

The Global Methane Initiative Policymaker Framework for Addressing Methane & Other Resources

Denise Mulholland
Lead, International Methane Team
Director, Global Methane Initiative Secretariat
US Environmental Protection Agency
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Overview

- Climate Change and Methane
- The Global Methane Initiative (GMI)
- The GMI Policymaker Framework for Addressing Methane Emissions
- Other GMI resources and events

Central Asia and Climate Change

Central Asia is already feeling the effects of climate change, according to a scoping [study](#) produced by the Asian Development Bank in 2023:

Water Scarcity:

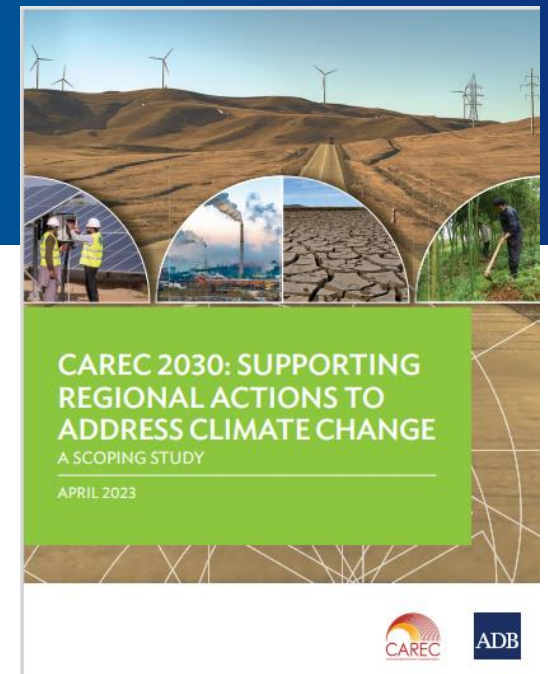
- *Over the past 50–60 years, the area of glaciers in Central Asia has decreased by about 30% due to climate change. The volume of freshwater in basins in the region is projected to decrease between 10-40% in the next 75 years*

Increased intensity and frequency of storms

- *The combination of melting snowcaps and intensifying extreme weather events are triggering natural calamities, including the increasing frequency and severity of floods and landslides*

Increased Desertification:

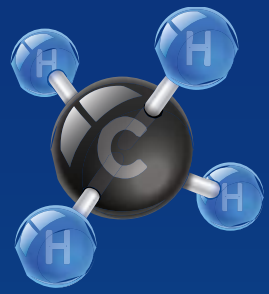
- *The shortage of water resources, increase in air temperature, high variability of precipitation, extreme heat spells, and deforestation lead to increased desertification of the region. ABD estimates that 4%–10% of cultivated areas, 27%–68% of pastures, and 1%–8% of forests are currently significantly degraded in Central Asia and are subject to desertification.*



Other Important Considerations

- Air pollution is already a challenge for Central Asia with poor air quality in cities, especially in the winter.
 - Key sources of air pollution include the burning of fossil fuels for electricity, heat and transportation
- The population is growing rapidly which will only increase demand for natural resources

Why Methane Matters



Positive Outcomes of Capturing and Using Methane

- ✓ Better air and water quality
- ✓ Improved human health
- ✓ Increased worker safety
- ✓ Enhanced energy security
- ✓ Economic growth
- ✓ Reduced odors

Methane Emissions

Trap 28 times more heat than carbon dioxide over 100 years

Contribute to ground-level ozone pollution

Create industrial safety problem

Methane Mitigation

Opportunity to capture and convert methane to useful energy

Global Methane Initiative (GMI)

- GMI: an international partnership of 47 countries and hundreds of private sector and multilateral partners
- Unique expertise, tools, and resources that enable countries to reduce methane quickly and cost-effectively across key sectors:



