

Newsletter #15

July 2022 - Open Waste Burning



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Challenges and opportunities of open waste burning

This contribution was provided by Professor Desta Mebratu, Waste Lead, and Dr Andriannah Mbandi, Deputy Waste Lead of the UN High Level Climate Champions team, supported by Engineering X.

Open waste burning is one of the major contributors of Green House Gasses (GHGs) besides posing major health hazards due to the cocktail of air pollutants it discharges. According to the report on ['Open burning of waste in Africa: Opportunities and challenges'](#) notes that:

- About 90% of waste in low-income African countries is openly dumped or burned while only about 11% of the waste is disposed of in properly designed and managed sanitary landfills.
- More than 60% of the waste generated in African urban centres is biodegradable and About 20% of it is recyclable of which only about 10% of the waste is recycled, mostly by informal waste service providers and waste pickers.
- A conservative estimate of the value of MSW generated in African urban areas is US\$8.0 billion per annum, of which 96 per cent is currently lost through disposal



Based on these findings, the report underlines that:

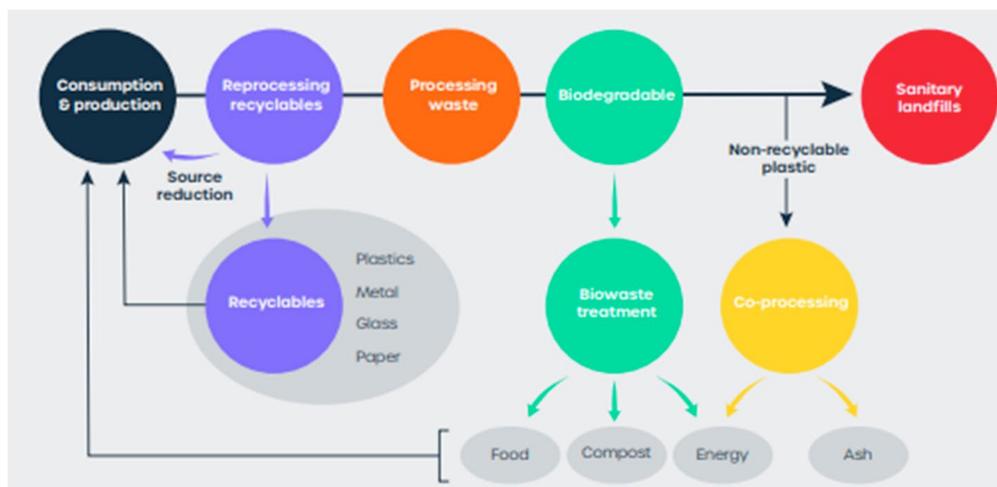
- Reducing and phasing out open waste burning in African urban centres would have significant health and environmental benefits besides reducing emission of GHGs.
- This would require moving away from piecemeal intervention to systemic transformation with a focus on addressing the systemic deficiencies of waste management systems in African urban centres.
- African countries have unique opportunities of securing multiple economic, social and environmental benefits through local beneficiation of waste as secondary resources.

The United Nations High Level Climate Champions in partnership with Engineering

X, an international collaboration founded by the Royal Academy of Engineering and Lloyd's Register Foundation, is working with key partners on building a consensus on possible targets of reducing open waste burning in Africa by 60% by 2030 and phasing out open waste burning from Africa by 2040.

You can get more information from the report ["Open burning of waste in Africa: challenges and opportunities"](#).

You can also access for more information on uncontrolled burning and dumping of waste across the globe on the Engineering X website [HERE](#).





Case Studies

The below case studies have been compiled by Dr Mansoor Ali and Dr Terry Tudor, Open Burning Leads for Engineering X, an international collaboration founded by the Royal Academy of Engineering and Lloyd's Register Foundation

