



INTEGRATION OF WASTE PICKERS TOWARDS AN INCLUSIVE CIRCULAR ECONOMY: TWO CASE STUDIES IN CANADA

DOI: <http://dx.doi.org/10.55449/conresol.7.24.XIII-004>

Ana Maria Rodrigues Costa de Castro (*), Jutta Gutberlet, Valdir Schalch

* Department of Hydraulics and Sanitation, São Carlos School of Engineering, University of São Paulo, anamcastro@usp.br

RESUMO

Os catadores são atores fundamentais na gestão de resíduos municipais e na transição para uma economia circular. Apesar da importância do seu trabalho, a maioria desses trabalhadores ainda não é devidamente reconhecida, respeitada e remunerada, fazendo necessárias iniciativas que promovam sua integração aos sistemas de gerenciamento de resíduos. Já existem muitos relatos na literatura sobre integração de catadores em países em desenvolvimento, em especial no sul global. No entanto, pouco se sabe sobre o setor informal da reciclagem e o que tem sido feito para integrá-los nos países do norte global, como o Canadá. Visando cobrir esta lacuna, buscamos analisar iniciativas para a integração de catadores na gestão de resíduos municipais no Canadá, destacando as suas principais características e contribuições para a economia circular. Foram escolhidos o Binnors' Project (BP), em Vancouver, British Columbia, e a cooperativa Les Valoristes, em Montreal, Quebec, como estudos de caso. Os procedimentos metodológicos incluíram entrevistas com os líderes dos dois grupos, análise de dados secundários disponíveis nos sites, relatórios, teses e artigos, e visitas em Vancouver ao BP e a um depósito de retorno de embalagens gerido como empreendimento social. Os resultados mostram similaridades entre as iniciativas, como o fato de ambas serem organizações de base com abordagem bottom-up, nas quais os catadores têm funções e participam na tomada de decisões. As duas contribuem para a geração de trabalho, maior reconhecimento e conquista de espaços para os catadores, melhorias na separação e recuperação de recicláveis e, portanto, para a economia circular.

PALAVRAS-CHAVE: integração de catadores, economia circular, gestão de resíduos, logística reversa, reciclagem inclusiva.

ABSTRACT

Waste pickers are key actors in municipal waste management and in the transition to a circular economy. Despite the importance of their work, most of these workers are still not properly recognized, respected and remunerated, making initiatives necessary to promote their integration into formal waste management systems. There are already many studies in the literature about the integration of waste pickers in developing countries, especially in the global South. However, little is known about the informal recycling sector and what has been done to integrate them in global North countries, such as Canada. Aiming to cover this gap, we seek to analyze initiatives for the integration of waste pickers in municipal waste management in Canada, highlighting their main characteristics and contributions to the circular economy. The Binnors' Project (BP), in Vancouver, British Columbia, and the Les Valoristes cooperative, in Montreal, Quebec, were chosen as case studies. The methodological procedures included interviews with the leaders of these two groups, analysis of secondary data available on websites, reports, theses and articles, and visits to the BP and a bottle depot, run as a social enterprise in the city of Vancouver. The results show similarities between the initiatives, such as the fact that both are grassroots organizations with a bottom-up approach, in which waste pickers have specific roles and participate in decision-making. Both contribute to the generation of work, greater recognition and conquest of spaces for waste pickers, improvements in the separation and recovery of recyclables and, therefore, to the circular economy.

KEY WORDS: waste pickers integration, circular economy, waste management, reverse logistics, inclusive recycling.

INTRODUCTION

The growing generation of waste in addition to the challenges of its correct management, requires changes to the current system, which is predominantly linear and where many resources are wasted. In this scenario, the idea of the circular economy emerges as a possible solution, which can be understood as a new economic system where the concepts of waste reduction, reuse, recycling and recovery prevail, instead of the idea of end of life (KIRCHHERR; REIKE;



HEKKERT, 2017). The circular economy is closely related to sustainability and its implementation has the potential to contribute to the achievement of the Sustainable Development Goals (SDGs) (VELENTURF; PURNELL, 2021).

