

**Neoliberalism versus Social Rights: The Formalization of Waste Picker Organizations in Bogotá,**

**Colombia**

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A Thesis Submitted to the Faculty of Graduate and Postdoctoral Studies  
in Partial Fulfillment of the Requirements for the Degree of  
M.A. International Development and Globalization

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## Abbreviations

ANR	National Waste Picker Association <i>Asociación Nacional de Recicladores</i>
ARB	Waste Pickers' Association of Bogotá <i>Asociación de Recicladores de Bogotá</i>
ARUB	United Waste Pickers' Association for Bogotá <i>Asociación de Recicladores Unidos por Bogotá</i>
ASE	Area of Exclusive Service <i>Área de Servicio Exclusivo</i>
CCU	Contract of Uniform Conditions <i>Contrato de Condiciones Uniformes</i>
CRA	Commission for the Regulation of Potable Water and Basic Sanitation <i>Comisión de Regulación de Agua Potable y Saneamiento Básico</i>
ECA	Classification and valorization station <i>Estación de clasificación y aprovechamiento</i>
EDIS	District Public Services Company <i>Empresa Distrital de Servicios Públicos</i>
FARC	Revolutionary Armed Forces of Colombia <i>Fuerzas Armadas Revolucionarias de Colombia</i>
FESNOPMA	National Trade Union Federation of Organizations Protecting the Environment <i>Federación Sindical Nacional de Organizaciones Protectoras del Medio Ambiente</i>
GHG	Greenhouse Gas
ISWM	Integrated Sustainable Waste Management
ILO	International Labor Organization
MSW	Municipal Solid Waste
NGO	Non-Governmental Organization
ORAs	Authorized Waste Picker Organizations <i>Organizaciones de Recicladores Autorizadas</i>
PDR	District Recycling Program <i>Programa Distrital de Reciclaje</i>
PGIRS	Integral Solid Waste Management Plan <i>Plan de Gestión Integral de los Residuos Sólidos</i>

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PMIRS	Master Plan for the Integral Management of Solid Waste <i>Plan Maestro para el Manejo Integral de Residuos Sólidos</i>
RRS	Selective Collection Routes <i>Rutas de Recolección Selectiva</i>
SOR	Recycling Operating System <i>Sistema Operativo de Reciclaje</i>
SSPD	Superintendence of Domiciliary Public Services <i>Superintendencia de Servicios Públicos Domiciliarios</i>
UESP	Public Services Special Unit <i>Unidad Especial de Servicios Públicos</i>
UAESP	Public Services Special Administrative Unit <i>Unidad Administrativa Especial de Servicios Públicos</i>
UNEP	United Nations Environmental Program
UPE	Urban Political Ecology
WIEGO	Women in Informal Employment: Globalizing and Organizing

**Glossary**

Altiplano Cundiboyacense	High plateau situated in the Eastern Cordillera of the Colombian Andes. It covers parts of the departments of Cundinamarca and Boyacá
Bodega	Warehouses where recyclable materials are classified, weighed, and stored before being sold to intermediaries or directly to the industry
Campesino	Peasant
Cundinamarca	One of Colombia's 32 departments, which contains the capital district
Gibraltar	A neighborhood situated in the locality Ciudad Bolívar; before the establishment of the sanitary landfill Doña Juana, the neighborhood of Gibraltar possessed an open-air dump which received part of the waste produced in Bogotá
La Violencia	A bipartisan conflict between Colombia's traditional political parties, the Liberals and the Conservatives, which originated in the mid-20 <sup>th</sup> century
Muisca	An indigenous group of the Altiplano Cundiboyacense that occupied current Colombia territory before the arrival of the Spanish
Techo	A neighborhood situated in the locality Kennedy; before the establishment of the sanitary landfill Doña Juana, the neighborhood of Gibraltar possessed an open-air dump which received part of the waste produced in Bogotá

## Abstract

Global waste generation trends are increasing at an alarming rate. Low- and middle-income countries (or the ‘Global South’) bear an increasing proportion of this burden, as the amount of waste produced in these countries is expected to surge drastically in the coming years. Since cities in the Global South rarely have formal municipal recycling systems, recycling activities are typically performed by waste pickers who are precariously employed and sell their wares in unpredictable, unregulated markets. That is to say, this economic activity is an archetype of what is commonly referred to as that taking place in the ‘informal sector.’ Although waste pickers must often confront exclusionary policies and social marginalization, some countries such as Colombia have begun to recognize the social, economic, and environmental contributions of informal recycling activities and have introduced policies that support waste pickers by trying to improve their working conditions.

Bogotá has been recognized internationally as an example of ‘best practice’ in terms of creating inclusive policies aimed towards improving the livelihoods of waste pickers. To this end, the Colombian government has introduced, in 2016, National Decree 596, which recognizes and remunerates waste picker organizations as official providers of municipal recycling services. Although this decree legitimizes these ‘third sector’ organizations and has important implications for ‘alternative’ models of service delivery, it has had contradictory effects: although it successfully recognizes the important role that waste pickers play in the waste management system, it also introduces barriers that impede the formalization of waste picker organizations. For example, the decree sets unattainable requirements for the recognition of waste picker organizations and does little to mitigate the vulnerability that waste pickers experience in the face of competition from large, private (often multinational) companies. Based on one month of fieldwork conducted in Bogotá from November 10<sup>th</sup> to December 10<sup>th</sup>, 2017, this thesis explores these contradictions and suggests that these barriers originate from the conflicting neoliberal and rights-based orientations of the 1991 Constitution.

### Acknowledgments

Many were responsible for the successful completion of this thesis. I owe a great deal to the many people who supported my fieldwork in Colombia, without whom this thesis would not have been possible. I would like to acknowledge all who gave their time and expertise. In particular, I would like to thank Silvio Ruiz Grisales, Magda Quisquilla Barinas Villamizar, Horacio Manuel Cárdenas, Campo Elias, and Olga Liliana Vasquez González for patiently and earnestly recounting their daily realities. I am eternally grateful for their kindness, hospitality, open-mindedness, and patience. With only a glimpse into their world and their struggle as *recicladores*, they have shown me the meaning of resilience and community. I also wish to express my gratitude to Federico Parra, whose research and immense knowledge laid out the groundwork for my research and were vital to the realization of this thesis.

I am also deeply indebted to my supervisor Dr. Susan Spronk for her heartfelt support, invaluable guidance, extensive knowledge, and distinct ability to know when to motivate and when to reassure. I would also like to thank her for introducing me to new research opportunities and for encouraging me to delve further into the world of academia. In addition, I wish to express my deepest appreciation to my thesis committee members, Dr. Melissa Marschke and Dr. Heather McLeod-Kilmurray, for their insightful comments and thoughtful contributions to the final version of this thesis.

I also owe a great deal to my loving family for their warm encouragement and for teaching me the value of education, hard work, and critical thinking and to Hugo Perrin for listening to my constant ramblings and for his eternal optimism. Finally, I wish to thank Edith Gaudreau-Lebel for her unrelenting and unwavering support and friendship throughout this, at times, arduous process.

## Chapter 1: Introduction

*“Waste is deeply political, and [...] careful attention must be paid to relevant social, political, cultural, historical, and economic issues when developing particular approaches to formally including waste pickers” (Samson, 2015b).*

The world is facing an environmental crisis as a result of our colossal production of waste, one that is worsening as urbanization and consumption rates continue to rise. Municipal solid waste (MSW) has become a significant by-product of rapid urbanization, economic development, and increased disposable income (Hoornweg & Bhada-Tata, 2012). A recent World Bank report estimated that, in 2012, 3 billion individuals lived in urban areas and generated roughly 1.3 billion tonnes of MSW per year (Hoornweg & Bhada-Tata 2012, p.8). These numbers are expected to rise drastically by 2025, at which time it is presumed that 4.3 billion urban residents will be producing as much as 2.2 billion tonnes of MSW per year. Waste disposal is therefore a global concern as volumes of MSW are increasing at an alarming pace. Moreover, this burden is growing increasingly heavy on governments in low- and middle-income countries, as waste generation trends are expected to surge drastically in these countries (see Table 1) (Hoornweg & Bhada-Tata 2012). Many people around the world are looking for alternative solutions to this mounting crisis.

Luckily, trends in total and per capita waste generation for high-income countries are expected to stabilize by 2025, due to a number of factors such as higher material efficiency, waste prevention programs, demographic changes, economic incentive to reduce waste, and availability of resources to reduce pollution (Medina, 2007). This stabilization in MSW generation in high-income countries will, however, lead lower-middle income countries to become the primary producers of MSW, with total and per capita waste generation trends also increasing significantly in low- and upper-middle-income countries. (Hoornweg & Bhada-Tata 2012). This trend is the result of rapid urbanization rates, increased economic development and disposable incomes, and elevated levels of waste produced from businesses (UN-HABITAT, 2010; Hoornweg & Bhada-Tata 2012; Phillips & Thorne, 2013). Therefore, how cities in the Global South choose to manage their waste will have substantial local, national, and global repercussions; the social and environmental costs pose an immediate challenge.

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Table 1. Waste Generation Projections for 2025 by Income.

Region	Current Available Data			Projections for 2025			
	Total Urban Population (millions)	Urban Waste Generation		Projected Population		Projected Urban Waste	
		Per Capita (kg/capita/day)	Total (tons/day)	Total Population (millions)	Urban Population (millions)	Per Capita (kg/capita/day)	Total (tons/day)
Lower Income	343	0.60	204,802	1,637	676	0.86	584,272
Lower Middle Income	1,293	0.78	1,012,321	4,010	2,080	1.3	2,618,804
Upper Middle Income	572	1.16	665,586	888	619	1.6	987,039
High Income	774	2.13	1,649,547	1,112	912	2.1	1,879,590
Total	2,982	1.19	3,532,256	7,647	4,287	1.4	6,069,705

Source: Hoorweg & Bhada-Tata (2012, p.10).

In low- and middle-income countries, formal municipal waste management systems are typically weak and focus almost exclusively on waste collection and disposal (Samson, 2015). They therefore rarely possess formal municipal recycling systems. Recycling activities are in many cases performed by waste pickers: low-income citizens employed in the informal sector collect, transport, sort, and commercialize recyclable waste. Roughly 3.8 million individuals in Latin America and the Caribbean, in fact, participate in informal recycling activities (Terraza & Sturzenegger, 2010). Such activities allow for the valorization of waste which refers to “the entire process of extracting, storing, collecting, or processing materials from the waste stream in order to extract and divert value and direct the material to a value-added stream” (Scheinberg, Wilson & Rodic, 2010, p.216). Waste picking activities therefore often represent the only means of recycling for municipalities in low- and middle-income countries. However, in recent years, the modernization of the waste management sector, as a result of the introduction of high-technology infrastructure and the contracting of formal private sector firms, has made it increasingly difficult for informal workers to access and valorize waste (Gunsilius et al., 2011).

While, the informal sector is typically not formally tasked with providing this service and therefore are not compensated for their labor by municipal authorities (Dias & Alves, 2008), informal recycling activities recover between 15-35% of urban MSW produced in low- and middle-income

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countries (Scheinberg, Wilson & Rodic, 2010). As a result of these high recovery rates, informal recycling activities generate important environmental benefits, such as the reduction of greenhouse gas (GHG) emissions and pollution from the production process, the expansion of the circular economy, and the conservation of primary resources and energy through the use of secondary materials in the manufacturing of goods (Gerdes & Gunsilius, 2010; Scheinberg et al., 2010; Gunsilius et al., 2011). Beyond these environmental contributions, informal waste management also provides significant social and economic benefits. Indeed, unlike ‘modernized’ waste management systems, informal waste management is labor-intensive. It therefore provides income opportunities for poor, marginalized, and vulnerable populations and enables these individuals to meet their household’s subsistence needs, through the commercialization of recyclable materials (Medina, 2000). It also allows individuals who typically would not have access to employment in the formal sector as a result of poor education or physical disability to find employment, particularly in regions which tend to have high levels of unemployment (Wilson, Velis & Cheeseman, 2006). Informal recycling activities also provide important economic benefits at the municipal and national level by reducing the cost of formal waste management systems, saving expensive landfill space, and providing inputs for local, national, and international recycling industries (Wilson, Velis, & Cheeseman, 2006; Medina, 2007; Scheinberg et al., 2010, Dias, 2011).

However, in spite of these fundamental social, economic, and environmental benefits, informal recycling activities often represent “the last alternative of decent work for a large number of people” (Parra, 2014, p.1) and are consequently situated at the lowest level of the urban informal employment hierarchy in terms of income earned (Samarth, 2014). Waste pickers therefore tend to make up the poorest segments of society. In fact, many informal workers were forced to participate in these economically and socially precarious conditions, which are characterized by high incidences of poverty, social marginalization, and health hazards, due to a lack of alternative livelihood opportunities. While the commercialization of recyclable material generates income for waste pickers and their families, most of them continue to live in conditions of poverty and must face significant health risks originating from both the nature of waste and the practice of collecting, recycling, and disposing of discarded materials (Wilson, Velis & Cheeseman, 2006). In addition, independent waste pickers are highly susceptible to exploitation by middlemen, who offer low prices while pocketing important profits (Medina, 2000). Poor inclusionary policies, physical violence, and negative attitudes towards waste pickers due to the nature of their work by authorities and society contribute further to the vulnerability and marginalization of these individuals (Medina, 2000; Wilson, Velis & Cheeseman, 2006).

In order to mitigate some of these challenges and to collectively advocate for the recognition of their rights, waste pickers in places like Colombia have increasingly begun to organize themselves. Waste

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picker organizations can, in fact, help address some of the financial and health burdens faced by their members, by enabling informal workers to extract higher value from collected waste and by providing education and training on minimizing health risks (Wilson, Velis & Cheeseman, 2006). While organizing can have important effects on increasing members' income, profit-making is not the exclusive aim of these organizations. They also create a space for empowerment and collective consciousness and allow members to achieve greater bargaining and negotiation powers, thereby improving their ability to negotiate with local and national authorities for better working conditions, recognition of their environmental and economic contributions, integration within municipal waste management systems, and increased institutional support (Medina, 2000; Gutberlet, 2008). These organizations are therefore improving their members' livelihood, while consequently establishing new models of public services delivery.

Therefore, given the significant contributions of waste picker organizations in the waste management and recycling sectors, it is important for debates on the delivery of basic services to transition away from the public and private binary towards a more holistic discussion on 'alternatives.' While both public and private models of MSW management have marked the Latin American urban landscape, recent literature has begun to examine 'alternative' models of public service delivery in which third sector organizations (e.g. non-governmental organizations), which sit on the public/private divide (Ostrom, 1990), take on a central role (Medina, 2000; Samson, 2009; Gutberlet, 2012; Gutberlet, 2016). Indeed, these organizations exhibit public-like features, such as democratic decision-making and profit-sharing structures, as well as private-like features, exemplified most notably by the fact that they are profit-motivated and provide market-based services (Quarter, Sousa, Richmond & Carmichael, 2001). They, in fact, represent what Ostrom (1990) defines as "rich mixtures of public and private instrumentalities" (p.182). These participatory governance structures have important implications for new modes of public service delivery. As a result, scholars have advocated for the inclusion of waste picker organizations within municipal waste management systems, recognizing the fundamental role played by informal workers in recycling large quantities of solid waste (Samson, 2009; Wilson et al., 2009; Parra, 2015; Dias, 2016; Gutberlet, 2016; Parra, 2016).

In addition, this 'alternative' model of service delivery is particularly attractive since conventional approaches favored in high-income countries, which typically rely on centralized, capital-intensive waste management systems, are unsuitable for most low- and middle-income countries (Medina, 2005b). Indeed, given their recognized environmental, economic, and social contributions, waste pickers organizations have demonstrated a significant potential for the effective provision of waste management and recycling services, one that is more compatible with the realities of the Global South. While financial,

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political, social, and physical impediments have limited the public sector's ability to provide adequate and efficient waste management systems, the emergence of an 'alternative' model to privatization based on the principle of a social economy could in fact represent an important avenue for a more efficient and socially inclusive approach to the collection, disposal, and valorization of solid waste. Looking more closely at the legislative and institutional frameworks that have led to the integration of waste picker organizations in Bogotá's municipal recycling sector and the remaining challenges they face in providing recycling services will facilitate a deeper analysis of emerging possibilities for the establishment of 'alternative' models for the provision of public services.

### **Bogotá's Waste Management Sector**

In Bogotá, roughly 14,000 waste pickers work relentlessly on a daily basis to support their family and to contribute to their city's sustainability by scouring through waste containers in search of recyclable materials that other residents, not knowing their value, have simply thrown away (Castro, 2014). Their efforts allow them to collect approximately 1100 tonnes of recyclable waste per day, a significant amount of waste particularly in light of the 6307.71 tonnes collected and disposed of daily in the district's sanitary landfill (SSPD, 2015). Although Bogotá is currently recognized by many scholars and policymakers as a positive example of 'formal' integration of waste pickers within the municipal waste management sector, it is evident that its legal and policy environments have not always been so inclusive, and that waste management remains a contentious issue to this day.

Bogotá's waste management sector has changed significantly over the past 60 years, transitioning several times between public and private models of service delivery. After a wave of decentralization, the responsibility of managing waste was transferred from the national government unto municipalities. As a result, in 1958, a public entity, known as the Empresa Distrital de Aseo later to be renamed as Empresa Distrital de Servicios Públicos, was the first government organization to formalize waste management processes in Bogotá (UAESP, n.d.). A public model of waste management persisted until the liquidation of the company in 1993 following reports of low efficiency, corruption, and outbreaks of disease (González, 2014). During these decades, precedence was given to public health concerns, due to the growing awareness of the causal relationship between the prevalence of infectious diseases and the presence of waste in public spaces (Parra, 2016). Only minimal attention was placed on environmental concerns. However, by the 1980s, municipal authorities began to recognize the growing complexity of waste-related problems and therefore expanded the waste management sector to include not only the transportation and disposal of waste, but more broadly its generation and disposal.

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Coinciding with a wave of liberalism that swept through Latin America, the collection, transportation, and disposal of waste was then awarded to private companies, through various contracts from 1993 until 2012 (Parra, 2014). In 2012, the state took temporary control, only to privatize the service again shortly after. The privatization of waste management services was the result of neoliberal policies that emphasized economic efficiency through market liberalization, principles which were entrenched in the Constitution of 1991 and in Law 142 of 1994 on domiciliary public services (Parra, 2016). During this period, national and district waste management legislation and policies continued to evolve significantly as well as the importance of the informal sector in the provision of these services.

Recognition of the growing complexity of the waste problem and of the limited capacity of the city's only final disposal site, the sanitary landfill Doña Juana, led to the development of plans and programs for the integral management of solid waste, which included recycling and valorization components. Although the private model of waste management eliminated any tangible incentive for service providers to reduce the quantity of waste sent to the Doña Juana landfill and in fact privileged the final disposal rather than the recycling of waste, environmental concerns became increasingly prominent in the early 2000s, with several recycling programs being implemented in the city, although largely unsuccessful.

While Bogotá's ecological modernization has resulted in significant advancements in terms of legislation and policy on recycling services, most recycling activities are still performed informally. National and district authorities have however increasingly regulated informal recycling activities and have often attempted to limit waste pickers' ability to perform their labor, by criminalizing such activities, privileging the provision of waste management services by private companies, and awarding private companies property rights over waste disposed of in public spaces.<sup>1</sup>

As a result of these exclusionary policies, waste pickers began to collectively demand the recognition of their rights. The organization of waste pickers, a process which began in the 1980s with the establishment of multiple waste picker organizations, such as the *Asociación de Recicladores de Bogotá* (ARB), allowed informal workers to solidify their claims to recognition, inclusion, and fair compensation (Parra, 2015). Through the use of strong legal campaigns<sup>2</sup> against national and municipal governments,

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<sup>1</sup> Law 142/1994; Decree 1713/2002; Law 796/2002; Ley 1259/2008.

<sup>2</sup>- *Silvio Ruiz Grisales v. Corte Constitucional de Colombia (2003)*. Court ruling: C-741/03. Law 142/1994 prohibited waste picker organizations (Organizaciones de Recicladores Autorizadas) from operating in municipalities with more than 8000 residents. Judgement C-741/03 was established on the basis of unconstitutionality, allowing waste picker organizations to work in all municipalities in Colombia. - *Silvio Ruiz Grisales and Asociación de Recicladores de Bogotá (ARB) v. Distrito Capital de Bogotá – Unidad Ejecutiva de Servicios Públicos (2003)*. Court ruling: T-724/03. The Court ordered district authorities to develop

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waste picker organizations, particularly the ARB, have successfully advocated for the recognition of informal workers' rights as a vulnerable and marginalized population before the Constitutional Court, even in the face of numerous pressures and challenges, such as public mistrust, unfavorable and exclusionary national and district policies, and competition with private companies for the recycling market. However, while the Constitutional Court has introduced important legislation<sup>3</sup> that protects the rights and labor of waste pickers, these informal workers continue to struggle to ensure that municipal and national authorities uphold the Court's orders regarding their inclusion in the waste management and recycling sector as well as the recognition of their rights, environmental contributions, and status as providers of public services.

Nevertheless, as a result of their relentless legal efforts, Bogotá has experienced important social and ecological transformations in its municipal waste management system. While legislative and political decisions have “for decades rendered other forms of waste management invisible, namely those linked to recycling, and managed by informal actors like the waste pickers” (Parra, 2014, p.4), Parra observes that a recent ‘paradigm shift’ has occurred in MSW management practices in Bogotá “from a transportation and burial-centered model that profited from increased production of waste to a development model based on shared responsibilities among the different actors in the production waste chain” (p.1). In the past 15 years, legislation and policies have increasingly recognized the rights of waste pickers, given their particular socioeconomic vulnerability, and have introduced mechanisms to integrate them in waste management planning and policies. In an attempt to better regulate and standardize recycling services as well as to further include the informal sector within the waste management sector, the national government introduced National Decree 596 in 2016 on the formalization<sup>4</sup> of waste picker organizations. This decree regulates recycling services and introduces a transitory scheme for the formalization of waste pickers organizations as providers of basic services. While in many respects this legislation represents an important endeavor for the formal integration of waste pickers, waste picker organizations still face significant barriers in becoming official providers of recycling services, particularly as a result of the

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actions that would reduce the vulnerability of informal waste pickers and that would allow their future integration in the municipal bidding process.

- *Nohra Padilla Herrera, Néstor Raúl Correa Henao, Silvio Ruiz Grisales and others v. Corte Constitucional de Colombia* (2009). Court ruling: C-793/09. Law 1259/2008 prohibited the extraction of waste material from garbage bags situated in public spaces. The Court stated that this law could not be applied to the detriment of waste pickers' livelihood.

<sup>3</sup> Sentence C-741/2003; Sentence T-724/2003; Sentence C-355/2003; Sentence C-793/2009; Sentence T-291/2009; Auto 268/2010; Auto 183/2011; Auto 275/2011.

<sup>4</sup> Formalizing the informal sector can take many forms, such as registration, taxation, and legal recognition and protection. In the case of waste picker organizations in Bogotá, the formalization process is outlined in National Decree 596, which outlines specific requirements, such as registration of the organization, registration of collected and commercialized materials, vehicles, and personnel, financial statements, and taxation. Compliance with these requirements bestows upon these organizations legal recognition as official providers of public services.

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neoliberal ideology of market liberalization ingrained in Colombia's waste management sector. This research, therefore, explores the remaining legislative and policy challenges that waste picker organizations continue to face in their struggle to be recognized as official providers of waste management services.

### **Research Questions**

This thesis analyzes Bogotá's legal and institutional waste management frameworks, paying close attention to their effect on the ability of waste pickers to provide recycling services. In doing so, it contributes to the further understanding of the remaining legislative and institutional challenges that waste picker organizations must face as they undergo a formalization process in order to be recognized as official providers of municipal recycling services. Consequently, my research addresses growing debates on the suitability of 'alternative' forms of service delivery in low- and middle-income countries that move away from the public and private dichotomy and, more broadly, it supplements existing literature on the compatibility between social inclusion and environmental sustainability.

In doing this research, I focused on three central questions: First, what are the current legislative and institutional challenges facing waste picker organizations in their process of formalization into official providers of municipal recycling services? Second, what tensions exist between ideologies of market liberalization and the social orientations of the Constitution? Third, how do competing ideologies of free competition and the protection of social rights in the provision of public services affect the ability of waste picker organization to provide municipal recycling services?

I argue that the neoliberal orientation of the Colombian government has produced fundamental tensions that are at the heart of market-based 'alternatives' that attempt to reconcile the need to protect social rights (in this case, of waste picker organizations) with the need to create economic efficiencies. This tension is embedded in the conflicting rights framework outlined in the Constitution of 1991, which is manifested in Bogotá's waste management and recycling sectors. While district authorities in Bogotá have passed legislation to comply with the orders of the Constitutional Court on the protection of waste pickers rights and labor, the way that waste picker organizations have been included in the formal market actually creates a different form of exclusion. The paper will support this argument by exploring the following main points:

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1. Law 142 of 1994 prioritizes large companies for the provision of public services, since they are seen as the preferred organizational figure for efficient service delivery. This law establishes the technical, administrative, commercial, and financial requirements for the provision of public services. Following the orientations of Law 142, National Decree 596, which came into force in 2016, outlines the requirements which waste picker organizations must meet in order to be recognized as official providers of recycling services. However, as noted below, it is impossible for the majority of waste pickers and their organizations to meet these requirements.
2. Although Colombia's Constitutional Court has demanded the formal integration of waste pickers in the recycling sector, the principle of 'free competition,' guaranteed under the Constitution and Law 142 of 1994, ultimately infringes upon the capacity of waste picker organizations in Bogotá to provide municipal recycling services, given of their inability to compete with large private companies due to their lack of technical, financial, and physical resources.

Thus, by analyzing Bogotá's transition towards a more socially inclusive model and the challenges that have arisen, my research provides valuable insights for other countries attempting to manage growing quantities of recyclable waste. Given the projected trends in MSW generation for low- and middle-income countries, it is important to explore alternative waste management and recycling models that allow governments to better address the current waste problem in a more environmentally sustainable, economically viable, and socially inclusive manner. Indeed, my research also contributes to this discussion by analyzing the suitability of a third sector organizations in managing solid waste in cities in the Global South. Moreover, by including an analysis of localized dynamics, my research provides new empirical information on fundamental legislative and policy challenges that arise when municipal and national authorities attempt to promote formalization and integration of these organizations within municipal waste management services. While very localized, the conclusions obtained from my research provide essential knowledge on how low- and middle-income countries, given projected trends in solid waste production, can more adequately manage growing quantities of waste, moving the world one small step closer to a more environmentally sustainable future.

### **Structure of Thesis**

This thesis is organized as follows. Chapter two presents the research methodology as well as the conceptual framework used to inform my analysis. Chapter three provides a literature review of the public and private dichotomy in the provision of basic services and the emergence of alternative modes of

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service delivery as well as of the role of the informal sector in global efforts to manage growing quantities of solid waste. Chapter four introduces information on the Bogotá's informal waste management sector, the evolution of national and district waste management legislation and policies, and the politicization of waste pickers struggle for the recognition their rights and labor. Chapter five presents my fieldwork data on the integration of waste pickers in the formal waste management sector, focusing specifically on National Decree 596 of 2016 and its effects on the formalization of waste picker organizations as official providers of recycling services. Chapter six provides a discussion of the broader implications of the field research by highlighting the incompatibility between the neoliberalization of waste management services and the protection of waste pickers' social rights. In addition, chapter six will include policy recommendations in order to mitigate some of the tensions in the waste management sector. Chapter seven concludes the paper.

## Chapter 2: Methodology and Conceptual Framework

### Methodology

Existing research on Bogotá's informal waste management sector has highlighted the importance of social mobilization, through waste picker organizations, in promoting and securing the recognition of the waste pickers' rights and labor (Medina, 2007; Samson, 2009; Parra, 2014; Parra, 2016). Indeed, Bogotá is frequently recognized by scholars as a positive example of inclusive public policies that promote waste pickers' incorporation within the municipal waste management sector (Samson, 2015a; Dias, 2016; Abizaid & Parra, 2017; The Economist Intelligence Unit, 2017). However, while Bogotá has established progressive legislation in many respects, this research highlights some of the remaining legislative and institutional challenges that waste picker organizations continue to face in their attempts to be integrated into the 'formal' waste management sector. More precisely, it examines the impact of National Decree 596 on the recycling sector and on the transitory regime for the formalization of waste picker organizations as official providers of recycling services. In order to analyze the effects of National Decree 596 on these organizations, I conducted, under the supervision of Dr. Susan Spronk, 4 weeks of ethnographic field research with waste pickers and organizations that support waste pickers, in Bogotá, Colombia, from November 10<sup>th</sup> to December 10<sup>th</sup>, 2017. Field research was conducted in the localities of Engativá, Suba, La Candelaria, Los Mártires, and Puente Aranda.

Bogotá was selected as a field site for several reasons, most notably for its significant number of waste picker organizations, its long history of grassroots organizing, and its inclusive constitutional framework that protects the right of waste pickers. Unlike many other cities in low- and middle-income countries, Bogotá is recognized for its legal and institutional frameworks that recognize the contributions and rights of waste pickers and seek to integrate these informal workers within the municipal waste management sector through their formalization. I was fortunate to conduct my field research during a time when legislative changes were the subject of intense public debate, as my field dates overlapped with a public tender process for domestic waste management services. The public tender process for the city of Bogotá opened on October 4, 2017 and the contract was awarded on January 2, 2018. Although the public tender involved the concession contracts for waste management services, and not recycling services as these are independent from one another, it nonetheless placed recycling, waste pickers, and privatization at the center of public in Colombia's capital. The magnitude of the debate highlighted the city's deep ideological divides with respect to who should be allowed to provide waste management and recycling services.

