


**OVERVIEW OF SELECTIVE COLLECTION FROM THE PERSPECTIVE OF THE
ASSOCIATION OF RECYCLABLE MATERIAL COLLECTORS OF CÁCERES-MT –
ASCARC**

**PANORAMA DA COLETA SELETIVA NA PERSPECTIVA DA ASSOCIAÇÃO DE
CATADORES DE MATERIAIS RECICLÁVEIS DE CÁCERES-MT – ASCARC**

**VISIÓN GENERAL DE LA RECOGIDA SELECTIVA DESDE LA PERSPECTIVA DE LA
ASOCIACIÓN DE RECOGEDORES DE MATERIAL RECICLABLE DE CÁCERES-MT –
ASCARC**

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ABSTRACT

The execution of Urban Solid Waste Management involves a complex process. Due to the fact that solid waste management is inherent to the municipality, each municipality establishes links with waste picker organizations in a different way. This paper analyzes, from the point of view of the ASCARC waste pickers, the limits and possibilities of the Cáceres Recicla Program, Municipal Law nº 2.367/2013, in relation to the socio-productive inclusion of recyclable material waste pickers. Waste pickers are important environmental agents and their perception of the processes that involve them contributes to the improvement of solid waste management, enabling solidary, more inclusive and efficient selective collection. Regarding the municipality of Cáceres-MT, it was observed that although ASCARC was the only organization qualified at the time of Public Call nº 001/2021, the associated waste pickers still lack training in relation to practices inherent to associated work, technical training and Environmental Education that allow the development of skills that lead them to critically analyze their important role within the municipality. These notes reflect directly on the importance of articulation between the municipal public management, educational institutions and organizations of waste pickers, in the sense that they are provided with adequate support for the execution of the selective collection service, as well as that they be able to provide information on the execution of the activity that provide subsidy for the elaboration of public policies, as well as their execution.

Keywords: Urban Solid Waste. Recyclable Material Waste Pickers. Cáceres Recicla Program. Socio-Productive Inclusion.

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RESUMO

A execução da Gestão dos Resíduos Sólidos Urbanos envolve uma complexidade de processos. Pelo fato de a gestão dos resíduos sólidos ser inerente à municipalidade, cada município estabelece vínculo com as organizações de catadores de uma forma. O presente trabalho analisa, na visão dos catadores da ASCARC os limites e possibilidades do Programa Cáceres Recicla, Lei municipal nº 2.367/2013, em relação à inclusão socioprodutiva de catadores de materiais recicláveis. Os catadores são importantes agentes ambientais e sua percepção acerca dos processos que os envolvem contribui para melhoria da gestão dos resíduos sólidos, possibilitando uma coleta seletiva solidária, mais inclusiva e eficiente. Em relação ao município de Cáceres-MT, observou-se que embora a ASCARC fosse a única organização habilitada no momento da Chamada Pública nº 001/2021, os catadores associados ainda carecem de formação em relação às práticas inerentes ao trabalho associado, capacitação técnica e Educação Ambiental que permitam o desenvolvimento de habilidades que os conduza a analisar de forma crítica sua importante atuação dentro do município. Esses apontamentos, refletem diretamente sobre a importância de articulação entre a gestão pública municipal, as instituições de ensino e as organizações de catadores, no sentido de que seja fornecido a eles o suporte adequado para a execução do serviço de coleta seletiva, bem como que eles sejam capazes de fornecer informações sobre a execução da atividade que proporcionem subsídio para a elaboração de políticas públicas, bem como sua execução.

Palavras-chave: Resíduos Sólidos Urbanos. Programa Cáceres Recicla. Inclusão Socioprodutiva.

RESUMEN

La gestión de residuos sólidos urbanos implica un conjunto complejo de procesos. Dado que la gestión de residuos sólidos es inherente al municipio, cada municipio establece una relación única con las organizaciones de recicladores. Este artículo analiza, desde la perspectiva de los recicladores de ASCARC, las limitaciones y posibilidades del Programa Cáceres Recicla, Ley Municipal n.º 2.367/2013, en relación con la inclusión socioprodutiva de los recicladores. Los recicladores son agentes ambientales importantes, y su comprensión de los procesos involucrados contribuye a mejorar la gestión de residuos sólidos, permitiendo una recolección selectiva más inclusiva, eficiente y solidaria. En el municipio de Cáceres-MT, se observó que, si bien ASCARC era la única organización autorizada al momento de la Convocatoria Pública n.º 001/2021, sus recicladores asociados aún carecen de capacitación en las prácticas inherentes al trabajo asociado, formación técnica y educación ambiental que les permita desarrollar habilidades que les permitan analizar críticamente su importante rol dentro del municipio. Estos hallazgos reflejan directamente la importancia de la coordinación entre el gobierno municipal, las instituciones educativas y las organizaciones de recicladores, garantizando que reciban el apoyo adecuado para la ejecución de los servicios de recolección selectiva y que puedan brindar información sobre la ejecución de la actividad que sirva de base para el desarrollo e implementación de políticas públicas.

Palabras clave: Residuos Sólidos Urbanos. Programa Cáceres Recicla. Inclusión Socioprodutiva.

