# Who Governs the Wasteland? Bangkok's Informal Recycling Sector in Urban Waste Management

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts Program in International Development Studies
Faculty of Political Science
Chulalongkorn University
Academic Year 2017

# ใครเป็นคนปกครองดูแลพื้นที่ขยะ?การสนทนาบรรยายอย่างไม่เป็นทางการระหว่างผู้เกี่ยวข้องในกรุงเทพมหานคร

นางสาววานิสา หงษถาวิช



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
สาขาวิชาการพัฒนาระหว่างประเทศ
คณะรัฐศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2560

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|---|---|
| Thesis Title | Who Governs the Wasteland? Bangkok's Informal Recycling Sector in Urban Waste Management |
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| Field of Study | International Development Studies |
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**วานิสา หงษถาวิช : ใครเป็นคนปกครองดูแลพื้นที่ขยะ?การสนทนาบรรยายอย่างไม่เป็นทางการระหว่างผู้เกี่ยวข้องในกรุงเทพมหานคร** (Who Governs the Wasteland? Bangkok's Informal Recycling Sector in Urban Waste Management) **อ.ที่ปรึกษาวิทยานิพนธ์หลัก: สุริชัย หวันแก้ว, อ.ที่ปรึกษาวิทยานิพนธ์ร่วม: โรซาเลีย ซิออร์ดิโน่**, 78 หน้า.

**ท่ามกลางการเติบโตของประชากรอย่างรวดเร็วและการกลายเป็นเมือง,เขตเทศบาลต้องเผชิญกับการท้าทายที่เกิดจากการสร้างสมของขยะมูลฝอยและสิ่งที่ตามมาในการเก็บและกำจัด.ในท่ามกลางการท้าทายปัญหาเหล่านี้,การประสานการกำจัดขยะอย่างสมบูรณ์แบบได้ปรากฏการเป็นทางเลือกในการแก้ปัญหาขยะอย่างเป็นองค์กร, รวมไปการพิจารณาอย่างสำคัญถึงพลังพลวัตรและความสัมพันธ์ระหว่างผู้มีส่วนร่วมและมีผลประโยชน์หลากหลายต่างกันการประสานการกำจัดขยะอย่างสมบูรณ์แบบในประเทศที่กำลังพัฒนายังเผยให้เห็นภาคกลุ่มผู้ประกอบการที่ไม่เป็นทางการที่มีการปฏิบัตรหลากหลายในการกู้คืนทรัพยากรและการทำให้นำมาใช้ประโยชน์ได้อีกแต่ทว่า,ยังไม่สามารถเห็นชัดเจนว่าการกำจัดขยะอย่างสมบูรณ์แบบจะสามารถประสานและส่งเสริมให้ภาคกลุ่มผู้ประกอบการที่ไม่เป็นทางการใดรับผลประโยชน์ร่วมในรูปแบบการใช้พลังงานอย่างมีประสิทธิภาพมากขึ้น,การลดมวลพิษของสิ่งแวดล้อม,การเพิ่มค่าอัตรารีซัยเคิล.และการดำรงชีพและเพิ่มความเสมอภาคที่มากขึ้นโดยเฉพาะผู้รับจ้างในภาคภาคกลุ่มผู้ประกอบการที่ไม่เป็นทางการวิทยานิพนธ์นี้พินิจถึงการเมืองของการปกครองในเมืองและการพัฒนาการผ่านกรณีการกำจัดขยะอย่างสมบูรณ์แบบในเขตกรุงเทพปริมณฑลโดยอาศัยการวิเคราะห์บทสนทนาเพื่อศึกษามองถึงอานุภาพของความสัมพันธ์ที่มีอยู่ระหว่างกลุ่มผู้ประกอบการที่ไม่ได้เป็นทางการโดยเฉพาะในกรณีใครจะได้ประโยชน์และใครเสียประโยชน์ภายในระบบและการปฏิบัติการกำจัดขยะอย่างสมบูรณ์แบบของเมือง**

**การศึกษานี้เอาข้อมูลส่วนใหญ่จากการสัมภาษณ์อย่างลึกซึ้งและปราศจากโครงสร้างจำนวน17ท่านจากผู้ประกอบการและผู้มีส่วนเกี่ยวข้องการกำจัดขยะในกรุงเทพมหานครจากรัฐระดับประเทศและรัฐท้องถิ่น, องค์การระหว่างประเทศ เอ็นจีโอ(องค์กรพัฒนาเอกชน), นักวิชาการ,สื่อ,ภาคการรีไซเคิลอย่างไม่เป็นทางการ สิ่งที่ได้เห็นจากการศึกษานี้แสดง.ให้เห็นว่าการปฏิบัติการอย่างไม่เป็นทางการและผู้ประกอบการกำจัดขยะภายใต้ตรรกะทางเศรษฐกิจเสรีนิยมซึ่งขยะของเสียใต้รับการกำจัดความใหม่จากการเป็นปัญหากลายเป็นทรัพยากร ซึ่งภาคนอกระบบมีบทบาทสำคัญ ในการทำให้ขยะของเสียกลายเป็นสินค้าที่มีค่าในด้านเศรษฐกิจ**



สาขาวิชา การพัฒนาระหว่างประเทศ ลายมือชื่อนิสิต .....

ปีการศึกษา 2560 ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

ลายมือชื่อ อ.ที่ปรึกษาร่วม .....

## 5981222524 : MAJOR INTERNATIONAL DEVELOPMENT STUDIES
KEYWORDS: SOLID WASTE MANAGEMENT / RECYCLING / INFORMALITY / INFORMAL SECTOR / BANGKOK / THAILAND

VANESSA HONGSATHAVIJ: Who Governs the Wasteland? Bangkok's Informal Recycling Sector in Urban Waste Management. ADVISOR: SURICHAI WUNGAEO, CO-ADVISOR: ROSALIA SCIORTINO, 78 pp.

Amidst rapid population growth and urbanization, municipalities confront many challenges posed by waste generation, and its subsequent collection and disposal. In light of these challenges, an integrated solid waste management has emerged as an alternative and more holistic approach to tackling waste challenges, including a more serious consideration of power dynamics and relationships between different actors and interests. Integrated solid waste management in developing countries further reveals an active informal sector and various practices of informality in resource recovery and recycling. Yet, it remains unclear if solid waste management systems can further integrate the informal sector in such a way that will promote co-benefits in the form of more economic efficiency, less environmental pollution and higher recycling rates, and greater livelihood and social equity, particularly for those employed in the informal sector.

This thesis examines the politics of urban governance and development through the case of solid waste management in the Bangkok Metropolitan Area, Thailand. It employs a discourse analysis to discern the power relations embedded within the discourses around informality, particularly in terms of who benefits and loses within the city's solid waste management system and practices. This study primarily draws its data from 17 in-depth, unstructured interviews with waste actors in Bangkok from national and local governments, private companies, international organizations, NGOs, academics, media, and the informal recycling sector. The central finding from this study shows how informal practices and waste actors operate under a liberal economic logic in which waste is principally redefined from a problem into a resource and in which the informal sector plays a critical role in rendering waste into an economically valuable good.



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| Field of Study: | International Development Studies | Student's Signature | ..... |
| | | Advisor's Signature | ..... |
| Academic Year: | 2017 | Co-Advisor's Signature | ..... |

# ACKNOWLEDGEMENTS

The author would like to thank her thesis committee members for their input and feedback, and her family for their support and encouragement throughout this process. She would like to convey her deepest gratitude to all those she interviewed during the fieldwork for their time, hospitality, and insights.

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# ABBREVIATIONS

| | |
|---|---|
| BMA | Bangkok Metropolitan Administration |
| CSR | Corporate Social Responsibility |
| DPC | Department of Public Cleansing |
| EPR | Extended Producer's Responsibility |
| ISWM | Integrated solid waste management |
| MSW | Municipal solid waste |
| MSWM | Municipal solid waste management |
| NGO | Non-governmental Organization |
| PCD | Pollution Control Department |
| PPP | Polluter Pays Principle |
| | Public Private Partnership |
| SW | Solid waste |

US$1 = 33 Baht

# CHAPTER I
# INTRODUCTION

## 1.1 Background

Perhaps no greater emblem of technological progress, industrialization, and urbanization exists today than the modern-day landfill in all its monstrous and pungent glory. This is not to say that the landfill is a natural or inevitable product of modernity. It is rather an artificial construct, its discarded contents—vestiges of modern consumer lifestyles— having been deliberately transported across spatial and social boundaries to a single site of disposal. Bounded by territory, the landfill is the final destination for many materials, signaling the end of the global value chain in the life cycle of resources. Compared to its corollary, the dumpsite, the landfill occupies a higher place in the hierarchy of disposal sites, for if the dumpsite reflects the absence of order, the landfill introduces, at the very least, a measure of control amidst the chaos. It necessitates some degree of bureaucratic and technical structure to be in place. As such, the landfill is an apt starting point for the study of modern urban waste systems, where one can begin to uncover the complex and embedded layers of decision-making processes and practices among various actors. In other words, this site is not no man's land, but a *governed wasteland*.



This thesis begins with the question in its title: Who governs the wasteland? The title draws its influence from Robert Dahl and his seminal book, *Who Governs*?, which examined political life in the American city of New Haven, Connecticut (Dahl, 1961). The question of "Who governs?" underscores the issue of governance, rather than the role of government, in decision-making processes. As Dahl demonstrated, the power dynamics within the city politics revealed that no single group of elites dominated and controlled policy decisions over key urban issues. Instead, power was distributed competitively across, albeit not equally, various interest groups. From a pluralist perspective, political outcomes are thus a culmination of struggles over

power, namely through processes of contestation and coordination among diverse actors embedded in both formal and informal urban political structures.

The public and private provision of municipal waste services offers an especially revealing domain to examine the distribution of power among multiple actors in urban governance. Waste has issue salience, as evidenced by its prominent appearance in policy discourses over governance and development at various scales. The challenges posed by waste generation, and its subsequent collection and disposal, are associated with patterns of rapid population growth and urbanization in a context of limited resources and infrastructure. At the global level, the Sustainable Development Goals explicitly mentions waste under Goal 12, which aims for sustainable consumption and production, including the improved management of hazardous waste and food waste (UN General Assembly, 2015). At the national and local level, public services in waste collection and disposal make up a large proportion of municipal governments' budgets, especially in many developing countries. It is estimated that in cities across developing countries, approximately 30-50% of municipal budges are spent on managing waste, but only 50-80% of the total waste is collected (Medina, 2000). Maximizing waste collection is thus a goal of many municipalities, posing a coordination problem within power structures of governance. In light of these policy priorities, it is not a coincidence that among development indicators used today, a city's level of cleanliness can now serve as a proxy for good governance (UN-HABITAT, 2014).



This research explores how power relations and dynamics are embedded in discourses, particularly around the concept of informality, through a case study of urban waste governance in the megacity of Bangkok, Thailand. Applying a qualitative approach, this thesis relies on in-depth, unstructured interviews with waste actors located in and around Bangkok. It examines how these various waste actors articulate the role of the informal recycling sector and informality within municipal waste system and practices. As such, the concept used in this study—that of a wasteland—indicates the various modes through which discourses are produced, diffused, interpreted, and integrated into modern urban governance. The wasteland represents a

policy domain through which discourses of informality and power are interrelated. The analysis employed in this research consequently seeks to reveal the ways of thinking among different waste actors about the role of the informal sector and practices, and how this aids in the production of knowledge about informality. With the increasing attention and call for more integrated forms of solid waste management, discourses on the informal recycling reveals important claims about who and what matters, how they should or might be integrated, and by the same token, who is excluded or marginalized. These discourses in turn influence the policy preferences and agendas in urban waste management, as well the processes through which decisions are made among the various and groups who govern Bangkok's wasteland.

## 1.2 Objectives of Study and Research Questions

The objective of this research is threefold. First, it explores the discourses of informality in Bangkok's waste management by examining the ways in which waste actors perceive and talk about the role of the informal sector and informal waste practices, particularly in regards to recycling. Second, it examines within these discourses how power is described, in terms of who holds power, what types of power, and what are the relevant power relations at hand. Third, it seeks to discern how these power relations are tied to particular ideas and claims about informality and the informal sector.

This study seeks to address the following research questions:

1) What types of discourses are used by waste actors to describe the informal recycling sector and informal practices in Bangkok's waste management system? To what extent are these discourses around informality complementary or conflictual with one another?
2) According to these discourses, who are identified as actors with power within the waste management system and informal recycling practices?
3) Which power relations are identified as critical within discourses around informality, and how is this power defined?

## 1.3 Hypothesis

According to the main hypothesis of this study, discourses of informality will reflect particular perceptions, claims, and beliefs about power, namely what is power, who holds power, and what types of power relations are critical in waste governance and waste management systems. Various waste actors and groups may express discourses that may be conflictual or complementary with one another depending on the concepts of power they employ, which are linked in part to their particular interests and identities.

## 1.4 Conceptual Framework

This research applies the concept of discourses of power to a study of informality and in particular, the informal recycling sector in urban waste management. Discourse refers to "an ensemble of ideas, concepts and categories through which meaning is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices" (Hajer and Versteeg, 2005, pp. 175). Through a discursive lens, power is not assumed as a given, but is produced and reproduced through a struggle over meaning. As one of its key strengths, critical discourse analysis reveals how certain ideas and types of knowledge legitimize power as a form of control, for instance, over particular resources that are less easily quantifiable, but important in (re)producing dominance and inequality (Van Dijk, 1993). Instead of treating power as simply one actor compelling another actor to act in such a way than he or she would do otherwise, a discourse analysis problematizes this narrow concept of power by interrogating the subjectivity of actors within power relations and opening the possibility to the joint production of various forms of power among different actors.

Furthermore, this discourse analysis looks specifically at the relationship between power and informality in the context of waste governance. Informality generally refers to those entities, actors, and practices that exist outside the legal and regulatory

framework. However, this research approaches informality as also an area of discourse shaped by ideas, concepts and categories regarding what defines informal versus formal structures, as well as who constitutes the informal sector across various perspectives. As the informal sector in resource recovery and recycling has been recognized as an instrumental component of urban waste management systems in developing countries, this research looks at how waste actors articulate particular ideas and claims about informal workers, structures, and practices in the case of urban waste management in Bangkok, Thailand.

## 1.5 Research Methodology

This study used primarily in-depth, unstructured interviews with policy actors involved in waste governance in the Bangkok Metropolitan area. In referring to these type of policy actors, this study uses the term "waste actors" to include the following groups:

- Bureaucrats in the government's executive branch (ministries and related departments)
- Authorities in the local government administration
- Private businesses and formal enterprises
- Workers in the informal sector
- Academics
- Professionals in international organizations
- Professionals in international non-governmental organizations
- Professionals in national or local civil society organizations
- Media personnel

The individual names and identities of relevant waste actors were collected through an analysis of academic literature, international and national media publications, and grey literature (generally working papers and reports from

organizations). After the list was compiled, an initial request for an interview was emailed to each identified person. In cases when an individual contact was not available, an invitation was sent to the organization with an interview request.

