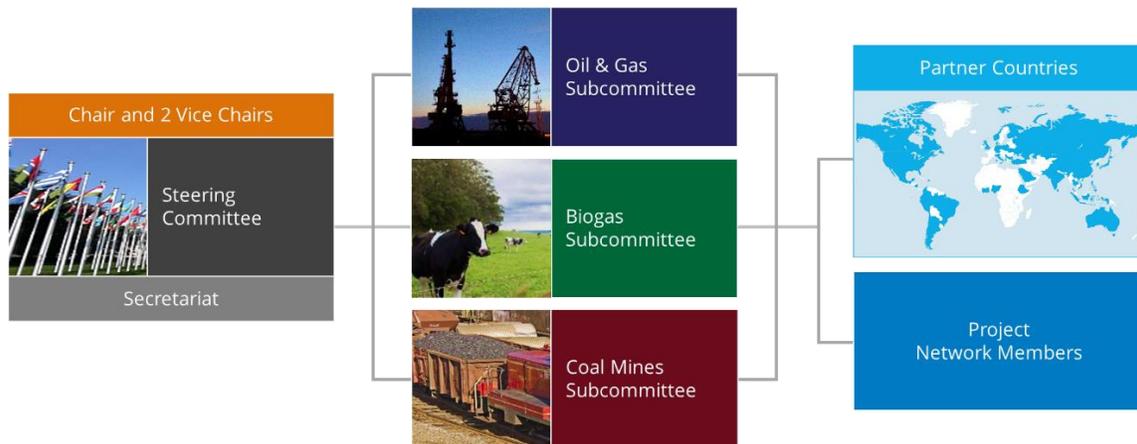


2021 Accomplishments

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

The Global Methane Initiative (GMI) is an international public-private partnership focused on reducing barriers to the recovery and use of methane as a valuable energy source. GMI's 46 [Partner Countries](#) and more than 700 [Project Network](#) members exchange information and technical resources to advance methane mitigation across key sectors: Oil & Gas, Coal Mines, and Biogas (which includes agriculture, municipal solid waste, and municipal wastewater). This report outlines accomplishments of U.S.-funded GMI activities in 2021.

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



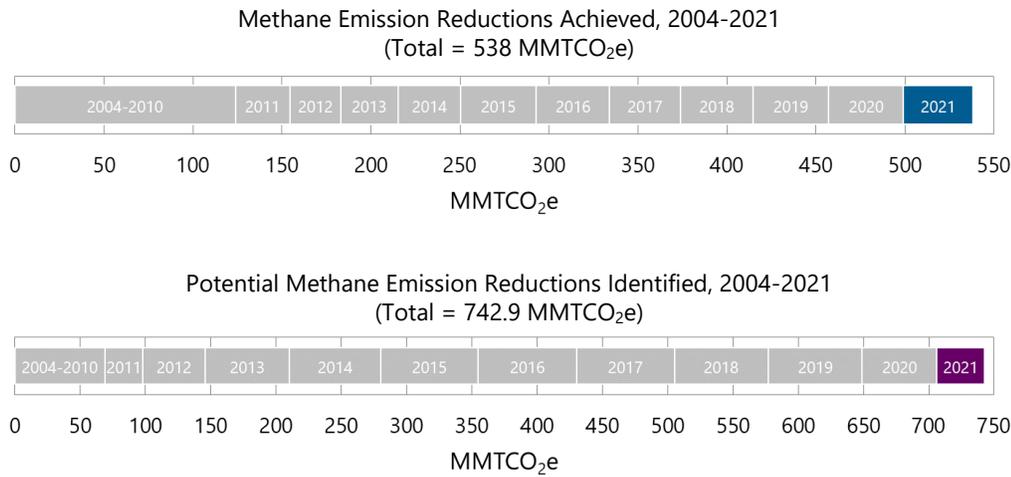
Methane Emission Reductions

The United States continued to actively engage with Partner Countries and provide key leadership on international methane emission reduction efforts in 2021. Through GMI, U.S. leadership has resulted in the implementation of more than 1,140 methane mitigation projects as of 2021. These projects have cumulatively reduced methane emissions by a total of approximately 538 million metric tonnes of carbon dioxide equivalent (MMT CO_2e), including 39 MMT CO_2e in 2021, as shown in Figure 2. U.S. efforts under the auspices of GMI have also identified additional possible mitigation projects with an estimated cumulative potential to reduce at least 742.9 MMT CO_2e .

