

CCAC Initiative

Mitigating short lived climate pollutants from the municipal solid waste sector

11-12 March, 2013 – Vancouver, Canada
Report of the first meeting of the initiative

Welcome and Introduction to the CCAC and Municipal Solid Waste Initiative

Laurence Blandford, Environment Canada, welcomed participants and laid out the goals for the two-day meeting. Kaveh Zahedi, Interim Head of the CCAC Secretariat at the United Nations Environment Programme, provided an overview of the CCAC. In response to questions from participants, Mr. Zahedi clarified that the initiative does not have a single methodology to be applied to all country and city participants. Instead, the municipal solid waste (MSW) initiative of the CCAC is intended to leverage political will to reduce short-lived climate pollutants (SLCPs) from the MSW sector by developing strategies that address each city's particular circumstances.

City Presentations and Assessment Results

Attendees provided an overview of each city's municipal solid waste system and policies, elaborated on the city waste assessments, identified barriers to and opportunities for further enhancement of SLCP-reducing actions in the sector, and previewed next steps for developing MSW systems. The presentations also highlighted existing projects and priorities for further development. The following cities gave presentations (powerpoints available by clicking on the link [CCAC MSWI Meeting – Vancouver – March 11-12](#)):

- [Rio de Janeiro, Brazil](#) - presented by Jose Henrique Rabello Penido Monteiro, Rio de Janeiro City Solid Waste Company (COMLURB), Brazil
- [Ho Chi Minh City, Vietnam](#) – presented by Viet Nguyen Trung, Ho Chi Minh Climate Change Bureau, Vietnam
- [Stockholm, Sweden](#) – presented by Nils Lundkvist, City of Stockholm, Sweden
- [Accra, Ghana](#) – presented by Tom Frankiewicz, US Environmental Protection Agency (US EPA)
- [Cali, Colombia](#) – presented by Diana Milena Rodriguez Velosa, Ministry of Environment and Sustainable Development, Government of Colombia

- Penang, Malaysia – presented by Hung Teik Khor, Zero Waste Malaysia
- Lagos, Nigeria – presented by Andrea Stowell, Clinton Climate Initiative (CCI)
- New York, New York – presented by Elizabeth Balkan, City of New York, US
- Dhaka, Bangladesh – presented by Bipan Kumar Saha, Dhaka North City Corporation, Bangladesh
- Viña del Mar, Chile – presented by Waldo Ceballos Ibarra, Municipality of Viña del Mar, Chile
- C40-CCI Cities – Ricardo Cepeda, C40

Common Threads

Several common themes emerged from the presentations:

Waste hierarchy: It is clear that the waste hierarchy, as emphasized by Stockholm, should be considered when planning MSW systems. Sustainable waste management plans typically first seek to reduce, then reuse and recycle waste. Remaining waste can be processed to recover energy, and finally landfilled if it cannot otherwise be used. Several participating cities are already conducting pilot projects to divert waste and move up the waste hierarchy.

Waste collection fees: Waste collection fees varied across cities. Cities stressed that identifying the appropriate fee level is important for ensuring a sustainable revenue base that can support services.

Leachate control: Both Rio de Janeiro and Accra identified leachate contamination as a problem. Without an advanced waste scheme, developing countries will continue to see contamination of surrounding land and water from leachate. Leachate is however both difficult and expensive to treat.

Waste collection: Waste that is not collected is often openly burned, creating black carbon, which is deleterious to human health and the environment. However, it is difficult to accurately assess the share of waste that is uncollected, especially in rural areas where collection services can be most limited. There is a need to address this data gap. For the MSW initiative, estimating the share of waste that is uncollected or burned is important for determining the contribution of actions to reducing SLCPs. To improve collection, some cities have relied on community-based approaches which have been profitable because they reduce the need for and expense of transportation. Accra has had success with this approach and is currently exploring its scalability.

Organics: The assessments demonstrated that all tropical countries participating in the initiative showed high percentages of organics in their waste streams, and thus could benefit from waste diversion schemes. Organics presented several challenges for waste systems in participating countries:

- Organics that remain uncollected or are inadequately managed present a serious health risk and decrease the quality of life for neighboring communities.
- Humidity in tropical countries makes processing organics difficult, and collection and transportation can be challenging especially during the rainy season.

