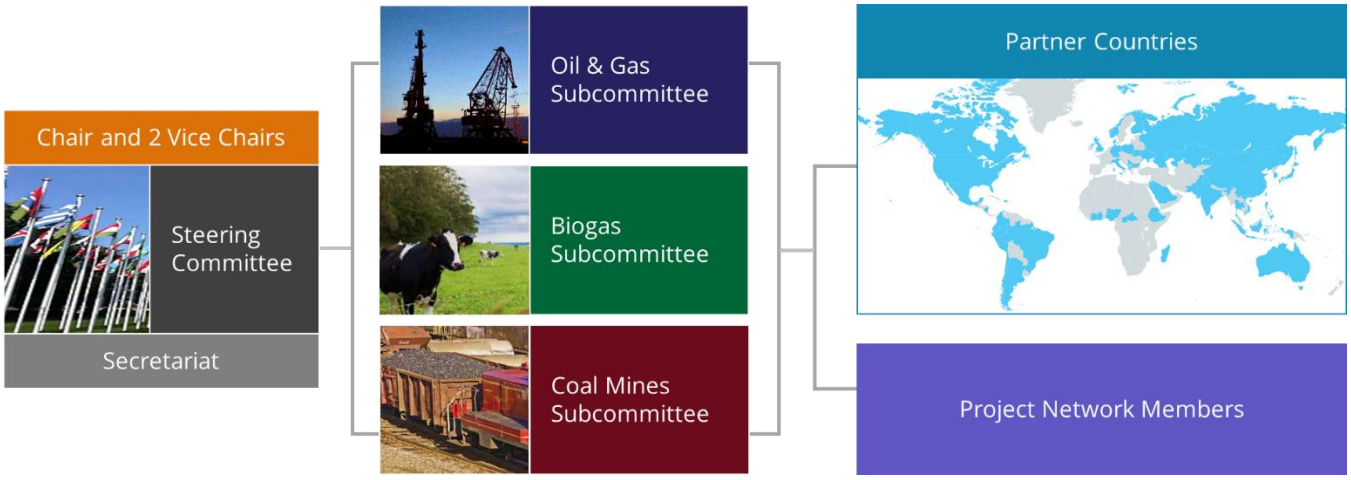
Global Methane Initiative
Leading methane action since 2004

2024 Accomplishments

in Methane Mitigation, Recovery, and Use through U.S.-Supported International Efforts

The Global Methane Initiative (GMI) is an international public-private partnership created in 2004 that is focused on reducing barriers to the recovery and use of methane as a valuable energy source. GMI's 49 Partner Countries and more than 1,000 Project Network members exchange information and technical resources to advance methane mitigation across three key sectors that are significant sources of global methane emissions from human activities: Oil & Gas, Coal Mines, and Biogas (which includes agriculture, municipal solid waste, and municipal wastewater). In 2024, the United States served as Chair of the GMI Steering Committee alongside representatives from India and Ghana who served as Vice Chairs. The United States also hosted the Secretariat of the GMI and contributed technical support and leadership based on its domestic expertise across the key sectors.

Figure 1. GMI Structure and Organization to Address Methane in Three Key Sectors



GMI promotes the successes and expertise of its Partner Countries, Project Network members, and strategic partners to support the implementation of policies, projects, and technologies to advance methane mitigation in specific sectors and countries around the world. Activities of GMI, which are focused on the recovery and use of methane as a valuable energy source, include collaborating with government and private sector stakeholders, developing tools and resources focused on methane mitigation, and providing technical support and capacity building. This report outlines accomplishments of U.S.-funded GMI activities in 2024.

Methane Emission Reductions

The GMI Secretariat continued to actively engage with Partner Countries and provide key leadership on international methane emission reduction efforts in 2024. These efforts benefited all GMI Partner Countries because they helped reduce methane emissions in the atmosphere, improve air quality and human health at home and abroad, create opportunities for international businesses and investors, and support diplomatic efforts.

Between 2004 and 2024, GMI helped to identify and implement more than 1,250 GMI methane mitigation projects. These projects have cumulatively reduced methane emissions by a total of approximately 689 million metric tonnes of carbon dioxide equivalent ($MMTCO_2e$), including approximately 22 $MMTCO_2e$ in 2024, as shown in Figure 2.