2021 Accomplishments in Methane Mitigation, Recovery, and Use through U.S.-Supported International Efforts



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

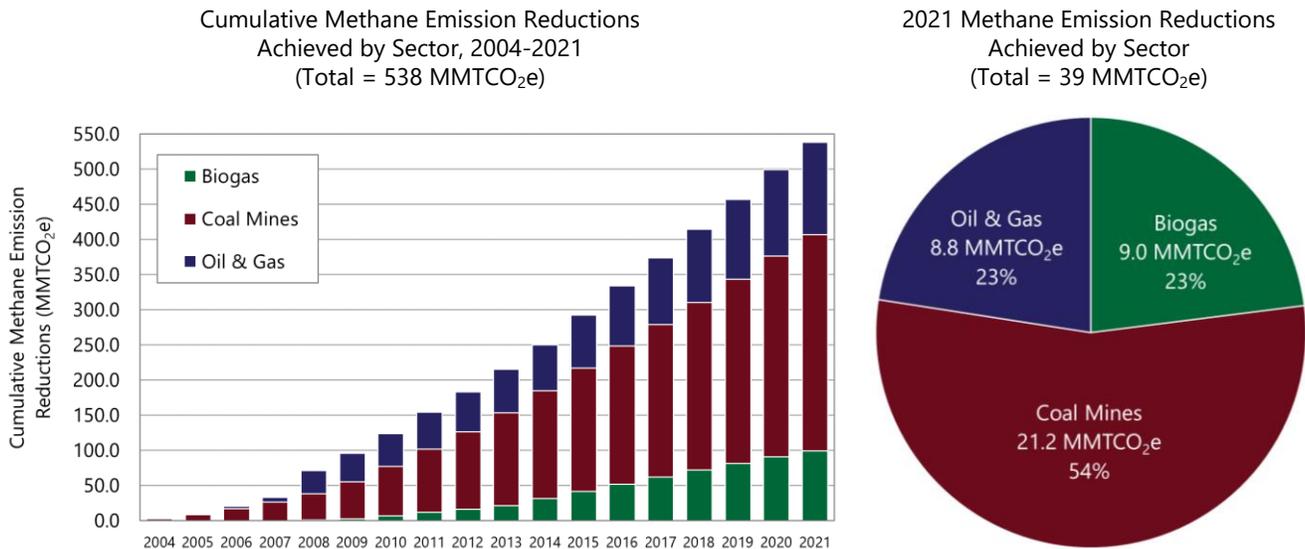


39
MMTCO₂e
reductions achieved
in 2021

36.6
MMTCO₂e
potential reductions
identified in 2021

Figure 3 shows the methane emission reductions by GMI’s key sectors, which are also the three largest sources of methane emissions from human activities. These emission reduction activities benefit the United States because they reduce methane emissions in the atmosphere, create opportunities for U.S. businesses and investors, and support U.S. diplomatic efforts.