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The research conducted for this thesis was predominantly qualitative in nature, while some quantitative data was used in order to contextualize research findings. For the purpose of this research, I relied on semi-structured interviews, non-participant observation, and secondary data analysis in order to address my research questions.

### Semi-Structured Interviews

In total, I conducted 12 semi-structured interviews to collect qualitative data on the effect of waste management legislation and public policies on waste picker organizations and their ability to provide recycling services, as well as how these policies affected different actors within Bogotá's waste management value chain. I interviewed individuals directly or indirectly involved in the waste sector in Bogotá, such as 7 members of waste picker organizations<sup>5</sup>, 2 NGO workers (who are also researchers), 2 municipal government employees, and 1 researcher (see Table 2). Although contact with some researchers was initiated prior to arrival, I recruited most participants during my 4 weeks of field research using snowball sampling methodology. I contacted researchers and government employees by email, while I recruited members of waste picker organizations in person or through Facebook, which was necessary given the level of informality of these organizations.

Table 2. List of Participants Interviewed During Field Research.

<b>Participant Name</b>	<b>Position</b>	<b>Organization</b>	<b>Date of Interview</b>
Brian Ladino	Environmental engineer	Ecoalianza	November 20 <sup>th</sup> , 2017
Magda Quisquilla Barinas Villamizar	Legal representative	Ecoalianza	November 20 <sup>th</sup> , 2017
Olga Liliana Vasquez González	Legal representative	Asociación de recicladores Pedro Leon Trabuchi (ARPLT)	November 20 <sup>th</sup> , 2017
Federico Parra Hinojosa	Regional coordinator, waste pickers Latin America	WIEGO	November 21 <sup>st</sup> , 2017
Silvio Ruiz Grisales	Union coordinator	ARB	November 22 <sup>nd</sup> , 2017
Ricardo Valencia Ramírez	Director	Iniciativa Regional para el Reciclaje Inclusivo (IRR)	November 29 <sup>th</sup> , 2017
Carolina González Barreto	Advisor, Department of Recycling	UAESP	November 30 <sup>th</sup> , 2017
Mauricio Mazo	Executive director	FESNOPMA	December 1 <sup>st</sup> , 2017

<sup>5</sup> Targeted cooperatives were Asociación de Recicladores de Bogotá (ARB), Asociación de Recicladores Pedro Leon Trabuchi (ARPLT), Ecoalianza de Recicladores, Federación Sindical Nacional de Organizaciones Protectoras del Medio Ambiente (FESNOPMA), Asociación de Recicladores Unidos por Bogotá (ARUB), and Asociación de Organizaciones de Reciclaje y de Recuperación Ambiental – ARAMBIENTAL.

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Rolfi Serrano Camelo	Profesional Universitario, Oficina de Atención al Ciudadano	Unidad Administrativa Especial de Organizaciones Solidarias	December 4 <sup>th</sup> , 2017
Sonia María Días	Waste specialist, Urban policy program	WIEGO	December 7 <sup>th</sup> , 2017
Horacio Manuel Cárdenas	Executive director	ARAMBIENTAL	December 9 <sup>th</sup> , 2017
Campo Elias	Legal representative	ARUB	December 9 <sup>th</sup> , 2017

I conducted interviews almost exclusively in Spanish, with the exception of one interview with Sonia María Días, a waste specialist at WIEGO, which I conducted in English. I documented interviews by making voice recordings and field notes. I later transcribed the interviews in their language of origin upon my return to Canada. Since none of the participants requested anonymity, I have preserved their real identity throughout this study. The original Spanish version of all direct quotations from interviews has been included as footnotes. I also took photographs of relevant waste management infrastructure to provide a visual representation of case study information. All data was stored on my password-protected personal computer, while my field notebook was kept in a locked hotel room.

Given the focus of my research on the legal and institutional frameworks within the waste management sector and specifically on the effects of National Decree 596 on waste picker organizations' capacity to provide municipal recycling services, I specifically targeted second-tier waste picker organizations. This, in part, was due to the fact that the directives of National Decree 596 are mainly intended for and affect second-tier organizations. Second-tier organization regroup smaller first-tier organizations and represent these organizations when working with municipal officials (Terraza and Sturzenegger, 2010). Therefore, since National Decree 596 stipulates the technical, physical, financial, and administrative requirements for the formalization of waste picker organizations, second-tier organizations are more likely to possess the necessary resources and assets to satisfy these requirements in comparison to smaller first-tier organizations. Therefore, I considered second-tier organizations to be more appropriate given the scope of this research.

In addition, within second-tier organizations, I specifically targeted legal representatives as research participants, rather than other members of the organization, given their more direct contact with municipal officials and their greater knowledge of current policies as well as national and district laws on waste management and recycling services. While legal representatives, in other spheres, signify someone in a legal occupation, in waste picker organizations, they are in fact waste pickers who however have the responsibility of representing the organization. Indeed, most legal representatives have been waste pickers for several years, even decades, and have also been typically involved in the organization's foundation.

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Their direct knowledge of informal recycling activities and their role in the founding of their organization makes them essential informants for this research.

While most informants were members of second-tier organizations, I also interviewed NGO workers, municipal employees, and researchers. NGO workers and researchers provided key qualitative data on informal waste management dynamics, the effect of the local political, institutional, and legal context on waste pickers, and the challenges still faced by waste pickers both locally and internationally. Municipal employees provided further information on national and municipal waste management normative frameworks, their effect on waste picker organizations, and the motives behind their formulation and implementation.

### **Non-Participant Observation**

I employed non-participant observation as a secondary qualitative tool during my field research. In part, this included attending the “Feria de Servicios para los Recicladores de Oficio”, a gathering of representatives of national and district institutions that offer support to waste pickers in Bogotá. The “Feria” allowed me to better understand which national and district institutions had programs directed towards the integration, formalization, and capacitation of waste pickers. I was also able to attend short meetings, conducted by employees of the Public Services Special Administrative Unit (*Unidad Administrativa Especial de Servicios Públicos*, or UAESP), that explained the social support programs, economic development and training programs, formalization and remuneration procedures, and essential waste management laws and policies directed toward waste pickers. The UAESP is the entity tasked with the provision, coordination, supervision, and control of waste management services, including recycling services, in Bogotá and therefore is responsible for the establishment of programs that support waste pickers.

Since many of my interviews with members of waste picker organizations were conducted at the organization’s center of operations, I was also able to observe how collected waste was managed and sorted once it arrived at various *bodegas*.<sup>6</sup> These dynamics were crucial to enhance my understanding of different mechanisms put in place by waste pickers and municipal authorities to commercialize recyclable materials. Recyclable materials are transported by individual waste pickers in human-traction vehicles or by members of the organization in larger trucks and then sorted according to composition, where different types of plastics as well as paper and aluminum, for example, are separated from one another. Materials are weighed and stored until they are sold. In cases where industry prices have plummeted, certain

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<sup>6</sup> *Bodegas* are warehouses where recyclable material is sorted, weighed, and stored before being sold.

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materials are kept within warehouses until prices have increased. Therefore, the use of non-participant observation allowed me to gain a better understanding of the various dynamics that are present in these *bodegas*, and helped me comprehend different parts of Bogotá's waste management value chain.



Picture 1. A *bodega* owned by FESNOPMA. Collected waste is sorted according to type of material and stored until sold.



Picture 2. Plastic waste stored in a *bodega* owned by Ecoalianza.

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Finally, I also observed and documented both formal and informal waste management and recycling practices and infrastructure throughout the city. Indeed, I spent several days wondering in different localities in Bogotá in order to study how waste was managed as well as people's relationship with waste. I also observed the level of implementation of municipal recycling policies. What was most striking was the lack of separation of recyclable materials at the source, although it is legally required. Unsegregated waste is placed in public spaces, requiring waste pickers to search through garbage bags and bins in order to find recyclable materials and further contaminating these materials.

Non-participant observation, therefore, allowed me to better understand if and how national and district policies and regulations were applied locally. In addition, I was able to comprehend more thoroughly the local dynamics within the waste management value chain and the role of informal workers within this chain.

### **Secondary Data Analysis**

I used qualitative data analysis in order to understand existing literature on informal waste management, as well as to evaluate the effectiveness of current and past waste management and recycling legislation and policies. I also drew on statistical data analysis to help strengthen my research. Secondary literature therefore helped me to corroborate some of the key findings identified by my research. I gathered secondary data from censuses, academic literature, conference proceedings, government policy documents, legal documents, national and municipal legislation, reports from multilateral institutions, and data sets. I used census data to provide quantitative data on independent and organized waste pickers in Bogotá and on trends in the waste sector. I also surveyed academic literature and conference proceedings in order to provide an overview of the main debates on formal and informal waste management in Colombia as well as in other countries around the world. Government policy documents, legal documents, and national and municipal legislation were used to conduct a policy analysis of waste management practices in Bogotá. Additionally, these sources served to analyze the legal tactics employed by waste picker organizations to secure the rights of informal workers. Finally, reports from multilateral institutions and data sets provided qualitative and quantitative data on trends in waste production, collection, transportation, and disposal.

### **Limitations**

This methodology enabled me to engage both directly and indirectly with the informal waste management sector, through interviews with key stakeholders and analysis of secondary data. While it allowed me to substantiate my hypothesis, I nonetheless encountered some challenges during my fieldwork, which were the result of certain weaknesses in my methodology. One limitation was my level of Spanish comprehension, since my methodology for collecting primary data was based on semi-structured interviews conducted almost exclusively Spanish. Although my comprehension and ability to speak the language is advanced, it is nonetheless not my mother tongue. Therefore, in some instances particularly at the beginning of my field research, I encountered some issues with misunderstanding and miscommunication. In these instances, some language barriers limited my ability to effectively probe participants on new topics that were introduced during the interview process. However, participants were patient and afforded me the opportunity to reformulate my questions, when miscommunication arose, but any errors in interpretation remain my own. In addition, interview recordings also allowed me to mitigate this issue, by allowing me to review interviews more thoroughly.

Another limitation in my research is that I conducted fewer interviews than I had initially anticipated. This was in part due to my lack of contacts before my arrival in Bogotá, the level of insecurity in certain localities which restricted the size of my fieldwork site, and the size of the city itself, which made it difficult to reach organizations in peripheral localities. Moreover, another important challenge in recruiting research participants is in terms of the organizations themselves. First-tier organizations are relatively small and therefore lack formal communication mechanisms; even in the case of second-tier organizations, only 2 had websites that provided contact information. Some second-tier organizations were accessible only through the organizations' Facebook pages, while many others did not possess any of these means of contact. In fact, contact information for these organizations, given their level of informality, is typically difficult to encounter. I therefore used snowball sampling to partially help overcome this limitation. It is important however to acknowledge the limitations of non-random sampling techniques. Indeed, while snowball sampling is widely used in contexts of hard to reach populations, it introduces a certain bias since people tend to recommend like-minded individuals as other interview contacts (Black & Champion, 1976; Faugier & Sargeant, 1997). However, while representation could therefore be affected by the limits of snowball sampling, this technique was appropriate within this research context given the complications I experienced in locating and recruiting participants.

### **Conceptual Framework: Urban Political Ecology**

Urban political ecology (UPE) will be used to inform my analysis of the current legislative challenges facing waste picker organizations in the provision of recycling services. UPE is a school of critical urban political-environmental research (Heynen, Kaika & Swyngedouw, 2006). As an underlining assumption, UPE rejects the binary of “nature” and “society” and assumes a dialectic relationship between the two, focusing particularly on urban settings (Swyngedouw, 1996; Heynen, 2003). According to UPE research, nature is too often externalized from social processes, since urban features such as building, cars, garbage bins, and concrete sidewalks are contradictory to our intuitive sense of ‘nature’, which is often imagined as pristine or wild nature untouched by humans (e.g. rocks, lakes and trees) (Heynen, Kaika & Swyngedouw, 2006). However, urban political ecologists emphasize that no natural or ecological process functions separately from social processes and that even urban forms of nature are in fact ‘hybrids’ (Swyngedouw, 1996; Swyngedouw, 1999; Heynen, 2003; Swyngedouw & Heynen, 2003; Keil, 2005; Heynen, Kaika & Swyngedouw, 2006; Grove, 2009; Holifield, 2009; Gandy, 2012). UPE, therefore, attempts to transcend the nature/society binary. It assumes that urban environments are produced through social, political, and economic dynamics, which are themselves produced and reproduced by environmental and ecological processes (Heynen, 2003; Heynen, Kaika & Swyngedouw, 2006). These reciprocal processes that make up the socio-nature are expressed within the metabolism of the city, as socio-environmental changes are continuous and constantly produce and reproduce new urban social and physical environmental conditions (Swyngedouw, 1996; Swyngedouw & Heynen, 2003). Such social, political, and environmental forces, therefore, shape and configure cities. Urban spaces are consequently interwoven networks of socio-natural and socio-ecological flows. As such, UPE contends that understanding urban environments requires a specific focus on social processes and that such processes must be analyzed through a historical-geographical analysis given the ever-changing nature of the socio-natural flows that constitute the urban landscape.

While the intertwining socio-natural processes that produce the city and the politicization of urban environments are at the center of UPE literature, Gabriel (2014) and Heynen (2014) distinguish between two waves of UPE. Earlier work, strongly rooted in Marxist theory, examined through a class-based analysis the ways in which socio-natural processes are enveloped in and produced by capitalist modes of production. Indeed, ‘Marxist’ UPE examines how power relations are embedded in the capitalist production of socio-natural processes and how they create uneven urban landscapes. A second wave has emerged out of criticisms of earlier emphasis on structural capitalist forces and has adopted a post-

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structural and post-humanist approach (such as actor network theory) that focuses on issues of agency and subjectivity in the creation of uneven urban landscapes.

Earlier Marxist formulations of UPE draw on the work of Henri Lefebvre (2003) and David Harvey (1996) in theorizing urban societies rooted in processes of capital accumulation. UPE scholars affirm that socioecological processes, rooted in capitalist production, that make up the city are deeply power-laden and therefore result in highly unjust urban environments (Swyngedouw, 1996; Swyngedouw, 1999; Heynen, 2003; Swyngedouw & Heynen, 2003; Keil, 2005; Heynen, Kaika & Swyngedouw, 2006). Indeed, Swyngedouw & Heynen (2003) suggest that “material conditions that comprise urban environments are controlled and manipulated and serve the interests of the elite at the expense of marginalised populations” (p.902). That is to say, that nonhuman agents, such as water meters, garbage dumps, and highways, are socially mobilized in a way that privileges the interests of elites. These unequal power relations are therefore innately wrapped up in the metabolism of city and thus create spatial and social inequalities (Cook & Swyngedouw, 2012). Cities are produced by and themselves produce unequal power relations. Uneven urban metabolic processes are the result of unequal relationships with capitalist means of production. Marxist UPE analysis therefore constantly seeks to identify who wins and who loses from urban environmental processes and attempts to uncover the power-laden processes that produce highly uneven and unjust urban environments (Swyngedouw & Heynen, 2003). Thus, as Swyngedouw & Heynen (2003) summarize, the political program of UPE aims “to enhance the democratic content of socioenvironmental construction by identifying the strategies through which a more equitable distribution of social power and a more inclusive mode of environmental production can be achieved” (p.898). As part of this political program, Cook & Swyngedouw (2012) argue that the role of the state and its linkages to neoliberalism should become more central to future UPE literature, as well as the connections between how socioecological metabolic flows produce the urban, including waste processes. This research, therefore, addresses these gaps in UPE literature, by examining how the neoliberal state regulates material conditions that make up the urban landscape, focusing particularly on how waste flows transform both social and physical urban environments in a way that privileges the interests of private companies at the expense of marginalized populations. UPE will allow for a better analysis of how power is exercised and negotiated at the local and national levels and how power relations affect service delivery as well as identify how state regulations dictate which actors in the waste management value chain can access waste and benefit from the presence of waste within urban landscapes.

However, the second wave of UPE has been however far less concerned with capitalist urban metabolism. In fact, it has emerged from concerns of overemphasis on “capitalist metabolism and a ‘structuralist’ theorization of power, to the extent that it becomes difficult to imagine an urban sphere

outside of capitalism” (Gabriel, 2014, p. 39). The result Marxist UPE is an understanding of urban metabolisms as rooted solely in capitalist relations or as a form of resistance to them. In the second wave of UPE, scholars suggest that urban socio-natural processes should be understood beyond capitalist relations, which ultimately limit the scopes of analysis (Grove, 2009; Holifield, 2009; Gandy, 2012). Indeed, while some engagement with post-humanism occurred in the earliest UPE literature by looking at non-human agents’ role in the creation of urban metabolism (Swyngedouw, 1997), scholars in the second wave place greater emphasis on non-human agency. Indeed, Holifield (2009) suggests that Marxist UPE (specifically Swyngedouw & Heynen, 2003) present nonhuman agents in terms of how they are socially mobilized to produce uneven urban environments that place the interest of elites over others. Such a theorization could lead back to a nature society dichotomy. Instead, he contends that by using actor-network theory, separately from, rather than conjointly with Marxist UPE, the distinct agency of nonhumans can be understood in terms other than as passive objects that are socially mobilized. In addition, scholars like Grove (2009) suggests that UPE literature should engage more directly with post-structural political ecology and critical geopolitics in order to examine the linkages between socio-ecological transformations and cultural practices, environmental discourse, and subjectivity (both human and non-human). He contends that subjectivity is intertwined with issues surrounding the production of urban subjects. This research will therefore seek to expand our understanding of how waste pickers’ subjectivity and processes of subject formation are wrapped up in the materiality of waste. Specifically, it will examine, beyond the scope of a structural analysis of the different power relations embedded in of capitalist forces, how waste pickers derive much of their subjectivity and their identity from the waste they collect and how they have also gained agency as a result of their relationship with waste.

## Chapter 3: Literature Review

In the past century, more and more waste has been produced, which has placed increasing pressure on municipal governments to manage growing quantities of waste in a way that ensures both the protection of public health and environmental sustainability. While public models of service delivery have historically dominated the waste management sector, the neoliberal turn in policymaking in the 1980s has brought with it a wave of privatization of public services as a way to meet the needs of growing urban populations. This chapter analyzes this shift in public service delivery as a result of changes in international economic policy and demonstrates the limitations of private models of service delivery in achieving social objectives. As a result, I introduce the debate on ‘alternative’ forms of public services delivery within the context of waste management services and suggest that waste picker organizations represent an important avenue for the provision of waste management and recycling services.

While traditional public and private models of waste management have largely disregarded the importance of the informal sector in managing growing quantities of waste, scholars and policymakers have increasingly recognized its environmental, social, and economic contributions. Indeed, since most cities in low- and middle-income countries lack formal recycling systems, recycling activities are predominantly provided by the informal sector. In addition, growing recognition of the unsuitability of conventional, capital-intensive and high-technology models of waste management to the economic, social, and political realities of the Global South has led to a large body of literature that explores the dynamics of informal waste management.

In this chapter, I review literature on the informal sector as well as the effect of economic policy on the growth of informal employment. I illustrate that lack of employment opportunities and the desire to meet subsistence needs has prompted individuals to seek employment within the informal waste management sector. In addition, I also present the benefits of informal recycling activities to cities in the Global South as well as the remaining challenges informal workers continue to face in terms of social marginalization, poverty, and health hazards, and the role of waste picker organization in mitigating these challenges.

### **Public and Private Models of Public Service Delivery**

Historically, public services, such as waste management, have predominantly been delivered by municipal authorities. However, with the neoliberal turn in policy making in the 1980s, many governments at the national and municipal levels abandoned state-led development models, turning

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instead to the private sector to meet the needs of growing urban populations. In these early years, privatization was billed as the panacea for poorly performing public utilities, as it was assumed that the private sector (as opposed to the state) was better equipped to manage the increasingly complex technological, environmental, and economic dynamics brought on by accelerated rates of urbanization in a more ‘efficient’ manner (Fernandez, 1997). These complexities coupled with poor management created an important strain on municipal budgets (Hoornweg & Bhada-Tata, 2012). The privatization of public utilities was therefore introduced as a way to manage public deficits by containing expenditure (Oestmann, 1994). Indeed, proponents of privatization often cite the poor ‘track record’ of governments in the Global South in the water and sanitation sector due to issues such as corruption, inefficiency, and excessive bureaucracy to justify the privatization of basic service delivery (see, for example, World Bank, 2004). As explained by Rees (1998), neoliberal ideology argues that state failure is the result of inefficient management, in turn due to the insulation of state enterprises from competitive incentives, the vulnerability of state-owned companies to changes in political ownership, and the lack of accountability mechanisms. The private sector, and more specifically large multinational corporations, are therefore seen as the solution to poor performing public-sector management of basic services since multinational corporations have the ‘know how’ to get the job done.

Indeed, proponents of this model – among the most notable, the World Bank – suggest that private entities ensure greater efficiency while reducing costs, through the introduction of market-based principles as well as management expertise and improved technical skills (Coad, 2005; Kassim & Ali, 2006). Market forces are seen as the only mechanisms through which development can occur, while state intervention limits saving, investment, productivity, and growth (Oestmann, 1994). Microeconomic dynamics, such as improved operating efficiency and consequently profitability and productivity, are also used to promote privatization (Oestmann, 1994). Privatization also enables access to private finance, enhances service provision and quality, and increases cost efficiency and recovery (Van Dijk, 2008). In addition, access to larger quantities of capital facilitates the modernization of public services through the introduction of more advanced infrastructure and technology (Gutbertlet, 2016). Moreover, increased market competition is also seen as a way to break government monopoly, which consequently improves efficiency (Niskanen, 1971).

However, according to many critical scholars, the neoliberal rationale that sought the privatization of basic services or the incorporation of private-sector principles in basic service delivery is fundamentally flawed (Smith, 2001; McDonald & Ruiters, 2012; McDonald, 2016). After numerous examples of failure of the private sector, it became obvious that the importance of market competition was overestimated, due to the limited possibility for competition in the basic services sector, and that

instead of regulating costs more adequately, the introduction of private-sector principles leads to the development of monopolistic or oligopolistic markets by limiting government regulation (Anderson, 2011). In turn, this lack of public accountability and ethical standards can also reinforce monopolistic or oligopolistic market behavior (Martin, 2001). Moreover, the profit-oriented motives of private firms are considered to be incompatible with public policy objectives and ultimately have adverse effects on society as a whole (Dorvil, 2007).

In solid waste management, for example, since many municipalities remunerate private contractors on the basis of the weight of collected and disposed waste, disposal-centered approaches are favored over the segregation and recycling of waste (Anderson, 2011). Moreover, under private market rules, emphasis is placed on pricing in order to ensure that individuals to pay for the cost of supply (Smith, 2004). Typically, the user's ability to pay affects the quality of the service delivered. Hence, the objectives of commercially-driven companies in the provision of basic services are significantly smaller in scope than the wide-ranging economic and social objectives sought within public services (Martin, 2001).

While the 'economic efficiency' of private entities has been championed by neoliberal policymakers, multilateral aid agencies, and international financial institutions, critical scholars have highlighted the need to refocus the debate on basic service delivery on 'social efficiency,' arguing that privatization does not meet the social and welfare goals of basic services and in fact has a detrimental effect on citizenship rights (Spronk, 2010). Thus, recent trends in privatization have exhibited significant limitations in achieving the stated goals of cost-efficiency and capacity building in the provision of waste management services. A reform of public utilities in the Global South is therefore necessary in order to meet emerging social and environmental demands, such as universal access to waste management services, improved environmental sustainability, and increased social inclusion in the waste sector.

### **Alternative Models of Service Delivery**

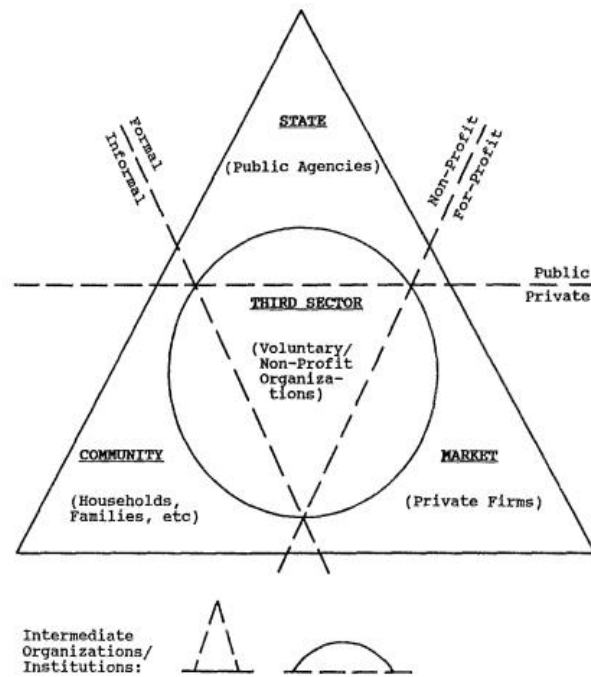
Given the failures of neoliberalism, scholars and activists have attempted to identify an 'alternative' in the provision of basic services (Pestoff, 1992; Leavitt & Morris, 2004; McDonald & Ruiters, 2012; Douvitsa & Kassavetis, 2014). Significant debate has arisen on what exactly constitutes an alternative to privatization, since these alternatives can take many forms. Public sector management, which McDonald & Ruiters (2012) define as 'public' entities that are entirely state-owned and operated (p.3), is commonly acknowledged as an alternative to the privatization of basic services. However,

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growing investigation of ‘unconventional’ organizational structures for basic service delivery, prominent in the Global South, has led to the recognition of another form of alternative that does not fall neatly within the public and private dichotomy (Joshi & Moore, 2004).

Various nomenclature has been used to define and categorize these organizational structures, such as the voluntary sector, the third sector, the (private) non-profit sector, or the social economy. For greater simplicity, the term ‘third sector’ will be used throughout this research to designate such organizational structures. The debate over nomenclature and definition is the result of the highly ambiguous nature of this sector, since the third sector does not fit neatly within the public and private binary. In fact, it adopts elements and characteristics of both these ideal-typical domains, thereby forming a hybrid sector (see Figure 1) (Brandsen & Pestoff, 2006). As an alternative to privatization, third sector organizations have become prominent in the debate on basic service delivery. Provision of basic services by such organizations cannot be categorized under conventional public or private models of service delivery. These entities have been characterized as “‘non-state’ organizations that operate independently of the state on a not-for-profit basis and are oriented to principles of equality and social citizenship (such as certain NGOs or community groups)” (McDonald & Ruiters, 2012, p.3). Third sector organizations typically constitute social enterprises, in which members’ welfare and socio-economic inclusion take precedence over profit-making motives (Matei & Dorobantu, 2015).

Figure 1. The Third Sector.



Source: Pestoff (1992, p.25).

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While there remains significant debate on which non-state organizations are considered alternatives to privatization, many scholars, in accordance with the definition provided by McDonald & Ruiters, have emphasized the not-for-profit nature of these organizations as a defining characteristic, arguing that for-profit motives are emblematic of private sector principles (Ravina, 1996; Brandsen, van de Donk & Putters, 2005; Brandsen & Pestoff, 2006). As a result, literature on alternatives to privatization often excludes for-profit organizations, such as the waste pickers organizations studied in this thesis. Waste picker organizations operate on a for-profit basis since they collect recyclable materials from garbage bins, open-air dumps, or any other source of waste generation and sell them to middlemen or, in some cases, to larger recycling industries. However, this research suggests that waste picker organizations, although operating on a for-profit basis, should nonetheless be considered a valuable alternative to privatization, given the socio-economic benefits they provide to their members, in terms of improved working conditions, bargaining power, and representation, empowerment, and poverty alleviation. In addition, they contribute to society in other ways by helping to reduce the impact of consumerism on the environment by collecting recyclable materials that would otherwise end-up in landfills.

It is important to note that in contrast to privatization, profits do not fall in the hands of large multinationals and their shareholders, but is rather distributed amongst waste pickers according to the quantity and type of waste each person collects. Waste pickers typically make up the poorest segments of society and lack alternative employment opportunities. They therefore benefit greatly from the profits earned by collecting waste. In addition, although they have control over the means of production, they, unlike large corporations in the formal private sector, do not exploit labor in order to increase shareholder profits. In fact, waste picker organizations function as petty commodity producers, since they are operated by and for excluded and marginalized populations, they generate profits from the commercialization of goods, notably recyclable materials, their operations remain small, and they act as intermediaries between informal workers and the formal 'modern' sector. In addition, as a result of their collective structure, waste picker organizations provide important socio-economic benefits to their members, such as increasing incomes by bypassing middlemen and selling directly to the industry, promoting greater empowerment and wellbeing, creating a space for collective consciousness and inclusion, improving bargaining power and working conditions, and securing greater inclusion in the municipal waste management sector. These benefits will be explained more thoroughly in subsequent sections.

This research, therefore, attempts to move beyond the public/private dichotomy and argue that waste pickers deliver an important public service, and as such should be recognized in debates on 'alternative' service delivery given their social objectives. As will become evident in the subsequent

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chapters, informal waste management is not only labor intensive, and thus provides income to a significant population who typically lacks other sources of employment, but has high recovery rates, comparable to many cities in high-income countries, at a lower cost to governments and citizens. More importantly, waste picker organizations, although operating on a for-profit basis, provide important social and economic benefits to its members, beyond the social, economic, and environmental contributions they produce for society more generally. As a result, the integration of the informal sector within the municipal waste management sector, through institutionalized co-production where public services are provided through a long-term relationship between the state and third sector organizations (Joshi & Moore, 2004), such as waste picker organizations, is championed by many scholars and policymakers that have recognized the social, economic, and environmental benefits of informal recycling activities (Samson, 2015a; Gutberlet, 2012; Gutberlet, 2016).

While these third sector organizations have important redistributive mechanisms that allow for the economic and social empowerment of marginalized populations and therefore represent ‘alternatives’ to private models of services, it is important not to romanticize our perception of these organizations and to recognize their limitations. Indeed, although waste picker organizations can mitigate some of the challenges faced by waste pickers, high incidences of health problems, social stigmatization, and poverty are still common to informal recycling activities. Although the social orientations of these organizations are crucial in positioning them as valuable ‘alternatives’, these organizations nonetheless have important drawbacks. However, no model is without flaws. Future research should, therefore, explore ways to mitigate such drawbacks in order to increase the value of these organizations as ‘alternatives’.

