

Municipal Wastewater Subcommittee Meeting  
Internet-Based  
6 December 2012

## Minutes

### Summary

The Global Methane Initiative (GMI) Municipal Wastewater Subcommittee conducted a subcommittee meeting via the Internet on 6 December 2012. The Municipal Wastewater Subcommittee meeting focused on preparation for the Methane Expo 2013 in Vancouver, Canada, including a discussion on technical and policy session topics and speakers and project opportunity and success story poster ideas; planning for the next subcommittee meeting to be held at the Expo; and ongoing subcommittee business (e.g., sector fact sheet). In addition, the meeting included an update from the GMI Administrative Support Group (ASG), and discussions concerning Methane Action Plan development.

The subcommittee meeting agenda and meeting recording will be posted on the GMI website.

The Municipal Wastewater Subcommittee meeting was attended by 24 representatives from 10 different countries: Canada, Dominican Republic, India, Italy, Japan, Mexico, Pakistan, Serbia, 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-chairs Federico Grullon (Dominican Republic), Elias Freig (Mexico), and Chris Godlove (United States).

### Welcome

Co-chair Chris Godlove (United States) began the meeting by welcoming everyone and stating he was looking forward to a thorough update on current activities and discussion on future planning for the sector. He introduced himself and his role within the United States Environmental Protection Agency (U.S. EPA), and then reviewed the meeting agenda. Mr. Godlove provided an overview of the meetings topics, which included an update from the GMI ASG, planning for Methane Expo 2013, planning for the next subcommittee meeting to be held at the Expo, subcommittee business, and Methane Action Plans. He noted, however, the meeting's focus would be on Methane Expo 2013 planning.

Mr. Godlove introduced his fellow co-chairs, Elias Freig (Mexico) and Federico Grullon (Dominican Republic). Each of the co-chairs provided brief updates of what was happening in their countries.

Mr. Freig thanked everyone for attending. He explained Mexico welcomed a new President and administration on 1 December 2012, noting this was the first time a new government was taking climate and green initiatives seriously. New members from the green party who have an excellent environmental track record—many of whom were champions of the Mexico's climate change bill—have been appointed to key government positions, which gives hope to the climate change bill being fully implemented. Mr. Freig concluded by saying he sees an opportunity for GMI to help with implementation of the climate change bill by-laws that will make pieces of the bill a reality.

Mr. Godlove presented an overview of the situation in the United States. He stated new elections have signaled continuity of U.S. support of GMI, and he expects ongoing support from the State Department and U.S. EPA. Mr. Godlove said over the past few months, he has been busy with follow-up from the [in-](#)

[person July 2012 meeting held in Singapore](#) and Methane Expo 2013 planning. He is looking at options for direct technical assistance and capacity building related to wastewater from U.S. EPA, and stated that further announcements on this will be coming. He also stated U.S. EPA is planning announcements of successful GMI grants early next year, and expressed his hope these grants help provide a better understanding of the wastewater sector and associated emissions. Mr. Godlove travelled to Dominican Republic in October 2012 at the invitation of Mr. Grullon to meet with the co-chairs and other Dominican Republic stakeholders to discuss wastewater sector activities, subcommittee planning, and Methane Expo 2013. Finally, Mr. Godlove stated he had planned to travel to Mexico in October 2012 to meet with stakeholders, but had to cancel due to Hurricane Sandy.

Mr. Grullon introduced himself and stated recent Dominican Republic elections present new opportunities for climate action. He summarized meetings held with government stakeholders about the wastewater sector, and mentioned a study of the Water and Sewage Master Plan that has recently been released by the Water and Sewerage Corporation (CAASD by its acronyms in English) to develop better wastewater treatment plants in Santo Domingo that include methane abatement and biogas capture. Another meeting is planned for January 2013 to discuss how to get more international support for these projects. He closed by saying about 95 percent of the Dominican Republic's wastewater is discharged to rivers, underground aquifers and the Caribbean sea; a problem that needs to be addressed.

Mr. Godlove introduced Henry Ferland, Co-Director of the GMI ASG who explained the ASG helps all five GMI sectors and GMI partners. He stated he looks forward to providing updates on Methane Expo 2013 planning.