Creative Data Collection and Mapping

Good quality data and maps are key to effective planning to improve waste management and to reduce waste burning. They are also important tools to leverage change, advocate for improvements, and central to formulating and monitoring sound policies. One of those cases was Open Map Development in Tanzania. The programme developed an interactive map of informal dumpsites and waste 'hot-spots' along the rivers of Dar-es-Salaam and informal settlements across the city. The map and the tools that it produced were sourced from drone flights, coupled with extensive in-house spatial analysis, as well as a training programme for local organisations to train staff and volunteers on the key computer programming and GIS support required. The resulting 'TrashMap'

provided a comprehensive overview of the city's waste 'hot-spots', responsible for clogging up Dar's rivers and waterways and magnifying flood risks across the city. Following initial pilots, supported by the UKAid and the World Bank, a number of local plastic waste collection companies, including The Recycler, Green Waste Pro and Tirima Enterprises Ltd., independently

contracted HOT for the provision of spatial data to help them realise a more efficient and profitable plastic recycling and recovery operation, demonstrating the value of the digital mapping of waste sources. More information and photos are available at: <https://www.trashout.ngo/trash-mapping-an-innovative-way-to-clean-the-world>



National Green Tribunal, India

Policy effectiveness is a major challenge in developing countries, as environmental management is an emerging area for many governments. Waste burning is common in many contexts, but legal procedures to control them are cumbersome and in need of creative reforms. The National Green Tribunal India is a good example of how best to address these challenges. The National Green Tribunal was established in 2010 under the National Green Tribunal Act 2010 for the effective and faster management of cases related to environmental protection, including citizens' concerns on waste burning. It is a judicial institution equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues, such as poor solid waste management. The Tribunal is not bound by the procedure laid down by

outdated legislation, rather it is guided by the principles of natural justice. It aims to complete the verdict for cases and appeals within 6 months, which is significantly shorter than the average time for proceedings in traditional courts. It has concluded nearly 82% of the instituted cases within the year of their start. The Tribunal also hosts an annual conference in partnership with UNEP and other national ministries. The conference is seen as a key event to discuss environmental challenges and to come up with innovative solutions. This conference is a step towards pioneering approaches which will have repercussions globally on all environmental policy areas such as forests and biodiversity, municipal solid waste management (MSW), climate change, and clean and renewable energy. The improvement of municipal waste

systems and the reduction of harmful open burning are some of the key areas where citizens have filed petitions, with the details published in the media and positive actions were taken by the tribunal. Overall, the National Green Tribunal is a replicable example of how MSW policies could be made more effective. This is particularly needed in emerging areas such as environmental protection, solid waste management (including open waste burning), and other critical sectors.



Get to know our Affiliates

In this section we give our Waste Wise Cities Affiliates the possibility to introduce themselves.

Indian Pollution Control Association (IPCA)



[Indian Pollution Control Association \(IPCA\)](#) has been working in the field on solid waste management, air quality monitoring, environmental education and up-liftment of the informal sector players for more than two decades.

At the community level, IPCA works as a service provider for services such as door-to-door garbage collection, segregation at source, recycling and co-processing of municipal solid waste across several cities in India. Through its education outreach program, IPCA has raised awareness in schools, colleges and residential societies. At the industrial level,

IPCA provides consultancy services and execute industrial waste management/ EPR projects. It has also been involved in R&D of technologies in the sector, also mentor individuals/ organizations working towards efficient management of waste. At the policy level, IPCA is members of various committees set up by government and contribute to policy level interventions, especially for plastic waste management.

IPCA is open to collaborate with like-minded organizations and contribute to sustainable management of waste in India and beyond.

Plastic Credit Exchange

[Plastic Credit Exchange \(PCX\)](#) is the world's first global non-profit plastic solutions platform committed to reducing the flow of plastics into nature. Through its non-profit arm, PCX Solutions, companies are given strategic advisory in order to assess their plastic footprint and create programs that match their sustainability goals. It was the first in the world to establish a Plastic Pollution Reduction Standard (PPRS) in early 2020. With its mission to enable the scaling up of circular economy infrastructure, the non-profit also provides certification of best-in-class plastic credit projects globally. PCX Markets is a complementary technology-enabled commercial credit marketplace that builds on the expertise, experience,

and credibility of PCX Solutions, enabling accelerated global scale and impact while developing a broader scope of services for PCX's network of consumer, and industrial, governmental, and institutional partners.

Rooted in the belief that fighting the plastic pollution crisis requires actively reducing unessential plastic, PCX promotes comprehensive solution sets to minimize pre-consumer footprints and sees plastic credits as a bridge to account for the rest of the plastic companies cannot immediately address. To make this a reality, PCX activates a broad and growing ecosystem of carefully vetted partners that recover, process, and recycle plastic waste while continuously seeking out innovative, environmentally sound

solutions for plastic waste reduction. PCX is committed to scaling up social impact across the world by supporting programs that improve livelihoods and empower communities.