The list of waste actors grew over the course of interviewing, when informants often suggested or recommended other individuals and organizations whom they felt would be appropriate for this study. This snowballing sampling technique provided many distinct advantages. First, it enhanced the list of informants by revealing key stakeholders in Thailand's waste management system, which the initial survey of the literature did not identify beforehand. Second, the interviewers typically had long-term working relationships with their contacts, and they often provided a direct contact. These direct connections drastically reduced the amount of time between the initial request and the actual interview to take place. Thirdly, the manner in which those interviewed personally identified other important actors in the waste management, particularly in such a large and dense network in the case of Bangkok, provided insight into the type of networks, both informal and formal, that exist in this sector. It provided additional data as to which relationships or partnerships were critical within these multilayered networks. Through a small-scale mapping exercise, the researcher could estimate the level of professional and personal distance between different actors in waste management based on whom they directly recognized or personally knew, compared to those whom they did not identify.



A total of 17 interviews with 23 informants was conducted and completed in 16 days. All interviews were conducted in person, and mostly within Bangkok (two interviews were held in the nearby provinces of Nakhon Pathom and Nonthaburi). Each interview was conducted in either English or Thai; in a few interviews, both languages were used during the interview. The average time for each interview was one and a half hours. In four interviews, the researcher conducted the interview in a group setting with 2 to 3 informants from the same enterprise or department.

In the case of informal workers, the researcher exclusively relied on personal connections to a third party whom both parties knew in order to prearrange an interview. The researcher and the broker agreed prior to the interview that the

interviewee would be compensated for his or her time. In these cases, a small monetary sum (typically 100 baht) was provided to the interviewee after the interview had ended.

### 1.6 Limitations and Scope

As all interviews and site visits were completed within the three weeks allocated for data collection and fieldwork, this short time-frame placed substantial limitations on the scope of the research project. A major challenge in studying waste management in a large municipality like Bangkok is the large number of relevant stakeholders involved in the city's waste and recycling sector. Only a small fraction of identified waste actors was successfully contacted and interviewed for this project, meaning that many key stakeholders across all sectors were left out of the sample. This study is especially limited by the number of interviews it was able to secure with those directly engaged in informal recycling. Individuals from specific groups, such as street waste-pickers and junk shops, were not included in the interview sample, as access to these groups were restricted and difficult to access independently of a third-party broker whom the research personally knew. Other gaps in the stakeholder network remain. Most notably, the researcher had secured interviews with a major stakeholder in recycling, but due to unanticipated delays, these interviews were not completed during the fieldwork period.



In addition, this research project was entirely self-financed by the researcher, who, as a graduate student, was already working with a minuscule budget. Therefore, every cost-cutting measure was taken to minimize the researcher's personal expenses in regards to transportation, transcription of interviews, and translation services of primary and secondary materials. The researcher declined a number of interviews and site visits when the cost of traveling was too prohibitive. For the purpose of this study, the majority of interviews were conducted in English in order to facilitate the researcher's own note-taking such that no audio recording would be necessary. This decision drastically reduced the time and money that would have been allocated for transcribing the interviews either by oneself or by a hired transcriber. Similarly, many

interviewees provided a substantial amount of literature and data in Thai for the researcher to review. However, due to financial constraints, this study focused its scope exclusively on interview transcripts as its primary source of data.

## 1.7 Ethical Considerations

Prior to every interview, the researcher made it explicit in the request for an interview that she is a graduate student, and that the primary purpose of the interview was to gather data for a master's thesis. During each request, the researcher communicated to the potential interviewee that participation in the interview was completely voluntary. A few potential informants declined the request to be interviewed; in such cases, the researcher did not reach out again, as to respect their decision to not consent to be interviewed.

As all theses from the Master of Development in International Development Studies (MAIDS) program at Chulalongkorn University are publicized and made accessible to the public, the researcher made it a priority to ensure the anonymity of all informants who participated in this study. Erring on the side of the caution, this thesis removed all information that could be used to determine any particular informant's identity. The information excluded from this text include not only the informants' names, but also their specific job titles.



## 1.8 Significance of Research

For many municipal governments, especially those in developing countries, waste management remains a formidable challenge. More emphasis has been placed on increasing and improving recycling efforts to reduce the costs of waste disposal and as a means to achieve a more circular economy. At the same time, many municipalities rely on an active informal recycling sector. Therefore, as countries strive for more formal and more integrated waste systems, these policies, whether

directly or indirectly, have profound implications for those employed in this sector, as well as those who rely on their activities through the recycling value chain.

This research selects as its case study the city of Bangkok. A substantial amount of literature has been previously written and studied about the city's waste management system and informal recycling sector. However, there remains little research on how discourses of informality operate in Bangkok with regards to urban waste management. This research project aims to contribute to the literature by evaluating the discourses around informality among waste actors that inform and impact their policy preferences and decisions. Discourse analysis provides an especially compelling lens to interrogate how power is perceived, normalized, and performed by various actors in urban waste management systems. As such, this research aims to contribute to the ongoing discussion on sustainable development through a better understanding of the dynamics of power at the discursive level and its influence on the pursuit of more efficient, environmentally sustainable, and socially equitable outcomes in modern urban waste governance.

# CHAPTER II
# LITERATURE REVIEW

## 2.1 Introduction

This review first examines the academic literature on solid waste management in Bangkok, Thailand, followed by literature on the informal sector in MSW at both cross-national scale and in the specific case of Bangkok, Thailand.

## 2.2 Integrated solid waste management

The proliferation of policy discourses around "integrated solid waste management" (ISWM) reflects a broader shift in the field of environmental politics that has mainstreamed the concept of "integrated resource management" (IRM) into policymaking. IRM is conceptualized as a response to the shortcomings of traditionally top-down approaches to resource management, which tended to both hierarchal and fragmented due to its sectoral orientation. Proponents of IRM contend that a more integrated framework would pay closer attention to linkages between components of a resource system, such as the interactions and interconnections. As one of its central claims, a more holistic and integrated perspective could better account for the synergies and trade-offs, and thus produce more efficient, equitable, and sustainable outcomes in development and management. On issues of governance, IRM is seen as more inclusive given its emphasis on participatory decision-making processes and multi-stakeholder dialogues (Hajer, 2003). Integrated solid waste management in particular refers to "a comprehensive waste prevention, recycling, composting and disposal program" (EPA, 2002). ISWM thus encompasses not only the collection, transport, and disposal activities, but also the prevention and recycling of solid waste. In Thailand, ISWM has been incorporated as part of the country's

national plan, which places particular emphasis on the minimization of waste generation by promoting the 3Rs Concept (Reduce, Reuse, and Recycle).

## 2.3 Solid Waste Management in Bangkok

The Bangkok Metropolitan Administration (BMA) manages the collection and disposal of MSW generated in Bangkok. Unlike other municipalities, Bangkok has its own waste management plan which the BMA operates mostly independently; this means that the BMA does not need approval form the central government to initiate its policies on waste with the exception of budget requests (Mattamara et al., 2004). The Department of Environment in the BMA oversees the management, research, monitoring and reporting on environmental quality. The Department of Public Cleansing (DPC) under the BMA works with 50 districts on public sanitation and are responsible for reporting data on waste collected. The BMA covers 100% of its waste generation within its jurisdiction. The collected waste, with the exception of hazardous waste, is transported to one of three transfer stations inside Bangkok (located in On Nut, Nong Khaem, and Sai Mai). Of the collected waste, 90% is disposed at two sanitary landfill sites, located in Nakonpathom and Chachoengsao, two vicinity provinces, while 10% is composed at On Nut transfer station. Across all 50 districts in Bangkok, collected waste has a high moisture density given that approximately 55% of the waste is organic, meaning that it can be composed, while 11% can be recycled (Sukholthaman and Shirahada, 2015).



When compared to other megacities, Bangkok's waste generation rate has increased by an average of 0.7% per year, based on 2009 to 2013 yearly figures due to lack of community involvement, limited infrastructure in waste collection (for instance, collection trucks), and inappropriate technology for waste treatment after separation (Laohalidanond et al., 2015). Currently, there is insufficient landfill capacities to manage MSW, and the building of an additional landfill site is constrained by the lack of land (Sukholthaman and Shirahada, 2015). The BMA is

currently pursuing, albeit with delay, a waste-to-energy scheme that would establish 2 incinerators in Bangkok with the power production capacity of 25 megawatts (Laoholidanond et al., 2015).

Thailand has an estimated 1,730 dumpsites, where approximately 65% of municipal solid waste (MSW) collected in the country are disposed of (Simachaya, 2016; Prechthai et al., 2007). The municipal government's reliance on dumpsites as a primary mode of disposal has created a substantial environmental impact in part due to the concentration of heavy metals in the waste runoff with the potential to contaminate and pollute soils (Prechthai et al., 2007). For instance, in one case study of a large dumpsite located in Nonthaburi, a neighboring province to the city of Bangkok, the land surrounding the dumpsite are largely paddy fields with economic value, and are especially vulnerable to heavy metal toxicity (Prechthai et al., 2007, pp. 87).

Solid waste under the BMA is covered under national legislation, particularly the 1992 Public Health Act. This Act defined solid waste as "waste paper, waste cloth, waste food, waste commodity, plastic bag, food container, soot, animal dung or carcass, including other thing swept away from roads, market places, animal farms, or other places" (Public Health Act, 1992, unofficial translation). This definition excludes industrial waste (Sukholthaman & Shirahada, 2015). The Act legislates several clauses on solid waste management with implications for the informal sector. First, it defines the jurisdiction for the disposal of sewage and solid waste to the local government, meaning that the implementation of the Act rests with the local authorities to manage. Second, within the same chapter, the Act defines, "Any person is forbidden to operate the business of collecting, transporting, or disposing of sewage or solid waste as a business or for payment of service charges, unless he has obtained a license form the local official." This section articulates the illegality of workers and businesses in informal sector if they are unlicensed by the local government. Third, the Act designates a category of "Business Detrimental to Health." In practice, this category has been applied to "junk shops", or businesses dealing in the buying and selling of recovered materials from waste.

## 2.4 Definition of Informal Sector, Informal Employment, and Informal Economy

In 1993, the International Labour Organization (ILO) defined the informal sector "as a group of production units comprised of unincorporated enterprises owned by households, including informal own-account enterprises and enterprises of informal employers (typically small and non-registered enterprises)" (ILO, 1993). The informal sector here refers primarily to those employed by enterprises. In 2003, ILO issued another definition on informal employment as "all remunerative work (i.e. both self-employment and wage employment) that is not registered, regulated or protected by existing legal or regulatory frameworks, as well as non-remunerative work undertaken in an income-producing enterprise. Informal workers do have secure employment contracts, workers' benefits, social protection or workers' representation" (ILO, 2003). This definition encompasses all types of informal jobs. Together, the informal economy refers to "all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements (ILO, 2017).

## 2.5 Informal Sector in MSWM



In developing countries, the informal recycling sector in waste management is generally composed of four types of actors: itinerant waste buyers, street waste pickers, municipal waste collection crew, and waste pickers at dumpsites (Wilson et al., 2006). Their activities include collecting, transporting, sorting, and reselling recyclable waste materials. Together, these actors make up a sizable workforce in managing waste among developing countries, where approximately 1 percent of the urban population (about 15 million people) is estimated to work as waste pickers alone (Medina, 2008). This proportion is notably larger in Asia and Latin America, where about 2% of the population is employed in the informal waste sector (Medina, 2000). The characterization of this sector as "informal" tends to be broadly defined as

lacking legal recognition by the state, although their irregularity in income levels, labor time and space, social protection, tenure insecurity, and job instability also define their informal status. While informal waste practices are varied and widespread, the people employed in this sector generally tend to be poor and migrants who engage in informal waste sector in order to supplement other sources of income (Medina, 2001). Rather than viewed as a product of modernity, informal recycling tends to carry negative connotations, often widely "regarded as backward, unhygienic and generally incompatible with a modern waste management system" (Wilson et al., 2009, p. 798). As such, informal workers are often ascribed a low status in society. While informal recycling work can be means for securing livelihood among disadvantaged groups, their employment in this sector can reinforce their stigmatization, further limiting their mobility to move out of poverty.

Due to the market for recyclable materials, whose prices fluctuate widely depending on industry demand and supply, scavengers directly and actively respond to these market, seeking out and retrieving those materials that command the highest prices. In developing countries, the informal sector is particularly active due to high unemployment rates, coupled with widespread poverty and lack of a safety net for the poor (Medina, 2001, pp. 237). As such, waste pickers provide this service primarily due to economic factors (Medina, 2008). Some researchers have recognized the agency of workers in their decision to pursue work in the informal sector, as it provides the benefit of independent entrepreneurship and some level of mobility within informal waste management (Steuer et al., 2017). Scavengers, however, often receive low incomes in part due to the exploitation they are subject to from middleman. As such, one proposed way to improve the livelihood of scavengers is to increase their income and bargaining power through a policy intervention that would allow scavengers to circumvent these middlemen (Medina, 2000). However, whether participation in the informal recycling sector can overall contribute to larger objectives of poverty reduction, especially for the vulnerable and/or marginalized, remains debatable and warrants further attention.

The extent to which an active informal recycling sector contributes to environmental sustainability depends on the specific problems and challenges from waste that governments at all scales must address. With rapid industrialization and urbanization, municipal governments must manage the corresponding increase in solid waste production and its substantial environmental costs. These threats to environmental sustainability include emissions of carbon dioxide from waste incineration and of methane from landfills, water contamination due to illegal dumping and improper disposal, and threats to biodiversity from accidental waste consumption (Pariatamby and Tanaka, 2014). Waste management poses a particular challenge for developing nations, which may lack the necessary state capacity to implement and enforce effective policies. In many cases, waste management systems become decentralized and often privatized as an effort to reduce costs. For activities like recycling, municipal governments may further lack the resources and incentives to invest in the technology that can facilitate the recycling process. In other notable cases, advanced technological transfers to developing countries for the purpose of improving waste management processes have proven to be unsuccessful (Medina, 2000). Within this context, the informal recycling sector emerges in response to the demands of development, which require intervention in waste management, as well as to an absence in governance, as many municipal authorities in developing countries do not directly manage recycling activities.