- Household collection of organics is key, however source separation to produce a quality feedstock for composting is both challenging and expensive. Some cities have shifted to collecting organics from markets to enable more efficient collection.
- Community-based programs can be sustainable, especially if negotiated with large organic waste producers like hotels and restaurants. The challenges here are limited land availability in communities and whether pilot projects can be scaled-up and replicated.
- Access to robust markets for compost is critical to the success of organics utilization. To enable market access, the organics feedstock must be relatively uncontaminated so as to produce high quality compost that can compete with chemical fertilizers in the market.
- Some cities found that composting was too expensive and thus chose to landfill their organics. Some composting systems are also labor intensive, thereby adding to the cost of these plants. It is important to ascertain how waste diversion and composting can be designed to be economically feasible so that more cities can implement this approach. If composting is not economically feasible, other options will need to be identified.

Innovative financing: The collapse of the price for certified emission reductions (CERs) on the carbon market has limited project financing that some cities were depending on to sustain projects. As such, cities are now looking towards innovative financing mechanisms that will attract equity investments or reduce the debt-to-equity ratio required to finance these projects.

C40 approach to working with cities: It is important to assess what actions are within the capacity of each city to implement, and then select those actions that are a priority for the cities. Actions should be high impact, or be a series of small actions that can lead to a high impact. They should also focus on identifying and overcoming barriers. It is important to collect data and develop action plans *with* cities to ensure cities own projects.

Evaluation of the City Assessment Process

Andrea Stowell, CCI, and Tom Frankiewicz, US EPA, evaluated the city assessment process. The city assessments are not limited to data collection. Rather, they are intended to qualitatively assess each city's existing solid waste management system, specific priorities and identify key stakeholders to help guide the identification of MSW projects that meet a city's waste needs and reduce SLCPs. It is important to determine the level of data and tools needed to establish a baseline and measure SLCP reductions. This could be useful in the future if the international carbon market picks up again and for measuring cities emissions reduction progress. Each city is at a different stage and has different priorities. The key to helping identify and ultimately implement projects is to work closely with cities to uncover this information. Other key considerations that lead to successful implementation include transparent processes for identifying projects, securing political support for initiatives, and developing a sustainable and robust revenue base.

Participants determined that the assessment tool was not always useful in helping cities identify projects and data points collected may need to be modified depending on where cities are in the project development timeline. Thus, it was important for implementers to use the assessment for data collection purposes, and then expand their assessment depending on the city's needs.

Assessments are intended to identify actions that reduce SLCPs, and can be broadened to include emission reductions from secondary sources in MSW management systems. In line with CCAC's purpose, actions should aim to identify all opportunities for reducing methane and black carbon. For example, the MSW initiative could begin to address the emissions produced by diesel-powered trucks used for collection and look for solutions such as eco-driving or optimizing routes that are currently in use in participating cities.

The Initiative should clarify how it can help cities reduce SLCPs through sustainable MSW management. The initiative should better define what value it can add to cities looking to improve MSW services. This is important in light of the limited funding available to support projects. Cities indicated that the initiative can provide critical technical assistance through its various members and should be a forum for engaging financial institutions for securing project financing, which is key to implementation. Other points made include the need to secure political buy-in, approach MSW holistically, and motivate other actors so that cities can work with partners to achieve their goals. It is worthwhile to continue discussing how the CCAC can continue to contribute beyond establishing projects in individual cities and especially what contributions can be made to reduce methane and black carbon through transformative actions. Continuing to engage both the national and local governments will be important to success.

There is a need to define the initiative's goals more specifically. Unifying goals would be helpful to offer consistency and provide direction for action. For example, the issue of waste reduction was raised several times as a goal and challenge the cities have experienced. Does the issue, which is fundamentally about sustainable consumption, fit in with what the initiative aims to achieve? One goal highlighted was to create software that can help assess waste accurately and quantify SLCP reductions. Therefore, existing models should be examined for their applicability.

City Action Plan Break-out Sessions

Participants had the option of joining 2 out of 3 break-out sessions that provided an informal environment for in-depth discussions framed by the following questions:

1. How can we **reduce open burning** and **improve waste collection systems**?
2. How do I set up a successful **organics diversion and management** system?
3. How do I improve **landfill operations and management** and implement a successful **gas capture** project?

Experts from the US EPA, Swedish EPA, C40-CCI Cities, and the Clinton Climate Initiative Waste and Water Team facilitated the discussions.