Oil & Gas Systems



Coal Mines



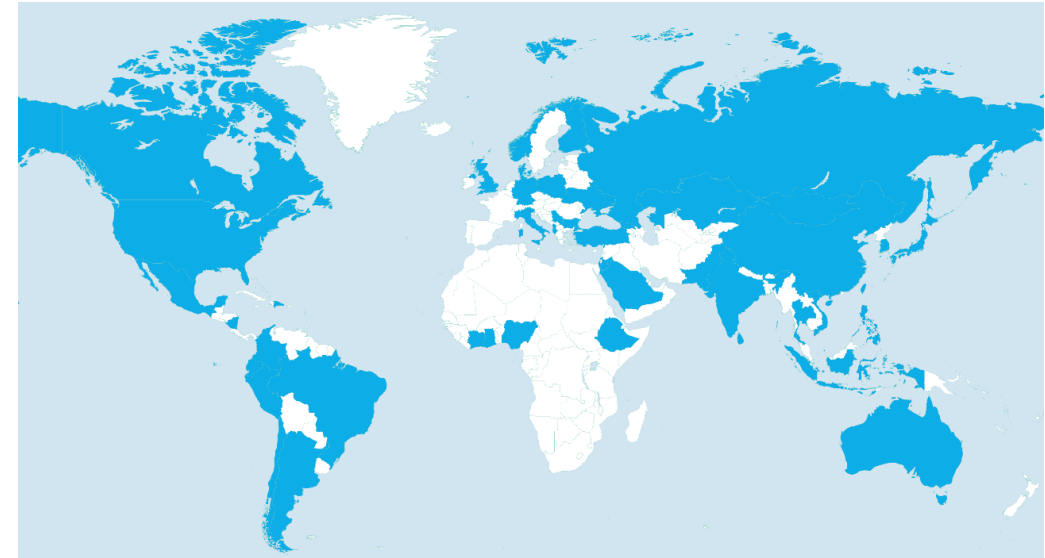
Wastewater



Agriculture: manure



Municipal Solid Waste



■ GMI Partner Countries

www.globalmethane.org

Strategic Alliances



GMI has reduced methane emissions globally



Grown from 14 to 47 Partner Countries



More than \$650 million in leveraged funding for projects and training



More than 700 Project Network members



Conducted or developed nearly 2000 assessments, pre-feasibility studies, feasibility studies, study tours, publications, guidances and site visits

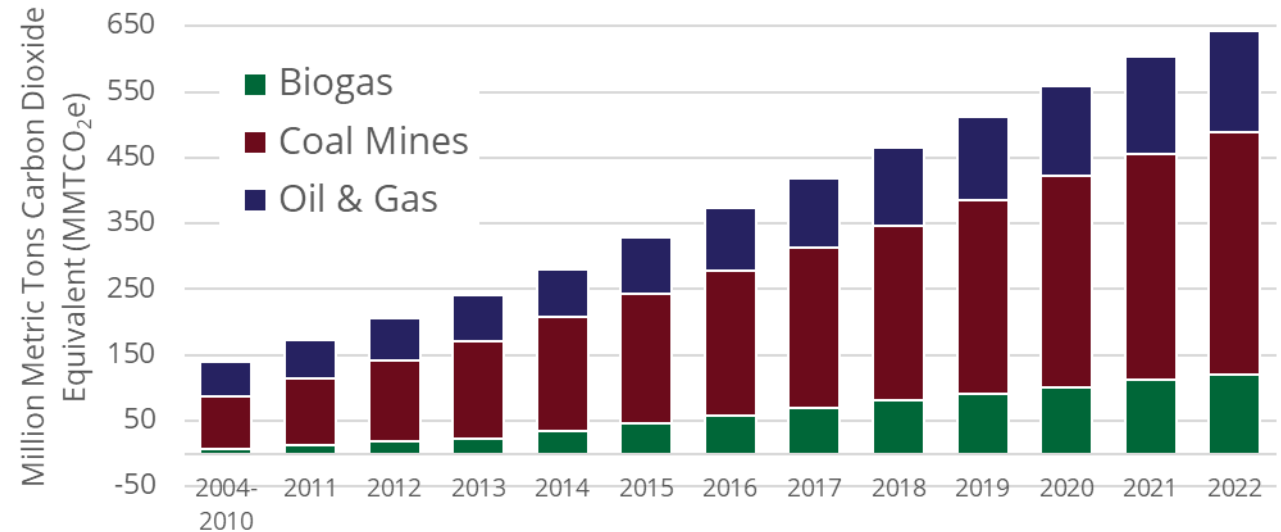


Provided training for more than 50,000 people on methane mitigation



Developed more than 60 tools and resources for methane mitigation

Since 2004, GMI has reduced CH₄ by approximately **643 MMTCO₂e** including **approximately 40 MMTCO₂e** achieved in 2022