## 2.6 Policy responses to the informal sector

Municipal governments have followed different policy approaches towards the informal recycling sector. One proposed typology categorizes governments' public policies according to four types of responses: repression, neglect, collusion, and stimulation (Medina, 2000, pp. 57-58). Repression includes the passage of laws to deem informal recycling activities illegal and punishable by the state. Neglect of the informal recycling sector involves ignoring the workers and letting informal activities continue with little to no state interference or intervention. Collusion takes the form of patronage relationships, in which authorities permit informal recycling activities, such

as access to dumpsites, in exchange for political support, monetary sum, or other goods or benefits. Lastly, stimulation refers to the authorities' active support of the informal recycling sector, such as policy interventions to better integrate them, such as improving working conditions. However, it is less clear from the present literature which factors and conditions accounts for these divergent public policy outcomes. For example, in a study of Enugu, Nigeria, Nzeadibe (2009) finds that municipal authorities tend to ignore informal recyclers, even though they are aware of the informal sector's presence and activities in their city's waste management. According to the author, this neglect is related to perceptions and attitudes among authorities and the public who do not view informal recyclers as relevant stakeholders in waste management, despite acknowledging the informal sector's contributions to the reduction of landfill waste. However, it is possible that these perceptions and attitudes are as much a cause as it is an effect of policymaking that systematically denies the official recognition and participation of informal recyclers.

## 2.7 Models of organizing informal workers

As a means of stimulating the informal sector, the World Bank cites Medina (2000) in presenting three successful models of organizing informal waste workers, specifically scavengers: social cooperatives, microenterprises, or public-private partnerships (PPPs). Social cooperatives have been implemented in several cases in Latin America, and a few cases in Asia, including in the Philippines, India, and Indonesia. The successful formation of social cooperatives among scavengers depends on the following key factors, including the support and assistance from NGOs and the timing of the formation of the cooperative, in which an optimal window of opportunity would before a change in political leadership at the local administrative level. Privatization offers both opportunities, in the form of cooperatives being awarded contracts to render services to reduce the role of the state, as well as threats, as companies can limit or prohibit scavenging activities in certain areas, thus decreasing scavengers' income. The potential benefits that the informal sector could derive from more formalized models of organization includes formal legal recognition

of their labor status, ability to enter contracts with industries, neighborhoods, and businesses (and out of dumpsites) and to secure grants from donors, and potential to garner higher prices for their materials by cutting out or reducing the role of the middlemen (Medina, 2008). Therefore, alternative and formalized modes of organizing waste-pickers can be a possible means of producing better social, economic, and environmental outcomes in the informal sector.

Loosely-formed organizations among the informal recyclers have also been identified in recent literature. Martinez and Pina (2017) use a SWOT analysis to identify the key issues in the transition of informal sectors from unauthorized waste pickers to authorized recycling associations in Bogota, Colombia, (Martinez and Pina, 2017). Among their findings, the authors underscore the need for support from both public and private sector through providing seed capital and financial remuneration in order to improve working conditions and to enhance chances for growth and sustainability through consolidation of recycling. Strategic alliances between the recycling associations and the industrial sector were identified as important in the formation of partnerships in ISWM, in order to reduce middleman in the sale of recyclable waste, and thus enhancing workers' income and stabilizing prices (Martinez and Pina, 2007: 1079). However, the main threat to these types of alliances is increased competition between both parties, in which private companies may choose to bypass the recycling association and provide recycling services themselves.



## 2.8 Public-Private Partnerships and the Informal Sector in SWM

Medina (2008) identifies public-private partnerships (PPP) as one model of organizing waste pickers that can potentially improve their working conditions and livelihood opportunities. PPPs are defined as "a partnership contract between a public-sector institution and private party, in which the private party assumes substantial financial, technical and operational risk in the design financing, building and operation of a project" (Liebenberg, 2007). The attractiveness of PPP in discussions of ISWM is due to larger trends within resource management's shift, such

as the emergence of resource dependency theory, that emphasized potential "win-win" outcomes rather than the traditional "winners and losers" perspective in business operations (Ahmed and Ali, 2004). The idea of cooperation, rather than competition, underscores the value placed upon partnerships, particularly in the form of private-public partnerships (PPPs), as a means to provide "win-win" outcomes. In the area of waste, a PPP would benefit the private sector, by tapping into a market where there is a steady and substantial (and therefore profitable) public demand for a service, while the public sector would benefit from reducing its budget expenditure that it would otherwise spend on providing these services directly to their constituents.

However, in order for PPPs to be successful in SWM, Ahmed and Ali (2004) note that the presence of several enabling conditions, including: a positive culture that fosters leadership and civic participation; a common vision and understanding of the targeted area among public sector, private sector, and community; a participatory ethos that successfully merges community and individual interests of its members; and a continued commitment to the policy, including the ability to adapt to the changing environment. The authors further acknowledge that it remains unclear in these discourses what a PPP in SWM would mean for the active informal sector, made up of waste-pickers, waste-buyers, recycling industries, community organizations, NGOs, and micro-enterprises. As the authors ask, "The relevant question is when and how can PPPs promote informal activities?" (Ahmed and Ali, 2004, pp. 476). As one example, Medina (2008) points to existing PPPs in Latin American cities where the municipality provides infrastructure and equipment while waste pickers provide labor. Although public and private sectors are both active in SWM in developing countries throughout Asia, it is less clear from the literature if public-private partnerships offer a meaningful policy for organizing the informal sector in this region.



## 2.9 PPPs in SWM in Thailand

Kritjaroen (2011) notes that PPPs have appeared as a concept in public service delivery since 1970s, albeit generally limited to the Bangkok Metropolitan area. He

further points a possibly common understanding in which, “it is said the solid-waste issue has been the only public service of municipal governments that provides the emergence of Public-Private Partnerships in Thailand” (Kritjaroen, 2011, pp. 73). Applying an urban regime theory to the studying the form of PPPs in SWM in Rayong Municipality, the author finds that the distribution of power among local authorities in Thailand reveals a strong and stable institutional coalition between politicians and business elites that enabled cooperation on environmental issues. As a result, these power structures in local governance, based on a coalition of political and economic interests, facilitated the construction of waste-to-fertilizer and energy plant in the municipality. At the same time, a critical aspect of the success of integrated SWM in Rayong was the bottom-up approach that involved community participation, community leadership and commitment, support from NGOs, government agencies, and private sector.

## 2.10 Role of Civil Society Organization in SWM

Through its mediating effect on patronage and political clientelism, the presence of civil society organizations may also an impact on policy outcomes in recycling activities for waste management (Medina, 2000; Charuvichaipong & Sajor, 2006). In a multi-country comparison of successful scavenger cooperatives, Medina (2000) contends that non-governmental organizations provide crucial financial, technical, business and legal assistance to scavenger cooperatives, as a meaningful alternative source of support for cooperatives to form and organize without having to rely on traditional forms of patronage support from the state. Without NGO support, members of newly-formed cooperatives are susceptible to clientelistic relationships with the state. If NGO assistance is a mechanism through which informal recyclers can successfully secure assistance and organize without entering a patronage relationship with state actors, then the opposite case would show that the absence of NGO support leads to less successful outcomes from recycling policies. Charuvichaipong & Sajor (2006) provide evidence for the counterfactual case in a study of the failed waste separation program Hatyai, Thailand. The lack of autonomy among civil organizations, and a top-down policy approach that excluded grassroots

participation in the policy process, were the main contributing reasons to why the local government's waste separation program failed. The authors found that clientelism and patronage were embedded into the relationships between authorities and the community people, thus hindering public mobilization and reifying the community members' belief that waste management was largely the government's, and not the public's, responsibility. The success and failures in organizing informal recycling workers or community-level waste initiatives thus point to the importance of existing political relationships between local officials, civil society actors, workers, and communities.

## 2.11 Integration of the Informal Sector in MSWM

More recent literature reflects a growing consensus that the informal recycling sector enhances overall waste management in developing countries: it reduces the costs of municipal government's labor costs and technological transfers, lessens the environmental impact by decreasing the amount of materials sent to landfills, and provides livelihood and employment for the poor. Therefore, many policy recommendations stemming from this consensus argue for greater stimulation, or active support, for the informal recycling sector. This discourse operates around the implied logic that improving the integration of informal recycling sector into waste management systems will create positive outcomes. The language of a "win-win" situation is explicitly used here, with an emphasis on co-benefits among the private, public, and informal sectors. Academics put forth an instrumental argument through the framing of "win-win" outcomes. For instance, in Wilson et al. (2009), the authors find that recycling rates are generally high in developing countries owing to the fact that the informal recycling sector supports itself with revenues through its own activities and operates almost entirely independent of the formal sector. According to the authors, this situation provides a unique "win-win" opportunity for municipal governments in developing countries and note:

> Current informal recycling systems are saving the formal sector money through reducing the quantities of waste collected for treatment and disposal. The extent of these savings will increase as systems are

> modernized and costs increase to meet environmental standards. There is a clear potential for "win-win" cooperation between the formal and informal sectors as providing support to the informal sector, to build recycling rates and to address some of the social issues that could reduce the overall costs of waste management for the formal sector. (Wilson et al., 2009, pp. 634).

Policies to integrate of the informal recycling sector are justified on the grounds that it will reduce costs that are expected to rise with increased modernization of waste systems and the simultaneous demand to meet environmental standards. An additional benefit of integration is posited to be that it would enable governments to address social issues, and thus reduce the overall costs of formal waste management. As waste management systems modernize, the "win-win" perspective reasons that the integration of the informal recycling sector vis-à-vis the formal sector is a logical step forward, given that the informal recycling sector has already shown to contribute positively to recycling and waste rates. In a way, this "win-win" approach is based on a perceived need to make visible the contributions of an existing and active informal sector.

## 2.12 Perceptions of Waste and the Informal Sector

How "waste" is interpreted and defined by various actors also inform the subsequent perceptions and attitudes around waste management policies. In Nzeabide (2009) study, the perception of waste may explain why municipal authorities in Enugu, Nigeria have largely pursued a policy of neglecting or ignoring the city's active informal recycling sector. According to Nzeabide, "Although scavengers rummage through the landfill to extract valuable materials, they do so at their own risk" (p. 97). This statement highlights the importance of perception, specifically regarding who is to blame— in this case, the informal recyclers themselves— and the resulting implication that they should thus absorb all the risks of their activities. Perhaps given the state's own limitations to adequately manage its waste challenges, the common response of municipal governments is to assign responsibility back to individuals within society. Formal waste management further depend on framings of waste, and whether it is seen as a hazard or resource. As Nzeabide contends,

"Authorities also do not perceive waste as a potential resource as against the informal sector that sees waste as ore – a source from which valuable materials are extracted" (p. 97). This perception of waste as a risk or resource may explain why authorities pursue a policy of neglect, in which informal waste activities are not seen as providing economic and social value, but through the risk-seeing behavior of informal recyclers, whose consequences lie beyond the purview of the state's responsibilities and duties.

## 2.13 Risks to Informal Workers in SWM

Scholars have noted the health hazards to the waste workers are exposed. Jerie (2016) documented the occupational hazards among those working directly in solid waste management among informal enterprises in Zimbabwe. These hazards included muscular-skeletal disorders, biological agents, hazardous substances, and mechanical hazards, noise/machinery, vibration, UV/IR radiation, electrical risks, and psychological burden (Jerie, 2016: 7). These occupational hazards are due to the properties of the waste, as well as the dominance of manual handling tasks that are performed by the informal sector.

Looking specifically at the case of waste intermediates (i.e. those who facilitate the exchange between waste collectors and waste traders) in Hanoi, Vietnam, Mitchell (2009) finds that the waste workers in the informal sector were especially vulnerable to globalized risks. Through a series of surveys and interviews, Mitchell find that waste intermediaries face increased competition from others in the same line of work, as well as a changing economic due to fluctuating housing and land market prices, placing informal waste recyclers in a precarious position in the urban economy. Price fluctuations in the market and spatial regulations implemented by the state thus render the subjectivities of informal recyclers more vulnerable without the state-mandated social protections.

# CHAPTER III
# DISCOURSES ON INFORMALITY AND THE INFORMAL SECTOR AMONG WASTE ACTORS IN BANGKOK

## 3.1 Introduction

This chapter examines the types of discourses around informality that emerged in the researcher's interviews with different waste actors. It analyzes the key claims that were made by waste actors about the role of the informal sector and informal waste and recycling practices, and the extent to which these ideas and arguments among certain waste actors overlapped or were odds with others. It further identifies how power, particularly power relations, were defined in relation to discourses on informality.

## 3.2 Waste Actors Directly Engaged in Small-Scale Informal Recycling

Interviews were conducted with waste actors who were directly engaged in the small-scale collection and selling of recyclables. This group included shop-owners, office cleaners, and housekeepers, all of whom were women. In terms of scale, this group represented the initial stage in the recycling value chain, which occurs at the ground site of resource recovery from waste. Even at the most individualized level of waste recovery, each interviewee described her activities within an intricately coordinated and reliable system. One shopkeeper, for instance, explained that she collected all recyclable materials from her small restaurant and coffee shop, which she disposed of directly to the closest junk shop every two weeks. The income she typically derives from each transaction is approximately 650 Baht. This sum is larger than what her neighboring businesses generate due to the fact that she and husband own a truck, and her husband typically transports the materials to the junk shop directly. Her access to an independent means of transport is thus a key resource in her engagement within the informal recycling network. In contrast, her neighbors who do

not have access to a vehicle rely on the informal waste buyers who travel on foot, usually with a cart or *salaeng* in tow, and who buys the recyclable materials from shopkeepers. These waste intermediaries then sell to the junk shop. As a result, the income that shopkeepers earned is less when selling via an intermediary versus directly to the junk shop. A key resource for informal recyclers also includes proximity to a junk shop, as those living within distance of a junk shop engage more frequently and more directly in recycling transactions than those who live further away.

While the selling of collected recycled materials through informal networks is not the primary or sole source of income for shop-owners, office cleaners, and housekeepers, those interviewed noted that it nevertheless constitutes an important source of income that enables them to meet their household expenses. They explained recycling activities as an integrated and routine part of their jobs and work lives, that provides a steady and reliable income. Importantly, shop-owners, office cleaners, and housekeepers articulated the distinct benefits of their engagement in informal recycling networks, which tend to be very individualized and personalized. While explaining their activities, they often described themselves as entrepreneurial agents who oversaw the collection process, managed their sellers, coordinated the transaction, and were responsible for the income they generated from the exchange. They describe the types of choices and calculations that inform their participation. This perception of the individual actors' relative autonomy within recycling networks was also corroborated by condominium and office managers, as well as the husbands of shop-owners, who acknowledged that these women were completely responsible for the process of collecting and selling of materials, independent of any interference from an authority figure. The women noted that the informal system worked well and efficiently, and preferred for the system to remain unchanged, because of the benefits it provided to women in the form of income and livelihood. Condo and office managers also expressed satisfaction with the current informal arrangement as it reduced the waste-related responsibilities under their management, while also improving their staff's job satisfaction, as they could organize the informal recycling by their own efforts and retain the full income they derived from these activities.

