

1<sup>st</sup> Municipal Wastewater Subcommittee Meeting  
Internet-Based  
18 April 2012

## **Minutes**

### **Summary**

The Global Methane Initiative (GMI) Municipal Wastewater Subcommittee conducted its first meeting via the internet on 18 April 2012. The Municipal Wastewater Subcommittee meeting discussed the new subcommittee and its objectives, subcommittee membership and leadership, the ongoing development of a sector Action Plan, ideas and plans for the first in-person meeting of the subcommittee scheduled for 3 July 2012 in Singapore, and plans for the Methane Expo 2013.

The [subcommittee meeting agenda](#) and [meeting recording](#) is posted online on the GMI website.

The Municipal Wastewater Subcommittee meeting was attended by 17 representatives from 10 different countries: Brazil, Colombia, Finland, Ghana, Indonesia, Italy, Japan, Mexico, Turkey, and the United States. A list of attendees is included as [Annex 1](#) to these minutes.

Presiding over the meeting was Municipal Wastewater Subcommittee Co-chair Chris Godlove, U.S. EPA, and Henry Ferland, Co-Director of the GMI Administrative Support Group (ASG).

### **Welcome**

Co-chair Chris Godlove began by welcoming and thanking everyone for participating in the first meeting of the Municipal Wastewater Subcommittee. He introduced himself and his role within U.S. EPA (Manager of EPA's Landfill Methane Outreach Program and Co-chair of GMI Municipal Wastewater Subcommittee). He then introduced Henry Ferland, Co-Director of the ASG. Mr. Godlove noted attendees will hear a lot of his voice during the meeting, but the hope is for the meeting to be interactive. He also noted the rationale for the Internet-based meeting (i.e., simple, inexpensive, lessens carbon footprint), but recognized the importance of face-to-face meetings and that one will be taking place later this year. Mr. Godlove mentioned all meeting files, including the minutes and a recording of the meeting, will be posted the GMI website soon.

Mr. Godlove provided an overview of the meeting's topics, which include background on GMI and an ASG update, subcommittee membership and leadership, the working draft of the subcommittee Action Plan and other subcommittee products to be developed, and finally, upcoming meetings.

Mr. Godlove explained the objectives of the Municipal Wastewater Subcommittee. He noted the subcommittee's purpose is to face the challenges of methane emissions globally by focusing on methane capture and reuse opportunities in the municipal wastewater sector. This includes developing and implementing strategies across partner countries. As one of the only global forums for addressing methane emissions from the municipal wastewater sector, the subcommittee is in a strong position to have a positive impact.

Mr. Godlove provided a brief overview of those participating in the subcommittee and attending the meeting. He explained there has been an enthusiastic response from GMI Partner countries in nominating delegates to the new subcommittee as well as interest from the private sector, academia, and other

stakeholders. Subcommittee delegates represent a range of skills, diverse background, and mix of institutions that will allow for different and valuable perspectives in targeting methane emissions from wastewater. The subcommittee also has Project Network members that represent academia, the private sector, and the financial sector (e.g., multilateral banks, development banks).

Mr. Godlove explained the process for identifying subcommittee delegates, which included reaching out to all 40 Partner countries asking for nominations, and presented the current list of the 15 countries with official delegates to the Municipal Wastewater Subcommittee:

- Colombia
- Dominican Republic
- Finland
- Ghana
- Indonesia
- Italy
- Japan
- Mexico
- Mongolia
- Nicaragua
- Pakistan
- Poland
- Serbia
- Turkey
- United States

Finally, Mr. Godlove opened up the floor to questions from attendees, but there were none.

### **Update from the Administrative Support Group (ASG)**

Mr. Ferland, with U.S. EPA, introduced himself as the ASG Co-Director and provided an [update on the ASG's activities](#). As an introduction to GMI, Mr. Ferland explained the ASG functions as the GMI secretariat and reviewed the five sectors (e.g., Agriculture, Oil & Gas Systems, Landfill, Coal Mines, and Municipal Wastewater) on which GMI focuses its efforts for mitigating methane.