643 MMTCO₂e is approximately equivalent* to the CO₂ emissions from any one of the following:



274 Billion
liters of gasoline
consumed



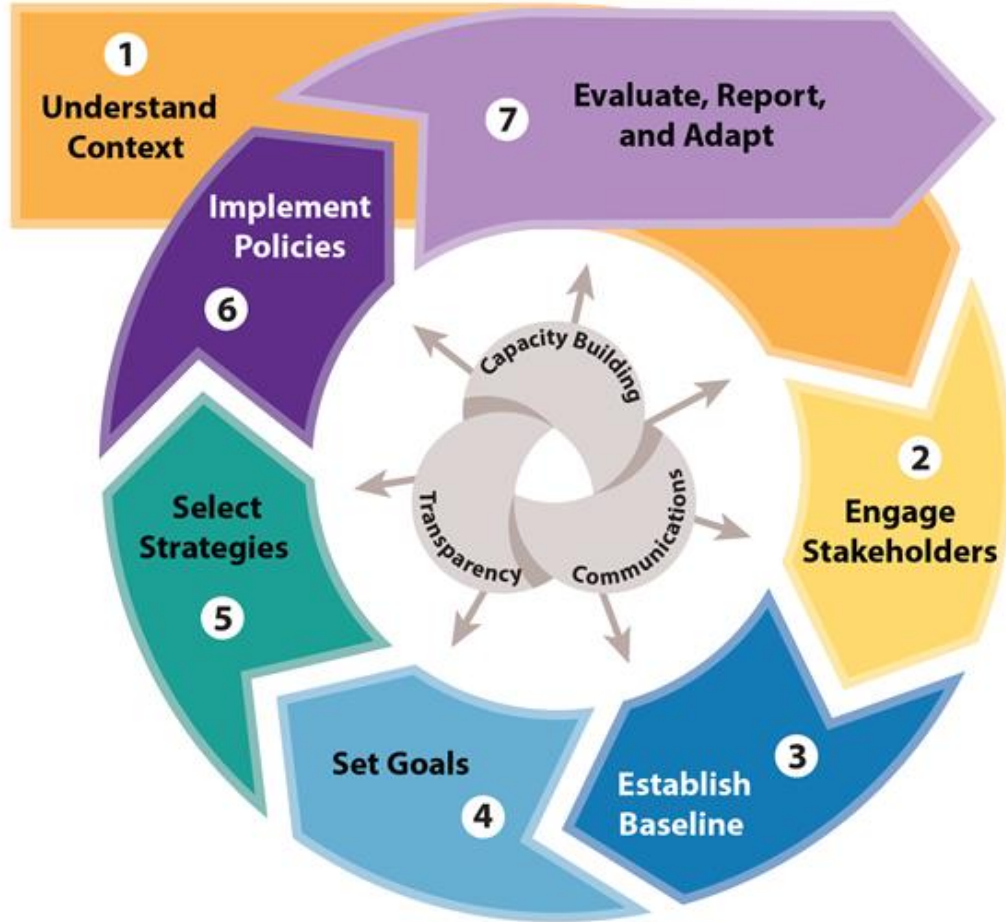
327 Billion
kilograms of coal
burned



78 Trillion
smartphones
charged

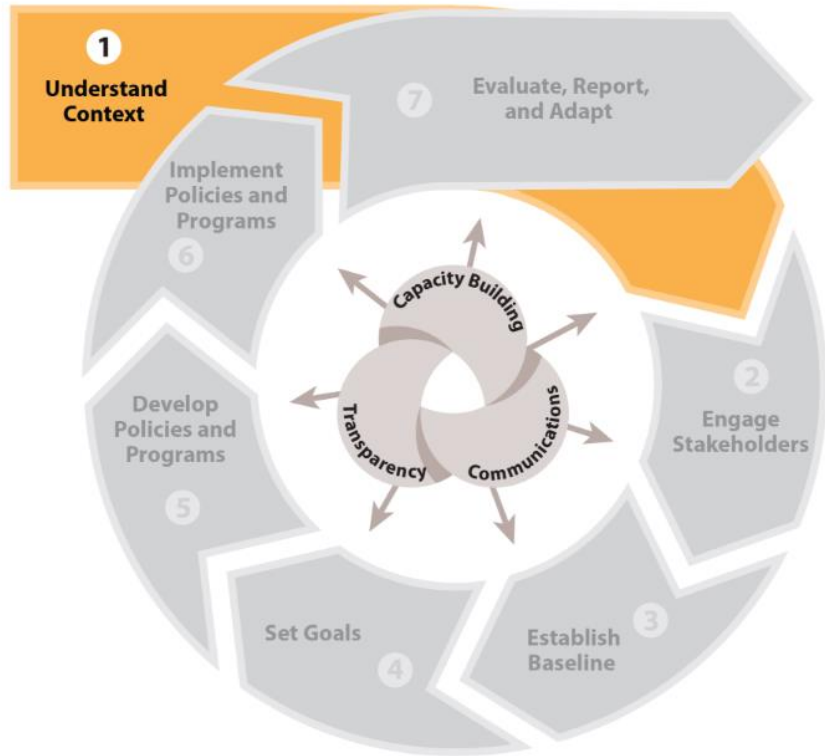
* epa.gov/energy/greenhouse-gas-equivalencies-calculator