Common Threads

The issues surrounding waste collection, organics management and landfills must be addressed according to the specific circumstances of each country and municipality. As such, no single solution is a panacea. However integrated approaches can help close service gaps and help reduce and efficiently utilize waste. Key cross-cutting issues include:

- Access to information is critical for sustainable MSWM systems. A lack of data on waste characteristics makes it difficult to identify and successfully implement the most appropriate technologies and policies. Likewise, sharing information with stakeholders through education campaigns and the media is important for affecting the behavioral change necessary to drive political will to improve waste services, reduce waste, and segregate organics at the source.
- There must be a market for waste end-products such as compost, recyclables, and waste-derived energy in order for related projects to be economically viable. Municipalities and national governments can play an important role in creating demand for products through incentives, procurement, and regulation.
- The CCAC is a useful forum for peer-to-peer sharing of best practices that can help policy-makers adapt successful policies and technologies to their municipality's circumstances.
- MSW management systems should be designed using innovative financial mechanisms that can use public support to attract private financing, such as NAMAs or other approaches.
- There is a need to quantify externalities in order to monetize the wider benefits of sustainable waste management practices to the wider community.

How can we reduce open burning and improve waste collection systems?

Participants expressed interest in CCAC continuing to facilitate the discourse on collection systems. Participants suggested that the CCAC develop a step-wise approach to designing and improving a waste collection system and publish it on the knowledge platform. Additionally, participants encouraged CCAC to consider whether the initiative should address SLCPs from waste transportation systems.

Fee generation and payment enforcement are key challenges to funding sustainable waste collection systems. Rate structures and the collection of fees typically do not cover the full cost of providing collection services. For example, flat fees or fees based on socio-economic status do not accurately reflect waste generation rates or associated costs and fees set at the national level may not accurately reflect service costs at the local level. In order to deter illegal disposal of waste, the

appropriate level of service, collection fee structures, and enforcement mechanisms must be in place.

Source-separation of organics is key to reducing feedstock contamination and subsequently producing high quality compost or energy. This can result in higher revenue streams that improve the financial viability of organics management programs. Behavior and collection costs impact segregation activities. Behavioral changes are needed to improve source separation, but behaviors can be difficult to change. Innovative solutions such as results-based financing can incentivize source separation by communities and individuals, and use of the media can increase awareness to improve segregation. The high cost of collecting source-segregated organics can also be a hindrance for many cities.

Waste is often not a political priority thus engaging and educating key stakeholders, especially the Mayor's office, is critical to ensuring necessary support. The media can be used to make citizens more aware of waste issues, and to put pressure on politicians to improve waste systems.

The provision of collection bins can be expensive but can also be an important determinant in improving collection rates. To resolve this problem, some cities require private waste collection firms to provide the bins. However, this cost is often built into the service contract and passed on to the generator. Given that collection contracts are typically 3-5 years, and bins have a life expectancy of 7-10 years, requiring private collectors to supply bins can actually mean that a municipality or generator is paying for bins more frequently than if they were to purchase them outright.

There is generally a lack of data regarding waste collection, which is exacerbated by the participation of the informal waste sector. Data collection would thus be an important first step for making informed decisions on improving waste systems.

Existing incentive structures are not always aligned with a city's waste diversion goals. Policy frameworks must create a robust market for recyclables and products from organics in order to drive separation and waste utilization. For example, low tipping fees incentivize landfilling over delivering waste to formal recycling and composting facilities. However, in developing cities, low landfill tipping fees can also prevent open burning and recyclables are picked out of the waste stream by the informal recycling community regardless of tipping fees.

It is difficult to hold private haulers accountable for an agreed upon level of service. Incorporating performance standards in contract language and executing short-term collection contracts were noted as useful tools for enhancing accountability.

The integration of informal waste collectors is a challenge to modernizing collection systems. Informal waste collectors pull high value materials out of the waste stream, minimizing the potential to offset collection costs with the sale of recyclables. This is also a pressing social issue in some cities that will need to be managed.

There is a need for integrating waste collection and disposal activities in order to optimize waste management systems. Absent some level of harmonization, the variety of participants in the waste sector can lead to gaps in service delivery. Waste management plans at the municipal or regional level can help in closing these gaps. Additionally, industrial waste management is often not addressed.

How do I set up a successful organics diversion and management system?

Economic feasibility is critical to the survival of organics management systems. This is dependent on the availability of markets for organics-derived products, and competition with products that can serve as substitutions. For example, where the cost of alternative power sources is low, anaerobic digestion projects may not be financially feasible.