Mr. Ferland continued his remarks by outlining the GMI Steering Committee's charge to subcommittees. He explained the ASG receives direction from Steering Committee, a subgroup of Partner countries which last met in Krakow, Poland, in October 2011. At that meeting, the Steering Committee established the Municipal Wastewater Subcommittee and provided charge to all subcommittees in the following areas:

- Outreach & Communications
  - Work directly with the ASG to provide information for the GMI website, particularly as it relates to sector-specific resources and project success stories.
  - Utilize the GMI newsletter to highlight projects, conferences, or other success stories.
  - Undertake outreach activities and provide links to press releases or other new items to the ASG for inclusion on the GMI website.
- GMI Partnership Expo (large technology expo that is a forum for information exchange)
  - Work to identify and create project opportunities for the Expo project showcase.
  - Identify topics/speakers and develop agendas for technical and policy workshops in each of the sectors.
- Action Plans

- Identify how subcommittees can support and assist Partners in both the development and implementation of GMI Partner Action Plans.
- Meeting Options
  - Hold at least one in-person meeting prior to the Expo, to be supplemented with webinar(s) as necessary.
  - Upcoming subcommittee internet meeting/in-person meeting dates include:
    - Landfill Webinar - May 7
    - Coal Webinar - May 16
    - July Singapore in-person meeting of Agriculture, Landfill and Municipal Wastewater Subcommittees

Mr. Ferland also provided participants with an overview on the new Short-Lived Climate Pollutants (SLCPs) Initiative (now called the [Climate and Clean Air Coalition \[CCAC\]](#)), which was launched in February 2012 and focuses on short-lived climate pollutants (including methane). Founding CCAC partners—together with the United Nations Environment Programme (UNEP)—include Bangladesh, Canada, Ghana, Mexico, Sweden, and the United States. Mr. Ferland added there was a [meeting](#) planned in Stockholm (23-24 April 2012) to further discuss the coalition’s structure, membership and work plan, and the ASG will strive to communicate new information to all members as it becomes available.

#### Methane Expo 2013

- 12-15 March 2013 in Vancouver, Canada.
- Same basic framework as the previous Expos (e.g., site visits, concurrent sector-specific sessions, exhibition hall, project opportunity/success story posters, subcommittee meetings).
- Regular Expo Task Force teleconferences.
- Call for Abstracts to solicit session topics/speakers forthcoming. (each wastewater delegate and Project Network member is encouraged to submit an abstract).
- Dedicated Expo website ([www.globalmethane.org/expo](http://www.globalmethane.org/expo)).
- Marketing print materials:
  - 2-page flyer.
  - 8-page brochure.
  - Special Editions of *Methane International (MI)* newsletter.
- GMI presence at global conferences (e.g., Carbon Expo).
- Advertisements in trade publications
- Online web calendars
- Methane Expo agenda at a glance:

Tuesday, March 12	Wednesday, March 13	Thursday, March 14	Friday, March 15
Registration and Site Visits	Opening Plenary Speakers 3.5 hours	Plenary Session 1.5 hours	Sector-Specific Sessions 3 hours
Expo Opening & Welcome Reception	Sector-Specific Sessions 3 hours	Sector-Specific Sessions 5 hours	Closing Plenary 1.5 hours

#### Revised Action Plan Guidance

- All Partner countries encouraged to complete sector Action Plans.
  - New guidance [now available](#).

- Subcommittee delegates encouraged to assist in development of Country Action Plans.
- Ideally hope to have many completed in advance of Methane Expo 2013.

#### Future Subcommittee Activities

- Selecting leadership of Subcommittee (each subcommittee can have up to three co-chairs)
- Finalizing sector Action Plan
- Preparing for the Methane Expo 2013.

Mr. Ferland opened up the field for questions, but there were none.