New! GMI Policymaker's Framework for Addressing Methane Emissions



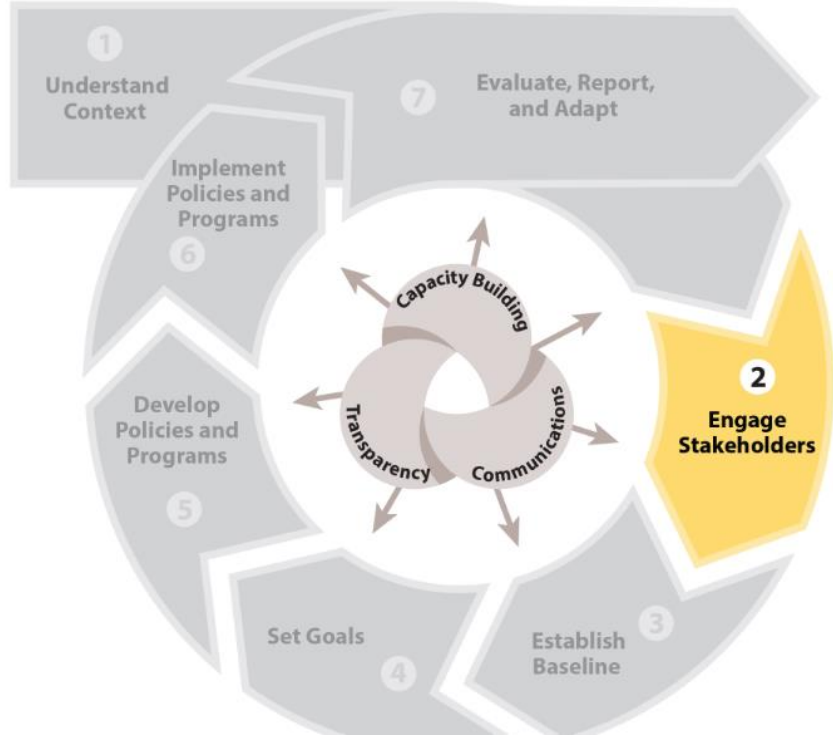
- **What:** A framework to help countries accelerate progress toward their methane emission reduction goals
- **How:**
 - Provides a step-by-step process for developing and implementing policies, programs, and partnerships to reduce methane emissions
 - Compiles and organizes available tools, resources and case studies for each of the seven steps
 - Outlines three core principles for success
 - Capacity building, transparency and communications
- **Who:** Primarily for national policymakers
- **When:** mid-November 2023
- **Where:** www.globalmethane.org

Step 1: Understand Context



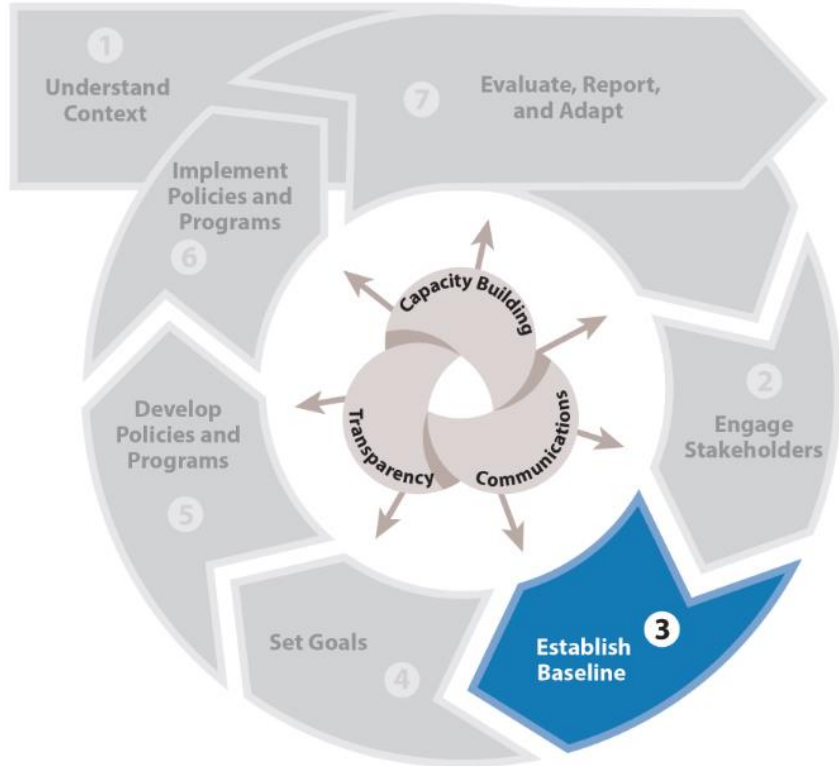
- **Action:** Examine the country's total annual methane emissions and trends, key sources of methane, national and subnational priorities related to the methane-producing sectors, and the current policy and regulatory landscape
- **Goal:** Develop a big-picture understanding of the context for action and priorities
- **Specific activities:**
 - Identify national anthropogenic methane emissions sources
 - Examine existing national and subnational commitments and related efforts aimed at reducing methane emissions in your country
 - Review existing social, environmental, and economic priorities in national strategies or action plans (e.g., National Development Plans)