1 INTRODUCTION

The exploitation of natural resources increased considerably after the Industrial Revolution when human beings began to produce on a large scale. As a result of this process is the increase in the extraction of raw materials directly from nature, resulting in increased pollution and the search for alternative resources that minimize this impact. As a result, the recycling of materials is currently sought to reduce the impacts resulting from the exploitation of raw materials from nature (Ribeiro *et al.*, 2014). In this perspective, there are possibilities for the development of production practices committed to socio-environmental sustainability.

It is important to point out that the recovery of materials extracted from garbage is an ancient activity, that since ancient times, the destitute obtained their survival from the leftovers of society. In Brazil, the activity of waste collection and the survival of thousands of people through waste have been taking place for many decades (Pereira and Teixeira, 2011). The participation of different subjects in the recycling process is important, especially the collectors of recyclable materials, who are responsible for a large amount of recyclable material reinserted into the production cycle of a given product.

It is possible, within the implementation of public policies, to identify each phase and each operational procedure, which bring important internal advances in the recycling production chain. According to Dos Santos and Rocha (2016, p. 5), "the recycling production chain begins with the separation of materials at the generating source, recyclable waste, organic waste and tailings".

The municipal selective collection process involves the daily collection of recyclable waste and subsequent collection to the local shed where the sorting process takes place, at which time the waste is separated and will be used for subsequent compaction by the press with which its main destination is the trade for companies that are interested in recycling and producing a new product for the market.

Given the issues of social inequalities existing in society, it is essential to have a solidary selective collection, which requires the participation of waste pickers, through their organizations, associations and cooperatives.

Solidary selective collection is one of the ways to put into practice the concepts of Solidarity Economy. In possession of the knowledge of its core values, and in order to understand and evaluate the real importance of garbage recycling for society and the environment, it is also necessary to understand the concepts related to the solidary

selective collection itself - which obtains this adjective by taking into account that it is only effective with the necessary contribution of the separation of garbage made by the users (Reis, 2018, p. 43).

It is necessary to consider the already institutionalized context of vulnerability, precariousness and fragility of the working conditions of waste pickers. In view of the emerging institutionalization of the PNRS, and in order not to reproduce effects such as exclusion and exploitation of these workers, it is important to build public policies that articulate social, economic and environmental aspects (Gouveia, 2012). Changing this context is only possible when it is treated in a technical and sensitive way, to the point of perceiving the bottlenecks and being able to bring alternatives that match the reality of the waste pickers.

The whole process of constructing the research to be carried out with the waste pickers begins with an empirical understanding of the world, of the concrete world of the waste picker that takes place on the ground, in the Sorting Center or on the street. "Problematizing this phenomenon is important for these workers, for the university and for society, given the richness of this process involved in the deep contradictions between the world of capital and the world of work" (Arruda, 2019, p. 64).

Considering the importance of waste pickers for the execution of municipal selective collection and also the complexity of carrying out a solidary selective collection, this research, developed in the municipality of Cáceres/MT, seeks to analyze, from the point of view of ASCARC waste pickers, the limits and possibilities of the Cáceres Recicla Program, Municipal Law No. 2,367/2013, in relation to the socio-productive inclusion of recyclable material collectors.

The process of problematization requires the articulation between different concepts that permeate the process of implementing a public policy through the Cáceres Recicla Program. The critical analysis of the research data was worked in the light of the theoretical Tablework that deals with selective collection, socio-productive inclusion and collectors of recyclable materials against the backdrop of the process of implementation of the Public Policy guided by the Cáceres Recicla Program (Arruda *et al.*, 2024; Sebalhos *et al.*, 2025).

The present work has great relevance for the improvement of solidary selective collection, as it identifies in the municipality of Cáceres/MT the strengths, weaknesses, opportunities and threats of the process that has been occurring and that results in the recovery of an average of 110 tons of recyclables per month by the Association of Recyclable

Material Collectors of Cáceres-MT – ASCARC, as well as the livelihood for 24 workers in the municipality.

2 THEORETICAL TABLEWORK

2.1 PUBLIC POLICIES IN THE MUNICIPALITY OF CÁCERES/MT

The construction of public policy on solid waste in Brazil takes place within the scope of environmental policy with social inclusion and in the context of the management of urban public cleaning services (Ribeiro and Besen, 2007; Besen, 2008; Ribeiro *et al.*, 2009). This model has been defended since the 1990s by civil society organizations, the National Movement of Recyclable Material Collectors (MNCR), government technicians and academics. Collectors of recyclable materials are the key people for the implementation of the National Solid Waste Policy (PNRS) with a view to the integrated management of solid waste.

Therefore, in the very letter of the law, in several passages, the need to include waste pickers in the processes that encompass the management of solid waste is highlighted, as described in one of the objectives of Law No. 12,305/2010:

Article 7. The objectives of the National Solid Waste Policy are:
XII - integration of collectors of reusable and recyclable materials in actions that involve shared responsibility for the life cycle of products (Brasil, 2010).

The professional activity of Recyclable Material Collector has been recognized by the Ministry of Labor and Employment since 2002, which, according to the Brazilian Classification of Occupations (CBO), contributes to increasing the useful life of landfills and reducing the use of natural resources, since some waste, after its environmentally correct final destination, they already serve as inputs for other production chains, replacing the excessive use of natural raw materials (Brasil, 2010). In this way, the PNRS encourages the creation and development of organizations of recyclable material collectors.

