



The role of the Municipal Council for the Defense of the Environment in the elaboration of the Municipal Plan for the Integrated Management of Solid Waste in Araraquara - State of São Paulo

Isabella Mattos

PhD student in Social Sciences, São Paulo State University "Júlio de Mesquita Filho" (UNESP),
College of Letters and Sciences (FCLAr), Brazil.
isinha_mattos@hotmail.com

Rafael Alves Orsi

Associate Professor, São Paulo State University "Júlio de Mesquita Filho" (UNESP),
College of Letters and Sciences (FCLAr), Brazil.
Accredited to the Graduate Program in Sociology, UNESP/FCLAr, Brazil.
rafael.a.orsi@unesp.com

Cristine Diniz Santiago

Researcher on a Scholarship from the National Development Research Subprogram (PNPD)
at Institute of Applied Economic Research (IPEA), Brazil.
Post-doctoral researcher in the Environmental Sciences Department at Federal University of São Carlos (UFSCar), Brazil.
cristine.dis@gmail.com

ABSTRACT

Municipalities play a key role in the public policy cycle because they are directly involved in managing their respective territorial areas. When it comes to solid waste in Brazil, one significant way to mitigate its impacts is through public participation in the National Solid Waste Policy, established by Law No. 12.305 of 2010. Municipal plans serve as the planning and implementation documents for this policy. In this context, the municipality of Araraquara was chosen as the case study, given its solid waste management system and its history of progressive municipal governance. This study aimed to understand whether and how institutionalized public participation occurred through the Municipal Council for the Defense of the Environment (COMDEMA) during the formulation of the Municipal Plan for Integrated Solid Waste Management between 2011 and 2021. To achieve this, we conducted a bibliographic review, documentary research, and semi-structured interviews, analyzing the data using Laurence Bardin's content analysis technique. The results indicate that, although the management instrument explicitly mentions participation, COMDEMA's input did not effectively translate into decisions by the council regarding the plan formulation during the period analyzed. This was due to the vulnerabilities within the council's structure, which hinder the inclusion of solid waste issues in meetings for discussion and decision-making. Hopefully, this research will foster further discussions about COMDEMA and its role in solid waste management.

KEYWORDS: Municipal plan for integrated solid waste management; Municipal Council for the Defense of the Environment; Araraquara/SP; Public Policies.

1. INTRODUCTION

Historically, the spheres of power in Brazil have viewed both the environmental preservation and conservation, as well as the reduction of environmental impacts, as obstacles to the economic development, especially during the industrialization process of the country. This economic focus has always been dominant, causing environmental policies to remain inactive. Despite this fragility, the 1988 Federal Constitution marked progress on certain public issues, including the concern for and need to preserve natural resources. In this regard, Article 225 of the Constitution is often cited:

"Everyone has the right to an ecologically balanced environment, an asset of common use to the people and essential to a healthy quality of life, imposing on the public authorities and the community the duty to defend and preserve it for present and future generations" (BRASIL, 1988, chapter VI).

The aforementioned proposal was a milestone for subsequent environmental issues, particularly as it placed responsibility on both public authorities and the community to defend and preserve the environment. This included considering future generations and imposing penalties on those who failed to comply with it. Additionally, there was an obligation to restore any degraded areas caused by harmful actions. These regulations, thus, have left no doubt about the necessity of environmental preservation prerogatives.

The 1988 Federal Constitution introduced two significant elements: decentralization by recognizing municipalities as autonomous federative entities and redemocratization through the institutionalization of participatory mechanisms. In today's Brazilian context, public policies are deeply intertwined with issues of federalism and are shaped by the Union, states, and municipalities to address regional and local particularities.

These challenges highlight the importance of social participation throughout the public policy cycle, especially in environmental matters that rely directly on collective action. In this

context, Article 225 of the 1988 Federal Constitution is particularly notable, as it assigns the community the responsibility to defend and protect the environment.

Regarding social participation, the Constitution established institutionalized models based on the principle of participatory democracy, fostering collaboration between public managers and citizens who represent social demands and interests. This institutionalization takes various forms, such as Participatory Budgeting, Management Councils, and Conferences, all designed to debate, discuss, propose alternatives, and make decisions about public policies. Each participatory unit operates with its own dynamics and is essential across all levels of government, particularly at the local level, where most public policies are implemented.

As a central element of decentralization and democratic processes, management councils have emerged with the goal of contributing to the formulation, implementation, and monitoring of public policies. Across all levels of government, these participatory institutions provide mechanisms that expand social participation and the direct exercise of citizenship, thereby strengthening social interests and increasing social oversight of the agendas and actions of public officials.