### **The Informal Sector**

In order to better understand the dynamics of informal waste management as well as the role of waste pickers in cities in the Global South, it is important to examine the different characteristics and theories that make up the informal economy. Insights in the informal economy will allow for a greater understanding of the realities faced by waste pickers in low- and middle-income countries. In fact, literature on the informal economy has been primarily focused on developing countries, given the size of the informal sector in these countries (De Soto, 1989; Fields, 1975; Portes & Hoffman, 2003). In Latin America and the Caribbean, the non-agricultural informal employment rate was 46.8% in 2013 (ILO, 2014). While this rate has decreased slightly from 50.1% in 2009, a substantial amount of the population—nearly half of the economically active population—remains employed in the informal sector.

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While informal employment can range from small marginal activities to larger enterprises (including illicit and frequently violent and dangerous economic activities such as the drug trade and sex work), it nonetheless provides income to a large segment of urban populations in low- and middle-income countries and has an important impact on the economies of these countries (Hart, 1973). As a result, given its magnitude, the informal sector has been widely explored and disputed in academic literature.

The informal sector is highly heterogeneous and complex. Therefore, there has been significant debate over its definition, existence, and basic characteristics. The International Labor Organization (ILO) has provided technical definitions of the informal sector and the informal economy, which have evolved throughout the years. The ILO distinguishes between the informal sector and informal employment. The informal sector is defined as the production units encompassing unincorporated household enterprises, limiting however the definition of informality to enterprises (ILO, 1993). The ILO later defined informal employment as all remunerative work, which includes both wage employment and self-employment, that is unregistered, unregulated or unprotected by formal legal or regulatory frameworks, thereby complementing the previous definition (ILO, 2003). It expanded the conceptualization of informality to include all employment excluded from social and labor rights (ILO, 2014). Other scholars have also attempted to provide other, more generalized, definitions. Indeed, Castells & Portes (1989) define the informal sector as “all income-earning activities that are not regulated by the state in social environments where similar activities are regulated” (p.12). Broadly speaking, common to most definitions is the criterion that the informal sector encompasses all activities taking place outside the reach of state regulations and protection.

Nonetheless, for the purposes of this study, it is important to understand the different dynamics that have led to the growth of the informal economy in order to identify what drives individuals to seek a livelihood in informal recycling activities. Different conceptualizations of the informal sector are rooted in varying interpretations of key elements, such as the cause and nature of informality, the linkages between the informal and formal economy, and the impact of state regulation. Over time, four dominant schools of thought have emerged from this extensive debate, which will be described further below: Dualist, Structuralist, Legalist, and Voluntarist (see Table 3 – p. 32 – for resume of the dominant schools of thought).

### **The Dualist School**

The term ‘informal sector’ was first coined in a study by the ILO looking at urban labor markets in Ghana (Hart, 1973). The term was used to describe the dualistic economic structure present in

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developing countries, in which informal economic activities remained outside the formal reach of the law. In its early formulation, researchers assumed that a strict dichotomy existed between the formal and the informal sectors and that consequently informal sector activities had few, if any, links with the formal economy (ILO, 1972; Hart, 1973; Ferman & Ferman, 1973; Tokman, 1978). Dualist scholars, therefore, suggest that these sectors operate independently from one another and that they possess entirely opposing dynamics (ILO, 1972; Hart, 1973; Ferman & Ferman, 1973). Informal activities are characterized by ease of entry, reliance on indigenous resources, family-ownership, small labor-intensive operations, and unregulated and competitive markets (ILO, 1972). Conversely, formal sector activities are seen in opposite terms, characterized by difficulty of entry, reliance on overseas resources, corporate ownership, large capital-intensive operations, and protected markets (ILO, 1972). In addition, Hart (1973) assumed that the many difference between formal and informal income opportunities is based on the distinction between wage-earning employment and self-employment, a concept that has been largely disputed in subsequent theories.

Dualist scholars also reject previous views of the informal sector as marginally productive (ILO, 1972; Hart, 1973). Most informal sector activities are in fact economically efficient and profit-making in nature, although they tend to be small in scale and lack links with the formal economy (ILO, 1972). While they remain small in scale, these activities provide individuals of low socioeconomic status with the opportunity to earn an income and therefore represents an important survival strategy for the poor (Hart, 1973; Sethuraman, 1976; Tokman, 1978; Ferman, Henry, & Hoyman, 1987). Indeed, it allows individuals that are denied entry in the formal sector to increase individual and household incomes (Hart, 1973).

According to dualist scholars, the existence of the informal sector can be attributed to the inability of the modern industrial sector of providing sufficient employment for all segments of the population, particularly low-skilled individuals, as a result of rapid urbanization and the disparity between required technical skills and modern economic structures (Hart, 1973; Ferman & Ferman, 1973). However, Tokeman (1978) suggests that, over time, the informal sector as a whole would be subject to a declining trend in income shares, although the sector will not disappear. Works by subsequent researchers, in fact, show that rather than declining, the informal sector has grown significantly, particularly in Latin American countries (Heintz & Pollin, 2003; Portes & Hoffman, 2003)

### **The Structuralist School**

Emerging in the late 1970s and early 1980s, the structuralist school, which was heavily inspired by Marxist schools of thought, became increasingly critical of the dualists' assumption of the

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dichotomous nature of formal and informal economies and of the existence of a segmented society. Focusing their analysis on different modes of production and petty commodity producers, structuralists suggest that the informal sector possesses important links, although subordinate in nature, with the formal sector (Gerry, 1978; Moser, 1978; Portes & Benton, 1984; Portes, 1985; Tokman, 1989; Hemmer & Mannel, 1989; Heintz & Pollin, 2003; Portes & Hoffman, 2003). They argue that petty commodity production is subject to a subordinate relationship to the modern capitalist sector (Gerry, 1978; Portes, 1985; Tokman, 1989).

Therefore, structuralists argue that the informal economy has several important links with the formal economy, some of which are problematic for informal workers. Many of these relationships are the result of the nature of capitalism and capitalist growth. Using a Marxist class-based analysis, Portes (1985) and Portes & Hoffman (2003) suggest that the ‘informal petty bourgeoisie,’ which is characterized by capitalist micro-enterprises, acts as the intermediary between the ‘modern’ sector and the ‘informal proletariat’. These micro-enterprises owned by the informal petty bourgeoisie produce goods and services for the formal working class as well as directly for large firms through different subcontracting agreements. Conversely, the ‘informal proletariat’, characterized by its lack of control over the means of production and their wage-earning status, produces cheaper goods and services for the formal market and lower the cost of production and marketing for large firms through subcontracting arrangements.

Therefore, informality is seen as a consequence of the uneven development of capitalism and of the limitations of the different economic paradigms it espoused. Key elements of capitalist growth, in fact, affect the development of informality: the profit-seeking motives of modern capitalist firms, the process of industrialization in developing countries, and the rise of neoliberalism (Chen, 2016). Profit-seeking mechanisms of modern capitalist firms and their attempt to reduce labor and operating costs in order to increase their competitiveness have encouraged formal enterprises to rely on subcontracting arrangements with informal entrepreneurs (Moser, 1978; Portes & Benton, 1984; Hemmer & Mannel, 1989; Heintz & Pollin, 2003). Portes and Benton (1984) suggest that the use of subcontracting mechanisms to reduce labor and operating costs by modern firms is a reaction to state regulations, such as minimum wage, social insurance, and labor standards. The flexibility provided by informal employment results not only in reduced costs, but also avoid state regulations on labor protection and social security. Due to such evidence of linkages between the formal and informal sectors, Portes, therefore, suggests that

“[t]he multiple relationships between the informal proletariat and capitalist production and circulation suggest that the common description of Latin American economies as ‘dual’ is inappropriate. These economies can better be described as unified systems in which the modern

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capitalist sector articulates with and relies on the continuing existence of backwards modes of production and the associated labor supplies.” (1985, p.16)

In addition, structuralist literature has focused heavily on inadequate labor absorption during the early phases of industrialization in most developing countries. Indeed, many have argued that industrialization in the second half of the 20<sup>th</sup> century has not been able to absorb the unemployed urban labor as well as the additional labor force originating from rural areas (Portes, 1985; Hemmer & Mannel, 1989). Heintz & Pollin (2003) focus their analysis on recent economic trends and attribute the rise of ‘informalization’ to the development of neoliberalism in developing countries. Indeed, the implementation of neoliberal policies in Latin America has led to a significant expansion of informal micro-enterprises as well as a stagnation or increase of the informal proletariat (Portes & Hoffman, 2003). Decline in public sector employment, the promotion of free trade and foreign direct investment, through low labor costs, and the abandonment of monetary and fiscal interventions by the government have converged to limit formal sector employment possibilities. This growth in the informal sector is the result of adaptive responses of both the middle and lower classes in the face of labor contractions following the application of neoliberal policies.

### **The Legalist School**

However, critical of the assertion by dualist and structuralist scholars that low-income individuals are forced into the informal sector due to the lack of employment opportunities in the formal sector, the legalist school of thought presumes that participation in the informal economy is the result of a voluntary exclusion from the formal economy, rather than a forced one. Such proponents view informal workers as small-scale entrepreneurs who intentionally choose to conduct their activities informally in order to avoid the additional cost, time, and effort required for formal registration (de Soto, 1989). Indeed, in his work, de Soto examines the costs, both economic and personal, of formality as well as the cost of remaining in the formal sector. He finds that low-income individuals cannot satisfy these costs. He suggests that “the choice between working formally and informally is not the inevitable result of people’s individual traits but, rather, of their rational evaluation of the relative costs and benefits of entering existing legal systems” (1989, p.185). Therefore, unlike other theories that see rural-urban migration, maldistribution of income, unemployment, or economic systems as the cause of informality, De Soto therefore finds the existence of informality to be contingent on the legal system in place, in particular of the costs that the legal system requires in order to operate in the formal sector.

**The Voluntarist School**

Finally, similarly to the legalist school, voluntarists suggest that informal workers voluntarily choose to operate within the informal economy after a cost-benefit analysis indicates that it will best serve their interests to do so (Maloney, 2004). However, they argue that this deliberate participation in the informal economy is not the result of the challenges and costs of registration or of a hostile legal system. Rather, the informal sector is seen as the optimal choice given individual preferences and human capital constraints as well as the labor productivity of the country (Maloney, 2004).

Voluntarists’ assumptions focus specifically on the behavior of micro-firms and micro-entrepreneurs as a response to formality and informality (Levenson & Maloney, 1988; Maloney, 2004). Maloney (2004) argues that the informal sector should be seen as “the unregulated, developing country analogue of the voluntary entrepreneurial small firm sector found in advanced countries, rather than a residual comprised of disadvantaged workers rationed out of good jobs” (p.1). Thus, Levenson & Maloney (1988) suggest that participation in the informal sector can be understood as a decision to participate in particular societal institutions. As such, formality should be seen as a continuum and as an input of the production function (Levenson & Maloney, 1988; Maloney, 2004). Levenson & Maloney assume that formality, which allows for access to mechanisms of property rights, risk pooling, and contract enforcement through taxes, is necessary for firm growth. Therefore, their approach indicates that micro-firms, given their size, choose to operate in the informal sector due to a cost-benefit analysis of formal and informal sector dynamics. However, they predict that “firms whose cost structures dictate that they should expand will make the transition to formality as they grow” (Levenson & Maloney, 1988, p.II).

Table 3. Dominant Schools of Thought on the Informal Economy.

	<b>Dualists</b>	<b>Structuralists</b>	<b>Legalists</b>	<b>Voluntarists</b>
<b>Who they focus on</b>	Those engaged in traditional and survival activities	Petty traders and producers; sub-contracted workers; casual workers	Informal enterprises and entrepreneurs	The self-employed, notably entrepreneurs and their informal enterprises
<b>How they view the informal economy</b>	As autonomous activities with few (if any) links with the rest of the economy; activities provide income for the poor and a safety net in times of crisis	As subordinated economic units (informal enterprises) and workers that serve to reduce input and labour cost of large capitalist firms and	As comprised of plucky entrepreneurs who choose to avoid the unnecessary and burdensome costs, time and effort of formal registration	As comprised of entrepreneurs who choose to operate informally in order to avoid taxation, commercial regulations, and other

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		increase their competitiveness		costs of operating formally
<b>Causal theory</b>	<p>Informal operators are excluded from modern economic opportunities due to</p> <p>a) imbalances between the growth rates of the population and of modern industrial employment</p> <p>b) a mismatch between people's skills and the structure of modern economic opportunities</p>	<p>Informality is due to the nature of capitalism and capitalist growth: specifically, the attempts by formal firms to reduce labour costs and increase competitiveness; the reaction of formal firms to the power of organized labour, state regulation of the economy (notably, taxes and social legislation) and global competition; and the process of industrialization (e.g. off-shore industries, sub-contracting chains, flexible specialization).</p>	<p>A hostile legal system leads to informal activities and informal, extralegal norms. Cumbersome government rules and procedures create barriers to formalization and thus stifle the productive potential of informal entrepreneurs.</p>	<p>Informal operators who choose to operate informally – or even criminally – after weighing the costs and benefits of informality relative to formality.</p> <p>Unlike the legalist school, this school does not blame cumbersome registration procedures but says informal is a deliberate choice by entrepreneurs to enjoy benefits of informality.</p>
<b>Characteristics</b>	<p>7 characteristics:</p> <ul style="list-style-type: none"> <li>• ease of entry</li> <li>• reliance on indigenous resources</li> <li>• family ownership of enterprises</li> <li>• small scale of operations</li> <li>• labour-intensive and adapted technology</li> <li>• skills acquired outside the formal school system</li> <li>• unregulated and competitive markets</li> </ul>	<p>Focus on the relationship of production and activities unregulated by the institutions of society.</p> <p>Informality is seen as:</p> <ul style="list-style-type: none"> <li>• universal</li> <li>• heterogeneous</li> <li>• on the rise</li> <li>• systematically linked to capitalist/formal firms</li> </ul>	<p>A hostile reception, especially from the legal system, leads to informal activities and extralegal norms.</p> <ul style="list-style-type: none"> <li>• Costs of becoming formal: registration and license</li> <li>• Costs of remaining formal: taxes and compliance with regulations or laws and higher rates for public utilities</li> <li>• Costs of illegality to economy: avoidance of fees and penalties and avoidance of taxes and labour laws</li> <li>• Costs of absence of good law to informal workers: not having property</li> </ul>	<p>Costs of formality (avoided): payroll taxes and social protection contributions</p> <p>Benefits of informality: way to earn income while avoiding costs of formality</p>

			rights and not having enforceable contracts and not receiving benefits from the formal sector	
Source: adapted from WIEGO (n.d., p.1-3).				

**Informal waste management**

Most scholars studying the informal waste management sector would, however, agree with scholars such as Ferman, Henry, & Hoyman (1987) and Tokman (1978) that informal recycling activities provide low-income individuals with the opportunity to earn an income in order to subsist (Samson, 2009; Parra, 2014; Scheinberg, 2012). Economic incentives, which are created from the commercialization of recyclable material, are important factors explaining the participation of informal workers in recycling activities (Vergara, Damgaard & Gomez, 2015). Governments and scholars initially saw the involvement of waste collectors in the informal sector as an expression of poverty, characterizing waste pickers as ‘vagrants’ (Taira, 1969). However, more recent literature has examined the extent of their contributions and has attempted to view waste pickers not as an expression of poverty, but as a cause of it, looking more closely at the underlying socioeconomic dynamics that justify their presence in the informal sector (Birkbeck, 1979). Given the lack of alternative livelihood opportunities, informal workers were forced to participate in the economically and socially precarious informal recycling sector, which is characterized by high incidences of poverty, health hazards, social marginalization, and poor working conditions (Medina, 2000). These conditions are often made worse by poor inclusionary policies and negative attitudes from governments, policymakers, and society towards informal waste pickers (Medina, 2000; Wilson, Velis & Cheeseman, 2006). However, a growing body of literature has in fact recognized the positive environmental, social, and economic impacts that arise from informal recycling (Medina, 2000; Wilson, Velis & Cheeseman, 2006; Gutberlet, 2008; Samson, 2009; Scheinberg et al., 2010; Para, 2014; King & Gutberlet, 2013; Vergara, Damgaard & Gomez, 2015; Dias, 2016; Gutberlet, 2016).

**The Informal Waste Management Value Chain**

The informal sector is a fundamental source of employment and livelihood opportunities for many of the urban poor. While waste pickers tend to make up the most impoverished segment of society, up to 3.8

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million people nonetheless take part in informal recycling activities in Latin America and the Caribbean (Terraza & Sturzenegger, 2010). While only a few are part of waste picker organizations, most work independently. In most cases, waste pickers work in hazardous and exploitative conditions (Gutberlet, 2016). Nonetheless, informal workers have become a significant force in MSW management in the Global South (Wilson, 2007). Indeed, research has found that informal recycling activities may already be recovering 15-35% of urban MSW produced in both low- and middle-income countries (Scheinberg, Wilson & Rodic, 2010). In a study of informal and formal waste management practices in 6 cities, Scheinberg et al. (2010) found that informal sector outperformed the formal sector in material recovery in all but one city (see Table 3). In some of these cities, material recovery rates from the informal sector were significantly higher than the formal sector, about 10 times higher in Quezon City, the Philippines, with Cairo, Egypt reaching as high as 30% of total waste. Formal municipal waste management systems in low- and middle-income countries are therefore typically weak and focus almost exclusively on waste collection and disposal (Samson, 2015). In many cases, waste picking activities represent the only means for recycling in municipalities in low- and middle-income countries. However, the informal sector is typically not formally tasked with providing this service and therefore are not compensated for their labor by municipal authorities (Dias & Alves, 2008).

Table 4. Comparison of Material Recovery by Formal and Informal Sector in the Six Cities (in Tonnes and Percent of Total Waste Generated).

City	Formal sector		Informal sector	
	Tonnes	Percent of total	Tonnes	Percent of total
<b>Cairo</b>	433,200	13%	979,400	30%
<b>Cluj</b>	8,900	5%	14,600	8%
<b>Lima</b>	9,400	0.3%	529,400	19%
<b>Lusaka</b>	12,000	4%	5,400	2%
<b>Pune</b>	-	0%	117,900	22%
<b>Quezon City</b>	15,600	2%	141,800	23%

Source: Scheinberg et al. (2010, p.6).

In recent years, the modernization of the waste management sector, through the introduction of high-technology infrastructure for the processing of collected waste, has made it increasingly difficult for waste pickers to access and valorize waste (Gunsilius et al., 2011). Indeed, modernizing cities are

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increasingly delegating recycling services to formal private sector entities (and in some cases the property rights to recyclable solid waste) in order to reduce the operating costs of their waste management services. Consequently, as Gunsilius and al. note, the “global commons into which the waste materials are disposed is shrinking” (2011, p.7). However, some cities in low- and middle-income countries are increasingly attempting to expand their waste management systems to include recycling services (Samson, 2015). This increased attention to recycling services are the result of two factors: (1) international donors are promoting ‘modern’ waste management systems, in which recycling is a fundamental component, and (2) waste pickers are increasingly organizing and mobilizing in order to demand recognition and inclusion, bringing recycling into political debates (Samson, 2015).

Informal waste management can take various forms. Wilson, Velis & Cheeseman (2006) identify 4 different categories of informal recycling: (1) itinerant waste buyers, who go door to door to collect recyclable materials; (2) street waste pickers, who collect recyclable materials from mixed waste disposed in the streets; (3) municipal waste collection crews, who recover recyclable materials from vehicles transporting waste to disposal sites; and (4) open dump waste pickers, who recover materials from final disposal sites. While there are significant variations in informal recycling activities, Parra (2016) identifies 3 characteristics common to all waste pickers: (1) the collection of recyclable material as an economic activity and pertaining to the first link in the recycling value chain; (2) the condition of economic poverty and the material precarity in the realization of their labor, as part of the informal sector of the economy; and (3) the lack of recognition and inclusion, almost always, from governments and society. Although there are different forms of informal waste management, this study will focus exclusively on the second category – street waste pickers – particularly those organized into associations, cooperatives or other types of organizations.



Picture 3. Human-drawn vehicle containing recyclable materials.

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Street waste pickers roam through the city and collect recyclable materials found within garbage bins or bags placed in public spaces (Wilson, Velis & Cheeseman, 2006; Wilson et al. 2009; Gutberlet, 2016). They collect a wide range of materials, such as plastic, paper, metals, cardboard, and wood, from various locations, such as households and businesses (Gutberlet, 2016). Informal recycling routes are typically determined by a process of territorialization of cities, in which waste pickers tend to collect recyclable waste from specific, preestablished routes, often based on the quality of material, level of income of neighborhoods, and scheduled waste collection (Parra, 2016).



Picture 4. Human-drawn vehicle containing recyclable materials covered from the rain.

Thus, the city is fragmented in different informal recycling routes, with individual waste pickers operating along their preestablished routes. In some cases, historical routes have emerged where longstanding waste pickers have collected materials from the same locations for more than 20 years. After the collection phase, they transport the recyclable material, usually in human- or animal-traction vehicles, to a sorting location, which can be in homes, vacant public spaces or, in the case of informal workers that are part of a waste picker organization, in warehouses.

Waste pickers then supply these materials, generally through middlemen, to a large formal network of dealers and recycling and export industries. The price earned for each material is determined by the industry and is also largely dependent on its quality (Gutberlet, 2016). Since waste picking networks are highly adaptable and able to respond to demand-driven forces, such as the price of secondary raw materials, some materials are more commonly collected than others (Dias & Alves, 2008; Gerdes & Gunsilius, 2010). Moreover, since recycling industries require a minimum quantity of recyclable material from their suppliers, they do not buy materials from independent waste pickers. These requirements, therefore, encourage the existence of middlemen, who buy collected materials from multiple waste pickers in order to satisfy the demands of formal industries (Medina, 2000). However, these middlemen often exploit waste pickers, by paying them low prices, to in turn generate high profits when selling these materials to industries (Medina, 2000). This unequal relationship of power is the result of the monopsonistic markets in which middlemen operate (Medina, 2000).

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Waste picker networks, although operating in the informal sector, are therefore highly structured and operate within a hierarchy or value chain (see Figure 2). They represent the first and primary actors at the base of the recycling value chain. Their position in the informal recycling hierarchy, however, means that they receive only a fraction of the value of the waste, given the lack of value-adding infrastructure available to them. Nonetheless, they are important actors in the waste valorization process, supplying middlemen, brokers, and manufacturing industries with considerable quantities of recyclable material (Scheinberg & Simpson, 2015; Scheinberg & Anschutz, 2006; Medina, 2005a; Scheinberg 2012; Dauvergne & Lebaron, 2013). It is, in fact, this process of valorization which provides substantial economic and environmental benefits to countless cities in low- and middle-income countries.

Figure 2. Hierarchy of Informal Recycling.

<p>Highest value</p> <p>↑</p> <p>Lowest value</p>	Manufacturing industries
	Brokers, wholesales and other processors
	Craftsmen, middlemen
	Recycling micro and small enterprises and scavenger co-operatives
	Family type units involved in waste collection or scavenging/picking
	Individuals waste scavengers/pickers
Source: Wilson, Velis & Cheeseman (2006, p.800).	

### **The Benefits of Informal Waste Management**

Informal recycling activities produce important environmental benefits, most of which are equivalent to the benefits of formal recycling. Recycling provides different types of benefits that affect greenhouse gas (GHG) emissions and climate change, natural resource use, and energy use. that “[a]fter waste prevention, recycling has been shown to result in the highest climate benefit compared to other waste management approaches” (2010, p.30). Therefore, waste picking activities, given their magnitude in low- and middle-income countries, have a considerable impact on climate change mitigation, particularly from reductions of GHG emissions in production and transformation processes.

The direct benefits of recycling on GHG emissions reductions remains nominal, since GHG emissions from post-consumer waste and wastewater only contribute to about 3% of total global GHG emissions and that methane released from landfills and wastewater accounts for approximately 90% of emissions in the waste sector (Bogner et al., 2008). However, indirect reductions can offer significant

benefits. Indeed, by reintroducing recyclable materials in the industrial process, recycling reduces GHG emissions from the production process (Gunsilius et al., 2011). The transformation of recyclable materials, although largely dependent on the materials involved, typically require less energy and therefore produces less GHG emissions than transformation processes for virgin material (Bogner et al., 2008). Informal sector recycling has demonstrated the ability to achieve GHG emissions reductions similar to those achieved by recycling and landfill gas capture in the formal sector. In addition, while achieving comparable environment results as formal waste management systems, informal recycling activities, particularly in low- and middle-income countries, greatly surpass material recovery rates within the formal sector (Scheinberg et al., 2010). In the Global South, formal recycling systems remain rare and offer only low levels of resource recovery (Gutberlet, 2016). King and Gutberlet (2013) have outlined some of the GHG emissions reductions that result from organized informal waste picking activities performed by a Brazilian cooperative. Their results indicate that Cooperpires, a Brazilian recycling cooperative, collects and processes approximately 24 tonnes/month of recyclable material. As a result, recycling activities contribute to an emissions reduction of 1443-2720 tCO<sub>2</sub>-eq, among which 166–276 tCO<sub>2</sub>-eq. are mitigated through recycling, and roughly 1277–2444 tCO<sub>2</sub>-eq. through landfill diversion of paper and cardboard (King & Gutberlet, 2013).

In addition, informal waste management contributes to greater environmental sustainability by avoiding pollution and conserving primary raw resources and energy through the use of secondary materials in the manufacturing of goods (Gerdes & Gunsilius, 2010; Scheinberg et al., 2010). Informal recycling activities essentially contribute to the circular economy. In a study of informal waste management in 6 cities, Scheinberg et al. (2010) illustrate that the informal sector outperforms the formal sector in the recovery of waste materials in 5 out of the 6 cities. Therefore, Scheinberg et al.'s study exemplifies the greater environmental contribution of the informal sector compared to the formal sector given its higher rate of resource recovery. These recycling practices help mitigate the growing scarcity of primary materials (Scheinberg et al., 2010). Recycling also reduces the amount of waste disposed of in dumps and landfills, thereby extending the life cycle of these disposal sites and saving an important disposal volume (Gunsilius et al., 2011).

The informal sector, however, is unique in its fossil fuel consumption, since waste pickers typically rely on human- or animal-drawn vehicles (Gutberlet, 2016). Since the formal sector typically uses large vehicles that rely on fossil fuels, informal waste management practices comparatively consume considerably fewer fossil fuels (Scheinberg et al., 2010). In addition, although these are indirect benefits, municipalities that have integrated informal waste management within their public policies have in some instances given waste picker organizations the responsibility of conducting environmental education to

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citizens (Gutberlet, 2016). This is the case in Bogotá, where waste picker organizations participate in the education of citizens on the environmental benefits of recycling and of the separation of recyclable materials at the source.

While informal recycling activities provide significant environmental benefits, they also have a considerable social impact. Indeed, informal waste management is labor-intensive and provides income opportunities to large segments of the urban population, which are typically poor, marginalized, and economically vulnerable (Medina, 2000). Comparatively, ‘modernized’ high-technology waste management systems, which are capital-intensive rather than labor-intensive, offer far fewer employment opportunities and often require more specialized labor. Despite unfavorable and precarious working environments, informal recycling activities nonetheless allow individuals to be employed in regions which tend to have high levels of unemployment (Wilson, Velis & Cheeseman, 2006). These informal employment opportunities are particularly attractive given that most waste pickers would not have access to formal sector employment as a result of poor education or physical disability (Wilson, Velis & Cheeseman, 2006). The autonomy and flexibility in working hours are also attractive to many who enter the informal recycling sector (Medina, 2000; Scheinberg et al., 2010).

Informal waste management also brings important economic contributions at the individual, household, municipal, and national levels. While waste pickers typically earn very low incomes, they can in some cases earn more than the legal minimum wage, particularly in regions with favorable legal and institutional environments and where governments recognize waste pickers as important actors in the waste management sector (Scheinberg et al., 2010). A study by Scheinberg et al. (2010) found that average earnings from the informal recycling sector in cities such as Pune, Lima, and Cluj, are somewhere between 110% to 240% above the legal minimum wage. Waste picking activities can also provide income opportunities for entire households, and therefore not only increases individual income, but household income as well (Gunsilius et al., 2011).

Informal waste management also brings positive economic impact at the municipal level. It provides employment opportunities for unskilled workers, who otherwise would be recipients of social assistance, as well as leads to a process of capital accumulation and investment in micro-enterprises (Scheinberg et al., 2010). More over, informal recycling systems reduce the cost of formal waste management systems by both minimizing operational costs in the formal sector and contributing to the economy. Indeed, it reduces the quantity of waste for collection, thereby lowering collection and transportation costs, and the amount of waste disposed of in landfills, effectively saving expensive landfill space (Wilson, Velis, & Cheeseman, 2006; Scheinberg et al., 2010). It, therefore, reduces the demand for collection, transport, and disposal equipment, saving municipalities a significant amount of capital in

equipment as well as labor costs (Medina, 2007). Since MSW management is typically the largest single budget item for cities in low-income countries as well as many in middle-income countries, informal recycling activities are therefore crucial (Hoornweg & Bhada-Tata, 2012).

Moreover, scholars have increasingly recognized the economic contribution of waste pickers, which provide inputs to local, national, and international recycling industries (Dias, 2011). Indeed, informal recycling activities add value to waste by transforming recyclable waste into tradable commodities (Gerdes & Gunsilius, 2010). Therefore, these activities also supply raw materials for industries, and hold considerable economic potential by avoiding the growing costs of increasingly scarce primary resource. In regions where waste segregation is uncommon, the commercialization of recyclable materials generates profits for intermediary buyers as well as for larger companies in the national and international secondary materials market (Birkbeck, 1978; Birkbeck, 1979). These recycling networks are therefore part of a larger recycling trade hierarchy, which is characterized by important variations in income generation, social status, and working condition at each level (Wilson, Velis & Cheeseman, 2006).