Figure 2. Methane Emission Reductions from U.S.-Supported International Efforts

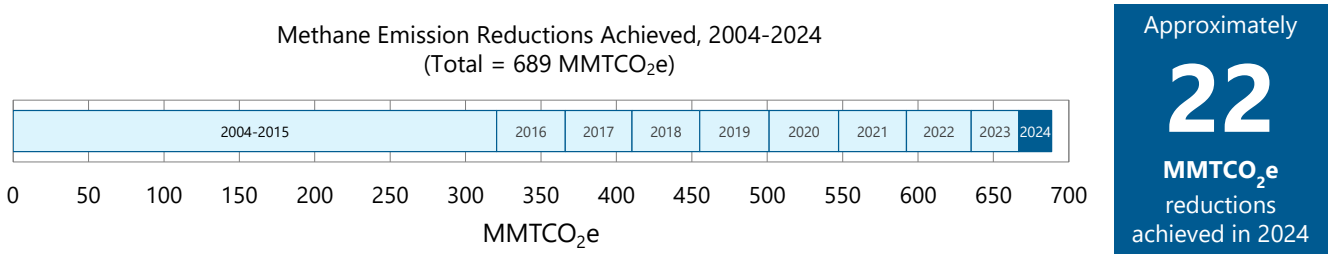
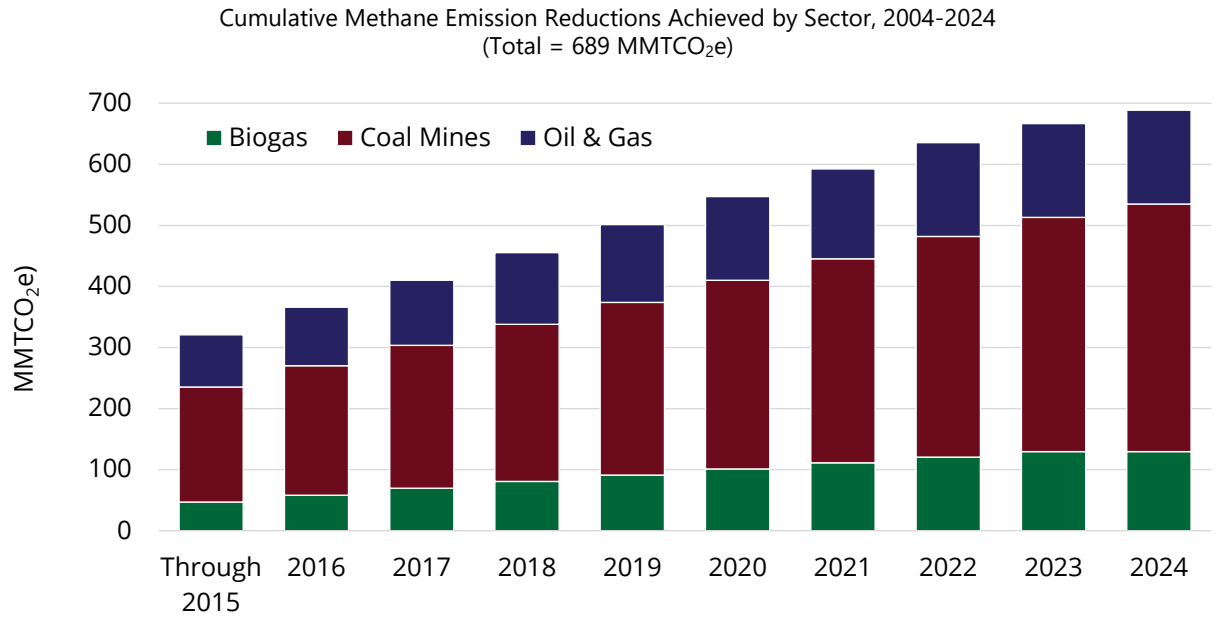


Figure 3 shows the cumulative methane emission reductions achieved by GMI's key sectors from 2004 through 2024.