Importantly, managers did not see informal recycling as necessarily cost-saving, as the management already pay an inexpensive monthly sum for waste collection services to the Bangkok Metropolitan Administration.

Informal recyclers perceived these localized, individualized and decentralized practices to be efficient and well-adapted to Bangkok. They did not vocalize support for alternative systems of organizing the city's recycling, nor to increase the profitability or transparency of their interactions. The reasoning behind these policy preferences is that the price for recycled goods is already set each week by the city of Bangkok; junk shops and waste dealers then set their own prices accordingly and competitively, such that there is little variation across competitors within a given spatially-defined network. In one case, a housekeeper preferred to sell her collected materials outside of Bangkok where the prices were higher, an opportunity made possibly because she commuted by car to and from work, and thus was able to absorb these transportation costs. However, as informal networks are very localized, making use of short distances and several transactions among multiple waste actors, those engaged in informal recycling do not see the lower prices as exploitative, given the benefits of convenience, reliability and relationships with particular waste intermediaries or junk shops, and the subsequent ease of these interactions and transactions. Actors who do not directly participate in these networks are much more critical of the argument that these recycling networks are efficient. However, at least one private sector actor noted that the lack of space for curbside recycling is one reason for this reliance and preference for informal recycling networks, as well as why it remains difficult and unlikely for Bangkok to transition its waste collection services to a more formalized system. The issue of scale thus functions importantly in the perceptions of informal recycling as an efficient and attractive system to participate in. From the perspective of informal recyclers who rely on this income, the individualized and localized networks enable them to derive a steady and reliable source of income for themselves and their households' livelihoods. For those informal recyclers who do not depend on these activities as their only source of income, their engagement in informal recycling enables them to take advantage of and organize the

resources at their disposal, and to make choices on how to best collect and sell their recyclables within their networks.

An interview was also conducted with a small-scale waste dealer in a busy commercial street in Bangkok. A former customer of the dealer had recommended the researcher to contact this waste dealer, as he "loved to boast about his business" and was "very proud and loves to talk about how much he knows." These expressions of pride for his business acumen and entrepreneurship, and references to in-depth knowledge about the informal recycling trade, were apparent during the interview. These were striking, because a common claim in interviews with waste actors, particularly among academics and engineers, was that small-scale informal recyclers participated in this line of work primarily because it is the only available employment for them. The discourse tends to explain the reasons why workers participate in informal recycling as a symptom of their social inequality, need to secure livelihood, and a condition of poverty. These reasons may account for the activities of a proportion of informal recyclers, such those actors with the most minimal of available of resources, who derive their sole source of income from informal recycling, and/or lack other employments alternatives. However, those informal recyclers who were interviewed for this thesis did not describe themselves according to these reasons, although they believed that these reasons do apply to other types of actors, such as itinerant waste pickers or those who work at the dumpsites. In one interview with an office manager, for instance, she distinguished her activities from those who collected waste on the street, asking the researcher rhetorically, "Would you want to be seen by others collecting recyclable materials from the trash on the street?" The recovery of recycled waste is thus perceived as more socially acceptable and widely practiced as a form of activity when it is done within privately accessible places, like restaurants office buildings, condominiums and apartments.



While informal recycling does not take place widely and frequently in public spaces throughout Bangkok as well, the workers who engaged in these activities are much viewed more negatively; indeed, in discussions the researcher held with other informal recyclers, as well as taxi drivers, waste pickers who sourced their materials

from public accessible spaces were described as destitute, and viewed generally with pity, for instance, by the police and by the public. Importantly, these discourses reveal the hierarchy embedded across actors in the informal recycling chain, and the awareness among waste actors who engage in informal recycling towards the existence of this ascriptive hierarchy. Although there is a tendency in policy discussions around informal recycling to associate and refer to informal recyclers interchangeably with waste-pickers, those who work in the informal recycling sector merit disaggregation, as these discourses of differentiation show that power, especially through access to particular types of resources, is not distributed equally among those who engage directly in small-scale recycling activities.

### 3.3 Waste Experts on the Role of the Informal Sector

Waste experts who have worked in different programs under large international and non-governmental organizations also expressed during the interviews the need to recognize the resources of informal recyclers as a form of power, and their roles of agents in waste governance. According to one leading UN expert, some initiatives and projects in cities throughout Southeast Asia fail to formalize the informal sector in waste management schemes, because they do not take into account the agency in terms of the preferences and motivations. In his experience, “Most informal workers do not want formal jobs; they want the flexibility, and they enjoy being their own boss.” He referred to one experience in a city in Cambodia that attempted to assign informal workers to the clean the market, but that this failed as workers quit after a day on the job. In the context of development projects in urban cities across Thailand and other developing countries, he stressed the importance for any project or policy to ask first and foremost, “Who is the informal sector, and what are their skills?” and then to identify the modality to incorporate the informal sector within the urban economy and management. He emphasized the need to “give space to the informal sector if they are giving a valuable service.” Lastly, when asked in a follow-up question what resources do the informal sector bring to urban waste management, he responded that the informal sector’s critical resource is their “tacit knowledge,” or more specifically, that the informal

sector “can be a source and form of knowledge, that can improve upon and inform data” due to their insider and in-depth experience and important information including where the waste is located, what can be recycled, and how to recover the materials.

The lack of data, particularly those collected from governments on their waste, is a fundamental challenge in development projects across urban environments, and especially in the case of secondary and smaller-scale cities. This challenge was mentioned in interviews with waste experts, and shaped the perspective of the UN official interviewed that the informal sector could be valued as a source of knowledge in data-scarce environments. This type of discourse explicitly recognizes the power of informal recyclers as producers of knowledge. In this manner, it acknowledges informal recyclers as experts in their own right. According to waste experts, municipal governments in Asian cities, including that in Bangkok, tend to pursue a policy of neglecting or ignoring the informal sector in urban waste management planning. An alternative discourse promoted by the waste experts in this study contends that better integration of the informal sector can provided co-benefits, particularly through empowering those employed in the informal sector as agents of their work, and valuing the tacit knowledge they have from their experiences on the ground. Social stigma was identified an impediment to the diffusion of a counter-discourse that recognized the informal recyclers as agents and producers of knowledge. As such, some policy recommendations from waste experts included making visible the contributions of informal recyclers to community members, and to provide informal recyclers with uniforms to counter the stigma often attached to their identities and activities. In addition, the UN official interviewed in this study noted the benefits of direct engagement with the informal recyclers at the lower scale, and thus cutting out middlemen and increasing the profits, for instance, of waste pickers who could then sell their materials directly to buyers higher up in the value chain.



### 3.4 Discourses from Waste Actors in the Private Sector

A shared perception among waste actors who represent private companies and businesses in urban waste management is that the “government is weak on recycling.”

From their perspective, waste management is not integrated in the sense of partnerships between the public and private sector through mutual support. Instead, private waste actors perceive themselves as generally autonomous entities who are providing a service in a domain where government generally lacks incentives and capacities for involvement. As such, those who work in private recycling or waste companies (with the exception of the company Wongpanit, which is discussed later in this thesis) did not explicitly recognize informal workers in their business plans, although they do acknowledge that the source of their materials does come from informal practices. However, because they contract only with suppliers at a higher end of the value chain, they do not recognize the impact of activities informal recycling sector on their business operations. These discourses from this group of waste actors position the informal recycling sector further down in the value chain, where the companies lack oversight or direct involvement. As such, a considerable distance is established among various actors within these discourses, based on the perception of relative autonomy in decision-making among public, private, formal and informal workers. This distance also reflects the preferences and practices among private actor actors' preference to engage with suppliers on the higher end of the value chain, who organize the sourcing of recycled materials at the lower end of the value chain and with the informal sector through the suppliers' own accord and initiative.



### 3.5 Discourses on Informality among Actors in Urban Planning

During interviews with those who work in urban planning and administration, an alternative development discourse emerged on informality as an integral and integrated component of formal structures and processes. As one interviewee put it, there remains a misunderstanding, particularly from the top levels of authority, such as among government officials, who do not acknowledge the informal and "only see the formal" sectors in governance and policymaking. They do not recognize that synergy that exists between formality and informality, and the co-dependence of each for urban development. This discourse on informality in the Southeast Asian context takes as evidence that the economic sector grows, the informal sector grows. A such,

a different pathway and economic logic of urban development characterizes the region as informality constitutes a structural component of the economy, precluding a shift from the informal to the formal sector. However, these waste actors note that policy responses have generally been top-down and initiated under the state-led discourse of "managing informality." In the context of urban waste management, managing informality would entail imposing limits of the growth of the informal sector through structural interventions. However, such policy interventions target the vertical structure of informality, while failing to account for the horizontal structures, and thus increases the risks from policies designed to restrict some types of informal activities, such as banning street food vendors. Such a policy would threaten stability given the deep level of integration and co-dependent relationship between informal and formal structures. For instance, banning informal street food vendor likely impact the income level and nutritional intake of customers who work in the formal sector and depend on access to these food outlets.

From the perspective of urban planners and consultants who were interviewed for this study, the informal recycling sector is not on the policy agenda of Bangkok's municipal government, and generally has low issue salience in development field right now compared to other issues of informality, such as street vending and informal settlements. The absence of the recycling sector in agenda-setting stage, however, does not make it immune to policy discourses around informality in other sectors, given the integrated and diversified sources of informality in Bangkok. A policy targeting a specific group of informal workers will likely affect both formal and informal actors outside of the target group. For instance, while BMA's policy to ban street vendors from public spaces in Bangkok targeted a specific group of informal workers, this policy has also impacted informal waste pickers and dealers who conduct their business operations on sidewalks and other public spaces, which may further impact the transfer of recycled materials across the value chain.

### 3.6 Discourses among Waste Actors in the Municipal and National Governments

The current policy priority of the BMA's solid waste management plans focuses on promoting and increasing separation at source. The discourse of informality that emerged from interviews with government actors centered on the limits of the informal sector. As one government official stated, "the informal is not enough" in separating waste material, although she recognized that the informal sector has contributed thus far to source separation efforts. Policy discourses among waste actors in the municipal government defined the government mandate as taking care of the waste remained after collection and sorting by the community, households, and informal recycling sector. The "informal" as conveyed in their discourses tends to reify the idea that the government is the formal sector that remains distinct and independent from the "informal." While the PCD and BMA do allocate activities to improve the informal sector, these efforts have been mostly targeted at junk shops and focused on implementing better safety and health guidelines, as well as the promoting registration. Registration efforts, however, have been less successful, which reflects the limitations of formalizing this sector through official recognition. When asked why those who operate junk shops prefer to remain unregistered, government officials provided the explanation that the process of registration is tedious, and most do not want to pay taxes, nor want to be subject to possible fines or planning codes that would force them to move or close their shops. The incentives for registration as legal entities are thus calculated as minimal for many employed in the informal recycling trade.



It is also worth noting that government officials see themselves as the producers of knowledge and disseminating critical information to the informal recycling sector in terms of how to handle waste and where they can operate within the city's jurisdiction. They also perceive themselves as agents in collecting information about the informal sector's activities, although these data efforts pose a difficult challenge and are still limited in scope. One main initiative has been to determine the number of junk shops in operation in Bangkok and throughout

Thailand, although these numbers are restricted to only those that have registered with the local authorities. The discourse of health and safety also appears as part of the government mandate in response to the informal waste sector, which is conveyed in terms of the state's responsibilities and duties to the populace. Safety guidelines and initiatives to protect the health of those who work in the waste trade have been incorporated as part of the government's programs, although it is less clear from the interviews how successfully and widely implemented these efforts have been. In many interviews, academics and other experts who were familiar with the government policies criticized the municipal government for ignoring or not doing enough for promoting safety and health for informal waste workers. However, in interviews with waste actors at the ministerial level, policy discourses did include safety and health of those engaged in informality and who work in the informal sector, at least in top-down initiatives that are targeted at the junk shops in particular. However, these efforts tend to be program-specific and do not function continuously in the long-term plans for urban waste management at the municipal and national levels of government.

## 3.7 Conclusion

This chapter identified the key discourses that emerge over the course of interviews with various waste actors. These waste actors included those who are employed or directly engaged in the informal recycling sector, experts from IOs and NGOs, private sector actors, urban planners and academics, and government officials at the municipal and state levels. It found that one key discursive area where ideas were either complementary or conflictual was in regards to who was perceived as a producer of knowledge in waste management. Differences in discourses on the informal sector appeared in regards to the expressions of power through agency and the production of knowledge Some waste actors perceived informal recyclers themselves as the epistemic agents who have relative power due to their on-the-ground knowledge and expertise on recycling. Informal recyclers who were interviewed saw themselves as agents within an efficient and well-coordinated system that provided tangible benefits in terms of income, as well as empowering them to

organize and make decisions about their recycling activities and interaction in these networks. This discourse recognizes a degree of power among informal recyclers, but this perspective is generally absent in the discourses among government officials, who see themselves as the producers of knowledge through a predominately top-down approach.

This discourse analysis further revealed competing frameworks to assess informality in relation to the formal structure. While urban planners and academics approached informality through an integrative perspective, in which formal and informal are co-dependent and assessed holistically, this discourse was at odds with that of municipal and national governments, who maintained a distinction between the two sectors, and defined themselves and their activities within the formal structure and separate from the informal sector. As a result, these discourses among various waste actors correspond different policy preferences and practices in regards to how to integrate the informal sector in waste management systems.

# CHAPTER IV
# THE INCLUSION AND EXCLUSION OF INFORMALITY IN POLICY DISCOURSES: CASE STUDIES ON URBAN WASTE MANAGEMENT

## 4.1 Introduction

This chapter looks at key policy issues in Bangkok's urban waste management as case studies that came up during the fieldwork and interviews with waste actors. Each case study examines the inclusion and exclusion of informality within the policy discourse on each issue. While some policy issues on urban waste government seem to exclude the informal sector from these discourses, this chapter demonstrates how the level of engagement of the informal actors and their activities influences the perspectives and practices waste actors pursue. These findings support the premise that integrated waste management approaches concerns the informality, whether implicitly or explicitly, and how even the absence of an active informal recycling sector can still influence subsequent policy preferences and actions in urban waste management.



