

Global Methane Initiative
17th Meeting of the Municipal Solid Waste Subcommittee
Internet Meeting
19 November 2012

Minutes

Overview

The Global Methane Initiative (GMI) Municipal Solid Waste (MSW) Subcommittee conducted its 17th meeting as an Internet-based meeting. The meeting focused on an update from the Administrative Support Group (ASG), a survey distributed to Delegates to obtain feedback for focus of future initiatives, preparation for Methane Expo 2013, and country methane action plans. Below is a detailed summary of the topics discussed, as well as a list of meeting action items. The meeting agenda is included in Appendix 1.

Twenty-eight participants—including attendees from Partner Countries Canada, Colombia, Germany, Ghana, India, Pakistan, Poland, Serbia, Ukraine, and the United States—participated in the MSW Subcommittee meeting, along with multiple Project Network (PN) members. A meeting participants list is included in Appendix 2.

Welcome and Opening

MSW Subcommittee Co-chair Tom Frankiewicz from the United States Environmental Protection Agency (U.S. EPA) began by introducing himself and Co-chair Diana Rodriguez Velosa from the Colombia Ministry of Environment and Sustainable Development. Mr. Frankiewicz briefly reviewed the agenda items and invited participants to request additional items for discussion.

ASG Update

Review of Charge to Subcommittee by GMI Steering Committee

Henry Ferland, ASG Co-Director, thanked everyone for participating and explained an updated charge to subcommittees for this year was provided in Krakow, Poland in October 2011. The Steering Committee provides guidance to each subcommittee every time a subcommittee meeting is held. The Steering Committee encouraged all subcommittees to continue communicating ongoing activities within each country and use existing tools – such as the GMI website where information about each country can be added, the quarterly *Methane International* newsletter, and other outreach mechanisms – to share these activities so anyone accessing these resources can learn GMI's current actions.

Mr. Ferland stated each subcommittee should continue to develop methane action plans for their sectors. He suggested all participants provide input to methane action plans for each country so each sector is properly included, which was discussed further later in the meeting. The Steering Committee encourages all delegates to participate in this effort, especially the MSW sector since there is a significant amount of activity within this sector.

Mr. Ferland encouraged all participants to participate in Methane Expo 2013 by identifying project opportunities and success stories for Methane Marketplace posters, identifying speakers and topics, and assisting with sector-specific technical and policy agenda development. He stated this effort is already underway in the MSW sector. Further, he mentioned this subcommittee meeting's purpose is to ensure the MSW technical and policy sessions are as good as possible and properly include input from all countries that participate in this sector. Mr. Ferland explained each Partner Country will be offered a free booth at the Expo and encouraged all delegates to work with potential Expo attendees from their country to ensure booths include a comprehensive level of current activities to market these opportunities.

Climate and Clean Air Initiative

Mr. Ferland reviewed the Climate and Clean Air Coalition (CCAC), which was launched in February 2012 by U.S. Secretary of State Hillary Clinton. This program focuses on all short-lived climate pollutants (SLCPs), including methane, black carbon, and hydrofluorocarbons (HFCs). Mr. Ferland pointed out methane is of particular interest due to GMI's methane reduction focus. He stated the importance of ensuring CCAC activities relating to methane dovetail and harmonize with GMI activities. Of particular interest to the MSW Subcommittee, CCAC is moving forward on an MSW initiative that focuses on large cities. Mr. Ferland mentioned GMI is examining CCAC's MSW initiative to ensure it is in harmony with GMI's MSW sector activities. He noted GMI is similarly keeping a watchful eye on CCAC's Oil and Natural Gas Production initiative to correlate with GMI's Oil and Gas Systems sector.

Mr. Frankiewicz noted attendees tracking this initiative might recognize it has been a little difficult to determine exactly what this initiative entails. He continued by stating a variety of activities are taking place under the CCAC banner, but possibly the more interesting activities are those specific initiatives proposed by Partner Countries in different sectors, such as oil and gas, brick kilns, or HFCs. The solid waste initiative proposed is led by Canada, Mexico, and the United States—in cooperation with the World Bank, the United Nations Environment Programme (UNEP), and the Clinton Climate Initiative/C-40. In short summary, Mr. Frankiewicz explained the purpose is a city-level waste initiative looking to encourage SLCP reductions across the entire waste sector, which from a practical perspective means primarily methane but also black carbon. He further explained the three main components of this initiative are:

1. Online knowledge platform – to share information and serve as a repository of information and forum for cities to communicate with one another.
2. City peer network – in-person pairing of cities to work with each other on short-lived climate pollutant reductions.
3. City-level technical assistance – partner countries will provide long-term technical assistance to specific cities to create a short-lived climate pollutant component for city's master waste plans through training, pre-feasibility studies, and waste audits to assess, identify, and implement projects to reduce short-lived climate pollutants in the waste sector.

Mr. Frankiewicz stated planning activities for this initiative have occurred over the past few months and contacting cities has been a focus over the past few weeks. He noted the plan to identify and sign agreements with eight to 10 pilot cities for the first launch of the initiative in 2013. Mr. Frankiewicz expects to feature this work at the CCAC side event in Vancouver. He offered to answer questions about the initiative now but also offered to discuss the initiative with participants through email or phone calls instead if they would like further information. He said several subcommittee members are also tracking progress of the initiative for their ministries as it has been difficult to fully understand all the components of the initiative and how it will complement GMI activities. Mr. Frankiewicz explained the co-chairs are ensuring GMI efforts are complementary, such that GMI tools and resources are contributing to this effort. He stated GMI will continue to provide the technical underpinnings for initiatives similar to those being conducted under CCAC. Mr. Frankiewicz requested Co-chair Diana Rodriguez Velosa provide an update on Colombia's thoughts on the solid waste initiative since she recently spoke at a CCAC event.