Following the 1988 Constitution, there was initially a strengthening of councils focused on social rights, particularly in the areas of health, education, and social assistance. Over time, ideological movements centered on belief, identity, the environment, and other issues have also been institutionalized.

According to Lüchmann (2008, p. 90), *"public policy management councils are supported by national legislation, have a more structured and systemic public policy character, and their work is provided for in the three spheres of government."* This character is evident in all phases of the public policy cycle, as these councils seek to align the interests of social groups and encourage greater participation, seeking to ensure universal access to social rights, particularly in health, education, and social assistance.

A key feature of management councils is the parity between state agents and civil society. According to Lüchmann, civil society representation is not on an individual basis but is linked to established entities or groups, such as NGOs, business organizations, universities, and others (LÜCHMANN, 2008).

When municipal management councils were proposed, it was believed that the proximity of citizens to their local area would encourage greater participation. However, despite this proximity, participation remains limited, mirroring the weaknesses in local management. According to Santos JR, Ribeiro, and Azevedo (2004), the major advantage of this participatory model at the municipal level is the potential to consolidate demands, interests, and priorities, thanks to the closeness of citizens to the formulation and implementation of public policies.

In this regard, municipal councils, through federative decentralization, serve as important instruments of democracy. However, it is evident that these bodies still exhibit certain weaknesses and fall short in making propositions and decisions that could meaningfully contribute to municipal management.

Côrtes and Gugliano (2010) note that, due to the historical and cultural context of Latin American countries, effective participation through management councils is often challenging. Nevertheless, the authors suggest that regarding some social rights, particularly health, municipal councils tend to adopt a more active role.

When it comes to environmental issues, the inherent fragility of this area in the country results in weakened municipal environmental councils, despite growing concerns reflected in regulations and public policies aimed at addressing environmental challenges.

Environmental councils, while consultative, equitable, and normative, are also deliberative in nature, meaning they have the authority to decide on the implementation of public policies and the management of resources from thematic funds.

Among the key environmental issues in current sustainability discussions is solid waste management (DODMAN, MCGRANAHAN & DALAL-CLAYTON, 2013). However, solid waste management often involves conflicts of interest, particularly between proposals to reduce waste, rethink contemporary consumption habits, and promote conscious consumption versus the growing incentives for consumption driven by the widespread use of disposable goods and other capitalist strategies (MESJASZ-LECH, 2014; JURAS, 2012).

Despite delays caused by economic priorities and other pressing issues, the National Solid Waste Policy (PNRS), Law 12.305/2010, was enacted after more than 20 years of legislative debate. Nonetheless, the PNRS represents a significant advancement in Brazilian environmental legislation, offering an integrated regulatory framework that emphasizes decentralization, planning, and social control (JURAS, 2012). It is therefore crucial to understand how local-level social participation influences the planning of this Brazilian environmental policy.

2. OBJECTIVES

This study aimed to explore whether and how institutionalized social participation occurred through the Municipal Council for the Defense of the Environment (COMDEMA) in Araraquara/SP during the formulation and implementation of the Municipal Plan for Integrated Solid Waste Management (PMGIRS), from 2011 to 2021.

3. METHODOLOGY AND ANALYSIS METHOD

Due to the complexity of the topic, the research employed both the quantitative and qualitative methods. According to authors such as Creswell (2010) and Spratt, Walker, and Robinson (2004), this mixed approach is valuable as it helps address the limitations of any single method besides providing a more comprehensive interpretation of the studied subjects. Each method can be applied at different stages of the research.

Initially, a systematic review was conducted over a twenty-year period (2001-2021), using the CAFE Capes platform with the keywords "municipal council" and "environment". This search yielded 253 peer-reviewed articles, from which the 17 most accessed were selected as being relevant to this research.

In the second phase, to identify specific correlations, the keywords "municipal council" and "solid waste" were used within the same timeframe, resulting in 31 peer-reviewed articles, of which ten were selected based on the criteria mentioned.

According to Costa and Zoltowski (2014, p.54), *"a systematic review is a method that allows you to maximize the potential of a search, finding the largest possible number of results in an organized manner"*. The previous literature review helped identify key authors on the subject and select theoretical references, including books, dissertations, and theses. It also

highlighted gaps in the research connecting municipal councils with solid waste policies, underscoring the importance of this study.