## 4.2 The Case of Glass

During interviews with shopkeepers and cleaning staff who sort and sell recyclables to waste dealers, it quickly became apparent that the most varied practices concerned recycled glass. In one neighborhood, a shopkeeper who was interviewed collected glass bottles, which were then readily accepted by the local waste dealer. In fact, the waste dealer accepted almost every type of recycled material, with the exception of green-colored glass or plastic. As a result, the shopkeeper disposed of all green-colored plastics and bottles into the trash for pick-up by the BMA. In another neighborhood, a member of a building's cleaning staff said that she no longer collects glass to sell, as her network of waste dealers have stopped buying recycled glass

bottles for over a year. This fact was confirmed by the local waste dealer, who said he only buys glass beer bottles, which he then sells by crate to the nearby junk shop. He does not buy any other type of glass products. Given these varied practices within Bangkok, the researcher thus sought to find out among waste actors the reasons for why some waste dealers dealt in glass, while others did not. Among all interviews, there was a general agreement that glass products command a low price (approximately 0.50 Baht per kilogram) on the market for recycled materials. Many interviewees indicated that the low price of glass made it unattractive for waste pickers, who would prefer to opt for other materials with higher market value, like cardboard, paper, and PET bottles. Due to limited space and carrying capacity, street waste-pickers also prefer to collect and sell these other materials more than glass bottles, which are heavy, fragile, and bulky to transport.

The different practices around glass recycling reveal the heterogeneity of local networks in which informal waste workers operate. As the case of recycled class indicates, the waste dealer plays an important role in coordinating and driving informal networks' separation and resource recovery at the ground level. In denser and closer networks, the waste dealer links industrial players who demand raw materials with the waste collectors. Once a demand from these agents are specified, for example, a set number of kilograms to be collected, the waste collector, who typically commands an average of 10 waste pickers, communicates the order and mobilizes his or her network to gather these materials (personal interview, 2017). In the case of class, the decision to collect glass depends on whether the waste dealer is part of the value chain that connects directly to a specific buyer for recycled glass. Due to the low cost of glass, only large volumes would generate a profit in the value chain, which favors big companies with a demand and use for recycled glass. Within these networks, large beer companies like Singh and Chang continue to rely implicitly on an informal workers and informal practices to collect their used glass bottles, as the companies have created a close loop chain for their products' recycled glass to be manufactured back into beer bottles.

In Bangkok, a handful of companies dominate the glass recycling market. Generally, these companies have direct partnerships with beverage companies. Each company tends to specialize in recycling only some types of glass, which in the industry, are classified by their color (white, tea-colored or red, green, yellow, and blue). These companies source their materials directly from big waste dealers. In an interview with two waste actors from a large glass recycling business, their company's operations dealt only with big waste dealers, meaning they did not know exactly if and how the informal sector was incorporated into the value chain. However, they acknowledge that it is likely that these big waste dealers recover their materials through various networks that incorporate and rely on the labor of informal workers. Glass is also a curious case compared to other recycled materials, as its trade is primarily restricted to the local market within Thailand. Although the market price of glass does not fluctuate much, the glass recycling business in Bangkok and in Thailand depend and are highly vulnerable to domestic market demand. The waste actors from the private sector noted that given the current economic downturn, the demand for recycled glass has decreased, which explains in part why some informal waste dealers have stopped buying glass from sellers in their networks. However, because many of the companies involved in recycled glass are connected to specific beverage companies, some types of bottles, specifically beer bottles, are continuously collected regardless of market changes. During the interview, it was also noted that recycled glass is undersupplied by domestic markets; therefore, the company imports glass from countries like Cambodia and China, where there is no domestic market for recycled glass (personal interview, 2017).



The driving force behind recycling around glass in Bangkok points to the important partnership between waste dealers and big beverage companies. The demand for recycled glass in Thailand is mostly domestic; as such, the price of glass does not change much on the market, but its entry into or exclusion from the recycling value chain varies depending on the domestic market demand. In the value chain for recycled glass, big waste dealers that have partnerships directly with these companies drive the waste collection efforts around glass when the market is favorable. In turn, these waste dealers mobilize their networks of smaller dealers and waste-pickers to

include the collection of glass. However, waste dealers that lack these types of partnerships are more likely to remain outside of glass recycling networks, especially given the low price for these materials and higher costs of storage that makes recycling in class a less profitable and thus unattractive trade. Waste actors in the private sector generally do not see the government as having a hand in recycling activities, and report little involvement from the public sector in the promotion of glass recycling. They articulated a preference to maintain "business as usual" in glass recycling, displaying skepticism amidst the perception that the partnerships with government would likely do more harm (in the form of more regulations and taxation) than good for business. From this perspective, the possibility of public-private partnerships in glass recycling was not seen as a desirable nor beneficial model.

### 4.3 The Case of Plastic Bags

The proposition to ban single-use plastic bags is a salient issue that appears frequently in current policy discourses around waste, at both a global, national, and local levels; as such, the issue was often discussed in interviews with waste actors in Bangkok. Waste actors, particularly those working in media, NGOs, and academia, have typically framed the issue within a "crisis" or "problem" narrative. Information from the BMA regarding the costs of managing plastic bag waste in Bangkok have been widely disseminated across media outlets and reports: the BMA estimates that in a city of nine million residents, more than 600,000 plastic bags are used per day, and the annual disposal costs of these bags are estimated at 600 million baht. Of the 10,000 tons of trash collected, 1,800 tons are plastic bags alone (or 18% of the total trash), a number that BMA expects to increase on a yearly basis (Corporeal, 2010). The particular composition of plastic bags in Bangkok have been also identified widely as a problem, as they are derived from petroleum, a non-renewable natural resource, to produce polyethylene, which is predicted to take 1,000 years to decompose.

As part of the "disaster" narrative, the BMA has issued press releases that explicitly links the improper disposal of waste, and particularly plastic bags, to exacerbating the disaster conditions for the city's flooding. This narrative identifies a central problem as plastic bags disposed of improperly on land, blocking the city's sewage systems during heavy rains and thus creating a build-up that leads to flooding when the system fails to drain the water fast enough. Interviews with waste actors question the effectiveness of this narrative in changing public awareness and behavior, as the focus on the failing of infrastructure tends to be associated with a government problem, and thus within the domain of BMA and other officials to address. In contrast, the BMA in interviews largely articulate these issues as a public behavior issue, linking the problem explicitly to the public's waste practices. This narrative thus shows a conflict of knowledge about who is primarily responsible for improper waste disposal when it is linked to a disaster risk framing. In both discussions with waste actors, issues that could connect this narrative to more macro-level issues about urban planning and infrastructure are subsumed under a more dominant narrative that tends to focus more on public behavior as the causal factor.

In Bangkok, the BMA has launched several campaigns aimed to reduce the number of plastic bags among consumers. In 2010, a BMA launched a campaign at a select number of stores in the city, which offered customers a one-baht discount for every 100 baht purchase if they used their own bag in lieu of a plastic one. Otherwise, the store would charge them one-baht for a plastic bag. This campaign sought to reduce the total of plastic bags in the municipality by 4.4 million; this target has been raised in subsequent years since this target in 2010 (Corporeal, 2010). However, there has been no city-wide initiative on plastic bag reduction that would allow discriminately across all stores; instead, campaigns have tended to be implemented for a short period of time and selectively applied. In practice, a few businesses have tended to be proactive on reducing plastic bag consumption have been department stores and some large outlets, like Tesco Lotus. As one waste actor noted, most of the data on whether initiatives are effective on reducing the distribution plastic bags comes from these businesses' own initiatives, but according to the waste actor, it very

doubtful that municipal authorities have actively sought out this information to discern if these types of initiatives should be scaled up.

According to a waste professional who works under the Ministry of Natural Resources and Environment, several studies have already been completed in Thailand on the feasibility of a policy initiatives on plastic bags, and recommendations have already been put forth and submitted to the Prime Minister's office for review (personal interview, 2017). However, several waste actors who currently or previously worked as bureaucrats in Thailand note that the lobbying power from a group of industrial plastic producers remains a major hurdle for the policy, as the production of plastic products is a key industry in Thailand. In one interview, a waste expert mentioned that the two top plastic companies in Thailand are also top political campaign contributors. However, another interviewee mentioned that there was a certain sense of consensus among businesses and government officials alike, that some initiative will be undertaken at the national level and in Bangkok to at least reduce the distribution of plastic bags. When articulating support for policies to curb plastic bags usage, waste actors frequently used the examples of similar legislation in other countries. Legislation to limit or ban plastic bag distribution have been implemented in several countries and municipalities, across different cultural, economic, and political contexts, with evidence showing that these types of policy initiatives—including placing a ban on plastic bags altogether or softer measures like charging a green tax fee—have been generally successful. In other words, waste actors turn to these examples as evidence in support of policy diffusion and transfer of a plastic bag initiatives in Bangkok and Thailand, with the understanding that their success in other countries make it more likely to be adopted in Thailand.



Policy discourses around plastic bag bans have found further resonance among waste actors in the context of Thailand, because it fits within existing and embedded policy preferences that tend to favor downstream interventions, rather than policy implementation at the upstream (in this case, the producers of the plastic bags). The dominant narrative among waste actors who were interviewed in this study reiterated these preferences by specifying the problem as concerning consumer and business

behavior: grocery and convenience stores are singled out in particular due to their frequent, unregulated distribution of bag that is deemed unnecessary or disproportionate to the perceived need (as more than one interviewee noted, every single purchased item, regardless of how small, is provided to the customer within its own plastic bag). Consumer behavior is also identified as the source of the problem due to their demand and participation in the plastic bag distribution, as many customers expect to receive the bags free of cost and do not pursue other alternatives, such as declining a plastic bag and/or bringing their own reusable bags. In more than one case, waste actors suggested the problem was partially cultural, in which consumers' relationship to plastic bags was seen as part of a larger societal problem: greater education on environmental issues did not seem effective in shifting enduring cultural beliefs about individual and public responsibility towards protecting the environment through behavioral change.

A striking feature among the interviews was the general acceptance and preference among waste actors across all sectors (government, private sector, NGOs, IOs, academics and media) towards a policy that would reduce plastic bag usage in Bangkok and in Thailand more generally. There were some minor differences in the details of the policy, for example, if the policy should be a full-right ban on plastic bags, or a softer policy that would target a reduction of bags, such as regulating the number of bags that stores could hand out to customers. A more important qualification in policy discourses over plastic bags was the issue of time: when should policies over plastic bag usage be implemented? Those interviewees who showed urgency in action often evoked the "crisis" narrative. To substantiate the claims, they drew upon a widely-publicized report, published in 2015 from the Ocean Conservancy and McKinsey Center for Business and Environment, that named Thailand as one of the top five countries contributing to plastic pollution in the world's oceans (Ocean Conservancy, 2015). When waste actors, particularly those in media, academic, and NGOs, evoked the "crisis" narrative, they were more likely to support a strict and immediate policy on business and consumer behavior.

One waste actor with a long career in local media has vigorously supported a nationwide policy to ban plastic bags, given both urgency of the situation at the global level and the problems posed by Bangkok's waste management system with an over-reliance on landfill disposal, which is now at over-capacity. Based on years of observing environmental policymaking, he believed that waste policies such as a plastic bag ban would not be plausible nor effective if it came from a bottom-up approach and if such a measure depended on public dialogue and support. In his opinion, the policy would have to come from the top-down, initiated as a government mandate (personal interview, 2017). His perspective was not unusual. In fact, a pervasive understanding among Thai waste actors emerged from the researcher's interviews, positing that if a mandate such a plastic bag was to be implemented, it would not likely pass under Thailand's pluralist democratic system. Interviews with Thai waste actors in government, private sector, academia, and media all reiterated the same argument: if a national or city-wide policy to restrict or ban plastic bag usage were to be passed and implemented in Thailand, it could only be done under a military regime (personal interviews, 2017). As one academic told the researcher, "If you look at the history of Thailand, all the environment protection laws were passed while the country was under a military regime" (personal interview, 2017). These waste actors shared a common knowledge over the political conditions necessary to advance environmental protection policies in Thailand, which tend to be more favorable with a concentration of power under military rule than a democratic pluralist system. As such, this knowledge of political conditions introduces a specific time window into the policy discourse, adding a sense of an urgency among waste actors to pressure for the passage of environmental protection policies like a plastic bag ban and the belief that they would can have a higher probability of passage if the policies were implemented under the current regime.



Alternatively, the reference to a temporal scale sometimes is used to justify a delay in action. In one interview, a waste professional who works in the municipal government raised the issue of timing when talking about a city-wide or national policy on plastic bags. The waste actor suggested that "more time may be needed" to identify meaningful alternatives for people to plastic bags. In this case, timing was seen necessary for a perceived gap in the research, necessitating a search for further

information regarding the applicability of such a policy, and its consequences for the public. This statement was different from others made by waste actors in other government sectors, who claimed that the research had been completed, optimal policies identified, and complete report was “already at the PM’s office for some time.” This position contradicted the argument that there remained insufficient knowledge about the proposed policy. From their perspective, the argument for “more time is needed” is framed as a political strategy, to justify a delay or momentary suspension based on the argument that there are still risks, particularly in regards to public behavior, and thus, limits to the current state of knowledge within government that require more attention and more information. One waste actor noted that the frequent use of time by government officials and businesses alike is often evoked to avoid action on certain policies through the justification that more knowledge and research is needed. However, in the case of plastic bag policies, waste actors underscore that this argument for “more time” is less persuasive in current policy discourses, as this argument is countered by the amount of knowledge from other countries and municipalities that have already implemented similar policies on plastic bags.

With the exception of one interview, the informal sector was neither mentioned nor brought up in any of the interviews with waste actors when discussing the plastic bag ban. One reason may be due to the perception that plastic bags hold no economic value in the recycling chain. In fact, plastic bags can be recycled, but they pose many challenges, including the fact that they must be cleaned prior to being sold and must be in-tact in order to secure a market price. Plastic bags are not only difficult to clean and separate, but they are also easily torn during the process of recovery. Furthermore, like with the case of recycled glass bottles, the price of plastic bags is generally low, and recyclers require a large volume before they are accepted for recycling, making it a generally less desirable item for informal recyclers to collect, sell, and buy (personal interview, 2017). Nonetheless, there is an active informal sector in the plastic bag recycling, although this sector often relies on a direct industrial supplier (Pruecksamars, 2013). In the interview when the informal sector was brought up in relation to the plastic bag ban, the interviewee questioned some of

the hidden costs of such a policy on the workers in the informal sector whose livelihood depends on the labor they supply in the value chain for the recycling of plastic bags. Whereas the policy discourse around the plastic bag ban tended to talk about losses in terms of industrial interests, whom many waste actors believe have strong and vested political power, this alternate narrative provided by one interviewee questioned the impact on the informal sector, or more specifically, the most vulnerable in the recycling value chain who stand to lose their livelihood through bans on certain types of materials. It is clear, however, that this perspective on poverty and livelihood opportunities is a more marginalized and generally excluded from the mainstream framings around plastic bags. Although the potential of job losses is often invoked during arguments against plastic bag bans, this link is less evident in the policy discourses around plastic bags in Bangkok and Thailand more generally. Even more absent from these discussions is the potential impact on the informal recycling sector. Knowledge about the informal sector's activities remain hidden in these discourses, with the pervasive framing and understanding of plastic bags as harmful and unnecessary. Furthermore, the tendency to frame a policy on plastic bags at the downstream level tends to reinforce the perception of the relevant actors as primarily businesses and consumers, and the need for a top-down government mandate to compel these actors to change their behavior.