Ms. Velosa explained she presented at a CCAC event for the Latin America region in Bogota, Colombia two weeks ago where information about the types of work done in the countries and how the coalition will support this work was presented, which better explained the coalition's focus. This event provided opportunities for several countries to participate. She further explained the Colombian ministry has been participating as coalition members from the beginning to better understand how their activities in the waste sector would develop, as Colombia is hoping to have one of their cities selected. Overall, Ms. Velosa thought the event went well and several countries participated. She added it was a good first step to clarify the coalition's function and to better define opportunities for countries to get involved.

Mr. Frankiewicz noted the situation Ms. Velosa described is similar to other delegates he has spoken with – interested in coalition activities, but waiting for specific components to take shape. He suggested participants

interested in contributing ideas share them because there is an opportunity to form activities and efforts within the coalition.

Magdalena Muir from International Energy, Environmental and Legal Services Ltd (IEELS) asked if there will be a specific focus on methane in cold climates since they have a different set of constraints, based on her work in Northern Canada's Nordic region. Mr. Frankiewicz requested Ms. Muir elaborate and asked if she was speaking of the Arctic Council's focus, specifically methane's effect on ice caps and sea level rising. Ms. Muir responded her question was directed at the municipal level – small, remote communities that might have limited resources so diesel fuel is used to generate heat, which provides an opportunity for waste reduction or waste conversion.

Mr. Frankiewicz replied there is no specific focus on this particular issue to date, but not to let that limit the potential for this type of work under the CCAC. He explained CCAC as a whole is currently focused on science and bringing countries together globally, but there are separate initiatives that have been or can be proposed that allow partner countries to suggest and fund particular initiatives under the coalition. Just as GMI is under the umbrella of CCAC, there are a number of other SLCP initiatives that will have a similar relationship and the Arctic Council will be one of them. Ms. Muir responded she worked with the Arctic Council previously.

Ms. Velosa added although there is not an existing specific focus on Ms. Muir's particular remote communities' scenario, there is a transport-oriented part of the coalition that works on black carbon emission reductions, which are related to the type of engines and type and quality of fuel. She expressed the importance of being creative with each country's needs and what actions can be proposed to reduce these kinds of pollutants. Also, it is possible to have an action that works on several different sectors, like transport and waste. Mr. Frankiewicz noted this was a good point and added while there might not be a specific initiative for a particular issue, there are a number of programs out there that cover a range of SLCPs and the diesel initiative could lend itself to Ms. Muir's scenario.

Methane Expo 2013

Mr. Ferland opened the Methane Expo 2013 discussion by pointing out the block agenda, shown in Appendix 3, outlines the Expo's first day as dedicated to side events, primarily those that are CCAC-related. He pointed out the Expo registration webpage is now available, and he encouraged all participants to register as soon as possible. Mr. Ferland highlighted the following Methane Expo 2013 agenda items:

- Monday, 11 March 2013 – CCAC MSW Working Group meeting and CCAC Oil & Gas Working Group meeting. There is the possibility for a high-level ministerial meeting that might begin on Monday as well. The Monday working group meetings will most likely be open only to CCAC members, but it is advantageous as these meetings might bring a broader and more diverse audience to the Expo. The CCAC members will also be included in site visits and will attend sector-specific technical policy sessions.
- Tuesday, 12 March 2013 – Two site tours for MSW sector: Nanaimo Bioenergy Centre and City of Vancouver Landfill with landfill gas (LFG) capture and use facility; both options are great opportunities. There will be an afternoon side event for the Center for Clean Air Policy (CCAP) group, funded by Canada, to highlight CCAP's work on Nationally Appropriate Mitigation Actions (NAMAs) in Latin America so this should feed into the MSW technical session for discussing NAMA work in Latin America. This CCAP side event is expected to be open to all participants. Several MSW Subcommittee members, including Ms. Velosa, have been active with this activity so it will be interesting to hear how this work is moving forward and will be excellent information to share during the MSW technical and policy sessions. The evening opening reception will flow into the start of the actual Expo on Wednesday.
- Wednesday, 13 March 2013 – Plenary sessions with opening remarks, followed by sector subcommittee meetings in the afternoon.

- Thursday, 14 March 2013 – Open with a joint plenary session focused on financing and then move into technical and policy sessions, which the co-chairs will discuss later during this meeting.
- Friday, 15 March 2013 – Working to put together a cross-cutting session across all the biogas sectors, including agriculture, wastewater, and MSW, recognizing many of the activities of these three sectors are closely linked and have similar PN members and technologies. This session will be a great opportunity to bring all participants together and hear common elements across these three sectors. The cross-cutting session will be followed by a Mayors' Forum to bring together mayors from different cities to talk about climate change and methane reduction, and then a closing plenary.