Bringing this context of public policies to the municipal level of Cáceres/MT, there is Law No. 2,367 of May 20, 2013, commonly called Cáceres RECICLA. This is because it institutes the "Civil Construction Waste Management Program, Bulky Waste and Household Dry Waste of Cáceres – Cáceres RECICLA Program", regulates the public service of selective collection of solid waste and provides other measures. In its Article 4, Law No. 2,367/2013 describes that "the public service of selective collection will be provided by

cooperatives and self-managed associations of waste pickers". In this sense, the regulations, contracts and processes for the implementation of selective collection must be aligned and in compliance with what was provided for in the laws mentioned above.

The laws and plans to guide the analysis of this study were chosen so that they contemplated solid waste in the three spheres and that the participation of waste pickers in each of them could also be observed. Table 1 presents the main records consulted that deal with the integrated management of solid waste:

Table 1

Public Policies and Plans consulted for the preparation of this study

REFERENCE	DESCRIPTION
Brazilian Constitution of 1988 – Chapter VI – Art. 225.	Everyone has the right to an ecologically balanced environment, a good for the common use of the people and essential to the quality of life, imposing on the Government and the community the duty to defend it for present and future generations.
Law No. 12,305, of August 2, 2010.	Establishes the PNRS/2010; amends Law No. 9,605, of February 12, 1998; and makes other provisions.
Law No. 7,862, of December 19, 2002	Provides for the State Policy on Solid Waste and provides for other provisions.
Law No. 2,367 of May 20, 2013	INSTITUTES "Civil Construction Waste Management Program, Bulky Waste and Household Dry Waste of Cáceres – Cáceres RECICLA Program", regulates the public service of selective collection of solid waste and provides other measures.
National Solid Waste Plan	Brasília, 2022
State Solid Waste Plan - MT	Cuiabá, 2022
Municipal Solid Waste Plan - Cáceres	In preparation

Source: Prepared by the authors, 2022.

2.2 THE CÁCERES RECICLA PROGRAM

Constituted in the municipality of Cáceres/MT, in 2013, Law No. 2,367 of May 20, 2013, institutes the "Civil Construction Waste Management Program, Bulky Waste and Household Dry Waste of Cáceres – Cáceres Recicla Program", regulates the public service of selective collection of solid waste and provides other provisions.

After the elaboration and publication of the Cáceres Recicla Program, in 2014, workshops were held with waste pickers, the Águas do Pantanal municipality, universities, the Public Prosecutor's Office of the State of Mato Grosso, students, among many other participants and at the end of the meetings, three working groups were formed to coordinate actions of the Cáceres Recicla Program, they are: Environmental Education Group, Public

and Environmental Management Group and the Solidarity Economy Group (Incubeess, 2014).

It is for this event that the Cáceres Recicla Program, Law 2.367/2013, is based on three axes, namely: Environmental Education, Solidarity Economy and Public Management. Therefore, the work fronts, whether in terms of actions for the population's adherence, for the socio-productive inclusion of recyclable material collectors or for the performance of the public power in the development of actions in favor of selective collection, were organized within each thematic axis of this project.

The present work, when approaching the waste pickers in the municipality of Cáceres/MT, is in line with the provisions of this law and even the field research was developed observing the axes. As specified in the methodology of this article, a dialogue circle was held with the waste pickers of ASCARC and later an interview was held, with participant observation, with the oldest waste pickers of the association.

With regard to Environmental Education, its essence and importance was explained, which according to Law No. 9,795 of April 27, 1999, in its article 1:

Environmental education is understood as the processes through which the individual and the community build social values, knowledge, skills, attitudes and competencies aimed at the conservation of the environment, a good for the common use of the people, essential to a healthy quality of life and its sustainability (Brasil, 1999).

According to Baeder (2009), Environmental Education is a fundamental action for the formation of critical and active citizens with the environmental reality they experience, promoting behavior change and improvements for society in general. For such development, it is necessary to integrate the cognitive area (knowledge), the affective area (attitude) and the psychomotor area (skills and action), all closely linked (Pelicioni, 2014).

For the successful implementation of selective collection, the development of Environmental Education in the various sectors within the municipality is fundamental, and the actions "must be based on the commitment to the transformation of society with a view to socio-environmental sustainability" (De Souza *et al.*, 2025, p. 3). As Loureiro (2004) detailed in a chapter called "Transformative Environmental Education", in the book "Identidades da Educação Ambiental Brasileira":

The very adjective "transformative" present in the title already signals, the primary purpose of environmental education is to revolutionize individuals in their subjectivities

and practices in the existing social-natural structures. That is, to establish educational processes that favor the realization of the movement of constant construction of our being in the dynamics of life as a whole and in an emancipated way (Loureiro, 2004, p. 65).

Like Environmental Education, the Solidarity Economy is a fundamental pillar for strengthening the selective collection process with socio-productive inclusion of waste pickers. Its dissemination and application favors the process and the achievement of the common goal. According to Borges and Sguarezi (2019, p. 3), "The solidarity economy is a form of production based on the mobilization and organization of workers, who aim at productive insertion through work based, essentially, on self-management, cooperation, participation and solidarity".

With regard to Public Management, the importance of participation and political interest in the implementation of public policies and the conduct of municipal actions is highlighted so that plans about solid waste are forwarded and implemented, especially selective collection with socio-productive inclusion of recyclable material collectors. For Melo *et al.* (2021, p. 13) "For public managers, public hearings, political will and the constant activity of environmental education in schools, companies and public authorities, cannot be missing in the implementation of selective collection." Thus, as each thematic axis of Law No. 2,367/2013 is worked on and achieved, the better the results will be for sustainable selective collection.