The transition to this circular economy would involve several actors, including the waste pickers, who work in the collection, separation, processing and reinsertion of recyclable materials into the production cycle. Despite the importance of these workers, many of them still suffer from a lack of recognition (RENDON; ESPLUGA-TRENC; VERD, 2021), difficult working conditions (CENTENARO *et al.*, 2021), exposure to occupational hazards (ZOLNIKOV *et al.*, 2021), among other challenges. One way to change this reality is through the integration of waste pickers into waste management. This integration could, in addition to improving the living and working conditions of waste pickers, increase the recovery of recyclable materials, having impacts in terms of circularity and sustainability.

There are already many publications on the integration of waste pickers in developing countries, such as Brazil (FIDELIS *et al.*, 2020), India (ESTRADA *et al.*, 2023), South Africa (BARNES *et al.*, 2022), among others. On the other hand, the presence of the informal recycling sector in developed countries and the initiatives for its integration are still little explored in the literature (BULLA; RENDON; TRENC, 2021).

Aiming to cover this gap, research was initiated through contacts with the North American Waste Pickers Association (NAWPA), recently being created and which includes groups of waste pickers from Canada and the United States. In this first stage of the research, which will be described in this article, we will focus on two Canadian groups: the Binners' Project in Vancouver, British Columbia (BC), and the Cooperative Les Valoristes in Montreal, Quebec. Through these two case studies, we seek to answer the following research questions: What kind of initiative happens in Canada to integrate waste pickers? What is their contribution to the circular economy?

OBJECTIVE

Analyze initiatives for the integration of waste pickers in municipal waste management in Canada, highlighting key characteristics and contributions to the circular economy.

METHODS

The research is classified as qualitative and exploratory, and consisted of 4 steps (Figure 1). The first was an analysis of secondary data available on websites, reports, papers and theses about the initiatives and the local waste management and Extended Producer Responsibility (EPR) systems in which they are involved.

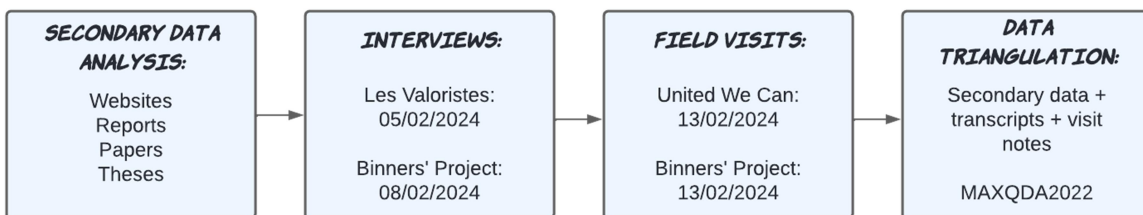


Figure 1: Research steps. Source: Authors.

The second stage was the online interview with leaders of both initiatives, which was recorded and transcribed. We followed a script previously approved by the Ethics Committee for Research involving Human Beings of the School of Arts, Sciences and Humanities of the University of São Paulo, Brazil (number 76555923.2.0000.5390). In the case of Montreal, the interviewee was one of the founders of the cooperative and has been working there since the beginning (2012); while the interviewee from Vancouver has been working in the project for 2 years and 8 months and is currently the director of the Binners' project. Therefore, they both have great knowledge about how the initiatives works.

Two field visits were also carried out in Vancouver in February 2024 to collect data through observation and informal conversations. The aim was to know more about the project and how the return system works in this city, and to also talk informally with participant waste pickers. The first visit was to the United We Can (UWC) depot, where most of waste pickers go to return the refundable beverage containers they collect (SHOLANKE; GUTBERLET, 2022; TREMBLAY, GUTBERLET; PEREDO, 2010), knowing that members of the depot have participated in the creation of both the Binners' Project and Les Valoristes initiatives. The other visit was to the Binners' Project's weekly meeting, where 85 binners were present. Unfortunately, it was not possible to travel to Montreal to do a visit there due to budget



limitations. In the end, the data collected in the previous steps were triangulated and the results were analyzed using MAXQDA 2022.

RESULTS AND DISCUSSION

Contextualization of waste management in the cities studied

The two cities have curbside recycling collection and container deposit systems, and all of these initiatives are part of an EPR program. Recycling collection, in Vancouver has been carried out since October 2016 by Recycle BC, a not-for-profit organization responsible for residential packaging and paper product recycling, performing curbside and multi-family collection and depot services. This program is funded by businesses that supply packaging and paper products (RECYCLE BC, 2024).