Mr. Ferland expressed Canada has been a great host country for the Expo, noting there was a recent event in Washington, D.C. at the Embassy of Canada where they invited all the embassies to attend an opening marketing session about Canada's Expo hosting and their vision for the event with remarks from GMI Steering Committee Chair Gina McCarthy and Environment Canada. He stated this kick-off event was an excellent opportunity to market the Expo to the world. Mr. Ferland indicated Expo promotion will continue with outreach to potential supporters to provide sponsoring and marketing opportunities for their companies, as booths will be available for the PN, and by encouraging as many delegates to attend as possible.

Mr. Ferland asked meeting attendees to explain their current plan for Expo participation.

Germany

Marlene Sieck responded Germany will definitely participate. Mr. Ferland thanked Ms. Sieck for sharing this information and encouraged her to consider reserving a country booth as a marketing opportunity to share all the work that is being engaged in Germany and for methane reduction globally. Ms. Sieck replied she will try, but it might be difficult to convince her colleagues to prepare a booth since they are involved with several other tasks. Mr. Ferland pointed out these free booths are a great opportunity to display activities currently underway within individual countries, as well as what is being done internationally in Partner Countries for developing countries.

Serbia

Goran Vujic responded someone from Serbia will definitely be traveling to Vancouver to participate. Mr. Ferland encouraged Mr. Vujic to consider a booth to highlight work in Serbia in the MSW sector and any other sectors of interest to Serbia. Mr. Vujic replied they have already prepared a good presentation about what is happening in Serbia for a poster and they will work with the Serbian ministry to prepare a report regarding Serbia's sector-specific activities. Mr. Ferland thanked Mr. Vujic for sharing this information.

Subcommittee Business

Survey on Subcommittee Focus and Potential Activities

Mr. Frankiewicz stated he hoped delegates had received the survey link that was sent on Friday, 16 November 2012. The purpose of this survey is to help the co-chairs get a better sense of delegates' thoughts and feelings about the subcommittee's future focus – comparing the traditional focus of mitigation technologies and practices like LFG energy with abatement and avoidance activities such as composting, waste diversion, and anaerobic digestion. He mentioned when the Methane to Markets Partnership was re-launched as GMI, the subcommittee was charged to focus on abatement and avoidance activities, but only recently has an earnest attempt been made. There is now a question of how much resources and time the subcommittee should provide to each area, so this survey solicits subcommittee members' feedback on how best to allocate effort.

Mr. Frankiewicz reminded participants this survey was requested at the July 2012 subcommittee meeting in Singapore, with the expectation that information collected will be summarized and shared at the March 2013 subcommittee meeting in Vancouver. The subcommittee members can then decide how best to use this information – revising the mission statement, if necessary, or letting the survey results shape the types of activities undertaken. Mr. Frankiewicz requested delegates contact him if they did not receive the survey link and he urged delegates to take five to 10 minutes to complete the survey prior to the 30 November 2012 deadline.

Next Subcommittee Meeting at Methane Expo 2013

Mr. Frankiewicz stated the preliminary Vancouver subcommittee meeting agenda (as shown in Appendix 4) is flexible (i.e., ability to move topics around or change the types of discussion topics), but the time allocation of three hours is firm. He further explained the current agenda is largely based on items discussed or suggested at the July 2012 Singapore meeting, with the main topics including:

- A new mission statement or discussion on focus of activities with input from the survey;
- Delegate presentations on methane action plans, with the expectation countries will be presenting final methane action plans or existing country strategies that include a methane component;
- A NAMAs roundtable where countries can provide a more focused discussion on tools and resources being developed to support NAMA work, as some countries have been: developing inventory measurement, reporting, and verification (MRV) methodology; actively engaged in sponsoring NAMA development; and developing their own NAMAs.

Mr. Frankiewicz emphasized subcommittee business is being limited to provide as much time as possible for technical sessions.

Co-chair Diana Rodriguez Velosa commented it would be helpful to get an update from participants on their NAMA development at the next subcommittee meeting. She added the MRV framework is an important and interesting topic, especially since a better determination of how to begin working on this component would be helpful because only a few countries currently have a clear MRV proposal.

Mr. Frankiewicz mentioned Colombia has been involved with its NAMA work for over a year. He recommended the subcommittee at a minimum provide a forum for discussing NAMA development as many Partner countries are involved with this work. Mr. Frankiewicz was pleased Ms. Velosa raised the topic of MRV because he feels it is a major component of any emission reduction measure and is currently relevant to NAMA efforts. He expressed U.S. EPA is expecting to provide some recommendations on MRV elements for a waste sector NAMA, which could then be shared with the subcommittee and open discussion on other components that should be included and how the subcommittee can evolve these ideas into a product or tool to support Partner Countries' NAMA development.

Methane Expo 2013 Preparation

Discussion of Proposed Topics and Speakers

Mr. Frankiewicz presented a draft technical agenda (shown in Appendix 5), which includes a preliminary list of accepted topics based on the call for abstracts. He pointed out this list is organized by overarching topics – tools and resources to support methane reductions from the waste sector, methane abatement, and a large portion focused specifically on LFG. There are also placeholders for joint sessions of the Agriculture, Wastewater, and MSW Subcommittees to focus on cross-cutting biogas issues, where some abstracts might be a better fit. The cross-cutting sessions are intended to focus on market and technical considerations for biogas use and provide discussion on overcoming common barriers of regulatory frameworks, financing, and technical difficulties for implementing biogas projects globally. Mr. Frankiewicz mentioned the co-chairs would like to have a NAMA panel within one of the sessions, most likely focusing on the large share of work taking place in the Latin America and Caribbean region. He noted some very good topics have been submitted already, but space is available for additional presentations.