2.3 URBAN SOLID WASTE MANAGEMENT

Mano *et al.* (2010) classify solid waste as leftovers of solid materials, used in the urban, industrial or agricultural sphere, which are discarded randomly, and this aspect is more frequent in cities and less developed countries. According to the National Solid Waste Policy - PNRS (2010) the definition of solid waste is:

Material, substance, object or discarded good resulting from human activities in society, whose final destination is carried out, is proposed to be carried out or is obliged to be carried out, in solid or semi-solid states, as well as gases contained in containers and liquids whose particularities make it unfeasible to dispose of them into the public sewer system or bodies of water, or require solutions that are technically or economically unfeasible in the face of the best available technology (Brasil, 2010).

The classification of Solid Waste according to the PNRS can be carried out as to origin and hazardousness. The national policy also organizes this waste into groups, with reusable materials that can be used again, and those that can no longer be allocated for other purposes are considered waste. In view of the PNRS (2010), the Municipal Plan for Integrated Solid Waste Management (PMGIRS) has become a basic requirement for access to federal resources. Thus, the PNRS itself demonstrates the minimum content necessary for the presentation of this plan.

Silva (2019) points out that the objective of a hierarchy in solid waste management is to seek the maximum use of materials by generating the least amount of waste possible. The reuse of solid waste is a preventive factor regarding its generation, since the material disposed of inappropriately has no other use, ceasing to be part of the solid waste production chain.

In this context of Integrated Solid Waste Management, it is worth highlighting the performance of selective collection, which is the differentiated collection of waste that has been previously separated according to its constitution or composition. Each type of waste has its own recycling process. As various types of solid waste are mixed, its recycling becomes more expensive or even unfeasible, due to the difficulty of separating it according to its constitution or composition.

The implementation of selective collection is characterized as an urgent and necessary demand in all municipalities that do not yet have it, given the requirements set by the PNRS 2010. The PNRS provides in Article 7, item XII, "One of the objectives of the policy is the integration of collectors of reusable and recyclable materials in actions that involve shared responsibility for the life cycle of products". The PNRS, in its Article 8, IV, also highlights the importance of the local government for "The incentive to the creation and development of cooperatives or other forms of association of collectors of reusable and recyclable materials".

2.4 CUTE MATRIX

Developed by Harvard Business School professors Kenneth Andrews and Roland Cristensen, the SWOT matrix, also known as SWOT, takes into account four points: strengths, weaknesses, *opportunities*, and *threats*. Through these variables, it is possible to survey the strengths and weaknesses, as well as the opportunities and threats of a company and situation (Silva, 2009).

Table 2

SWOT matrix statement

	POSITIVE FACTORS	NEGATIVE FACTORS
INTERNAL FACTORS	Strength	Weakness
EXTERNAL FACTORS	Opportunity	Menace

Source: Prepared by the authors, 2022.

The SWOT matrix is commonly used during strategic planning, being used as an administration and *marketing* tool. Through the analysis, it is possible to identify the company's main perspectives in relation to the market, based on the macroenvironment and microenvironment. In this work, because it is based on the socio-productive inclusion of waste pickers, an approach was used that facilitates the understanding of readers, especially waste pickers from Cáceres/MT. For this reason, we chose to use the term SWOT when using SWOT to provide a reading that approximates reality, since the term SWOT refers to the initials of strength, opportunity, weakness and threat.

Strengths are the skills and qualities that can positively influence the organization. They should be explored since they are internal and controllable variables, reflecting in the reduction of weaknesses (Rezende, 2008). According to Raeburn (2022), weaknesses are internal initiatives that end up performing results below expectations, that is, disadvantages of the internal context. Identifying them is the starting point for improving them.

Opportunities are the results of strengths and weaknesses, added to external initiatives that put the organization at a competitive advantage (Raeburn, 2022). It is worth remembering that these external phenomena are not under the control of the organization, but they can occur, thus requiring them to be prepared. According to Borges (2013), threats are external situations that can compromise the proposed objectives. As opportunities are not in the control of the institution, but there is a possibility of happening, ways to mitigate them must be considered.

Therefore, when there are economic, social, environmental and political aspects, it is possible to apply the SWOT matrix. From this analysis, suggestions and indications are made about the possibilities of management and management (Bozzini, 2022).

3 METHODOLOGICAL PROCEDURES

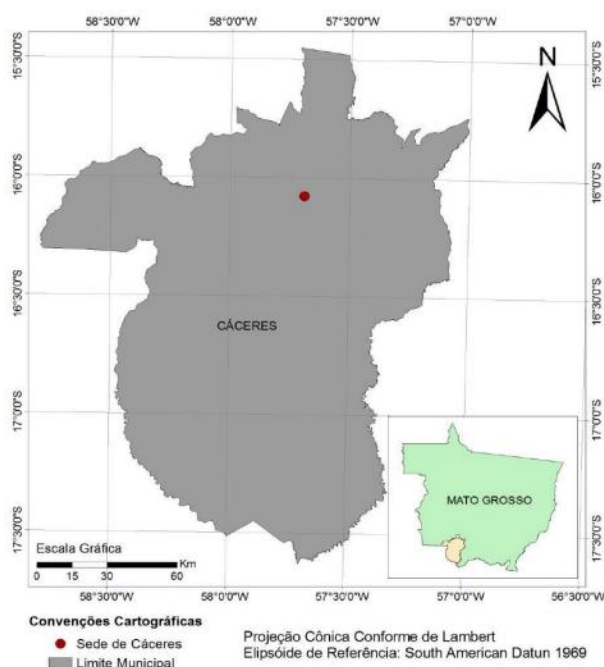
This research was developed in the municipality of Cáceres, located in the state of Mato Grosso, in the Midwest region of Brazil. Located in the Center-South Mato Grosso mesoregion and in the Alto Pantanal microregion, its estimated population for 2020 was