Figure 3. Methane Emission Reductions by Sector from U.S.-Supported International Efforts



Note: Methane emissions data come from the GMI database of project activities maintained by the U.S. Environmental Protection Agency. Data represent the best available yet conservative estimates of emission reductions, including actual emission reductions from projects supported by the U.S. Government and potential emission reductions from other projects identified through U.S. Government efforts. Carbon dioxide equivalents (CO_2e) are based on methane having a global warming potential 28 times greater than carbon dioxide over a 100-year period.

Methane Mitigation Activities

Since 2004, U.S. Government funding under the auspices of GMI has sponsored and advanced methane mitigation activities including technical assessments, information sharing, capacity building, and GMI partnership-related activities. Every $1 invested in GMI leverages approximately $6 in investments from other stakeholders, which are used to develop projects that reduce or recover methane emissions as an energy source directly and fund assessments that identify additional opportunities to achieve emission reductions. In 2024, U.S. Government funding supported country-specific activities related to methane mitigation in 14 nations (Argentina, Brazil, China, Colombia, India, Indonesia, Kazakhstan, Madagascar, Mexico, North Macedonia, Serbia, Switzerland, Togo, and Vietnam) and partnership-wide activities that served all GMI Partner Countries. These efforts provided approximately 5,500 hours of training that benefited more than 3,100 people from 78 countries around the world. Figure 4 summarizes the technical and outreach support provided by GMI in 2024 under a variety of methane mitigation activities.

Figure 4. International Methane Mitigation Activities and Impacts Supported by the U.S. Government in 2024

Through U.S. investment in GMI in 2024, more than

3,100

people from

78

countries

received a total of approximately

5,500

hours

of training about reducing methane emissions and capturing methane for productive uses

	Capacity Building/Information Sharing fostering best practices
20	**Workshops/Trainings** Argentina, Brazil, Indonesia, Togo, Partnership-wide
13	**Policy Analyses/Consultations/Other Outreach** China, Colombia, India, Kazakhstan, Mexico, Partnership-wide
	Assessments identifying opportunities for emission reductions
4	**Inventories/Assessments/Study Tours** India, Partnership-wide
13	**Tools/Models** China, India, Mexico, Vietnam, Partnership-wide
	Partnerships building relationships to foster action
5	**GMI Meetings (Steering Committee/Subcommittees)** Partnership-wide
49	**Other Stakeholder Meetings/Presentations/Databases/Site Visits** Brazil, India, Madagascar, Mexico, North Macedonia, Serbia, Partnership-wide
3	**Conferences** India, Switzerland, Partnership-wide

The 2024 Global Methane Forum was a premier global event that successfully convened stakeholders to mobilize action for reducing methane emissions—a necessity for limiting the rise of global temperatures. GMI co-hosted this successful event in Geneva, Switzerland with the United Nations Economic Commission for Europe (UNECE) in partnership with the Global Methane Hub and the Climate and Clean Air Coalition (CCAC). The Forum garnered more than 800 participants, including nearly 500 in-person attendees and hundreds more who joined virtually, from 59 countries. High-level global leaders spoke at the event including Rick Duke, Deputy Special Envoy for Climate, Executive Office of the President of the United States; Tim Gould, Chief Energy Economist, International Energy Agency; Gianpaolo Balsamo, Director, Global Greenhouse Gas Watch, World Meteorological Organization; and María P. Neira, Director of Department of Environment, Climate Change and Health, World Health Organization. The event provided a platform for dialogue, exchange, and action to advance global methane reductions in the biogas, coal mines, and oil & gas sectors. Global thought leaders representing governments, multilateral development banks, nongovernmental organizations, finance institutions, philanthropies, environmental groups, and the private sector joined together to build momentum for taking action on methane. Activities included 6 high-level plenary sessions, 21 joint technical sessions, in-person meetings of the GMI Steering Committee and technical Subcommittees, a Methane Action Showcase poster session, and several informal meetings organized onsite to convene in-person participants with shared interests.