Mr. Frankiewicz asked participants if they had questions about the list of topics and speakers identified so far and/or had recommendations for organizing these topics or speakers. He reminded participants there is some time over the next several weeks to identify speakers for open slots, and requested participants provide their topic and/or speaker recommendations by emailing or calling the co-chairs.

Ms. Sieck asked if the co-chairs are looking for presenters for the joint biogas sessions specifically. Mr. Frankiewicz replied the joint biogas sessions have the most open time slots so this is the primary area where additional speakers are needed. He added there are a few time slots available during other sessions as

existing presentations might be reorganized by topic, but reiterated the biogas cross-cutting sessions have the most availability for additional speakers. Ms. Sieck responded she can ask her German colleagues if they would like to present at these joint sessions because Germany has a good amount of experience with this topic, especially with regulatory barriers and financial incentives. Mr. Frankiewicz responded the co-chairs are very open to those suggestions.

Project Poster Ideas

As shown in Appendix 6, Mr. Frankiewicz presented a snapshot of project poster ideas (by country) GMI has received to date. This current list summarizes both poster ideas submitted through ASG's online submission, as well as posters U.S. EPA will develop as a result of technical assessments being conducted in cooperation with Partner Countries. He noted several additional posters are expected to be added to this list, both through development by U.S. EPA staff and submittal by Partner Countries who have indicated verbally they are interested in submitting poster ideas, but have not done so yet. Mr. Frankiewicz requested participants contact himself or other solid waste sector U.S. EPA staff soon if poster ideas are missing from this list, because this is a critical time for identifying these projects and starting the technical work needed to produce posters. Mr. Ferland further explained a preliminary template is currently available on the Methane Expo 2013 website for each sector that explains the type of information being requested, but the poster layout template used to organize and format information displayed on the posters isn't available yet. Mr. Frankiewicz followed up by saying the online template can be used as a starting point, and the poster layout template will be available in the coming weeks.

Attendance by Delegates

Mr. Frankiewicz noted countries already responded about their plans to attend Methane Expo earlier in the meeting, as requested by Mr. Ferland. As a follow-up, he encouraged delegates to work with their ministries to seek permission and funds to travel to the Expo, because GMI is providing limited financial support for participation this year. Further, GMI will be reaching out to delegates and a small group of others to provide additional support as GMI is facing regulatory constraints that have some significant barriers to supporting travel. He explained GMI is looking into alternatives to provide support, but any financial assistance that can be provided by individual countries will allow GMI's budget to go further in supporting this effort. Mr. Frankiewicz stated GMI can send official letters to ministries or provide a role for delegates during the Expo that allows them to attend, but he urged delegates to contact the co-chairs as soon as possible as this issue is much easier to handle now instead of waiting until a few weeks prior to the Expo. He encouraged all participants to attend the Expo and noted money might appear to be the primary barrier but it is usually just one of several barriers that can be overcome. The co-chairs requested participants work with GMI to make attendance feasible, since they want as many participants as possible.

Methane Action Plans

Mr. Frankiewicz indicated methane action plans appear to be an ongoing discussion topic, but the momentum is finally building up for Methane Expo 2013 in Vancouver. He noted as someone who has been working on the U.S. sector action plan for MSW, he understands it takes a significant amount of work but noted countries can determine whether these plans should be simple or more complex. Mr. Frankiewicz explained he worked on the U.S. action plan and assisted partner countries with their action plans and has encountered a range of undertakings, from a very large plan that could be used as a vehicle for provisions to be adopted as regulations to a memo summarizing ongoing activities. He added these plans can be as easy or as complicated as countries envision.

Country-Specific Updates

Mr. Frankiewicz requested a brief check-in with participating delegates to get an update on their methane action plans.

Colombia

Co-chair Diana Rodriguez Velosa stated Colombia is undergoing the final stages of development and planning to have their methane action plan ready to present at the Expo. She added Colombia is compiling

information for the different sections outlined in the template being followed, including describing the current state of the sector and the opportunities available depending on how the sector is established and characterized. Ms. Velosa explained Colombia is waiting for final data on their low-carbon development strategy to incorporate into their action plan since they envision using their plan as a tool for ongoing activities as opposed to duplicating efforts. She added methane action plans can serve as a roadmap for countries to focus efforts depending on what has already been accomplished and what opportunities are available. She believes methane action plan development can serve as a decision-making tool to prioritize actions within a country. Ms. Velosa noted Colombia's action plan has been developed with GMI's support, as GMI has guided and supported their efforts to enable Colombia to determine needs and information required to complete their action plan.

Mr. Frankiewicz mentioned Ms. Velosa made an important point regarding countries having low-carbon development strategies, climate strategies, or climate action plans should be complimentary to methane action plans and provide good starting points for data, activities, or strategies already in place. He added while action plans might appear to be just another document requiring completion, these plans can be a great way to summarize and provide specific actions based on existing documents.