Waste Wise Cities Affiliates Roundtable – Plastic waste management

Waste Wise Cities had its fourth Roundtable on the theme “Plastic Waste Management” on June 16, 2022 (1:30 PM EAT). The purpose of this roundtable was to discuss the global challenges of plastic waste, including opportunities to rethink human approach to the plastic waste problem, the role of international organizations in funding and establishing plastic waste management systems, and exploration of possible innovative solutions and opportunities within the plastic waste management sector.

Two distinguished keynote speakers from Plastic Credit Exchange, an organization whose mission is to stop the flow of plastics into nature and clean up 80 years’ worth of plastics by 2030, and BVRio, a non-profit organization that works at the intersection of environmental, economic, and social sustainability, discussed the challenges, appropriate technological, and innovative strategies needed to effectively tackle the plastic waste menace. Thierry Sanders (BVRio) also touched on the circular action program that uses waste footprints solutions and the KOLEKT App that is in the offing to help recover over 1000 tons of used packaging materials p.a. and improve plastic waste picker’s

lives. On his path, Vincent Kneefel (Plastic Credit Exchange) spoke about the momentum towards a circular economy for plastics where he threw more light on the consumer expectations, regulatory tailwinds and massive market opportunity for plastic waste. Some of the over 27 participants raised cogent questions that were addressed by the two speakers. After the discussions, it became clear that technological solutions alone will not be enough to help solve the waste problem; instead, strong policies, multi-stakeholder engagements, and acknowledging all stakeholders along the value chain will help solve some of the current challenges in the plastic waste sector.



Waste Wise Cities Affiliates

Do you want to:

- Support Waste Wise Cities and improve waste management in cities around the world?
- Be an official partner of Waste Wise Cities and UN-Habitat?
- Show up on the Waste Wise Cities website?
- Implement the Waste Wise Cities Tool?
- Read about your activities in this newsletter?
- Do much more?

Then [contact us](#) and become a Waste Wise Cities Affiliate! Together we can become Waste Wise!

Waste Wise Cities Tool (WaCT)

You have forgotten what the Waste Wise Cities Tool is? No worries, you can find all information on our [website](#). [Here](#) you find out which cities have already submitted data collected with the WaCT and as you can see from the article below, more data is becoming available.

WaCT application in Thiruvananthapuram, India



Under the project, "Waste Wise Cities: Tackling Plastic Waste in the Environment" funded by the Alliance to End Plastic Waste (AEPW), UN-Habitat India office conducted a detailed ground assessment study in Thiruvananthapuram, Kerala, India in the month of November 2021 through the application of the Waste

Wise Cities Tool (WaCT) with support from Thiruvananthapuram Municipality Corporation (TMC) and the NGO Sahridhaya.

A sample size of 90 households (HHs) from high-, middle- and low-income groups participated in the study. The activities included: capacity building workshop for a team of 20 volunteers to implement the WaCT, distribution of collection bags (2 bags each for wet and dry waste) to HHs collection of segregated bags from HHs for eight days for a detailed study. Commercial Units were also interviewed. Since TMC does not have an officially recognised landfill; a comprehensive mapping of all the resource recovery centres along with the formal and informal resource value chain in the city was undertaken.

The results from the WaCT application have been used to identify the gaps in consultation with relevant stakeholders and to create a draft action plan for improving the management of waste, reduce the city's plastic leakages and bring all stakeholders together to increase coordination and strengthen the network. Have a look at the results from [here](#).



WaCT Result summary of Alexandria, Egypt

Upon selection of the Alexandria city for the application of the WaCT under ACCP, UN-Habitat Egypt Office in collaboration with the Alexandria Governate coordinated all the activities and conducted the survey. During the implementation, several challenges were faced, which is the bad weather conditions in the coastal city of Alexandria, which prevented movement within the city that lasted for a long time, and also many restrictions related to COVID-19 procedures.