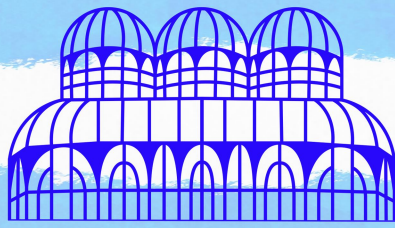
In Quebec, the curbside collection system has been financed by producers of containers, packaging and printed matter through the organization Éco Entreprises Québec (EEQ). In January 2024, EEQ and the city of Montreal entered into a partnership agreement to modernize the recycling curbside collection system, and EEQ became operationally and financially responsible for the recyclables management, while the government continues to participate with inspections, specifications for services contracts, and public awareness building (EEQ, 2024).

However, despite the existence of these selective collection systems, waste picking activity in these places is mainly motivated by the existence of a 'Bottle Bill', which is the term used for a deposit refund system for beverage container. The consumer pays a deposit for the container they purchase and receives the amount back when returning it to the collection points, which can be retailers or specific depots for this purpose. When consumers do not return their packaging and simply discard it along with other recyclables for curbside collection or in public bins, the opportunity arises for waste pickers to earn income by recovering these materials and delivering them to places that pay the deposit.

The main characteristics of the Bottle Bills of the two Canadian provinces where the cities studied are located are organized in Table 1. The system in BC is older and includes more types of containers and beverages. In fact, Quebec's system expanded to include more packaging only in November 2023 (QUEBEC, 2024). Furthermore, in BC the value per container is unique, regardless of the material and size. Both have two organizations responsible for the systems who pay a handling fee to those that are responsible for receiving the containers and paying the deposit, but each one has different rules.

Table 1. Main features of BC and Quebec Bottle Bills.

Province	British Columbia	Quebec
Name	Beverage Container Stewardship Program (Litter Act)	Environment Quality Act / Agreement Relating to the Consignment, Recovery & Recycling of Non-Refillable (Soft Drink/Beer) Containers
Date implemented	1970, last amended in 2022	1984, last updated in 2022
Stewardship agencies	Brewers Distributor Ltd. (BDL): stewardship agency for most domestic beer and some cider brands. Encorp Pacific (Canada): beverage container industry stewardship agency for all other beverage types including wine, coolers, spirits, some import beer, and all non-alcoholic beverages. Operates the Return-It program.	L'Association québécoise de récupération des contenants de boissons (AQRCB) handles all non-alcoholic beverages along with wine and spirits (starting November 1, 2023) Québec Brewers Association handles beer.
Beverages Covered	All ready-to-drink beverages, except infant formula, meal replacements and dietary supplements.	Beer; carbonated soft drinks and energy drinks After November 2023, the following containers were included: Wine; spirits; cider; fruit and vegetable juices; tea; water (sparkling and non-sparkling); milk
Containers	All container types	Aluminum, plastic and glass containers between



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Covered		100mL and 2L
Deposit	10¢ for each of the listed beverage containers	Non-glass containers: 10¢ CAD Glass containers <500 mL: 10¢ CAD Glass containers ≥ 500mL: 25¢ CAD
Handling Fee	Confidential handling fee paid by Encorp Pacific and BDL to authorized depots and contracted retailers. Bottle depots independently negotiate handling fees directly with the beer industry.	2¢ CAD "return incentives" paid to retailers from unredeemed deposits (1¢ CAD for one-way glass containers)
Source	Container Recycling Institute. Last Updated on August 28, 2023 https://www.bottlebill.org/index.php/current-and-proposed-laws/canada/british-columbia	Container Recycling Institute. Last Updated on October 3, 2023. https://www.bottlebill.org/index.php/current-and-proposed-laws/canada/quebec

Another difference between the two systems is in relation to the existence of depots where consumers and waste pickers can return their containers and receive the refund. In Quebec the system is more focused on retail and the first bottle depot in Montreal was only created in 2012, when Coop Les Valoristes was created, which is responsible for its operation. On the other hand, in BC there are several depots. Those in the Return-It system are financed by Encorp Pacific, like the UWC depot that was visited (Figure 2).



Figure 2: Waste picker sorting containers before returning them to the United We Can depot. (Photo by Ana Castro, February 13, 2024).

Description of the initiatives

Table 2 summarizes the main characteristics of both initiatives. In the case of Vancouver, waste pickers call themselves binners and are organized through a Non-Governmental Organization (NGO), while in Montreal they prefer the French term valoristes and are part of a cooperative. The cooperative was created first, in 2012, and the Binners Project was created in 2015, but in both cases the articulation for the creation of these groups started earlier and had the support of the UWC founder, Ken Lyotier.

