

Urban Governance Waste Management in Phnom Penh January 2019

A review of waste management from the streets



សមាគមបឹងទន្លេសាស

Sahmakum Teang Tnaut, a Cambodian Urban NGO

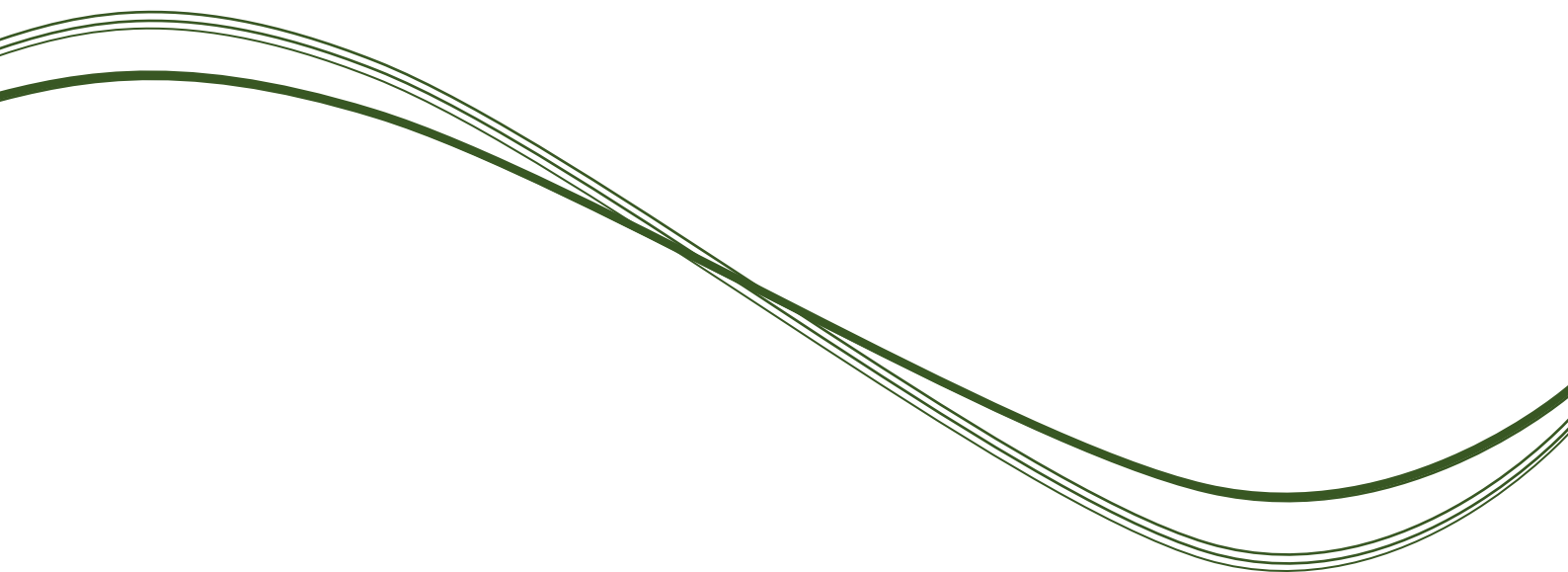
Research was funded by Heinrich Böll Stiftung.



Sahmakum Teang Tnaut

January 2019

Sahmakum Teang Tnaut would like to thank all participants that helped to produce this research, including: the urban poor communities that provided information and welcomed researchers to their villages; the key persons who provided information that shaped the report; and CINTRI, who provided information to help clarify the situation for residents of Phnom Penh.



CONTENTS

Figures, Tables, Abbreviations	iii
Chapter 1 Executive Summary	1
Case study: The black river	3
Chapter 2 Methodology	5
2. 1 Methodology	5
2.1.1 Study area	5
2.1.2 Scope	5
2.1.3 Data collection and analysis	5
2. 2 Limitations	6
2.2.1 Lack of participation from Phnom Penh Municipality	6
2.2.2 Research design	6
Chapter 3 Governance and Waste	6
3. 1 Governance	6
3.1.1 Urban Governance	6
3.1.2 Good Governance	7
3.1.3 Democracy and Good Governance	7
3.1.4 Cambodia's Governance	8
Case study: Japanese waste governance	10
3. 2 Municipal Solid Waste Management	11
3.2.1 Policy, Regulatory and Institutional Profile	11
3.2.2 Waste generation, Composition, Collection and Disposal	11

3.2.3 Capacity	12
3.2.4 The informal economy – waste-pickers	12
Case study: The recyclers	13
Chapter 4 key Findings	14
4.1 Participation	14
Case study: Lethal refuse	16
4.2 Rule of law	17
4.3 Consensus Oriented	18
Case study: Three women fighting waste	20
4.4 Equity and Inclusiveness	21
4.5 Effectiveness and Efficiency	23
4.6 Accountability	24
4.7 Transparency	25
Case study: Active citizens and responsive government	27
4.8 Responsiveness	28
Chapter 5. Conclusions and recommendations	30
Chapter 6. Appendix	31

FIGURES, TABLES, ABBREVIATIONS

Figure	1: Governance Indicators for Cambodia	8
Map	1: Communities without waste collection	20
Table	1: Trash carts by population and area	23
Diagram 1:	Possible Causal link between infrastructure and waste management.	23
Table	2: Trash carts by urban poor communities	24
Table	3: Trash collection shifts by time	25
Table	4: Trash collection shifts by frequency	25

CINTRI (Cambodia) Ltd.

CINTRI

COMPED

*Cambodian Education and Waste Management
Organization*

CSARO

Community Sanitation and Recycling Organization

EDC

Electricité Du Cambodge

FGD

Focus Group Discussion

MPP

Municipality of Phnom Penh

MSWM

Municipal Solid Waste Management

ODI

Overseas Development Institute

PPCC

Phnom Penh

RGC

Royal Government of Cambodia

STT

Sahmakum Teang Tnaut

TI

Transparency International



A girl looks out over a drain way in Phnom Penh. STT. 2017.

CHAPTER 1: EXECUTIVE SUMMARY

Urban governance is a critical tool for ensuring the well-being of an urban society. This research assesses municipal solid waste management governance from the ground up, looking at the issue from the perspective of one of the most disadvantaged, marginalized and forgotten groups of Phnom Penh - the urban poor. **99 (35.7%) of the 277 urban poor communities in Phnom Penh still receive no waste management**, despite often having their wealthier neighboring communities receiving doorstep pick-up.

In order to truly assess the issue of governance, ‘on-the-ground’ research was conducted to understand the full magnitude of the issue. Moreover, this study responds to the call for more research on urban service delivery and analysis of governance features of specific sectors, such as solid waste management¹.

CINTRI (Cambodia) Ltd., hereafter referred to as CINTRI, has been the primary waste collection service in Phnom Penh since 2002, although a contract has never been publicly released, complicating research into CINTRI’s responsibilities. The key findings that emerged highlighted several areas for improvement regarding service provision by CINTRI, the Royal Government of Cambodia (RGC) and lower levels of government. Many communities said their interactions with CINTRI were positive, but had little awareness of ways to contact them if they had complaints. Contrastingly, participation with local authorities was described as “**bad**”, “**one-way**” and “**uncaring**”.

14 CINTRI workers were killed within the last four years by traffic accidents while on the job. The losses are startling, with family members scared to speak out about issues and **no protective clothing or safety measures provided to workers** in the wake of these deaths. This report finds that CINTRI is failing its legal obligations to guarantee the safety of its workers as it is not supplying safety materials, such as protective work clothing or adequately mitigating the risks of a dangerous workplace. Without the Department of Labor Inspection monitoring and investigating CINTRI’s compliance with the Labor law, it is likely CINTRI workers will continue to be put in dangerous situations with little protections in place to safeguard their right to a safe working environment.

CINTRI’s 50-year contract to manage Phnom Penh’s waste still has not been publicly released, allowing little insight into how issues of waste management can be accurately measured or where responsibilities lie. Unless the contract is released, **both parties are equally answerable for poor transparency**.

Of the 105 sangkats², officials from 99 provided input into the research, with many **being found unaware of how their constituents experience waste management**. Of the sangkats which experience *full coverage waste management*, there are 42 urban poor communities that reported they do not receive any waste management within the sangkat boundaries.

Poor access routes are commonly cited as a reason for communities not receiving waste management, and there is a strong causation found in this study. However, **trash carts³ should be able to navigate the small alleyways that trucks cannot enter in most communities**, and the inequitable distribution of trash carts across the city may be the reason so many communities have no waste collection. There is less than one trash cart per kilometer squared (km²) in all of the outer khans⁴ except Meanchey (1.5 km²), whereas the inner khans have a minimum of four trash carts per km².

8 of the 17 focus group discussion (FGD) communities had reported issues to local authorities but received no response. Additionally, only 1 of the 17 communities was able to produce a CINTRI contact card⁵, which had been used by the community to communicate directly and successfully with CINTR.

¹H Jones, B Clench and D Harris, 2014, ‘The governance of urban service delivery in developing countries - Literature Review’, Overseas Development Institute (ODI); H Jones, C Cummings and H Nixon, 2014, Services in the city - Governance and Political Economy in urban service delivery - Discussion paper, ODI. Whiteman et al. 2018. ‘Waste Management: An indicator of urban governance’.

²A ‘*sangkat*’ is an administrative area of the city.

³Refers to a cart, typically narrow and hand or motorcycle drawn, that is used to collect trash by CINTRI workers.

⁴A ‘*Khan*’ is an district of the city.

⁵A CINTRI contact card is a card containing the contact details of a relevant CINTRI offices nearby a community.

CINTRI documents are often published online, such as the Khan Waste Pick-up Schedules, which are detailed and concise, but not easily accessible to the public as internet use and smart phone or computer possession remains low in urban poor communities⁶. According to CINTRI, **it is the government's responsibility to inform the public** after CINTRI inform them⁷.

As well as providing specific recommendations to the authorities, CINTRI and the urban poor communities, the report concludes that urban governance is inadequate with regards to waste management. A lack of transparency, equity, accountability, responsiveness, and the respect for the lives of CINTRI's workers, leads to the ultimate conclusion that waste is poorly governed. The study should not be considered as comprehensive, but provides an insight into governance from one of the most marginalized groups in the city. Without better governance moving forward, local government, the RGC, and CINTRI, will continue to endanger citizens and workers, undermining their ability to provide trash collection services.

⁶STT, *Community Database*, 2018.