In addition to the literature review, a documentary analysis was conducted, examining legislation, rules, and regulations related to solid waste management in Brazil, starting from a broad overview to a more specific and decentralized perspective. This included: the 1988 Federal Constitution; the National Solid Waste Policy (Federal Law No. 12.305, August 2, 2010); the discussion and preliminary version of the National Solid Waste Plan (as provided for in Federal Law 12.305); the Municipal Solid Waste Policy (Municipal Law 8.561, October 13, 2015); and the Municipal Plan for Integrated Solid Waste Management (Ordinance 21.785/12), both for Araraquara.

The analysis also covered COMDEMA's rules, regulations, bylaws, minutes, and attendance records, as well as the minutes and attendance lists from two public hearings held to approve the PMGIRS. A total of 73 minutes were reviewed, along with six regulations that established and reformed the municipal council since 1984. Additionally, the bylaws governing the administrations of the council were examined.

To gain a deeper understanding of the context, complementary attention was given to the Master Plan of the municipality (Complementary Law No. 850, February 11, 2014) and the City Statute (Law No. 10.257, 2001), which helped to frame the local scenario as a driver of public policies.

Initial contact was made with key figures to address preliminary questions and access the analyzed documents, including the heads of the Autonomous Water and Sewage Department (DAAE), and COMDEMA councilors. Two additional key informants were consulted: a representative from the Public Prosecutor's Office, and a representative from the Casa dos Conselhos (House of the Councils).

In addition, a semi-structured interview guide was developed to assess municipal councilors' perceptions and actions related to the council and solid waste management from 2011 to 2021, based on their experiences. The interviews were conducted with ten municipal councilors, randomly selected from the 114 councilors.

Content analysis, following the stages outlined by French scholar Laurence Bardin (1977), was well-suited for this phase of the research. It allowed for drawing inferences and performing a detailed qualitative analysis of the data. Bardin's method involves a series of steps: pre-analysis, exploration of the material, determination of the units of record, determination of the units of context, treatment of results, inferences and interpretation.

The municipality of Araraquara was chosen for this case study due to (i) its nearly complete decentralization of solid waste management, which is handled by an autonomous entity, the DAAE; and (ii) the presence of a normatively active COMDEMA during the analysis period, coupled with a prevalence of progressive government mandates, particularly from the Workers' Party (PT), during the studied period.

4. RESULTS

The municipality of Araraquara is located in the central region of São Paulo state and has a population of 242,228, according to the 2022 Census. Covering an area of 1,003.625 square

kilometers, it has a population density of 241.35 inhabitants per square kilometer (IBGE, 2010, 2022). Araraquara is a medium-sized city and, according to the FIRJAN Municipal Development Index (FIRJAN, 2009), it ranks among the most developed cities in the country in terms of quality of life, income, health, and education.

In Araraquara, solid waste management is handled by DAAE, an indirect public administration body. This approach is not typical for municipal solid waste management, though it is common in other basic sanitation sectors such as water supply and sewage. The municipality has established consolidated policies for solid waste management, including a selective collection system in partnership with a cooperative of waste pickers (GUSHIKEN, 2015).

However, Araraquara faces challenges in solid waste management, particularly concerning final disposal. The municipality currently lacks its own landfill; its former dump site has been adapted as a controlled landfill, which still does not fully comply with regulations. In 2012, the plan to close the controlled landfill was completed, and the site is now monitored by the São Paulo State Environmental Company (CETESB). Consequently, all waste collected is transported to a transshipment point near the old landfill and then taken to a private landfill in Guataporã. The processes of collection, transshipment, and final disposal are managed by DAAE, which contracts external companies to carry out these services.

According to Santiago's research (2016), based on data from the National Sanitation Information System (SNIS), out of the 33 municipalities in the Tietê/Jacaré Water Resources Management Unit (UGRHI 13), Araraquara and Bauru were the only cities where waste management was handled by public entities such as autarchies.

Araraquara charges for urban solid waste management services and is financially self-sufficient, with a solid waste management efficiency of 108.85%. This indicates that the revenue from the municipality's waste management fee not only covers the costs but also provides a surplus for further investments (SNIS, 2022). The municipality reported an expenditure of R\$124.88 per capita per year (SNIS, 2021).

Currently, Araraquara has almost entirely decentralized its waste management to DAAE, with financial resources for this urban service partially funded by a waste fee, calculated as 7% of the household's water supply costs.