Mr. Godlove gave each attendee the opportunity to introduce themselves:

- Adalberto Noyola (Mexico, National University of Mexico, Institute of engineering) indicated he is working on methane emissions from municipal wastewater treatment plants, and he will be in Vancouver for the Methane Expo 2013.
- Alexander Fassbender (United States, Ecovia Corp.) stated his company is looking at using methane to generate power and heat for use at wastewater treatment facilities to improve performance.
- Dr. Basharat Bashir (Pakistan, Alternative Energy Development Board) expressed there is a lot of interest in energy from wastewater and he is very interested in capacity building opportunities from GMI.
- Daniel Yeh (United States, University of South Florida) described his research interest is energy recovery from wastewater and he is looking at anaerobic digestion and growing algae for biofuels. He has a project with the Gates Foundation to build partnerships to convert waste to energy.
- David Greene (United States, SCS Engineers) stated he is a GMI support contractor and is interested in learning more about the wastewater sector.
- Donna Boysen (United States, TetraTech) stated she is a U.S. EPA Landfill Methane Outreach Program support contractor, and is interested in plans for the Expo.
- Joseph Cantwell (United States, Science Applications International Corporation [SAIC]) indicated he is involved in energy efficiency and renewable energy programs related to wastewater.
- Nimmi Damodaran (United States, Stratus Consulting) stated she is a support contractor for U.S. EPA's Climate Change Division.
- Sandra Mazo Nix (United States, SCS Engineers) expressed her interest in ongoing activities in the wastewater sector and other GMI countries.
- Seth Snyder (United States, Argonne National Laboratory) described his interest in accelerating methane production at wastewater treatment plants and knowledge sharing between the United States and Asia.

- Shailendra Jain (India, Shreyans Energy Private Limited) indicated he is working in India on energy recovery from industrial waste.
- William Powell (Canada, Environment Depot for Wastewater to Energy) stated he is based in British Columbia, Canada, and his company is involved with improved wastewater biogas production as a means to clean wastewater.
- Shahid Chaudhry (United States, California Energy Commission [CEC]) indicated he works on a broad spectrum of activities at the wastewater-energy nexus.
- Vladica Bozic (Serbia, Ministry of Energy, Development and Environmental Protection) stated he works with on wastewater issues within the Ministry's Department for Project Management.

Mr. Godlove thanked everyone for their introductions and stated he looked forward to working more closely with everyone.

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

Mr. Ferland provided an ASG update, and began by noting the diverse range of people participating in the meeting and thanked everyone for their participation.

Topics of Mr. Ferland's update included the following:

- Review of Charge to Subcommittee by GMI Steering Committee (see slide 6 of presentation for details). Mr. Ferland stated the current charge to the subcommittee came out of the October 2011 Steering Committee meeting held in Krakow, Poland, and there will be a new charge from the Steering Committee coming out of their meeting in Vancouver at the Methane Expo. The current charge involves subcommittees providing education and outreach about their sectors, developing action plans, and planning for the Methane Expo 2013 in Vancouver.
- Climate and Clean Air Coalition (CCAC) (see slide 7 of presentation for details). Mr. Ferland indicated there are about 26 CCAC partners now, and explained some of the current Initiative activities.
- Methane Expo 2013 (see slides 8-15 of presentation for details). Mr. Ferland provided an overview of the Expo (i.e., dates, its purpose, format), reviewed the Expo block agenda, discussed outreach that has taken place to date, encouraged people to register and advertise the Expo in their own channels, discussed the wastewater site visit that will take place at the Annacis Island Wastewater Treatment Plant, and provided a summary of the GMI social networking sites being used to promote the Expo and GMI more broadly.

Sandra Mazo Nix (United States, SCS Engineers) asked if the CCAC and Center for Clean Air Policy (CCAP) events are open to all attendees. Mr. Ferland replied the CCAC meeting is open to members only, but the CCAP meeting will be open to all.

### **Methane Expo 2013 Preparation**

(Please refer to slides 16-21 of the meeting presentation)

Mr. Godlove introduced preparation for Methane Expo 2013 as the meeting's focus and noted the main discussion points, which included:

- The block agenda for Methane Expo 2013 as it pertains to wastewater.
- The next subcommittee meeting, which is scheduled to take place during Methane Expo 2013.
- The wastewater-focused technical and policy sessions.
- The biogas joint session.
- Expo project posters.

Mr. Ferland clarified the GMI subcommittee meetings are open to everybody, and anyone with interest is encouraged to attend.

*Block Agenda for Methane Expo 2013 as It Pertains to Wastewater (slide 17 of meeting presentation)*

Mr. Godlove stated the wastewater site visit to the Annacis Wastewater Treatment Plant will take place on Tuesday, 12 March 2013, and encouraged everyone to attend. He indicated the next subcommittee meeting will be held on Wednesday, 13 March 2013 in the afternoon and will last for 3 hours, and the wastewater technical and policy sessions will take place on Thursday, 14 March 2013 over the course of 5.5 hours. On Friday, 15 March 2013, there will be a joint biogas technical session to discuss cross cutting issues between the wastewater, municipal solid waste (MSW), and agriculture sectors.