Serbia

Mr. Frankiewicz asked Goran Vujic if he could provide a brief update on Serbia's methane action plan, knowing he works in cooperation with the Serbian ministry but cannot speak on behalf of the ministry officially. Mr. Vujic responded he thinks Serbia's MSW methane action plan has been completed and provided to GMI, although there are some technical corrections that need to be implemented. Since Serbia joined GMI about a year ago, he understood the action plans for the other sectors are in the beginning stages, especially since new Serbian officials were elected earlier this year and communications within these other sectors are not as developed as the MSW sector. Mr. Vujic stated he expects Serbia to work on methane action plans for the other sectors over the next couple months in order to have some reports or results prepared for Vancouver. Mr. Frankiewicz replied he has seen drafts of Serbia's waste sector action plan and is looking forward to seeing other countries' plans.

Ghana

Mr. Frankiewicz asked Lukman Salifu if he could provide a brief update on Ghana's intentions for developing a methane action plan. Mr. Frankiewicz mentioned he met Mr. Salifu's colleague, Emmanuel Theodore Asimeng with Ghana's Environmental Protection Agency, at the Singapore meeting and understood Ghana was hoping to summarize existing strategies to focus its waste action plan. Mr. Salifu replied he has been away from Ghana for a couple weeks and had not communicated with his colleagues about this topic since returning, so he was unable to provide an update but was confident some type of report is being prepared. Mr. Frankiewicz requested Mr. Salifu contact him, if needed, to discuss further and determine if GMI can provide assistance once Mr. Salifu has coordinated with his colleagues.

Germany

Marlene Sieck responded unfortunately Germany is not working on its methane action plan at the moment, because they are currently involved with a large amount of mandatory reporting activities.

Mr. Frankiewicz stated he understands delegates might be unable to prepare a plan, possibly due to their governments not wanting to develop one because they have some type of other plans in place already that serve as the official communication. However, he encouraged delegates not to feel as though their country has nothing to share if an official methane action plan doesn't exist. He explained it would be helpful for delegates to utilize information in existing national communications, low-carbon development strategies, or climate action plans or strategies to summarize the highlights of these existing plans in presentation slides to share in Vancouver, thus showing where countries are focusing methane activities or waste sector activities.

Closing

Basharat Bashir, with the Alternative Energy Development Board (AEDB) of Pakistan, commented he would be submitting a Methane Expo poster. He also noted he believes delegate funding to attend the Expo should be used for developing or the least-developed countries. He mentioned the AEDB recently issued a letter of intent for construction of a 12 MW waste-to-energy facility in Mardan, Pakistan. It is a private sector

initiative and will be an independent power producer (IPP). Mr. Bashir stated they will apply to the Organization of the Petroleum Exporting Countries (OPEC) for funding using the 25% equity/75% financing arrangement. Mr. Frankiewicz thanked Mr. Bashir for the project update and requested he keep GMI informed of its progress.

Mr. Frankiewicz reminded participants there are a variety of ways to develop methane action plans, and he encouraged delegates to contact him so he could provide suggestions or review plans to provide helpful hints and tips. He noted GMI is already working with some countries more directly. He pointed out a variety of GMI assistance can be provided so countries that have not begun developing action plans for any number of reasons should understand GMI welcomes any level of information to be shared at Methane Expo in Vancouver. He explained most—if not all—countries have some type of strategy, plan, or other elements in place that can be used to present a couple slides during country updates at the Vancouver subcommittee meeting.

Ms. Velosa reminded participants to provide suggestions for Methane Expo posters, such as case studies or projects that have been successful, and speakers for the Expo technical sessions, such as topics that haven't been considered or areas that should have more focus. Mr. Frankiewicz added speaker topic suggestions should ideally be provided before the end of December. He noted the co-chairs will update and shape the agenda accordingly to add moderators and better define topics, and then share new versions of the agenda with participants.

Mr. Ferland reminded participants online Expo registration is now open, noting it is easier to plan all the event's activities if registrations are received sooner. He also reminded participants to sign up for the site visits, as there will be limited availability for some and participants are more likely to secure their spot if they register early. Mr. Ferland said he looks forward to seeing all of the meeting attendees in Vancouver soon, and he hopes everyone can attend and participate in some capacity.

Mr. Vujic asked how GMI will assist delegates with obtaining the necessary documents for securing a travel Visa to Canada. Lauren Lariviere, ASG support team, responded the Expo registration form on GMI's website contains a checkbox to indicate if delegates require a Visa. She added delegates can submit all the necessary information using the online form, such as passport number and date of birth, which is done through a secure Web server. Ms. Lariviere explained GMI will then work with Environment Canada to generate the invite letters required to secure Visas. Mr. Frankiewicz noted participants should contact him if they encounter any troubles or difficulties with the registration process.

Mr. Frankiewicz closed the meeting by thanking everyone for participating and expressed his hope to see participants in Vancouver at the Methane Expo in March 2013. He acknowledged Internet meetings can be an awkward format, but provide a more cost-effective option than having everyone travel to a meeting location.

Summary of Action Items

Subcommittee Action Items

- The Co-Chairs will summarize and share survey results at the next subcommittee meeting in Vancouver on 13 March 2013.
- The Co-Chairs will provide updated agendas for the MSW and cross-cutting biogas technical sessions for Methane Expo 2013 in Vancouver.
- The Co-Chairs will provide assistance to Partner Countries, as needed, to determine how best to present updates for methane action plans or similar in-country plans at Methane Expo 2013.

