

Biogas Subcommittee
31 May 2023
Bangkok, Thailand

MEETING SUMMARY

Introduction and Purpose:

The two-part Global Methane Initiative (GMI) Biogas Subcommittee Technical Workshop was held in person on 31 May 2023 in Bangkok, Thailand, during the Climate and Clean Air Coalition's (CCAC) Climate and Clean Air Conference. The workshop was led by Mr. Matt Hamilton of Environment and Climate Change Canada (ECCC) and Monica Shimamura of the U.S. Environmental Protection Agency, Co-Chairs of the GMI Biogas Subcommittee. Twenty participants from 8 Partner Countries attended in person, including Canada, Chile, India, Indonesia, Pakistan, Thailand, the United Kingdom, and the United States. Participants from Egypt, Malawi, Nepal, and Panama also attended. Annex I contains the list of participants.

The purpose of the meeting was to provide delegates an overview of GMI's accomplishments and updates about the Biogas Subcommittee, discuss how GMI can support countries in their national commitments to reduce methane emissions, and hear from guest speakers on how their organization plans to partner with GMI and support the Global Methane Pledge. A copy of the final agenda is included as Annex II.

Key Takeaways:

- Biogas projects in Southeast Asia still face many challenges. Most biogas projects are at the household level and do not remain in operation after the first few years.
- Every country faces different challenges related to the implementation of biogas projects and the solutions will vary widely by country. Country representatives agree that their national government must play a role in implementing regulatory changes to encourage the production of biogas as a way to reduce methane emissions.
- Regional similarities in biogas policies, challenges, and benefits exist, therefore it is advantageous to host webinars, trainings, and capacity building workshops with a regional focus.
- There is an opportunity to involve the private sector in implementing biogas projects. The private sector can often offer more solutions in terms of investments and technologies that are applicable to a country's specific situation.

In the future, where it's possible, co-locating the GMI Biogas Subcommittee meeting with the CCAC Annual Meeting is a benefit to both organizations and should be considered when planning the next meeting.

Meeting Minutes:

Part One

Introductions and Welcoming Remarks

GMI Biogas Subcommittee Co-Chair, Ms. Monica Shimamura, U.S. Environmental Protection Agency (United States), opened the meeting by reviewing the agenda and introducing the other Biogas Subcommittee Co-Chair, Mr. Matthew Hamilton, Environment and Climate Change Canada (ECCC) (Canada).

Update on GMI Activities

Ms. Emma Eichelman, on behalf of Denise Mulholland, Director of the GMI Secretariat, gave an overview of GMI accomplishments and updates in the past year. She highlighted GMI accomplishments and methane mitigation activities since 2021, including the Global Methane, Climate and Clean Air Forum held in September 2022. Secretariat priorities through 2023 include assisting countries working to reduce methane emissions, supporting Subcommittee Co-Chairs, enhancing promotion of GMI through targeted communications, and planning the 2024 Global Methane Forum in Geneva, Switzerland. Ms. Eichelman also reviewed GMI's support of signatories of the Global Methane Pledge and highlighted the upcoming GMI resource, the Policy Maker's Framework for Addressing Methane Emissions, which is scheduled to be released in September 2023.

Overview of the Biogas Subcommittee

Mr. Hamilton began by reviewing how the Biogas Subcommittee can support countries to achieve their goals under the Global Methane Pledge, including convening experts to exchange information, sharing tools and resources, and providing technical training and expertise. Mr. Hamilton also provided several updates related to the Biogas Subcommittee, including that the Subcommittee is looking for a new Co-Chair and is planning to bring together working groups to discuss biogas sector strategies. He noted that the working group will help identify topics for the biogas technical session agenda at the 2024 Global Methane Forum. Mr. Hamilton reviewed suggested agenda topics and asked for participants to send feedback to the Secretariat at secretariat@globalmethane.org.

Southeast Asia Biogas Industry: Case Studies

Ms. Shimamura introduced two speakers who shared their insights on the biogas industry in Southeast Asia. The speakers were Giulia Ceccarelli from the World Biogas Association and Dr. Amornwan Resanond from the United States Agency for International Development's (USAID) Smart Power Program.

World Biogas Association – Giulia Ceccarelli

Ms. Ceccarelli provided an overview of methane emissions from rotting wastes and explained how anaerobic digestion (AD) can help countries avoid methane emissions to meet their goals under the Global Methane Pledge. It is estimated that at full potential, AD can deliver roughly 50% of methane reductions required under the Global Methane Pledge through avoided waste sector emissions, avoided emissions from manure management, and avoided burning emissions. Ms. Ceccarelli noted that if biogas' full potential were to be delivered, it would amount to more than 12,200 terawatt hours of energy per year. She reviewed key policy recommendations to help biogas achieve its full potential, including national and international policy, feedstock policy, biogas utilization policy, and digestate policy. Ms. Ceccarelli ended her presentation by sharing a case study of biogas projects in Vietnam, emphasizing that biogas projects in the country are typically at the household level.

USAID Smart Power Program – Dr. Amornwan (Mai) Resanond

Dr. Resanond began by providing an overview of Thailand's renewable energy sources. In 2022, 8% of renewable energy in Thailand was from biogas sources, including electricity to the grid, self-consumed energy, and self-consumed heat. Dr. Resanond then reviewed the timeline of biogas production in Thailand, beginning in 1990 when the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) and Chiang Mai University (CMU) collaborated on research and development of small-scale biogas plant engineering and demonstrated with pilot livestock farms. The biogas sector progressed in Thailand over the next two decades, with the current focus on larger biogas plants in the country. Dr. Resanond described the future outlook at biogas production in Thailand, with a target of 1,565 megawatts of cumulative installed capacity of energy from biogas sources by 2037.