95,339 people (IBGE, 2010). For 2018, the projection of the Gross Domestic Product (GDP) per capita was R\$20,193.53 and the Municipal Human Development Index (MHDI) in 2010 was 0.708.

The municipality has historical and cultural value, being perceived in its buildings, in its typical dances and in its own history, which has been built since 1778, still as the village of São Luiz de Cáceres (PMSB-Cáceres, 2014).

Figure 1

Location map of the city of Cáceres/MT



Source: PMSB Diagnosis – Cáceres, 2014.

In the municipality of Cáceres, the management of basic sanitation is carried out by the Águas do Pantanal Environmental Sanitation Service, and according to the Public Call Notice No. 001/2017, available on the municipality's website, this autarchic entity promoted the closure of the dump (coordinates 15°57' to 16°12' south latitude and 57°30' to 57°42' west longitude) on 07/01/2016 and consequently started the operation of the landfill, located in the rural area called Tarumã, 13.5 km from the urban center of the city.

Since the present research is developed in Cáceres/MT, it was sought to analyze, from the point of view of ASCARC waste pickers, the limits and possibilities of the Cáceres Recicla Program, Municipal Law No. 2.367/2013, in relation to the socio-productive inclusion of waste pickers. In view of the objective of this article, the present research methodology was field

research, supported by participant observation, semi-structured interviews to listen to the subjects involved, in addition to documentary research.

Regarding the ethical aspects, the research was approved by the Research Ethics Committee (CEP) of the State University of Mato Grosso (UNEMAT), under Opinion number 4.510.078, CAAEE n. 39694220.2.0000.5166, being developed with its own resources, respecting the ethical precepts contained in Resolution No. 466/2012.

In preparation for the field research, a dialogue circle was organized so that the axes of the municipal public policy, the Cáceres RECICLA Program, which are: Environmental Education, Solidarity Economy and Public Management, could be contextualized to the waste pickers. For this reason, the research was organized in such a way that the main stages were as follows:

- Dialogue circle to expose the axes of municipal public policy;
- Semi-structured interview with ASCARC waste pickers.

The dialogue circle was held on 04/16/2022 and the dynamics of the dialogue circle first involved the fraternization of breakfast with all ASCARC waste pickers, later there was a talk about the axes of the Cáceres RECICLA Program, which are detailed below. After this moment, the speech was opened so that everyone could manifest themselves and contribute to the educational process, which was proposed. In order to start the dialogue circle, everyone was open to speak so that at the time of the presentation they could say the time they work with the waste picker and the time they have been at ASCARC. This information was used so that the subjects to participate in the semi-structured interview could be defined.

Then, as a next step, the semi-structured interviews were carried out on April 20, 21 and 22, according to the availability of the ASCARC waste pickers and each interview should last an average of 55 minutes, given the need to make them understand the questions, as well as the correct completion according to the statement of each one. The script for the application of the semi-structured interview was applied with 09 (nine) collectors from ASCARC and had as its main objective to identify the strengths, weaknesses, opportunities and threats of selective collection in the municipality of Cáceres/MT, in relation to the socio-productive inclusion of recyclable material collectors and is presented at the end of this work as an appendix.

The criteria for defining the waste pickers who would participate in the semi-structured interview were:

- waste pickers who already worked with waste pickers before joining ASCARC;
- waste pickers who had 2 years or more of experience in ASCARC;

However, if only these two criteria were maintained, only 01 (one) woman would participate in the semi-structured interview. Therefore, in order to ensure gender diversity, 02 (two) more women were included to participate in the semi-structured interview, these two being the ones who have participated for the longest time, having 03 months of experience at ASCARC.

With regard to documentary research, laws, ordinances, decrees and official publications carried out in the context of waste pickers, as well as selective collection in the municipality of Cáceres/MT, were consulted, because "The use of documents should be valued because it enables the understanding of objects, in addition to allowing historical and sociocultural contextualization" (Sá-Silva; Alameida; Guindani, 2009).

To compile the data, a SWOT analysis of the existing processes and views was carried out, as well as the possibilities for the panorama found. This approach assists in the development of strategies and action plans for the development of sustainable cities (Daskal, 2019). The SWOT analysis will result in a demonstrative and self-explanatory Tablework and it is highlighted that despite the subjectivity of the participants' weighting, if used correctly, it provides a basis for the formulation of strategies for the organization (Lee; Huang; Teng, 2009).

3.1 DIALOGUE CIRCLE

In order to help the waste pickers so that it was possible to better understand the interview that would be applied later with the members, as well as to carry out together with them a stage of the educational process necessary to inspire the emancipation of waste picker organizations, a Dialogue Circle was held within the association. With an average duration of 3 hours of dialogue, the formative axes of Municipal Law No. 2,367 of May 20, 2013 were addressed.