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

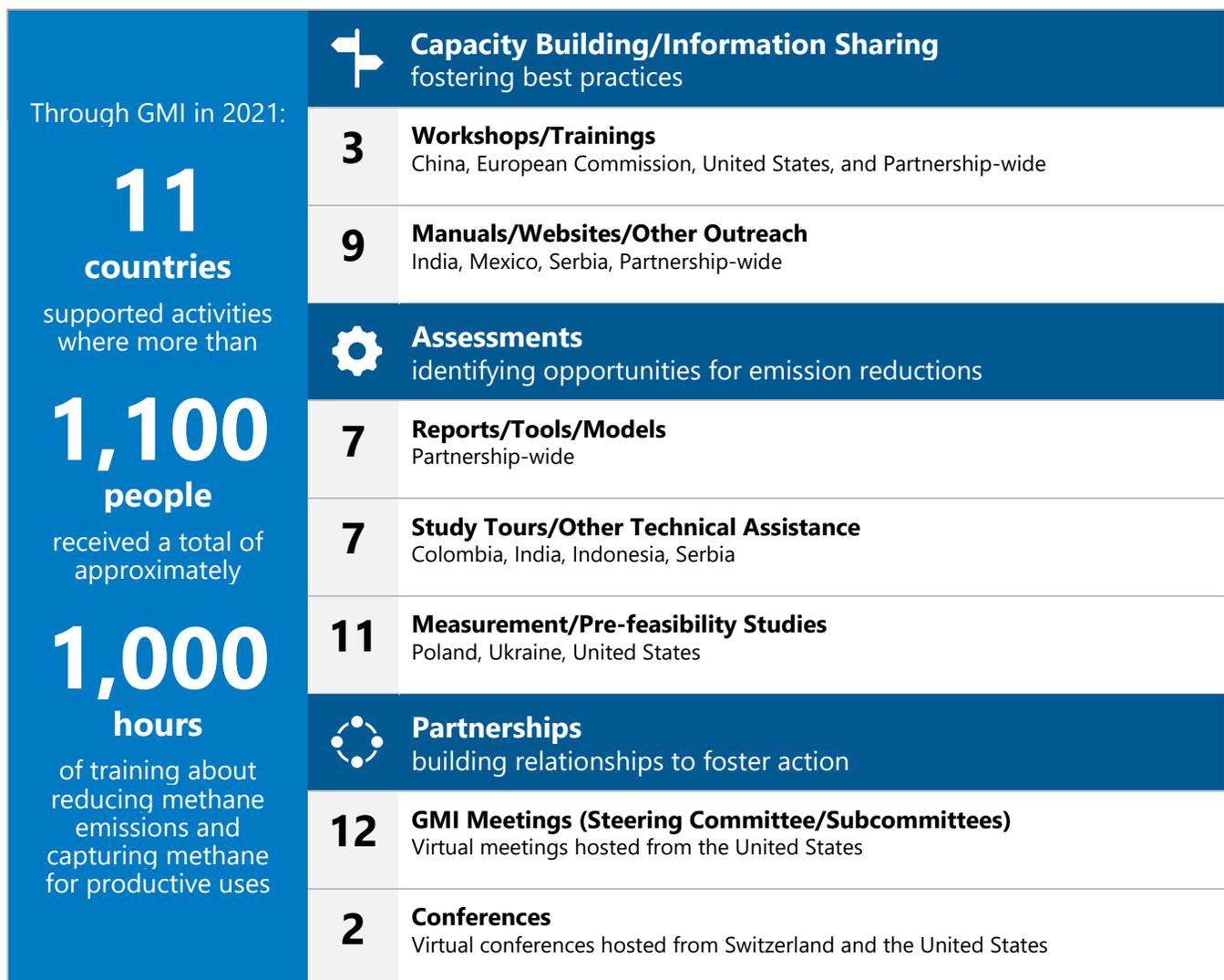


Note: Methane emissions data come from GMI’s database of project activities. These data represent the best available yet conservative estimates of emission reductions, including actual emission reductions from projects supported by the U.S. Government and potential emission reductions from other projects identified through U.S. Government efforts. Carbon dioxide equivalents (CO₂e) are based on methane having a global warming potential 25 times greater than carbon dioxide over a 100-year period.

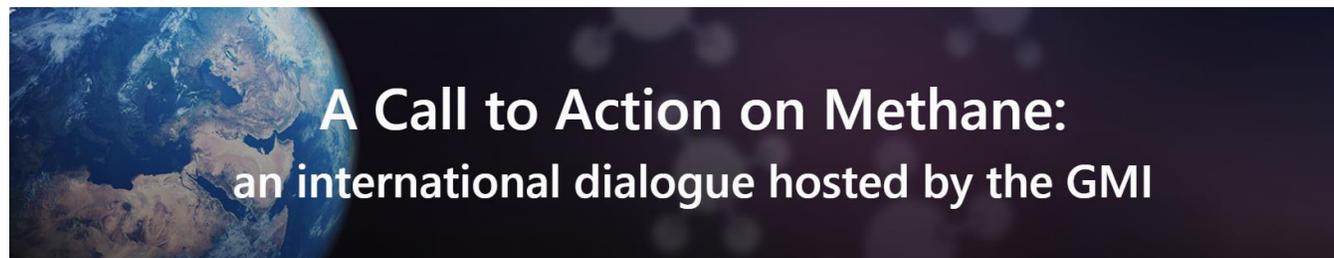
Methane Mitigation Activities

U.S. Government funding from the Department of State and U.S. Environmental Protection Agency (EPA) has supported and advanced methane mitigation activities including technical assessments, information sharing, capacity building, and GMI partnership-related activities. Every \$1 invested by the United States in GMI leverages approximately \$6 in investments from other stakeholders that are used to develop projects that reduce methane emissions directly and other activities and assessments that identify opportunities to achieve additional emission reductions (see Figure 2). Figure 4 summarizes the technical and outreach support provided through GMI in 2021 under a variety of methane mitigation activities. Despite ongoing travel restrictions due to the COVID pandemic, GMI continued to advance many capacity building and partnership efforts through virtual meetings and webinars.

Figure 4. International Methane Mitigation Activities and Impacts Supported by the U.S. Government in 2021



Raising International Awareness through a Call to Action

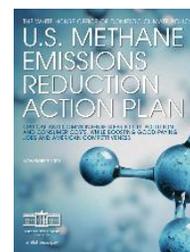


In June 2021, GMI hosted a virtual event, [A Call to Action on Methane: an international dialogue hosted by the GMI](#). The event attracted attention from a global audience of more than 800 participants from more than 70 countries and shone a spotlight on the urgent need to reduce global methane emissions. During the event, influential leaders urged actors around the globe to advance efforts to mitigate methane to slow global climate change. The speakers highlighted current efforts underway to manage methane emissions and emphasized that readily available solutions exist for more ambitious action across the world. Speakers highlighted solutions across the main emitting sectors, as well as the role that both the public and private sectors play in working collaboratively to take action.

