



Global Methane Initiative

Biogas Subcommittee Meeting

27 April 2017



Agenda

- GMI Administrative Support Group Update
- Overview
 - Biogas Subcommittee
 - Action Plan and Proposed Activities
 - Nominated Subcommittee Leadership
- Country Updates
- In-Person Biogas Subcommittee Meeting
- Presentation: Livestock Waste Management in the Philippines



Global Methane Initiative Administrative Support Group Update

Monica Shimamura, U.S. EPA



ASG Update

Global Methane Forum

- The Global Methane Forum was held in March 2016 in Washington D.C.



ASG Update

New GMI Charter

- Renewed charter for 5 years
- Biogas Subcommittee formalized
- Emphasize information sharing and policy development and guidance rather than site-specific projects
- Formalized alliances with:
 - United Nations Economic Commission for Europe (UNECE)
 - Climate and Clean Air Coalition (CCAC)
 - GMI is a non-state partner
 - GMI attends CCAC Working Group meetings

ASG Update New GMI Charter

- *Recommendation 3: Structural Changes*

Element	Recommendation	Past
Steering Committee	Two Co-chairs with 2-year terms	One Chair
Subcommittees	Three Subcommittees: 1. Coal Mine 2. Oil and Gas 3. Biogas	Five Subcommittees 1. Coal Mine 2. Oil and Gas 3. Agriculture 4. Municipal Solid Waste 5. Wastewater

GMI News

- Canada and Mexico are new Steering Committee Co-Chairs
- United States has formally stepped down; however will continue to maintain Secretariat
- June 2017: Canada hosting GMI Oil and Gas Subcommittee in conjunction with Global Petroleum Show
- October 2017: In conjunction with UNECE, GMI will be hosting Coal Subcommittee Meeting
- GMI and CCAC working together to develop another combined meeting in 2018



Biogas Subcommittee Overview

Chris Voell, U.S. Environmental Protection Agency



Sectors: Biogas Subcommittee

Biogas Subcommittee



Agriculture



Municipal Solid Waste



Municipal Wastewater

Focus Areas: Biogas Subcommittee

Commonality

- Biogas capture and use for energy is the unifying force binding all three sectors in the subcommittee (Agriculture, MSW, Wastewater)

Areas of Intervention

- Centralized wastewater treatment
- Food waste diversion
- Livestock manure digesters
- Household/small scale digesters

Synergies

- Co-digestion of organic wastes in wastewater or manure digesters
- Co-location of digesters with landfill gas energy
- Food waste diversion from landfill as methane mitigation and feedstock for digesters

Subcommittee Action Plan

Since its formation last year, the Subcommittee developed an Action Plan which:

- Defined the Subcommittee Statement of Purpose
- Defined biogas
- Listed potential activities of the Subcommittee
- Defined the structure and leadership

Statement of Purpose

- The GMI Biogas Subcommittee will identify and promote areas of bilateral, multilateral, and private sector collaboration on methane abatement, recovery, and use in the areas of agriculture (livestock manure and agro-industrial wastewater and residues), municipal solid waste, and municipal wastewater. It will focus on removing policy barriers to project development and implementation; identifying project opportunities; and demonstrating and deploying technologies. This will be accomplished by building capacity through development of tools, policy guidance, and project development resources at the national, state, and city level within Partner Countries. The Subcommittee will seek work areas on common policies and approaches across the biogas methane sectors, and also should conduct sector-specific work as needed.



Biogas Definition

- Biogas is the gas that is produced through the anaerobic digestion of the following feedstocks: livestock manure, agro-industrial wastewater and residues, municipal solid waste, municipal wastewater, food waste, and other organics. Biogas is mostly made of methane and carbon dioxide plus small amounts of some other gases. Depending on the feedstock and the method in which anaerobic digestion takes place, biogas contains 50%-75% methane and 25%-50% carbon dioxide.

Key Activities

- One annual in-person meeting.
- Alignment of work across all appropriate biogas sectors with GMI participating partners:
 - Climate & Clean Air Coalition; Global Alliance for Clean Cookstoves; World Biogas Assn; World Resources Institute; World Bank; United Nations – Environment Program, Industrial Development Organization; Inter-American Development Bank; Asian Development Bank
- Development or modification of tools to evaluate biogas technologies and facilitate biogas project development.
- Policy guidance (with focus on supporting development of national initiatives that include biogas actions).
- Technical guidance for biogas projects and technologies.
- Improvement of the legal, regulatory, financial, institutional, technological and other conditions necessary to attract investment in biogas projects.
- Presentations at conferences, internet-based meetings, and other events to promote development of favorable biogas policies and successful biogas projects.
- Sharing of experience, success stories, and lessons learned from Partner Countries (biogas policies and incentives, technologies, and projects).

Structure

Biogas Subcommittee Structure

Chairs (Up to 3)

- Lead strategic visioning for GMI biogas methane initiatives and administration of Subcommittee
- Must be nominated by a Partner Country
- Chosen for two-year term (terms can be extended upon consensus of subcommittee)
- Preferably, there will be a Chair to represent each of the three key biogas focus areas of GMI – Agriculture, Municipal Solid Waste, and Municipal Wastewater

Vice Chairs (up to 3)

- Works alongside co-Chairs and serves as back-up in their absence
- Must be nominated by a Partner Country
- Chosen for two-year term (terms can be extended upon consensus of Subcommittee)
- Would assume Chair role after Vice Chair term is complete (with consensus of Subcommittee)
- Preferably, there will be a Vice Chair to represent each of the three key biogas focus areas of GMI – Agriculture, Municipal Solid Waste, and Municipal Wastewater

Subcommittee Technical Leads (up to 3)

- Act as a primary technical resource to Chairs, Vice Chairs and Biogas Subcommittee
- Leads can be a Country Partner Delegate or Project Network member
- Preferably, there will be a Subcommittee Technical Lead to represent each of the three key biogas focus areas of GMI – Agriculture, Municipal Solid Waste, and Municipal Wastewater

Subcommittee Membership

- Open to any and all Partner Country Delegates and Project Network members
- Open to include GMI collaborating organization representatives (e.g., CCAC)

- Allow for leadership representation across all critical biogas sectors
- Set a robust management structure
- Provide for institutional leadership and consistency
- Further engage Project Network members
- Foster an open and welcoming forum for exchange of information and ideas.