Table 2. Characteristics of the initiatives studied.

	Binnners' Project	Les Valoristes
Type of organization	NGO	Cooperative
Term and definition used for waste pickers	Binner: A person who collects redeemable containers and other things from bins to sustain their livelihood and to divert waste from landfills; a dumpster diver.	Valoriste: A person who recovers on a regular basis and mainly in the public domain, refundable, recyclable, or reusable materials for economic, social and/or environmental reasons.
Year of creation	2015	2012
How to participate	Attend at least 3 meetings	Pay 10 CAD\$ for a lifetime membership
Waste pickers involved since the beginning (cumulative data)	Between 400 and 500	Around 2000
Current members	40 staff members, including 35 binnners 150-200 binnners involved in the project	3 workers members 27 support members 112 users of the depot
Waste pickers participation in decision-making	Yes	Yes
Partners	Public and private sector; civil society organizations	Public and private sector; civil society organizations
Activities	Back-of-house waste sorting Public waste education Community programs Other city partnerships Universal Cart Initiative Binnners' hook Coffee cup revolution Binnners' meetings Training programs DTES street market	Operation of the bottle depot Binnners' hook Participatory waste bin Services in companies and events Refundable container collection service
Website	https://www.binnnersproject.org/	https://cooplesvaloristes.ca/language/en/home/

Achievements and challenges

Regarding achievements over the years of work, the Binner's Project has seen an increase in the number of binnners participating in the weekly meetings, and an increase in the number of clients interested in contracting the service, which resulted in more resources and more opportunities for members. In the case of Les Valoristes, among the main achievements were the creation of the depot, the non-refundable collection events, in addition to the greater visibility that the valoristes gained in the city. One result that was common to both initiatives was that they began to occupy important spaces in discussions and decision-making, as in the case of the Vancouver government's waste reduction strategy, and in discussions about the EPR with the productive sector in Montreal.

Regarding the challenges, the Binner's Project faces the fluctuation in the ability of binnners to participate and engage in activities and in the local political agenda that is not so compatible with the demands of binnners, and financial challenges. In the case of Montreal, in addition to the financial issue that was also mentioned before, there seems to be the difficulty in being recognized for the work they do. They also face the challenge that they will need to leave the location of the depot, by October 2024, and still do not have a new location.

Types of integration

Both interviewees showed a notion of integration more focused within the group, in the sense of bringing autonomous waste pickers into these groups, where they begin to be included through different actions. This response makes sense within the Canadian context in which the two initiatives are inserted, where waste pickers collect cans and bottles from



public bins for refund or are contracted by clients at specific events, but with little connection to the municipal door-to-door selective collection program. Some waste pickers may even look for recyclables in residential bins, but this is not their main focus. Therefore, the work of these waste pickers is more related to the EPR scheme than to municipal selective collection.

This shows a reality that is very different from the one found in low- and middle-income countries, such as Brazil, where the main activity of waste pickers takes place within municipal selective collection systems and integration usually occurs within these systems (RUTKOWSKI; RUTKOWSKI, 2015). Waste pickers' integration within EPR schemes is something newer and still little explored in the literature.

Regarding integration into the municipal waste system, one of the interviewees argued that the notion of integration into the system that some groups defend does not apply to the reality of valoristes, as many of them receive financial aid (welfare pay) from the government and may lose these benefits if their work is formalized.

The other interviewee also does not see integration within the selective collection system in his city. According to him, the focus should be on streetscape waste from bins on the sidewalk. This type of approach is interesting, as this service will not generate competition between binners and companies that carry out household collection. The binners started to carry out a service of 'rescuing' recyclables from public bins that no one would recover and that would thus be sent to the landfill. So, by focusing on bins, conflict is avoided, and environmental, social and economic benefits can be promoted.

Integration promoted by these two initiatives

The integration mentioned in the case of Montreal can be considered internal, as it occurs through membership in the cooperative (the focus is not on entry into other systems, such as municipal collection or EPR). Some elements of this integration mentioned by the interviewee are the participatory approaches, promoting management where waste pickers are heard, in addition to being a group that represents them and fights for their rights alongside other actors. The cooperative also works to promote the visibility of the valoristes and as a result, members began to appear in the media.