⁷STT, *Interviews with Cintri*, 2018.

Case study: The black river

“People still throw trash into the canal. They don’t care.”

If smells were sounds, Samaki Roeung Roeurng would be screaming. Located along the Trabek canal, infamous for its thick black-grey waters and an odor that burns the nostrils, this community is home to 297 people. The houses sit above the water that is littered with white plastic bags, styrofoam and other trash that has formed islands so thick they look walkable.

Twice a week the CINTRI truck will arrive at the edge of the community to pick up trash, though it rarely takes all of it. Many community members contribute to the pollution of their own community by throwing waste into the river, or by the side of their house, in the street, or in a pile to be burned.

When the waters rise, inundating houses on rare occasions, any unorganized trash will be scattered, further contaminating the water and spreading waste throughout the community.

Community members pay US\$1.00 per household for CINTRI to remove their trash, despite CINTRI not taking any trash from within the community’s boundaries. “It isn’t fair”, according to one community member. Some community members have been there since the fall of the Khmer Rouge, when the city’s population was less than 20,000 inhabitants. Now, they are deemed illegal by the authorities, and newer inhabitants of the city upstream dump trash on the street that eventually finds its way into the dark river, clogging the drains and littering the community. The canal was originally a drain to remove water from the city to its penultimate exit of Boeung Tompoun lake.

Some community members, including children, sift through the floating islands of plastic, often without protective clothing, to find recyclable materials which can be sold.

CINTRI reports that it would like to do more to help urban poor communities, but is often left without technical knowledge or support from authorities. CINTRI has said they talked to authorities about urban poor communities, but they can’t do anything without further support from the government. The narrow entry points of the community can fit a motorbike, but make it difficult to enter for larger waste collection projects.

Until another solution is found, residents will continue to worry about their children’s health and fear that a cigarette dropped in the wrong place will alight the whole community.

“They [authorities] don’t care about us. They don’t care what happens to this community.”



The black river. STT. 2018.

CHAPTER 2 METHODOLOGY

2.1 Methodology

Methodology was developed to meet the following objectives:

- assess the current waste management situation in the inner and outer khans of Phnom Penh
- identify any risks to communities with poor waste management
- make clear recommendations to stakeholders about waste management on the basis of the findings of this research
- provide evidence of waste issues through statistics, narrative reports and pictures.

2.1.1 Study area

Research was carried out in the entire Municipality of Phnom Penh, covering 678 km², 12 khans (districts), 105 sangkats (communes) and 277 urban poor communities.

2.1.2 Scope

Focus group discussions (FGDs) were organized to gather information from urban poor community members of the inner and outer khans of Phnom Penh. Discussions focused on perceptions of solid waste governance, relationships and satisfaction with Municipal Solid Waste Management (MSWM), and the principles of good governance. 30 people participated in the FGDs, representing 17 urban poor communities (5 inner khan and 12 outer khan).

Data were utilized from the *The Phnom Penh Survey 2018*, in which 277 community leaders/informants provided information on the general socio-economic conditions and challenges of their communities, including information about the availability of solid waste collection, street lights and access to the communities.

In addition, data were generated through direct interviews with sangkat chiefs, or other sangkat officials if a chief was not available, to gather information on the service delivery of solid waste management within their constituencies. 99 of a total 105 sangkat chiefs participated in the research, representing a response rate of 95%.

CINTRI, Cambodian Education and Waste Management Organization (COMPED), Community Sanitation and Recycling Organization (CSARO), and Go Green provided key person interviews that helped to inform the research and generate some data.

2.1.3 Data collection and analysis

A ‘mixed methods’ approach was used for this report. Primary data were generated from questionnaires, interviews, focus group discussions (FGDs), and key person interviews.

Secondary data was generated through a desktop review of the relevant literature and research, as well as analysis of the most recent database records of STT – primarily the database records produced for *The Phnom Penh Survey 2018*⁸.

⁸STT, 2018. ‘*The Phnom Penh Survey*’.

A desktop review, focused exclusively on good governance and municipal solid waste management as key search terms, was conducted. Additionally, as a part of this review, the relevant legal documents were reviewed and analyzed, as well as RGC plans and policies.

Observation, interview and internal databases were also used to generate case studies that emphasize key issues.

Photos were taken, and have been dispersed throughout the report as evidence of waste practices.

Consent was gained from all participants in this research. To protect the identity of certain people who contributed to this report, pseudonyms have been used when possible and communities are often not named.

2. 2 Limitations

2.2.1 Lack of participation from Phnom Penh Municipality

The Municipality of Phnom Penh was invited to participate in the research, however, they instead asked for additional submissions of documentation⁹, essentially side-lining any further attempts for contact. As such, many conclusions were drawn without their input.

2.2.2 Research design

The scope of the research focuses on urban poor communities as the main participants, meaning that the majority of Phnom Penh was not included directly in this study. Where possible, outside data were used to make the research wider reaching in its scope. As such, this research does not serve as a comprehensive study of urban governance on waste management in Phnom Penh, rather, it serves as a case study of the ways governance and waste management intersect and affect the lives of Phnom Penh's urban poor, a group which typically experiences some of the worst service provisions and living standards.

Additionally, this research is mainly concerned with waste collection. Therefore, waste generation, recycling, dumpsite management, and other issues related to waste management are not the main focus of this research and were not thoroughly-considered. Waste collection was selected as a key focal point as it is a key intersection point between the public, CINTRI, local government, and the RGC, and therefore is able to provide examples of governance.

CHAPTER 3 GOVERNANCE AND WASTE

3. 1 Governance

Governance is the ways in which state and non-state actors interact to implement policy and achieve goals. It is the process of ruling and of being ruled. This process involves numerous actors coming together, interacting, disagreeing with, but ultimately designing and implementing policies¹⁰.

3.1.1 Urban Governance

With more than half of the world's population now living in cities, a figure which is expected to increase to 68% by 2050, it has become increasingly important not only for States but also municipalities to manage

⁹NOTE: Requesting extra documentation or following strict bureaucratic measures has not been fruitful for STT in the past and it was decided to move ahead without involving the MPP in this research.

¹⁰World Bank, 2017. 'World Development Report: Governance and the Law.' Washington DC, USA.

urban growth and development¹¹. This growth will be distorted rather than uniform¹², with migrants and other poor groups inhabiting the outer areas of cities at a faster rate than the interiors¹³. This is especially true in low-income countries like Cambodia, where the periphery and peri-urban areas will grow much faster, compelling the need for strong governance to remedy the lacking infrastructure that these areas already face. Phnom Penh's population doubled in size between 1996 and 2008¹⁴, and is expected to reach approximately 2.2 million in 2018¹⁵, with the next census to be conducted in 2019¹⁶. As of 2015, 24.5% of the country's internal migration is rural-to-urban¹⁷, which will rise as Phnom Penh continues to have attractive pull factors such as work opportunities, better education and better infrastructure than rural areas¹⁸. The rise of secondary cities like Battambang and Sihanoukville, will also increase the need for effective and widely practiced urban governance. Cities around the world currently account for 70% of all waste generation¹⁹, epitomizing the epicenters in which the best waste management is required.

Citizen participation and engagement in decision making processes will be key issues to be addressed considering that cities will experience faster growth on the periphery and in peri-urban areas than the center²⁰. Local governments, civil society, the private sector and the public will be need to work collaboratively if they are to avoid major social and environmental catastrophes and ensure the city remains habitable²¹.

The need for urban governance research has been raised as a critical issue in Cambodia. As Sreang et al argue²² in their research paper on the impacts of decentralization reforms on urban governance in Cambodia, there has been an absence regarding urban governance in Cambodia, and the current decentralization policy needs to be redesigned and inclusive if it is to have a positive contribution to society. As the Overseas Development Institute (ODI) finds in its study regarding waste management, governance is crucial in the success of service delivery²³. When outsourced to a private provider, residents have experienced higher informal charges or no collection at all. As such, if service provision is designated to the private sector without strong commitment by the RGC to establishing regulatory frameworks, enforcement and subsidization, urban poor communities will likely experience poor waste collection²⁴.

3.1.2 Good Governance

Good governance is both the end goal, a well-governed and prosperous society, and the means to get there - through the creation of institutions, laws and a society in which the principles of good governance are upheld. It can be understood to be participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive, and legitimate under the rule of law²⁵.

3.1.3 Democracy and Good Governance

The relationship between democracy and good governance is mostly direct. Many of the principles of good governance such as accountability and transparency, are enshrined in democratic norms. However, democracy is not essential for good governance. Good governance is often viewed as pro-Western, biased

¹¹Clarke Alvarez, P., Huet, G. & Peterson, G. (2008). *Lessons for the urban century: Decentralized infrastructure finance in the World Bank*. Washington, DC: World Bank.

¹²OECD. (2015). *The metropolitan century: Understanding urbanisation and its consequences. (Policy Highlights)*. Paris: OECD.

¹³Avis, W. 2016. 'Urban Governance'. UK: GRDSC, University of Birmingham.

¹⁴Open Development Cambodia, accessed at: <https://opendevdevelopmentcambodia.net/topics/population-and-censuses/>.

¹⁵Ministry of Planning - Cambodian RGC 'Migration in Cambodia' (2012).

¹⁶Sen David 2017. "Election delays 2018 census". *Khmer Times* 8 November 2017. <http://www.khmertimeskh.com/5089529/election-delays-2018-census/>

¹⁷See n9.

¹⁸National Institute of Statistics, Ministry of Planning. "Cambodia Inter-Censal Survey 2013, Final Report."

¹⁹Avis, W. 2016. 'Urban Governance'. UK: GRDSC, University of Birmingham.

²⁰Sam Agere, 2000, 'Promoting Good Governance: Principles, Practices and Perspectives', in *Volume 11 of the Managing the Public Services: Strategies for Improvement Series, Commonwealth Secretariat*.

²¹Nuno F. da Cruz, Philipp Rode & Michael McQuarrie (2018): *New urban governance: A review of current themes and future priorities*, *Journal of Urban Affairs*.

²²Chheat Sreang, Ann Sovatha & Kim Sedara. 2012. *Urban Governance in Decentralised Cambodia: An Under-researched Topic?*. CDRI.

²³UN Habitat III Quito Policy and Issue Papers on Urban Governance and Urban Services; ODI.

²⁴UN Habitat III Quito Policy and Issue Papers on Urban Governance and Urban Services; ODI.