Subcommittee Leadership

■ Current Co-Chairs

- Jorge Hilbert, National Institute of Agriculture Technology, Argentina
- Chris Voell, U.S. Environmental Protection Agency, United States
- *vacancy*

■ Current Vice-Chairs

- Tom Frankiewicz, U.S. Environmental Protection Agency, United States
- V.K. Jain, Ministry of New and Renewable Energy, India
- *vacancy*

■ Technical Leads

- Grigor Stoyanov, 100-First Zero Waste and Organic Cycle Organization (100-NGO), Bulgaria/Austria
- V.K. Vijay, Indian Institute of Technology, Delhi, India
- *vacancy*

■ Administrative Support Group

- Monica Shimamura, U.S. Environmental Protection Agency, United States

■ Approval Process

- Nominated Co-Chairs and Vice-Chairs will be presented to Country Delegates for approval in May 2017
- Suggestions for additional Co-Chair, Vice-Chair and Technical Lead being solicited
- Leadership finalized in June 2017

Subcommittee 2017 Work

What activities should the Subcommittee undertake?

- Increased website content
- Develop or modify tools
- Sharing of success stories and lessons learned
- Best practices guides
- National policy guidance and model policy development
- Technical assistance
- Training
- Inclusion of biogas in Nationally Determined Contributions (NDC) development
- ***Other suggestions?***
 - *Raise your hand – type it chat box – or send in later*





Country Updates

Thomas Frankiewicz, Monica Shimamura, and Chris Voell

U.S. Environmental Protection Agency



Country Updates: United States

■ Municipal Solid Waste

— In the United States

- USEPA's Landfill Methane Outreach Program continues to promote the collection, control, and beneficial use of landfill biogas (since 1994)
 - Now over 1,100 partners, including industry, communities, and states
 - 654 landfill biogas energy projects nationwide (as of March 2017)
- The U.S. is beginning to shift focus towards organics diversion
 - USEPA announced a 50% food waste reduction goal by 2030
 - 24 states have landfill bans on yard waste (5 include food waste)
 - ~200 municipalities have food waste collection programs in place

— Internationally

- Developing a methodology with China's National Center for Climate Change Strategy and International Cooperation (NCSC)
- Working with Chinese officials to identify a pilot city in which to implement a low carbon city concept program
 - Focus on methane
 - Linking waste and wastewater treatment



Country Updates: United States

- **Municipal Wastewater**
 - Outreach / Action Planning
 - Help to develop tools and resources such as: biogas modeling tools, case studies, training activities, and pre-feasibility studies.
 - Example: BioWATT
 - Technical Assistance
 - Continue support of international GMI wastewater projects focused on technical assistance and training to overcome technical, institutional, and financial barriers to project development.
 - Current focus: China and Mexico
 - Collaboration
 - Identify and seek ways to better collaborate with Partner Countries; the private sector; and multilateral organizations.

Country Updates: United States

■ Agriculture

- AD trends in the United States:
 - Co-digestion of food waste and other organic waste streams with livestock manure and bio-solids (sludge)
 - Eco-markets aspects of AD systems
 - Commercialization of small-scale nutrient recovery
 - Third-party project investment and development
 - Digester biogas to vehicle fuel
- GMI International Ag Efforts:
 - Interface w/CCAC Ag Initiative relative to Ag High Level Assembly
 - Cooperative Agreement with Global Alliance for Clean Cookstoves on household and small-scale AD biogas
 - Resource assessment updates (six countries)
 - Sponsoring UK/AD Forum-World Biogas Expo (July, Birmingham)
 - Outreach re: 'biogasdoneright' platform (May, Italy)
 - Community scale AD projects in Indonesia
 - Regional level Resource Assessment in China



Country Updates

- Other countries?

In-Person Biogas Meeting

- The next Biogas Subcommittee will be co-located with the International Solid Waste Association (ISWA) World Congress and the Solid Waste Association of North America (SWANA) WASTECON
 - 25-27 September 2017
 - Baltimore, Maryland, United States
- Planning for Subcommittee Meeting, site tours, and technical session
 - Please let us know if you are interested in presenting

 **ISWA WORLD CONGRESS**

SWANA's WASTECON

SEPTEMBER 25-27, 2017 | BALTIMORE, MD

**NO TIME
TO WASTE**





Livestock Waste Management in the Philippines

Mary Sagapan and RL Jerlyn Oliva
Development Academy of the Philippines



About the DAP

- Core purpose is to help development partners (its development stakeholders/clients) excel in serving others better by enabling institutionalization of cutting-edge capacity building and development solutions.
- DAP's **Sustainable Human Development Program** designs and implements projects on environment and sustainable development.



Video on Livestock Waste Management in the Philippines

- Overview of the livestock industry in the Philippines
- GMI – DAP partnership
- Interview with Buklod-Unlad Cooperative and its stakeholders
- The Philippine Methane Initiatives

Thank you!

Questions?

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