*Next Municipal Wastewater Subcommittee (slide 18 of meeting presentation)*

Mr. Godlove stated the primary focus of the in-person July 2012 subcommittee [meeting held in Singapore](#) was to get to know each other and hear the priorities from various countries and regions. The meeting also served as a platform for obtaining agreement on an overall [Action Plan](#) for the sector, which frames the Municipal Wastewater Subcommittee activities. Within the document, there is a focus on: mitigation; recovery and use opportunities; technologies; barriers and GMI's role in addressing barriers; Project Network integration; and country and region-specific needs.

Mr. Godlove introduced a few of the focus areas for the next meeting, which include:

- Country Updates – Mr. Godlove asked attendees to be thinking of important project and policy developments in their countries to discuss at the meeting.
- Resource Assessments (RAs) – Mr. Godlove described how these RAs outline methane reduction and utilization potential in the wastewater sector in specific countries. He stated they have been used in the agriculture sector, and suggested the meeting discussion could focus on the value of RAs to identify methane emission reduction opportunities in the wastewater sector.
- Country Action Plans – Mr. Godlove stated now that the subcommittee has an overall Action Plan, the next step is to develop country-specific action plans. These action plans are an opportunity for GMI Partners to think about the activities/actions that would be appropriate for their country.

Mr. Godlove asked attendees for additional topic ideas for the next subcommittee meeting.

Mr. Freig (Mexico) described that in Singapore, the subcommittee talked about how it could work together with the CCAC. Mr. Ferland said discussing synergies between the subcommittee's activities and those of CCAC would be a good meeting discussion topic, and Mr. Freig suggested attendees develop ideas for how this could be a win-win situation. Mr. Ferland followed up by reminding Mr. Freig of his idea for including wastewater methane in nationally appropriate mitigation actions (NAMAs) as an action to undertake as well. Mr. Godlove stated NAMAs to date have focused on solid waste, but there are draft versions that include wastewater, which could also be a meeting topic.

No other comments were provided.

*Wastewater-Focused Technical and Policy Sessions (slide 19 of meeting presentation)*

Mr. Godlove explained the Methane Expo 2013 technical and policy sessions are an opportunity for people to hear interesting topics happening globally in wastewater. He further explained the abstract submittal process and indicated the proposed agenda for the technical and policy sessions was developed based on the abstracts accepted. These abstracts fall into two broad categories: Biogas Modeling/Measurement and Wastewater Biogas Projects/Issues. He stated the presentation topics received to date are interesting and come from a diverse group (i.e., academia, government, private

sector), including submittals from some subcommittee members. Mr. Godlove stated, however, there are still a few agenda openings that need to be filled, and now is the time for everyone to reach out or suggest additional presentations. He explained due to limited travel budgets, priority will be given to those people who are able to cover their own travel expenses.

Mr. Godlove opened up a discussion for ideas to fill the open agenda slots, stating one area of interest is examples of additional successful projects, and encouraged attendees to recommend developers/project owners that could highlight successful projects.

Shahid Chaudhry (CEC) stated 20 minutes is not enough for each speaker and indicated they should get 30 minutes, and also suggested an important topic is biogas pre-treatment. Mr. Godlove indicated biogas pre-treatment would be a good topic for the biogas joint session.

Joseph Cantwell (United States) stated tools developed by the Water Environment Federation (WEF) and the Water Environment Research Foundation (WERF) would be good topics. He also suggested for the biogas joint session, it might be good to look at small systems (i.e., one to two million gallons per day ) that are recovering and using biogas to show you don't have to be a big facility to recover and use biogas. Mr. Godlove agreed the WERF project on biogas barriers would be a good topic, and is interested to receive contract information for people that could speak about tools.

Mr. Freig (Mexico) stated it would be useful to assemble a Methane Expo 2013 information packet for potential attendees and sponsors, acknowledging he knows of people that would be interested in Expo. Mr. Freig also knows of two companies that might be interested in sponsorship. Mr. Ferland stated there is a [supporter package on the Methane Expo website](#) that describes sponsorship activities, and the link would be sent to Mr. Freig. Mr. Ferland also encouraged people to reach out personally to others that may be interested in supporting the Expo.

No other comments were provided.