²⁵United Nations Economic and Social Commission for Asia and the Pacific, 2009 'What is Good Governance?', accessed at: <https://www.unescap.org/sites/default/files/good-governance.pdf>.

and unreasonable for hybrid-democracies or countries trying to move towards democratic ideals²⁶. This research notes that it is possible for good governance principles to be enacted in certain sectors, such as waste management, without a functioning democracy. While possible, based on recent history, good governance will not flourish in Cambodia without principles of democracy in place.

3.1.4 Cambodia's Governance

Reports on Cambodia's governance reflect a bleak reality for the country. The World Bank has compiled governance indicator data for over 200 countries since 2006, collecting information from hundreds of institutions, NGOs, professionals, businesses and researchers to produce reports that reflect how well a country performs internationally.

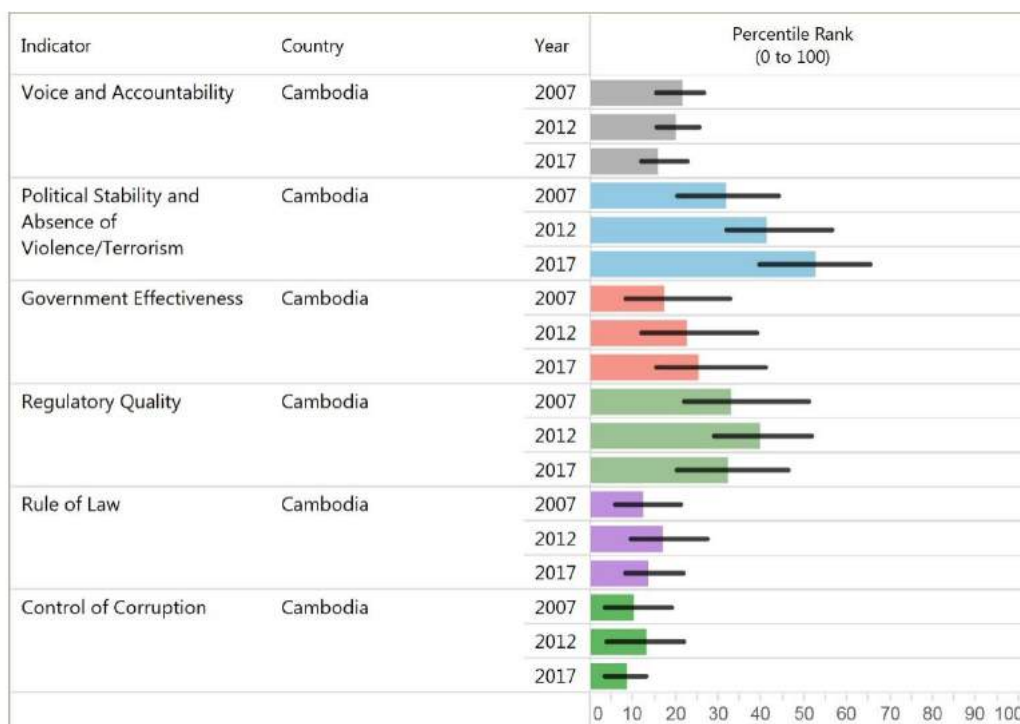


Figure 1²⁷: Governance indicators for Cambodia.²⁸

Cambodia ranks poorly internationally, although it has shown improvement in *government effectiveness* and *political stability and absence of violence/terrorism*. *Government effectiveness* improvements should indicate that public services can be improved in line with good governance principles.

On a more localized scale, Cambodia ranks poorly on governance indicators related to the public sector, public procurement and transparency processes, according to a 2014 report by Transparency International (TI)²⁹. In terms of public sector employees being responsible and answerable for their actions, TI gave a score of 25/100, or *weak*, noting the lack of an administrative court and internal resolution. In terms of public procurement or bidding processes, of which CINTRI was a notable beneficiary in gaining the contract to manage Phnom Penh's waste, TI gives a higher score of 50/100, or *moderate*. It noted that safeguards are now in place to reduce corruption risks in public procurement, such as the Law on Public Procurement, which was passed in 2012 - 10 years after the awarding of CINTRI's contract in 2002³⁰. Others have noted the prevalence of bribery in procurement contracts with Cambodia's ministries^{31,32}. TI's

²⁶Menocal, A. 2007. 'Analysing the relationship between democracy and development: defining basic concepts and assessing key linkages'. Wilton Park Conference on Democracy and Development.

²⁷Bars denote percentage points that indicate how many countries rank below Cambodia on an indicator. As such, good governance scores would be 75-100, whereas bad governance would be 0-25.

²⁸World Bank, 2018. 'Worldwide Governance Indicators'. Accessed at: <http://info.worldbank.org/governance/wgi/index.aspx#reports>

²⁹Transparency International, 2014. 'Corruption and Cambodia's Governance System: The need for reform'. National Integrity System Assessment. Phnom Penh, Cambodia.

³⁰UNEP, 2018. 'State of Waste Management in Phnom Penh, Cambodia'.

³¹ See n22.

³² The Global Fund, 2013. 'Investigation Report of Global Fund Grants to Cambodia'. Office of the Inspector General, Geneva.

report gave a score of 0/100, or *very weak* regarding the independence of Cambodia's Anti-Corruption Unit, leaving considerable questions for how well corruption can be monitored, if at all, by responsible institutions³³.

Cambodia's national budgets often provides "scant" and unspecific information³⁴. This makes it difficult for the public to analyze and understand the information, as specific details are usually removed, allowing the RGC maneuverability when being held accountable as to how funds are spent.

The shortcomings of good governance have been heavily and critically debated by various academic experts and institutions³⁵. Despite this, there are strong normative, political and rights-based arguments for utilizing governance indicators to measure the quality of governance in relation to providing a *public good*, such as solid waste management.

³³ See n22.

³⁴ International Budget Partnership, 2017. 'Open Budget Survey 2017'. Accessed at: http://www.cambodianbudget.org/files/publication_file/d75eb879f668b18015a52d83bc9a1bcf-OBS-2017-eng.pdf

³⁵ Andrew Whiteman, Peter Smith and David C. Wilson, 2001, 'Waste Management: An Indicator of Urban Governance', accessed 09/08/2017: <http://davidcwilson.com/project/waste-management-an-indicator-of-urban-governance/>
Karen Mossberger, Susan E. Clarke, Peter John, 2012, 'The Oxford Handbook of Urban Politics',

Case study: Japanese waste governance

In Japan, effective cooperation between national government, local government, the private sector and the public has been critical in having an advanced solid waste management system.

National and local governments share responsibilities, ranging from data collection to financing. According to the World Bank, 99% of the 44 million tons of waste generated annually is recycled or converted to energy in waste-to-energy facilities throughout Japan.

Some have traced this to a cultural tradition that dates back to the Edo Period (1603-1868), when Japanese people recycled what they produced. Pride in cleanliness is also highly valued in Japan. During the Football World Cup in Russia earlier this year, Japanese supporters would stay behind after the game had finished to help clean the stadiums.

From a governance perspective, the creation of a 'Gomi guide', a 24-page guide on garbage disposal and recycling facilities by local officials in parts of Tokyo, helped to create a more in-depth understanding of waste management amongst the public.

Since the 1990s, a series of national waste management laws have been introduced to restrict waste consumption and promote 'reduce, reuse and recycle' principles.

In contrast to Phnom Penh, waste collection in Japan is mostly carried out by small local operators and no significant national player exists. The Japanese national government also provides subsidies to municipalities to develop waste treatment plants.



Sources: *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050* by The World Bank; *Waste Disposal: Not a just a load of Rubbish* in The Japan Times, *Wasteland: Tokyo grows on its own Trash* in The Japan Times; *Waste Management and Recycling in Japan Opportunities for European Companies (SMEs focus)* by EU-Japan Centre for Industrial Cooperation. Picture from <https://www.givemesport.com/>.

3.2 Municipal Solid Waste Management

Municipal Solid Waste Management (MSWM) refers to the process of managing waste in a municipal area. Generally, a distinction is made between the waste of factories or industrial projects which is often not solid and may contain dangerous chemicals, and the waste of households, small businesses and public area waste, which is considered municipal solid waste. Additionally, MSWM does not refer to liquid sewage or wastewater.

3.2.1 Policy, Regulatory and Institutional Profile

In Phnom Penh, MSWM collection and disposal is currently outsourced via service contract to a private provider. In 2002, CINTRI (Cambodia) Ltd. bought contractual rights from PSBK Ltd. to operate waste management in the city. The Municipality of Phnom Penh (MPP) and CINTRI signed a 50-year contract on waste collection service in Phnom Penh³⁶.

The Phnom Penh Capital Council (PPCC) has jurisdiction within Phnom Penh to establish, promote and sustain democratic development. It is currently headed by Governor Khuong Sreng, who is nominated by the Ministry of Interior for a period of 4 years and a maximum of 2 terms³⁷. The khan and sangkat councils are under the supervision and management of the PPCC. However, ultimately, the roles, duties and working relations of the PPCC, khan councils and sangkat councils are determined by the Minister of the Interior, Deputy Prime Minister Samdech Krolahom Sar Kheng. Additionally, a series of laws³⁸ and policies³⁹ are relevant for MSWM governance.

3.2.2 Waste Generation, Composition, Collection and Disposal

Phnom Penh generates close to 4.09 million tons of municipal waste per year⁴⁰. In 2015, household waste generated about 55% of total municipal waste generation, with the remaining amount being made up of hotel (17%), restaurant (14%), market (8%), retail (6%) and office waste (1%)⁴¹.

Waste is generated in households, small businesses and other locations, before being placed outside for collection. In most areas, waste is placed in plastic bags and sat in piles on the side of the street, outside a household, in a dumpster, in an agreed area, or it is illegally disposed of by being dumped into a river or elsewhere, burnt, or buried. Illegal dumping, burying or burning of waste was reported by 75 urban poor communities that had no access to MSWM in their communities in 2017⁴².

A key issue is that few people have waste bins or dumpsters. The lack of a bin, which acts a protective covering, means that trash awaiting pick-up will often be spread by animals, such as dogs, cats, rats or monkeys, or washed away in the floods regularly experienced in Phnom Penh. The smell of trash is also amplified by the lack of a bin; the smell and beauty of areas is a frequently mentioned issue when discussing waste management with residents of the city.