In the wake of what Marxian thought proposes, this theory presents dialogue as our ontological condition, as a way to overcome social alienation and the many forms of oppression, it presents us as beings who humanize themselves while dialoguing to transform reality through action-reflection – which is praxis – which takes place concomitantly in/about the world (Souza, 2017, p. 24).

With the objective of establishing a field of dialogue that would enable the conceptual understanding of the three axes that were consensual between the government, waste pickers and education education, the dialogue circle was based on base texts that guided the conceptual speeches on the themes. Therefore, the approach was carried out in the following order and presenting the following topics:

- **Environmental Education:** To address this theme, an article published in the Annals of the Teaching, Research and Extension Journey – JENPEX, 2017, which was an event held by the Federal Institute of Education, Science and Technology of Mato Grosso – Cáceres Campus – Prof. Olegário Baldo, was used. In the text used, the authors presented some characteristics of Environmental Education that the authors understand "to be liberating, unveiling reality and promoting social transformation; be promoted, both in the scope of formal and non-formal education" (Souza *et al.*, 2017, p. 179). In this sense, points of great importance of Environmental Education were highlighted, which should be inherent to the process. Thus, it was evidenced that Environmental Education should be: dialogical, critical, political, citizen, scientific, committed to an environmental rationality, understands work as an ontological condition of human beings.
- **Solidarity Economy:** Using the article "Solidarity Economy and Education", written by Borges and Sguarezi (2019), published in the magazine Akrópolis, Umuarama, it was highlighted that solidarity economy is a form of production based on the mobilization and organization of workers, as well as key points for the approach were raised in order to enable a better understanding of waste pickers and then self-management was detailed, cooperation, participation and solidarity as crucial points in the development of the solidarity economy.
- **Public Management:** Municipal Law No. 2,367/2013 was used, which is the guiding instrument for actions on the management and management of solid waste and therefore points out several times the paths to be followed in relation to the social inclusion of recyclable material collectors. For the speech on this theme, four excerpts from the law were addressed, and each excerpt was read and later contextualized. The excerpts selected to be addressed with them, in order to contextualize Public Management, were articles 4, 6, 9 and 15, as detailed below:

Article 4. The public selective collection service will be provided by cooperatives and self-managed associations of waste pickers.

Article 6. The planning of the public selective collection service will be developed by a competent municipal body, aiming at the universalization of its reach, with the participation of cooperatives and associations of waste pickers.

Article 9. It will be the responsibility of the Cooperatives or Associations of selective collection to provide:

- I. The inclusion of unorganized informal waste pickers in the collection groups and in the work carried out in the sorting sheds;
- II. The continuing education of its members and their training in social and economic aspects and literacy.

Article 15. The public bodies of the municipal, state and federal administration, churches, barracks, stadiums and other public or private establishments for the generation of special solid waste must implement, in each of their facilities and, especially in those intended for the realization of large events, procedures for the selective collection of waste of household characteristics generated in their activities, observing legal provisions in force, disposing of recyclable dry waste to cooperatives and associations of local waste pickers.

3.2 SEMI-STRUCTURED INTERVIEW

The semi-structured interview was carried out in order to understand the weaknesses and strengths, opportunities and threats of the Cáceres Recicla Program, in the view of ASCARC's recyclable material collectors. For this, a form was applied to the waste pickers referring to: work organization, perception of the performance of waste pickers and public policies. As the questions were being asked and their comments were emerging, the researcher took note of the information.

In addition to the interview with the 9 waste pickers, a form was also applied on general questions of the association, which presented questions about income, production, number of waste pickers and equipment used. Each interview lasted about 55 minutes, as the dynamics for its execution was that the researcher asked and clarified the questions to the waste pickers and they answered, as well as made scores when they felt the need.

Considering that the interview was conducted in the association itself, the waste pickers were called one by one to participate. Thus, their work was not paralyzed at the time of the execution of this research, even because the order in which the interviews were carried out was given according to the availability of each one. For example, on one of the days of the interview, there was a shipment of recyclable material that was being sold. For this reason, the collector, who is also a forklift operator, was interviewed at a later time.

The organization of the semi-structured interview form was carried out in order to contemplate the three axes of municipal public policy, Law No. 2,367 of May 20, 2013. In

view of this, for the preparation of the form, the entire law was observed and in particular its article 2 establishes its principles:

- I – Prioritization of actions that generate employment and income;
- II – Commitment to actions that change the behavior of citizens in the face of the waste they generate;
- III – Incentive to the solidarity of citizens and their social institutions with the action of cooperatives or selective collection associations;
- IV – Recognition of cooperatives and self-managed associations as environmental agents of urban cleaning, providers of waste collection services to the municipality;
- V – Development of inclusion and social support actions for the less favored population that can be integrated into the program, constituting the recycling production chain (Cáceres, 2013).

Table 3 clarifies the justification for asking the questions contained in the semi-structured interview form. Based on the principles of the aforementioned municipal law, the axes of the Cáceres RECICLA Program were explained and this resulted in the elaboration of the questions carried out. The connection of the principles is presented below, with the axes contemplated and the questions formulated for the semi-structured interview.