In a study conducted by Martins, de Lorenzo, and Alves de Castro (2017), the results presented through a SWOT analysis revealed several strengths for Araraquara: consistent planning for basic sanitation and solid waste management since 1970; the formulation of the PMGIRS in 2013 and its approval in 2015; a robust administrative framework for managing solid waste; the establishment of a Basic Sanitation Council; the use of a licensed landfill for final disposal since 2009; the implementation of a Solid Waste Fee in 2015 to fund services; financial self-sufficiency in MSW management achieved by 2016; control through performance indicators; the creation of a cooperative for recyclable material collectors in 2002; and an increase in both the volume and territorial coverage of selective collection.

The authors also identified two opportunities for the municipality: increased public involvement and participation, driven by a historical tendency to elect mayors from parties with progressive ideals, and the population's awareness of the importance of waste management.

Considering the unique characteristics of each municipality and using the National Solid Waste Policy as a normative basis, Araraquara enacted Law No. 8.561/15. This law established

the Municipal Solid Waste Policy (PMRS), outlining its principles, objectives, goals, and guidelines for managing solid waste, including hazardous waste—excluding radioactive waste—and assigning responsibility to generators, producers, consumers, and public managers. In terms of responsibilities, the municipality reinforces what is outlined in the PNRS, which assigns the integrated management of solid waste to public authorities, public and private organizations, and civil society under the principle of shared responsibility. This includes not only generators, producers, and consumers but also managers. Therefore, everyone is accountable for reducing waste production, minimizing consumption, and managing the waste and refuse generated. The PMRS further stipulates that:

Art. 5 - The Municipal Solid Waste Policy is part of the Municipal Environmental Policy and is articulated with the municipal basic sanitation policy and state and national basic sanitation policies. Sole paragraph. The administrative powers over solid waste are those defined by the 1988 Federal Constitution, the 1989 State Constitution and the 1990 Organic Law of the Municipality of Araraquara (ARARAQUARA, 2015).

This provision highlights that the PMRS must align with the principles of similar laws at both the state and federal levels, as well as the Municipality's Organic Law, serving as a regulatory framework for Araraquara's administrative activities. In this context, Article 6 of the municipal policy, when outlining its principles, aligns closely with the PNRS, including aspects such as shared responsibility, integrated management, the polluter-pays principle, prevention, environmental education, cooperation between different levels of government and other stakeholders, and society's right to information, *participation, and social control*.

In line with Brazil's decentralization criteria, each level of government has its own councils for managing public policies across various sectors. At the federal level, there is the National Environment Council (CONAMA), at the state level, the State Environment Council (CONEMA), and at the municipal level, COMDEMA.

Regarding participation and social control, Article 8 of the municipal regulations outlines the instruments for upholding the principles and objectives. Paragraphs I and XIII specifically mention the PMGIRS and COMDEMA as crucial tools for implementing the policy as a decentralized and democratic practice. From this perspective, Article 14 of the Law emphasizes that:

Art. 14 - The content of the Municipal Plan for Integrated Solid Waste Management (PMGIRS) shall be widely publicized, as well as social control in its formulation, implementation and operation, in compliance with the provisions of Federal Law No. 10.650, of 2003, and art. 47 of Federal Law No. 11.445, of 2007 (ARARAQUARA, 2015).

The two aforementioned provisions pertain to social participation in public basic sanitation services, with a specific focus on solid waste management. The first provision emphasizes public access to existing data and information within the bodies and entities that are part of the National Environment System (Sisnama). Additionally, Article 47 of Law 11.445/07 underscores the importance of social control over public basic sanitation services through collegiate advisory bodies at all levels of government, including representation from service users and civil society organizations.

However, the way these councils are characterized by the normative instrument often

leads to a misunderstanding that these collegiate bodies are not tasked with deliberation, which can undermine their credibility as effective instruments of public policy.

The way these councils are characterized by the normative instrument often leads to a mistaken belief that public policy management councils, as collegiate bodies, are not responsible for making decisions, which can discredit their role as effective instruments of public policy.

It is worth noting that, unlike the national trend, the municipality of Araraquara first approved the PMGIRS in 2014 and then passed the law establishing the Municipal Solid Waste Policy in 2015. This sequence occurred primarily because municipalities, being the federative entities most involved in the implementation and execution phases of public policies, require a more operational instrument to guide their activities. According to Chiavenato (2000), one of the core elements of the administrative function is planning. Therefore, management plans are essential for guiding government policies and addressing issues as effectively as possible. This approach aligns with the PNRS, which also emphasizes planning as one of its fundamental pillars.