Waste is then either collected by CINTRI, waste-pickers or is disposed of privately. Around 80% of municipal waste is collected by CINTRI and then transported to the Dangkor landfill⁴³. Waste collection or 'pick-up' takes place during both the day and night, depending upon the area of the city. Waste routes are scheduled for either 'everyday', 'every-other day', or '3 days a week', with some markets and other unusual areas receiving waste pickups 'twice everyday'. Trucks are used for the main streets of the city whilst small-carts are used for alleyways, with the exception of Chbar Ampov district, which has no small-

³⁶See n23.

³⁷Organic Law on Administration of Capital City, Province, Municipality, District and Khan (2008): http://www.cdc-crdp.gov.kh/cdc/twg_network/country_systems_cambodia/strengthening_national_systems/documents_for_reform/sndd/organic_law_2008_en.pdf

³⁸Sub-Decree On Solid Waste Management, No. 36 (1999), Sub -Decree on Urban Solid Waste Management, No. 113 (2015), Waste Storage, Cleansing, Waste Discharge and Penalties on Improper Waste Disposal in Phnom Penh Municipality (2013).

³⁹Inter-Ministerial Declaration of Ministry Of Interior-Ministry of Environment on Waste and Solid Waste Management in Province / Municipalities of Cambodia, No. 80 (2003), Draft Strategy and Methodology for Improving Waste Management and Cleansing, Collection and Transport of Solid Waste in Phnom Penh Capital Sechkdey Chun Damnoeng (Notification) On Waste Storage, Cleansing, Waste Discharge and Penalties on Improper Waste Disposal in Phnom Penh Municipality, No. 13 (2013), Instruction Plan on the Application of Penalties to Promote Environmental Sanitation Raising In Phnom Penh Municipality, No. 09 (2010), Sechkdey Nainoam (Instruction) on Penalties on Waste Disposal in Public Area, No. 16 (2010), Instruction Plan on Waste Separation Promotion in Phnom Penh Municipality, No. 08 (2010).

⁴⁰Provincial Departments of Planning, 2015. 'Data Documentation on Provincial-Municipal situation in 2015'.

⁴¹Seng, K. 2015. 'Analysis of solid waste composition and waste forecasting in Phnom Penh with the production of methane from Dangkor landfill, Cambodia'. Institute of Technology of Cambodia.

⁴²See n2.

⁴³See n23.

cart collection service⁴⁴. It is estimated that approximately 20% of total waste is not collected and 9.3% is recycled, leaving the rest to be burned, buried or informally dumped⁴⁵.

3.2.3 Capacity

MSWM is based on a ‘user-pays’ system, which is inherently profit driven. The total fee for collection is typically US\$1.00 per household in urban poor communities and is tied to the electricity bill issued by Electricite Du Cambodge (EDC). Many users have refused to pay for CINTRI’s service, however there are very few reports of this resulting in power cut-offs⁴⁶.

CINTRI employs 2,359 workers, of which 1,678 work on field operations. CINTRI has 426 trucks and 273 trash carts for waste collection.⁴⁷

3.2.4 The informal economy – waste-pickers

Waste-pickers contribute to waste management in Phnom Penh through material recovery (recycling), which is lacking in the formal economy. Only CSARO and some other NGOs recycle, however they mostly focus on organic waste.

There are estimated to be more than 3000 waste-pickers in Phnom Penh, with a large proportion of those being children⁴⁸. Many of these waste-pickers work at the Dangkor landfill, where they are often registered with authorities. Other workers operate in the informal sector, usually on the streets of the city, buying and collecting recyclable materials. Materials are then taken and sold to middlemen, who sell them internationally as Cambodia has limited recycling capabilities.

Waste-picking often provides higher material recovery totals than formal sector recycling in developing nations, such as Egypt, Romania, Peru, India and the Philippines⁴⁹. This is also true in Cambodia, where the informal waste-pickers will then sell their waste to middlemen who sell it abroad⁵⁰. The relationship between the informal and formal sector is often exploitative, with the formal sector allowing waste-pickers to operate outside of regulatory frameworks that would require them to pay higher wages or provide healthcare if they were formalized. This prompts the need for further incorporation of the informal sector into RGC plans and policies in order to protect workers from exploitative conditions. On average, pay is

approximately US \$200.00 per month⁵¹ and conditions are harsh for informal sector waste-pickers.

Research from a range of countries has demonstrated the importance of waste-pickers in creating a more inclusive city⁵². Municipal expenses are reduced through subsidization of solid waste management systems because of waste-pickers, many of whom help to clean public spaces without any costs to the government⁵³. As of 2010, UN Habitat reports that waste-pickers performed 50-100% of ongoing waste collection in most cities in developing countries⁵⁴. It is unclear how much of the waste collection waste-pickers perform in Phnom Penh, but it is likely they are performing most of the non-organic recycling as no private companies operate at the collection level currently.

⁴⁴CINTRI schedules. Accessed at: CINTRI.com.kh

⁴⁵See n23.

⁴⁶The Asia Foundation, 2016. ‘Reforming Solid Waste Management in Phnom Penh’. Working Politically in Practice. Australian Aid: Department of Foreign Affairs and Trade.

⁴⁷Cintri provided statistics for their own workplace injuries and deaths during interviews with STT. 2018.

⁴⁸Global Alliance of Waste-pickers, 2018. ‘Law Report: Cambodia. Waste-pickers in Cambodia’.

⁴⁹Dias, M. (2016) ‘Waste-pickers and Cities’. International Institute for Environment and Development.

<http://www.wiego.org/sites/wiego.org/files/publications/files/Dias-wastepickers-cities-2016.pdf>

⁵⁰STT interviews with waste-pickers. 2018.

⁵¹Ibid.

⁵²GIZ, (2010). ‘The Economics of the Informal Sector in Waste Management’. Collaborative Working Group on Solid Waste Management in Low- and Middle-income Countries. <https://www.giz.de/en/downloads/giz2011-cwg-booklet-economicaspects.pdf>

⁵³WIEGO Secretariat, (2012). ‘Urban Informal Workers and the Green Economy’. Harvard University.

⁵⁴UN Habitat (2010), ‘Solid Waste Management in the World’s Cities’.

Case study: The recyclers

“I can earn about 30,000 riels [US\$7.50] a day,” says Bong Srey, a Phnom Penh waste-picker.

Bong Srey is earning approximately US\$200.00 per month, and with 11 family members to help support, her money is often stretched thin. “My daughter also works, and another 5 grandchildren are at school,” she explains.

Bong Srey collects plastics, metals, cardboard and paper from the O’Russey market area. She is concerned sometimes that she will become sick because of the waste she has to go through to find recyclable materials. “I always wear gloves and a mask”, but needles can puncture her worn gloves and a mask does not provide full protection.



From the streets to the rivers and the forests

Bong Srey, along with other waste-pickers throughout the city, provides a public service that few others in Cambodia provide. So few, in fact, that almost all recyclable materials, excluding organic materials, are sold to Vietnam, Thailand, South Korea, China, and Singapore (around 14 thousand tons in 2015). Waste-pickers help to keep the city clean, the forests protected and the environment healthy. By recycling paper, waste-pickers help to save virgin pulp from being used, as recycled paper is used instead, which saves more trees from being cut down and helps keep topsoil intact to prevent flooding. Bong Srey works on the asphalt and concrete streets under a hot sun, but ultimately, her work contributes to forest conservation and a healthier Cambodia.

After the US\$117.00 she spends on rent each month, the remaining amount, US\$108.00, is spent on food, and taking care of her children.

“My husband died from beer and smoking too much. When I first came here, I carried sacks to collect the trash with my husband and young daughter. Then the middle-man gave me 50,000 riels [US\$12.50] and a trash cart to push.”

In the landfill, there are around 2000 registered waste-pickers, but there are many more working outside it. The informal economy is vulnerable, and initiatives should be aimed at recognizing the importance of waste-pickers and helping to protect them - such as through the provision of health care. Bong Srey worries about her health and the impact it might have on her children.

“I only have a heart problem. I’m 60 years old and I don’t eat enough.”

Despite this, Bong Srey continues to strive to make a living for her children, with her impact being felt even further than the streets of Phnom Penh.

Sources: STT, Key Person Interviews, 2018.

CHAPTER 4: KEY FINDINGS

Good governance principles were used as a framework against which the findings are organized. The purpose of this is to identify the key areas in which good governance is failing or succeeding and gain insight into the effects of different good governance indicators.

4.1 Participation – *People should be able to voice their own opinions through legitimate, immediate organizations or representatives.*

Participation in waste management is low among urban poor communities, many of whom are not included in planning or meetings. According to Focus Group Discussions (FGDs), community participation in the governance of waste management is lacking due to a lack of communication between citizens and the government officials and unclear requirements for civic engagement in waste management practices.

When FGDs communities were asked if they can communicate with CINTRI or local government about waste management, only 6 (35%) of the 17 communities said they felt comfortable doing so. Communities generally felt discouraged to communicate complaints to sangkat and khan officials, with many communities vocalizing their frustration at the local officials' lack of concern for the urban poor. Two communities felt they could talk to CINTRI about issues, but could not talk to local officials. Additionally, 8 communities (47%) said their interactions with CINTRI were positive. Contrastingly, participation with the local authorities was described as “bad”, “one-way” and “uncaring”⁵⁵.

14 (82%) of the 17 communities were aware of different ways to voice their opinions with local government, such as through sangkat or khan meetings, directly by visiting officials' offices, or by writing a letter⁵⁶. Despite being aware of different methods of participation, none (0%) of the 17 communities were confident of their ability to speak, or believed they would be listened to, at the meetings⁵⁷. Many were unsure of the effectiveness of participation, and doubted their capacity to write an official letter. Further, communities expressed doubt at the effectiveness of talking or raising issues with local authorities, often saying things such as “they don't want to hear about it”⁵⁸.

In terms of direct involvement in MSWM, in this case defined as (a) *education programs on waste management*, or (b) *participation in setting up waste management activities*, 11 (64%) of the 17 communities had been directly involved in waste management⁵⁹. Communities had participated in education programs, with some recalling television programs and training courses, all of which were provided by NGOs or the RGC (television programs were said to be RGC initiated⁶⁰). All communities had a general understanding of the health risks posed by improper waste management, which 15 (88%) out of the 17 communities had gained knowledge of through trainings⁶¹.

