Closing the Loop: Unlocking an inclusive circular economy approach

Stakeholder Workshop in Bangkok, Thailand

Workshop Report

13 September 2018
United Nations Conference Centre, Bangkok

The 'Closing the Loop' project supports more inclusive and circular waste management processes to increase the rate of recovery and reduce the leakage of plastics in two pilot cities, Pune and Bangkok. This initiative in Bangkok is implemented in close partnership with the Stockholm Environment Institute (SEI) Asia Centre, the Bangkok Metropolitan Administration (BMA) and Women in Informal Employment: Globalizing and Organizing (WIEGO).

This city-level workshop held in Bangkok brought together stakeholders from the public and private sector as well as public, private, and community stakeholders from local authorities and civil society. The purpose of the workshop was to present preliminary findings of data collection in Bangkok, to deepen understanding of the plastic waste value chain and actors involved, to build partnerships, and to explore opportunities to improve waste management by stakeholders in an inclusive, socially responsible manner.

The outcomes of the workshop will feed into a Bangkok case study and will inform policy recommendations for the Asia-Pacific region to support a more circular and inclusive economy that reduces plastic pollution.

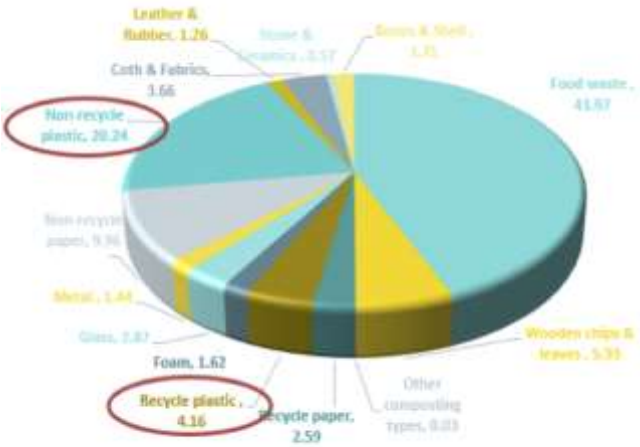
Preliminary insights from analysis of the plastic waste value chain in Bangkok

Thailand is one of top five countries in Asia contributing the most plastic leakage into the ocean because of its underdeveloped waste management system.

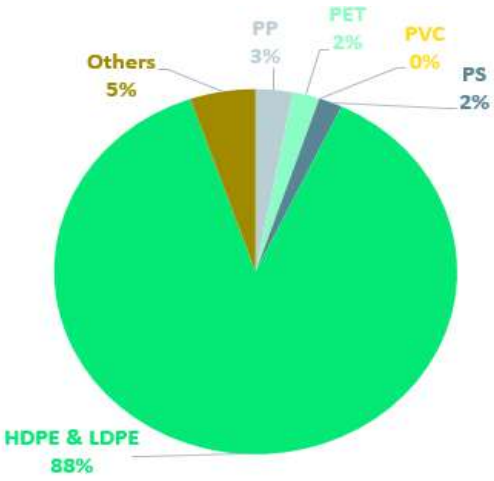
A stocktaking of the solid waste management system and the plastic waste recycling value chain in Bangkok was presented. The purpose of the research was to identify opportunities to return plastic resources into the production cycle and reduce plastic waste leakage into the land and marine environments by linking informal

and formal waste processes. The Sai Mai District was selected as the area of focus since it is placed within one of three sub-systems of waste collection overseen by the BMA and features similar same management systems, waste composition, and waste streams as the other districts in Bangkok.

The volume of municipal solid waste collected daily in Bangkok has tripled since 1985. Approximately 10,000 metric tons (MT) of municipal waste is collected daily, which is sent to the Sai Mai Disposal Center (24 per cent), the Nong Kheaem Disposal Center (34 per cent), the On-nut Disposal Center (23 per cent), and to composting plants (16 per cent). Roughly 3 per cent of this waste is then incinerated, with the rest sent to sanitary landfills in Chacheongsao and Nakhorn Pathom Provinces. In 2016, only 4 per cent of the municipal waste collected was recycled plastic, whilst 20 per cent was plastic that was not recycled. The vast majority (88 per cent) of the plastic collected is high-density polyethylene (HDPE) and low-density polyethylene (LDPE) plastic. It was noted that different types of plastic are valued differently, with Polyethylene terephthalate (PET) plastic (water bottles) fetching the highest price followed by HDPE and polyvinyl chloride (PVC) plastics.