Partner Country Action Items

- Delegates are encouraged to respond to an online survey to better understand the scope of the MSW Subcommittee and focus its future initiatives. A survey link was sent on 16 November 2012 and Delegates are requested to respond by 30 November 2012.
- Delegates and Project Network members are encouraged to contribute potential speakers and technical topics as well as project poster ideas for Methane Expo 2013, preferably before 31 December 2012.
- Delegates and Project Network members are encouraged register for Methane Expo 2013 at <http://www.globalmethane.org/expo/registration.html> and prepare booths for the Expo representing activities being conducted in Partner Countries.
- Partner Countries are requested to prepare materials to present updates for methane action plans or similar in-country plans at Methane Expo 2013 in Vancouver.
- Partner Countries are encouraged to get involved and share ideas with the CCAC initiative for MSW.

APPENDIX 1: AGENDA

GLOBAL METHANE INITIATIVE MUNICIPAL SOLID WASTE (MSW) SUBCOMMITTEE TELECONFERENCE AND INTERNET MEETING MONDAY, 19 NOVEMBER 2012

MSW Subcommittee Meeting Draft Agenda

(See Enclosure for meeting times in local time zones)

- | | |
|------------|---|
| 10 Minutes | Initiate Call and Welcome Addresses
<i>MSW Subcommittee Co-Chairs Diana Milena Rodríguez (Colombia) and Tom Frankiewicz (United States)</i> |
| 15 Minutes | Update from the Administrative Support Group (ASG)
<i>Henry Ferland, ASG</i> <ul style="list-style-type: none">• Review of Charge to Subcommittee by GMI Steering Committee• Climate and Clean Air Initiative• Methane Expo 2013 |
| 15 Minutes | Subcommittee Business
<i>Co-Chairs</i> <ul style="list-style-type: none">• Survey on Subcommittee Focus and Potential Activities• Next Subcommittee Meeting at Methane Expo 2013 |
| 30 Minutes | Methane Expo 2013 Preparation
<i>Tom Frankiewicz (United States)</i> <ul style="list-style-type: none">• Discussion of Proposed Topics and Speakers• Project Poster Ideas• Attendance by Delegates |
| 20 Minutes | Methane Action Plans
<i>Co-Chairs and ASG</i> <ul style="list-style-type: none">• Country-specific Updates• Options for Finalization |

Appendix 2: GMI MSW Subcommittee Meeting Attendees**Meeting Date: 19 November 2012****28 Attendees**

First Name	Last Name	Country	Organization	Address	City	State	Zip Code	Email	Phone
Paul	Liddy	Canada	Cedar Road Bioenergy	Box 852 Station A	Nanaimo	BC	N9R5N2	pliddy@suncurrent.ca	403 560 2260
Alain*	David	Canada	Environment Canada	351 St. Joseph	Gatineau	QC	K1A0H3	alain.david@ec.gc.ca	819-953-1110
Magdalena	Muir	Canada	International Energy, Environmental and Legal Services Ltd (IEELS)	220 21 Avenue Northeast	Calgary	AB	T2E1S4	makmuir@ieels.com	+1 403 305 3393
Murali	Ganapathy	Canada	SENES Consultants Limited	12-121 Granton Drive	Richmond Hill	ON	L4B4N4	mganapathy@senes.ca	905 764 9380
Diana*	Rodriguez	Colombia	Ministry of Environment and Sustainable Development	Calle 37 No. 8 - 40	Bogota			dmrodriguez@minambiente.gov.co	+(57) 1 332-3400
Marlene*	Sieck	Germany	Federal Environment Agency	Wörlitzer Platz 1	Dessau		06844	marlene.sieck@uba.de	+4934021032464
Lukman*	Salifu	Ghana	WasteCare Associates	PO Box LG 486	Accra		LG486	lysalifu@yahoo.com	+233-24-4670128
Sanjay	Jagtap	India	Abhirutu Consultants	27/28, Himali Society, Near Mhatre Bridge	Pune		411004	abhirutu@gmail.com	+919822394170
Shailendra	Jain	India	Shreyans Energy Private Limited	Caravs 15 Civil Lines	Jabalpur		482001	shailendrajain@shreyansenergy.com	+91 9300644224
Basharat*	Bashir	Pakistan	Alternative Energy Development Board (AEDB)	166, Street-3, G-8-2	Islamabad		44000	basharathan@gmail.com	923335768438
Alina	Rejman-Burzynska	Poland	Central Mining Institute	Plac Gwarkow 1	Katowice		40-166	alirejman@gig.katowice.pl	+48 32 2592619
Eugeniusz	Jedrysik	Poland	Glowny Instytut Gornictwa	Plac Gwarkow 1	Katowice		40-166	e.jedrysik@gig.eu	48 32 2592477
Piotr*	Klimek	Poland	Oil and Gas Institute	Lubicz 25a	Krakow		31-503	klimek@inig.pl	+48126603605
Goran*	Vujic	Serbia	University of Novi Sad	Trg Dositeja Obradovica 6	Novi Sad		21000	goranvujic@uns.ac.rs	+381638085436
Hennadiy	Zhuk	Ukraine	Gas Institute of NAS Ukraine	Dehtyarivska str., 39	Kyiv		03113	hen_zhuk@ukr.net	+380935767713
Yuri	Matveev	Ukraine	Renewable Energy Agency (REA)	Box 66	Kyiv		03067	mtv@biomass.kiev.ua	+380677907508
Mauricio	Lopez	United States	Caterpillar, Inc.	3450 Executive Way	Miramar	FL	33025	lopez_mauricio_a@cat.com	(954) 885-3172
Brian	Guzzone	United States	ERG	2995 Persimmon Drive	York	PA	17404	brian.guzzone@erg.com	(703) 424-4820
Sarah**	Greenberg	United States	GMI Administrative Support Group	110 Hartwell Avenue	Lexington	MA	02421	sarah.greenberg@erg.com	(781) 674-7272
Desiree**	Hamelin	United States	GMI Administrative Support Group	111 Hartwell Avenue	Lexington	MA	02421	desiree.hamelin@erg.com	(781) 674-7272
Lauren**	Lariviere	United States	GMI Administrative Support Group	112 Hartwell Avenue	Lexington	MA	02421	lauren.lariviere@erg.com	(781) 674-7272
Amy**	Alexander	United States	GMI Administrative Support Group	1600 Perimeter Park Drive	Morrisville	NC	27560	amy.alexander@erg.com	(919) 443-1554
Henry**	Ferland	United States	GMI Administrative Support Group	1200 Pennsylvania Avenue	Washington	DC	20460	ferland.henry@epa.gov	(202) 343-9330
Chad	Leatherwood	United States	SCS Engineers	20 Battery Park Avenue #505	Asheville	NC	28801	cleatherwood@scsengineers.com	(828) 285-8951
Kim	Domptail	United States	Tetra Tech	4601 North Fairfax Drive	Arlington	VA	22203	kim.domptail@tetrattech.com	(703) 387-2115
Christian	Pichard	United States	Tetra Tech	4602 North Fairfax Drive	Arlington	VA	22203	christian.pichard@tetrattech.com	(703) 387-2122
Thomas*	Frankiewicz	United States	United States Environmental Protection Agency	1310 L Street Northwest	Washington	DC	20005	frankiewicz.thomas@epa.gov	(202) 343-9232
Victoria	Ludwig	United States	United States Environmental Protection Agency	1311 L Street Northwest	Washington	DC	20005	ludwig.victoria@epa.gov	(202) 343-9291