### **The Challenges of Informal Waste Management**

Although governments and policymakers in low- and middle-income countries have increasingly recognized the aforementioned environmental, social, and economic contributions of the informal sector, waste pickers still face considerable challenges in providing recycling services. Indeed, given the nature of their work, waste pickers face significant health risks. These risks arise from both the nature of the waste itself and the processes involved in the recycling of waste (Cointreau, 2006; Wilson, Velis, & Cheeseman, 2006). Waste pickers also face a critical combination of unhygienic working conditions as well as risks of accident from the manual handling of waste (UN-HABITAT, 2010). These risks are often accentuated since living and working environments tend to overlap. Indeed, while many of these risks arise from the nature of their work, it is often difficult to separate their work from their living conditions, which can affect surrounding households and communities (van Eerd, 1996). While waste picking, in general, has significant negative health impacts, collecting recyclable waste from open-air dumps is the most detrimental to health (Wilson, Velis, & Cheeseman, 2006). In low- and middle-income countries, a large proportion of waste pickers working on open-air dumps are pregnant women and children and exposure to the risks presented above is particularly precarious for these individuals (Cointreau, 2006). Indeed, children who perform waste picking activities are particularly vulnerable to health risks due to their more delicate constitutions (UN-HABITAT, 2010).

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Health risks associated with waste are the result of many factors: the nature and composition of waste (e.g. toxic or infectious), the process of decomposition of waste (e.g. gases, dusts, leachates), the handling of waste (e.g. odor, accidents, water and air emissions, fires), and the disposal of waste (odor, noise, accidents, water and air emissions, fires) (Cointreau, 2006). Since waste pickers are impoverished and lack government support, they often work without protective clothing and equipment, which puts them in direct contact with waste, therefore compounding health risks (Wilson, Velis, & Cheeseman, 2006; UN-HABITAT, 2010). There are therefore many risks that occur from the manual handling of waste, such as contact with broken glass, human fecal matter, hospital waste, and chemical residues (Cointreau, 2006). Common occupational health risks for waste picker include eye infections and diminished vision, intestinal protozoa and helminths, diarrhea, skin disease as well as back and joint injuries from lifting heavy containers filled with waste, respiratory illness from ingesting volatile toxic chemicals, dust, and smoke, infections from direct contact with waste, lead poisoning, and tetanus, hepatitis, and HIV infections (Konnoth, 1991; van Eerd, 1996; van Eerd, 1997; Cointreau, 2006). Other researchers have also reported high incidences of tuberculosis, bronchitis, asthma, pneumonia, dysentery, parasites and malnutrition (de Coura Cuentro & Gadjó, 1990; Kungskulniti et al., 1991; Huisman, 1994). In fact, a study conducted by Bhide & Sundaresan (1984), which compared stool samples from waste pickers and a control group with a similar socioeconomic status, concluded that 98% of waste pickers tested positive for parasites, while only 33% of the control group tested positive.

While the nature of their work makes waste pickers subject to many occupational health risks, many of these risks and injuries could be significantly reduced through the implementation of simple and low-cost safety measures (Cointreau, 2006). The introduction of protective gears, such as gloves and masks, could have significant health impacts on these informal workers and would cost very little. Other measures, such as the sanitation and hygiene educations, could further minimize these risks.

Beyond these critical health risks, waste pickers must face important economic challenges. Their income is highly volatile, as a result of fluctuating industry prices, geographic region, quality and quantity of collected materials, and prices paid by middlemen (Gutberlet, 2016). Although in some cities waste pickers' income from the commercialization of recyclable materials can amount to more than the minimum wage, most waste pickers live in poverty. Given their low their low position on the recycling value chain, they receive only a fraction of the millions of dollars generated in the recycling value chain (Parra, 2016). Moreover, unorganized waste pickers are more susceptible to exploitation, since they are forced to sell their materials to middlemen, who offer low prices while pocketing important profits (Medina, 2000). Indeed, given the small number of recyclable materials collected by individual waste pickers, they are unable to sell their materials directly to industries and are therefore forced to submit to

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the exploitation of middlemen who typically operate in monopsonistic markets (Medina, 2000). As will be explored later, in order to mitigate the negative impact of middlemen, some waste pickers have decided to organize themselves into associations or cooperatives in order to sell greater quantities of recyclables directly to industries.

These challenges are greatly compounded by the lack of governmental support. Given the nature of their work, waste pickers have historically been marginalized and stigmatized by the public, government officials, and policymakers. The relationship between authorities and waste pickers is often hostile and conflictive, with some informal workers facing harassment and prosecution by authorities (Samson, 2009). In addition, in many instances, waste pickers must face a hostile social and legislative environment. Public policies tend to be repressive towards waste pickers and their labor and most waste pickers remain unprotected by social and labor legislation (Gutberlet, 2016). As a result of these policies, waste picking is often criminalized in many low- and middle-income countries, thus contributing to the unpopular public perception of waste pickers.

Indeed, they are often associated with the garbage they collect, as dirty and diseased individuals whose profession is a symbol of backwardness (Medina, 2000; Wilson, Velis & Cheeseman, 2006; Wilson et al., 2009). Waste picking activities are seen as incompatible with modern capital-intensive waste management systems. Indeed, city planners, which tend to “privilege a rational-modernist model of urbanization based on the use of capital-intensive technologies imported from the global North,” have largely overlooked the importance of informal recycling activities within the waste management sector (Dias, 2016, p.377). However, in recent years, there has been a significant change in public perceptions of waste picking activities, following the recurring failure of capital-intensive waste management technology, transposed from high-income countries, and greater environmental awareness (Medina, 2000). Policy makers and government officials have increasingly recognized the environment, social, and economic contributions of waste pickers. This change has in some cases translated into the legalization of waste picking activities and the creation of a legislative and institutional environment that encourages the formation of waste picker organizations, as is the case in Colombia.

### **Waste Picker Organisations**

The formation of waste picker organizations, such as associations, pre-cooperatives, and cooperatives, plays a fundamental role in mitigating many of the social, economic, and health challenges faced by informal workers. In recent years, waste pickers have begun to organize themselves and demand recognition for their environmental and economic contributions as well as to force the state to officially

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integrate them in within municipal waste management services (Samson, 2009; Samson 2015a). Indeed, rather than operating as autonomous workers, waste pickers are increasingly empowered through the networks and organizations they have created. Samson (2015a) suggests that:

by mobilizing collectively to demand formal incorporation into municipal waste management systems, waste pickers are expanding both the public sector and the public sphere, transforming relations between the state, formal economy, informal economy, and residents, and contributing to the forging of a more inclusive, participatory, and democratic state. (p.2)

Waste picker organizations, therefore, allow members to improve their working conditions through several mechanisms, such as increased income, empowerment, and social protection.

In many cases, waste pickers organizations have in fact consolidated into larger networks, in order to create economies of scale, and collectively commercialize their material. In doing so, they are able to sell larger quantities of recycled material at a time, thus receiving higher prices for the material and circumventing middlemen by selling directly to industries (Medina, 2000; Gutberlet 2008; Terraza & Sturzenegger, 2010; Tirado-Soto & Zamberlan, 2013). This, in turn, translates into higher wages and living standards for waste pickers. However, by selling directly to industries, waste picker organizations need to be able to comply with standardization and commercialization requirements demanded by industries (Tirado-Soto & Zamberlan, 2013). These requirements can place significant pressure on smaller networks and organizations, which are typically weak in infrastructure and equipment, to collect sufficient quantities of recyclable materials in order to be able to sell to industries. In addition, although these organization represent important links in the recycling value change, they are unable to add value to recyclable materials, due to lack of investment in physical infrastructure and technology, which effectively places them at the base of the structure (Tirado-Soto & Zamberlan, 2013). Some organizations have therefore developed value-adding processes in order to sell recycled materials at a higher price, thereby generating higher income for their members (Medina, 2000; Wilson, Velis & Cheeseman, 2006). In addition, waste picker organizations can also allow members to have access to services, including health insurance and micro-credit (Gunsilius et al., 2011). They can also provide training programs and certifications for their members as well as safety equipment in order to mitigate the health risks associated with waste picking activities (Gutberlet, 2016).

While improvements in wages and income are one of the objectives sought through organizing, profit-making is not the exclusive purpose of these organizations. The creation of a solidarity economy that promotes the well-being and empowerment of waste pickers is also fundamental objective. Gutberlet (2016) suggests that waste picker organizations have emerged as a mechanism that allows informal

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workers to replace the ‘vacuum’ under which they operate. Such organizations represent important spaces for emancipation and empowerment and can help counteract the invisibility, voicelessness, and lack of recognition felt by most waste pickers (Gutberlet, 2016). Cooperatives and associations therefore create a space for collective consciousness. Women in particular, given their increase marginalization due to their gender, are also given a voice and the opportunity to interact with other members and share their ideas. These spaces also provide opportunities to contest the lack of inclusion of waste pickers in public policies. Waste pickers, therefore, become empowered agents in changing their own circumstances and reality (Gutberlet, 2016).

In addition, organizing allows members to gain greater bargaining power, thereby enhancing their negotiating positions with other actors in the waste management value chain and with local and national authorities for better working conditions, recognition for their environmental and economic contributions, integration within municipal waste management systems, and legislative and institutional support (Medina, 2000; Gutberlet, 2008). Successful integration is highly dependent on the organizational capacities of the informal sector and its ability to influence public and political opinion as well as on external factors such as political will and possibilities for partnerships with the informal sector (Dias & Alves, 2008). In some cases, registered organizations have successfully advocated for and earned the right to provide waste management and recycling services directly to users in partnership with municipal authorities (Gunsilius et al., 2011). For example, the program *Reciclando Vidas* (Recycling Lives) implemented in Londrina, Brazil, provides a successful case of informal-sector integration in the MSW sector through a mechanism of co-production (Gutberlet, 2016). The waste collection program regroups 500 organized recyclers from 33 waste picker organizations. These waste pickers conduct door-to-door selective collection as well as transport, sort, and commercialize waste collectively. They are therefore remunerated from the commercialization of collected recyclable materials and receive a payment by the government for each services household and for solid waste diversion from landfill.

Organizations, therefore, represent a fundamental means in achieving the integration of waste pickers within the ‘formal’ municipal waste management sector. It is important to remember however that not all waste picker organizations are democratic and inclusive (Gutberlet, 2016). Insufficient trust among members and lack of transparency have caused some organizations to break down (Gunsilius et al., 2011). Undemocratic practices have also resulted in challenges in some organizations (Gutberlet, 2016). Therefore, democracy, equality, and inclusivity must be promoted in order to ensure the continued existence of these organizations and their ability to provide important social and economic benefits to their members. They also are fundamental in advocating for the integration of informal recyclers in the

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waste management sector and in promoting principles of Integrated Sustainable Waste Management (ISWM).

### **Integrated Sustainable Waste Management**

Understanding current waste problems as encompassing more than just technical and engineering components has led scholars, governments, and policymakers to acknowledge the need for more inclusive, participatory, and comprehensive waste management policies. This new understanding coupled with the growing recognition of the benefits of the informal waste management sector has led to the development of more integrated frameworks for waste management. Indeed, while the modernization of waste management systems in the 1970s in high-income countries relied predominantly on technical and engineering solutions, municipalities in the 1980s and 1990s recognized that waste management technology did not operate independently from the social, economic, and environmental realities of the city and was, in fact, subject to local institutional, governance, and policy frameworks (UN-HABITAT, 2010).

Thus, the Integrated Sustainable Waste Management (ISWM) framework recognizes the need to improve the performance of solid waste management systems through sound decision-making (UN-HABITAT, 2010). ISWM was first developed in the mid-1980s by WASTE, a Dutch non-governmental organization, in partnership with WASTE's South partner organizations and was further advanced by in the mid-1990s by the Collaborative Working Group on Solid Waste Management in Low- and Middle-Income Countries (UN-HABITAT, 2010). As a framework, it outlines the various and abundant stakeholders involved in the waste management sector as well as how different parts of this sector are connected and interrelated (UN-HABITAT, 2010). It rests upon the principles of equity, effectiveness, efficiency, and sustainability in managing solid waste (van de Klundert & Anschutz, 2001).

Broadly defined, ISWM is “a systems approach that recognizes three important dimensions, which all need to be addressed when developing or changing a solid waste management system” (UN-HABITAT, 2010, p.27). ISWM is based on three dimensions: stakeholders, the practical and technical waste system, and the local context, which must be taken into account during the planning and assessing of waste management systems (van de Klundert & Anschutz, 2001). These dimensions are integrated within two ‘triangles’, the physical elements and the governance features, which make up the ISWM framework (UN-HABITAT, 2010). The physical ‘triangle’ consists of the elements which must be addressed to ensure that an ISWM system works efficiently and sustainably over the long term. These

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elements include: public health, environment, and resource management. Government strategies, contained within the second ‘triangle’ on governance features, are added to these physical elements. It encompasses good waste governance features, such as inclusivity, which rests upon transparent processes and citizen participation, financial sustainability, which entails both cost-effective and affordable services, and sound institutions pro-active policies (UN-HABITAT, 2010). The ISWM framework is, therefore, an assessment tool, whether it be for existing or prospective waste management systems (van de Klundert & Anschutz, 2001). It allows for the development of a material flow overview and can highlight the weaknesses and gaps in the system.

As such, ISWM framework seeks to integrate the various stakeholders, including informal workers, in the planning, assessment, and management of the solid waste sector. Therefore, in alignment with many of the basic principles of the ISWM, many scholars, practitioners, and policymakers have increasingly supported the inclusion and integration of waste pickers in the municipal waste management sector (Wilson, Velis, & Cheeseman, 2006; Samson, 2009; Scheinberg et al., 2010; Gunsilius et al., 2011; Parra, 2016). Many have in fact argued that the sustainable, fair, and effective modernization of the waste management sector in low- and middle-income cities cannot be accomplished without the informal sector and have proposed a new way of looking at waste management that allows the experience, knowledge, and efficiency of the informal sector to strengthen the effectiveness of the formal sector (Gunsilius et al., 2011). As a result, many scholars and policymakers have emphasized the inadequacy of high-technology, capital-intensive waste management systems, prevalent in high-income countries, for the social, political, and economic realities of low- and middle-income countries and have therefore advocated for a “mixed, pluralistic combination of high- and low-technology treatment and collection, private, public, formal and informal actors, and local and global practices” (Gunsilius et al., 2011, p.7).

Therefore, the inclusion of the informal sector in municipal waste management services and in decision-making processes within this sector is fundamental. In fact, Gutberlet (2008) asserts that “the participation of organized recycling groups in waste management is essential in the process of defining of dealing with solid waste” (p.122). Governments must therefore not only recognize the social, environmental, and economic benefits generated by waste pickers, decriminalize waste picking activities, and abolish repressive policies, but they must actively seek to include the informal sector in the planning of waste management policies and legislation as well as develop their capacity to provide these services (Wilson, Velis, & Cheeseman, 2006; Gerdes & Gunsilius, 2010; Dias, 2012; Gutberlet, 2016). There has been significant progress in Colombia, and Bogotá specifically, in introducing the ISWM framework within national and district policies and legislation. While both the institutional and legal frameworks in Bogotá have in many instances supported the integration of waste picker organizations in the waste

management sector, there remain important political, legal, and institutional challenges that limit their ability to provide municipal recycling services.

### **Conclusion**

This chapter has argued that informal recycling activities should not be seen as merely ‘marginal,’ but rather as important mechanisms that contribute to the environmental, social, and economic sustainability of cities in the Global South. Waste pickers are therefore fundamental agents in local and global efforts in managing growing quantities of waste. They make up for the shortcomings of formal waste management systems in low- and middle-income countries, which rarely possess formal recycling systems.

However, waste pickers still face important challenges, such as social marginalization, poverty, severe health hazards, all of which are amplified by exclusionary public policies. While such policies further contribute to waste pickers’ vulnerability and marginalization, they also limit the environmental, social, and economic potential of informal recycling activities and thus prevent cities from benefitting fully from these activities. However, as ISWM has become more prominent, municipal authorities and policymakers have increasingly begun to recognize waste pickers contributions and have attempted to introduce inclusive policies in favor of waste pickers in order to strengthen the primary linkages in the waste management and recycling value chain.

The next chapter will situate these dynamics within the context of Bogotá’s informal recycling sector. It will illustrate Bogotá’s transition to a more integrated and inclusive approach to solid waste management, by analyzing the evolution of waste management legislation and policies. More specifically, it will examine how waste pickers are affected by and have themselves reshaped waste management legislation and policies as well as identify the remaining challenges that waste picker still face in providing municipal recycling service.

## Chapter 4: Background

Bogotá is Colombia's capital and largest city, with a population of 8,080,734 (DANE, 2017). It is located in Colombia's geographic center and lies 2,640 meters above sea level in the Cordillera Oriental of the Northern Andes Mountains. Bogotá is divided into 20 localities and is part of the Cundinamarca department, which contains 116 municipalities in addition to the capital district. The city was initially inhabited by an indigenous population of the Altiplano Cundiboyacense, called the *Muiscas* until Spanish settlement began in 1538 (Secretaría General de Bogotá, n.d.). Bogotá remained under Spanish rule until the battle of Boyacá in 1819 during which time Colombia gained its independence from Spain. Following its independence, Bogotá became the capital of Gran Colombia until 1830, when Gran Colombia dissolved into the Republics of Ecuador, Venezuela, and Colombia (and later Panama in 1903). Bogotá has since then conserved its status as the capital of Colombia.

Today, Colombia is a highly unequal country, with a Gini coefficient of 0.508<sup>7</sup> and with 26.9% of the Colombian population living below the poverty line (DANE, 2018). While this represents a significant percentage of the population, Bogotá, however, has the second lowest percentage of people below the poverty line at 12.4%, preceded only by Bucaramanga. Although many factors can explain these levels of poverty and economic inequality, it can be argued that Colombia's decades-long conflict has had a significant impact on poverty levels.

Colombia has been plagued by internal military conflict for several decades. There is some disagreement as to the origins of the conflict. Some attest that the root of the conflict can be traced back to the 1950s, bipartisan violence between Colombia's traditional political parties, the Liberals and the Conservatives (Rodriguez, 2018). Others attribute the beginning of the conflict to the creation of the first Marxist guerrilla movements in the 1960s, such as the Revolutionary Armed Forces of Colombia (FARC). Regardless of its origin, the conflict between state security forces, guerrilla movements, and paramilitary groups has had a devastating impact on the Colombia population, with roughly 265,000 people murdered, 46,000 cases of forced disappearances, and 6,800,000 displaced persons since the beginning of the conflict (ASF, 2016). However, as of 2016, the Colombian Congress has unanimously voted for a peace agreement between the national government and the FARC, which brought with it an end to this internal war that lasted more than 50 years.

While the peace agreement marks an important milestone in the country's history, its effects have had lasting consequences on the Colombia landscape. Indeed, significant regional disparity during the

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<sup>7</sup> In comparison, Canada's Gini coefficient was of 0.32 (OECD, 2018). The Gini coefficient is a measure of income inequality, which ranges between 0, in the case of perfect equality, and 1, in the case of perfect inequality.

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conflict resulted in most of the violence occurring in rural regions, with cities absorbing millions of displaced persons (Corredor, 2010). The rapid influx of rural migrants fleeing violence in the countryside placed significant pressure on cities. As a result of the limited employment opportunities in urban centers, many turned towards the informal sector for employment, which included waste picking activities.

### Bogotá's Waste Management Sector

Waste generation trends in Bogotá are expected to increase significantly in the coming years (see Table 4). According to recent projections, waste generation in 2018 will reach 7,566.00 tonnes per day and will grow to as high as 8,553.79 tonnes per day in 2025 (UAESP, 2015). While the majority (65.48%) of the waste comes from organic material, recyclable material nonetheless represents a significant percentage of waste generated in Bogotá. Although Bogotá has recently implemented 'formal' recycling programs and projects, the majority of recycling activities are performed by the informal sector. In 2015, waste pickers collected and diverted approximately 1,100 tonnes of recyclable waste per day from the Doña Juana landfill (SSPD, 2015). This represents a particularly significant amount in light of the 6307.71 tonnes collected and disposed of daily in the district's sanitary landfill, Bogotá's only final disposal site.

Table 5. Projections for Generation and Collection of Solid Waste 2016-2027.

Year	Population	Generation (ton/day)	Collection (ton/day)	Per Capita Generation (kg/day)	Per Capita Collection (kg/day)
2016	7,977,000	7,275.87	6,762.06	0.91	0.85
2017	8,080,000	7,419.52	6,866.72	0.92	0.85
2018	8,184,000	7,566.00	6,973.00	0.92	0.85
2019	8,283,000	7,699.80	7,058.77	0.93	0.85
2020	8,383,000	7,835.97	7,145.59	0.93	0.85
2021	8,484,000	7,974.54	7,233.48	0.94	0.85
2022	8,587,000	8,115.57	7,322.45	0.95	0.85
2023	8,691,000	8,259.09	7,412.52	0.95	0.85
2024	8,796,000	8,405.15	7,503.69	0.96	0.85
2025	8,902,000	8,553.79	7,595.99	0.96	0.85
2026	9,010,000	8,705.06	7,689.42	0.97	0.85
2027	9,114,000	8,859.00	7,784.00	0.97	0.85

Source: UAESP (2015, p.172).  
Note. Translated from Spanish.

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According to a 2012 census, 13,771 waste pickers operate on a daily basis in Bogotá (UAESP, 2012). However, more recent estimates suggest that Bogotá contains 21,220 waste pickers, with 13,675 currently active. Among this population, 15,331 are independent and unorganized waste pickers, which represents roughly 70% of all waste pickers in Bogotá, while 5,797 are part of an organization, association or union, which amounts to 30% of waste pickers (UAESP, 2015). Organized waste pickers are part of approximately 140 organizations, ranging in size, membership base, and resources.

While recycling activities are predominantly performed by the informal sector, domiciliary waste management services are provided by private companies. The contracts for the concession of waste management services, estimated at 4.8 billion Colombian pesos, were awarded in January, 2018 to 5 private companies, Promoambiental Distrito, Limpieza Metropolitana, Ciudad Limpia, PSF Promesa de ESP Futura Bogotá Limpia, and PSF Área Limpia (El Espectador, 2018). It is important to note here that in Bogotá waste management services are managed separately from recycling services. Indeed, contracts for waste management services are awarded by the municipal authorities through public tenders, while recycling services are not subject to any tender process. Moreover, providers of waste management services are not permitted to collect and/or transport recyclable waste presented in a segregated matter.

The latest concession of waste management services marks the end to a transitory period in the provision of waste management services, following a failed attempt at remunicipalization by the previous administration in 2012. Apart from this attempt, waste management services in Bogotá have remained privatized since the mid-1990s. The concession of waste management services remains a strong tendency in Colombia and Latin America more generally. Indeed, a study of different modes of provision of waste collection and transportation services in Latin America found that direct municipal services, which reaches 50.6% of the population, is the most common method of service delivery (Espinoza et al., 2010). In contrast, contracted services covered 45.4% of the population, while other options such as cooperatives and national government covered only 3.3% and 0.6% respectively. With these trends in mind, country-level data illustrated that Colombia had the second highest percentage of population covered by contracted services at 69.4%. The importance of the private sector in the delivery of waste management services in Colombia is emblematic of the neoliberal economic paradigm introduced in its Constitution in 1991.

This chapter will look therefore look at the evolution of waste management legislation and policies in Colombia and in Bogotá. More specifically, it will examine the ecological modernization occurring in Bogotá's waste management sector, which has been expanded to include recycling systems. Indeed, although this research focuses on the informal waste management sector, both the informal and formal sectors are largely interwoven and mutually influence one another. Formal waste management

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laws, infrastructure, and policies shape the informal sector and therefore need to be examined in order to better comprehend their impact on informal recycling activities.

Table 6. Evolution of Bogotá's Waste Management Sector (1950-2017).

1950s	Major internal rural-urban migration due to bipartisan violence.
1958	Creation of the District Sanitation Company ( <i>Empresa Distrital de Aseo</i> ).
1960	District Sanitation Company ( <i>Empresa Distrital de Aseo</i> ) is transformed into the District Public Services Company ( <i>Empresa Distrital de Servicios Públicos</i> , or EDIS).
1974	<u>Decree-Law 2811</u> : Municipalities are officially given the exclusive responsibility of establishing adequate waste collection, transportation, and disposal services.
1979	<u>Law 9<sup>a</sup></u> : First reference of environmental protection in waste management policy.
1980s	Waste pickers begin to form organizations.
1983	<u>National Decree 2104</u> : The term 'service provider' is defined as to include private and public entities as well as associations.
1986	Closing of Bogotá's open-air dumps.
1988	Closing of Bogotá's open-air dumps.
	Creation of the sanitary landfill Doña Juana.
1991*	Sanitary crisis in Bogotá.
	<b>A new Constitution is established, which rests on conflicting ideologies of social welfare and neoliberal economic development.</b>
1992	Creation of the Waste Pickers' Association of Bogotá ( <i>Asociación de Recicladores de Bogotá</i> , or ARB).
1993	Liquidation of the EDIS.
1994*	<b><u>Law 142</u>: Regulates all policies and legislation on domiciliary public services, including waste management. It solidifies the principle of free market competition in the provision of domiciliary public services.</b>
	Creation of the Public Services Special Unit ( <i>Unidad Especial de Servicios Públicos</i> , or UESP).
	First public tender for the concession of waste management services to private operators.
1996	<u>National Decree 605</u> : Provides the first definition of the term 'valorization'.
1997	Sanitary crisis in Bogotá.
1999	<u>Law 511</u> : First national legislation that officially recognizes waste pickers' rights and labor.
2000	<u>Decree 421</u> : Regulates the figure of Authorized Organizations for the provision of waste management, established under Law 142.
	First Master Plan for the Integral Management of Solid Waste ( <i>Plan Maestro para el Manejo Integral de Residuos Sólidos</i> , or PMIRS).
2001	<u>Resolution 151</u> : Introduces Areas of Exclusive Service ( <i>Áreas de Servicio Exclusivo</i> , or ASEs) and the methodology for calculating price ceilings.
2002	Second public tender for concession of waste management services to private operators.
	<u>National Decree 1713</u> : Harmonizes and expands the orientations of the Constitution and the policy guidelines dictated by Law 142 in the area of waste management services. It also

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	establishes the guidelines for the Integral Solid Waste Management Plan ( <i>Plan de Gestión Integral de los Residuos Sólidos, or PGIRS</i> ).
	<u>Law 769</u> : Prohibits the use of animal-draw vehicles.
2003	<u>Sentence C-355</u> : Responds to the demand of unconstitutionality of Law 769 on the prohibition of animal-draw vehicles.
	<u>Sentence T-724</u> : Responds to a tutela action against the public tender process of 2002.
	<u>Sentence C-741</u> : Responds to the demand of unconstitutionality of Law 142 of 1994 and Decree 421 of 2000 on the regulation of Authorized Organizations.
2004	First version of Recycling Operating System ( <i>Sistema Operativo de Reciclaje, or SOR</i> ).
	First PGIRS in Bogotá.
	City development plan “Bogotá sin indiferencia” (2004-2008), which introduced the District Recycling Program ( <i>Programa Distrital de Reciclaje, or PDR</i> ).
2006	Second PMIRS.
	The UESP is transformed into the Public Services Special Administrative Unit ( <i>Unidad Administrativa Especial de Servicios Públicos, or UAESP</i> ).
2007	<u>Agreement 287</u> : Introduces affirmative actions in favor of the participation of waste pickers in waste management processes in Bogotá.
2008	<u>National Law 1259</u> : Introduces sanctions for behaviors to be considered to be detrimental to the environment, in some instances criminalizing waste picking activities.
2009	<u>Sentence T-291</u> : Responds to a tutela action against the municipal administration in Cali.
	<u>Sentence C-793</u> : Responds to National Law 1259 that criminalizes waste picking activities.
2011	Third public tender for the concession of waste management services to private operators.
	Election of Gustavo Petro as mayor of Bogotá.
	<u>Auto 275</u> : Confers onto waste pickers the status of “subject of special protection”.
2012	<u>Decree 564</u> : Provides a transitory scheme to increase recycling, waste picker inclusion, and remunicipalization of waste management services.
2013	Destitution of mayor Gustavo Petro.
	<u>National Decree 2981</u> : Regulates all components of waste management services, including recycling services.
2014	Reinstitution of Gustavo Petro as mayor of Bogotá.
2015	<u>Auto 587</u> : Asserts that municipal authorities must ensure waste pickers’ unconditional access to waste.
	Election of Enrique Peñalosa as mayor of Bogotá.
2016*	<b>National Decree 596: Provides a transitory scheme for the formalization of waste picker organizations.</b>
2017	Fourth public tender for the concession of waste management services to private operators.

## **The Legal and Policy Frameworks for Waste Management and Recycling in Bogotá**

### **Transformations in Bogotá's Waste Management Sector**

Bogotá's waste management landscape has changed significantly since the 1950s. It has been marked by 3 prominent transitions: (1) a transition in the role of the state from provider to regulator of waste management services; (2) a transition in policy focus from public health to environmental protection; (3) a transition from largely exclusionary policies towards informal workers to the integration of waste picker organizations in the municipal waste management sector. These transitions were therefore fundamental in reshaping Bogotá's waste management sector and will be the subject of this chapter.