### **Municipal Wastewater Subcommittee Membership and Leadership**

Mr. Godlove reiterated the enthusiastic response from GMI Partners as well as interest from the Project Network. Mr. Godlove noted there are currently 15 countries represented by official delegates and that other countries are encouraged to join the subcommittee. He explained delegates must be nominated by an official Partner country government representative, but that non-government representatives can be delegates. Mr. Godlove also explained the importance of the GMI Project Network and how the subcommittee will rely on delegate support to engage Project Network members. Mr. Godlove noted there are a number of ways to engage Project Network members, and this is an item for the subcommittee discussion.

Mr. Godlove explained he currently serves as the only subcommittee co-chair and that additional co-chairs are needed (i.e., each GMI subcommittee can have up to three co-chairs). Mexico and the Dominican Republic have expressed interest in serving as subcommittee co-chairs and other Partner countries are encouraged to come forward by contacting Mr. Godlove. Further discussions of subcommittee leadership will take place at the in-person meeting this year, currently planned for 3 July 2012 in Singapore. Mr. Godlove explained the role of subcommittee co-chairs is to mainly act as a facilitator of subcommittee activities including the planning and organization of meetings (i.e., developing agendas, following up on action items, planning follow-up meetings). Mr. Godlove concluded by saying other Partner countries are also encouraged to host future meetings, which can include technical site visits.

Mr. Godlove solicited questions from attendees and received two:

***Brazil:*** Eduardo Jordao, Universidade Federal do Rio de Janeiro (UFRJ)

**Question:** Are there any countries participating in the meeting today who are not official members of the subcommittee?

**Answer:** Yes, there are people on the line who are not official subcommittee delegates, but they can act as valuable Project Network members. Mr. Godlove explained the process for identifying delegates which included reaching out to all GMI Partner Country Steering Committee and Administrative Liaison contacts. He noted interest from 15 Partner countries has been received so far, and that other Partner country representation is encouraged.

***Mexico:*** Adalberto Noyola, National University of Mexico (UNAM)

**Question:** Should proposals for co-chairs come from government agencies?

**Answer:** Yes, co-chair nominations must come from government agencies. However, co-chairs do not have to be a government employee, but the nomination has to come from a government agency.

## **Municipal Wastewater Subcommittee Action Plan**

Mr. Godlove noted a [working draft of the Municipal Wastewater Subcommittee Action Plan](#) was distributed prior to the meeting and is now posted on the GMI website. He explained the Action Plan will guide the subcommittee activities going forward and inform country-specific Action Plans.

He explained the purpose of the Action Plan working draft is to facilitate collaborative discussion and present a framework for the Municipal Wastewater Subcommittee to follow as it considers the specific activities it will pursue to increase wastewater methane recovery and use. He noted the draft action plan is organized by the key headers that the final action plan will contain. Under each header, information for subcommittee discussion is presented. Specific questions for each section of the draft plan for subcommittee consideration are presented in the Appendix.

Mr. Godlove walked through each section of the Action Plan and the information contained within. Key components of the Action Plan include:

- Overview of methane recovery and use opportunities and descriptions of available technologies and best practices.
- Identification of key barriers and issues for project development.
- Identification of possible cooperative activities to increase methane recovery and use in the sector.
- Discussion of country-specific needs, opportunities and barriers.
- Outreach to engage Project Network members.

Mr. Godlove then focused the conversation on addressing questions for subcommittee consideration contained within the Appendix, and solicited overall questions, comments, and reactions. The following comments were offered by attendees in response to Mr. Godlove's question about where the subcommittee should focus its efforts:

***Finland.*** Mari Heinonen, Helsinki Region Environmental Services Authority

- Action plan should contain and overview of the wastewater situations in developing and developed countries.
- In Finland's case the primary opportunity for methane recovery and use is optimization of centralized plants as well as working to reduce N<sub>2</sub>O emissions.
- Finland is happy to share their country's experiences with others.
- Subcommittee should also develop partnerships with the research community to stay up to date on effective technologies and practices. Mr. Godlove encouraged Mari to go ahead and initiate those contacts and the subcommittee can follow-up.