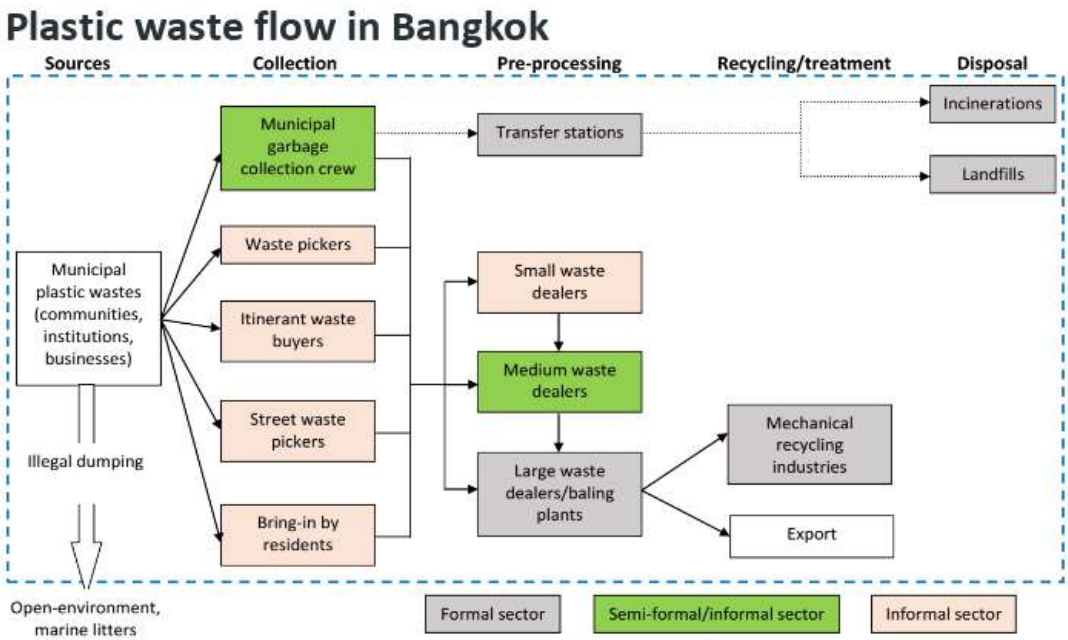


Composition of MSW in 2016



Composition of Different types of Plastic Waste in Bangkok in 2013

Several linkages between the formal and informal waste management sectors were identified, as well as potential points where plastic leakages into the environment can occur along the plastic flows from disposal to end of life. Informal workers tend to focus on the more valuable plastic types and the availability of plastic types in waste stream to secure greater income. Issues were identified around technical support and equipment for compressing and transporting plastic waste, waste segregation (plastic waste contaminated by wet waste in



garbage bins), the fact that some plastics are not currently being recycled in Thailand due to a lack of available technology, and the lack of financial incentives for recycling. The latter includes the low value of specific types of plastics and the consequences of the recent Chinese ban on plastic waste imports, leaving recycling companies in Thailand without a sufficiently sized end-market for raw recycled plastic. Furthermore, the lack of social recognition and protection of informal waste actors is of concern.

It was identified that informal waste collectors could alleviate the financial burden of plastic waste recycling and management on government, as their recycling of plastic waste is saving an estimated 1,200,485 THB per year in landfill fees.

In consideration of the data gaps and limitations, it is important to recognise the difficulty of assessing the value of waste pickers due to the hidden nature of the informal sector itself. Data on plastic waste generation is also difficult to collect because households, salengs, and cleaners are the major groups tasked with separating plastic waste before it can enter into the municipal waste stream.