#### *Biogas Joint Session (slide 20 of meeting presentation)*

Mr. Godlove indicated this is the least defined session so far, and the current idea is to focus on market and technical considerations for biogas end use and overcoming biogas project barriers. He reiterated Mr. Chaudhry's suggestion of including biogas pre-treatment as a topic that would fit in well here, and the WERF biogas use barriers paper would be a good one to cover as well. Mr. Godlove asked if there were any questions or comments, but no comments were provided.

#### *Expo Project Posters (slide 21 of meeting presentation)*

Mr. Godlove explained Expo project posters are great opportunities for highlighting project success stories and project opportunities in need of technical and/or financial support. Posters will be highlighted in a "Methane Marketplace" at the Expo. He described posters as important because they will live well beyond the Expo on the GMI website as a resource for project developers and those looking for methane mitigation, recovery, and use models. Mr. Godlove presented the project poster data collection form (included in meeting presentation right after slide 20) as a means to collect information for the posters. Mr. Godlove said he would also be happy to share the form with anyone who has an idea for a project to highlight.

Mr. Chaudhry stated success stories are a great way to share lessons and knowledge with others, and that failed projects can be just as instructive as successful projects. He suggested posters include failed projects as a means of highlighting reasons why projects were unsuccessful as a lesson for future projects. Mr. Godlove stated if Mr. Chaudhry is able to identify someone who is willing to share their experience(s), the subcommittee can work to highlight that information in some way.

Mr. Grullon stated that the Water and Sewage Corporation of Santiago city (CORAASAN, by its acronyms in English) already filled the forms with preliminary data of two WWTP to prepare the Posters. CORAASAN is searching technical and financial support to put in operation these two plants with the intention to capture methane and generate electricity.

### **Subcommittee Business**

Mr. Godlove introduced a few ongoing items that will be part of the subcommittee's work.

- Municipal Wastewater Fact Sheet – Mr. Godlove explained how fact sheets are produced for each GMI sector as a means of highlighting opportunities and the work GMI is doing. He stated a draft fact sheet has been produced and the goal is share the fact sheet at the subcommittee meeting in Vancouver for comment.
- Project Network Recruitment – Mr. Godlove explained how Project Network recruitment is a very important part of the subcommittee's work. He indicated the subcommittee sent out a web blast to all current Project Network members soliciting interest in joining the wastewater Project Network, and there was a strong response (63 people). Mr. Godlove said the subcommittee is always looking for new members, and encouraged attendees to reach out to those who might be interested.

### **Sector Action Plans**

Mr. Godlove explained there is a [guidance document](#) on the GMI website that provides an overview of how sector action plans can be developed and what they are focused on. He stated these action plans are important documents for countries as they think about where to best dedicate resources to develop successful wastewater projects. He stated the website contains 8-10 examples that vary in level of detail, and encouraged attendees to take a look. He concluded by saying sector action plans will be a topic at the subcommittee meeting in Vancouver.

### **Conclusion**

Mr. Godlove thanked everyone for attending the meeting and asked attendees if there were any final comments or questions.

Mr. Bozic (Serbia) asked if Mr. Godlove had any plans to visit Serbia. Mr. Godlove said he did not have any immediate plans, but GMI has some open activities with the MSW sector that might present some opportunities. Mr. Bozic said he hoped to attend the Expo, and Mr. Godlove said he looked forward to Serbian representation at the Expo.

Mr. Godlove concluded by saying there will be follow-up from this meeting prior to the Expo, and he looked forward to seeing everyone there.

### **Summary of Action Items**

The meeting action items include the following:

- Subcommittee members will continue to suggest topics and speakers to the Co-chairs for the next subcommittee meeting to be held in Vancouver during the Methane Expo 2013, as well as for the wastewater-specific technical and policy sessions.
- Co-chairs (Elias Freig, Chris Godlove, and Federico Grullon) will circulate a draft agenda for the next subcommittee meeting to be held in Vancouver.
- Co-chairs (Elias Freig, Chris Godlove, and Federico Grullon) will circulate a draft agenda for the Methane Expo 2013 wastewater technical and policy sessions.

- Subcommittee members will think of Expo project poster ideas and fill out the poster data collection form (Mr. Godlove can provide this form).
- Subcommittee members will think about topics for their country updates and sector action plans for discussion at the next subcommittee meeting in Vancouver.
- Subcommittee members will continue to recruit Project Network members.
- The GMI ASG will complete a draft of the sector fact sheet for review and comment at the next subcommittee meeting in Vancouver.

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

<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>	<b>Country</b>	<b>E-mail</b>
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