***Mexico.*** Adalberto Noyola, National University of Mexico (UNAM)

- Mexico has current project to identify wastewater technologies being used in Latin America. The paper will be available in about a month, and Mr. Noyola will circulate it to the subcommittee.
- Use of uplow anaerobic sludge blanket reactors (UASB) is emerging. Methane emissions from the effluent are an issue, and something the subcommittee should explore.

***Brazil.*** Eduardo Jordao, Universidade Federal do Rio de Janeiro (UFRJ)

- Followed up in agreement with Mr. Noyola's point about UASBs. Brazil currently has about 500 UASB reactors. Approximately 30 percent of methane produced in UASB reactors is lost through effluent so it should be a focus.

***United States.*** Daniel Yeh, University of South Florida

- Commented the draft Action Plan is a good document.

- Section IV of the Action Plan needs more discussion of anaerobic digestion opportunities from open air lagoons.
- Expressed reservations about promoting more centralized treatment in some areas, noting that activated sludge digestion is very energy intensive and aerobic treatment produces a lot of sludge, which could result in increased emissions.
- Subcommittee should consider promoting direct anaerobic treatment as is done in Brazil and parts of Europe.
- The subcommittee should take a multi-level approach to promoting methane recovery and use. For existing, centralized infrastructure, the subcommittee should consider ways to optimize plants and make them more efficient so as to decrease methane emissions. Approximately 40 percent of the world's population does not have access to proper sanitation, so the subcommittee should also be looking at opportunities related to decentralization, while recognizing that methane recovery and use is rarely the primary driver for enhanced sanitation in the developing world.
- Echoed points related to UASBs expressed by others.

**Italy.** Giorgio Pineschi, Italy Ministry for the Environment, Land and Sea

- The subcommittee can provide added value by educating the public about how energy can be produced from wastewater. The subcommittee should consider effective ways of doing this.

**Colombia.** Diana Rodriguez, Colombia Ministry of the Environment and Sustainable Development

- Noted that in Colombia, there are barriers to using biogas as an energy source (primarily given the price of energy is very low). As such, the subcommittee should work to issue some guidance on how to overcome barriers to energy use from biogas.

Mr. Godlove prompted further discussion by asking attendees about innovative projects in their countries:

**Finland.** Mari Heinonen, Helsinki Region Environmental Services Authority

- Finland has an excellent utility with underground wastewater treatment in Helsinki. They are currently developing a system to meter greenhouse gas (GHG) emissions (e.g., methane and nitrous oxide). Ms. Heinonen will update the subcommittee once more information becomes available.

**Brazil.** Eduardo Jordao, Universidade Federal do Rio de Janeiro (UFRJ)

- Brazil has a new plant (Belo Horizonte, Brazil) that is serving 800,000 people, and generating electrical and thermal energy from digester biogas.
- Also noted that Ms. Rodriguez (Colombia) made an interesting observation about barriers to biogas use. The cost of energy is also low in Brazil given the prevalence of hydroelectricity. The subcommittee should look into supporting policies that make it easier to develop and use biogas.

**Mexico.** Adalberto Noyola, National University of Mexico (UNAM)

- Commented decentralization of wastewater treatment has risks in response to Mr. Yeh's (United States) point. Operation and control may not be as good as expected so there is a risk of uncontrolled methane emissions. When considering decentralized wastewater treatment options, the subcommittee should ensure that all options stress proper operation and maintenance.

Mr. Godlove thanked the attendees for their valuable input, and concluded the discussion of the sector Action Plan by saying development of the Municipal Wastewater Action Plan will be an ongoing process, but it is his hope to finalize some the key points at the Singapore meeting. Mr. Godlove and the ASG will incorporate the comments offered by attendees into the existing draft and present it in July for subcommittee discussion.