* Partner Country Delegate

** ASG Support Staff

**Appendix 3: -
Methane Expo 2013 Agenda -
March 12-15 -
Vancouver, Canada -**

Monday, 11 March 2013

1:00pm-6:00pm	5.0 hr	CCAC MSW Working Group Meeting
1:00pm-6:00pm	5.0 hr	CCAC Oil & Gas Working Group Meeting

Tuesday, 12 March 2013 -

10:00am-6:00pm	8.0 hr	Registration	Expo Set-up
10:00am-6:00pm	8.0 hr	Sector-Specific Site Tours	
3:00pm-6:00pm	3.0 hr	Steering Committee Meeting	
4:00pm-6:00pm	2.0 hr	CCAP Side event	
7:00pm		Expo Opening & Welcome Reception	

Wednesday, 13 March 2013 -

8:00am-12:30pm	4.5 hr	Registration						Exhibit Open
9:00am-10:30am	1.5 hr	Opening Plenary Session						
10:30am-11:00am	0.5 hr	Networking Break						
11:00am-12:30pm	1.5 hr	Opening Plenary Session (continued)						
12:30pm-1:30pm	1.0 hr	Lunch						
1:30pm-3:25pm	1.9 hr	Steering Committee meeting	Agriculture Subcommittee Meeting	Coal Mines Subcommittee Meeting	MSW Subcommittee Meeting	WW Subcommittee Meeting	Oil & Gas Subcommittee Meeting	
3:30pm-4:00pm	0.5 hr	Break						
4:00pm-6:00pm	2.0 hr	Steering Committee meeting	Agriculture Subcommittee Meeting	Coal Mines Subcommittee Meeting	MSW Subcommittee Meeting	WW Subcommittee Meeting	Oil & Gas Subcommittee Meeting	
6:30pm-Until		Dinner						

Thursday, 14 March 2013 -

9:00am-10:30am	1.5 hr	Plenary Session (Finance Panel)						Exhibit Open
10:30am-11:00am	0.5 hr	Networking Break						
11:00am-12:30pm	1.5 hr	Plenary Session (Finance Panel continued)						
12:30pm-1:30pm	1.0 hr	Lunch						
1:30pm-3:25pm	1.9 hr	Steering Committee meeting	Agriculture Technical Session	Coal Mines Technical Session	MSW Technical Session	WW Technical Session	Oil & Gas Technical Session	
3:30pm-4:00pm	0.5 hr	Break						
4:00pm-6:00pm	2.0 hr	Steering Committee meeting	Agriculture Technical Session	Coal Mines Technical Session	MSW Technical Session	WW Technical Session	Oil & Gas Technical Session	
6:00pm-8:00pm	2.0 hr	Dinner & Cultural Event						

Friday, 15 March 2013 -

8:00am-10:30pm	2.5 hr	Biogas Cross-Cutting Technical Session	Coal Mines Technical Session	Oil & Gas Technical Session	Expo Open
10:30pm-11:00am	0.5 hr	Networking Break			
11:00am-12:00pm	1.0 hr	Mayors Forum on Sustainable Cities			
12:00pm-1:00pm	1.0 hr	Closing Plenary			