Step 2: Engage Stakeholders



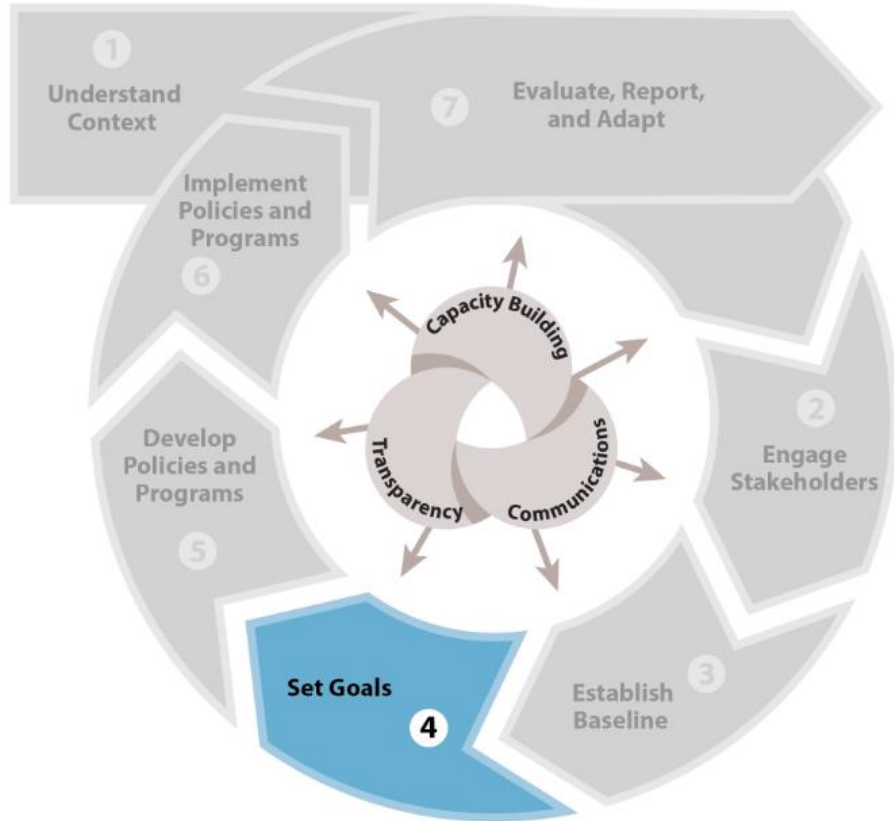
- **Action:** Engage meaningfully with key stakeholders early for long-term success of methane mitigation strategies.
- **Goal:** Solicit input, information and data on policy ideas, feasibility, costs, and impacts; listen to industry and local community concerns; and share information on policy goals, proposals or new rules.
- **Specific activities can include:**
 - Identify key stakeholders and document stakeholder roles and responsibilities.
 - Select the appropriate type of stakeholder engagement and determine the desired outcomes of engagement.
 - Engage with identified stakeholders
 - Document interactions