## **Other Subcommittee Resources**

Mr. Godlove described several of the other subcommittee resources in development. He first described the Municipal Wastewater Subcommittee fact sheet, explaining each of the GMI sectors has a fact sheet that highlights the focus of each subcommittee and its activities. The fact sheet also provides sources of methane and opportunities for use, highlights a few case studies, and can address some of the main barriers to methane recovery and use. Mr. Godlove encouraged attendees to suggest projects to highlight. He said a fact sheet will be ready for subcommittee review in July. Once the fact sheet is finalized, it will be translated into Chinese, Russian, and Spanish and posted to the GMI website. If Partner countries would like to translate the fact sheet into their native language(s), they are encouraged to do so and those versions will also be posted.

Mr. Godlove described the [GMI Municipal Wastewater Subcommittee website](#), and encouraged attendees to send documents, presentations, or other information that could be included. Finally, Mr. Godlove stated country-specific action plans will be addressed further at the July meeting.

## **Upcoming Meetings**

Mr. Godlove stated there are two in-person meetings currently being planned.

The first is a joint Agriculture/Landfill/Municipal Wastewater meeting currently planned to take place 3 July 2012 in Singapore. The meeting would coincide with the [Singapore International Water Week](#). Mr. Godlove noted the ASG strives to hold in-person subcommittee meetings in conjunction with other relevant industry and technical meetings to give Partner country delegates and Project Network members the opportunity to leverage their travel dollars and time. Meeting logistics such as hotels, timing, and registration will be sent to subcommittee members shortly. Mr. Godlove also stated a draft meeting agenda will be developed in the coming weeks and shared with subcommittee members. Tentative topics include the subcommittee Action Plan, identifying subcommittee co-chairs, and planning for the Methane Expo being held March 2013 in Vancouver, Canada. He encouraged subcommittee members to suggest additional topics. Mr. Godlove stated the subcommittees and ASG are hoping to get good participation from everyone, especially Asian countries.

The second in-person meeting planned will take place at the aforementioned Methane Expo 2013. Mr. Godlove stated a call for abstracts will be coming out shortly, and he encouraged all attendees to submit abstracts on topics of interest to the subcommittee. He also stated the subcommittee doesn't have to just rely on abstracts for technical content, but can decide to have speakers on specific topics such as UASB-reactors, financing, and policy barriers. The goal is to effectively highlight opportunities for wastewater methane recovery and use. At the in-person meeting planned for Singapore, the subcommittee will develop a draft agenda for the Methane Expo 2013.

Mr. Godlove asked for any final questions or comments before the meeting adjourned. Mr. Yeh (United States) stated there has been lots of discussion on whether food waste should go to wastewater treatment plants or landfills, and the issue of co-digestion of municipal sludge with organic waste from other sources offers opportunities that the subcommittee should consider. He noted this might be a good topic for the Methane Expo or for inclusion in the subcommittee Action Plan.

Mr. Godlove and Mr. Ferland thanked the meeting participants for their input and participation.

The meeting adjourned at 9:45 EDT.

## **Summary of Meeting Action Items**

The meeting action items include the following:

- United States (Mr. Chris Godlove) will incorporate comments on the draft subcommittee Action Plan offered by meeting participants and present a revised version for subcommittee consideration at the Singapore in-person meeting.
- Finland (Ms. Mari Heinonen) will initiate contact with wastewater research organizations as potential subcommittee partners. Ms. Heinonen will also update the subcommittee on the GHG metering project at the underground wastewater utility in Helsinki once information becomes available.
- Mexico (Mr. Adalberto Noyola) will distribute the paper he referenced on wastewater technologies used in Latin America to the subcommittee when it is ready.
- Subcommittee members will suggest projects to highlight in the subcommittee fact sheet.
- United States (Mr. Chris Godlove) will develop a draft subcommittee fact sheet and present it to the subcommittee at the Singapore in-person meeting for discussion.
- The ASG will distribute logistical information about the Singapore in-person meeting to subcommittee members.
- United States (Mr. Chris Godlove) will develop a draft agenda for the Singapore in-person meeting and distribute to subcommittee members for input. Subcommittee members are encouraged to submit agenda topic ideas to Mr. Godlove.
- Subcommittee members will consider and/or submit abstract ideas in response to the Methane Expo 2013 solicitation.