Appendix 4: Municipal Solid Waste Subcommittee Draft Meeting Agenda

Methane Expo 2013
Vancouver Convention Centre
Canada

Wednesday, 13 March 2013

- | | |
|---------------|--|
| 13:30 – 13:40 | Welcome and Brief Introductions
<i>Tom Frankiewicz and Diana Milena Rodríguez, Co-chairs</i> <ul style="list-style-type: none">• Agenda overview• Meeting goals |
| 13:40 – 14:00 | Subcommittee Business
<i>Co-chairs</i> <ul style="list-style-type: none">• New Mission Statement |
| 14:00 – 15:00 | Methane Action Plans
<i>Partner Country Delegates</i> |
| 15:00 – 15:30 | Break/Lunch |
| 15:30 – 16:45 | NAMAs Roundtable
<i>Co-chairs</i> <ul style="list-style-type: none">• Summary and status of NAMAs in Solid Waste Sector – Tom Frankiewicz• Partners Roundtable Discussion – Partner Countries provide an update on their NAMA activities• Proposed MRV Framework for NAMAs• Discussion, outline of GMI support, and tools needed to advance NAMA development in Partner Countries |
| 16:45 – 17:00 | Summary and Review of Action Items |

**APPENDIX 5:
DRAFT
Methane Expo 2013
Municipal Solid Waste Technical Sessions**

Thursday, 14 March 2013

**Municipal Solid Waste Technical Breakout: Session A – Tools and Resources
10:30 – 12:30**

GHG Emissions and Energy Potential by Waste Destination in Brazil
Carlos Silva Filho, ABRELPE – Brazilian Association of Waste Management Companies

A Municipal Waste Analysis in Mexico's Southeast Region for GHG Reduction
Edgar Villasenor, ICLEI – Local Governments for Sustainability, Mexico Office

Better Waste Management Can Avoid GHG Emissions Significantly
Marlene Sieck, Federal Environment Agency, Germany

Economic Comparison of a GHG Emission Reduction System at a Regional Municipal
Solid Waste Management Facility**
Richard Aho, Marquette County Solid Waste Management Authority, United States

Remaining speakers to be determined

**Municipal Solid Waste Technical Breakout: Session B – Methane Abatement
13:30 – 14:30**

Community Owned and Operated Small Scale Anaerobic Digestion for Rural Villages
Across the UK **OR** Low Cost Micro-scale Anaerobic Digestion in Sierra Leone**
Kevin Monson, WYG Environment, United Kingdom

Bio-Cancun: Organic Waste to Energy Project in Mexico
Murali Ganapathy, SENES Consultants Limited

Semi-formal Recycling as a Viable Option for Methane Abatement in Developing
Countries
Sandra Mazo-Nix, SCS Engineers

Reducing Black Carbon Emissions from Open Burning: A Cobenefit of Landfill Methane
Recovery
Nimmi Damodaran, Stratus Consulting, Inc.

**Municipal Solid Waste Technical Breakout: Session C – Landfill Biogas
15:00 – 17:00**

Application of ORC-process for Landfill Gas CHP-efficiency Optimization
Jukka Salmela, Helsinki Region Environmental Services Authority, Finland

Maximizing Greenhouse Gas Reductions at the Vancouver Landfill
Albert Shamess, City of Vancouver, Canada

Benefits from Implementation of Methane/Biogas Storage Technology for Landfill Gas Utilization Projects

Axel Schaefer, Greentech Avenue, Inc., Canada

Challenges for Propagation of Landfill Gas Utilization for Indonesian MSW Final Disposal Facilities; Case Study on Bekasi CDM LFG Flaring and Electricity Generation Project

Joseph Hwang, PT Gikoko Kogyo Indonesia

Development of Landfill Gas Technology in Ukraine – Status and Prospects

Yuri Matveev, Renewable Energy Agency (REA), SEC Biomass

Possibilities and Obstacles for Utilization of Methane from Landfills in Serbia

Goran Vujic, University of Novi Sad

Landfill Gas Recovery and Combustion with Renewable Energy Generation from Sanitary Landfill Sites under Land Bank of the Philippines Carbon Finance Support Facility

Josefina A. Ramos, Land Bank of the Philippines

Case Study...Novo Gramacho Landfill Gas Biomethane Purification Project in Brazil **

Steve Willburn, FirmGreen, Inc.

Exploring Cross-cutting Options from Community-based MSW Initiative in the Philippines

John Maxwell, BUNGE Ecoinvest Carbon S.A.

Antanas Environmental Park in Colombia

Oscar Parra Erazo, Grupo Sala

Friday, 15 March 2013

Biogas Joint Session 1 (Agriculture, Municipal Solid Waste, Wastewater)

8:30 – 10:00

Market and Technical Considerations for Various Biogas End Uses

Biogas Joint Session 2 (Agriculture, Municipal Solid Waste, Wastewater)

10:30 – 12:00

Overcoming Barriers to Biogas Projects Around the World

** - Consider moving to Biogas Joint Sessions

Appendix 6: Anticipated Methane Expo Posters

- Argentina (2)
- Brazil (3-4)
- Canada (2)
- Chile (4)
- China (1)
- Guatemala (1)
- Indonesia (2-3)
- Mexico (1)
- Nigeria (1)
- Serbia (2)
- Turkey (2)
- Ukraine (2)