The latest United Nations Environment Programme report on waste management acknowledges that many participatory problems are the fault of each the government, CINTRI and citizens⁶². Data from the Japanese International Cooperation Agency, (JICA) suggests that many communities, although not necessarily urban poor, continue to dump trash on the streets and into canals⁶³, which then clogs drainage systems and worsens flooding. When asked about their knowledge of environmental effects of dumping waste, most communities (60%) were able to identify risks to the environment but only 1 community (5%) was able to demonstrate knowledge of drainage problems⁶⁴.

⁵⁵ STT, Focus Group Discussions. 10/5/2018.

⁵⁶ STT, Focus Group Discussions. 10/5/2018.

⁵⁷ STT, Focus Group Discussions. 10/5/2018.

⁵⁸ STT, Focus Group Discussions. 10/5/2018.

⁵⁹ STT, Focus Group Discussions. 10/5/2018.

⁶⁰ STT, Focus Group Discussions. 10/5/2018.

⁶¹ STT, Focus Group Discussions. 10/5/2018.

⁶² See n23.

⁶³ JICA, 2016. 'The study on drainage and sewerage improvement in Phnom Penh metropolitan area'. Accessed at: http://open_jicareport.jica.go.jp/pdf/12270294_01.pdf

⁶⁴ STT, Focus Group Discussions. 10/5/2018.

CINTRI informed the researchers that complaints, questions and queries are welcomed via phone, Facebook messenger, in person at any CINTRI office and via their hotline, which is specifically established to maintain communication with citizens in the event of any issues. According to CINTRI, if their staff receive a complaint, they will perform a site visit to assess the issue, prepare a short report based on the investigation and take further action accordingly⁶⁵. When FGD communities were asked if they were aware of these mechanisms, they reported that they were aware of CINTRI offices (100%), but only one person was aware of the CINTRI hotline⁶⁶. Most communities had leaders with Facebook and internet access, but capacity to access and use the internet remains low in urban poor communities. One community (5%) was able to produce a CINTRI contact card, but other communities were unaware of how to obtain this card.

“When people get educated about this problem, the city will be clean,” said a supervisor for CINTRI⁶⁷. CINTRI notes that it is the responsibility of the RGC to provide education on how to organize trash for collection⁶⁸. Simple organization of trash can lead to much higher collection rates⁶⁹, but this knowledge is not being passed on to urban poor communities, ultimately leading to compromised participation with regards to waste management.

The bottom lines

Lack of participation leads to a disjointed MSWM program. A lack of education and engagement can worsen the problem and lead to illegal dumping, mismanagement of waste and anger from citizens. Ultimately, a lack of participation will affect responsiveness, effectiveness and efficiency.



Waste in an urban poor community. STT. 2018.

⁶⁵ STT, Interview with Cintri, 2018.

⁶⁶ STT, Focus Group Discussions. 10/5/2018.

⁶⁷ Muong, V. 2016. 'It's a dirty job... a night with the trash collectors.' *The Phnom Penh Post*, accessed at: <https://www.phnompenhpost.com/post-weekend/its-dirty-job-night-trash-collectors>

⁶⁸ STT, Interview with Cintri, 2018

⁶⁹ STT, 2016. 'Facts & Figures #31: Trash'.

Case study: Lethal refuse

“I have worked there [CINTRI] for 4 years. My husband, my sons, and my daughters all work the same as me. We all get a US\$115.00 salary [per month].”

Ming Srey says her and all 9 of her family members, work hard at their jobs. Working the early morning shift from 4:00am till 9:00am, the family works through the darkness and peak-hour morning traffic.

“I worry about the traffic, but I don’t have any choice”. Ming Srey has good reason to worry. Since working there, she has known 5 people that have been killed on the job. Nearly two years ago, her cousin was killed by a motorbike driver in the early morning. CINTRI provided over US\$1000.00 in compensation, but did not include his salary for the month he died.

CINTRI provides only a green company shirt to its employees despite them regularly handling dangerous materials like glass, needles, and improperly disposed of wastes - such as sulfuric acid from batteries.

In 2017, 43 injuries were reported by CINTRI workers, either from cuts or burns suffered during work procedures. 100 incidents of vehicle-to-CINTRI worker accidents were recorded too, with 7 fatalities. As of November 2018, no deaths have occurred throughout the year, but there were still more than 100 traffic accidents involving CINTRI workers on-the-job.

The green company shirt provides no protection from the traffic. It doesn't reflect light or glow, but the company has been offering “safety” training.

“We, who are waste-collectors, are afraid to advocate.”



Sources: STT, *Key person interview with CINTRI staff member*, 2018. (Picture from Cambodia Daily).

4.2 Rule of law - The legal framework should be enforced impartially, especially human rights laws.

100% of communities that participated in FGDs were aware of the guidelines, general laws, and responsibilities involved in MSWM. They had predominantly gained this information through RGC funded television programs. Communities reported that they were not comfortable reporting issues to the police or authorities but also noted that they did not see many legal issues to report.

One worrying issue that emerged from the desk review and interviews with CINTRI workers and CINTRI themselves was that CINTRI workers are put in deadly situations on a regular basis.

Roughly half of all of trash collection by CINTRI is conducted at night, which was adopted as a way for waste trucks to avoid traffic issues and to decrease the amount of waste placed on the streets during the day when citizens are more active on the roads⁷⁰. While this rationale is logical, the danger posed to CINTRI workers may be increased at night by compounding factors such as dim lights, narrow streets and drunk-drivers. However, incident reports from CINTRI do not support a causal link between the night shift and accidents, with roughly half of all accidents occurring during the night and half during the day⁷¹.

In the last 4 years, 14 CINTRI workers have been struck and killed by traffic while on the job. Roughly half of the deaths occurred during a night shift. CINTRI has no data on whether or not the responsible drivers were intoxicated. Additionally, in the last 3 years there have been 380 incidents of injury, including 285 vehicle-to-worker accidents (non-fatal only), and close to 90 injuries resulting from cuts, burns, and falls⁷².

Under the Cambodian Labor Law, 1997, Article 229, all workplaces “must maintain working conditions necessary for the health of the workers”⁷³. Additionally, Article 230 notes that all establishments “must be set up to guarantee the safety of workers”⁷⁴. Given the 14 deaths and 380 incidents of injury over the last 4 years, it is unlikely that CINTRI is able to maintain working conditions that are necessary for the health and safety of their workers.

Through Prakas No. 176, CINTRI is responsible for the provision of education and training to its workers on the risks they face as well as the effective preventive measures⁷⁵. CINTRI does provide “safety training” to its workers⁷⁶, but fails to provide any safety gear⁷⁷. Even the effectiveness of “safety” trainings must be called into question given trainings have been given to CINTRI workers for nearly a decade⁷⁸ and there have been 14 fatalities and 380 incidents of injury over the last 4 years. CINTRI indicates that their trainings explain an improved safety record (self-reported⁷⁹) over 2018 – in which, as of November, no CINTRI staff had died on-the-job. But the fact that there were still over 100 vehicle-to-worker accidents during 2018, indicates that “safety” trainings may not be providing significant enough mitigation.

According to Prakas No.341, CINTRI is under the jurisdiction of the Ministry of Labor and Vocational Training⁸⁰, and under Sub-Decree No.52, Article 11, the Department of Labor Inspection, which sits under the Ministry of Labor and Vocational Training, is responsible for monitoring and reinforcing the implementation of the Labor Law and international conventions on labor conditions and rights⁸¹, such as the provision of “individual protective instruments and work clothes”⁸². Under Article 233 of the Labor

⁷⁰See n48.

⁷¹ Data provided from Cintri.

⁷² STT, CINTRI interviews, 2018.

⁷³ Cambodian Labor Law, 1997, Article 229.

⁷⁴ Cambodian Labor Law, 1997, Article 230.

⁷⁵ Education on Hygiene and Technicality for Occupational Safety to Workers, Shop Stewards and Unions. No. 176. 2013.

⁷⁶ STT, Interview with Cintri, 2018.

⁷⁷ STT, Interviews with CINTRI workers, 2018.

⁷⁸ STT, Interview with Cintri, 2018.

⁷⁹ Cintri provided statistics for their own workplace injuries and deaths during interviews with STT. 2018.

⁸⁰ Prakas on the Determination of Enterprise and Establishment Management in Phnom Penh. No. 341. 2016.

⁸¹ Prakas on Education on Hygiene and Technicality for Occupational Safety to Workers, Shop Stewards and Unions. No. 176. 2013.

⁸² Cambodian Labor Law, 1997, Article 229.

Law, Labor Inspectors and Labor Controllers are tasked with inspection missions of the enforcement of legislative provisions but the law does not stipulate how often inspections are to be conducted⁸³.

Under the International Covenant on Economic, Social and Cultural Rights⁸⁴, which Cambodia is party to⁸⁵, and the Universal Declaration of Human Rights⁸⁶, of which the Kingdom of Cambodia recognizes and respects⁸⁷, the right to *favorable and safe conditions* of work are protected and the Cambodian State is the ultimate guarantor of this through enforcing constitutional protections. Under Sub-Decree No.52, Article 11, the Department of Labor Inspection, is responsible for monitoring and reinforcing the implementation of the Labor Law and international conventions on labor conditions and rights.

In terms of responsibility, CINTRI has failed its legal obligations to provide a safe working environment to its employees. There is need for further investigation through Labor Inspectors and Labor Controllers under Article 233 of the Labor Law, and through the Department of Labor Inspection, and this investigation should take place immediately in order to protect CINTRI workers' lives. The responsibility for monitoring and reinforcement of the law sits with the Department of Labor Inspection.

The bottom lines

The law must be upheld and enforced in order to keep citizens, the environment, and the workers of CINTRI safe.

The deaths of 14 CINTRI workers over the last 4 years requires official investigation by the Labor Inspectors and Labor Controllers and the Department of Labor Inspection to determine if CINTRI is failing its legal obligations to its workers and to provide greater safety to CINTRI workers.

Until CINTRI is able to guarantee a safe workplace for its workers, or provide appropriate mitigations to reduce the number of casualties and deaths on-the-job, the company is ultimately responsible for failing to mitigate against the risks of a dangerous work environment. Without proper investigation, and subsequent enforcement, through official governmental channels, such as the Labor Inspectors and Labor Controllers and the Department of Labor Investigation, the RGC will also fail to protect favorable and safe conditions of work for its citizens.