Re-chartering GMI for 10 Years (2021-2031)

In May 2021, the GMI Steering Committee voted to renew its charter for a 10-year term. Historically, GMI has been renewed every 5 years. The longer term was adopted to reflect GMI's commitment to raising global ambition for reducing methane emissions and harmonize GMI activities with other leading international efforts, including The Paris Agreement, the Climate & Clean Air Coalition (CCAC), the European Union (EU) Methane Strategy, and programs led by the United Nations. Under this new charter, the United States continues to serve as the host of the GMI Secretariat.

Similarly, the GMI re-charter aligned with the release of the [U.S. Methane Emissions Reductions Action Plan](#) (November 2021). The Action Plan includes a number of critical and commonsense steps to accelerate the pace at which methane emission reductions are achieved and catalyze similar actions around the world.



Committing to Fast Action on Methane

Through the [Global Methane Pledge](#), the United States committed to take fast action on methane as an effective strategy to limit global warming to 1.5 °C. Along with more than 100 other countries, the United States is leading efforts to reduce global methane emissions by at least 30 percent from 2020 levels by 2030. As a key supporter of the Global Methane Pledge, GMI assists countries with national planning, engages stakeholders to identify needs and jointly develop tools and resources, and builds the capacity of developing and developed countries to implement technologies and techniques to reduce methane emissions from key sectors.



2021 Project Highlights

Biogas

Solid Waste Emissions Estimation Tool (SWEET) Update

Developed by the U.S. EPA in support of GMI and the CCAC, [SWEET](#) is a **tool for quantifying emissions and emissions reduction estimates for the municipal solid waste sector**. Waste management professionals, local decision makers, and others can use SWEET to estimate how changes in waste management practices affect local emissions of greenhouse gases and other air pollutants. EPA completed updates to the tool and released a set of quick tip training videos and a new promotional video for SWEET, as well as a comprehensive user manual, which are [available online](#).

Coal

International Coal Mine Methane (CMM) Project Database Update

The GMI Coal Subcommittee coordinated with U.S. EPA's Coalbed Methane Outreach Program (CMOP) to develop the [International CMM Project Database](#). The existing database was updated through research of technical reports, Internet searches, and newsletters. Expert opinions were consulted to validate the latest known information on existing CMM projects worldwide. The database contains information about **CMM recovery and utilization projects operating, in development, or planned around the world** in both GMI Partner and non-partner countries. The database is [available online](#).

Oil & Gas

Oil & Gas Subcommittee Technical Webinar Series

GMI's Oil & Gas Subcommittee hosted a series of technical webinars that brought together decision makers and project developers to discuss:

- [Methane Emissions Mitigation – Technology and Innovation](#)
- [Accelerating Methane Mitigation Through Markets](#)
- [Improved Collection and Verification of Methane Emissions Data for Effective Mitigation](#)

Each webinar included presentations, a moderated discussion, and a question-and-answer session.

Biogas

Technical Assistance for Source Segregation in India

GMI provided technical assistance to help waste generators in Panjim and East Delhi comply with India's Municipal Solid Waste Rules of 2016, which **require cities to improve source separation, collection, and treatment of waste**. Improved source segregation is the most efficient and cost-effective manner of reducing organic waste sent to landfills and generating clean feedstock for use in treatment technologies. GMI provided assistance to help bulk waste generators consider biogas and in-situ treatment technologies. As a result of this work, best practices and guidance information were shared with other cities.

Biogas

Pre-feasibility Study for Scaling Up Novi Sad Composting Facility

Through GMI, EPA staff provided technical expertise to evaluate the feasibility of expanding an existing Novi Sad composting plant through **three organic waste collection and treatment scenarios**. The expansion would help Novi Sad contribute to the goals of Serbia's Waste Management Strategy and comply with the European Union Landfill Directive. The study utilized GMI's [OrganEcs](#) tool to assess the costs for each scenario and compare potential revenues against expenses for a period of 20 years. The study also involved the use of [SWEET](#) to analyze potential GHG emissions avoided under the three scenarios.

Coal

Conducting Pre-Feasibility Studies for Coal Mine Methane Projects Training

An interactive online training program was created to educate users on the development of robust pre-feasibility studies at active coal mines. The course introduces principles for assessing the potential of developing projects to mitigate methane at active coal mines through a **pre-feasibility study**. Pre-feasibility studies are typically carried out by CMM project developers, third parties, mining company personnel, or government officials, all of whom can benefit from this training course. The course consists of [eight online modules](#). China Coal Information Institute is translating the course into Chinese.

Learn More

Learn more about GMI by visiting globalmethane.org.

- Find [tools and resources on methane mitigation best practices](#)
- Learn more about GMI [Partner Countries](#) and [international collaboration](#)
- Explore [events](#) and [methane emissions data](#)
- Engage with the GMI Sectors: [Oil & Gas](#), [Coal Mines](#), and [Biogas](#)