



GLOBAL METHANE INITIATIVE AGRICULTURE SUBCOMMITTEE STATEMENT OF PURPOSE

MISSION

The GMI Agriculture Subcommittee is dedicated to reducing the impacts of climate change by providing international leadership to mitigate global methane emissions through the abatement, recovery, and use of methane from agricultural sources. The Subcommittee promotes collaboration between delegates from Partner Countries and Project Network members to build capacity, develop strategies and markets, and remove barriers to methane mitigation project development in order to increase environmental quality, improve rural livelihoods, strengthen the economy, and expand opportunities for renewable energy production and use.

FOCUS

The Subcommittee primarily focuses on promoting the reduction of methane emissions from livestock manure and agro-industrial wastewater and residues through the use of anaerobic digestion (AD) for conversion into biogas.

ROLES

Delegates work to achieve these goals by:

- Serving as the country point of contact for information about the Initiative;
- Preparing and updating country agriculture sector action plans;
- Sharing country policies, incentives, standards, plans, and success stories through participation at GMI events and contributions to GMI resources (including GMI website, documents, international AD database, etc.);
- Conducting research, performance evaluations of operating AD systems, technical assistance, workshops or meetings, technology transfer activities, and training;
- Developing fact sheets, tools, guides, training plans, country AD databases, and methane inventories or reduction estimates; and/or
- Funding the activities above in other Partner countries.

Project Network members assist in these efforts by:

- Providing funding opportunities,
- Participating at events,
- Sharing industry expertise and research,
- Representing similar organizations,
- Implementing methane reduction projects, and
- Publicizing success stories.



BACKGROUND INFORMATION

GLOBAL METHANE INITIATIVE BACKGROUND

Methane is the second most abundant greenhouse gas (after carbon dioxide). Methane's ability to trap heat in the atmosphere, which is called its "global warming potential," is more than 20 times greater than that of carbon dioxide. As such, methane is a significant contributor to global climate change.

The Global Methane Initiative (GMI) is a voluntary, multilateral partnership that aims to reduce global methane emissions and advance the abatement, recovery and use of methane as a valuable clean energy source in five sectors: agriculture, coal mines, municipal solid waste, municipal wastewater and oil and gas systems. GMI achieves its goals by creating an international network of Partner Countries and Project Network members, who represent the private sector, development banks, universities, and NGOs, in order to build capacity, develop strategies and markets, and remove barriers to project development for methane reduction in partner countries. GMI projects reduce greenhouse gas emissions in the near term and provide a number of important environmental and economic co-benefits.

AGRICULTURAL METHANE EMISSIONS BACKGROUND

The main sources of methane emissions from agriculture include manure management, enteric fermentation, and rice cultivation.

- **Manure** and agro-industrial wastes and residues produce methane when they decompose anaerobically. While manure accounts for 7 percent of global agricultural methane emissions, agro-industrial wastes and residues are also significant contributors to methane emissions.¹ The main method to reduce these emissions is through the use of anaerobic digestion to produce and capture biogas, which may be used as an energy source.
- **Enteric fermentation** refers to a digestive processes whereby microbes in an animal's digestive system ferment food and produce methane as a byproduct. Enteric fermentation accounts for 58 percent of global agricultural methane emissions.¹ Enteric fermentation emissions may be mitigated through multiple practices, including but not limited to: improved animal diets, chemical treatment of feed, genetic improvement of the animals, bioengineering of the ruminant microorganisms, and improved efficiency and production of the animals. *Although not currently a focus of the Subcommittee, the Subcommittee*

¹ Based on 2010 methane data from: U.S. EPA's 2011 *Draft Global Non-CO2 Emissions Projections Report (1990-2030)*



will work with other organizations to promote methane mitigation techniques in this area.

- **Rice cultivation** results in methane emissions from the anaerobic decomposition of organic matter in flooded rice fields. Rice cultivation accounts for 22 percent of global methane agricultural emissions.¹ These emissions can be mitigated through the use of methods including improved water management, application of chemical fertilizer, direct seeding, improved tillage and crop residue management, and use of different rice cultivars. *Although not currently a focus of the Subcommittee, the Subcommittee will work with other organizations to promote methane mitigation techniques in this area.*