Part Two

Overview of GMI Biogas Subcommittee Tools and Resources

Ms. Shimamura began Part Two of the Biogas Subcommittee Technical Workshop by reviewing available biogas tools and resources that are currently available for countries to use to develop biogas projects. She highlighted the [Biogas Toolkit](#), Measuring, Reporting, and Verification (MRV) Resources, the [Solid Waste Emissions Estimation Tool \(SWEET\)](#), the [Anaerobic Digestion Screening Tool](#), and [OrganEcs](#) tools. Ms. Shimamura then asked Ms. Sandra Cavalieri, CCAC, to provide a brief overview of the open CCAC expression of interest in which countries can submit proposals for consideration to be funded.

Panel Discussion

Ms. Charlotte Morton, WBA, began the panel discussion by asking country representatives if there was already a strategy in their countries that supports the development of biogas. Ms. Camila Labarca, Chile, noted that Chile is looking to implement a waste strategy that aims to divert organic waste from landfills, but this has been challenging given that the diversion needs to happen in homes and Chile needs to build composting plants. Chile has a goal to reduce methane emissions by 2025; Ms. Labarca believes that the only way they can achieve this goal is by capturing biogas from landfills. Ms. Melani Acosta Chin, Panama, explained that the waste sector in Panama is more of a focus for the health sector as the transportation sector is the largest contributor to greenhouse gas emissions. She noted that Chile offers incentives for the private sector to invest in biogas technology, but waste management issues in the country cause other challenges related to capturing energy from waste. Mr. Bhushan Tuladhar, Nepal, added that biogas plants in Nepal are typically at the household level, although the next step is to scale up to the community or municipal level. In the past, these biogas plants were only used for heat with a single stream of feedstock. Mr. Tuladhar agreed that composting may be more effective than household level biogas plants as composting allows for more types of organic waste and is more robust than a biogas plant. He added that Nepal lacks the access to proper feedstocks and technical expertise to operate the larger-scale biogas plants, in addition to a limited market for where to sell the energy created in these larger plants. Ms. Morton finalized the discussion by highlighting WBA's regulatory framework that is currently in production. She noted that Phase 1 will include the standardized, globally applicable suite of regulations related to biogas production and Phase 2 will be to work with individual countries to adapt the framework to work in their country.

Next Steps and Adjournment

Mr. Hamilton and Ms. Shimamura closed the meeting by reminding participants about the upcoming [2024 Global Methane Forum](#) and encouraged everyone to engage with GMI by following GMI's social media accounts ([Twitter](#), [Facebook](#), and [LinkedIn](#)) and sending feedback to the Secretariat at secretariat@globalmethane.org. They then thanked the speakers for sharing their expertise with the Subcommittee and thanked participants for joining the meeting. The meeting was adjourned.

ANNEX I

GMI Biogas Subcommittee Technical Workshop Participants

Melani Acosta Chin	Panama Ministry of Environment	Panama
Lojain Ahmed	Egyptian Natural Gas Company (GASCO)	Egypt
Caroline Birsner	Department of State	United States
Sandra Cavalieri	Climate and Clean Air Coalition	United States
Giulia Ceccarelli	World Biogas Association	United Kingdom
Emma Eichelman	Tetra Tech	United States
Matt Hamilton	Environment and Climate Change Canada	Canada
Vicky Janssens	Klik Foundation	Thailand
Camila Labarca	Ministerio de Medio Ambiente	Chile
Juwo Lwesya-Sibale	Ministry of Environment and Climate Change	Malawi
Nabina Maharjan	Department of Environment	Nepal
John Mitchell	U.S. Environmental Protection Agency	United States
Charlotte Morton	World Biogas Association	United Kingdom
Denise Mulholland	U.S. Environmental Protection Agency	United States
V. Preethi	Hindustan Institute of Technology and Science	India
Muhammad Huzaifa Qasmi	LUMS Energy Institute	Pakistan
Amornwan Resanond	USAID Smart Power Program	Thailand
Dody Setiawan	German Society for International Cooperation (GIZ) GmbH	Indonesia
Monica Shimamura	U.S. Environmental Protection Agency	United States
Bhushan Tuladhar	FHI 360	Nepal

Annex II

Agenda

GMI Biogas Subcommittee Technical Workshop
 Wednesday, 31 May 2023
 09:00 – 10:30 and 11:00 – 12:30 ICT (UTC +7); Meeting Room-G

GMI Biogas Subcommittee Technical Workshop	
09:00 – 09:05	<i>Welcome and Opening Remarks; Adoption of the Agenda</i>
09:05 – 09:20	<i>GMI Secretariat Updates</i>
09:20 – 09:35	<i>GMI Biogas Subcommittee Updates</i>
09:35 – 10:25	<i>Thailand Biogas Industry: Case Studies</i>
10:25 – 10:30	<i>Adjourn</i>
Networking Break	
11:00 – 11:05	<i>Welcome and Opening Remarks</i>
11:05 – 11:20	<i>Overview of GMI Biogas Tools and Resources</i>
11:20 – 12:20	<i>Country Panel and Roundtable Discussion: Accelerating Adoption of Biogas</i>
12:20 – 12:30	<i>Concluding Remarks and Next Steps; Adjourn</i>