In the 1950s, after a wave of decentralization, the national government transferred onto municipalities the responsibility of providing public services, including waste management services. As a result, district authorities in Bogotá created in 1958 a waste management company called Empresa Distrital de Aseo and later renamed Empresa Distrital de Servicios Públicos, which provided waste management services until its liquidation in 1993 following reports of low efficiency, corruption, and public health outbreaks. The liquidation of the Empresa Distrital de Servicios Públicos however also coincided with a wave of privatization of public services as a result of the neoliberal ideology ingrained within the Constitution of 1991. The role of the state, therefore, shifted from a provider to a regulator of waste management services. Indeed, the state took on the responsibility of ensuring the regulation, control, monitoring, and efficient provision of these services. Principles of market liberalization and free competition were introduced within the public services sector in order to ensure greater coverage and efficiency, thereby breaking the state's monopoly over these services. The neoliberal orientations of the Constitution were disseminated through Law 142 of 1994, which regulates the provision of domiciliary public services. As a consequence of this neoliberal turn in the public services sector, the collection, transportation, and disposal of waste was therefore privatized from 1993 until 2012, when public control was temporarily regained, and then returned again to private hands.

At the same time, waste management policies in Bogotá, and in Colombia more generally, shifted from a focus on public health to one on environmental protection. This transition is consistent with changes in many other countries in the Global South, as shown by Wilson's (2007) research on policy drivers. Indeed, Wilson refers to policy drivers as factors that have prompted policy developments in the waste management sector. Such drivers evolve over time, although at varying rates in developed and developing countries. Wilson suggests that public health emerged as the primary driver for the development of a formal waste management sector, following growing awareness of the linkages between infectious diseases and the presence of waste in public spaces. Policies, therefore, focused on removing

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waste from public spaces. In Colombia, initial waste management policies focused heavily on sanitary concerns, such as the prevention and mitigation of the public health impact of waste. While public health concerns have remained the primary driver in most countries in the Global South, some countries, such as Colombia, have transitioned towards environmental protection drivers, which focus on phasing out uncontrolled disposal, promoting technical standards, and reducing the impact of waste on climate change (Wilson, 2007). In Bogotá, this focus on environmental protection resulted in the replacement of open-air dumps by a sanitary landfill. In addition, the recognition of the growing complexity of managing significant quantities of urban waste led authorities to conduct studies in order to better understand the different phases of waste management such as generation, collection, transportation, and disposal. These studies prompted national and municipal authorities to think more holistically about waste management, pushing them to include recycling services within the waste management sector and introduce municipal plans, programs, and instruments on the integral management of waste. In this transition towards greater environmental sustainability, Colombia has also relied on other drivers introduced by Wilson (2007), such as resource drivers, which entails a shift towards more sustainable options of reduction, reuse, and recycling, and a public awareness driver, which is present at the district level through educational programs on the integral waste management practices and the promotion of separation of waste at the source.

Finally, Bogotá has undergone significant changes in its approach towards waste pickers, from the introduction of largely exclusionary policies to the integration of waste picker organizations in the municipal waste management sector. Although the informal sector has provided recycling activities since the mid-1900, due to a large influx of *campesinos* (peasants) fleeing violence in rural regions, national and municipal authorities have only recently begun to recognize the environmental, social, and economic contributions of waste pickers. Waste pickers were, in fact, subject to social marginalization due to negative public attitudes. They also faced numerous exclusionary policies that negatively affected their rights as a vulnerable population and hindered their ability to perform recycling services. In response to these policies, waste pickers began to organize themselves and to demand the recognition of their rights and labor through legal action. Relentless legal pressure from waste picker organizations, particularly the *Asociación de Recicladores de Bogotá* (ARB), has led to the recognition by the Colombian Constitutional Court of waste pickers' rights, as a socially and economically vulnerable population, as well as the public service they provide. The Constitutional Court has recognized that waste pickers, as a marginalized population, require special constitutional protection (Sentence C-793/2009) and has introduced numerous orders which require municipal governments to guarantee waste pickers' access to waste (Auto 587/2015), to introduce affirmative action in favor of waste pickers in municipal policies and programs (Sentence T-724/2003), and to develop a process that enables their social and economic inclusion

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(Sentence T-291/2009). Although demands for formal integration remains a constant struggle for waste pickers, waste picker organizations have produced a significant shift towards a greater integration in the waste management sector.

These transitions are fundamental in explaining and contextualizing what Parra (2016) refers to as ‘paradigm shift’ in Colombia’s waste management sector: a progression from a “transportation and burial-center models in the hand of stock-companies, to a model that demands the valorization of waste and the recognition and remuneration of waste pickers as providers of recycling services” (p.2).<sup>8,9</sup> This shift, as well as the three transitions previously outlined, will be further explored in this chapter through an analysis of the legislative and policy frameworks in the waste management sector in Bogotá and Colombia more generally. Special attention is given on their effect on waste pickers’ lives and labor as well as on how waste pickers, relying on the social rights granted in the Constitution of 1991, contested and reshaped the waste management and recycling landscape. It is important to note that the following section is heavily reliant on the work of Federico Parra (2016),<sup>10</sup> an expert in informal recycling in Colombia and Regional Coordination for Waste Pickers in Latin America at WIEGO<sup>11</sup>, and provides a summary of his research on social mobilization and community-based management of waste management services.

### **Waste Management Policies from 1950-1991: Before the Constitution**

Rapid urbanization in the first half of the 20<sup>th</sup> century significantly increased the quantity of waste generated in cities and consequently exposed the limitations of existing waste management systems in Colombia. These changes also coincided with a wave of decentralization, during which the Colombian government transferred onto municipalities the responsibility for the provision of public services,

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<sup>8</sup> “modelos de transporte y enterramiento de basuras en manos de empresas por acciones, a un modelo que exige el aprovechamiento de residuos y el reconocimiento y remuneración de los recicladores como prestadores del servicio público de recolección transporte y aprovechamiento.”

<sup>9</sup> I have assumed the responsibility of translating all Spanish texts both from secondary sources or participant interviews. The original Spanish version of all direct quotations will be included as footnotes.

<sup>10</sup> In his doctoral thesis entitled “De la dominación a la inclusión: La población recicladora organizada como sujeto político” Parra provides a comprehensive analysis of waste management policies, programs, and legislature both in Colombia and in Bogotá, focusing on how waste pickers, through their organization, have become political subjects. His work in fact represents the most comprehensive analysis of laws, policies and legislature on the waste management and recycling sector in Colombia and Bogotá.

<sup>11</sup> Women in Informal Employment: Globalizing and Organizing (WIEGO) is a global network of activists, researchers, and policy makers that seek to improve the status of individuals, particularly women, in the informal economy. WIEGO has been instrumental in supporting waste picker organizations in Bogotá in terms of policy development, capacity building, and research.

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including waste management services<sup>12</sup>. As a result, following an initial study on the growing waste problem in Bogotá, the Council of Bogotá created in 1958 a public sanitation company, called *Empresa Distrital de Aseo*, which was tasked with the collection and transportation of waste along with other sweeping and cleaning services. The company was later transformed in 1960 into a public services company, called *Empresa Distrital de Servicios Públicos* (EDIS), acquiring other functions such as the management of public cemeteries and marketplaces. Waste collected by Bogotá's waste management company was initially transported to and disposed of in open-air dumps, until their closure in the late 1980s. These open-air dumps were replaced by the sanitary landfill Doña Juana<sup>13</sup>, which remains to this day the only final disposal site for waste produced in Bogotá.

Municipalities were however only officially given the exclusive responsibility of establishing adequate waste collection, transportation, and disposal services in 1974 (Decree-Law 2811/1974). While municipalities held the responsibilities of providing these services, they were allowed, only under extraordinary circumstances, to contract third parties to provide such services. The term third parties referred to private or public entities as well as associations (National Decree 2104/1983). Indeed, the Ministry of Health established and defined the concept of 'service provider'<sup>14</sup> as "the natural or legal person, public or private, entrusted or responsible in a municipality for the provision of the waste management service, such as companies, organizations, associations, or municipalities directly" (National Decree 2104/1983, article 5).<sup>15</sup> The state, through municipal governments, therefore acted as the provider of waste management services. This is a stark contrast to the provision of waste management services in the post-1991 Constitution era, which privileged large, private companies as service providers. The question of who is allowed to provide waste management and recycling services will later become a contentious issue, particularly in the aftermath of Law 142 of 1994 on public services.

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<sup>12</sup> In Colombia, waste management services are referred to as *servicio de aseo*. It is important to note that the *servicio de aseo* includes other services beyond waste management. Indeed, it currently includes the collection, transportation, treatment, and disposal of municipal waste as well as complementary activities such as the recycling of waste, the mowing of lawns and the trimming of trees located in public spaces, and the cleaning of public spaces (National Decree 2981/2013). However, for the purpose of this research, I will continue to use the conventional English term 'waste management services' in order to refer to the entirety of the services included in the *servicio de aseo*.

<sup>13</sup> The sanitary landfill Doña Juana is the only source of final disposal of waste generated in the District of Bogotá (SSPD, 2015), covering an area of 500 Ha<sup>2</sup> (Geotec Ingeniería Ltda., 2002). It is located in the Southern locality of the District of Bogotá in Ciudad Bolívar, a zone that is both urban and rural. Waste picking activities are however prohibited in sanitary landfills in Colombia due to Constitutional Decree 805 established in 2005 (Ruiz-Restrepo & Barnes, 2010). As of 2015, the Doña Juana landfill has a remaining life cycle of 7.6 years, making it inoperative as early as 2022 (Secretaría de Salud, 2015).

<sup>14</sup> "persona prestadora del servicio de aseo".

<sup>15</sup> "Persona prestadora del servicio de aseo" as "la persona natural o jurídica, pública o privada, encargada o responsable en un Municipio de la prestación del servicio de aseo, como empresas, organismos, asociaciones, o municipios directamente."

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Throughout the 1960s to the 1980s, waste management was seen as a sanitary and public health issue, particularly following the recognition by national authorities of the causal relationship between infectious diseases, such as cholera, and the presence of waste in public spaces. During these decades, only minimal attention was placed on environmental concerns derived from the generation and disposal of waste. While some waste management policies referenced environmental protection (Law 9ª/1979) and mentioned the term “valorization” as a strategy to deal with the growing waste problem (Decree-Law 2811/1974), most policies remain heavily focused on sanitation and public health concerns. However, the understanding of the causal relationship between infectious diseases and waste led to the introduction of regulatory and policy frameworks that outlined general guidelines and norms for the proper management of waste in a way that prevents public health outbreaks. As a consequence, the Ministry of Health was appointed as the regulating entity regarding norms and policies of solid waste management. Authorities were therefore focused on keeping public spaces clean and free of waste. Environmental concerns would, however, become more prominent during in the late 1990s and early 2000s. Nonetheless, throughout the 1980s, national and municipal authorities began to recognize the growing complexity of the waste problem and therefore expanded their approach to this problem to include not only the transportation and disposal of waste, but more broadly its generation and treatment.

Although national and municipal normative frameworks focused heavily on public health, growing institutional problems with the EDIS, such as low-efficiency and corruption, coupled with the emergence of a city-wide sanitary crisis led to a state of emergency in Bogotá. As a result, district authorities called on private operators for support in the collection and transportation of waste in order to mitigate the impact of the growing sanitary crisis. Private operators, therefore, provided waste management services in 40% of the city and subsequently in 60%, following a similar sanitary crisis in 1991. In addition, following a strike by workers of the EDIS in 1993, which left more than half of the city without waste collection and transportation services, the district government turned to the *Fundación Social*, a non-governmental organization, in order to mitigate the impact of the strike. The *Fundación Social* subcontracted the provision of waste management services to the Waste Pickers’ Association of Bogotá (*Asociación de Recicladores de Bogotá*, or ARB), providing waste pickers with an unprecedented opportunity to collect and transport waste generated by approximately 3 million residents. In 1993, following reports of low efficiency and corruption as well as several reported public health outbreaks, the EDIS was officially liquidated, leaving a void in the waste management sector quickly filled by private operators.

### **The Emergence of Informal Waste Management in Bogotá**

During the second half of the 20<sup>th</sup> century, while waste management services in Bogotá were increasingly institutionalized, the informal sector also became a prominent actor in the waste sector. Indeed, internal rural-urban migration in the mid-1900, resulting from bipartisan violence between liberals and conservatives, led to the rise of waste picking activities in Bogotá (Parra, 2015). Known as “*La Violencia*”, this conflict caused numerous *campesinos* to flee rural regions, many of which resettled in Bogotá, through kinship networks, in search of better opportunities. Given their restricted income and limited employment opportunities in the city, many were forced to settle near Bogotá’s two open-air dumps found in the *Techo* and *Gibraltar* neighborhoods respectively located in the Southern and North-Western parts of the city. As waste generation expanded throughout Colombia’s major cities, rural practices of valorization and reuse were adapted to the city. While initial informal waste collection consisted of finding organic waste to feed animals and livestock, rural immigrant families quickly began to recognize the economic potential of recyclable materials. It is on these open-air dumps that they could find materials that allowed them to sustain their family, through the reuse of discarded material or their commercialization. Kinship ties were formed due to a shared history of rural life and constant discrimination, which represented the basis of early collective action in informal waste management.

The growing complexity of waste management coupled with increasing unemployment due to the continuous influx of rural migration to cities made informal recycling activities attractive not only to migrants, but also to the unemployed. At this time, the lack of a regulatory framework on waste management and institutional weaknesses allowed for the growth of informal recycling activities in the city. In the 1970s, some families turned to the streets as a source of recyclable materials, allowing them to recover and commercialize materials in a less competitive environment. Materials found in garbage bins disposed of in public spaces, in fact, tended to be in better condition than materials found in open-air dumps. However, street collection comparatively required more work and effort, due to the long distances traveled by waste pickers in search of recyclable material. It also exposed waste pickers to increasing discrimination and stigmatization from the public. However, as the city’s open-air dumps were closed between 1986 and 1988 to allow the establishment of the sanitary landfill Doña Juana in 1988, all waste picker, approximately 3,000 in total, were forced to the streets in search of recyclable materials.

Although state regulation of informal waste management activities had remained relatively absent until then, the 1980s saw a significant rise in state intervention in the waste sector. In fact, the national and district administrations introduced legislation and policies that defined who and how solid waste should be collected and disposed of, thereby increasingly regulating waste pickers’ labor. Therefore, as a response to growing state regulation, severe stigmatization, hostility from both municipal authorities and

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the public, and the closing of open-air dumps, waste pickers began to form organizations in the early 1980s (Medina, 2007). Colombia, in fact, has the oldest known waste picker movement in the world (Medina, 2007). These organizations, primarily formed out of kinship networks, initially fought for their right to their territory and to housing in relation to open air-dumps (Parra, 2015). After having received support from the *Fundación Social*, a non-profit organization that works towards aiding Colombia's poor, four cooperatives, which had been fighting the closure of a dump in Bogotá, joined together to establish in 1992 the *Asociación de Recicladores de Bogotá* (ARB), arguably the most important waste picker organization in Bogotá in terms of representation and influence.

The ARB along with other waste picker organizations would, therefore, become important actors in the waste management sector as well as in the fight for recognition of waste pickers' rights and labor. In the face of rampant social stigmatization and discrimination, epitomized in one horrific case in 1992 in Bogotá, when 40 waste pickers, lured into a university with the promise of recyclable materials, were murdered in order to supply medical student with bodies for dissection, as well as exclusionary national and municipal policies, waste pickers have organized themselves in order to defend their livelihood and their rights.

### **The Post-1991 Constitution Era: The Neoliberalization of Public Services**

The establishment of a new Constitution in 1991 marked an important transition in Colombia's political orientation and introduced profound social, economic, and political transformation (Murillo & Gómez, 2005). While it traced a new trajectory in Colombia's history, it also introduced a series of social, economic, and political orientations that are often at odds with each other. The Constitution, in fact, rests on conflicting ideologies of social welfare and neoliberal economic development. It asserts that "Colombia is Social State of Right"<sup>16</sup> (Constitution, Article 1) and therefore bestows new responsibilities, many of which social, on the Colombian state (Franco Zárate, 2005). The state must therefore guarantee its citizens' fundamental social and economic rights, such as the right to life, liberty, equality, and dignity as well as the right to be protected as a discriminated or marginalized group, through mechanisms that promote conditions of equality, the right to form associations or unions, the right to social security, and the right to education. In contrast to the social responsibilities of the state, the Constitution also incorporates a neoliberal economic paradigm through the introduction of measures that limit the protagonist role of the state and that advance a liberal economic rationale as the guiding principle for Colombia's political and economic orientation (Murillo & Gómez, 2005). Market liberalization is

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<sup>16</sup> "Colombia es un Estado social de Derecho".

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therefore promoted in all aspects of the economy. Free competition is considered a right granted to all citizens, one that must be ensured by the state. Consequently, companies are regarded as the basis for economic development. The Constitution therefore introduces and secures the “coexistence of two antagonistic models of state: the Social State of Right and the Neoliberal State” (Murillo & Gómez, 2005, p.243). These conflicting models were consequently transposed into waste management policies and therefore generate important tensions in the provision of these services. These tensions will be explored in more detail in the following chapters.

As such, the post-1991 Constitution era is marked by a transition towards neoliberalism in most aspects of the state, including basic services, while simultaneously granting the constitutional protection of social and economic rights. In relations to public services, the Constitution also elevated public services to a constitutional status, stating the need for a national law on the public services. It affirms that these services are inherent to the social purpose of the state, since they are fundamental to the general well-being of its citizens (Constitution 1991, article 365 and 366). However, it also asserts that the state must ensure the efficient provision of these services. Economic efficiency and viability in the provision of public services is considered paramount, and therefore these services, including waste management, are regulated by the market in a state of free competition.

Therefore, as a result of the importance awarded to public services in the Constitution of 1991, the Congress of the Republic of Colombia introduced Law 142 in 1994, which regulates all domiciliary public services, including waste management services. Law 142 adheres to the political orientations of the Constitution and introduced a neoliberal economic model in the delivery of domiciliary public services. It solidifies the principle of free competition in the provision of these services and specifies the role of the state as a regulating entity that must ensure the necessary conditions for free competition. As such, the market as the best regulator of public service delivery and enables greater efficiency in the provision of these services. Therefore, Law 142 asserts that the state must guarantee free market competition, since it is seen as the best way of obtaining the desired goal of efficiency in the provision of basic services. This national legislation thus marks an important transition in the provision of waste management services, as they will from then on be provided under the basis of free-market competition, thereby eliminating the state’s previous monopoly. As a consequence, the role of the state is significantly altered, from a provider of waste management services to a regulating entity. It is important to note that this law is paramount in the public services sector, since it dictates the orientations of all subsequent waste management legislation and policies.

While Law 142 makes a notable contribution in the protection of the neoliberal state and of free-market competition in the provision of public services, it also resulted in the creation autonomous

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regulatory bodies, called regulation commissions (*comisiones de regulación*), which oversee the regulation of public services. These bodies have the responsibility of regulating monopolies in public services. In the waste management sector, it is the Commission for the Regulation of Potable Water and Basic Sanitation (*Comisión de Regulación de Agua Potable y Saneamiento Básico*, or CRA) that holds this responsibility. Moreover, Law 142 also establishes the tariff structure for the provision of basic services, which is based on a price ceiling dictated by the CRA. More importantly, it also provides a definition of who can provide these services. Indeed, the article defines them such as:

15.1. Public services companies.

15.2 Natural or legal persons that produce for themselves, or as a consequence or complement to their main activity, the goods and services of the object of the public services companies.

15.3. Municipalities when they assume directly, through their central administration, the provision of public services, in accordance with the provisions stated in this Law.

15.4. Organizations authorized under this Law to provide public services in smaller municipalities in rural areas and in specific urban areas or areas.

15.5. Entities authorized to provide public services during transition periods provided for in this Law.

15.6. The decentralized entities of any territorial or national order that at the moment of issuing this Law are providing any of the public services and comply with the provisions in the paragraph of Article 17. (Article 15, Law 142, 1994).<sup>17</sup>

Therefore, while article 15 outlines the various entities that could provide public services, other articles in Law 142, in fact, introduce conditions and requirements for the provision of these services that effectively limit the ability of entities, other than large companies, of providing public services. In fact, article 17 stipulates that public services companies must, in fact, be stock companies. Stock companies, in other words companies with significant technological and financial assets, are therefore seen as the most adequate figure for the provision of basic services, since their nature and organizational structure are more appropriate for market competition. This ideology along with the precedence given to the principle of free

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<sup>17</sup> 15.1. Las empresas de servicios públicos.

15.2. Las personas naturales o jurídicas que produzcan para ellas mismas, o como consecuencia o complemento de su actividad principal, los bienes y servicios propios del objeto de las empresas de servicios públicos.

15.3. Los municipios cuando asuman en forma directa, a través de su administración central, la prestación de los servicios públicos, conforme a lo dispuesto en esta Ley.

15.4. Las organizaciones autorizadas conforme a esta Ley para prestar servicios públicos en municipios menores en zonas rurales y en áreas o zonas urbanas específicas. Reglamentada por el Decreto Nacional 421 de 2000

15.5. Las entidades autorizadas para prestar servicios públicos durante los períodos de transición previstos en esta Ley.

15.6. Las entidades descentralizadas de cualquier orden territorial o nacional que al momento de expedirse esta Ley estén prestando cualquiera de los servicios públicos y se ajusten a lo establecido en el parágrafo del Artículo 17.

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competition in the provision of public services will result in the creation of significant barriers for the integration of waste picker organization in the municipal waste management sector.

### **The State as a Regulating Entity and Waste Pickers Struggle for Inclusion**

Given the new regulatory responsibilities of municipal governments outlined in the Constitution and in Law 142, district authorities created in 1994 the Public Services Special Unit (*Unidad Especial de Servicios Públicos*) (UESP), which oversaw the administration, regulation, and monitoring of waste management services in Bogotá (District Decree 792/1994). Following some institutional restructuring at the district level, the UESP was later transformed in 2006 into the Public Services Special Administrative Unit (*Unidad Administrativa Especial de Servicios Públicos*, or UAESP), which was tasked with overseeing and ensuring the provision, coordination, supervision, control of all services comprised within the waste management sector, including recycling services (District Agreement 257/2006).

In addition, as a consequence of this transition towards neoliberal policies of market liberalization, privatization, and free competition, the authorities in Bogotá opened a public tender, supervised by UAESP, in 1994 that resulted in the privatization of waste management services and therefore in their concession to private operators. Given the significant shortcomings of the previous public model of waste management, private operators were forbidden from engaging in recycling activities in order to focus exclusively on collection processes as a way to ensure efficiency in the provision of waste management services. This first public tender led to the formation of a private consortium and thus to the creation of a powerful actor in the waste management sector, one that is not favorable to the cause of waste pickers. Although the concessions were originally awarded for 5 years, they were later extended for almost 4 years, until 2003. This delay was due to a restructuring of the public tender process and of concession contracts following a study on the waste generation and management in Bogotá, submitted to municipal authorities in 2000. Indeed, the conclusions from the study were used to inform subsequent policies in the public tender process, which were initiated in 2002.

In spite of the growing power of this private consortium, waste pickers managed to gain increasing recognition during the 1990s, as a result of strong activism from leading waste picker organizations, such as the ARB. Their efforts resulted in the introduction in 1999 of a first normative framework that officially recognizes waste pickers and their labor, representing an important milestone in the fight for recognition and inclusion (Law 511/1999). This framework marked March 1<sup>st</sup> as the National Waste Picker day and conferred onto the State the responsibility of providing a series of social, housing, education, and training programs that specifically target the waste picker population.

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Although this represented an important victory for Colombian waste pickers, they still faced resistance from both national and municipal authorities. Indeed, in 2000, Decree 421 was introduced to regulate the figure of Authorized Organizations for the provision of waste management, established in Law 142. Following the directives of this law, the decree states that communities and individuals are permitted to organize themselves, as non-profit legal entities, in order to provide waste management services, but specified that such Authorized Organizations were only permitted to operate in small municipalities, rural regions, and specific urban areas of low socioeconomic status (Decree 421/2000)<sup>18</sup>. Although allowing entities such as waste pickers organizations to provide public services, this provision however significantly debilitates the income of waste pickers since the quality and quantity of waste tends to be significantly inferior in these areas. As a response to the limitations imposed by Decree 421 on the ability of waste picker organizations to provide services in cities and large urban centers, Silvio Ruiz Grisales, member of the ARB, challenged this decree on the basis of unconstitutionality. He argued that these limitations violated the right to equality of solidarity organizations granted under the Constitution of 1991 and placed unreasonable restrictions for the provision of these services, stating that stock companies were not the only figures able guarantee efficiency and quality. As a result of a *tutela* action,<sup>19</sup> the Constitutional Court introduced Sentence C-741 of 2003, which states that the legislator, through Decree 421, blatantly violated the Constitution by excluding various sectors of the population in participating in an economic activity under the pretext of greater efficiency and service quality. As a result, the provision restricting waste picker organizations ability to provide recycling services to small municipalities, rural regions, and specific urban areas of low socioeconomic status was withdrawn. In addition, the Court stated that Authorized Organizations could be limited in the provision of basic services by zone or due to their organizational structure. This legal action by waste pickers represents one of several other legal actions before the Constitutional Court that have altered public policies in the waste management sector in favor of their inclusion and recognition.

Around the same time, district authorities in Bogotá were preparing for another public tender process in 2002 for the concession of waste management services. A private model of waste management persisted, with the concession of these services to several private operators. Following the recommendations proposed in the study submitted in 2000, municipal authorities introduced in 2001 a

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<sup>18</sup> “Para los efectos de lo establecido en la Ley 142 de 1994, en cuanto a los servicios públicos de agua potable y saneamiento básico, podrán prestar dichos servicios en municipios menores, zonas rurales y áreas urbanas específicas, las comunidades organizadas constituidas como personas jurídicas sin ánimo de lucro.” (Article 1, Decree 421, 2000).

<sup>19</sup> The *tutela* action was created by the Constitution of 1991 and “permits any person to request any judge in the country to protect his or her fundamental rights whenever they are being violated or threatened by the action or omission of a state institution or of a particular person exercising a dominant position” (Saffron, 2007, p.541).

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methodology for the calculation of price ceilings, which was adopted during this public tender process (Resolution 151/2001). They also introduced the principle of Areas of Exclusive Service (*Áreas de Servicio Exclusivo*, or ASEs) as a way to guarantee economies of scale. These ASEs divided the city into 6 different areas and allotted each area to a private contractor in order to ensure the financial viability and sustainability of these services. Private contractors were therefore required to provide waste management services within their allotted ASE.

However, under the terms of conditions of the tender process, the UAESP outlined specific requirements in terms of experience, capital, and knowledge that could ultimately only be satisfied by existing operators, citing the need for quality and continuity. As a response to these barriers for participation in the public tender process, the ARB deposited a *tutela* action against the district capital of Bogotá, stating that the public tender impeded waste pickers' rights to work, minimal subsistence, and due process. Although the *tutela* action was undertaken by the Constitutional Court, the tender process was concluded, assigning contracts to 4 private operators, before the Court could issue a judgment. However, although the Court was unable to alter the newly concluded tender, it produced Sentence T-724 of 2003, which altered the requirements for all future public tenders for waste management services in order for them to be attainable for waste picker organizations. The Court stipulated that the UAESP had failed to follow the orientations of the Constitution, such as adopting actions in favor of marginalized or discriminated groups, and therefore did not allow for any action that enabled the participation of the ARB in this public tender process. As a result, it stated that district authorities had to include affirmative actions towards waste pickers in Bogotá when it came to the awarding of contracts for waste management services. This sentence, therefore, promoted conditions of equality and inclusivity as well as underscored the social duties of the state.

While this move represented a significant victory for waste pickers throughout Colombia, they were soon confronted with other important limitations and barriers to their labor. Indeed, in 2002, the Colombian Congress ordered the eradication of all animal-drawn vehicles in urban areas as a way to ensure efficient mobility in cities (Law 769/2002, article 98). However, this law had a significant negative impact on waste pickers, since such vehicles represent waste pickers' primary mode of transportation, in order to perform informal recycling activities. As a result of these exclusionary policies, José William Espinoza Sánchez deposited a *tutela* action before the Constitutional Court on the basis of unconstitutionality, stating that article 98 of this law violated the right to work and thus to attain a minimal level of subsistence. The Constitutional Court validated the demand of unconstitutionality, arguing that this article had significant repercussions on the right to work of those who depend on these

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modes of transportation and that it would only be applied when alternative and substitutive measures were adopted by municipal authorities (Sentence C-355/2003).

However, in an attempt to satisfy the requirement for affirmative action introduced in Sentence T-724 of 2003, the Council of Bogotá introduced Agreement 287 in 2007, which establishes affirmative action in favor of the participation of waste pickers in integral waste management processes. Parra (2016) suggests that this agreement represents one of the most important legislation in terms of the recognition of waste pickers and their labor. One of its most significant contributions lies in the introduction of a more accurate definition of waste pickers as:

“the natural person who enlists or recovers waste for valorization. It is understood that a waste picker in condition of poverty is a natural person who derives his/her livelihood and that of his/her family from the recycling of solid waste and who has his/her place of residence in buildings classified in strata 1 or 2.<sup>20</sup> [...] The state of vulnerability of the waste picker in condition of poverty will be established by the district administration based on its social policy and applicable regulations.” (Article 2, Agreement 287/2007).<sup>21</sup>

In addition, it required that all governmental program, plan or project include affirmative actions towards the waste picker population. These affirmative actions must, among other orientations, center around: equality in tender processes, capacity building, organizational strengthening, democratic participation in waste picker organizations, and national and international cooperation among waste pickers.

Although equality in tender processes was one of the affirmative actions outlined by district authorities in 2007, the public tender process of 2011 was met with significant resistance from waste picker organizations. The contract for the concessions of domiciliary waste management services, under the principle of ASEs, was established for a duration of 8 years. As a result of Agreement 287, authorities included several affirmative actions in order to promote the participation of waste pickers in this tender process. It required private operators to bid in association with second-tier waste picker organizations and allocated a percentage of share of the bidding company to these organizations. The higher the percentage

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<sup>20</sup> Bogotá is divided in six strata. This process of ‘stratification’ is used to classify residential buildings according to housing characteristics and along socioeconomic levels. ‘Stratification’ allows authorities to provide subsidies and concentrate social services in lower socioeconomic areas as well as reduce tariffs for domiciliary public services, among other social benefits. In Bogotá, strata 1 and 2 are considered the lowest socioeconomic levels in the city (Instituto de estudios urbanos, n.d.).