Identifying waste sources, characteristics, and quantity early on is important for developing the most appropriate treatment and processing solutions. Quantifying the cost of waste treatment alternatives can be challenging, and for many projects, ensuring uniform and reliable waste streams is necessary for project viability. One of the greatest challenges to managing organics is the variety of waste streams and volume produced. Characteristics are also greatly influenced by the local climate.

Municipalities can play an important role in driving demand for organics end-products through regulation and market creation. For example, banning organics disposal in landfills can shift behavior towards segregation (if enforced) while increasing tipping fees lowers the relative cost, and thus competitiveness, of organics processing. To create a market, governments can implement projects or policies that create demand for organics-derived end products, such as agriculture or reforestation projects that utilize compost, or programs that use food waste to generate biogas for transportation and power generation.

There is a need to scale-up approaches for diverting and managing organics that are appropriate to local circumstances. Low-technology solutions, like those in use in India, may be useful for low-income countries to pursue.

To better capture the value of organics segregation, policy-makers should measure not only the profits generated by end-products, but also the avoided cost of landfilling. Diverting organics minimizes the need for landfill air space and thus defers the cost of building expensive landfill infrastructure.

The World Bank is developing a catalogue of successful projects for organics management as a tool for policy-makers. Currently, there are few examples of successful projects to build on. Inventorying projects will enable policy-makers to explore various options available to them.

How do I improve landfill operations and management and implement a successful gas capture project?

The technical solutions to most landfill management and landfill gas issues currently exist, but must be tailored to the local context. Often, it is the political, economic or other externalities that present barriers to implementation. Existing landfills will require different strategies than new landfills. When considering new landfills, planners should also consider how future diversion efforts could affect landfill management by, for example, reducing landfill gas. Waste-to-energy facilities specifically often fail in developing countries because many technologies are not suited to the local context. It is important for the CCAC to know which technologies are appropriate to better advise cities.

There are many issues surrounding technical capacity that should be considered when developing landfills. Is there *local* capacity to improve waste disposal and landfill gas capture? Is there an experienced entity that can guide not only the construction, but the *operation* of the facility? If there is limited capacity for landfill management and operation, it will be difficult to identify capable entities for advanced management practices such as segregation and anaerobic digestion.

Waste-to-energy facilities may not be profitable, especially considering the decline of revenues from the Clean Development Mechanism. There needs to be a new approach to determining the value of these facilities, such as using a long-term cost analysis, or other ways of extracting value from landfills, such as reclaiming the land area or mining landfills for materials.

The regulatory framework surrounding landfills is important for the success of projects. Regulations should evolve alongside technology, and enforcement of regulations is critical.

Landfill design, construction and operation should all be captured in one, transparent contract to maintain a single point of responsibility. This avoids an exchange of blame when something does not go according to plan.

Financing Mechanisms

Speakers introduced various types of financing offered by multilateral development banks and innovative financing approaches through private sector participation specific to the waste sector. Participants agreed that in promoting private sector investment in MSW, the CCAC should include organizations that represent the private sector, such as the International Finance Corporation (IFC) and the private sector arms of the multi-lateral development banks. Participants noted that business models are locally specific, and suggested the CCAC consider how it can provide assistance to help overcome the challenges to MSW financing generally, and to attract private sector participation specifically. They also suggested thinking through how implementation of MSW projects can be scaled-up, and how common challenges can be best addressed through the initiative.

World Bank Financing: Overview and Innovative Approaches to [Methane] Finance for Solid Waste - Farouk Banna and Sintana Vergara, the World Bank

The World Bank provides funding to national and sub-national governments for solid waste activities in the form of grants and zero-interest loans for low-income countries through the IDA. It also provides low-interest loans for low to mid-income countries through the IBRD. Non-financial support includes economic and sector work-studies, as well as technical assistance. The World Bank deals directly with Ministers of Finance, and is driven by Country Assistance Strategies. The national governments, in cooperation with the World Bank, determine the priorities for financing. In the last decade, the World Bank has invested \$2.9 billion in solid waste, with more than 68% of this funding in the form of investments (grants and loans). This portfolio has been growing over time.

The World Bank introduced a new type of financing called **results-based financing**, which funds *outcomes* (verified provision of services resulting from infrastructure development) rather than *inputs* (construction costs of infrastructure development). In this model, service providers fund their own infrastructure developments with a commitment from the World Bank to provide a pre-determined level of funding conditional on independently verified results – specifically, the provision of service. Results-based financing offers the potential to incentivize a range of MSW management activities, with beneficiaries at various levels – including national governments, the private sector and local communities.