## 4.4 The Case of the Used Beverage Cartons (UBC)

In the shelves of local markets and grocery stores throughout Bangkok, one can find milk, juice, and other beverages not in the freezer section, but aligning shelves alongside dry goods. Unlike plastic and bottle containers, these cartons are a composite of paperboard, polyethylene, and aluminum, which maintain the freshness, flavor, and nutritional value of its contents much longer than its plastic and bottle containers. These products have found a receptive consumer base, as their containers allow the products to maintain a longer shelf-life. In Thailand, 75% of the beverage carton market is composed of Tetra Pak products, a multinational food processing and packaging solutions company (Agamathu and Visvanathan, 2014). As such, Tetra Pak products once disposed become categorized as Used Beverage Cartons (UBC). While

all its individual components are recyclable, the fusion of UBC's three materials poses a particular challenge, as they must be separated from one another prior to recycling. According to an interview with an academic expert on UBC recycling, the problem is a logistics one: the moisture in the UBCs means its fibers decompose rapidly, meaning they deteriorate in storage if they are not transported quickly to plants where their materials can be separated. The success of UBC recycling thus depends on the level of integration in the network between collecting, storing, transporting, and separating UBCs. Tetra Pak's recycling activities thus tend to operate most successfully in urban cases, where the high volume of UBCs in a concentrated space makes its recycling logistically and economically feasible (personal interview, 2017).

The case of UBCs, and the specific challenges it poses for municipal waste management systems, emphasizes the importance of the informal sector in the recovery of materials. There is currently a lack of market for UBCs in the recycling value chain. The absence of a recycling market for UBCs was confirmed when the researcher brought a used Tetra Pak container to a waste dealer, who abruptly dismissed the carton with the explanation, "We don't deal in those." While the individual parts of UBCs do have market value in the informal recycling chain, and waste dealers do accept plastic, cardboard, and aluminum components, the separation of UBCs into individual components requires technology beyond that of manual labor. As such, informal recyclers in Bangkok perceive and treat UBCs as holding no value. Existing outside the recycling value chain, UBCs thus becomes a problem for Bangkok and other localities, as they end up in the landfill or dumpsite. The issue is compounded by the fact that there is no regulatory framework in Thailand over the management of beverage cartons.



Tetra Pak has responded by initiating its own UBC recycling programs through various strategic partnerships. As one of its major initiatives, Tetra Pak began the Green Roof Project in 2010 in collaboration with the Princess Pa Foundation, the Thai Red Cross Society, and Big C Supercentre. The project created a recycling network through which volunteers were recruited to sort and collect UBCs, and to

dispose of them at drop-off locations, which would then be transported to processing plants where they would be made into roofing material. This material would then be donated to communities in need, including flood victims. The Green Roof Project was also supported by Channel 3, a major commercial television station in Thailand, which aired programming to support the project, as well as by the Thai Post Office, which allowed the temporary storage of collected UBCs at their site. The Green Roof Project depended on public participation and volunteers and key partnerships with non-governmental organizations and commercial businesses. It also had strong media presence and support from local agencies. Private sector initiatives like Tetra Pak's Green Roof Project have been recognized as helping transition UBCs "[f]rom a mere throw-away item to a valuable recyclable material" (Agamathu and Visvanathan, 2014: 2).

Applying the "extended producer responsibility" concept to this case, Tetra Pak's initiatives in recycling highlights a case where the private sector is clearly driving one key area in waste management in Bangkok to the extent that they created and managed its own value chain in recycling for its products. In other words, the solution to reduce waste disposal in the landfill came from the private sector, and its corporate social responsibility policies. In order to do so, the company had to directly engage at all stages of the value chain, and with its key actors, namely consumers, waste dealers, and recyclers. One crucial and direct partnership formed between Tetra Pak and large waste dealers, or those who buy the UBCs, and then sell to private recycling facilities where they can be processed into new materials. However, one major limitation to the sustainability of these initiatives is the lack of an end-market for the recycled products from UBCs (Agamathu and Visvanathan, 2014; confirmed by personal interview), meaning that recycling capacity remains limited. While initiatives do require a degree of support from municipal authorities, the role of the public sector and municipal government is generally seen as a hindrance, with the impression that they mostly endorse recycling projects in order to project a positive public relations image. However, industry experts say there is little investment from the municipal governments to support private-led initiatives, with the observation that "government is weak on recycling" (private interview). In another UBC recycling

project in Thailand, located in the Central Region, Tetra Pak did have a stronger partnership with municipal government than in the Green Roof Project, as the municipal government supplied logistical support by providing trucks that transported UBCs. However, support from the public sector did not expand much beyond this logistical support.

The recycling network depends on informal agents to recover items that have economic value, as determined largely by global and domestic demand for recycled materials. Yet, in certain value chains where a used product has none or limited market value, there may be an opportunity for private sector entities to apply EPR and develop initiatives to drive waste management practices to produce more favorable outcomes—in this case, the reduction of UBC in the landfill. However, the limited end-market poses a challenge, and will likely restrict the informal sector from entering into the market for UBC recovery. As such, the project will likely remain primarily volunteer-oriented and focused on consumer behavior. If integrating of the informal sector into solid waste management is seen as a desirable objective, it is likely that their integration will be beneficial for only certain types of products, namely those that have sufficient, existing markets. In this sense, the private sector can be seen as a producer of knowledge in regards to recycling activities of products with limited economic sector and outside mainstream recycling knowledge networks. The private sector, in the case of Tetra Pak, creates a different value chain through which a product with no economic value in other chains becomes valued in a new one. The absence of a national regulatory management policy over UBCs allows companies like Tetra Pak more control in the decision-making domain over its recycling policies. When the business turns to developing solutions for creating a sustainable market for its end-products, it too, will help to determine whether the informal sector can and will enter these recovery activities for these types of products in the future.

Although the Polluter Pays Principle is a part of Thailand's national plan on waste, the waste actors interviewed for this study agreed that there is no enforcement of PPP, and the producers of waste are seldom held legally responsible for the waste

they generate. It is unsurprising, therefore, that most policy discourses remain focused on downstream practices and actors. In some cases, private sector has initiated partnerships with the public sector in order to research a waste problem related to their company's activities, and to propose possible solutions. For example, private companies have approached the Pollution Control Department for consultation on ways to reduce their waste disposal. The motivation for this consultancy is less attributed to the reduction of overhead costs, but rather as an important component of the company's CSR policy, which often includes a reduction of waste to the landfill as an objective. One such case concerned plastic liquid refill pouches, which available widely and purchased for a variety of liquids, such as detergents and soaps, and which cannot be recycled and are disposed of in the landfill. A PCD official estimates that are least 100,000 of these refill bags are collected daily. One company who is major producer of these refill products in Thailand, approached the PCD for consultation. The PCD provided the research and developed suggestions to the company to innovate their product design: the first would be to change the components of the refill bags into materials that either can be incinerated or decomposed. In this case, PCD produced knowledge, but at the behest of the company. The production of knowledge becomes actual practice once the company decides to use this knowledge in inform its own manufacturing and CSR policies. The PCD produces knowledge through its research, as it has the technical expertise, but in these partnerships with companies, it often operates more in consultancy roles for the private sector's waste management (personal interview, 2017).



However, some examples were identified in some interviews where the government authorities, particularly at the ministerial and national level, can produce knowledge, and use it to influence policy through behavioral change among the private sector. The PCD identified the plastic capsule seal on commercial water bottles as a problematic and unnecessary waste item, that could be eliminated with better bottle design. The PCD, along with the DEQM, launched an awareness and education campaign that encouraged consumers to rethink purchasing water bottles if they had the plastic capsule seal (personal interview, 2017). As a step further, an initiative was launched within ministerial buildings and cafeterias that the government

would no longer purchase water brands if they had a capsule seal. Incidentally, two of the largest suppliers of bottled water in Thailand both use the plastic capsule seals on their products. Due to pressure from the PCD, the two suppliers agreed to phase out use of the plastic capsule seals, but asked "for more time", specifically a deadline of a few years to change their operations (personal interviews, 2017). Whether the companies do carry out their commitment to this design change remains to be seen, but their response was in part due to direct pressure leveraged by government authorities, and particularly by the loss of a major customer of their products as a result of the ministry-mandated policy to not purchase any beverage products with the plastic capsule seal.

### 4.5 Knowledge through Performing Best Practices

Without enforcement power, ministerial authorities who seek to influence policies on waste management turn to other strategies, such as through "stick" measures (in the case of the plastic capsule case) or through softer methods. One prevalent strategy in Bangkok around waste entails the production of knowledge through modelling best practices and behavior. The "ministry as model" takes as its in-house operations at its government buildings in Bangkok to demonstrate the process of reducing waste generation. These measures to reduce waste are framed as an environmental duty of the ministry, to be carried out dutifully by all its officers and employees, but it also used as a measure of efficiency and cost-effectiveness. As the national ministries are held in Bangkok, they fall under the BMA to whom they must pay directly for waste collection services. According to one waste professional, the budget paid to the BMA for its waste services are expensive and quite high; therefore, implementing more proactive in-house waste policies were also seen as an important cost-saving measure (personal interview, 2017).

The ministries' site of operations consequently aims to become a model of best practices for other organizations and governments to follow. During the researcher's trip to the ministerial building that houses the PCD, this performative function of the ministry was distinct and was on display. For instance, electric fans were turned on during the morning in lieu of air conditioning, as personnel were still

arriving to work. Makeshift chairs designed from used cardboard boxes lined employees' desks. The PCD also sees itself as a pioneer of source separation, having gone through several iterations of waste bins in the pursuit of an optimal design. Currently, each floor has a designed section where several bins for source separation can be found. Five such containers were located on the ground level: one for soda cans, one for tin cans and glass bottles, one for PET bottles, one plastic items such as straws and plastic bags, and one for Styrofoam and foil snack bags. A separate large sorting container was located near these bins for the disposal of hazardous waste, in which different compartments encourage further separation, for instance, household batteries, ceiling light tubes, and aerosol containers. Currently in the process of being replaced by a newer model, the container for hazardous waste disposal is clear, allowing people to peer into the contents from the outside. It designed deliberately to reduce the hazardous risks, including the installation of a screen panel designed to reduce sunlight exposure and the use of materials to reduce the transfer heat. In this sense, the continuous updating of in-house facilities demonstrates the performative role of ministries like the PCD, in which their power to change and control in-house operations can also serve to legitimize their authority in environmental policymaking.

The food cafeteria also serves as an important domain for the PCD's to demonstrate and perform its activities in waste reduction. For instance, the coffee shop provides a discount for those who bring their own beverage containers and use them in lieu of disposable ones. When customers finish their meal, they bring their trays to the collection area, and are asked to separate their food waste into two bins: one for cooked food, and the other for raw food. According to a PCD officer, the cooked food is then collected by a network of pig farmers, while the raw food is collected by a different network that becomes feed for dogs (or as the officer put it, "one for the pigs, the other for the dogs). The PCD officer further noted that this change means that the ministry no longer contracts the services of the BMA to pick up food waste. In fact, the networks that the ministry relies on for its disposal of food waste are informal. PCD officers did not have the specific knowledge about who actually picks up the food waste, and whether it goes through several channels before it actually reaches the pig farms. The network itself is not explicitly common

knowledge, as this knowledge is held by the kitchen staff who carry out these duties, drawing upon their networks and connections that exist outside of the general knowledge channels. Similarly, the recycled waste collected in the bins become the cleaning staff's domain of authority; they are the ones who call in the waste buyers to come pick up the recycled materials, and they are the ones who negotiate directly with the waste buyers and receive the profits from the sale of the building's recycled materials. The only waste collection process that exists separate of the building staff's informal networks is hazardous waste, which the BMA picks up directly.

If ministries at the national level performs measures to reduce its environmental impact, particularly through the reduction of waste, in their in-house operations, these activities can serve to legitimize their authority by demonstrating to others "best practices" for others, including local governments, to emulate. There is thus constant attention to improving and existing recycling and waste facilities through better design and practice. The ministerial building also remains an important site of knowledge production among government officers. At the source separation level, all staff personnel are expected to participate. However, after source separation, the subsequent processes involving waste collection, transportation, and disposal simultaneously becomes the jurisdiction of the informal sector who performs and coordinates these activities. The officers largely do not have direct control over these steps, allowing the cleaning and kitchen staff to use their own knowledge and resources to carry out these steps. That the system works reasonably well and is efficient (as the waste is always routinely moved from this premises) adds to the legitimacy of the entire enterprise, as the ministries no longer have to depend on the BMA to carry out all these services and at high cost. Building operations thus constitute an important site for the ministerial authorities to produce their knowledge through tangible in-house measures, and to legitimize their authority as experts through these waste practices. Yet, their dependence on the informal sector is also an implicit acknowledgement that the success of their in-house operations relies to an important degree on these agents and their own sources of knowledge.

### 4.6 The role of academic institutions as real-life laboratories for the production of knowledge through practice

Universities in Thailand have also served as important sites for the production of knowledge in the implementation and demonstration of innovative waste technologies and practices. One key area has been to facilitate the separation of waste at source; hence, several universities in Thailand now offer separate bins for waste separation. At Chulalongkorn University for instance, a university-wide campaign, organized as "Chula Zero Waste," aims to promote 3R practices throughout the campus. Among its many activities, it has issued two bins in public spaces, one designed for food waste and one for general waste. As each campus building is managed separately, Chula Zero Waste has also worked with individual managements to encourage them to adopt additional bins to sort recycled goods, which are then managed by the university's cleaning staff. At another university, located outside of Bangkok, that included in this research as a field site, similar efforts have also been initiated to enhance the 3Rs and reduce the amount of waste collected by the municipal government.

During the implementation of campus-wide policies to improve recycling rates, in particular, both universities have engaged directly with informal recyclers. In the case of Chulalongkorn University, an academic who is leading the Chula Zero Waste campaign reached out to the nearby junk shops in the area in order to a stronger network in order to facilitate the chain by which recycled goods would be removed out of the university consistently, without ending up in the general waste. According to the interviewee, part of these efforts included convincing these junk shops to register with the BMA, in order to better incorporate the junk shops into a more formalized waste system around the university. However, many of these junk shops were hesitant to register formally, especially amidst the concern that their businesses would be deemed a public hazard and they would be forced to close down.

