GMI Biogas Subcommittee Meeting



6 October 2020



Need Help? If you need help, please send an email to asg@globalmethane.org

Help!

Agenda

Welcome

- Biogas Subcommittee Co-Chairs:
 - Matthew Hamilton, Environment & Climate Change Canada (Canada)
 - Jorge Hilbert, National Agricultural Technology Institute (Argentina)
 - Tom Frankiewicz, U.S. Environmental Protection Agency (United States)

Meeting Objectives; Adoption of the Agenda

Tom Frankiewicz

Update on GMI Activities

– Monica Shimamura, Director, GMI Secretariat

- Looking Beyond 2021 GMI's Path Forward for the Biogas Subcommittee
 Biogas Subcommittee Co-Chairs
- Project Highlights
- Wrap-up and Next Steps



Update on GMI Activities

Monica Shimamura Director, Secretariat 6 October 2020



Secretariat News and Highlights

2020

Executive Task Force

has been another *very* busy year

Pivoting to Virtual Meetings



✓ International participation
 ✓ Can "see" each other!
 ✓ Interactive discussions
 ✓ Instant polls

- 5 Executive Task Force virtual meetings
- 2 GMI Oil & Gas Subcommittee webinars
- I GMI Coal Subcommittee meeting
- 1 GMI Biogas Subcommittee meeting

GMI continues to engage with stakeholders to share information and identify and promote methane mitigation opportunities.



Expanding Direct Communications and Social Media



GMI Mailing List

- 2,005 members
 77% growth in 2020
- 923 following biogas
- Open rate over last 3 months (July-September) averages 36.5%



Facebook
488 followers
▲ 3.8 % growth in 2020





Growth in 2020, based on changes since November 2019

Expanding globalmethane.org to Improve Information Sharing

- Better navigation and organization
- More direct outreach to stakeholders
- Easier access to tools and resources
- Faster load times



nouas sector	
Coll Biogas Subcommittee focuses on building capacity within Partner Countries to leverage mmon interest across the areas of agriculture, municipal solid waste, and municipal wastewater. estimates licitude togos energy use, the loss of waster manager lack waster beatment Enchologies, dthe potential for synergistic projects involving input streams from multiple sources. Efforts include weiging and promoting tools policy guidance, and project development resources at the national, etc. and city level within Partner Countries.	Biogas Subcommittee Connect, Contribute, and Global Methane Challeng Featured Tools Recent Resources

GMI Technical Groups

Whin the Biogas Sector, GM maintains active technical groups in the areas of agriculture, municipal solid waste (MSW), and municipal wastewater. There groups provide international leadership to mitigate global methanic emissions through the abatement, recovery, and use of methane. They promote collaboration between delegates from Partner Countries and Project Network members to build capacity, develop strategies, and espand opportunities for using methane as a remeable energy exerce.

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Methane emissions come from livestock enteric fermentation, Municipal solid waste management and treatment activities Methane is produced when

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GMI is an international public-private partnership focused on reducing barriers to the recovery and use of methane as a clean energy source. The initiative provides technical support to deploy methane-to-energy projects around the world as well as information resources through its extensive online library featuring best practices, technical tools and resources, and more.

To support this effort, GNI collaborates with its Partner Countries and more than 700 Project Network members to exchange information and technical resources to advance methane mitigation in three key sectors: Oil & Gas, Biogas, and Coal Mines.

Additionally, GMI works with other international organizations focused on methane recovery and use, including the Climate and Clean Air Coalition (CCAC), the United Nations Economic Commission for Europe (UNECE), and the Interny Agency (IGA).



Executive Task Force

The Future of GMI



Executive Task Force Background

Postponed

- The GMI Steering Committee was scheduled to meet in person in March 2020 during the Global Methane Forum in Geneva, Switzerland
- In response to the postponement, the Secretariat took a virtual approach to facilitate discussion and decision-making regarding the future of GMI, among other issues
- GMI's charter expires in April 2021



Goals of the Executive Task Force

- Engage a broader cross-section of the GMI community beyond Steering Committee members
- Gather information and make recommendations to the Steering Committee



Task Force Discussion Topics:

- GMI's Strategic Partners: How to Complement and Leverage Action
- The Global Methane Challenge
- Proposal for United Nations International Year or Decade of Methane Management
- Future of GMI
- Re-Charter of GMI

The Steering Committee will discuss the recommendations at its meeting in December 2020.



Members of the Executive Task Force by Affiliation to GMI





International Representation of the Executive Task Force





Key Takeaways



Support for extending GMI charter by 10 years to 2031; harmonizes GMI with:

- The Paris Agreement
- Re-chartering of CCAC through 2031
- United Nations (UN)
 Decade of Methane
 Management

- Formalize relationships with additional partners; for example, the World Bank, IEA, and UNEP, among others
- Extend the Global Methane Challenge as part of the re-chartered GMI; explore opportunities to make it an awards-type of program
- Support UN Decade of Methane Management
- Become a "hub for all things methane"



Global Methane Challenge



Published Submissions

Global Methane : CHALLENGE





Biogas Sector Stories

Global Methane : CHALLENGE



Recognizing Global Leaders in Methane Mitigation

Global Methane ... CHALLENGE

- Video was prepared for a recognition ceremony at the 2020 Global Methane Forum
- Features:
 - Overview of the Challenge by Helen Ryan, GMI Steering Committee Co-Chair
 - Importance of Collaborative
 Efforts to Mitigate Methane
 by Scott Foster, UNECE
 - Highlights of many submissions
 - List of all Challenge participants



View at globalmethane.org/challenge



Thank you!

Monica Shimamura shimamura.monica@epa.gov

Looking Beyond 2021 – GMI's Path Forward for the Biogas Subcommittee





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Help!