Table 3

Correspondence of the principles of Law No. 2,367/2013 and the thematic axes

PRINCIPLE	AXES CONTEMPLATED	ELABORATED QUESTIONS	
I – Prioritization of actions that generate employment and income;	Solidarity Economy and Public Management	2.1	2.6
		2.2	2.7
		2.3	2.8
		2.4	2.9
		2.5	2.10
II – Commitment to actions that change the behavior of citizens in the face of the waste they generate;	Environmental Education and Public Management		4.8
			4.9
			4.10
III – Incentive to the solidarity of citizens and their social institutions with the action of cooperatives or selective collection associations;	Environmental Education and Solidarity Economy	3.1	3.6
		3.2	3.7
		3.3	3.8
		3.4	3.9
		3.5	4.27
IV – Recognition of cooperatives and self-managed associations as environmental agents of urban cleaning, providers of	Environmental Education, Solidarity Economy and Public Management	3.10	4.28
		3.11	4.29
		4.1	4.12
		4.2	4.13
		4.3	4.14

waste collection services to the municipality;		4.4 4.5 4.7	4.17 4.22 4.30 4.31 4.32 4.33 4.34
V – Development of inclusion and social support actions for the less favored population that can be integrated into the program, constituting the recycling production chain.	Solidarity Economy and Public Management	1.1 1.2 1.3 2.11 4.11 4.18 4.19	4.20 4.21 4.23 4.24 4.25 4.26

Source: Prepared by the authors, 2022.

4 RESULTS AND DISCUSSION

By analyzing the forms applied in the semi-structured interviews, the following SWOT Matrix was reached:

Table 4

SWOT matrix built from the Dialogue Circle and Semi-Structured Interview carried out with ASCARC waste pickers

Forces	Weaknesses
<ul style="list-style-type: none"> Fellowship among ASCARC members; Generation of work and income for the population of Cáceres; They have documentary organization of the association; 	<ul style="list-style-type: none"> Rotation of waste pickers in various activities inside the shed; The association does not have its own shed for the development of its activity (lack of machinery and equipment); Lack of mass dissemination of the activities developed by the association; Lack of adequate own structure; Lack of training and education for associativism, cooperativism and Environmental Education; Only 4 women in the association.
Opportunities	Threats
<ul style="list-style-type: none"> The association is trusted by part of the population; Possibility of expanding selective collection to other neighborhoods and districts; Legal requirement of the PNRS and local legislation; Collaboration Agreement in force with the Águas do Pantanal municipality; They have a contract with the Community Council, to carry out the reinsertion, through work, of re-educating students. 	<ul style="list-style-type: none"> Disrespect of citizens in relation to waste pickers; Lack of dialogue on the part of the Águas do Pantanal municipality to make decisions regarding the planning of selective collection in the municipality; The work of the National Movement of Recyclable Material Collectors with the interviewees was not satisfactory (internal conflicts of the MNCR);

Source: Prepared by the authors, 2022.

In addition to these practical results that are obtained by the SWOT Matrix, considerations are also presented below both in the dialogue circle and in the interviews by the waste pickers, in the sense that they contribute to the process of elaborating a proposal for public policy aimed at selective collection.

During the collection, drivers and collectors exchange experiences and information with the population, since they are the ones who are subject to the various situations of daily life. For example, there is a reduction in the volume of the sound of selective collection in specific places where drivers have already identified that there are people with autism, as has been reported. "There are children who don't miss a collection and there are situations where people complain about the music. There are places that we know have to lower the music."

In addition, the practice of Environmental Education developed by ASCARC's waste pickers also has repercussions for the development of collection, as follows.

"It's been a good experience and the information details of the type of separation. There are compliments and complaints about the collection"

Regarding the Environmental Education action that has been developed by the association, the importance of dialogue among all members of the association was raised, since during the information action on selective collection, criticism is also received, such as the speed of the trucks, for example, which can be solved in a dialogical and agile way among the members themselves with the exchange of experience in the development of each one's activity. There is also the sharing of complaints that occur during the route.

"There is constructive and destructive criticism, it must be resolved with dialogue"

"The owner was rude. She said I don't want to know about this crap and closed the door in our faces"

"What good is it for collectors to talk to people and the population arrives on the street, it is no use treating us well and the population is bad. It's not easy just to receive criticism"

"There are people who criticize and people who praise. There are people who complain about the truck being disrupting traffic"

In addition to all the above, there were also speeches with approaches about the Cáceres Recicla Program, according to the vision they have.

"It doesn't get off the ground. It is a fight that has to be the result of unity"

Although there is disbelief about the implementation of the municipal law by saying "it does not get off the ground", there is also an alternative for its implementation by saying "it is a struggle that has to be the result of unity".

Also, in relation to the practices of the residents regarding solid waste, they pointed out, demonstrating that the way waste is perceived by the population has also changed.

"In the past, I saw cans on the floor and nowadays only the other recyclable is left"
"The can is retained by the resident"

In addition, criticism was raised about the performance of public management, referring to the inspection of selective collection.

"Public management is a shame that has no oversight"

According to the analysis of the forms applied in the semi-structured interview, it can also be seen that most of the interviewees believe that in relation to the waste pickers' organizations existing in the municipality of Cáceres, each one should perform its activity independently of the other. In addition, most claimed "I don't know how to answer" when asked if the support (financial transfer and machinery) passed on by the municipal authority to the association is sufficient. In addition, it was also pointed out that if one more collector is added to the collection routes, the collection will flow faster and thus open up the possibility of covering new neighborhoods. A point made by several of the waste pickers, both in the dialogue circle and in the semi-structured interview, was the lack of proximity of the municipal public agency that manages solid waste, in this case the municipality Águas do Pantanal, with the association.