The World Bank presented two project examples: A results-based incentive scheme in Ningbo, China where the municipality through an IBRD loan provides financial reward to neighborhood resident committees to enhance the quantity and quality of source-separated waste. A Nepal output-based aid project on the other hand provides financial subsidies to municipal governments conditional to improvement in collection of solid waste fees in exchange for high quality service.

The World Bank is developing financing tools for the CCAC. The presenters highlighted two in particular: the *results-based financing mechanism* customized for CCAC participating cities, and *capacity building tools on financing*, such as a handbook on best practices in landfill gas financing and a guide to regulatory and financial aspects of composting.

Private sector participation for Waste Management - Jessica North, on behalf of UNEP-IETC

Waste management is a significant cost for developing countries, with 20-50% of the recurring budget for municipalities spent to cover just 50% of the urban population. Private sector participation is thus key for improving service delivery, generating investments and improving the efficiency of services.

The speaker described four models for private sector partnership in solid waste management and ownership, emphasizing that these models must be well integrated with existing domestic systems:

Open Competition (market-based system): This system is regulated by the government but owned by the private sector. The private sector also makes all decisions regarding capacity.

Franchise (commercial waste or MSW collection): In this system, the government awards long-term contracts and charges a licensing fee. There is competition but the system is partially monopolized. Both the government and private sector can own facilities, but capacity decisions are made by the government. Customers pay for services.

Concession (full concession contract, build-own-operate-transfer, or build-operate-transfer): Long-term contracts are awarded through a competitive tender. The government guarantees the volume of waste delivered to facilities. There is a monopoly in the sector, but both the public and private sector can own the facilities. The government or customers pay for services.

Contracting (transfer and disposal, solid waste collection, operation and maintenance, and supply of equipment): Short-term contracts are offered through competitive tenders. The government owns the facilities and pays for services.

The private sector has been participating in solid waste management projects in Asia for many years through the above models. The success of these partnerships has been dependent on the presence of appropriate institutional and regulatory frameworks, as well as proper risk allocation between the two sectors. Monitoring of services is also important for ensuring firms comply with contracts and provide efficient, cost-effective services. Importantly, legal input is necessary for ensuring contracts are designed to facilitate a flexible partnership that promotes service delivery and creates the certainty that businesses need to flourish. Finally, economic incentives should be developed that attract private sector participation while offering environmental and social protections for vulnerable groups.

Public Private Partnership in the Waste Sector - Gary Crawford, Veolia Environmental Services, International Solid Waste Association (ISWA)

A **private finance initiative** (PFI) is a form of public-private partnership that combines concession agreements with government grants. A PFI offers the following benefits:

- The municipality benefits by utilizing the resources and experience of the private firm for the design, implementation, management and operation of MSW services.
- The municipality transfers the responsibility for various components of MSW services under a single entity and is able to monitor the performance of the firm through third party verification.
- The private firm can be required to meet specific performance criteria and to continuously invest in service improvements over the course of a long-term service contract.

- Essential risks can be transferred to the private firm, or shared by the parties. During the procurement process for example, the risk of cost overruns and lost revenue from late delivery are assumed by the private sector.
- Private construction of facilities eliminates the need for public funding of capital expenditures.

Successful public-private partnerships are dependent on strong political leadership, public support and a clear understanding from the onset that both the government and private firms want to build a long-term partnership. Employees must also receive the appropriate training to build local capacity for participation in the sector. Since the informal sector typically plays a significant role in the provision of waste management services, their integration in the formal sector must be considered in advance. Finally, it may be useful to phase-in large capital projects.

Working Lunch – City Session

Cities were invited to share feedback on the city waste assessments and participation in the CCAC during a closed discussion. Facilitators Terry Willis and Ricardo Cepeda, C40, provided excerpts from the discussion as follows:

For most developing cities, SLCP reduction is not yet a priority or a driver for participation in the CCAC MSW initiative. Participants are interested in improving their waste management systems, accessing financing mechanisms and receiving technical assistance.

The CCAC needs to more clearly communicate its capacity to deliver technical assistance, including areas of expertise, partners, and deliverables provided to cities. Accordingly, cities have identified priorities and opportunities for engagement, but are unclear on whether the CCAC can provide needed assistance. Cities were encouraged to communicate their needs to the CCAC to help determine how the initiative can facilitate access to resources for addressing these needs.