Step 3: Establish Baseline



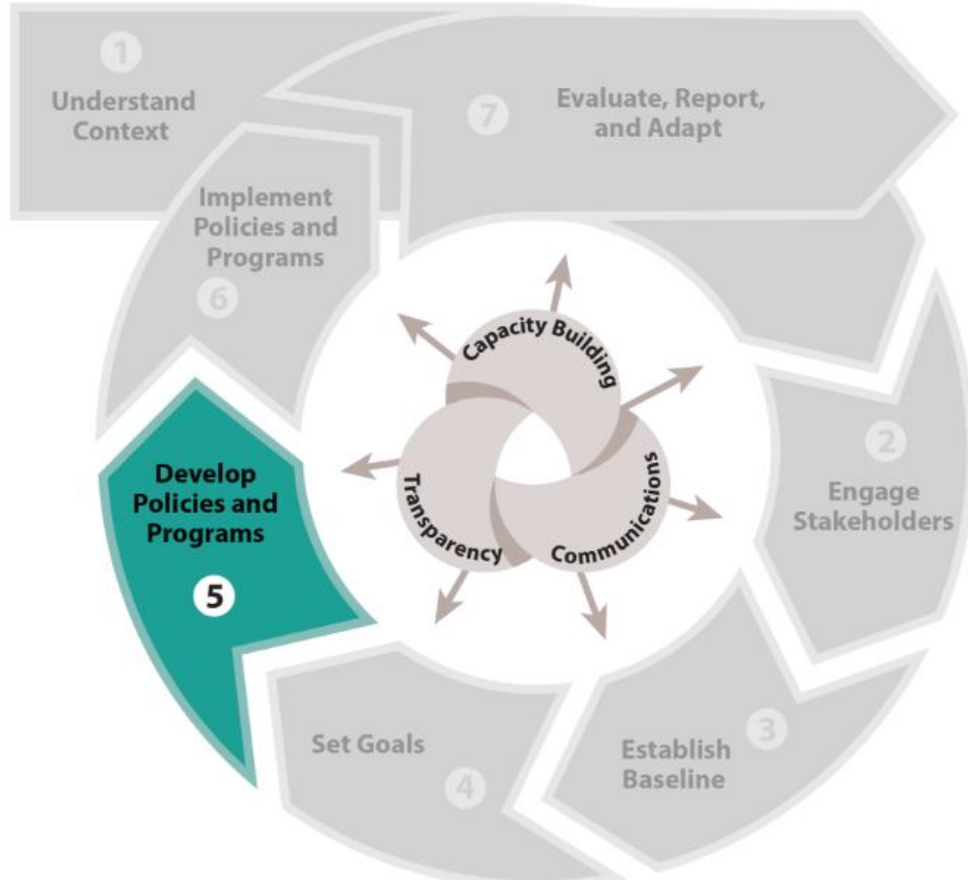
- **Action:** Estimate baseline emissions—that would occur business-as-usual, in the absence of any policy intervention—for key methane-emitting sectors.
- **Goal:** Understand what emissions would be in the absence of the emission reduction policy to compare against.
- **Specific Activities can include:**
 - Review core concepts and components of baselines
 - Collect readily available methane emissions data and identify data gaps and limitations.
 - Calculate baseline emissions, factoring in current or future law, practices, and technologies that could affect projections.

Step 4: Set Goals



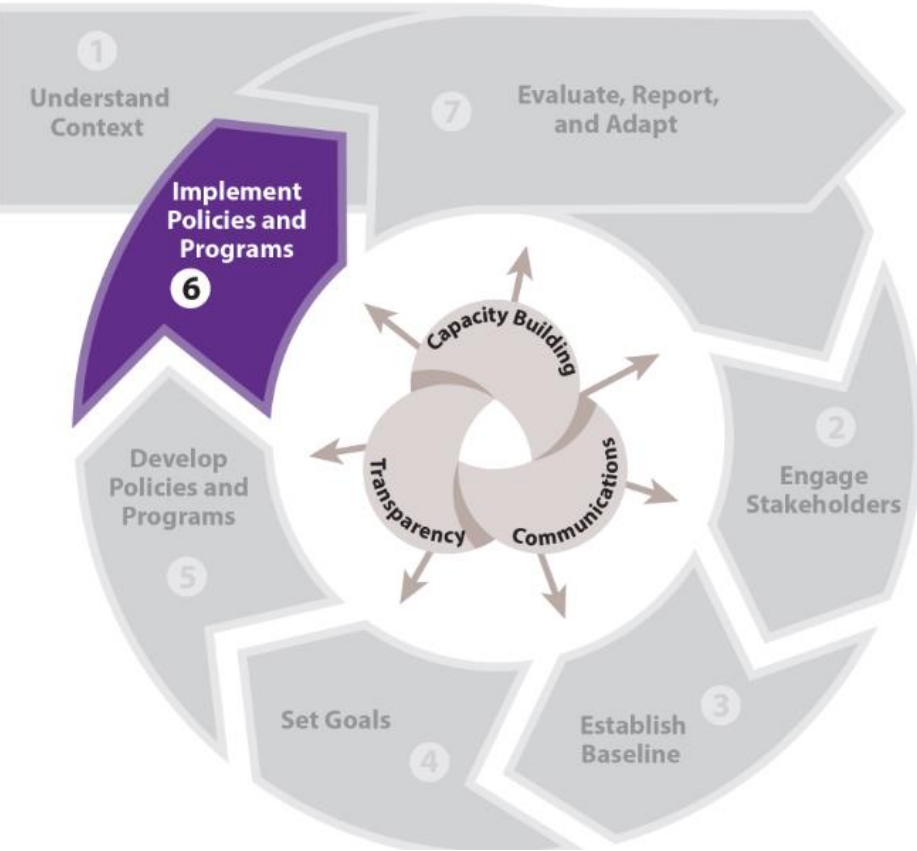
- **Action:** Establish goals related to limiting methane
 - e.g. from specific source sector, to a specified annual amount by a specified date.
- **Goal:** Ensure goals are realistic with a clearly defined goal boundary, goal type, and timeframe for achievement.
- **Specific activities can include:**
 - Consider priorities and previous goals
 - Consider the technical feasibility and quantify emission-reduction potential
 - Set the parameters of the goal (e.g. geography, sector, format, time frame)
 - Communicate with stakeholders and document