4.3 Consensus Oriented - Mediates differing interests to meet the broad consensus on the best interests of a community.

Consensus oriented MSWM requires an understanding of the communities, which can be achieved through meetings, surveys, participatory MSWM programs, feedback polls, and questionnaires. 13 out of 17 communities (76%) reported participating in meetings with CINTRI and government about MSWM, but CINTRI has reported that it has not conducted participatory MSWM programs, feedback polls, or surveys. CINTRI specifically stated that they have “no information” about the feelings of the users of its service⁸⁸.

Map 1. illustrates the 105 sangkats, of which 99 sangkats chiefs or officials responded to questions about waste management coverage. The map shows which sangkats receive *full coverage*, *partial coverage*, and those that reported being *unsure*, as well as *no available data*. Additionally, the black numbered dots show the urban poor communities that are not receiving waste management services as of 2017.

⁸³ *Cambodian Labor Law, 1997, Article 233.*

⁸⁴ *International Covenant on Economic, Social and Cultural Rights, 1992. Article 6 and Article 7.*

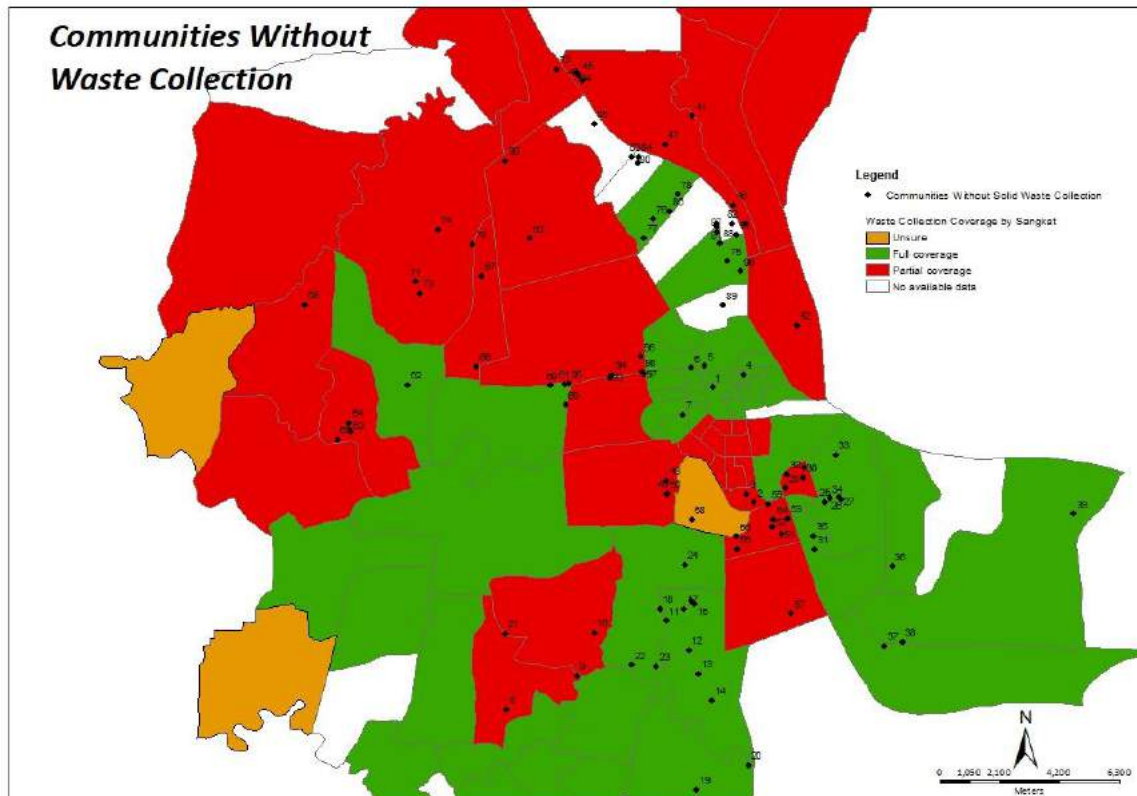
⁸⁵ *Office of the United Nations High Commissioner for Human Rights Cambodia Country Office. The Declaration of Human Rights in the Cambodian Constitution, 2008.*

⁸⁶ *Universal Declaration of Human Rights, 1948. Article 23.*

⁸⁷ *The Constitution of the Kingdom of Cambodia, 1993. Chapter III, Article 31.*

⁸⁸ *STT, Interviews with Cintri, 2018.*

Map 1. Communities without waste collection



A key finding of this is that sangkats level officials are often ignorant about how their constituents experience waste management. In the sangkats which reported *full coverage waste management*, there are 42 urban poor communities that reported they do not receive any waste management. Some sangkats responded that their administrative areas received *full coverage* despite having more than 4 or 5 urban poor community constituents that do not receive waste management.

FGDs also revealed a notable discrepancy in satisfaction rates based on location of communities. In the inner khans, 3 out of the 5 communities (60%) agreed to being satisfied with MSWM. 2 communities reported dissatisfaction due to the speed and regularity of MSWM in their communities. Outer khan satisfaction rates were much lower than the inner khan rates, with only 2 communities out of 12 (16%) reporting full satisfaction with MSWM in their communities. 10 communities reported dissatisfaction citing irregularity, slowness, lack of education, and ineffectiveness.

The bottom lines

Sangkat officials should be able to understand the needs of their constituents, yet this is not the case in many areas. Many communities do not receive waste management for technical reasons, but meetings between authorities, CINTRI and the communities do not take place regularly enough to find consensus-oriented solutions.

Case study: Three women fighting waste



“We care about our community... It belongs to all of us.” The words of Sen, Ros and Maan reflect the feelings of many Cambodian and Phnom Penh residents. The Cham community of Kor Village didn’t have waste management before these women took it upon themselves to provide a solution.

Located next to the regularly flooding Tonle Sap river, trash bins sit on the street corners ready to be used by the community. Years before, the community’s children regularly got sick, as floods mixed with rubbish and endangered residents who had nowhere to dispose of their trash other than the river or a fire pit.

The three women now lead a local waste collection initiative, meeting three evenings a week to gather waste from the community streets and bins and bring it to collection points along the highway where CINTRI trucks can access it. CINTRI workers do not access the community to collect trash, meaning that any trash left inside the community stays there.

People in Need, STT and Urban Poor Women Development, under the Human Rights Based Spatial Planning project, helped to organize the community and fund the trash bins that provide a more efficient and hygienic solution to waste management issues in a community without a formalized system. Now the community is cleaner, safer, and better organized, with clear roles on how to ensure waste is collected by CINTRI.

“The community is cleaner, less people are getting sick, and it is nice that children can play on the streets,” says Maan.

Sources: People in Need, 2018.

4.4 Equity and Inclusiveness- People should have opportunities to improve or maintain their well-being.

According to FGDs, the communities widely believe that they are not treated as equal to other communities in Phnom Penh in terms of MSWM, as supported by the fact that 99 of 277 urban poor communities have no waste management. As Map 1. illustrated, urban poor communities were likely to be excluded from waste management even when the rest of the sangkat received it.

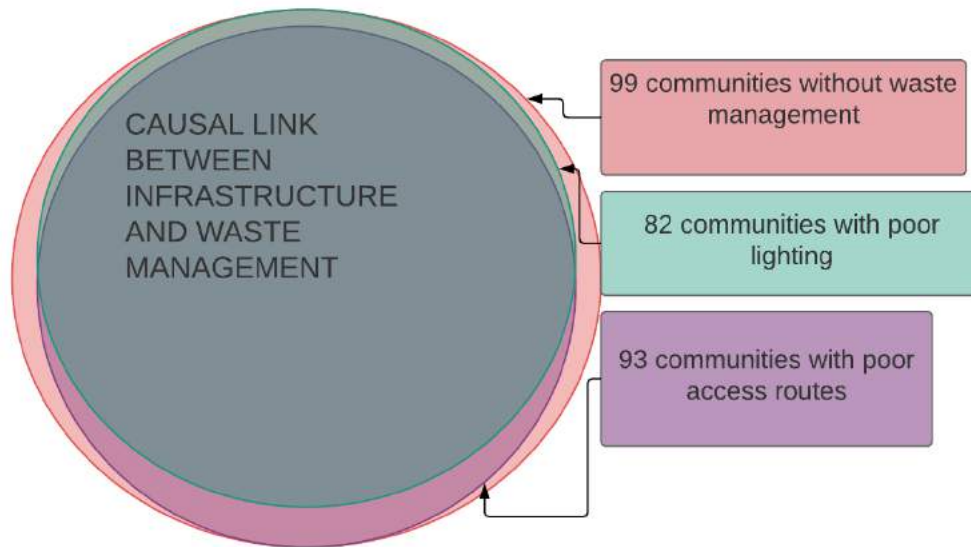


Diagram 1. Possible Causal link between infrastructure and waste management.

Diagram 1. explores the possible causal link between the 99 communities that do not have MSWM and the two most important infrastructure features these communities lack. Poor access routes are the most likely explanation for not having MSWM, with street lighting being another possible explanation for lack of MSWM. Of the 99 communities without MSWM, 93 have access roads which are either: one-lane roads, small alleys/paths (can fit a motorbike), weak bridges (can support a motorbike only), railway tracks or stairs⁸⁹. Trash carts should be able to navigate the small alleyways of most communities, with the exception of communities that are located up-stairs (1 community) so this doesn't fully explain why these communities do not receive waste management services.

Lack of street lighting may also prohibit or deter CINTRI workers from collecting trash in some communities as workers may have safety concerns when working late at night, but this should be mitigated by working during the day. Finally, a lack of an EDC connection (12 communities) may mean that CINTRI does not service these communities as it is unable to bill them.

⁸⁹STT, 2018. 'The Phnom Penh Survey'.

Table 1. Trash carts by population and area⁹⁰

Khans (district)	Population	Total area (km2)	Trash carts (per khan)	1 trash cart per _____ persons	Carts per 1km2
7 Makara [inner khan]	91,895	2.2	27	3403.5	12.2
Chamkar Mon [inner khan]	182,004	11.2	45	4044.5	4.01
Daun Penh [inner khan]	126,550	7.6	60	2109.1	7.8
Toul Kork [inner khan]	171,200	8.02	44	3890.9	5.4
Chbar Ampov	<i>no data</i>	87.3	0	<i>n/a</i>	0
Chroy Chongva	<i>no data</i>	86	2	<i>n/a</i>	0.02
Dangkor	257,724	115	4	64431	0.03
Meanchey	327,801	28.8	46	7126.1	1.5
Porsenchey	183,826	149	12	15318.8	0.08
PreakPnov	<i>no data</i>	116	3	<i>n/a</i>	0.02
RusseyKeo [inner khan]	196,684	23.9	21	9365.9	0.8
Sensok	147,967	54	9	16440.7	0.1

As Table 1 shows, the trash cart resources of CINTRI, which are the only options for many urban poor communities due to poor access routes, are thinly spread across the outer khans. There is less than 1 trash cart per km2 in all of the outer khans except Meanchey (which has 1.5 trash carts per km2). Contrastingly, the inner khans have a minimum of 4 trash carts per km2.