Looking Beyond 2021

- What should be the focus of the Biogas Subcommittee's work for the next 3 to 5 years?
- 2. How should the Biogas Subcommittee be organized to accomplish that work?
- 3. How should GMI prioritize its work to support the Biogas sector

(and the work of the other GMI sectors)?





What should be the focus of the Biogas Subcommittee's work for the next 3 to 5 years?





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3. How should GMI prioritize its work to support the Biogas sector (and the work of the other GMI sectors)?



Project Highlights











Center of Excellence for Circular Economy and Climate Change

- Based in Novi Sad, Serbia
- Established in April 2019
 - SeSWA, GIZ, USEPA
- Dr. Goran Vujic, Director





Contact: goranvujic@uns.ac.rs

www.centercecc.org









Center of Excellence for Circular Economy and Climate Change



- Mission Introduction and implementation of CE and CC mitigation actions in the waste sector
- Services offered:
 - Education
 - Consultancy
 - Data analysis
 - Professional training











Center of Excellence for Circular Economy and Climate Change

- Previous experience:
 - USEPA grants
 - GIZ projects
 - CCAC projects
 - Local, regional and national projects
- Ongoing projects:
 - Food Shifters
 - Novi Sad Composting plant





INDIA /Ministry of New and Renewable Energy (MNRE)

Vijay K Bharti

Global Methane Initiative Biogas Subcommittee Virtual Meeting

6 October 2020, 12:00-13:30 UTC

CONTEXT

HORTICULTURAL CROPS

(viz. fruits, vegetables, flowers, aromatic plants, and spices)

-314 Million Tonnes/year

-Ranked 2nd largest producer globally

MILK

More than **150 Million Tonnes** of milk daily

ECONOMIC IMPORTANCE:

Around 6.5 % of GDP

Contribute 9% of total exports

Share of 13% of its employment

- Despite huge progress in production, <u>post-harvest</u> losses of fruits and vegetables go up to 25 to 40% of the total annual production.
- India estimated losses at Rs. 133 billion mainly due to shortfall in Pre-cooling and Cooling infrastructure at farm level (According to estimates by the Central Institute of Post Harvest Engineering and Technology) (NCCD, Govt. of India)

Agriculture Waste (livestock waste, agro-residues) •683 MT from 11 major crops & ~178 MT is surplus quantity

•192.5 million Livestock -potential to produce 224.8 million tons biogas (assuming 50% cattle waste is collected and used in biogas plants)

Municipal Solid Waste- 68.8 million tonnes per year

India Cooling Action Plan (ICAP) projected 8 times increase in cooling energy demand by 2037

Providing sustainable affordable **cooling energy** through **local sources** is important strategy for reducing food loss, increased farmers income and energy security

COLD CHAIN OPPORTUNITY IN INDIA

Туре	Production Million Tons (MT)	Cold Storage Facility required for MT	
Fruits	97.4	97.4	
Vegetables	187.3	164.0	Onion 23.3 MT, does not require cold storage
Flowers	2.8	2.8	
Aromatics and Medicinal	0.85	0.85	
Plantation Crops	17.7	1.8	Approximately 10% require cold storage
Spices	8.6	4.3	Approximately 50% require cold storage
Milk	176.3	88.2	Approximately 50% distributed through organized sector which has cooling facilities
Total	491	359	
Existing Cold storage capa	city 2018*	39	

Need to develop sustainable cold chain development

CURRENT FOCUS TO PROMOTE BIOGAS DEVELOPMENT IN INDIA

- Focuses on energy recovery in from Industrial, Agricultural & Urban waste/effluent
- Biogas from Cattle manure and other organic waste in rural areas to establish small-scale biogas plants
- To promote Compressed Biogas(CBG), target to develop 5000 CBG plants with expected production capacity of 15 million tonnes of CBG per annum by 2023
- to improve sanitation in Indian villages by processing livestock manure and solid agricultural waste to produce bio gas.

Need to promote use of biogas for meeting growing cooling energy in rural area for agriculture value chain development and biogas market in India







KEY CONCLUSIONS AND WAY FORWARD

- Despite large production of perishables, the **cold chain potential** still remains untapped due to lack of enabling infrastructure like **reliable power**, **lack of demonstration and awareness**.
- The decentralized cold chain in India is still at a nascent stage
- Cold storage facilities based on **alternate energy solutions**, such as biogas has huge potential in India. This would result in **very low operating costs** in comparison to diesel or grid electricity based systems, in addition to being environmentally benign.
- A **Research study** being conducted by **TERI and GMI** for assessment of potential sectors and demand scenarios in key perishable sectors like Dairy, Fruits & Vegetables, Meat & Poultry and mapping of potential States/districts would help formulate additional policies linking biogas use for cold storage applications.

Wrap-up and Next Steps

- Information discussed will be presented to the GMI Steering Committee on 2-3 December
- Presentation and meeting summary will be posted to the GMI website soon
- Stay tuned for details about future technical webinars!

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We welcome your feedback!

We encourage you to share news, resources or suggestions for future webinar topics by emailing us at <u>asg@globalmethane.org.</u>

Please join us at 14:30 UTC

THE WORLD SUMMIT S

WBA – GMI panel Carbon Neutrality – the Climate Benefits of Biogas

Stefano Bozzetto, Consorzio Italiano Biogas e Gassificazione
Bruce Dale, Michigan State University
Matt Hamilton, Environment and Climate Change Canada
Jorge Hilbert, Instituto de Ingeniería Rural (Biogas Done Right)
Thomas Minter, Malaby Biogas
Charlotte Morton, WBA
Dr. Jeremy Woods, Imperial College London (Biogas Done Right)



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Thank you for participating today