Case studies for potential exploration

- One individual created a smartphone app in order to improve community waste collection processes. Residents are required to download and register with the app, then use it to notify him of the amount of waste they have so he knows when to collect it. He then gives the money he receives for the sale of plastics directly back to the residents – a very transparent process. He has been doing this in many communities, and this could be scaled up across Thailand, allowing waste collectors to better plan the logistics of waste management and also enabling the amount of waste collected to be better quantified;
- Focus on the successes of waste collectors contracted by government to collect waste during royal cremation ceremonies. In one year waste pickers collected enough bottles to make more than 160,000 THB, which was used to pay for life insurance for everyone working there. This was an example of a waste picker collective that works with organisations and individuals for mutual benefits;
- A few years ago, the Government partnered with an organisation to set up a 'clean junk shop' in Suvarnabhumi, highlighting sanitary practises and the potential hazards of waste collection to informal waste pickers, and this could be explored as an example of proactive governance;
- A man set up a franchise with 500 vendors and clean junk shops that have partnered with government;
- In Phitsanulok there has been a partnership between the informal and formal sectors leading to an increase in separation and a 90 per cent increase in recycling rates;
- There are good case studies about green procurement in government buildings and universities (for example, a partnership with 7/11);
- The case of wet markets where segregation has been promoted through providing separate collection boxes for food waste used for worm production and fishponds;
- One group saw religion as a means of bringing communities together to focus on the problem of waste. He created a prayer book using recycled materials, and the monk works with communities to reduce waste. Communities trusted him and there was no corruption, but there was not enough manpower to scale the project;
- The private sector mentioned a clean city/clean province initiative;
- Further explore the Zero Baht company as a case study.

Next steps

The participants were divided into four multi stakeholder breakout groups for focussed discussions on different aspects of the plastic waste management problem as it pertains to Bangkok: mapping the value chain, regulatory issues and policy, considering the issue in the context of a broader circular economy, and intersections between the formal and informal sectors. Within these focus areas participants were asked to identify where and how the formal and informal intersect, the existing challenges, and the opportunities for

action. The following is a summary of the recommendations that came out of both the presentations from the breakout groups and the subsequent plenary discussions.

Key issues identified

- A lack of recycling of specific types of plastics, whether due to technological constraints, design issues, bad segregation, or because of a lack of market incentives;
- A lack of a clear holistic vision of the plastic waste flows and value chain from actors in the value chain;
- Since they are informal and therefore not officially recognised, the government lacks a database of informal waste workers to work with – the system must be redesigned to address this fundamental issue;
- There is an opportunity to offer classes or services to teach informal waste pickers to provide better waste collection but many want to remain 'hidden' and do not wish to engage;
- There is an opportunity for informal worker organisations to collaborate with government, but there is a lack of clarity regarding who would be the focal point or coordinator within the government;
- There is a lack of updated and specific regulation regarding waste management that limits action and engagement with relevant actors and sometimes a lack of coordination between ministries with a stake in waste management;
- Attention must be paid to the implementation of any new regulation – this is a universal challenge, not just specific to the plastic sector;
- There needs to be a platform/mediator to connect various organisations and government agencies moving forward – currently the various actors largely work in silos;
- The informal sector is perceived in quite a negative way and this needs to be counteracted and its value in reducing plastic waste should be recognised;
- The oil sector is not in favour of anything that would reduce the need for oil-based plastics, which poses challenges due to the industry's significant influence in Thailand;
- A lack of awareness amongst the public on the need for recycling and how to separate waste, and the public's negative impressions of informal waste pickers are key challenges.

Ways forward

Identify a focal point for coordination between formal, informal, and private waste management groups

- Establish a platform, coordinating body, or hub tasked with further knowledge-exchange and action on the topic of plastic waste management in Bangkok;
- Promote ongoing communication between the private sector and BMA by identifying who the private sector should best communicate with in order to receive better support and be able to exchange knowledge and ideas with the government;
- Use the new sub-committee set up by the Prime Minister to address plastic issues, and ensure it engages with the informal sector – a representative of BMA at the workshop said, "we want to share this burden of managing plastic waste and work together, maybe in a cooperative with the informal sector".

Optimise informal waste processes and improve the status of the informal sector

- Leverage social media to change the public narrative about informal waste pickers. The informal sector is often perceived in a negative way, but with the support of social media campaigns, social influencers, bloggers and celebrities its value in managing, reducing, and recycling plastic waste could be recognised;
- Support for the informal waste management sector should be strengthened by registering informal waste workers officially, providing them with ID cards, and investing in capacity building to strengthen their ability

to collect waste more efficiently. The establishment of co-operatives should be supported, potentially by a government sub-contractor;
- Promote the welfare and living standards of informal waste pickers – perks and initiatives could include annual health check-ups, life insurance, and annual bonuses for collecting over a certain amount;
- Explore how to better link the informal and private sector to increase the value of the plastic that is collected and to better streamline activities;
- Consider using health as an entry point for engaging with the informal sector through establishing a health initiative and providing a complimentary service to informal workers to provide a platform for further engagement and capacity building;
- Consider Thailand's aging population when creating solutions – the elderly could be tasked with the business of recycling in a more regulated, formalised system than currently exists.