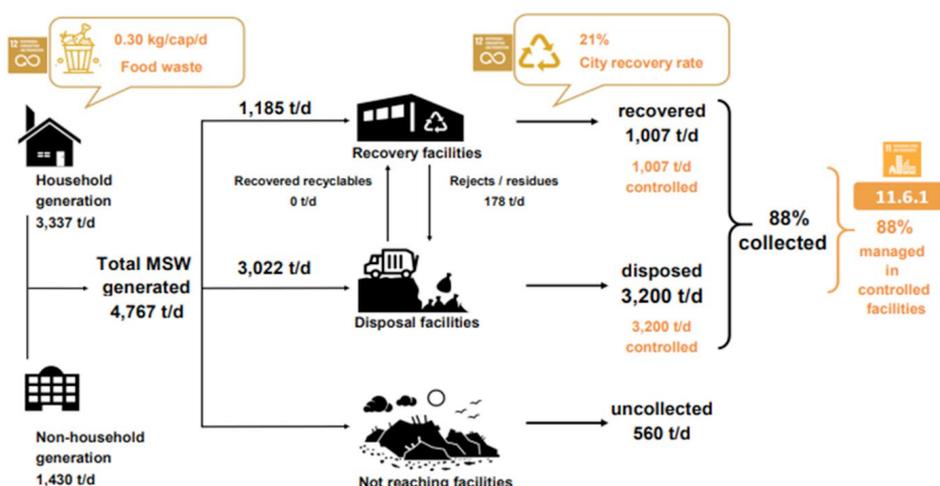
the one of low- income households found during Step 2 of the WaCT, which may testify of the limited input of non-household organic waste sources at the disposal site.

- Plastic film (14.5 - 18.4 %) is the second most important waste fraction received in site disposal (Transfer stations & treatment plant) after organic waste. The higher average percentage at the disposal

site for this fraction compared to the household composition (12.6%) may therefore be caused by shopping bags and snack packs. This can also be caused by purchases on non-household sources, which may receive their merchandise packaged in plastic films.

For more data on SDG Indicator 11.6.1 of the world's cities, you can access them from [here](#)

WaCT Flow Chart

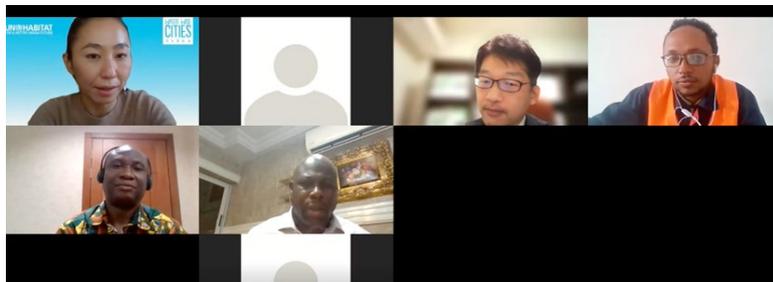


The below flowchart estimated that 4,767 tons of municipal solid waste are generated per day in Alexandria. Of this quantity, an estimated 88% is collected, and managed in controlled facilities. From these results, the following are worth noticing:

- Organic waste represents the overwhelming majority of the overall waste fraction (which is more than 60%). Its fraction is nearly equal to

Waste Wise Cities & African Clean Cities Platform Updates

ACCP Webinar Series



On 30 March and 19 May, Africa Waste Webiar #3 and #4 were organized respectively, supported by ACCP, UNOSSC, and CoMSSA.

The third webinar discussed how to turn open dump sites to controlled waste disposal facilities in African cities, inviting Mr. Peter Kwei Dagadu, CEO of Waste Landfills Company in Ghana, Mr. Ephrem Sisay, Landfill Administration Directorate Director at Addis Ababa city Cleansing management Agency, Mr. Solomon Noi, Director of Waste management Department of the Accra Metropolitan Assembly, and Mr. Toshikazu Mito, UN-Habitat Waste Management Consultant. Those presentars addressed the issues and appropriate solution in each country's context. Main outcomes of the webinar were:

- Peter suggested public/private partnerships for financing
- Solomon suggested source separation as a solution, law enforcement and a sustainable financing strategy for dumpsites.
- For Mito capacity development of already existing dumpsites management is necessary

- And to always keep in mind the minimum requirements for an upgrade, financial or equipment wise.