Step 5: Develop Policies and Programs



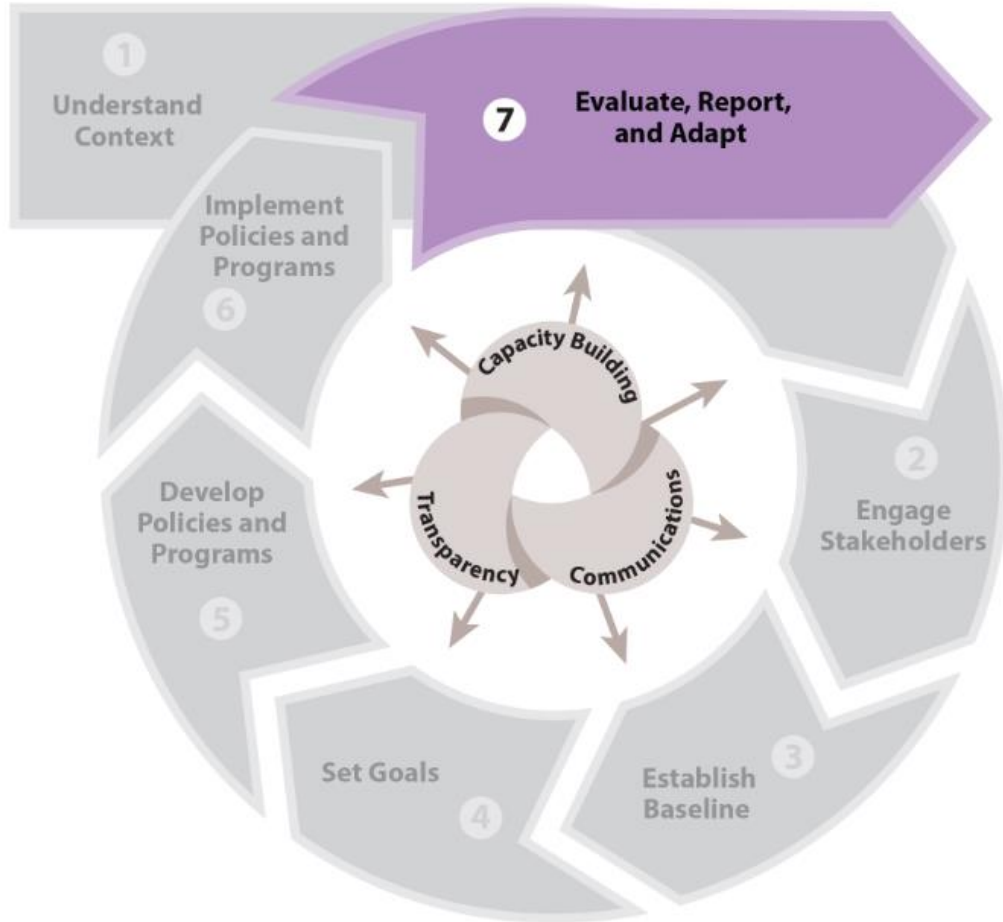
- **Action:** Identify, analyze, select, and further develop/design the sector- and source-specific strategies
 - (e.g. regulatory, voluntary, and incentive-based policies, programs or approaches).
 - It may be useful to examine other countries' strategies and tailor them to meet your own circumstances.
- **Goal:** Design and select strategies most tailored to your priorities and circumstances
- **Specific Activities** can include:
 - Identify potential strategies
 - Quantify reduction potential
 - Estimate costs AND benefits
 - Develop and apply criteria, including feasibility

Step 6: Implement Policies and Programs



- **Action:** Implement policies and programs, often in coordination or consultation with agriculture, municipal solid waste, wastewater, oil and gas, or coal mine sector government agencies and key stakeholders.
- **Goal:**
- **Specific Activities**
 - Prepare a detailed implementation plan, that identifies the lead ministry or organization responsible
 - Establish agreements and frameworks as necessary
 - Explore/identify financing sources, as appropriate
 - Identify capacity building needs and plan to address
 - Engage stakeholders
 - Track progress

Step 7: Evaluate, Report and Adapt



- **Action:** Measure, report and verify progress on emissions reductions and identify any need to modify policies
- **Goal:** Track progress toward goals and identify areas for improvement
- **Specific activities** can include:
 - Determine status of policy implementation
 - Calculate and verify emissions reductions
 - Gather input from key stakeholders
 - Identify adjustments to policies and program(s) needed
 - Report progress toward goals