During the interviews, it was also possible to observe that, due to the execution of selective collection in only 46% of the households in Cáceres, a large part of the recyclables recovered come from businesses, and for this it is necessary to continue actions aimed at sensitizing the population so that they increasingly participate in selective collection. And that is why the expansion of selective collection to the other neighborhoods of the city represents an opportunity for the activity developed by waste pickers, since currently, collecting in less

than half of the households, they sell an average of 110 tons per month, and this number can be significantly increased, being then transformed into income and work for these workers.

The elaboration of the SWOT matrix in this study demonstrates that the lack of adequate structure to develop the activity, as well as the participation of few women in the Association of Recyclable Material Collectors of Cáceres-MT – ASCARC are weak points that need to be worked on internally. In this sense, the solid waste management institution of the municipality of Cáceres/MT can be the promoter of these training that intend to train for cooperativism and that as a reflection of this action will result in direct and indirect benefits for selective collection, since the subjects executing the collection are the collectors.

5 FINAL CONSIDERATIONS

The process of implementing selective collection with socio-productive inclusion proves to be a challenge for municipal managers, since it involves several subjects for success, among them are citizens, companies, the municipal public agency itself and collectors of recyclable materials. For such implementation to occur, it is necessary to understand the issues that involve the performance of each one.

In this work, seeking to add information to contribute to the selective collection process with socio-productive inclusion of waste pickers in the city of Cáceres/MT, the limits and possibilities were presented, in the view of the recyclable material waste pickers of ASCARC, about the public policy Cáceres Recicla Program. As they are important agents of municipal selective collection, analyzing their opinion about the process provides improvement for the service.

According to the notes made both in the dialogue circle and in the semi-structured interview, it was possible to perceive the fragility of these workers, since they have not yet appropriated the various aspects of their work. For example, the lack of complete understanding of the existing Collaboration Agreement between ASCARC and Águas do Pantanal, which is one of the association's sources of revenue. It is necessary to carry out training and training with ASCARC waste pickers.

In the past, it is important to highlight the lack of effectiveness of Environmental Education in the municipality, since this reflects to the collectors of selective collection pejorative criticisms about the development of the service. Linked to this, attitudes such as storing aluminum cans in homes for their own commercialization, results in devaluation of the service developed by the association. In addition, Municipal Law No. 2,367/2013 provides:

Art. 5 It is the responsibility of the municipal administration to develop actions that inhibit practices that are not allowed, such as:

[...]

III - Storage of waste in households, for commercial purposes, that cause any type of pollution, damage to environmental health or that promote the multiplication of vectors or other animals harmful to human health.

With regard to the implementation of actions that provide improvement in selective collection with socio-productive inclusion of waste pickers, Law No. 9,795/1999 provides for Environmental Education, and institutes the National Policy for Environmental Education, stands out. The PNEA (1999), in its Article 1, emphasizes:

Environmental education is understood as the processes through which the individual and the community build social values, knowledge, skills, attitudes and competencies aimed at the conservation of the environment, a good for the common use of the people, essential to a healthy quality of life and its sustainability (Brasil, 1999).

This practice can also be formal or informal, but in both cases they have the duty to transmit a democratic, participatory approach, recognize the breadth of cultural diversity, have a link with ethics, education and social practices, among other principles that are highlighted in the law. These notes directly reflect on the importance of articulation between municipal public management, educational institutions and waste pickers' organizations, in order to provide them with adequate support for the execution of the selective collection service.

Regarding the municipal law, the Cáceres Recicla Program, the perception that the Waste Pickers went through during the activities developed, is that they do not understand how the law is being complied with, or even how it can bring benefits to the development of their work. In this case, it is necessary to carry out training with the association in order to approach public policies aimed at solid waste.

In addition, when observing another statement of theirs about the fact that the inspection of the municipal public agency for the execution of selective collection by residents and merchants is not being effective, it is necessary to highlight that this is a point to be observed during the planning of selective collection, that is, it is important to think about how the inspection and monitoring of selective collection will be carried out so that there is more and more adherence from the population, resulting in greater revenue for the association and reflecting on its working conditions.

Finally, the waste pickers alleged distancing between the municipal public agency and the association, an issue that can be solved in a simple way, establishing a routine of dialogue with the association, so that the improvements that can be made are observed and also how the municipal public agency can contribute to the development of actions to improve the internal logistics of the association, in favor of the continuity of selective collection with socio-productive inclusion of recyclable material collectors.

For these reasons, the present work has great relevance for the improvement of selective collection with the participation of waste pickers, as it identifies in the municipality of Cáceres/MT the strengths, weaknesses, opportunities and threats of the process that has been occurring and that results in the average recovery of 110 tons of recyclables per month by the Association of Recyclable Material Collectors of Cáceres-MT – ASCARC, as well as the livelihood for 24 workers in the municipality.

So a research gap to be studied is the way Environmental Education actions are being implemented in the municipality, as well as the effectiveness of such actions. In addition, the performance of the National Movement of Waste Pickers in the municipality can be analyzed, in order to understand what have been the actions developed by this social movement, understanding that their participation is decisive for the elaboration of the waste pickers' proposal for the improvement of selective collection, attributing even greater weight to the speech of these workers.

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