As a result of GMI's leadership, the Forum achieved many positive outcomes:

Connected Peers and Experts	Showcased Replicable Successes	Amplified Global Awareness
• Connected participants with peers with similar roles, responsibilities, and interests. Technical experts and project developers established connections that will facilitate opportunities for new projects and foster new partnerships. • Expanded the Forum's audience by livestreaming plenary sessions and the Biogas Joint Technical Sessions. Plenary sessions were also translated in real time into French, Chinese, Russian, and Spanish. Recordings are on the Forum website for viewing and sharing.	• Highlighted innovative solutions and insights for overcoming sector-specific challenges including lessons learned and best practices mitigation, emerging methane action areas, and tools for scoping, measuring, reducing, verifying, and reporting emission reductions. • Shared posters that exemplified replicable project successes during an inaugural element of the Forum. The Methane Action Showcase provided an open space for participants to meet colleagues with similar interests and explore real-world examples of practical solutions.	• Generated global press attention with at least 275 articles in 12 languages published about the event reaching a potential audience of over 838 million. • Mobilized momentum for addressing methane through international efforts by issuing a joint press release that urged countries to take ambitious steps to reduce methane emissions. • Celebrated the 20th anniversary of GMI and its advancement of technical understanding of methane challenges and opportunities.

GMI Secretariat Accomplishments

In 2024, the GMI Secretariat frequently engaged with Partner Countries about their needs and priorities, shared knowledge about replicable practices across technical sectors and countries, enhanced engagement with the Project Network members, and commemorated 20 years of methane mitigation action. Highlights of the GMI Secretariat's accomplishments in 2024 include the following:

- Launched the GMI 20th Anniversary webpage to showcase GMI's impact and history, accomplishments, resources, and partners.
- Developed the GMI Policymaker Framework for Addressing Methane Emissions to provide an interactive, web-based step-by-step process for policymakers for developing and implementing policies and programs to reduce methane emissions across all GMI sectors.

Celebrating 20 Years of Methane Action

- Published the quarterly GMI Methane Matters Newsletter to share updates with the GMI Partner Countries, strategic partners, Project Network members, and other global stakeholders on innovative ways that the GMI network is making a global impact on reducing methane.
- Updated GMI's 49 Partner Country webpages to provide information about each Partner Country's role in GMI, methane emissions, methane commitments, plans and mitigation activities, and GMI delegates.
- Hosted Steering Committee meetings in March and September 2024 to determine a path forward on future priorities of the Steering Committee and GMI's strategic partners.
- Created a new Case Study Library to demonstrate replicable examples of how stakeholders have helped countries and companies overcome barriers and achieve methane reduction goals.
- Enhanced the Project Network by launching the Find an Expert tool to help GMI Partners and funders find Project Network members with the expertise needed for successful methane mitigation projects.
- Drafted Sprint Action Plan templates and timelines to guide the priorities and objectives of the technical Subcommittees from 2025-2030.

GMI's Steering Committee at the 2024 Global Methane Forum in Geneva, Switzerland.

2024 Project Highlights

Biogas

GMI Waste Characterization Handbook and Planning and Data Tool

The *GMI Waste Characterization Handbook and accompanying Excel tool* is a resource that can help decision-makers and solid waste professionals plan and conduct waste characterization studies. Officials can use the Handbook and spreadsheet tool to characterize their city's waste by employing a systematic approach to understand the composition and proportion of each material or product in the waste stream. The resulting data can be used to establish baseline conditions, develop reduction and diversion strategies, and select policies and technologies that reduce methane and other greenhouse gas (GHG) emissions.

Oil & Gas

SMART Plus - Oil & Gas Facility-Level Emissions Inventory Tool

The U.S. Environmental Protection Agency (EPA), with support from the U.S. Department of State Transparency Accelerator program, developed the Simplified Methane Assessment and Reporting Tool Plus (or "*SMART Plus*") to help stakeholders refine and improve GHG and other emissions estimates from oil & gas facilities. This free resource includes two Microsoft Excel spreadsheet templates – one for Intergovernmental Panel on Climate Change (IPCC) Tier 1 and 2 assessments and one for IPCC Tier 3 assessments. The tool also includes a user manual and a Microsoft Access database application to combine multiple facility-level estimates for calculating Tier 2 emission factors and enabling national-level emissions to be aggregated and submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in the appropriate format.