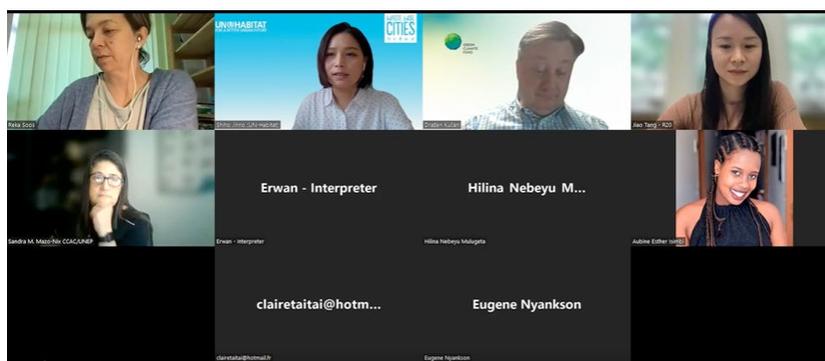
For the fourth webinar's theme was "Waste and Climate Change" with the focus on climate financing. Speakers, Sandra M. Mazo-Nix from the Climate and Clean Air Coalition, Dražen Kučan from the Green Climate Fund, Jiao Tang from Regions20 (R20), and Reka Soos from the Resource and Waste Advisory (RWA Group), firstly discussed the waste sector's impact on the climate, presenting the methane pledge supported by 105 countries at COP 26. During this webinar we discussed climate funding opportunities which according to our speakers are not as much available to the waste sector as other sectors. Nevertheless, these opportunities are very diverse, some are at an international level,

others at a sub-national level or local level. For example, Dražen Kučan from GCF talked about his organization. The GCF operates at a national level and its financial instruments include equity, concessional loans, guarantees and grants. Sandra presented CCAC's work, which focuses on national and sub-national levels, and through its waste hub, helps countries plan the shift to a SWM system with low emissions. In addition, the CCAC provides technical and financial assistance. R20 which was presented by Jiao Tang, on the other hand, uses commercial equity and concessional equity and is exclusively focused on medium size projects, ranging from 5M-75M USD, which are at a sub-national level.

Series of the webinar recordings and presentations can be accessed from the link below:

[Africa Waste Webinar #3](#)

[Africa Waste Webinar #4](#)



Waste Events in Africities

Africities is a Pan-African conference convened by the United Cities and Local Governments of Africa. UN-Habitat organized two events related to waste management. The first event was organized on 19 May, highlighting UN-Habitat’s project, which facilitated the partnership between the government, private sector, and waste pickers group in Kisumu, Kenya. The event showcased how the Waste Wise Cities Tool helped cities and civil society in Kisumu understand the local informal waste recovery chain. This activity facilitated a partnership between Kisumu Waste Actors Network (KIWAN), waste pickers SACCO, Mr. Green Africa, the City of Kisumu, and Civil Society

Urban Development Platform, which materialized the establishment of the waste sorting center.

Another event, ‘Waste: Better Health, Environment and Livelihoods in Africa’, showcased a successful case of Mombasa County, where Waste Wise Cities Tool data leveraged solid waste management projects with funds from Coca-Cola Foundation, WWF, and European Investment Bank. ‘Before UN-Habitat’s Waste Wise Cities Tool survey, we thought we generated 2,000 tonnes of waste daily; therefore, we need a Waste to Energy plant. After the survey, we generated only 800 tonnes daily; therefore, we shifted our policy and infrastructure intervention to strengthen

the waste collection and recycling system. As a result, we mobilized funds from Coca Cola Foundation and WWF to set up material recovery facilities. European Investment Bank also invested in a feasibility study for Refuse Derived Fuel factory’ said Dr. Godfrey Nato, Mombasa County Executive Committee Member for Environment. Many questions were asked by participants, mainly from the county governments of Kenya to Dr. Nato, asking about where to start. He recommended beginning with Waste Wise Cities Tool application, identifying policy and infrastructure gaps in a participatory way. As a result of this session, three countries from Kenya joined Waste Wise Cities and African Clean Cities Platform.

ACCP and Waste Wise Cities at Expat Group Meeting - Possibilities for a just transition of the informal waste sector in the negotiations on plastic pollution

On 4th - 6th of April 2022, UN-Habitat and the Norwegian Institute for Water research (NIVA) hosted an Expert Group Meeting (EGM) virtually, in order to identify and discuss possibilities for a just transition of the informal waste sector under a legally binding instrument to end plastic pollution. This topic is one of the key element recognised as “the significant contribution made by workers under informal and cooperative settings to collecting, sorting and recycling plastics in many countries” in the resolution adopted

at UNEA 5.2 titled End plastic pollution: Towards an international legally binding instrument recognizing.