The CCAC plays a valuable role in securing political buy-in and building city-to-city networks that foster horizontal collaboration. When sharing best practices, it is important to remember that solutions are contextualized to local conditions. Many waste management representatives struggle to generate buy-in from mayors and city governments. By generating international recognition for city actions, the CCAC can help generate local buy-in.

The ultimate goal is project implementation and financial sustainability, which can be best achieved by engaging city officials directly throughout the process. It is essential that all studies and technical assistance be conducted with the direct cooperation of the local government. This ensures implementers understand the local context and capture existing knowledge and capacities. Conducting studies without local partners can lead to recommendations that are difficult to implement. Many cities have an abundance of studies that did not lead to implementation. Working with officials directly will help move projects from the shelf into the implementation pipeline. Since many assistance programs

lack continuity when funding is over, it is essential to ensure projects launched through the initiative are sustainable.

International financing can be difficult to access. Some cities have challenges accessing World Bank financing as it needs to come through their countries. Alternately, JICA funding is sometimes passed directly to cities, and can at times be easier to secure than if passed through the national level.

Working Lunch – Private Sector Session

During an informal break-out session led by Gary Crawford, Veolia Environmental Services/ISWA, participants discussed how to engage the private sector in the CCAC municipal solid waste initiative.

All participants agreed that it was essential to have the private sector involved in the initiative. The private sector has experience in designing, building, operating and financing MSW infrastructure required by cities. The private sector can be called upon to advise the CCAC and share its experience and expertise.

Private sector engagement in the CCAC municipal solid waste initiative

A suggestion was made to **consider the establishment of a pool of regional private sector experts** that could be contacted by initiative partners.

The private sector and the CCAC must provide neutral technical advice to initiative participants. City officials have in the past been visited by various technology providers for waste treatment, and did not have the technical capacity to assess these alternatives. Likewise, CCAC should provide information on successful policies and technologies to address a city's MSW priorities, but should take care not to highlight or favor only one option.

The private sector can provide input into the initiative's knowledge base and build local capacity in technical areas such as organic waste collection and treatment. National Waste Associations and government-to-government efforts in pilot countries could be helpful with this effort.

Active participation may be possible by some larger firms without reimbursement, but **some financial support may be required to enable smaller firms to participate** in activities.

Subject areas for private sector input

Participants suggested the private sector provide input into the following areas:

- Integrated waste management experience
- Public Private Partnership experience
- Examples of implementation of financial incentives for MSW projects

As the pricing for CERs from CDM projects has dropped considerably in the past year, **there will need to be other incentives for implementation** of improved waste management practices and infrastructure.

Favourable feed-in-tariffs (FIT) that will promote the development of energy from waste projects could be a useful tool for incentivizing these projects. However, when setting up feed-in-tariffs, care must be taken to ensure that FITs do not inadvertently promote technologies that are not in the public's interest. Diversion of subsidies being provided to fossil fuels and potash were also suggested as policies to incentivize implementation.

Showcase of MSW Knowledge Platform, Beta version

Rachael Williams, ISWA, introduced the “Municipal Solid Waste Knowledge Platform” as an online forum for sharing best practices in MSW management and facilitating participation in the CCAC.

Participants expressed concern that allowing non-clients to “ask an expert” for advice on MSWM practices via the platform could become resource intensive and ultimately a distraction from the website's original purpose. Rio de Janeiro provided information on the city's waste department website, which served as a robust model from which the CCAC platform could borrow concepts. Participants also inquired how the private sector could be incorporated so as to enable their participation. It was highlighted that the platform should be a tool for connecting city participants in order to continue the relationships and knowledge sharing initiated at the first meeting. There were suggestions to look into offering web courses or a periodic newsletter. While participants were interested in these functionalities, there was a question as to whether the resources would be available to provide sufficient support. A suggestion in this regard was to link the knowledge platform with other websites and to use web courses and learning material provided by other organizations.

City Action Plan Workshop

The workshop brought together government officials and experts to help prioritize next steps for each city to identify opportunities for new action on waste and SLCPs, and generate ideas on how the CCAC can help support cities on this action over the coming year. Cities were asked to consider four questions when developing their action plans:

1. What is your city's priority action area to improve MSW management?
2. Would this action area also reduce SLCPs?
3. What steps are needed to implement this action?
4. What capacity do you lack to achieve these steps?

City action plans are to be finalized following the conclusion of the meeting, in cooperation with Initiative Lead partners when officials returned to their municipalities.