Table 2. Trash carts by urban poor communities⁹¹

Khans (district)	Number of urban poor communities	Trash carts (per khan)	Average number of trash carts per urban poor community
7 Makara [inner kahn]	9	27	3
Chamkar Mon [inner khan]	19	45	2.3
Daun Penh [inner khan]	13	60	4.6
Toul Kork [inner khan]	15	44	2.9
ChbarAmpov	36	0	0
ChroyChongva	13	2	0.1
Dangkor	23	4	0.1
Meanchey	41	46	1.1
Porsenchey	19	12	0.6
PreakPnov	52	3	0.05
RusseyKeo [inner khan]	27	21	0.7
Sensok	10	9	0.9

When divided by how many urban poor communities there are in a khan, the results show that trash carts have not been prioritized in areas where they are most needed for urban poor communities. Once more, only Meanchey has 1 trash cart or more per urban poor community, with all other outer khans having less than 1 per urban poor community.

⁹⁰STT, Interviews with Cintri, 2018.

⁹¹STT, Interviews with Cintri, 2018.

Perhaps surprisingly, inner khans have at least 2 trash carts available per urban poor community, yet 8 urban poor communities are without waste management in these khans. This demonstrates that there is no direct link between ‘amount of trash carts’ in an area and ‘urban poor communities waste management receiving service’.

The inequitable treatment by authorities and CINTRI, which is experienced by urban poor communities, is further demonstrated by a report by STT which was conducted over a period of 2 years between 2014 and 2016⁹². By documenting the changing nature of 147 trash sites throughout Phnom Penh, it was evident that there was a relationship between increased waste collection by CINTRI and the presence of a nearby development project⁹³.

The bottom lines

All public services should be equitably delivered throughout society. MSWM should not discriminate against communities and technical reasons, such as not having the ability to enter communities, or a lack of trash carts, do not fully explain why so many urban poor communities are without waste management. This indicates a possible case of discrimination against urban poor communities.

4.5 Effectiveness and Efficiency - Processes and institutions should be able to produce results that meet the needs of their community while making the best of their resources.

During FGDs, 1 community member explained that the cost of CINTRI collection was small - “only the cost of 2 coffees”. In response, a dissatisfied community member replied that, “when you order 2 coffees you get 2 coffees, but when you order CINTRI you only get it sometimes and with many problems.”⁹⁴

All FGD communities agreed that pricing of the waste management service was feasible, or was not high enough to increase their poverty, but they did not like being asked to pay if the service was insufficient⁹⁵. Of the communities that received CINTRI services, most found them to be “partially effective” in their MSWM practices. Key issues were that CINTRI often failed to meet their own schedules, did not collect all trash, and leaked trash fluids into the street that left a lingering odor that raised further hygiene concerns⁹⁶.

Table 3. Trash collection shifts by time⁹⁷

Time of trash collection	Number of shifts	Percentage
Night shift	648	43.14
Day shift	854	56.86
Total	1502	100

Table 4. Trash collection shifts by frequency⁹⁸

Frequency of schedule	Number of shifts	Percentage
Once to twice per day	316	24
Three to four days per week	952	72
Less than three days per week	54	4
Total	1322	100

⁹²See n49.

⁹³See n49.

⁹⁴ STT, Focus Group Discussions, 10/5/2018.

⁹⁵ STT, Focus Group Discussions, 10/5/2018.

⁹⁶ STT, Focus Group Discussions, 10/5/2018.

⁹⁷ CINTRI schedules. Accessed at: CINTRI.com.kh

⁹⁸ CINTRI schedules. Accessed at: CINTRI.com.kh

Table 3. and Table 4. calculate trash collection based on whether the shift occurs during the day or night, and the frequency with which it occurs. Table 4. shows that most of Phnom Penh's trash collection is undertaken three to four days per week. In many developed nations, such as Australia, waste collection is undertaken once per week or once every two weeks, which does not necessarily have a negative impact upon waste collection. However, in Phnom Penh, the lack of waste collection bins means that any trash not picked up quickly is vulnerable to being spread by animals or floods and may present a fire and health risk. These risks could be overcome by daily trash collection and/or investment in waste collection bins. Finally, a study conducted in 2016 noted that attempts to monitor waste collection were undermined by drivers who, likely purposely, destroyed or damaged GPS equipment, making it difficult to determine whether or not schedules are met⁹⁹.

As noted above, CSARO, some other NGOs, and informal waste-pickers are estimated to be responsible for almost all recycling that occurs within Phnom Penh. The RGC and CINTRI should therefore consider the informal sector carefully, studying it and developing a plan to move towards increased formalization. This would allow for improved access to health care and other benefits to informal workers, and increase the efficiency of recycling processes. It is crucial that the importance of waste-pickers be understood and valued by authorities, and their vulnerability be taken into account when designing waste management plans.

The bottom lines

It is difficult to measure effectiveness or efficiency of MSWM in Phnom Penh, but the lack of waste management in 99 urban poor communities is a worrying sign that waste is not being adequately managed yet. The inclusion of the informal sector waste-pickers into a more formalized setting, providing them with benefits such as healthcare and a more consistent salary, will help to achieve higher rates of material reuse while investing in local livelihoods.

4.6 Accountability - Governmental institutions, private sectors, and civil society organizations should be held accountable to the public and institutional stakeholders.

Results from the FGDs note that inner khan communities are much more likely to hold CINTRI or the government responsible for MSWM issues. All 5 inner khan communities had met with local officials or had contacted newspapers and media outlets to report issues in the past¹⁰⁰. These communities had all been established nearly or more than 20 years ago, likely providing them with a concrete understanding of who to talk to when issues arise.

Outer khan communities also reported issues to their local officials and the media, noting that news coverage was the quickest way to get CINTRI to respond to WM issues. Outer khan communities were less enthusiastic than the inner khans about holding government or CINTRI responsible¹⁰¹. Outer khan communities tended to have been established more recently, within the last 20 years, and were less often in contact with their local officials, the media, and CINTRI.

A spokesman for Phnom Penh's City Hall noted in 2016 that the municipality could only facilitate negotiations between the customers and CINTRI¹⁰². However, the lack of a publicly attainable contract undermines accountability and makes responsibilities difficult to determine. According to a TI report conducted in April 2018, 66.8% of citizens are willing to pay more taxes for better services. If CINTRI's accounts are correct and they are owed around US\$20 million¹⁰³, this may be because of frustration with CINTRI's services.

⁹⁹The Asia Foundation, 2016. 'Reforming Solid Waste Management in Phnom Penh'. Working Politically in Practice. Australian Aid: Department of Foreign Affairs and Trade.

¹⁰⁰ STT, Focus Group Discussions, 2018.

¹⁰¹ STT, Focus Group Discussions, 2018.

¹⁰²Chheng, N. 2016. 'CINTRI says its owed up to \$20 million by city residents'. The Phnom Penh Post, accessed at: <https://www.phnompenhpost.com/national/CINTRI-says-it-owed-20m-phnom-penh-residents>.

¹⁰³ Ibid.

Interviews with CINTRI revealed that they regularly submit reports about activities, future plans and updates to the MPP, but usually receive no response¹⁰⁴. This indicates some responsibility from CINTRI, who also noted that they will be fined if they are not able to fulfill their duties¹⁰⁵. Despite this, their precise duties, the cost of fines, and records concerning any previous fines, have not been publicly disclosed.

Additionally, CINTRI informed researchers that it is the responsibility of the authorities to prepare sites for people to place trash for collection¹⁰⁶. CINTRI also said the authorities are required to spread information about waste management, fine people that violate procedures, and prepare all documentation for the waste management process, such as schedules¹⁰⁷. The role of the citizens, according to CINTRI, is only to manage their waste and bring it to collection points for CINTRI collection¹⁰⁸.

The World Bank has claimed that citizen responsibility can be increased through taxation, as citizens tend to demand a greater say when they are forced to pay¹⁰⁹. This may be part of the reasoning for linking electricity and waste collection bills, but as many FGD participants claimed, this led to an assumption that the EDC is ultimately responsible for waste management practices – which it is not¹¹⁰. This has further confused the process, and as a result some communities are charged for waste collection whether or not they receive it regularly.

An STT study found that organization of trash sites can lead to a greater collection rate, but this information does not seem to have been relayed accurately, if at all, to Phnom Penh's citizens¹¹¹. According to CINTRI, this is the responsibility of the government¹¹².

The bottom lines

Neither the government or CINTRI have displayed much concern for accountability. Notably, CINTRI says they do produce reports, but the lack of a transparency in MWSM has led to the corrosion of accountability from the top-down.

4.7 Transparency - Information should be accessible to the public and should be understandable and monitored.

Bidding and the details of the contracting of CINTRI in MSWM remains confidential¹¹³. Many documents that have been released do not provide sufficient detail, such as reviews of CINTRI, and the consequences for CINTRI if it fails to uphold its obligations¹¹⁴.

Documents that have been created by CINTRI are often published online, such as the Khan Waste Pick-up Schedules, which are detailed and concise, but not easily accessible to the public, especially the urban poor who have low levels of literacy and computer/smartphone skills and access. However, CINTRI has published this material and has noted that it is the government's responsibility to inform the public after CINTRI informs them¹¹⁵. Therefore, this appears to be a failure of local government rather than CINTRI.

A report by TI found that 88% of citizens believed that the national budget would better meet their needs if they were included in the process, underscoring the need for a clearer budget and a 'citizen's version'.

¹⁰⁴ STT, Interview with CINTRI, 2018.

¹⁰⁵ STT, Interview with CINTRI, 2018.

¹⁰⁶ STT, Interview with CINTRI, 2018.

¹⁰⁷ STT, Interview with CINTRI, 2018.

¹⁰⁸ STT, Interview with CINTRI, 2018.

¹⁰⁹ World Bank, 2017. 'World Development Report: Governance and the Law.' Washington DC, USA.