The EGM discussed the role and significance of the informal sector, several case studies on the IWS in various countries, challenges IWS workers face, experiences on EPR and the informal sector, lessons learned from the Minamata Convention, the Basel Convention and the Biodiversity Convention. Actions that are needed for a just transition and social inclusion of the Informal Waste Sector (IWS) were also discussed.

In order to harness the development potential of the IWS, several measures are necessary at the global, national and local levels. At the global level, efforts

are already underway spearheaded by the Global Alliance of Waste Pickers in order to dignify their activities and get the recognition they deserve. IWS activities need to be legalized; support programs, preferably at the national level, need to be created. Grants, loans and technical assistance from governments, NGOs, the private sector and civil society are also needed. At the local level, the IWS needs to be considered as key stakeholder in waste management and consulted when changes are being considered. Municipalities need to regard the IWS as a partner and facilitate their inclusion in MSWM systems.

Expert Group Meeting
 Possibilities for a just transition of the informal waste sector in the negotiations on plastic pollution

Date: 4th - 6th April 2022
 Time: 9-12 EAT and/or 16-19 EAT (UTC+3)
 Venue: Virtual

South-South Cooperation in Koidu, Sierra Leone

In August 2021, UN-Habitat in collaboration with the United Nations Office of South-South Cooperation (UNOSSC) launched a pilot project “Waste Wise Koidu” in Koidu city, Sierra Leone, aiming to improve the MSWM and develop local capacity on waste collection, disposal & recycling towards a Circular Economy. The initiative is supported by UNOSSC under the framework of its “City Project” and its Thematic Cities Cluster and promote city-to-city exchange through online thematic city cluster [Waste Management, Green Cities & Renewable Energy](#) offering a space for knowledge sharing and partnership enhancement among city partners of the global South. For example, Koidu, Sierra Leone has knowledge and experiences exchanges with the city of Kushtia, Bangladesh on

[ANNOUNCEMENT] ACCP Assembly to Come!!

Learning from knowledge sharing and networking is a critical way for cities in Africa to inspire action to improve solid waste management. The first ACCP Assembly was held in Rabat, Morocco in June 2018, with 220 participants from 32 African countries. Government of Morocco organized a site visit to their transfer stations and sanitary landfill site to share their experience with participants. The second ACCP Assembly was held in Yokohama, Japan as a side event of TICAD 7, with 450 participants from 38 African countries. The outcome document “Yokohama Action Guidance” which stipulated 11 action areas to be carried under ACCP from 2020 – 2022 in addition to the ACCP secretariat transfer to UN-Habitat, was adopted by representatives from African member countries and cities.

its successful experience in setting up an effective and financially sustainable solid and liquid waste management system.

In addition, the advocacy and educational materials in four local languages and posters were developed to encourage residents. The project will be continued building on the joint efforts and solid

foundation to scale up facilitating South-South cities exchanges and mutual learning through this year.

Read more about “Be Part of the Solution: South-South and Triangular Cooperation Towards Sustainable Waste Management in Koidu, Sierra Leone” [here](#).

2022 is the year of TICAD 8 and was expected to observe the third ACCP Assembly, capturing the outcomes of activities laid out in [Yokohama Action Guidance](#) as well as agreeing the ACCP activities in coming three years. In order to avoid any risks of COVID-19, the third ACCP Assembly will be held online from 25 to 29 July 2022, at 09.00-12.00 GMT / 10.00-13.00 WAT / 11.00-14.00 CAT / 12.00-15.00 EAT / 18.00-21.00 JST in prior to TICAD 8.

During the Assembly, an outcome document which determines the activities to be carried out in the coming three years under ACCP, will be adopted and endorsed by the participating ACCP members.

All ACCP members are encouraged to participate in the Assembly. For more details please access to the event page [link](#).

Call to Action

- Share with us your good examples of setting up waste collection systems, including waste separation at source!
- Promote waste separation at source!
- Include the informal sector and other relevant stakeholders when planning your waste collection system!
- Become an ACCP and/or Waste Wise Cities member or affiliate and share your stories with us!