<sup>21</sup> “Se entiende por reciclador de oficio la persona natural que alista o recupera los residuos para su aprovechamiento. Se entiende por reciclador de oficio en condiciones de pobreza la persona natural que deriva su sustento y el de su familia del reciclaje de residuos sólidos y que tiene su lugar de residencia en inmuebles clasificados en los estratos 1 o 2. PARÁGRAFO: El estado de vulnerabilidad del reciclador de oficio en condición de pobreza será establecido por la administración distrital en función de su política social y la normativa aplicable.” (Article 2, Agreement 287, 2007).

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of shares allocated, the more points the company obtained in the tender process. However, since the UAESP had removed criteria of longevity and representation for waste picker organizations, new ‘waste picker’ organizations were created, which in fact did not contain any longstanding waste pickers, as a way to benefit from the privileges awarded to waste pickers. The ARB, therefore, argued before the Constitutional Court that the conditions of the tender process did not comply with the requirements of Sentence T-724/2003. The Court ruled in favor of the ARB and stated that distribution of shares to waste picker organizations did not consist in a real affirmative action (Auto 275/2011).

Auto 275 represents an important milestone for waste pickers’ fight for recognition. Indeed, through this legislation, the Constitution Court conferred onto waste pickers the status of “subject of special protection”<sup>22</sup> based on the duty of the social state of right to protect marginalized populations, the recognition that their work represents an intangible public benefit as a result of the environmental and sanitary contributions of informal recycling activities, and the recognition of their labor as an integral part of municipal waste management services. Auto 275 requires the structural integration of waste pickers in waste management services and their remuneration as providers of recycling services.

This fundamental legal framework for the inclusion of waste pickers in the municipal waste management sector coincided with the election of a new left-leaning mayor, Gustavo Petro in October 2011 (Parra, 2015). Beyond introducing a ‘zero waste’ program, his administration established a transitory scheme, in order to satisfy the requirements of Auto 275. This transitory scheme sought, among other things, the reorganization of the existing model of waste management in order to favor recycling services, the formalization of waste picker organizations and their remuneration as service providers, and the promotion of a culture of separation at the source (Decree 564/2012). Although mechanisms for the inclusion of waste pickers remained largely ineffective, Petro’s administration nonetheless succeeded in establishing a formal payment scheme for the remuneration of waste pickers by tonne of waste collected and avoided from the sanitary landfill, which remunerated roughly 10,000 waste pickers for the collection of approximately 170,000 tonnes of recyclable waste for more than 15 million Colombian pesos.

Moreover, his administration also attempted to return waste management services to public hands, through the creation of a public waste management company called *Aguas de Bogotá* and the discontinuation of concession contracts with private companies. (Parra, 2015). While *Aguas de Bogotá* initially provided waste management to 80% of the city (while private operators provided the other 20%), the remunicipalization process faced significant challenges, forcing district authorities to grant a larger share of waste management services to private companies. In addition, Petro faced several accusations by

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<sup>22</sup> “sujeto de especial protección”

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political coalitions and the private waste management consortium regarding the poor quality of waste management services provided by *Aguas de Bogotá*, which had resulted in a sanitary crisis in the city. As a result of public discontent, in December 2013, Colombia's Inspector General ordered Petro's destitution and his removal from politics for 15 years, citing irresponsible behavior that led to an environmental crisis and the infringement of the principle of free competition in the provision of public services (Samson, Parra & Abizaid, 2014). However, following a series of legal actions, Colombia's High Court ordered the restitution of Gustavo Petro, who regained the position of mayor until 2015.

Unfortunately, Petro's attempts to remunicipalize waste management services were short-lived. The public waste management scheme devised during his administration was considered illegal since it violated the principle of free competition (El Espectador, 2018b). Petro's administration was therefore ordered to return to a scheme based on the principle of free competition. *Aguas de Bogotá* continued to provide services for 52% of the city until the following administration, under mayor Enrique Peñalosa, initiated a public tender process in 2017. This process resulted in the concession of domiciliary waste management services to 5 private companies for a value of 4.8 billion Colombian pesos and the exclusion of *Aguas de Bogotá* this service, allowing waste management services to return to private hands.

This tender process was therefore highly contentious and sparked significant political debate. For one, the capacity of the public company *Aguas de Bogotá* to participate in the public tender was questioned. As a result of resistance from insurance companies due to the poor reputation of the company, *Aguas de Bogotá* could not satisfy the requirements of the tender process and therefore was excluded from the provision of waste management services (El Espectador, 2018b). In addition, while the conditions of the contract specifically prohibit these private companies from collecting recyclable material, they, however, require providers to place large waste containers throughout the city, in which residents can dispose of their waste (Interview Silvio Ruiz Grisales; Interview Magda Quisquella Barinas Villamizar). Although from a sanitary perspective these containers can provide important benefits to the city, they ultimately hinder informal recycling activities since they prohibit waste pickers' access to the waste placed inside them. Given a lack of culture of separation at the source, waste placed within these containers contain both recyclable and nonrecyclable materials. With the property rights of these large containers given to these private companies, waste pickers will, therefore, lose access to significant quantities of waste. Since this issue is fairly recent, the extent of its impact on waste pickers in Bogotá has yet to be determined.

### **Bogotá: Transitioning Towards Environmental Protection**

While the previous section has highlighted the transition in the role of the state from the provision to the regulation of waste management services, emphasized through the neoliberal orientations of the Constitution and of Law 142 and the subsequent privatization of these services. In addition, it evidenced waste pickers' struggle for recognition and inclusion in the formal waste management sector. This section will build on the legal struggle undertaken by waste picker organizations and will examine the transition from the public health driver to the environmental protection driver in the development of waste management services.

Although the term valorization first appeared in waste management legislation in 1974 as a way to deal with rising quantities of waste, the national government only introduced the concept of valorization and recycling as a fundamental component of waste management services and as a public-sector solution to the growing waste problem in 1996 (National Decree 605/1996). It defined the term valorization as “the use of solid waste through activities such as separation at the source, recovery, transformation and reuse of waste, which while generating an economic or social benefit reduce environmental impacts and associated human health risks associated with the production, management and final disposal of solid waste” (Article 1, National Decree 605/1996).<sup>23</sup> While this definition represented an important first step in the conceptualization of an alternative, more environmentally sustainable, form of waste management, it however conferred onto service providers and municipalities the responsibility over valorization processes and recycling services, by effectively preventing any other individual from “uncovering, removing or extracting the total or partial content of waste containers, once placed in the collection site” (Article 104, Decree 605/1996).<sup>24</sup> As a result, this decree ultimately criminalized waste picking activities, leaving waste pickers in a greater state of vulnerability. It was only in 2002 that this policy criminalizing of informal recycling activities was repealed.

While municipal authorities increasingly began to recognize the value of recycling services, another sanitary crisis occurred in 1997, this time, however, occurring within the boundaries of the sanitary landfill Doña Juana. It prompted authorities to question the viability of current policies on waste management. Indeed, as a result of this crisis, district authorities were forced to acknowledge that Bogotá's dependency on the Doña Juana landfill, the city's only final disposal site, created a significant

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<sup>23</sup> “Es la utilización de los residuos sólidos por medio de actividades tales como separación en la fuente, recuperación, transformación y rehúso de los residuos, que al tiempo que generan un beneficio económico o social reducen los impactos ambientales y los riesgos a la salud humana asociados con la producción, manejo y disposición final de los residuos sólidos.” (Article 1, Decree 605/1996).

<sup>24</sup> “destapar, remover o extraer el contenido total o parcial de los recipientes para basuras, una vez colocados en el sitio de recolección” (Article 104, Decree 605, 1996).

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problem for the management of growing quantities of solid waste. This realization, as well as increased pressure from residents surrounding the landfill, led Bogotá's government to recognize the need for a better, more integrated model of waste management. They, therefore, contracted a private firm to complete a study on the production, collection, transportation, and disposal of waste in Bogotá, which, as previously mentioned informed the tender process of 2002. This study was also later used to inform the first Plan for the Integral Management of Waste (*Plan Maestro para el Manejo Integral de Residuos Sólidos*, or PMIRS).

The need for integral waste management was subsequently acknowledged by the national government. As a result, it introduced National Decree 1713 in 2002, which harmonized and expanded the orientations of the Constitution and the policy guidelines dictated by Law 142 in the area of waste management services. Among its most notable contributions, it introduced the notion of integral management of solid waste, which implies the disposal of waste in the most adequate manner from an environmental point of view (Article 1, Decree 1713/2002). It also required municipalities to formulate and implement a municipal planning instrument for the management of solid waste, called the Integral Solid Waste Management Plan (*Plan de Gestión Integral de Residuos Sólidos*, or PGIRS). The PGIRS must provide short-, medium-, and long-term guidelines and policy orientations for the integral management waste. As a result of pressure from waste pickers, authorities were required to ensure that the formulation of the PGIRS occurred through a participatory approach, where waste pickers are were involved in its elaboration and implementation. Moreover, along with the acknowledgment of environmental concerns, Decree 1713 positioned valorization and recycling services as important alternatives to final disposal and stated that landfills were the only permitted final disposal sites.

Although Decree 1713 represented an important national effort towards the recognition of recycling services as a fundamental part of a more integrated approach to waste management and reflected Colombia's transition towards greater environmental protection, several components of the decree however had negative impacts on waste pickers and their labor. Indeed, waste picking activities were ultimately prohibited within the perimeter of sanitary landfills, thus eliminating a significant source of income for numerous informal workers. In addition, although it provided a definition of the term 'waste picker' as a "natural or legal person that provides waste management through the activity of valorization",<sup>25</sup> this definition was overly broad as to include not only waste pickers, but other commercial and organizational entities (Article 1, Decree 1713/2002). The particular socioeconomic

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<sup>25</sup> "Es la persona natural o jurídica que presta el servicio público de aseo en la actividad de aprovechamiento." (Article 1, Decree 1713, 2002).

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vulnerability of waste pickers was not highlighted in this definition, thereby allowing other entities to benefit the privileges awarded to waste pickers by the district and national governments.

Similarly, Decree 1713 also supplemented the definition of various entities allowed to provide recycling services, previously established in Law 142 of 1994 and Decree 421 of 2000. Although it introduced the concept of waste picker organizations as a possible provider of recycling services, the definition used was once again too broad as to include organizations that are not made up of waste pickers. In addition, it outlined both logistical and technical standards for recycling services, such as the frequency and schedule for collection as well as the need for closed motorized vehicles for transportation, which are overly demanding and ultimately very difficult for waste pickers to comply with. The limited financial, technical, and physical assets of most waste picker organizations, therefore, inhibited them from complying with such substantial requirements.

Finally, Decree 1713 conferred onto the municipality or the district property rights for waste placed in public spaces. In other words, in depositing waste in public spaces, residents ceded its property rights to the entity, in most cases private operators, responsible for the provision of waste management services. This decree therefore effectively criminalized informal recycling activities and contributed to the stigmatization of waste pickers, by portraying them as criminals, robbing private operators or the municipality in which they operate.

As a response to these exclusionary policies, the ARB, with the help of the National Waste Picker Association (*Asociación Nacional de Recicladores*, or ANR), challenged before the Constitutional Court the property rights of solid waste established in Decree 1713, citing its restriction on the labor of waste pickers. While a subsequent decree in 2003 abolished article 28 on the property rights of waste (Decree 505/2003), controversy has nonetheless remained over ownership of waste placed in public spaces, until 2015 when the Auto 587 by the Constitutional Court asserted that municipal authorities had to ensure waste pickers' unconditional access to waste.<sup>26</sup> This was of paramount importance in waste pickers' struggle for the recognition of their labor.

In the following years, the district government introduced various programs that promoted recycling as a fundamental component of the city's effort to manage growing quantities of waste. It introduced in 2004 the first version of the Recycling Operating System (*Sistema Operativo de Reciclaje*, or SOR), "a parallel program to the waste management system, whose objective was to promote the political, regulatory, technical, administrative, financial and infrastructure tools for the efficient use of the

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<sup>26</sup> "la garantía del acceso cierto y seguro al material aprovechable como derecho de los recicladores" (Auto 587/2015).

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recoverable fraction of ordinary solid waste, in order to generate productivity and environmental sustainability to the city” (2016, p.193).<sup>27</sup> This program was later assimilated by the District Recycling Program (*Programa Distrital de Reciclaje*) in 2006 and later in the sub-program entitled Bogotá Recycles (*Bogotá Recicla*). This program included important components regarding recycling. It sought the promotion of separation at the source, the development of recycling infrastructure, such as specialized warehouses, recycling centers, and research centers, the improvement of the recycling value chain, the increased commercialization of recyclable, the integration of selective collection for recyclable materials (which were only introduced during the subsequent program), and the promotion of a social component to recycling. This social component specifically targeted waste pickers and their labor by recognizing recycling as a productive economic activity. It also included mechanisms for the promotion capacity building for waste picker organizations. However, these measures largely failed to create long-term structural transformations that reduce the condition of vulnerability and poverty of waste pickers, since they did not take into account the heterogeneity of the waste picker population. Although the SOR promoted fundamental mechanisms to improve the recycling sector and encapsulated many of the recommendations presented in the first PMIRS, the lack of incentives to encourage recycling practices by both the public and the private operators remained a substantial weakness in the integration of this program.

Consequently, in 2004, the district government introduced the first PGIRS in Bogotá (Resolution 132/2004). The PGIRS is essentially a planning instrument that outlines the mechanisms and guidelines for the integral management of solid waste. Its objectives were to ensure that waste was adequately separated, recycled, and commercialized within the city, to minimize and recycle waste, to improve the competences of district organizations involved in the recycling sector, to determine the most cost-effective disposal method, to control the environmental impacts of waste, and to introduce an institutional mechanism for the integral management of solid waste. In addition, following the requirements of Sentence T-724, the plan established policies towards the inclusion of waste pickers. However, since the PGIRS rested on the ideology of a recycling system heavily reliant, for the medium- and long-term, on a high-technology and business development, it promoted the business capacity building of waste pickers instead of attempting to introduce affirmative actions directed towards reducing their socioeconomic

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<sup>27</sup> “El SOR debe ser entendido como un programa paralelo al sistema de aseo, cuyo objetivo era fomentar las herramientas políticas, normativas, técnicas, administrativas, financieras y de infraestructura para el aprovechamiento eficiente de la fracción recuperable de los residuos sólidos ordinarios, de manera que generaran productividad y sostenibilidad ambiental a la ciudad” (Parra, 2016, p.193).

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vulnerability. Ultimately, the level of implementation of the first PGIRS was relatively low, particularly in the realization of its goals for the recycling of waste and the inclusion of the waste picker population.

In subsequent years, a second PMIRS was approved by municipal authorities (Decree 312/2006). The PMIRS represent a complementary planning instrument which seeks to articulate the policies, strategies, programs, and projects in the short-, medium-, and long-term for the management of solid waste. Essentially, the PMIRS structures and guides different mechanisms on the integral management of waste. As such, the orientations established in the PMIRS were introduced and materialized through the subsequent PDR under the administrations “Bogotá sin Indiferencia 2004 – 2007” and “Bogotá Positiva 2008 – 2011.”

Similar to the PGIRS, the PMIRS provided city-wide orientations in terms of waste management. It was developed by different actors and experts and based its guidelines on trends in waste production and on technical aspects of waste management. As a result of these studies, the PMIRS outlined 4 key objectives: the promotion a culture of waste minimization and productive recycling among citizens; the creation of economies of scale, competitiveness, and productivity; the promotion financial efficiency and sustainability in waste management whilst complying with the objectives of social inclusion; and, the prevention and proper management waste-related emergencies. These objectives are aligned with 3 axes: territorial and environmental, economic and financial, and social productive. The PMIRS had many commonalities with the objectives of the PGIRS, such as the promotion of waste separation at the source, the formalization of waste pickers, and the development of organizational and business capacity of waste picker organizations. However, in addition, the PMIRS also underlined the need to diminish the quantity of waste disposed of in the sanitary landfill Doña Juana and therefore tasked private operators have the responsibility of promoting the recycling and valorization of waste. Unfortunately, the PMIRS, like the PGIRS, had a low level of implementation and execution, particularly for medium and long-term objectives.

Although the PDR followed many of the directives outlines in the PMIRS, it also focused on increasing the competitiveness and productivity of the recycling and valorization value chains. In order to attain this objective, four main components were introduced within the PDR: public awareness and education of separation at the source, Selective Collection Routes (*Rutas de Recolección Selectiva*) (RRS); the construction of recycling parks; and, the inclusion of the waste picker population. Recycling was positioned as a transformative factor for the city. Most notably, the PDR succeeded in introducing RRS, where private operators collected previously separated recyclable materials. Although it implemented a formal system for the collection of recyclable material, the ineffectiveness of educational

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programs in creating a culture of separation of waste at the source resulted in the creation in 2008 of 71 micro-routes that reached only 678,298 users.

Although recycling plans and programs in Bogotá were largely ineffective in creating a recycling culture in Bogotá due to their low-level of implementation, they nonetheless highlight the city's environmental orientations in its waste management sector. Indeed, these plans have emphasized: (1) the need for economically and financially efficient sustainable waste management and recycling services; (2) the need to reduce waste disposed in the sanitary landfill; (3) the requirement of citizen participation for the reduction and recycling of waste through separation at the source; and (4) the inclusion of waste pickers in the waste management sector, through capacity building, business development training, and organizational strengthening.

In parallel to efforts to ensure the integral management of waste and the promotion of environmental protection in the waste management sector, the national Congress introduced sanctions for behaviors to were considered to be detrimental to the environment, which resulted in some instances in the criminalization of waste picker activities (Law 1259/2008). Indeed, article 6 of this law effectively sanctioned all components of informal waste management activities: the collection of recyclable material from garbage bags and bins; the transportation of collected materials in human- and animal-drawn vehicles; and the commercialization of these materials. As a result, the ARB and the ANR argued before the Constitutional Court on the basis of the unconstitutionality of this article, stating that it violated waste pickers' rights' to work and minimal subsistence as well as neglected to take into consideration the affirmative actions required by Sentence T-724 and Sentence C-355. As a result, the Constitutional Court issued Sentence C-793 in 2009 which indicated that the state must adopt positive actions towards waste pickers in order to allow them to overcome their condition of exclusion and vulnerability and that therefore Law 1259 could not be applied in a way that hindered waste pickers' labor and livelihood.

Finally, given the changing dynamics in the waste management and recycling sector as well as new orders of inclusion by the Constitutional Court, municipal authorities introduced in 2013 National Decree 2981. This decree regulates all components of waste management services, including recycling services. It situates recycling as a structural and integral component of waste management services, which requires significant investment. Although previous recycling programs and plans emphasized the importance of recycling, little investment in recycling infrastructure materialized, since the capital was primarily allocated for the collection, transportation, and disposal of waste. This decree, therefore, introduces a new conceptualization of waste management that is rooted in the recycling and valorization of waste. In addition, it attempts to normalize recent orders of the Constitutional Court on the establishment of affirmative actions in favor of waste pickers and their inclusion in the waste

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management sector (Sentence C-793/2009; Sentence T-291/2009, Auto 268/2010; Auto 275/2011).

However, as it will be evidenced in the following chapters, the neoliberal economic paradigm established in the Constitution and in Law 142 of 1994 have limited municipal authorities' ability to normalize the orders of the Constitutional Court into municipal legislation and policies.

### **Conclusion**

This chapter has highlighted three fundamental transitions in Bogotá's waste management and recycling sectors: the transition in the role of the state from provider to regulator of waste management services; the transition in policy focus from public health to environmental protection; and the transition from largely exclusionary policies towards informal workers to the integration of waste picker organizations in the municipal waste management sector. These transformations have resulted in a paradigm shift from a "transportation and burial-center models in the hand of stock-companies, to a model that demands the valorization of waste and the recognition and remuneration of waste pickers as providers of recycling services" (Parra, 2016, p.2). This new paradigm is therefore shaped by the outcome of these transitions. Such outcomes can be summarized in the following manner.

The Constitution of 1991 introduced a neoliberal economic paradigm in most aspects of the Colombian society. It, therefore, advanced a liberal economic rationale as the guiding principle for Colombia's political and economic orientation, through mechanisms of market liberalization. Within the public services sector, it introduced measures that limit the protagonist role of the state in the delivery of these services and altered its role from a provider of public services to a regulating entity. These orientations are therefore instilled in Law 142 of 1994 on the regulation of domiciliary public services, which reinforces the hegemony of neoliberalism in the public services sector. In accordance with the directives of the Constitution, free competition is introduced as the guiding principle for the provision of public services and is viewed as the best way to ensure efficiency and the protection of the interests of consumers. Law 142 also outlines specific requirements in order to be recognized as a provider of public services, which rest on the principles of economic efficiency and positions large companies as the preferred figure for the delivery of public services. As a result, these national legislative and normative frameworks had important repercussions on public services in Bogotá, notably the privatization of waste management services as well as the introduction of a new powerful actor: the private waste consortium. This transition has, therefore, had profound implications for waste pickers. Indeed, the preference awarded to large companies for the provision of public services as well as the integration of the principle of free competition has limited waste pickers capacity of providing recycling services.

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At the same time, environmental concerns have replaced public health concerns as the primary driver for the development of waste management systems. As a result, integral waste management and recycling mechanisms are brought to the forefront of waste management legislation and policies. Greater emphasis is placed on the valorization of waste rather than on previous burial-centered models of waste management. The acknowledgment of the value of recycling systems has led to the recognition of waste pickers as important agents in creating a more sustainable city. In addition, district authorities have introduced several recycling plans and programs and have attempted to promote a culture of ‘zero waste’ and of separation at the source, although most have been limited in their level of implementation and success. These recycling programs have acknowledged the role of waste pickers in recycling systems and has attempted to promote capacity building initiatives directed towards their capacitation. However, although these programs have been fairly progressive and ambitious on paper, they have failed to materialize in structural changes and to achieve their stated social goals. Moreover, although the transition towards environmental protection has led to the recognition of the contributions of the informal sector, it also resulted in the further regulation of the municipal recycling sector, which have in some cases limited waste pickers ability to provide informal recycling services.

Finally, legislation and policies within the waste management and recycling sectors have become significantly more inclusive. Indeed, as a result of legal pressure from waste picker organizations, the Constitution Court has produced several orders on the recognition of their rights and inclusion in the municipal waste management and recycling sector (see Table 5 for a partial summary). These orders emanate from the rights-based orientations of the Constitution which protects, among other rights, the right to work (Article 25), equality (Article 13), and liberty (Article 18). Indeed, the Constitution requires the state to promote conditions of equality and to introduce measures in favor of decimated and marginalized populations (Article 13). In addition, it stipulates that the law, as well as employment contracts, cannot undermine human liberty and dignity or the rights of workers (Article 53). Therefore, the rights-based orientations of the Constitution have allowed waste pickers to contest exclusionary policies in the waste management sector. Legal action undertaken by waste pickers has therefore had a profound effect in reshaping Colombia’s waste management framework, through the recognition of their demands by the Constitutional Court. Among the most notable orders in favor of waste pickers and the most important for the purpose of this analysis are:

- (1) Waste pickers are allowed to conduct their activities in all municipalities in Colombia (Sentence C-741/2003).

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- (2) District authorities must develop affirmative actions that reduce the vulnerability of the waste picker population in order to create conditions of equality for public tenders and to comply with the social duties of the state (Sentence T-724/2003).
- (3) The state is not only required to adopt affirmative actions that allow waste pickers to overcome their conditions of discrimination and social marginalization, but they must also refrain from adopting measures that, although supporting objectives that are constitutionally legitimate, have a disproportionate impact on the activities performed by waste pickers without them offering alternative opportunities for income (Sentence C-793/2009)
- (4) All municipal authorities must develop mechanisms for the economic and social inclusion of waste pickers (Sentence T-291/2009).
- (5) Affirmative actions must not only be incorporated into public policies and programs, but must result in profound structural transformations that are effective in their objective of allowing waste pickers to overcome their conditions of vulnerability and marginalization. These affirmative actions must be based on the incorporation and remuneration of waste picker in the municipal waste management sector (Auto 275/2011)
- (6) Property rights for waste disposed of in public spaces cannot be awarded. However, the state must guarantee waste pickers' unconditional access to recyclable materials (Auto 587/2015).

Table 7. Legal Framework of the Actions Taken by the Waste Picker Population for the Recognition of Their Rights in Colombia.

Year	Institutional and Normative Framework	Legal Strategy	Judicial Sentence	Consequence
2002	The national government establishes in art. 28 of Decree 1713 that waste was the property of the government, and decides to cede its usufruct to the companies providing waste management services.	Legal action in defense of the right to work	Regulatory Decree 1505 (2003)	The national government was required to replace “the property of waste” with “the responsibility” over waste. The article was repealed.
2003	National Traffic Code: “eradication of animal-drawn vehicles from the streets”	<i>Tutela</i> action in defense of the principle of legitimate expectations and minimum subsistence	C-355 (2003)	The national government was required to eliminate this article, urging the concerted, gradual, and programmatic substitution of said vehicles.
2003	Public tender of 2002 The district government to does not include the waste	<i>Tutela</i> action on the principle of legitimate	T-724 (2003)	The Court demanded that district authorities develop a series of affirmative actions that would

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	picker population in the public management of waste.	expectations and in defense of minimal subsistence		reduce the vulnerability of the waste picker population, that they prepare this population to participate in equal conditions in a forthcoming public tender for waste management services in the city.
2003	The regulation of the figure of Authorized Organizations of Law 142/1994 and its Regulatory Decree 421/2000 prohibited the work of waste pickers in municipalities of more than 8000 subscribers.	Demand for unconstitutionality	C-741 (2003)	The Court established that waste pickers could work in all municipalities in Colombia and overrode the belief that the private provision of public services was inherently efficient.
2009	The municipal administration of Cali decided that it would stop sending waste to the open dump, which until then received the waste produced daily in the city.	<i>Tutela</i> action in defense of the right to work, minimal subsistence, and legitimate expectations	T-291 (2009)	The Court demands from all municipal authorities the development of an integral process that allows the social and economic inclusion of the waste picker population.
2009	The National Law 1259 of the Ministry of Environment prohibited the extraction of waste from bags placed in public spaces, its transport in unsuitable means, as well as the commercialization in conditions not suitable for such purpose.	Action of enforceability of rights	C-793 (2009)	The Court established that the law could not be applied to the detriment of the work of the waste picker population.
2010	The UAESP decides to open a tender for the operation of the Doña Juana sanitary landfill	Action of contempt against the District rooted in the requirements of Sentence T-724	Auto 268 (2010)	The Court demands the incorporation of a valorization component the final disposition site that would link the organized waste picker population with the private company that won the bid.
2011	Public tender for the collection and transportation of waste in Bogotá	Action of contempt of the Sentences T724 and T-291 in the terms of reference of the bid.	Auto 183 (August 2011); Auto 275 (December 2011)	The Court requires the structural incorporation of the waste picker population in the management of waste, in particular, its remuneration for services related to recycling.
Source: Parra (2015, p.6-7). Note. Translated from Spanish.				

More generally, the jurisprudence of the Constitutional Court has established an inclusive framework that seeks to allow waste pickers to overcome their conditions of social and economic vulnerability. Its framework has introduced fundamental principles for of recognition and inclusion.

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Indeed, it recognizes waste pickers as a marginalized and discriminated group that lives in conditions of poverty and vulnerability, which requires special constitutional protection (Parra, 2016). It also acknowledges the benefits of informal recycling activities as a public service and views waste pickers, and particularly waste picker organizations, as providers of public services. This new framework is therefore fundamental in explaining waste pickers claims to formal integration in the recycling sector. However, as it will be demonstrated in the following chapters, this inclusive and progressive framework is at odds with the neoliberal orientations of the Constitution and of Law 142 of 1994. These different ideologies, therefore, create significant tensions in waste management and recycling policies at the municipal level. The implications of these tensions will be explained in Chapters five and six.

In sum, as this chapter has illustrated, Bogotá's waste management sector has undergone three important transitions. These transitions have profoundly altered the waste management landscape by establishing the role of the state as a regulating entity, solidifying the hegemony of neoliberalism in the waste management normative framework, positioning integrated sustainable waste management and recycling as fundamental components of waste management services, and introducing a series of inclusive policies in favor of waste pickers. The implications of these transitions will, therefore, be examined in the following chapter in the context of national legislation on the formalization of waste picker organizations. Indeed, the Chapter five touches upon these three transitions in its analysis of National Decree 596 which regulates the formalization of waste picker organizations as official providers of waste management services. It examines the political context that resulted in the introduction of this decree as well as its effect on the capacity of waste picker organizations of providing municipal recycling services.

## Chapter 5: Research Data and Findings

Waste pickers' fight for the recognition their rights and for improved working conditions has led to fundamental changes within the waste management sector in Colombia. As a result of this activism, in recent years, both national and municipal governments have introduced legislation and policies for the inclusion of waste picker organizations in the recycling sector. While these policies are numerous, none to date have been as important as National Decree 596. Indeed, in 2016, the Ministry of Housing, City and Territory (*Ministerio de Vivienda, Ciudad y Territorio*) issued National Decree of 596, which regulates recycling services as well as proposes a transitory scheme for the formalization of waste pickers organizations as providers of basic services. It outlines the specific steps and requirements in order for waste pickers organizations to become official and 'formal' providers of recycling services throughout Colombia.