Coal

International Coal Mine Methane Projects List

GMI updated the International Coal Mine Methane Projects List. The list, GMI's most popular resource in the coal sector, provides comprehensive information on approximately 500 coal mine methane recovery and utilization projects at coal mines worldwide, including projects that are operating, in development, or planned. The list can help identify successful case studies of methane mitigation projects in different countries and demonstrate what activities can be done to reduce emissions in this sector. Learn more about these successful mitigation efforts in the coal sector by exploring the list on GMI's website.

Biogas

Financial Readiness Framework for Organic Waste Management

The GMI Financial Readiness Framework for Organic Waste Management, published in 2024, is a resource designed to help national and subnational governments and private sector project developers understand the process for financing organic waste management projects, mitigate potential investment risks, and improve the bankability of projects. The Framework depicts a seven-step process, which can be undertaken sequentially, concurrently, or iteratively, through which public and private actors may collaborate to secure project funding. Each step includes a concise overview, best practice recommendations, and relevant tools and resources. Case studies are included throughout the Framework.

Biogas

Organic Waste Management Training

A four-part training series on Best Practices for Landfill and Organic Waste Management was developed by the U.S. EPA in collaboration with the Asian Development Bank. This training provides a comprehensive overview of proven approaches to mitigate methane emissions from the waste sector including dumpsite closure and remediation; sanitary landfill construction, operation, and maintenance; organic waste treatment; feedstock management; and GHG measurement, reporting, and verification. The training was originally delivered to implementers of the Bahawalpur Integrated Solid Waste Management project in Pakistan, although the training materials are relevant for many partners interested in the fundamentals of solid waste management and reducing methane emissions.

Oil & Gas

Leak Detection and Repair Training

Adopting a Leak Detection and Repair (LDAR) program is widely recognized as an effective mechanism to reduce a significant source of methane emissions from oil and gas operations. The U.S. EPA developed a self-paced training series that provides an overview of LDAR programs for companies that may have minimal experience with such programs. This training is intended to assist oil and gas companies that seek to reduce methane emissions from equipment leaks. Future modules will provide detailed information on how to design, manage, and implement an LDAR program, and which equipment is typically used. The technically based program is not intended to provide policy or compliance recommendations or supersede local requirements or regulations.

Coal

Coal Mine Methane Emissions Inventory Resource

The CMM Emission Estimation Tool aims to help national governments estimate annual methane emissions from underground coal mines in their countries. This spreadsheet-based resource provides a step-by-step, systematic, and easy-to-follow process for collecting the data needed to estimate facility-specific methane emissions, including descriptions of the equations and calculations used. Currently, a number of coal-producing countries estimate national methane emissions from underground coal mining through IPCC Tier 1 methodologies that apply default emission factors. This resource is designed to help these countries develop more accurate national emissions estimates by aggregating facility-level emissions.

Biogas

GMI Biogas Subcommittee Workshop Series on Methane Action at Landfills

The GMI Biogas Subcommittee conducted a four-part virtual workshop series on waste, *Mobilizing Methane Action at Open Dumpsites and Landfills*, in June 2024. The series, developed in partnership with Environment and Climate Change Canada (a GMI Partner Country), the International Solid Waste Association (ISWA), and the U.S. EPA, focused on policies, technologies, and tools and resources that reduce methane emissions from municipal solid waste. Recordings of each webinar are available online.

Learn More

Learn more about how GMI advances information sharing, promotes ambitious activities, trains stakeholders, and builds capacity to abate methane by visiting **globalmethane.org**.

- Find tools and resources on methane mitigation best practices
- Learn more about GMI Partner Countries and international collaboration
- Engage with the GMI Sectors: Oil & Gas, Coal Mines, and Biogas

Every $1
invested in GMI

▼

leverages

Approximately $6
of funding from other stakeholders

▼

that is used to achieve

More than 4 $MTCO_2e$
of methane emission reductions, which is equivalent to the CO_2 emissions from either:*

Consuming		Burning		Using
450 gallons of gasoline	*or*	**4,443 pounds** of coal	*or*	**184 propane** cylinders

*Derived from U.S. EPA Greenhouse Gas Equivalencies Calculator