Improve data mapping capabilities and waste management technologies

- This preliminary data on Bangkok's waste management flows should be further developed and quantified, then disseminated to a wider audience once complete;
- Explore further how IT and mobile applications could improve waste management capabilities;
- Innovate and experiment with waste management technologies, such as plastic-to-fuel solutions.

Support the government in developing more actionable and targeted policies

- While several government regulations do exist, and some are positive (e.g. Public Private Partnerships) there needs to be more targeted and actionable policies that can be implemented at the local level and provide strong incentives for public and private sectors and civil society to act;
- Enlist the support of NGOs and co-operatives to ease the burden on BMA in dealing with the issue;
- Develop an integrated approach to waste management that involves various stakeholders so that groups are not working in silos, enabling them to make a difference on bigger scales;
- Assign responsibility for achieving plastic reduction targets to specific government offices as currently no such accountability exists;
- Introduce regulations that require the private sector to be responsible for the design of their packaging.

Improve awareness of waste management issues at a community level

- Continue awareness-raising efforts at universities and schools by investing in educational partnerships;
- Consider introducing initiatives at a household level so that waste can be separated before it enters the waste stream, enabling leakages to be managed from the start;
- Invest in community education campaigns to inform the public on the harms of single-use plastic as well as the rules regarding which kinds of plastic can be recycled;
- Promote the need for research focussed on improving CSR for businesses to reduce plastic use.

Leveraging partnerships for a more efficient plastic waste management and increased recycling

- Develop positive financial incentives to encourage the formal and informal sectors to recycle more, such as subsidies, Pay-As-You-Throw (PAYT) programs and kerbside reward schemes;
- Adopt a Whole-of-Government approach to developing integrated policy approaches to recycling, supported by more cohesive institutional mechanisms;
- Develop and maximise green procurement policies to require ministries and departments to take into account environmental considerations when procuring goods and services;
- Enhance governmental partnerships with the private sector, civil society and informal sector.

Participant Evaluation Summary

The participants were polled by a show of hands to provide feedback on the impact of the workshop. All participants either agreed or strongly agreed that the workshop was useful to their work, that they would use the information gained from the workshop in their work, that they would be interested in remaining involved with the project, and that they had made useful contacts through the workshop. Participants explicitly expressed interest in continuing to work together on these issues and there was agreement that a platform should be identified or developed to facilitate ongoing knowledge exchanges and partnerships on these issues.

Participant List

Participants	Men	Women	Total
Citizen and NGO	3	5	8
BMA	6	4	10
ONEP	0	1	1
Pollution Control Department	1	0	1
Research and Academic Institutions	2	2	4
Private Sector Enterprises	4	3	7
Total Participants	**16**	**15**	**31**

Citizen and NGO		
Ms. Ruth Erlbeck Ms. Maeve Nightingale	Dr. Supachai Tantikom Mr. Sinchai Thiensiri Ms. Supranee Kampongsun	Ms. Poonsap Tulaphan Mrs. Pimpilas Nuntiphon Khoeiram Mr. Burin Tangsilpaolarn
Bangkok Metropolitan Administration (BMA)		
Mr. Panuwatt Ontes Mrs. Saiehon Changsonya Mr. Siripong Rattanarojanakool	Mr. Somjet Sonti Mr. Akom Itsuwansin Ms. Duangduan Kittiprapas Mr. Jirathep Thaochoo	Ms. Kanuangnit Nonpanapol Mr. Somchai Pholchareo Ms. Tassanee Artwichai
Office of Natural Resources and Environmental Policy and Planning (ONEP)		
Ms. Charinee Suwannatat		
Pollution Control Department		
Mr. Chaiya Boonchit		
Research and Academic Institutions		
Mr. Chris Oestereich	Mr. Varoon Varanyanond Ms Nguyen Thi Trang	Ms. Unchulee Lualon
Private Sector Enterprises		
Ms. Kantsinee Lalitsitthirangkul Mr. Pornchai Atitkul	Mr. Wuthichai Sithipreedanant Mr. Chattin Boonyarat Ms. Cindy Johansson	Ms. Raksina Chirawanich Mr. Warit Atitkul