallurgical coal emissions represent material climate action.

Based on this initial momentum, IMEO was asked by funding governments to explore expanding its scope to include methane emissions from three additional sources: waste, rice cultivation and livestock. Section 2 of this report includes a reflection on the differences among the sectors and how IMEO's data-driven approach might apply. Subject to approval and funding, inclusion of these sectors can then be delivered in the near future.

IMEO is a catalyst for action on the Global Methane Pledge

One of the major results of COP26 was the signature of the Global Methane Pledge (GMP), with 122 countries pledging to collectively reduce 30 per cent of global methane emissions by 2030. The GMP was coalesced by the U.S. government and the European Union, and IMEO is a core implementing partner tasked with various functions. IMEO's MARS data to action platform, to be launched at COP27, reflects the first phase of a strategy to get policy-relevant emissions data into the hands of asset operators, companies, policymakers and civil society for the mitigation action needed to deliver on the GMP. IMEO is particularly well-positioned, as OGMP 2.0 member companies hold assets in the majority of the largest methane emitting GMP countries, as well as other major emitting countries. Data on coal, waste, livestock and rice will be added gradually to support the GMP implementation. UNEP's IMEO further supports countries to build capacity to access and understand these data in support of science-based mitigation strategies and targets.