At another university, greater efforts were made to create a more efficient and closed recycling community, including the designating and hiring its own workers to

collect and sell recycled goods, independently of the municipal government. These efforts worked remarkably well in removing recycled materials from the general waste stream, such that very little remained in the trash pick-up by the municipal authority. However, improved in-house recycling had a much larger political ramification, when municipal garbage collectors to pick up the university's waste, as they could no longer derive the income from selling recycled materials from the waste. This incident highlighted a common sentiment echoed by several waste actors: improved recycling efforts sometimes failed when it opposed entrenched political interests, and particularly those who monopolize the waste trade. This case exemplifies that municipal collection crews have a degree of political power in waste governance and have sustained interests in informal recycling in tandem with their official municipal jobs.

This type of informal recycling by municipal collection crews is tolerated by the municipal government, and has been documented as an important source of income for municipal collection crews. The comparative advantages of recycling done by municipal collection crews vis-à-vis informal recyclers are noteworthy, given their access to trucks with large carrying capacity and the ability to cover large spatial distances in a day's work. Their relative power within these networks correlates with findings from researchers that show that in terms of profit margin and volume of materials recovered, the municipal collection crews are the important actors driving informal recycling, at least in the amount of recyclable material they recover directly from the collected trash.



## 4.7 Conclusion

Several key policy areas were identified over the course of the interviews. The first issue is related to what might be considered a long-existing recycled material, glass, given its long prevalence in Bangkok's waste streams. The different knowledge

streams and subsequent practices around glass depended on the networks in which actors were embedded. The value chain of recycled glass has become more dominated by a handful of glass recycling companies and large beverage companies; while these networks still rely on informal recycling to source glass from waste streams, as this fieldwork showed, they also exclude many everyday informal recyclers. It was difficult to track a comprehensive account of glass when the question was posed to waste actors in this study's sample, showing that knowledge about the domestic market demands placed on glass did not filter or diffuse much beyond the level of the businesses who directly engaged in this industry. One additional explanation locates the factors at the level of waste-pickers and waste-dealers, in which the calculations about profit and costs of collecting and transporting a large volume of fragile and heavy material are prohibitive.

Compared to other materials, glass, partly because of its low market value, lacks issue salience when it comes to discourses around recycled materials. In contrast, policy discourses around plastic bag have been especially salient among waste actors in Bangkok, mostly with the association of plastic bags with environmental hazards and high municipal costs. Like glass, they have low value on the market for recycled materials. However, unlike glass, plastic bags are framed within a "problem" or "crisis" narrative that posits plastic bags as dangerous due to their non-recyclability and easy disposability (either incinerated, landfilled, or dumped into the ocean rather than recycled). Whereas discussions around recycled glass tend to be limited to the private domain of domestic industries and waste dealers, the problem of plastic bags is framed at the global and national scale, fitting into existing and pervasive policy discourses around plastic bag bans and other government instruments, such as a green tax, that have already been adopted elsewhere. Compounded with the knowledge about the political conditions in the country, waste actors view plastic bags bans through the lens of policy diffusion to tackle a relatively well-defined problem, and consequently largely support a top-down approach to plastic bags in the form of a government mandate. Rarely prevalent in these "crisis" discourses are the potential effects or costs of such bans on the lower-

income and poor, who are largely subsumed under a larger category of consumers and businesses.

UBCs were also discussed due to the fact they represent an alternative policy approach, namely through the private sector's own initiative. As materials that are left outside the informal sector's recycling chain, Tetra Pak has essentially created its own value chain that mobilizes waste dealers and the public to engage in recycling activities for its products. Like among recycled glass companies, the private sector in these alternative products do not seem invested or supportive of public-private partnerships for recycling activities, preferring instead to allow further privatization of waste management and minimal government interference.

Collectively, these policy issues and preferences fit within the larger policy patterns in Bangkok and Thailand that focus policy at the downstream level. As one government officer indicated, policies targeting the upstream, using the polluter-pays principle, are presented as a possible alternative in research and reports, but rarely implemented. In discussions around recycling, this tendency to locate and frame issues at the downstream level was pervasive among waste actors in this sample, even though they supported, and in more cases, preferred more efforts targeted at the upstream level.



Lastly, this section presented institutional spaces as areas where government actors and academics have sought to demonstrate innovate recycling practices through active engagement with their universities' networks through the collection, separation, recycling, and removal of waste. These spaces are areas where state actors and academics assert their knowledge, which in turn, legitimizes their authority as experts on waste whose organizational models in waste management could applied in other organizations and scaled up. In these cases, this research revealed how the success of these initiatives depended to an important extent on their knowledge of existing power relations embedded in the informal sector.

# CHAPTER V
# THE "WASTE AS A RESOURCE" DISCOURSE

## 5.1 Introduction

The following question was posed to an academic who had written a widely-cited publication on Bangkok's waste practices a few decades ago: what has changed, or rather, what have been the most significant changes, in waste management within Bangkok since the 1990s when he had written the article until the present? According to his answer, "the knowledge today is different." During the 1990s, waste was largely seen as a problem by city authorities; today, "waste is now seen in terms of its potential" (personal interview, 2017). An additional change concerns the integration of the informal sector into Bangkok's waste management schemes to the extent that this system relies crucially on informal activities. The informal sector itself has also changed in the composition of its workforce, in which a large proportion of waste-pickers or scavengers are migrants from neighboring countries, particularly Myanmar and Cambodia. The question that this chapter investigates is how discourses around the potential of waste, namely that "waste is a resource," guides the perceptions and policy priorities among waste actors. The discourse around "waste as a resource" marks a shift from "waste as a problem" by redefining waste in terms of its value. This chapter looks at the role of informal sector through this paradigm, and how waste actors negotiate the concept of waste as a resource through their own roles as producers of knowledge and policy priorities.

The "waste as a resource" narrative is pervasive among waste actors in Bangkok at all scales. As one informant who has longed worked on waste issues at a regional NGO indicated, "There is no longer any doubt about the profitability of the waste sector" (personal interview, 2017). Leading international organizations also convey this concept of waste as a resource in their projects. In one large, six-year project, "Pro-Poor and Sustainable Solid Waste Management in Secondary Cities and

Small Towns in Asia-Pacific," funded by the Bill and Melinda Gates Foundation, UN ESCAP produced a publication of the project, titled, "Valuing Waste, Transforming Cities" (UN ESCAP, 2015). This project aimed to shift the policy perceptions of waste as a problem into waste as a resource, stating explicitly:

> In effect, waste is being wasted. By dumping, burning or landfilling, the value of both organic and organic waste is lost. Recycling these materials allows municipalities, communities and businesses to capture and retain this value. But creating a recycling culture requires changes in perception: waste, especially organic waste, must be seen as a resource and an opportunity. (UN ESCAP, 2015: viii)

The project focused on secondary cities and small towns, and the implementation of integrated resource recovery centers (IRRC), which were a low-cost, low-technology, and de-centralized model to increase recycling and to recover organic waste in order to transform it to compost or biogas. Much of the policy discourses around waste in Bangkok and Thailand refer to model management systems in developed countries, with Japan, Germany, and Taiwan (ROC) frequently referenced. This study's approach justified the project on the grounds that these advanced technologies, although available, was simply not a viable option for secondary cities and small towns due to economic, social, and political constraints. Site visits to observe waste management practices in other countries or municipalities is a common activity among waste actors as means to gain and exchange knowledge. In the context of Thailand, select cities, including Bangkok, are frequently featured in these capacity-building tours, in which waste management systems in cities like Bangkok serve as a site for knowledge transfer.

Across the interviews with waste actors in Bangkok in this study, they shared a common understanding that the concept of "waste as a resource" is embedded into Bangkok's waste plans and policy discourses, and that the idea has been generally accepted by municipal authorities and bureaucrats alike, with little contestation. Under BMA plans, the "waste as a resource" motivates the city's current strategy for waste separation. To encourage waste separation at the household, the BMA identifies four types of waste: recyclable waste, organic waste, hazardous waste, and general

waste. The BMA's policy is to encourage more localized, community-based initiatives to tackle recyclable waste or organic waste, by deriving the direct value from these sources. In the case of recyclable waste, the BMA encourages households to sell these materials to waste dealers, deriving the profits from these transactions. For organic waste, the BMA has implemented initiatives to teach and encourage residents to transform organic waste into home composting, such as through the application of effective microbes (EM), or to convert their organic waste into biogas or animal feed. In terms of hazardous waste, the BMA has indicated two pathways, based on whether hazardous waste is recyclable or not. When it is recyclable, the BMA promotes that it is sold to waste dealers or recyclable shops, whereas non-recyclables are to be collected directly by the BMA and disposed of at a secure landfill. After all this source separation is completed, what remains in the waste stream is determined as "general waste," and becomes the domain of the BMA, which either sends the waste to a composting plant or to an incineration plant. By encouraging a decentralized approach to waste separation and management at the household or district level, the BMA's policy is seen as a "win-win" situation, in which households and communities can derive the direct benefits and profits from the recyclable and organic waste they generate, thus reducing the waste stream much earlier become it becomes "general waste," which the BMA directly oversees.

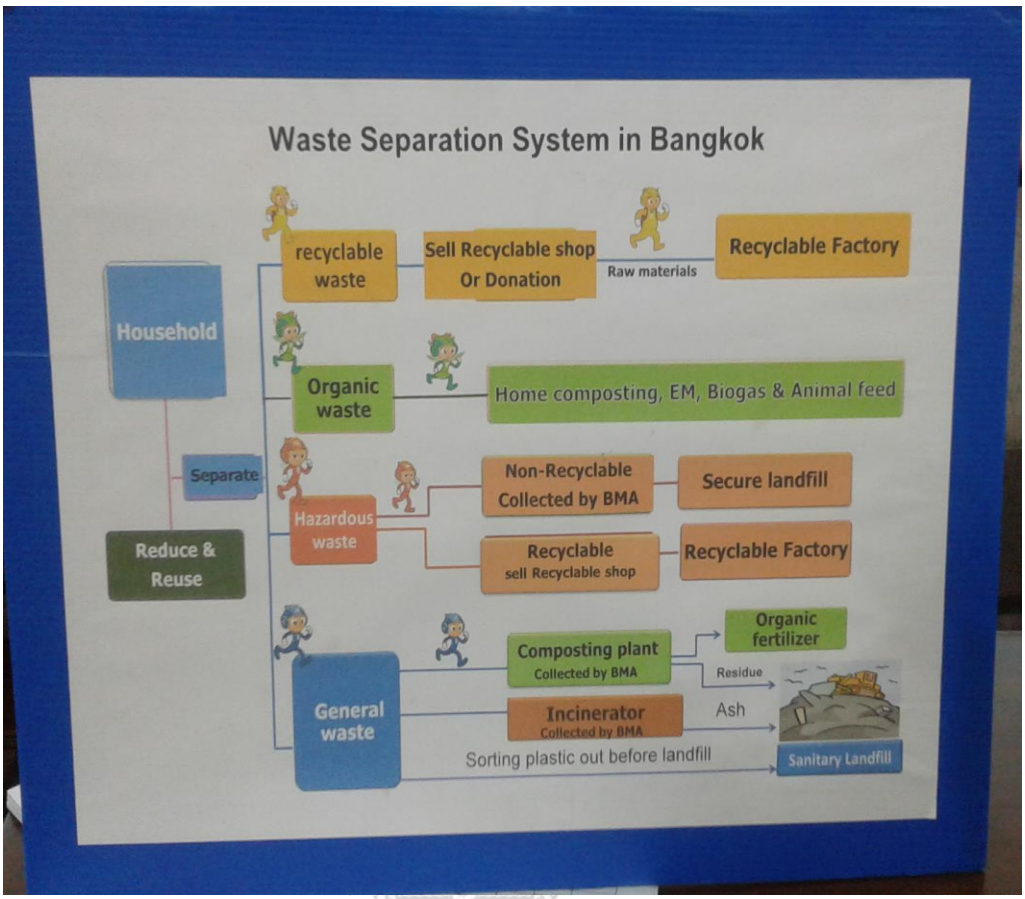


Figure 1: BMA's Diagram of the Waste Separation System in Bangkok

In promoting the "waste as a resource" in its policy to reduce waste collection and disposal In Bangkok, the BMA's plan does not directly refer to the informal sector, although it is apparent that the informal sector is implicated and embedded in its policy objectives. For instance, the BMA promotes households to sell their recyclables to "recyclable shops." Although the BMA encourages "recyclable shops" to directly register with the city, many operate without proper registration and license from the city. In reality, many of these recyclable shops are owned and operated informally.

A critical component that is not made explicitly known in these formal presentations is the role of BMA collection crews in the informal activities for waste separation and selling to recyclable shops. In fact, interviews with the government authorities did not explicitly acknowledge the informal activities of BMA collection

crews. A doctoral student who was interviewed has worked on a study of informal sector in Bangkok's waste management, and found that by and large, BMA collection crews are the primary sellers to junk shops located near the city's transfer stations (personal interview, 2017). According to the student's research, BMA workers hire informal workers to accompany them on their routes in order to assist in the recovery of recyclable material, and in some cases, organic waste, which are then sold directly to junk shops. In this study, participant observation was also used to study recycling activities in an affluent Sukhumvit area, and this researcher observed that BMA workers often separated the waste on the streets in the morning (before 6 AM), recovering recyclables which were placed separately on their trucks. In more than one case, the collection crew was made up of several persons, suggesting the likelihood that some of these workers were not BMA employees, but employed informally to assist with material recovery during the BMA trash route pick-ups. It is also interesting to note that within the same street in Sukhumvit, condominium residences rely on multiple and varied informal practices. While some condominiums rely directly on the BMA's services, one condominium, owned by a company that many interviewees identified as particularly proactive on recycling, relied entirely on a single waste-dealer, negotiated through the cleaning staff, to recover the recyclables from the building. In the BMA's plans, all these practices would fall into its decentralized policy of allowing individual buildings and households to choose how to manage the recovery of their waste streams, for instance, whether to have the BMA workers sort and recycle the materials or to rely on a waste dealer.