GMI Actions and Resources to Support Methane Reductions

Performs Assessments and Provides Tools	Builds Capacity with Best Practices and Guidance	Fosters peer exchange and information sharing
<ul style="list-style-type: none">• Desktop studies• Site Visits and scoping missions• On-site measurement (i.e Pre-Feasibility) studies• Leak Detection and Repair• Data collection assistance• Reports/Technical Presentations/ Guidance• Tools/Models• Databases on projects• Analyses	<ul style="list-style-type: none">• Mitigation technologies and best practices• Best practices and technologies for measurement, reporting and verification (MRV)• Guidance to refine emissions inventories• Trainings• Consultations	<ul style="list-style-type: none">• Conferences• Presentations to Partners and Other Stakeholders• Subcommittee Meetings• Workshops• Webinars• Other Meetings

For more information: www.globalmethane.org

EPA-sponsored GMI Oil & Gas Sector Resources to Support Methane Reductions

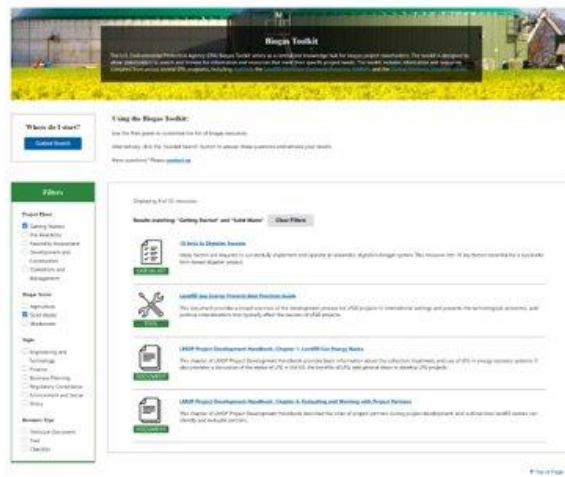
- [Methane Emissions Data Dashboard](#)
- EPA's [Recommended Technologies to reduce methane](#)
- Identifying and Evaluating [Opportunities](#) for Greenhouse Gas Mitigation & Operational Efficiency Improvement at Oil and Gas Facilities (GMI, 2020)
 - Introductory guidance on identifying, evaluating, and advancing cost-effective, high-impact opportunities to manage GHG emissions, energy use at O&G facilities.
- Best Practice [Guidance](#) for Effective Methane Management in the Oil and Gas Sector: Monitoring, Reporting and Verification and Mitigation (UNECE and GMI, 2019)
 - Guidance and case studies for facility owners, operators and government policymakers.

The collage displays four key resources:

- Recommended Technologies to Reduce Methane Emissions:** A webpage from the Natural Gas STAR Program providing a table of technologies with filters for emission source (e.g., Compressors/Engines, Dehydrators) and capital cost. It includes a 'Please Note' section regarding EPA's disclaimer.
- Methane Emissions Data Dashboard:** An interactive tool from the Global Methane Initiative (GMI) for exploring methane emissions measurements and projections. It features a 'Methane Emissions and Projections' section and a 'Methane Emissions Dashboard' with various filters.
- Identifying and Evaluating Opportunities for Greenhouse Gas Mitigation & Operational Efficiency Improvement at Oil and Gas Facilities:** A report cover from GMI (March 2020) featuring an image of an oil field.
- Best Practice Guidance for Effective Methane Management in the Oil and Gas Sector: Monitoring, Reporting and Verification (MRV) and Mitigation:** A report cover from UNECE and GMI (2019) featuring an image of an industrial facility and the number 65.

EPA-sponsored GMI Biogas Technical Assistance, Tools, and Resources to Support Methane Reductions

- [EPA Biogas Toolkit](#) provides a roadmap for planning and implementing projects and quantifying economic and environmental impacts with **38 tools and resources** to facilitate biogas project development, including:
 - Solid Waste Emissions Estimation Tool ([SWEET](#)) **Excel-based tool** for quantifying pollutant emissions from sources across the waste sector
 - Policymakers' [Handbook on Measurement, Reporting and Verification](#) in the Biogas Sector -**High-level resource** on guiding principles for conducting emissions MRV for the biogas sector



Save the date!

2024 Global Methane Forum: *Mobilizing Methane Action*

Goals:

- Convene global government, science, industry and finance thought leaders to mobilize ambitious action on methane
- Highlight methane mitigation activities underway to achieve the goals, including of the Global Methane Pledge
- Share information about technical, policy, financing, and regulatory challenges and solutions related to methane policy and project development

Dates and Location:

- 18-20 March 2024, UN Palais des Nations, Geneva, Switzerland

Additional information will be posted here:

- <https://www.globalmethane.org/2024forum> and at <https://unece.org/sustainable-energy>.



We look forward to welcoming you in Geneva!



Thank You

Denise Mulholland
Mulholland.Denise@epa.gov