### **Annex 1: Final Meeting Participant List**

<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>	<b>Country</b>	<b>E-mail</b>
Eduardo	Jordao	Universidade Federal do Rio de Janeiro (UFRJ)	Brazil	<a href="mailto:epjordao@gmail.com">epjordao@gmail.com</a>
Magda	Correal	MAG CONSULTORIA SAS	Colombia	<a href="mailto:magdacorreal@yahoo.com">magdacorreal@yahoo.com</a>
Diana Milena	Rodríguez	Ministry of Environment and Sustainable Development	Colombia	<a href="mailto:dianami2002@yahoo.com">dianami2002@yahoo.com</a>
Mari	Heinonen	Helsinki Regions Environmental Services	Finland	<a href="mailto:mari.heinonen@hsy.fi">mari.heinonen@hsy.fi</a>
Daniel	Tutu Benefoh	Environmental Protection Agency	Ghana	<a href="mailto:dbenefor2000@yahoo.com">dbenefor2000@yahoo.com</a>
Rudy	Yuwono	Indonesian Society of Environmental Engineers	Indonesia	<a href="mailto:ryuwono@cbn.net.id">ryuwono@cbn.net.id</a>
Giorgio	Pineschi	Ministry of the Environment (Italy)	Italy	<a href="mailto:giorgio.pineschi@gmail.com">giorgio.pineschi@gmail.com</a>
Rie	Nishisako	Japan Ministry of Land, Infrastructure, Transport and Tourism	Japan	<a href="mailto:nishisako-r2p7@mlit.go.jp">nishisako-r2p7@mlit.go.jp</a>
Adalberto	Noyola	National University of Mexico (UNAM)	Mexico	<a href="mailto:noyola@pumas.ii.unam.mx">noyola@pumas.ii.unam.mx</a>
Erkan	Karsli	Greater Municipality of Ankara	Turkey	<a href="mailto:erkankarsli06@hotmail.com">erkankarsli06@hotmail.com</a>
Donna	Boysen	Tetra Tech, Inc.	USA	<a href="mailto:donna.boysen@tetrattech.com">donna.boysen@tetrattech.com</a>
Henry	Ferland	EPA	USA	<a href="mailto:ferland.henry@epa.gov">ferland.henry@epa.gov</a>
Thomas	Frankiewicz	EPA	USA	<a href="mailto:frankiewicz.thomas@epa.gov">frankiewicz.thomas@epa.gov</a>
Julie	Godin	World Bank	USA	<a href="mailto:julia.outremont@gmail.com">julia.outremont@gmail.com</a>
Chris	Godlove	EPA	USA	<a href="mailto:godlove.chris@epa.gov">godlove.chris@epa.gov</a>
Charlie	Goff	ERG - ASG Subcontractor	USA	<a href="mailto:charlie.goff@erg.com">charlie.goff@erg.com</a>
Sarah	Greenberg	ERG - ASG Subcontractor	USA	<a href="mailto:sarah.greenberg@erg.com">sarah.greenberg@erg.com</a>
Brian	Guzzone	ERG	USA	<a href="mailto:brian.guzzone@erg.com">brian.guzzone@erg.com</a>
Monica	Shimamura	GMI	USA	<a href="mailto:shimamura.monica@epa.gov">shimamura.monica@epa.gov</a>
Daniel	Yeh	University of South Florida	USA	<a href="mailto:dhyeh@usf.edu">dhyeh@usf.edu</a>