Another integrating factor mentioned by the interviewee is the generation of work within the cooperative (some valoristes are hired), which generates a change in life for people who need an opportunity. During the interview, the story of an employee was told who was a drug addicted, but who overcame the challenges and achieved good work results after receiving the opportunity to work in the depot. A similar story was told by a binner hired to work at the UWC depot in Vancouver, contacted during the field visit. These stories reveal a major challenge for groups that work with waste pickers in North America, in which many have addiction problems, disabilities and are homeless, and these conditions need to be considered when discussing their integration.

In the Binners' Project, integration occurs internally in the project and externally in the community. Within the project, it occurs through the participation of binners in activities, generating work and income opportunities for them. Binners can get involved in the project in 3 ways (from the most informal to the most formal): volunteer, casual staff role and part-time role. On the other hand, community integration is related to advocacy and visibility, with actions that seek to bring binners closer to the community and destigmatize their work, reducing conflicts with residents and landlords who otherwise could not accept their presence.

Contribution to the Circular Economy

When analyzing the contribution of waste pickers to the circular economy (CE) in the contexts studied, the interviewee from Vancouver pointed out the pioneering spirit of these workers, that they act as environmentalists, and that they contribute to filling gaps in the waste management system.

Regarding the project's contribution to the CE, good results from the services provided were mentioned in terms of separation and recovery of recyclables, reaching a diversion of around 80% of what would go to landfills in some locations. Furthermore, destigmatizing the binners makes their work easier, resulting in greater productivity and contributions to the CE. Moreover, the project promotes advocacy work around the importance of the CE.



While in Montreal, the services that valorists and their cooperative perform of separating waste to be returned to the production sector, promoting circularity, was highlighted. Furthermore, the cooperative is responsible for operating Quebec's first bottle depot, facilitating the return of packaging participating in the EPR, therefore contributing to closing the loop.

CONCLUSION

The two initiatives studied have several similarities, such as the fact that they began with the support of the activist Ken Lyotier, they are grassroots organizations with a bottom-up approach, in which waste pickers have participated since their creation, and they occupy roles and participate in decision-making. Both initiatives promote job opportunities, such as hirings for specific services inside and outside the project, and the waste pickers continue to maintain their autonomy, collecting and exchanging recyclables for refunds. Both face financial challenges, have gained space in decision-making, focus more on internal integration, and intrinsically contribute to the circular economy by increasing the recovery of recyclables and their return to the production sector. Furthermore, both cases confirm the contribution of these organizations to destigmatize waste pickers and to contribute to their empowerment.

Among the differences, we identified the classification of the initiative (cooperative and NGO), the form of entry and membership to the group and the fact that only the cooperative operates a bottle depot. Besides that, the Binner's Project has a greater variety of activities and holds weekly meetings with the bidders, much more frequently than the cooperative does.

This article's differential is to present first research results on the waste pickers groups that are part of the North American Waste Pickers Association that is being formed in the region. In the next stage, United States initiatives will also be analyzed and compared with Canadian ones. Furthermore, during this research, a fifth group of waste pickers was identified, located in Victoria, BC, and the researchers already created a relation with the association in formation, suggesting their entry into this regional group, and including them in the research project.

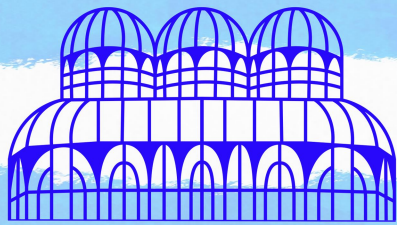
We sought to provide a diagnosis of the work that has been done to integrate waste pickers in the study region. However, our study also presents some limitations due to focusing only on interviews with the leaders of these groups and on secondary data. More research is recommended in these places, seeking to give a voice to the waste pickers involved, through participatory and community-based research, and seeking to understand what their members expect from their organizations in terms of integration.

ACKNOWLEDGEMENTS

The research reported in this article is part of a doctoral project funded by The São Paulo Research Foundation (FAPESP), process number 2022/12729-4, and was carried out during a research internship in Canada funded by CAPES (This study was financed in part by the Coordination for the Improvement of Higher Education Personnel – Brazil (CAPES) – Finance Code 001). In addition to thanking the funding sources, the authors would like to extend their gratitude to the leaders of the groups of waste pickers interviewed and the employees of the depot visited for their valuable contributions to the research.

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