¹¹⁰ STT, Focus Group Discussions. 10/5/2018.

¹¹¹ STT, 2016. Facts & Figures #31: Trash.

¹¹² See n49.

¹¹³ Spiess, R. 2017. 'CINTRI chided by former exec'. *The Phnom Penh Post*, accessed at: <https://www.phnompenhpost.com/business/CINTRI-chided-former-exec>.

¹¹⁴ Meta, K. 2016. 'CINTRI awarded with contract extensions'. *The Phnom Penh Post*, accessed at: <https://www.phnompenhpost.com/national/CINTRI-rewarded-contract-extensions>

¹¹⁵ STT, Interview with CINTRI, 2018.

that is easier to understand¹¹⁶. This can affect how citizens view the process of waste management, and could allow them to feel more included in the process.

During the FGDs, it emerged that no communities were aware of any reports or CINTRI documents outlining the processes, scheduling or funding of CINTRI, and this is likely the result of poor communication between the local authorities and the communities, if CINTRI is correct and the responsibility lies with the government.

The bottom lines

Transparency in the bidding process of contracts for MSWM is non-existent. Other documents have been produced to help provide transparency to the MSWM process, but many of these remain inaccessible to the public due to them being published online only, or, as in the case of the budget, having insufficient detail.

¹¹⁶Transparency International, 2018. 'National Survey on Accountability and Transparency of Budget Processes'. Accessed at: www.ticambodia.org

Case study: Active citizens and responsive government

A few years ago, Rolous Choeung Aek community was littered by their own trash, and that of some of the city's farthest flung residents.

Sitting a kilometer and a half east of the Dangkor landfill, where most of Phnom Penh's municipal waste eventually ends up, the community is built along a small canal that acts as a flood drain and a sewer, eventually draining into the Boeung Tompoun lake and wetlands where it is naturally treated by the plants and aquatic agriculture.

A community member told researchers that “the trash problem was caused by many issues. 1. People littered and threw trash into the canal. 2. Trash was blown by the wind from the Dangkor landfill into the canal and transported down to our community, where it contributed to blockages. And 3. CINTRI rarely came to collect the trash - maybe once every one or two weeks”.

The community took it upon themselves to organize and solve the issues. They talked through the problem and requested trash bins and training on waste management and pollution from Sahmakum Teang Tnaut (STT). Following this, the community sought to meet with their local authorities. After a meeting, the village chief, the authorities and the sangkat chief decided to meet with CINTRI on behalf of the community to address the scheduling issues.

Since 2017, the community has been receiving regular trash collection two times a week from CINTRI, demonstrating the importance of grassroots action, responsive governance, and the technical capacities of CINTRI.

“There is still trash in the canal.” But the community believes they have done their part in improving the waste management system.



Sources: STT. Key interviews with community members. 2018.

4.8 Responsiveness - Institutions and processes should serve all stakeholders.

FGDs revealed frustration from communities about not knowing how to communicate with CINTRI¹¹⁷. This frustration contrasts with their frustration towards the government, which is rooted in feelings of exclusion rather than a limited understanding of communication channels. To the credit of CINTRI and authorities, they have continued to expand and achieve greater collection rates over a period of years, and more trash bins have been installed in public spaces. In 2014, 188 urban poor communities had no waste management. Over the past three years, many of these communities have since gained access to waste management¹¹⁸, however it is difficult to ascertain the precise increase in access considering that many urban poor communities “disappeared” in the last 3 years due to eviction, development and conglomeration with other communities¹¹⁹.

Further, 8 urban poor communities in the inner khans remain without waste management, which is a worrying sign for the responsiveness of the MSWM system as the inner khans are more developed than the outer khans in terms of waste management and basic services.

A lack of responsiveness can lead to a crisis that demands a response from authorities. In 2000, a dumpsite in the Philippines was neglected for so long that it eventually collapsed and killed 200 waste-pickers. In this case, public outrage led to the creation of legal mechanisms to address the Philippines’ insufficient regulations that were partly responsible for the crisis¹²⁰.

In Phnom Penh, responsiveness mechanisms are difficult to access, according to the FGD communities, almost all of which come into direct contact with floods on a yearly basis. Floods attributed to improper waste disposal (see the *Black River* case study) or outbreaks of disease from waste can be preemptively managed with proper responsiveness, yet to date, governments and CINTRI have not clearly demonstrated this in MSWM.

Further, the fact that 14 CINTRI workers have been killed on the job in the last 4 years is a violation of workers’ right to safety. This requires immediate action and is a crisis that must be addressed by both the RGC as well as CINTRI.

The bottom lines

A greater sense of urgency and public participation is encouraged to increase the responsiveness of the MSWM system and prevent future issues.

¹¹⁷ STT, Focus Group Discussions. 10/5/2018.

¹¹⁸ STT, 2014. ‘The Phnom Penh Survey’.

¹¹⁹ See n23.

¹²⁰ UN Habitat (2010), ‘Solid Waste Management in the World’s Cities’.



Trash littered around Samaki Roeung Roerung community, and a trash cart. STT. 2018.

CHAPTER 5. CONCLUSIONS AND RECOMMENDATIONS

Urban governance of MSWM in Phnom Penh is inadequate at the level of collection and appears to be mostly driven by a lack of transparency, equity, accountability, responsiveness, and mechanisms in place to ensure better safety for the lives of CINTRI's workers. This study is not comprehensive, but provides an insight into how some of Phnom Penh's most vulnerable communities are experiencing waste issues and governance.

The 14 CINTRI workers who lost their lives as a result of MSWM over the last 4 years is a terrible tragedy that should have been avoided. An enquiry into the deaths of these workers must be undertaken immediately to protect against future incidents and provide safety and security to CINTRI employees.

Without better governance moving forward, the RGC, all levels of government in Phnom Penh, and CINTRI, will continue to endanger citizens and workers, and provide trash collection services that are not transparent, effective, equitable, participatory or responsive.

Recommendations

In light of the above findings and conclusions, this research makes the following recommendations.

Authorities

1. Clarify the responsibilities and requirements of achieving higher participation in waste management through the release of the progress reports, evaluations, budgetary information and the contract for MSWM in Phnom Penh.
2. Educate the public on how to organize waste for collection through television programs.
3. Commission an investigation into the deaths of CINTRI workers while on-the-job. This investigation should have the aim to understand the risks that CINTRI workers regularly incur, as well as the reasons for the deaths of the 14 workers, and whether the mitigations that CINTRI put into effect are effective in reducing the danger posed to workers and are in-line with the Labor law.
4. Connect all communities to EDC and focus efforts on communities most in need of support for the subsidizing of trash bins or other equipment as necessary to improve efficiency and equity in trash collection.
5. Utilize statistics provided in this report to target communities that are most in need.
6. Increase the pressure on CINTRI to achieve higher rates of efficiency by opening up MSWM to a competitive waste management market and by providing reports on CINTRI's efficiency to the public.
7. Officially recognize the informal sector's contribution towards the goodwill of the city by providing them with social security as they should be entitled to under the Cambodian Constitution, Chapter VI, Article 75, and other benefits that come with formalization.

CINTRI

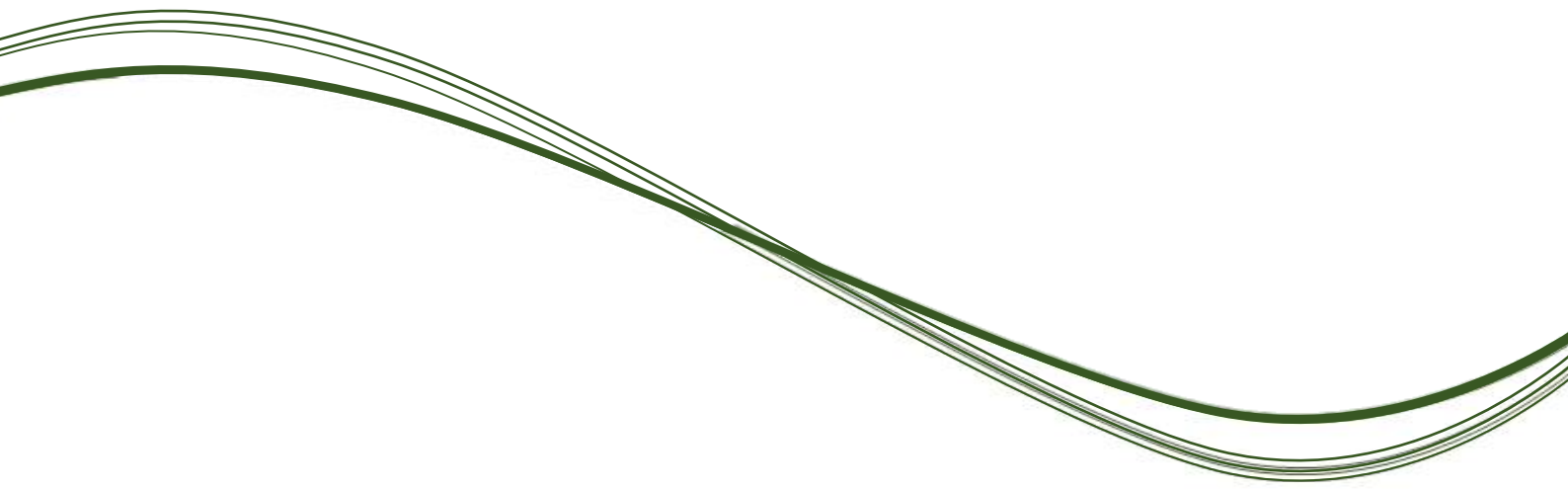
1. Provide and guarantee usage of protective clothing, including high-visibility clothing, to protect workers from harm.
2. Concentrate the use of trash carts in communities which need them the most by using the findings of this research.
3. Release monitoring reports and improve transparency in order to allow more professional analysis of waste management that may lead to more effectiveness and efficiency.
4. Make an effort to increase access to complaints hotlines and other mediums to increase responsiveness in urban poor communities. Make community visits regularly.

Public

1. Continue to pursue better MSWM practices by organizing as groups and raising waste management issues with local authorities and CSOs.
2. Continue to hold government and CINTRI jointly responsible for waste management.

CHAPTER 6. APPENDIX

Appendix is published separately. Please see STT's website or contact them directly for further details.



T: 023 555 1964

W: <http://teangnaut.org/?lang=en>

F: <https://www.facebook.com/teangnaut/>