Formalization is promoted by Colombian authorities as a way to increase the technical, operative, administrative, financial, and commercial capabilities of waste picker organizations, to improve public perception of waste pickers, and to better their working conditions. It also allows them to benefit from the support of municipal and national authorities, to improve the conditions for the commercialization of recyclable materials, and to receive payment from users' tariff (CEMPRE, 2016). While formalization can provide important benefits to these organizations as well as their members, this process also has fundamental repercussions on the structure and operations of waste picker organizations.

It is important to acknowledge that this decree represents the first real attempt by the national government to advance the formalization of waste picker organizations (Interview Ricardo Valencia), which implies their integration within the formal recycling sector, the conferring of the status of official service providers, and their ability to receive payment from users' tariff. In many respects, it represents an important endeavor in the formal integration of waste pickers in the municipal waste management sector, one that has few counterparts in other countries throughout the world. It outlines a formalization process, through which any waste picker organization, which has the capacity to comply with the requirements outlined in National Decree 596, will be recognized as an official provider of municipal recycling services. This progressive and unprecedented decree is the result of unrelenting activism from waste pickers themselves. It also has new implications for current models of service delivery and understanding of informality in the recycling sector.

However, while National Decree 596 is novel in many ways, it introduces important challenges and barriers to waste pickers' formalization process. They are the result of problematic assumptions that are rooted in the hegemonic neoliberal ideology found in the normative frameworks that regulates public

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services. Indeed, in accordance with the directives outlined in Law 142, which regulates all waste management legislation, National Decree 596 introduces requirements that are overly burdensome and ultimately unattainable for most third sector organizations; requirements that only large companies could satisfy. In addition, by guaranteeing the principle of free competition in the provision of recycling services, it infringes upon the capacity of waste picker organizations in Bogotá of providing recycling services, given their inability of competing with large private companies. The following chapter, therefore, explores these obstacles as well as the limitations in National Decree 596 for the integration of these organizations in the municipal recycling sector.

### **National Decree 596 and its Implications for The Formalization of Waste Picker Organizations**

National Decree 596 modifies National Decree 1077 of 2015 in relation to recycling activities as a component of the waste management sector. As such, it outlines the responsibilities of users, services providers, and municipal authorities within the recycling sector. It requires users to present their waste in a segregated manner and pay for the service provided. This decree also establishes users' rights, such as being included in collection routes for recyclable materials, receiving training separation at the source, and receiving an incentive for separation at the source.

In contrast, service providers are required to collect and transport recyclable materials to a classification and valorization station (*Estación de Clasificación y Aprovechamiento*, or ECA) as well as classify and weigh collected materials within the ECA. Service providers must be registered before the Superintendence of Domiciliary Public Services (*Superintendencia de Servicios Públicos Domiciliarios*, or SSPD) and report all the required technical, administrative, commercial, operative, and financial information in the *Sistema Único de Información*. They must also keep a registry of all the quantity of recyclable material effectively valorized and the associated quantity of waste that they were unable to commercialize. Service providers must implement educational campaigns for users, financed territorial entities, on recycling, valorization, and separation at the source.

In addition, municipal or district authorities must satisfy certain requirements for the integration of the waste picker population in the waste management and recycling sector. They must formulate and adopt a PGIRS, which must include a census of the waste picker population and public education programs for the promotion of separation at the source. They are also assigned the responsibility of including the following in the 'waste picker inclusion program' within the PGIRS: (1) waste picker capacity building projects, which entails training and assistance on formalization, administrative,

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commercial, financial, technical, and operative capacity building, and technical training on the management of recyclable waste, and (2) assistance projects for the formalization of waste pickers, which must take into account their heterogeneity and different levels of vulnerability. In addition, they must provide, under certain terms and conditions, rights to or access to recycling infrastructure and equipment.

Beyond stipulating the responsibilities of users, services providers, and municipal authorities, section 3 of National Decree 596 introduces a transitory scheme for the formalization of waste picker organizations and thus outlines the requirements that must be met by waste pickers in order to become official services providers. Waste picker organizations must register before the SSPD and from then on are considered official providers of municipal recycling services. In doing so, they, however, lose their status as a subject of special constitutional protection as well as the benefits that come with this status. At the moment of registration, they must indicate in which municipality or district they will operate as well as provide the organization's constitution and identification information of members. Waste picker organizations that have registered before the SSPD and are in the process of formalization will have 5 years to progressively satisfy the administrative, commercial, financial, and technical requirements established by the Ministry of Housing, City, and Territory, in accordance with those outlined in Law 142 of 1994 (see Table 6). These requirements are therefore mandatory for all entities providing recycling services.

The 5 years allocated to waste picker organizations to satisfy these requirements, however, represents a grace period awarded to them given their unique status as solidarity organization and their unique conditions of vulnerability and marginalization as recognized by the Constitutional Court. Therefore, waste pickers organizations are considered official providers of recycling services from the moment of their registration before the SSPD and can immediately receive payment for their services, through users' tariff, while other entities, such as private companies, must comply with all of these requirements before benefitting from the tariff.

Table 8. Requirements for the Formalization Process of Waste Picker Organizations as Defined in National Decree 596/2016 and Resolution 276/2016.

Phase	Topic	Requirement	Timeline
1	Registration	Registry of service providers	Moment 0
2	Technical	Define the area of service provision	First month
	Technical	Registry of tonnes transported	
	Technical	Registry of tonnes for the area of service provision	
	Commercial	Registry of tonnes effectively valorized	
	Commercial	Registry of receipt for the commercialization of recyclable materials	

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	Technical	Registry of classification and valorization stations (ECAs)	
	Technical	Registry of transportation vehicles	
3	Commercial	Uniform conditions for waste management services	Second month
4	Commercial	Portfolio of services	Twelfth month
	Administrative	Business strengthening plan	
	Commercial	User database	
	Commercial	Web page	
5	Technical	Registry of scale calibration	Second year
	Technical	Supervisors and operational control systems	
	Technical	Service provision plan	
6	Administrative	Personnel by employment category	Third year
	Technical	Micro routes for collection	
	Administrative	Certification of labor competencies	
7	Commercial	Registry of petitions, complaints, and resources	Fourth year
	Technical	Contingency and emergency plans	
8	Financial	Financial information	Fifth year
	Technical	Map of area of service provision in reference system MAGNA-SIRGAS	
Source: National Decree 596/2016 and Resolution 276/2016. Note. Translated from Spanish.			

As Table 6 illustrates, the formalization process is divided into 8 phases, each with different timelines. The timelines for each phase are however not definite; although failure to comply within the allocated 5 years could result in an intervention from the UAESP. The second phase, which occurs within the first month after registration, is related to commercial and technical activities that are fundamental for the calculation for the payment from users' tariff (CEMPRE, 2017). Waste picker organizations must delineate the area or localities in which they will provide recycling services and provide a registry of vehicles used for the provision of services. They must also provide monthly registries that record the quantity of recyclable waste transported, the quantity recyclable waste for the area of service provision, and the quantity of recyclable waste that has been effectively valorized and commercialized. These registries are necessary in order for waste picker organizations to receive remuneration for their service from the waste management tariff charged to users.

Indeed, in accordance with Resolution 720 of 2015 by the CRA, which delineates the tariff regime for waste management services for municipalities of more than 5.000 subscribers, service providers of 'non-recyclable' waste management must charge users for the entirety of waste management services, including recycling services. Recycling services are remunerated, unlike waste management services, per tonne of recyclable waste effectively valorized and commercialized, which signifies the quantity of waste categorized and then sold to intermediaries or directly to the industry. Waste pickers must weight collected materials in classification and valorization stations in order to receive a receipt that

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confirms this quantity and to receive payment for their services (Decree 1077/2015). The tariff for recycling services is then calculated as the sum of collection and transportation costs and final disposal costs in the municipality where services are conducted. They are also required to pay taxes on some of the types of materials they sell, such as certain types of plastic or cardboard. The requirement to pay taxes on recyclable materials has generated significant tensions in Bogotá, between district authorities and waste pickers. However, given the limited scope of this research, the implications of this provision on waste pickers and the questions it raises with regards to their informality were not explored in further detail.

In addition, since the fee for recycling services is included within the waste management tariff, providers of waste management services collect the entirety of the tariff and then redistribute to providers of recycling services the corresponding remuneration for their work (Decree 1077/2015). Therefore, private operators in Bogotá are tasked with redistributing the recycling tariff to waste picker organizations that operate within their ASE. Unlike the remuneration scheme established under Petro's government, payment for recycling services is not awarded directly to waste pickers, but rather is given to the organization, which then redistributes the payment to its members according to established internal rules (typically per tonne of recyclable material effectively commercialized). Individual payments established under Petro's government were in fact considered illegal, since this system did not follow the directives of Law 142 (Interview Carolina González Barreto). Indeed, this normative framework specifies that anyone being remunerated through the waste management tariff must be recognized as a service provider which entails compliance with specific requirements.

Therefore, the only way for waste pickers to access the recycling tariff is through their membership in an organization. This provision, therefore, encourages associative behavior among independent waste pickers as well as their formalization into official service providers. Beyond the payment received through recycling tariff charged to users, waste pickers associated with any organization undergoing formalization also generate income from the commercialization of recyclable materials to intermediaries or to the industry. Income earned from the commercialization of waste is determined by industry prices, which are dependent on the quantity, type, and quality of collected materials.

During the third phase, which takes place during the second month, waste picker organizations must design their contract of uniform conditions (CCU) for waste management services, which stipulates and regulates the relationship between the service provider and its users. The CCU must then be approved by the CRA. For the fourth phase, accomplished by the twelfth month, waste picker organizations must provide: (1) a portfolio of their services, which includes a description of the organization, its vision and mission, its products and services, and its contact information, (2) a business strengthening plan, which

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presents short-, medium-, and long-term plans along with the organization's goals, activities, services schedule, costs, and sources of funding (3) a user database, which includes data on the address and identification information of subscribers, and (4) a web page, which contains the CCU, initiatives on separation at the source, and the tonnes of waste produced and effectively valorized in the area of service provision.

The fifth phase must be accomplished during the second year after registration. It requires waste picker organizations to have a registry of scale calibration, in order to guarantee the validity of data for weighted recyclable materials, which includes the date of calibration, the entity responsible for the calibration, and the type of scale used. In addition, they must register and supervise operative elements such as the schedule, frequency, and collection routes, the use and distribution of equipment and tools, and the quantity of waste collected that was not valorized. They must also provide a plan for the provision of recycling services, in accordance with the objectives, strategies, and operating systems provided in the PGIRS, which include macro and micro collection routes, vehicles and equipment, location and description of the ECAs, and personnel information.

Phase six, to be completed within the third year, requires organizations to classify their members by employment category as well as keep a registry of personnel information, such as salaries and pensions. Organizations must also ensure that all of their members possess certifications, provided by the National Service of Learning (*Servicio Nacional de Aprendizaje*), on the proper management of waste as well as on recycling and valorization processes. In addition, they must provide a detailed description of each member's selected micro route.

The seventh phase, which occurs during the fourth year after registration, requires waste picker organizations to implement a system that manages and follows-up on users' petitions and complaint as well as to develop emergency and contingency plans, which define the policies, organization systems, and general procedures on how proper manage disaster and emergency situations. Finally, the last phase, which must be completed within the fifth year after registration, demands that waste picker organizations provide financial information on their organization and must, therefore, keep track of accounting information, which includes balance sheets, income statements, cash flows, statement of changes in financial position, statement in changes in equity and notes on consolidated financial statements. They must also provide a map of the service area in a geocentric reference system called MAGNA-SIRGAS.

As these different phases have evidenced, the formalization process outlined in National Decree 596 will require substantial efforts from waste pickers as well as fundamental and profound transformations in how waste picker organizations operate and how they are structured. Moreover, it

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represents an integral step by Colombia's national government to comply with the orders of the Constitutional Court on the inclusion and integration of waste pickers in the recycling sector. The transitory scheme outlined in this decree consists in the first real attempt by national authorities in advancing their formalization as official providers of recycling services. It recognizes the valuable contributions made by the informal sector and introduces a progressive framework for the legitimization of waste picker organizations. Indeed, this formalization process can allow for significant benefits to its members, such as access to additional income through the recycling tariff, recognition of their role as providers of an essential municipal service, and the growth in the organization's capacities. However, National Decree 596 also introduces important barriers to waste pickers' formalization that rests on problematic assumptions rooted in the hegemony of neoliberal ideology in the public services sector. The following section examines these challenges.

### **Challenges to Formalization**

#### **Privileging Companies as Service Providers**

Firstly, some of the requirements outlined in National Decree 596, which reflect those contained in Law 142 of 1994, have proven to be very difficult for waste pickers organizations to comply with, given their limited financial, technical, physical, and human assets. It is important to note that these obligations are required for all providers of recycling services, these include but are not limited private companies. As previously mentioned, Parra (2016) suggests that the hegemonic narrative of Law 142 and of subsequent national waste management legislation privileges large stock companies as the preferred and most efficient figures for the provision of these services. As such, the requirements outlined in Law 142, which regulate National Decree 596, therefore reflect this hegemonic narrative and presuppose that service providers possess significant financial, physical, and technological assets. However, given waste pickers' particular socioeconomic vulnerability, their organizations lack such assets. Therefore, although the standardization of recycling services, through the establishment of criteria and requirements, is necessary, some of the requirements necessitate physical, technical, and financial resources that waste pickers organizations simply do not possess. Indeed, some are practically unattainable for even the largest second-tier organizations in the city, such as the ARB, and are consequently out of grasps for smaller organizations. Unlike private companies, waste picker organizations lack the necessary resources to comply with these requirements:

Basically, what the formalization process seeks is to recognize that waste pickers are providing a service, however in providing this service, [waste picker] organizations do not operate in the

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same conditions as a private waste collection company, rather they operate in conditions that arise from their socioeconomic and sociocultural characteristics.<sup>28</sup> (Interview Silvio Ruiz Grisales)

We are not waste collection companies that have a large infrastructure, vehicles, factories, and equipment, we do not have the financial muscle for what they [municipal and national authorities] ask of us. We are attempting to explain to the Ministry and the Superintendence that we have the willingness and readiness to comply, but that they should not include things [requirements] that, if we cannot meet them, will expel us from the [recycling] scheme.<sup>29</sup> (Interview Magda Quisquella Barinas Villamizar)

As Magda Quisquella Barinas Villamizar emphasizes, the inability to comply with these requirements ultimately results in an expulsion from the formal recycling sector and the loss of remuneration from the waste management tariff paid by users. Indeed, if waste pickers do not have the capacity to satisfy these obligations within the allocated period of time, they risk being excluded from the formal recycling sector altogether. Therefore, some organizations have undertaken this formalization process as a way to safeguard their labor:

Our mission is to comply with many of the obligations of the decree in order to remain in this sector, for the benefit all of our colleagues, so that they [municipal authorities and private companies] do not exclude us from our labor, which has existed for many years, from generation to generation<sup>30</sup>. (Interview Olga Liliana Vasquez González)

In addition, as organizations currently undergoing the formalization process have begun to realize, the transitory scheme outlined in the decree is too brief. Indeed, while this decree does allow for exceptions for waste picker organizations, such as allowing them a transitory period in which they still receive remuneration via tariffs, this period is far too limited to allow waste picker organizations to successfully comply with all of the requirements:

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<sup>28</sup> Básicamente, lo que pretenden el proceso de formalización es reconocer que los recicladores prestan un servicio, pero que este servicio para prestarlo las organizaciones no están en las condiciones como una empresa privada de recolección de basura, sino que tienen las condiciones propias de sus características socioeconómicas y socioculturales.

<sup>29</sup> Nosotros no somos las empresas de aseo que tienen una gran infraestructura, vehículos, plantas, y equipo, que no tenemos el músculo financiero para lo que nos piden. Les estamos planteando al ministerio y a la Superintendencia que nosotros estamos en la voluntad y la disponibilidad de cumplir, pero que no nos pongan cosas que por no cumplir eso nos van a sacar del esquema.

<sup>30</sup> Nuestra misión es cumplir con muchas obligaciones del decreto para estar en el negocio, para todos nuestros compañeros, y que no nos salgan de nuestra labor que hace muchísimos años que existe, de generación en generación.

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They [national authorities] awarded us 5 years. Today, we realize that this is very little time, these 5 years are flying by, because there is a lot to do. As for waste pickers, not all of us are able to comply with the standards. Other companies have had 20 years of experience in the sector. They have all the experience, they received all the resources from the tariff. We are just beginning<sup>31</sup>.

(Interview Silvio Ruiz Grisales)

While it is important not romanticize third sector organizations and to recognize the need for the standardization of recycling services and for important transformations in how these organizations operate, public policies must nonetheless be more adapted to waste pickers' particular socioeconomic conditions. The requirements and obligations presented in National Decree 596 have not recognized these unique conditions and therefore limit waste pickers' ability to remain in their occupation. Although this decree requires municipal and district authorities to provide waste picker organizations with some technical, financial, and administrative assistance, support is often delayed, thereby increasing the vulnerability of these organizations.

Moreover, National Decree 596, in accordance with Law 142, dictates that recycling services must be provided under the principle of free competition. As such, it further privileges companies as the preferred organizational figure for the efficient provision of public services:

This law [Law 142] adopted as a governing principle the free competition in the field of the provision of public services as a guarantee of economic and operational efficiency in the provision of such services to the general public. Therefore, it generated strong incentives for the participation of specialized operators in the provision of municipal waste management services, through concessions for this service in all Colombian municipalities granted through bidding processes. This has resulted in the prioritization of a specific type of provider a public waste management services, with developed business capacities, and has ignored both organized communities and the informal sectors that fit within these niches<sup>32</sup>. (Parra, 2015, p.2)

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<sup>31</sup> Nos otorgaron 5 años. Hoy, vemos que son muy poquitos, los 5 años de tiempo vuelan, porque hay mucho que hacer. Y los recicladores, no todos somos en condiciones de cumplir con las normas. Otras empresas han tenido 20 años de experiencia en el sector para cumplir. Pues tienen toda la experiencia, tuvieron todos los recursos de la tarifa. Nosotros apenas estamos empezando.

<sup>32</sup> “Esta ley adoptó como principio rector la libre competencia en el campo de la provisión de servicios públicos como garantía de eficiencia económica y operativa en la prestación de dichos servicios a la ciudadanía en general. Por ello generó fuertes incentivos a la participación de operadores especializados en la prestación de servicios de aseo municipal, mediante concesiones del servicio de aseo en todos los municipios de Colombia otorgadas a través de procesos licitatorios. Esto se ha traducido en la priorización de un tipo específico de persona prestadora de servicio público de aseo, con capacidades empresariales desarrolladas, y ha ignorado tanto a comunidades organizadas, como a los sectores informales que se inscriben dentro de estos nichos.”

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As a result, both national and district authorities have emphasized ideologies of market liberalization and have privileged large companies, particularly private ones, as the preferred organizational figure for the provision of public services. This ideology is reflected in National Decree 596, since it introduces a normative framework that requires substantial and fundamental transformations in the way waste picker organizations operate, through the integration of private sector principles and characteristics. At the district level, the UAESP, the entity tasked with the provision, coordination, supervision, and control of waste management services, including recycling services, has affirmed its primary ambition in transforming waste pickers organizations in order for them to resemble companies. As interview participant Carolina González Barreto, advisor for the Department of Recycling the UAESP, asserts regarding the formalization of waste pickers:

They have to start acting like a company. They have to make an effort, like any other company. And they have the support of the municipality. But, they now need to understand that now they have to manage resources, that the leaders of the organizations have responsibilities towards their associates, that they have to grow their organization, that they no longer live day to day, that it has to be a long-term plan where they imagine themselves as entrepreneurs, that they have to invest, buy and sell.<sup>33</sup> (Interview Carolina González Barreto)

Although it is evident that waste picker organizations must strengthen organizational, financial, technical, and physical capacities in order to meet environmental, technical, and labor standards and that the integration private sector principles does not necessarily impede the cooperative nature of these organizations, the prioritization of companies as the preferred organizational figures for the provision of waste management services ultimately disregards the social, environmental, and economic contributions of waste pickers. It also suggests that national and municipal authorities have applied limited efforts in adapting policies to correspond to existing realities in the recycling sector. In contrast, they have focused on restructuring waste picker organizations in a way that forces them to conform to pre-existing models of basic service delivery, ones that favor companies over community-based organizations. Indeed, rather than adopting policies that strengthen the existing (and long-established) recycling sector, which has been effectively managed by the informal sector, national and municipal authorities have advanced a neoliberal

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<sup>33</sup> Ellos tienen que empezar a actuar como empresa. Ellos tienen que esforzarse, como otras empresas. Y tienen el apoyo del municipio. Pero ellos ahora necesitan entender a que ahora van a manejar recursos, que los líderes de las organizaciones tienen responsabilidades con sus asociados, que ellos tienen que hacer crecer su organización, que entienden un poquito más que eso ya no es para conseguir a vivir al día, esto ya tiene que ser un plan a largo plazo donde ellos se imaginen como empresarios, que se dan cuenta que van a tener que invertir, comprar y vender.

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model of public service delivery, one that ultimately neglects the social economy devised by waste pickers.

In fact, waste picker organizations in Bogotá, and others throughout Colombia, have created an 'alternative' model for the provision of waste management services, based on principles of solidarity, democracy, redistribution, and social capital, that differs from traditional public and private models of service delivery. Indeed, this social technology challenges these traditional models as well as the hegemony of market-based ideologies in the public services sector. It, therefore, allows for new conceptualizations modes of service delivery. Beyond providing employment for marginalized populations and income for roughly 14,000 families, informal recycling activities in Bogotá have achieved high recovery rates, even without the use of high-technology. While there remain some important challenges in the informal recycling sector, such as high incidences of diseases, poor working conditions, and high incidences of poverty, national and municipal policies should focus on mitigating these challenges and improving the current recycling system.

In addition, while National Decree 596 provides a transitory framework for the formalization of waste pickers organizations into official providers of recycling services, this process remains out of grasp for the majority of those engaging in informal recycling activities. Indeed, the technical, administrative, financial, and physical resources required by this decree exclude most waste picker organizations as well as all independent waste pickers:

In Bogotá, 70% of waste pickers are not organized and they, being independent, need a different process. A process that helps them understand why they should become organized and what it means to be organized. Another 25% are weak organizations that do not know how to sell materials collectively, each one sells their materials individually. They are organizations of political and union representation. What they require is the be accompanied and supported financially in order to own warehouses and vehicles and to start operating as a productive unit. Finally, 5% already have warehouses, already sell collectively, have sources for recyclable materials, have routes. What they need is to meet a series of requirements to be recognized and remunerated as providers. Decree 596 is made only and exclusively for this 5%. And the question is: what about the other 95%? Part of the answer also comes out of national regulations, that is to say [...] that the organizational support and productive strengthening have to come from the local

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PGIRS, that the responsible ones are the municipal authorities. If municipal authorities do not fulfill their task, 95% of waste pickers are marginalized.<sup>34</sup> (Interview Federico Parra).

Although national authorities have introduced this decree partly as a way to regularize recycling services and to act as an incentive for the formalization of waste pickers, it does not provide a framework that supports the majority of waste pickers in this process. As with other national legislation in the waste management sector, it provides orientations and directives for its application at the municipal level, but it gives municipal authorities the responsibility of implementing these policies within municipal programs. Authorities in Bogotá have largely failed to implement programs that accompany and support unorganized waste pickers as well as smaller organizations that lack the necessary financial, technical, and physical resources to comply with the requirements of National Decree 596:

They [municipal authorities] have absolutely nothing to accompany this 95%. In other words, they have concentrated on protecting the top 5%. In programmatic terms, it is obvious that, in regard to public investment, there is no budget for this 5%. This complicates things significantly because there is going to be a small group that will continue to benefit from this policy, but in general, almost everyone [waste pickers] will be excluded.<sup>35</sup> (Interview Federico Parra)

Therefore, the benefits of this progressive legislation will not reach the most vulnerable. Arguably, organizations that will successfully comply with the requirement of the formalization process will distance themselves even further from other smaller organizations and unorganized waste pickers, by gaining physical and financial capital. This situation becomes even more problematic in a context of free competition.

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<sup>34</sup> En Bogotá, El 70% de los recicladores no están organizados y ellos al ser independientes necesitan un proceso diferente. Un proceso que les ayude entender porque organizarse, qué sentido tiene organizarse. Un 25% son organizaciones débiles que no saben lo que es la comercialización conjunta, cada quien vende por su lado. Son organizaciones de representación política y gremial. Lo que ellos necesitan es el acompañamiento y el soporte económico para poder tener sus bodegas, para establecer sus vehículos, para empezar a funcionar como una unidad productiva. Finalmente, el 4-5% ya tiene bodegas, ya vende de manera colectiva, tiene fuentes de materiales, tiene rutas. Lo que necesitan es cumplir una serie de requisitos para ser reconocidos y remunerados como prestadores. El Decreto 596 está hecho única y exclusivamente para este 4-5%. Y la pregunta es: ¿qué pasa con este 95%? Parte de la respuesta también sale de la normativa nacional, es decir que [...] el acompañamiento organizativo y fortalecimiento productivo tienen que salir de los PGIRS locales, que los responsables son las alcaldías municipales. Si las alcaldías municipales no cumplen su labor, el 95% es marginalizado.

<sup>35</sup> Ellos no tienen absolutamente nada para acompañar a estos 95%. En otras palabras, se han concentrado a decir que van a proteger a estos 5%. En términos programáticos, se puede constatar que con el tema de inversión pública no hay un *budget* para estos 5%. Y eso complica muchísimo las cosas porque va a haber un pequeño grupo que iba beneficiando de esta norma pero en el esquema general, casi todos van a estar excluidos.

### **Free Competition in the Provision of Recycling Services**

While National Decree 596's neoliberal ideology has privileged companies as the preferred figure for the provision of basic services at the expense of waste picker organizations, it also rests on the problematic principles of market liberalization and free competition. These principles were introduced through the Constitution of 1991 and further cemented in Law 142 on domiciliary public services due to the belief that free competition enables a more efficient provision of public services. Indeed, the Colombian Constitution assumes that "free economic competition promotes in the best way the interests of consumers and the efficient functioning of the different markets"<sup>36</sup> (Sentence C-355/1997). However, the principle of free competition in the recycling sector signifies that waste picker organizations, whether formalized or in the process of formalization, will be forced to compete with large companies for access to recyclable waste.

Following the directives outlined in Law 142, National Decree 596 states that public services must be provided under the principle of free competition or through ASEs. In Bogotá, while waste management services are provided under ASEs, recycling services are provided under the principle of free competition<sup>37</sup> (UAESP, 2017). In privileging this economic system, National Decree 596, therefore, creates a significant gap in the normative framework on the formalization of waste picker organizations:

The process of free competition has left a huge gap in the decree for private companies to use the privileges that are given to waste picker organizations and can come to receive the benefits that had been intended for these organizations for being in a situation of socioeconomic vulnerability<sup>38</sup>. (Interview Ricardo Valencia)

Indeed, this provision enables large, private companies to enter the recycling market and, in the process, significantly limit the ability of waste pickers, whether unorganized, organized or in the process of formalization, to continue performing their labor. Moreover, it also implies that formalized waste

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<sup>36</sup> "la libre competencia económica promueve de la mejor manera los intereses de los consumidores y el funcionamiento eficiente de los diferentes mercados."

<sup>37</sup> The Constitutional Court states that "free competition occurs when a group of entrepreneurs, in a regulatory framework of equal conditions, put their efforts, business and production factors, in the conquest of a given market, under the assumption of the absence of barriers to entry or of other restrictive practices that hinder the exercise of a lawful economic activity" (Sentence C-815/2001). / "La libre competencia se presenta cuando un conjunto de empresarios, en un marco normativo de igualdad de condiciones, ponen sus esfuerzos, factores empresariales y de producción, en la conquista de un mercado determinado, bajo el supuesto de la ausencia de barreras de entrada o de otras prácticas restrictivas que dificulten el ejercicio de una actividad económica lícita" (Sentencia C-815/2001).

<sup>38</sup> El proceso de la libre competencia ha dejado un hueco enorme en la norma para que empresas privadas utilicen los privilegios que se les dan a las organizaciones de recicladores y entren a recibir beneficios que habían sido previstos a esas organizaciones por estar en situación de vulnerabilidad socioeconómica.

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pickers organizations will be forced to compete with private companies, which possess far more financial, technical, and physical resources, for the lucrative recycling market. This provision ultimately undermines efforts for the integration and empowerment of waste picker organizations.

However, the problem I outline here is not necessarily with free competition, although several criticisms can be made of this principle in the context of public service delivery, but of free competition between unequal entities. Competition between entities of unequal financial, technical, and physical capabilities introduces issues of equity and ultimately defies the social objectives of National Decree 596, since large companies, with extensive resources and assets, could easily comply with the requirements in order to be recognized as official providers of recycling services. As a result, these companies, by gaining substantial shares of the recycling market, would ultimately expel waste pickers from this sector and threaten this longstanding profession, given their considerable resources and experience.

Furthermore, the application of this principle in National Decree 596 significantly curtails national and municipal efforts to comply with the requirements of the Constitutional Court for the further integration of waste pickers in the recycling sector. In the long run, the principle of free competition could effectively undermine the rights protected by the Constitutional Court, such as access to waste, the right to their labor, and their status as subjects of special constitutional protection.

### **Conflicting Models of State in the Public Services Sector**

In sum, although my analysis has been highly critical of limitations of National Decree 596, it is important to acknowledge its novelty in terms of the formal integration of waste pickers in the municipal recycling sector. Its progressive normative framework on the formalization of waste picker organizations as official providers of recycling services nonetheless represents a substantial attempt by national authorities to comply with the orders of the Constitutional Court regarding the recognition of the service provided by waste pickers as well as on their inclusion in the recycling sector. It recognizes the invaluable contributions made by the informal sector and introduces a progressive framework for the legitimization and remuneration of waste picker organizations. Moreover, this decree illustrates the culmination of waste pickers' longstanding activism and introduces important new implications for current models of service delivery and our understanding of informality in the recycling sector. Indeed, future research will be required to examine how this formalization process and the recognition of waste pickers organizations as official providers will affect our understanding of possible 'alternative' models of service delivery that move away from the public and private dichotomy. Future research will also be needed to understand how

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these new dynamics will reshape our understanding of informality with regards to formalized waste picker organizations.