There is some notable evidence that was raised during interviews with waste actors to support the claim that the BMA has become the dominant actor in informal sector practices, controlling parts of the city's waste streams that was once the mostly exclusive domain of informal waste-pickers. One academic noted that that informal scavengers are now prohibited from access to the waste transfer stations in Bangkok. Information about access to these transfer stations was disputed in the interviews with different actors. One government authority suggested that waste scavengers could pay 60 Baht to enter the transfer station, but this academic source stated this information was false. According to the academic, the private company which operates the

transfer station sources its own group of informal sectors, which it authorizes to enter the transfer stations and sort the materials. In exchange, the informal workers are expected to sell the materials to the private company, at a lower cost than if they sold the recycled materials to one of the many junk shops located outside the transfer station. The group of informal workers who were observed in the academic study were exclusively labor migrants from Cambodia and Myanmar. At one transfer station, these workers were provided space behind the station for accommodation, although the academic who visited the site noted that the living arrangements were extremely substandard. According to the academic's testimony, which was confirmed by government officials, the informal sectors work in extremely poor conditions, and are provided no protective gear or equipment.

The private companies, which are contracted by the BMA to collect and transfer waste from the city, control access to the waste, restricting it to only an authorized group of informal workers who perform material recovery on site for the private companies. The informal workers in turn receive a lower-market value for the recovered materials. These practices exemplify Samson's study of waste management at a landfill site in South Africa, a process that she deems as an "accumulation by dispossession" (drawing upon David Harvey's theory) (Samson, 2015). According to Samson, attempts by the state and private capital to enclosure the dumpsite is not only an extension of control over its physical materials, but also over "the very framing and establishment of these materials as valuable" (Samson, 2015: 814). The enclosure of the wasteland also reflects a capture over knowledge, which also entails "erasing the role of reclaimers in these processes" and denying recognition of informal workers as epistemic agents in the production of knowledge whereby waste became reframed as valuable (Samson, 2015: 814). In the case of the transfer stations, the private companies depend on the informal workers' knowledge of recycled materials such that their labor facilitates resource recovery. However, by prohibiting access to the landfill not only allows the state to both make use of informal workers' knowledges while subsuming them under control, thus denying their role as agents. It is noteworthy that only a select few are authorized by the state and company to access the transfer stations; hence, migrant labors who work at the transfer stations secure

work permits from the companies, although the nature of their work is not specified on their permits. In this manner, the work performed by migrant labors remains informal even under these work permits (personal interview, 2017). BMA collection crews (whose trucks are also contracted to a small number of private companies) also enclose certain areas of the city, particularly in the inner, dense parts of Bangkok. From this example, public-private partnerships between the BMA and private sector (who run the collection crews and transfer stations) fit more adequately into a neoliberal model of governance through which the informalization of labor is maintained, controlled, and promoted.

The concept of enclosure of the commons in the context of Thailand resonates strongly with current policy initiatives around informality, which the current government has singled out in its plans. In the course of interviews with waste actors, many brought up the informal recycling sector in broader discussions about current government policies to clamp down on street vendors, under the campaign to protect public safety and health. The campaign to prohibit street venders from occupying sidewalks and streets is framed by government authorities as an initiative to reclaim these public spaces. The primary target in these discourses have been street food vendors. However, participant observations during the researcher's field visits and interviews with waste sellers and dealers confirmed that these campaigns also have implications for those working in the informal recycling sector. One waste dealer who was interviewed buys recycled goods from nearby offices and restaurants, parking his truck and operating his business on the street. However, the restrictions initiated by the BMA to ban street vendors also apply to the several waste dealers who depend on their access to these public spaces.



## 5.2 Wongpanit and "Waste is Gold" Discourse

Wongpanit's status as a leading resource recovery in Thailand is well-recognized among waste actors, especially among those who work specifically in recycling. The story of Wongpanit is a widely circulated in Thailand, as it fits in an appealing narrative of hardworking entrepreneur, Dr. Somthai Wongcharoen, who

founded his business in 1974 when he was eighteen years old, in his hometown of Phitsanulok. Today, Wongpanit franchises operate throughout Thailand and now increasingly in other countries, including Laos, Cambodia, Malaysia, Japan, and the United States (Green Cross, nd). The company buys waste from local residents and waste collectors, and then sellers recyclable materials to recycling factories in Thailand, Myanmar, China, Singapore and England (Pariatamby and Tanaka, 2014). Although the company identifies itself as a "garbage recycle separation plant," Wongpanit was described by more than one interviewee a "large junk shop," given that its activities are primarily buy and selling. It is also a registered junk shop, having attained a license from the Ministry of Industry, and generally recognized by waste actors in the private sector as a generally successful business model in the industrial value chain for recycling. The motto of Wongpanit is "Waste is Gold," and much of the publicity from the company actively promotes the idea that "all waste has value" (personal interview, 2017). Some of the positive attributes associated with Wongpanit is that company's aim to reduce the number of middlemen in the recycling value chain by connecting directly to informal waste collectors and households, thus providing a more competitive and profitable rate for recycled goods to informal workers further down the value chain. Furthermore, the company was noted as allocating a fair proportion of its business activities to community-based initiatives, such as waste banks at schools, whereby community members would be encouraged to deposit recovered materials for recycling in exchange for a share of the communal income derived from the sale of these materials to Wongpanit.



Wongpanit's "waste is gold" discourse has found a receptive audience, as evident in many similar businesses that have entered the recycling sector. However, several waste actors who were interviewed critiqued Wongpanit's motto of "waste is gold," one main reason being that Wongpanit depends crucially on the informal sector for the recovery of waste. To a certain and noteworthy extent, Wongpanit has enhanced transparency in its business dealings by publishing on its website and Facebook its list of prices for all materials it purchases, and these lists are generally updated (although one waste actor claimed it was not updated frequently.) As a result, those waste collectors in the lower chain have better access to information about

prices, which puts pressure on the middlemen dealers to raise their prices to be competitive with that of Wongpanit. However, several interviewees noted that while Wongpanit has conducted workshops for waste dealers, particularly about ways to operate their business and improve standards of operating, many of them shared the belief that Wongpanit "could be doing a lot more," particularly for the informal workers from whom it depends and derives much of its profit. While Wongpanit does purchase nearly every type of material (included green glass), it does have a stipulation that these materials have to be separated (in other words, a pure material) before Wongpanit will purchase them. This stipulation is particularly problematic when it comes to materials, such as copper and steel. In practice, it falls to those in the informal sector to separate these materials themselves, which often proceeds in unregulated and often dangerous circumstances. For instance, many of these recycled materials come from used appliances, like refrigerators. However, the manners in which these materials are extracted are often manual, posing many health and safety risks. As many interviewees noted, the fastest way to separate materials is by burning the materials apart. According to one government official, the preference to burn waste in order to facilitate material separation is one major fire hazard (according to the official, most fires that occur in and around landfills are "man-made" due to these practices, but the causes of these fires are rarely reported in the media fully and accurately).



The "waste is gold" narrative was also identified as problematic in its normative assessment that all waste has, and indeed should inherently, have value. According to one waste actor, not all waste that is recycled represents resource recovery; in some materials, the amount of pollution and energy used to recycle them offsets their value, as the costs of production outweigh its market value. Several waste actors who are academics and engineers brought up a similar concern by pointing out that "waste as a resource" has a homogenizing perspective on waste, when in actuality, waste must be disaggregated first in order to determine its particular relationship to waste stream and then to assess its potential value. Another interviewee from the private sector believed the "waste is gold" narrative is further problematic in promoting recycling as a good in and of itself, without considering if

there is an existing market for these goods. As one example, the interviewee noted the prevalence of businesses and organizations (including several charities) that use recycling as one of its key projects or initiatives (for instance, recycling material into low-value consumer products); from the interviewee's perspectives, these activities do not fit with the definition of recycling, as its "recycled" outputs do not promote a circular production and consumption economy.

Wongpanit retains a high-profile position in discourses around waste in Bangkok and Thailand, partly due to its active engagement and promotions. As one government authority noted, whenever there is a workshop or meeting with waste dealers, for instance, during PCD's campaign to improve waste handling practices and operations among junk shops, representatives from Wongpanit are generally in attendance. There is broad consensus that Wongpanit is a leading stakeholder among businesses dealing in waste. However, in the course of interviews, it quickly became apparent that Wongpanit is the leading *publically known* stakeholder in the private sector in Thailand's waste management. According to government officials, Wongpanit has about 10% of the market in recycled materials, although some academics estimated a much larger share. The question thus begs: Who makes up the other 90%? One government official tellingly replied, "Informal operators." Another government official more bluntly admitted that there was a much larger actor(s) in the recycled materials market, that was widely known, but not openly discussed due to the link to organized crime. As exemplified in this particular instance, the link between criminality and informality appeared in many discourses around the waste management, with many interviewees making both direct and offhand comments about the level of corruption and mafia involvement in Bangkok's waste management system. Therefore, the "waste as a resource" or "waste is gold" narrative links the value of waste through the promotion of the informal sector, and to a certain extent, more transparent, fair, and inclusive business operation and processes of engagement with the community and informal sector. In practice, however, this knowledge and relationship is openly contested among waste actors, indicating that much information about the recycling market is uncertain, and some information, such as the links to

criminality, is often hidden or in some cases, missing, in discussions around policy recommendations about the private and informal sector in recycling.

# CHAPTER VI
# CONCLUSION

This study began with the question: Who governs the wasteland? From the interviews and data collected from this research, the short answer is: No one, and everyone. In Bangkok's waste management, several actors are involved: government, the private sector, communities, media, NGOs, IOs, and the informal sector. Discourses around informality and the informal sector showed differing concepts about power and its distribution among various policy actors. This variation lends support to the notion that these interest groups, no one actor dominates policymaking and decision-making, although some groups are clearly more powerful than others. Waste actors generally recognize that the informal sector constitutes an important component in Bangkok's waste management systems, particularly in the recovery of recycled materials on the ground level. The networks among households, street waste pickers, BMA collection crews, waste dealers, and landfill/dumpsite scavengers enable a high rate of resource recovery in Bangkok, especially compared to other municipalities. Yet, as a few waste actors noted, once "waste" is disaggregated into its individual components and examined, some actors have more power than others over recycling activities, for example, in the case of glass and UBCs, the driving actors appear to be mostly the private sector and their partnerships with large waste dealers. In regards to plastic bags, in contrast, the government is identified as the major actor given the diffused policy discourses around plastic bag bans and other legislation that enable the narrative to emphasize the role of government in the policymaking sphere. With the discourses revealing that the informal sector is already a key component of an integrated waste management system in Bangkok, this recognition is often treated as common knowledge in policy discourse, with more attention on how to better integrate, rather than neglect, those who work in the informal recycling sector. Policy recommendations that were raise in interviews included initiatives such as organizing waste-pickers in a manner similar to the way motorcycle taxis, for instance, by providing them uniforms. Other recommendations included pressuring government private waste dealers to provide more direct benefits to the poor, such as through

social insurance schemes and health trainings to informal workers, although these efforts appear to have less traction and widespread appeal among waste actors in policy discourses.

This thesis also looked into a prominent discourse around "waste as a resource" that has had an especially pervasive appeal and policy impact in waste governance in Bangkok and Thailand more generally. The emphasis now has turned to food waste, particularly as resources have been allocated and policy attention have turned to national and municipal-level programs to promote waste-to-energy schemes (for instance, with the feed-in tariffs program to promote biogas developments in Thailand). This current, heavy focus on food waste is likely due to the fact that the majority of waste collected in Thailand is made up of organic waste, and in the case of Bangkok and Thailand, there is still limited success in transforming municipal waste in particular into biofuels. In keeping with the "waste as a resource" narrative, several waste actors who were interviewed for this study have now turned their research and work towards food waste, which has emerged and sustained itself as a central policy issue among waste actors. Unlike under "waste as a problem" narrative, "waste as a resource" emphasizes the redefinition of waste into a value system. Waste actors have tended to buy-in to this discourse, and many currently align with the concept of transforming and valuing waste. In some cases, this narrative can empower the informal sector as agents of knowledge, as informal recyclers have produced much of the information about what recycled materials have value, and where to locate and source these materials. However, as this research showed, the "waste as a resource" paradigm can also be detrimental and exclusionary to the informal sector, just as the co-option of public spaces—the wasteland—by the state and private capital. However, this discourse analysis revealed how the informal sector is a critical dimension of the urban waste management system. If alternative models for integration are indeed possible in Bangkok's modern urban wasteland, it will likely have to start at the level of the street and landfill waste-pickers, who, while often used interchangeable with the "informal sector" or "informal waste workers," are also the most vulnerable in the recycling value chain, and who are often denied recognition as relevant stakeholders in policy discourses, both in Bangkok and elsewhere.

# APPENDIX

## APPENDIX A: LIST OF INTERVIEWS

| Interviews | #of Persons | Profession | Type of Organization | Classification |
|---|---|---|---|---|
| 1 | 1 | Housekeeper | International non-governmental organization | Informal |
| 2 | 2 | Shop Owner | Independent small business | Informal |
| 3 | 1 | Environmental Manager | Private packaging company | Private |
| 4 | 1 | Economic officer | International organization | IGO |
| 5 | 1 | Professor of Engineering | University | Academic |
| 6 | 1 | Environment Officer | Pollution Control Department (Ministry of Natural Resources and Environment of Thailand) | Government |
| 7 | 3 | Local Government Officials | Department of Environment (Bangkok Metropolitan Administration) | Government |
| 8 | 1 | Program Manager | International non-governmental organization | NGO |
| 9 | 1 | Waste Buyer (Itinerant) | Independent small business | Informal |
| 10 | 3 | Researcher | National non-governmental organization | NGO |
| 11 | 1 | Editor and Journalist | Broadcast newspaper in Bangkok | Media |
| 12 | 1 | Urban Planner | International non-governmental organization | NGO |
| 13 | 2 | Business Manager | Private recycling company | Private |
| 14 | 1 | Professor of Engineering | Academic institution | Academic |
| 15 | 1 | Chief Officer | National non-governmental organization | NGO |
| 16 | 1 | Professor of Environmental Economics | University | Academic |
| 17 | 1 | Researcher and Graduate Student | University | Academic |

| | | |
|---|---|---|
| **Total:** | 17 | 23 |

## APPENDEX B: SAMPLE OF INTERVIEW QUESTIONS

1) In your perspective, what does an “integrated solid waste management system” entail? To what extent is Bangkok’s waste management “integrated”?
2) What do you believe are the strengths of Bangkok’s current waste management system?
3) What do you believe are the weaknesses of Bangkok’s current waste management system?
4) What are the main challenges that Bangkok currently faces in regards to waste?
5) How does Bangkok compare to other municipalities?
6) How would you describe the role of the informal sector in Bangkok’s waste management system?
7) What are the current challenges with the informal sector in recycling?
8) What types of policies do you think the government should adopt to improve waste management in Bangkok?
9) In your opinion, who is primarily responsible for the success in waste management schemes?
10) What do you see as the next policies to be implemented to target Bangkok’s waste and improve the city’s management system?

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