Nonetheless, while National Decree 596 is progressive in many ways, it introduces important challenges and barriers to waste pickers' formalization process that stem from the hegemony of neoliberal ideology in the normative framework that regulates the public services sector. The prioritization of companies as the preferred organizational figures for the efficient provision public services in Law 142 of 1994 has resulted in the establishment of technical, administrative, commercial, and financial requirements for the formalization of waste picker organizations that are ultimately unattainable for the majority of waste pickers. Moreover, although Colombia's Constitutional Court has demanded the inclusion of waste pickers in the recycling sector by municipal, district, and national authorities, the principle of free competition, ultimately infringes upon the capacity of waste picker organizations in Bogotá of providing municipal recycling services, given of their inability to compete with large private companies.

Thus, the present analysis of the conditions for the formalization of waste picker organization as well as the barriers that originate from the hegemonic neoliberal ideology in the public services sector exemplifies and corroborates Parra's argument that "still today, there is a terrible tension, almost a contradiction, between the [Constitutional Court's] orders of inclusion and recognition of waste pickers as service providers and the rules which govern the provision of public services, in particular in the straightforward application of the principle of free competition that threatens any action that gives preferential treatment to waste pickers in the provision of recycling services when this affects the right (or profitability) of waste management companies to participate in the waste market"<sup>39</sup> (Parra, 2016, p.252). Indeed, the barriers to the formalization of waste picker organizations originate from the tensions caused by the coexistence of conflicting ideologies of neoliberalism and social rights' protection. Both of these ideologies, in fact, emanate from the contradictory models of state introduced in the Constitution of 1991. The following discussion will, therefore, analyze the implications of these conflicting models of state on public policies in the waste management and recycling sectors.

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<sup>39</sup> Aun hoy en día se constata una terrible tensión, casi contradicción entre las ordenes de inclusión y reconocimiento de los recicladores como prestadores de servicio de aprovechamiento y las reglas de juego que rigen la prestación del servicio, en particular la aplicación simple y plana del principio de libre competencia que amenaza cualquier acción que dé un trato preferencial a los recicladores en la prestación del servicio de aprovechamiento cuando esta afecte el derecho (o la rentabilidad) de las empresas de aseo a participar del negocio de basuras.

## Chapter 6: Discussion

The challenges faced by waste picker organizations in their formalization process as official providers of recycling services are emblematic of the contradictory normative frameworks that coexist in Colombia and that originate from its Constitution. Indeed, while National Decree 596 represents an important step towards the greater inclusion of waste pickers in the municipal recycling sector and can be seen as a sincere attempt by the state to comply with the orders of the Constitutional Court, the hegemonic neoliberal narrative of free competition, introduced through the Constitution and later engrained in Law 142, ultimately hinders any attempt in altering their subordinate position to private companies.

Waste pickers continue to face challenges in their formalization process that are rooted in the conflicting roles of state that were established by the new Constitution of 1991. Indeed, as Murillo & Gómez (2005) have suggested, the Constitution has introduced two antagonistic models of state: the social state of right and the neoliberal state. It, therefore, positions the neoliberal orientations of economic liberalization promoted by the Colombian government against the social and rights-based orientations of the Colombian judicial system (Saffron, 2007). Within the waste management sector, Law 142 of 1994 has cemented the hegemony of neoliberal ideology, which promotes market liberalization and free competition in the public services sector. In contrast, the Constitutional Court has introduced mechanisms, such as *tutela* actions, for the protection of constitutional rights, human dignity, social inclusion, and equality. As a result of relentless legal actions from waste pickers, the Constitutional Court has recognized the economic and social rights of waste pickers and has required national and municipal authorities to ensure their inclusion and integration in the recycling sector.

Thus, the coexistence of these contradictory models of state has created significant tensions in Colombia's waste management sector. Indeed, the neoliberal paradigm secured through Law 142, which views the principle of free competition as the optimal way to regulate the provision of public services, has proven in many cases to be incompatible with the orders of the Constitutional Court, which demand the recognition of waste pickers social and economic rights and their further inclusion in the waste management sector. As a result, it communicates conflicting political orientations to municipal authorities regarding the functioning of waste management systems and the regulation of different actors within this sector:

Public policies have two perspectives: a perspective of integration, recognition, and remuneration that comes from the Constitutional Court and waste pickers themselves, and a perspective that is

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rooted in the profitability and sustainability of the business, through the logic of the market.<sup>40</sup>  
(Interview Federico Parra)

While the national normative framework in the waste management sector provides a series of directives and obligations, it is, in fact, municipal authorities that have the responsibility of integrating these orientations into municipal policies and programs. Indeed, municipalities have some flexibility in how they are integrated and therefore do not have to follow one specific model, although they must abide by the general directives included within national legislation (Lleras, 2014). Therefore, in the face of these conflicting political orientations and their lack of harmonization, district authorities have attempted in some measure to comply with the Constitutional Court's orders on the protection of waste pickers rights and their inclusion in the formal recycling sector, but ultimately, they have largely sided with the neoliberal paradigm as a way to regulate waste management and recycling services. District authorities have abided by the Court's orders to the extent that this compliance does not infringe upon the hegemony of neoliberal policies of market liberalization in the provision of these services. As a consequence, district authorities have inhibited any 'real' attempt to ensure the greater integration of waste pickers in the Bogotá's formal recycling sector. In fact, municipal authorities have been able to privilege the interest of private companies over those of waste pickers given the lack of enforcement of the orders of the Constitutional Court and the hegemony of neoliberal ideology within the waste management and recycling sectors.<sup>41</sup> Therefore, as Saffron (2007) argues that:

The judicial protection of social rights has the capacity of imposing some substantial limitations on the progress of neoliberal policies [...]. Yet, in the absence of a wider counterhegemonic strategy, it is difficult for the judicial power, on its own, to prevent the advancement of neoliberalism. Indeed, an effective counterhegemonic strategy would require the support of the judicial protection of social rights by both de facto and political powers in the national and international context. (p.536)

While there have been some significant advancements in the inclusion of waste pickers in the municipal waste management sector, waste pickers in Bogotá still do not possess sufficient support from political elites, both at the district and national levels, to significantly limit the hegemony of neoliberalism within the waste management and recycling sectors. Therefore, until they manage to garner sufficient

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<sup>40</sup> Las políticas públicas tienen dos perspectivas: una perspectiva de integración, reconocimiento, y remuneración que viene de la Corte Constitucional y de los mismos recicladores, y una perspectiva que se veía acuñando en la rentabilidad y la sostenibilidad del negocio, por la lógica del mercado.

<sup>41</sup> However, the mayor of Cartagena, Dinosio Vélez Trujillo, received a sentence of 3 days of prison and a fine equivalent to value of 10 minimum wages for failure of implementing affirmative actions towards the inclusion of waste pickers (Caracol Radio, 2015).

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support from political elites or until the Constitutional Court's orders are enforced, the integration and formalization waste pickers within Bogotá's recycling sector will remain subject to and limited by the hegemony of neoliberal ideology within the district government and the normative framework that regulates public services.

### **Urban Political Ecology: The Struggle over Waste in Bogotá**

Waste is therefore at the center of this highly conflictual political environment. Although waste is often considered solely in terms of consumption processes, in which the transformation and consumption of resources are at the center, this research has shown that it is also a (sought-after) resource and not merely the valueless, apolitical by-product of our consumerist culture as we often see it to be. Waste is innately wrapped-up in the broader urban political and economic strategy. As such, the provision of waste management services is deeply embedded in multiple, multi-scalar structures of power. This research has therefore evidenced the highly politicized nature of waste and of waste management systems in Bogotá, drawing on both first wave and second wave UPE analysis.

Indeed, this study has illustrated that policy and legislative frameworks in the waste management sector in Bogotá have created an unjust urban environment. The barriers that waste picker face in their formalization process as providers of municipal recycling services are the result of the uneven socio-ecological relations of capitalist market societies that create inequalities in access to resources. The neoliberal Colombian state regulates and controls the material conditions of the recycling sector in a way that ultimately privileges market principles of free competition and economic efficiency over the social and economic rights of waste pickers. The state exercises power, as a regulating entity, in a way that allows only a limited number of actors in the waste management and recycling value chain to effectively benefit from the waste. The neoliberal orientations pursued by national and municipal governments continue to privilege the interests of political elites and have pushed waste pickers into a subordinate position within the waste sector. Waste has therefore been socially mobilized in a way that allows private companies to benefit more extensively from its value.

In fact, although National Decree 596 affords waste picker organizations certain privileges, it nonetheless represents a veiled attempt at improving waste pickers' socioeconomic condition and leaves them highly susceptible to market competition from large private companies. In addition, waste picker organizations that have the financial, physical, and technical capacity to comply with the requirements represent only roughly 4% of the waste picker population. Therefore, unless significant efforts are made

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by municipal authorities to provide assistance to unorganized waste pickers in order to allow them to begin the formalization process, the benefits of recyclable waste will fall in the hands of private companies or a hand full of formalized waste picker organizations, leaving the majority of waste pickers to fend for themselves. While waste picker organizations have used their improved bargaining power to ensure their recognition and demand for their inclusion in the municipal waste management sector, neoliberal ideology in the provision of recycling services still limits their ability to benefit justly from this market. Current legislation and public policies, although attempting to promote greater inclusion, continue to perpetuate conditions of inequality, vulnerability, and exclusion.

At the same time, this research also provides a more ontological analysis of the materiality of waste and has exemplified how waste is deeply bound up processes of urban subject formation and empowerment. As evidenced throughout this thesis, waste picker's subjectivity and identity are uniquely derived from and shaped by the materiality of waste. Indeed, waste is not solely mobilized by government authorities and private companies in order to pursue their own interests, it is also mobilized by waste pickers in processes of subject formation and in a way that creates new subjectivities and that generates empowerment and agency. Their subjectivity, both as individuals and as a community, is deeply embedded in their relationship with waste and the nature of their work. While waste picker's identity has often been associated with the waste they collect, as dirty and disease-ridden, they have reclaimed it as vital agents in ensuring the economic and environmental sustainability of the city. As a community, they are united in their common struggle over waste against government authorities and private companies. Their subjectivity is therefore strongly rooted in their labor and in processes of waste management. Waste is profoundly involved in processes of urban subject formation as they have become an influential social group as a result of their collective mobilization. As such, beyond examining governance "by tracing the circuits of power through which citizens are controlled, dominated, or oppressed by the state and related institutions", this thesis also contemplates "the momentary and the commonplace, highlighting the ambiguity, ambivalence, indecision, and opportunity in which new realms of being emerge through the formation of new associations among governing subjects and the world around them" (Gabriel, 2014, p.42). New realms of being have emerged that are deeply embedded in the materiality of waste.

In addition, their agency as a community and as active agents is also profoundly rooted in their relationship with waste. Historically, waste pickers were typically rural migrants fleeing "*La Violencia*" that settled in Colombian in search of new opportunities. While many waste pickers still face deplorable working and living conditions, they have nonetheless become empowered and resilient actors that have managed to elevate their claims for recognition and socioeconomic protection to the Constitutional Court. Indeed, through the formation of associations and collective mobilization as well as by utilizing the

judicial mechanisms at their disposal, waste pickers in Bogotá have successfully advocated before the Constitutional Court for the recognition of their labor as a productive and fundamental public service, the protection of their socioeconomic rights, and their inclusion in the municipal waste management sector through affirmative actions. Therefore, although, as I have illustrated, Colombia and Bogotá's political economy has in many ways continued to marginalize waste pickers, they have nonetheless become empowered and active agents, critical in reshaping the waste management sector. Both their resilience and agency are born from their collective struggle for recognition and identity, uniquely embedded in their relationship with waste.

Thus, as Loftus (2009) asserts "by connecting the individual with the broader networks of power, there is the possibility of seeing the subject as both the iteration of practices of power and also a knowing, situated and active agent, contesting the consolidation of hegemony through the integral state" (p.959). This assertion holds particularly true in the case explored in this thesis. Indeed, waste pickers are both subjugated by practices of capitalist power and empowered agents contesting the hegemony of neoliberalism in the waste management sector. These dual processes are a result of the ways in which waste has been socially mobilized and are deeply rooted in the materiality of waste. Waste is therefore not an apolitical by-product of our consumerist society, but rather a non-human agent intertwined in the socio-natural processes that produce the city.

### **Recommendations**

While waste pickers have gained significant empowerment since the 1950s, national and municipal policies and legislation continue to marginalize them within the waste sector. As previously evidenced, the hegemony of neoliberal ideology in the waste sector undermines any attempt to improve waste picker's socioeconomic conditions and secure their right to their labor. Thus, from a more ideological standpoint, there needs to be a process of harmonization between the Law 142 and the Constitutional Court's orders on the recognition of waste pickers' rights and their inclusion in the municipal recycling sector. While it is obvious that the neoliberal ideology of the Constitution and Law 142, which privileges market liberalization and free competition in the public services sector, will endure, advancements in the harmonization of public policies could be achieved with the establishment of a law specifically on waste management and recycling services. Indeed, the waste management and recycling sector in Colombia is regulated not by a law that exclusively governs waste processes, but rather by a law on public services:

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We are regulated by a law on public services, not by a law on waste. We do not have a law that addresses the entire [waste] cycle. And that is serious, because it does not generate mechanisms of co-responsibility among other actors<sup>42</sup>. (Interview Federico Parra)

Informal sector dynamics and the status of waste pickers as subjects of special constitutional protection is arguably unique to the waste management sector. Therefore, introducing a law that specifically regulates the waste management and recycling sector could allow for the harmonization of public policies with the orders of the Constitutional Court.

More realistically, however, district authorities in Bogotá must formulate and implement capacity building programs that accompany and assist waste pickers in their formalization processes. While these authorities have formulated several plans and programs for the inclusion and support of waste pickers in it PGIRS and PMIRS, these have had low levels of implementations, due to lack of incentives, focus on high-technology fixes, and inadequate remuneration schemes. It is important for these programs to provide more tailored assistance and support that differ between unorganized waste pickers, which make up 70% of this population, and organized waste pickers that are part of small organizations that lack the financial, technical, and physical resources to undertake the formalization process. These programs should focus on improving the informal sector's ability to provide recycling services, through infrastructure, financial, and technical support, in order to allow waste pickers to become more competitive. In addition, district policies on waste management and recycling services must take into account and reflect more accurately the existing recycling system, which is predominantly managed by the informal sector. To do so, district authorities have to introduce more participatory models of policy and program formulation, planning, and implementation.

### **Looking Forward**

Given its limited scope, this paper was unable to answer several fundamental questions raised throughout this study with respect to the impact of waste pickers' formalization process on Bogotá's political landscape. Indeed, since waste picker organizations have only recently begun to formalize, there remain many uncertainties in terms of how this process will affect Bogotá's recycling sector. In the event that some waste picker organizations comply with the requirements outlined in National Decree 596, future research should analyze how this will impact current informal recycling practices as well as the

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<sup>42</sup> Nosotros estamos regulados por una ley de prestación de servicios no por una ley de residuos. No tenemos una ley que aborde todo el ciclo. Y eso es grave, porque no generas mecanismos para que otros actores tengan co-responsabilidad.

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ability of unorganized waste pickers to remain in their occupation. Moreover, additional research is needed to understand how compliance with the requirements outlined in National Decree 596 affect the organizational and operative structure of formalized waste picker organizations. Indeed, pressures from national policies as well as municipal authorities on waste picker organizations to adopt ‘private-sector’ and business characteristics could, in fact, have a profound effect on these organization’s democratic and redistributive dynamics.

In addition, as this research has highlighted, there remain significant concerns in terms of the future of informal recycling activities in Bogotá in the event that large companies are able to successfully comply with the requirement for becoming official providers of recycling services. Indeed, given their extensive resources, they could in many ways reshape Bogotá’s recycling sector in ways that exclude waste pickers. Therefore, future research should analyze the impact of the free competition on the formalization of waste picker organization and their ability to provide recycling services as well as the extent to which these companies have expelled waste pickers from the recycling market. In addition, in the case that this co-production model is expanded, where waste picker organizations provide the majority of recycling services, further research must also focus on finding ways to mitigate the social, economic, and health concerns previously outlined, such as high incidences of poverty, social marginalization, and health hazards, and to improve waste pickers’ working conditions. A better understanding of these dynamics could, therefore, help inform public policies in other countries in the Global South in order to allow them to manage growing quantities of waste in a more environmentally sustainable and socially inclusive manner.

## Chapter 7: Conclusion

Bogotá's waste management sector has undergone important transformations since the mid-20<sup>th</sup> century. It has been marked by three key transitions that occurred simultaneously from the mid-20<sup>th</sup> century to the present day: a transition in the role of the state from provider to regulator of waste management services; a transition in policy focus from public health to environmental protection; and a transition from largely exclusionary policies towards informal workers to the integration of waste picker organizations in the municipal waste management sector. These transitions were fundamental in reshaping Bogotá's waste management sector into a more environmentally sustainable and socially inclusive sector.

Indeed, while a wave of decentralization transferred the responsibility for providing public services onto municipalities, the introduction of the neoliberal paradigm in the Constitution and in the public services sector altered the role of the state into a regulating entity. Principles of market liberalization and free competition were introduced within the public services sector, as a way to ensure greater coverage and efficiency, thereby breaking the state's monopoly in the provision of these services. At the same time, waste management policies in Bogotá, and in Colombia more generally, shifted from a focus on public health to one on environmental protection. In Colombia, initial waste management policies focused heavily on sanitary concerns, such as the prevention and mitigation of the impact of waste on public health. While protecting health remained the primary driver of waste management policy for most of the 20<sup>th</sup> century, more recently the state has focused more notably on environmental protection. Indeed, the growing size and complexity of the waste problem inspired national and municipal authorities to think more holistically about waste management, pushing them to include recycling services within the waste management sector and to introduce municipal plans, programs, and instruments on the integral management of waste.

Finally, the municipal government of Bogotá has also changed its approach towards waste pickers. As a result of relentless legal pressure from waste pickers, Bogotá transitioned from largely exclusionary policies, which negatively affected the rights of waste pickers and hindered their ability to perform recycling services, to more inclusive policies, which recognize the social and economic rights of waste pickers as a vulnerable population. Through the use of the *tutela* action, waste pickers secured the recognition of their rights by the Constitutional Court as well as formal recognition of their role as a legitimate service provider in municipal recycling sector, as evidenced by National Decree 596.

These transitions therefore explain and contextualize the emergence of a paradigm shift in Bogotá's waste management sector from a "transportation and burial-center models in the hand of stock-

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companies, to a model that demands the valorization of waste and the recognition and remuneration of waste pickers as providers of recycling services<sup>43</sup> (Parra, 2016, p.2). This shift is the result of waste pickers' organization and activism, which have had a profound effect on waste management legislation. Indeed, while national and municipal authorities have established a series of inclusive policies, none to date have been as important as National Decree 596. This decree introduces a transitory regime, which outlines specific financial, administrative, technical, and physical requirements, for the formalization of waste picker organizations into official providers of municipal services. It represents the first real attempt by the national government to advance the formalization of waste picker organizations and to satisfy the orders of the Constitutional Court on the protection of waste pickers rights.

While National Decree 596 has profound positive implications of the greater integration of waste pickers in the formal recycling sector, it introduces important challenges and barriers to waste pickers formalization process that originate from tensions between the State's economic and social orientations. More specifically, the transitory scheme outlined in National Decree 596 has introduced a series of financial, administrative, technical, and physical requirements with which waste picker organizations must comply in order to be recognized as official providers of municipal services. As a result, organizations undergoing the process of formalization will be remunerated for the environmental service they provide, through a recycling fee charged to residents, thus representing an unparalleled achievement towards the inclusion of waste pickers in Colombia. However, although this decree has profound implications in terms of waste pickers recognition and inclusion, it introduces requirements that are out of reach for the majority of waste pickers, given their limited financial, technical, and physical assets. These requirements, in accordance with those outlined in Law 142, are far more suitable for large private companies. They reflect the priority awarded to such companies as the preferred organizational figures for the 'efficient' provision of public services in Colombia's neoliberal regulatory framework for the waste management and recycling sector. This preference has resulted in the establishment of requirements for the provision of recycling services that are ultimately unattainable for the majority of waste pickers, since 70% of waste pickers are unorganized and 25% are part of organizations that lack the resources to comply with these requirements.

In addition, although National Decree 596 represents an important attempt by national authorities to comply with the orders of the Constitutional Court that mandated governments to recognize waste pickers as legitimate service providers in the formal recycling sector, it substantially limits their ability to

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<sup>43</sup> “modelos de transporte y enterramiento de basuras en manos de empresas por acciones, a un modelo que exige el aprovechamiento de residuos y el reconocimiento y remuneración de los recicladores como prestadores del servicio público de recolección transporte y aprovechamiento”.

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provide such services. Indeed, in accordance with the neoliberal orientation of the Constitution and of Law 142, it stipulates that recycling services must be provided under the principle of free competition. This provision reflects the hegemony of neoliberal ideology in the regulation of the public services sector, which considers that market liberalization and free competition ensure the most efficient provision of these services and best promote the interests of consumers. However, by introducing this principle in National Decree 596, national authorities have created a significant gap, which allows private companies to use and benefit from the privileges awarded to waste picker organizations all the while largely excluding the informal sector from the recycling market. Indeed, in the highly probable event that large private companies comply with the requirements of the law and become official providers of municipal recycling services, they will limit waste pickers ability to remain in this sector, since they possess far more assets than their informal counterparts. As such, the principle of ‘free’ competition ultimately infringes upon the capacity of waste picker organizations in Bogotá to provide municipal recycling services, given their inability of competing with large private companies due to their lack of technical, financial, and physical resources.

This analysis on the limitations of the formalization process outlined in National Decree 596 and the remaining legislative challenges still faced by waste picker organizations has evidenced the considerable tensions in Colombia’s waste management and recycling sector. Indeed, these limitations originate from the coexistence of conflicting ideologies neoliberalism and social rights’ protection engrained in the Constitution of 1991. Indeed, as Murillo & Gómez (2005) have suggested, the Constitution has introduced two antagonistic models of state, the social state of right and the neoliberal state. The neoliberal orientations, rooted in the principle of economic liberalization, promoted by the Colombian government are juxtaposed to the social and rights-based orientation of the Colombian judicial system. The social state assumes a prominent role in ensuring the protection of its citizens’ constitutional rights, such as human dignity, social inclusion, and equality. As such, the Constitutional Court has recognized the social and economic rights of waste pickers, as subjects of special constitutional protection, and has demanded their inclusion in the municipal recycling sector. In contrast, the neoliberal state, as a regulating entity, must ensure the promotion of a neoliberal economic model.

Within the waste management sector, Law 142 of 1994 has cemented the hegemony of neoliberal ideology through several mechanisms, including the protection of market liberalization and free competition. These conflicting ideologies and models of state have therefore created profound tensions in the waste management and recycling sector in regard to how municipal authorities should integrate these directives and orientations in municipal policies and programs. Consequently, my research suggests that within the context of these contradictory ideologies, authorities in Bogotá have complied with the orders

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of the Constitutional Court on the protection of waste pickers' rights and their inclusion in the formal recycling sector to the extent that this compliance does not infringe upon the hegemony of neoliberal policies. In doing so, these authorities create a new form of exclusion, where waste picker organizations have a subordinate position to private recycling companies.

Therefore, while waste pickers fight for recognition of their contributions has had profound impacts on waste management and recycling policies, it has not materialized in a sufficient counterhegemonic strategy given the lack of support from political elites in Bogotá. Although Bogotá remains an important example of inclusive policies towards the recognition of waste pickers as providers of public services, the tensions introduced through conflicting models of state must be addressed, through a process of harmonization of waste management legislation and policies, in order to ensure that waste pickers continue to operate within the municipal recycling sector.

Nonetheless, although there remain significant legislative and institutional challenges that hinder waste pickers formal integration in the municipal recycling sector, the formalization process outlined in National Decree 596 nonetheless legitimizes waste picker organizations as official service providers and has important implications for 'alternative' forms of service delivery. While this process requires fundamental transformations in the way waste picker organizations are structured and operate, it nonetheless provides an important avenue for the integration of these third sector organizations within the municipal recycling services and introduces an 'alternative' model of service delivery, one that moves away from the public and private dichotomy. While third sector organizations provide an important avenue for new models of service delivery since they not only allow for the economic and social empowerment of marginalized populations, but bolster high recovery rates, it is important not to romanticize our perception of these organizations and to recognize their limitations. Indeed, high incidences of health problems, social stigmatization, and poverty are still common to informal recycling activities. Waste picker organizations have not been able to mitigate all of these challenges. Therefore, although the social orientations of these organizations are crucial in positioning them valuable 'alternatives', these organizations nonetheless face important challenges in improving the working conditions of its members. While no model is perfect, third sector organizations nonetheless provide important environmental, social, and economic benefits to cities as well as introduce redistributive mechanisms that benefit marginalized populations. These mechanisms are a stark contrast to the profit-oriented motives of large, private companies that largely neglect the social orientations of public service delivery. Further integration in the formal recycling sector and increased support from municipal and national governments could significantly enhance the value of these organizations as 'alternatives' model of service delivery.

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Although limited in scope, this research has broader implications for low- and middle-income countries attempting to manage growing quantities of waste. Indeed, rapid urbanization, economic development, increased disposable income, and the growth of the consumerist culture has forced cities in the Global South to confront colossal quantities of waste and have left them searching for new ways to properly manage this crisis, particularly in light of the unsuitability conventional centralized and capital-intensive waste management systems to their local context.

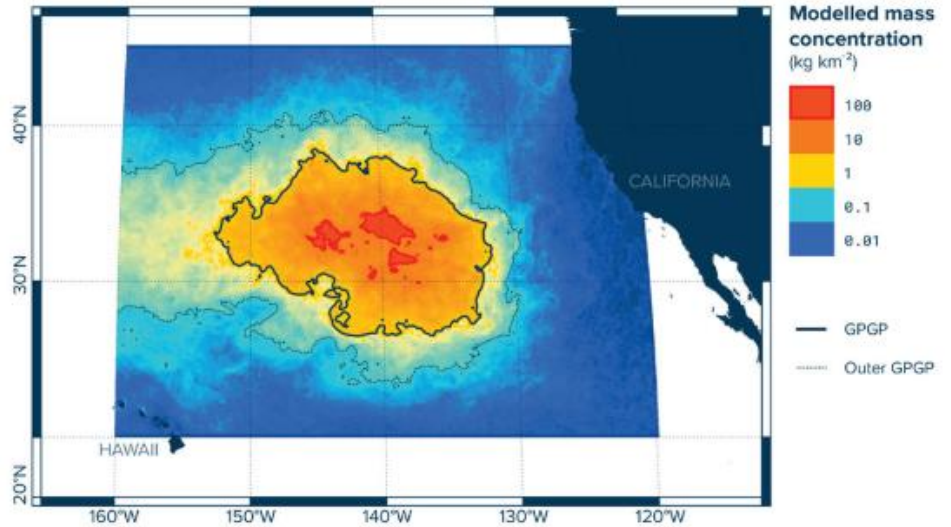
Therefore, the contributions of this research could serve to inform public policies in the waste management and recycling sector in low- and middle-income countries and provide important information on how to manage waste in a more environmentally sustainable and socially inclusive manner. Although the legal and policy environments analyzed throughout this research are specific to the Colombian context, the lessons learned from the development and implementation of more frameworks that recognize the environmental contributions of waste pickers can help advise municipal government as well as policymakers in the Global South. In addition, while Bogotá should be recognized as a positive example of inclusive policies towards waste pickers, understanding the limitations of these policies and the challenges still faced by waste pickers in their attempts to formalize can help shape future recycling systems both in Colombia and in other countries attempting to transition to a more environmentally sustainable and socially inclusive system.

By evidencing the benefits and contributions of informal recycling activities, this research has emphasized the need to adapt policies to the realities of the informal sector. This is especially important since most cities in low- and middle-income countries lack formal recycling systems and continue to promote exclusionary policies towards waste pickers, which hinder their ability to perform their labor and thus limit their environmental contributions. Therefore, adapting policies to the realities of the informal recycling sector could have important environmental repercussions. As such, research on the benefits and limitations of public policies that support waste pickers and their informal recycling activities can have profound implications on both local and global efforts for the better management of solid waste. Although small in scope, this research supplements existing literature on creating more inclusive and sustainable cities through the empowerment of the informal sector.

While this study has focused on low- and middle-income countries, exorbitant levels of waste generation are nevertheless part of a global crisis. Indeed, plastic pollution is one of the greatest environmental challenges of our era. Plastic waste has infiltrated every part of our lives, including our oceans. It comes as no surprise that waste disposed of in oceans has accumulated to form the Great Pacific Garbage Patch, which has an estimated surface area of 1.6 million square kilometers and contains roughly 1.8 trillion pieces of plastic (Lebreton et al., 2018). While the scope of this study is limited, it has

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broader implications on global strategies to manage the growing waste crisis. As research has evidenced, informal recycling activities bolster high recovery rates, ones that rival rates in high-income countries obtained from expensive, high-technology systems. Although it may seem trivial given the size of the Great Pacific Garbage Patch, one can,



Picture 5. Modelled mass concentration of plastic in the Great Pacific Garbage Patch. Source: The Ocean Cleanup (n.d.).

however, reflect on how many fewer pieces of plastic would be floating around in this patch if more countries recognized waste pickers' contributions, supported them through capacity-building and social programs, and formally integrated them within the municipal recycling sector. Any step taken towards fighting plastic pollution can have profound global repercussions. As this research has evidenced, we must pay close attention to ensure social inclusion and equality as we attempt to transition towards a more environmentally sustainable future.

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