The PMRS discusses the PMGIRS, identifying it as a tool with a minimum planning horizon of 20 years, to be reviewed no more than every four years. This process is based on the premise that the plan would be developed and revised through mobilization and social participation, including public hearings and consultations. However, the documentary research reveals that while two public hearings were held—on June 10 (at 5 pm) and July 17, 2014 (at 7 pm)—there was minimal representation from civil society. The attendance lists show that between 20 and 25 people attended each hearing, with the vast majority being civil servants or representatives of public agencies.

The minutes from these hearings do not provide a detailed account of the PMGIRS content as attached to the Municipal Basic Sanitation Plan. Although both meetings emphasized the importance of participation by the relevant municipal councils, there is no record of any statements or positions from council representatives. Notably, the documents prioritizing the minutes highlight the speaking roles of representatives from the company hired by the city to consolidate the sectoral plans for water, sewage, drainage, and solid waste. There are no explicit positions, opinions, or suggestions from those present—only observations and concerns.

Based on the timeframe studied in this research, three laws related to the establishment or reformulation of COMDEMA were analyzed: Law No. 6.973/09, Law No. 8.056/13, and Law No. 8.969/17. These ordinary laws provided insights into the council's structure and functionality, which, under the current system, is defined as a local advisory, consultative, and deliberative body within its jurisdiction on matters of environmental management in Araraquara. The sole paragraph of Law No. 8.969/17, updated by Law No. 10.144/21, establishes that COMDEMA is linked to the Municipal Secretariat for the Environment and Sustainability, utilizing its administrative framework to carry out its objectives.

According to Santiago (2016), when examining the issue of solid waste in the cities within UGRHI 13, which includes Araraquara, social participation remains underdeveloped despite being a critical component of the decision-making process and the implementation of decentralized public policies.

This is one of the major obstacles that can either strengthen or weaken the effective solid waste management. The author also highlights another weakness: the lack of specialized technical staff to develop management plan indicators and targets aligned with environmental

protection needs. This deficiency may have been a contributing factor to the municipality's PMGIRS being developed by a private consultancy contracted by the DAAE, potentially leading to a disconnect from social participation.

A significant issue in this context was the political discontinuity affecting municipal secretariats and participatory institutions, particularly those related to environmental matters like COMDEMA. It is important to note, however, that one of the main guidelines of the National Solid Waste Policy is precisely the integrated waste management. This approach emphasizes shared responsibility among producers, consumers, and the government for both waste prevention and environmentally appropriate final disposal.

According to the analysis of the 71 COMDEMA meeting minutes from 2011 to 2021, there were frequent occurrences of unsigned minutes or minutes signed by only a few members. Additionally, meetings often lacked the minimum quorum of fifty percent. It was also common to find that absences were predominantly among the civil society representatives on the council. The main topics discussed in these meetings included the Green-Blue Municipality Program, urban afforestation, fires, the Municipal Environmental Development Fund, environmental education, fauna and flora, and reports of waste being improperly disposed of. The table below summarizes the minutes analyzed.

Table 1. Profile of Araraquara COMDEMA Minutes (2011-2021)

YEAR	Amount of minutes	Key Topics
2011	3	Green-Blue Municipality Program - Programa Município VerdeAzul.
2012	8	Environmental licensing; reforestation; Green-Blue Municipal Seal; request for a Solid Waste Plan.
2013	4	Green-Blue Municipality; COMDEMA reformulation
2014	9	Internal regulations; Municipal Sanitation Plan ; Green-Blue Municipal Seal; fauna and flora.
2015	6	Afforestation; Green Blue Municipality Program report; fires; Municipal Environmental Development Fund.
2016	5	Deliberation of the Master Plan; new regulations for the Green-Blue Municipality Program; green IPTU (Urban Property Tax)
2017	3	New council members; fires; environmental education.
2018	4	Municipal Environment Conference.
2019	12	Afforestation; Green-Blue Municipality Program report; fires; Municipal Environmental Development Fund; FEHIDRO (State Water Resources Fund); financing; internal regulations.
2020	8	Water supply; Green-Blue Municipality Program - council directive; drastic pruning; fires; Municipal Environmental Development Fund; Basalt revitalization and Paiol catchment.
2021	9	Secretariat for the Environment and Sustainability; Green-Blue Municipality; Municipal Environment Plan; Municipal Environmental Development Fund; environmental education

Source: Elaborated by the authors. Information taken from the minutes sent by COMDEMA.

An analysis of the minutes revealed that COMDEMA's activities tend to be more consultative than deliberative, with significant deliberations only occurring regarding the council's own regulations and the reformulation of the Master Plan in 2016. The PMGIRS was mentioned sporadically, often only as a brief update. Discussions on solid waste were infrequent and mostly focused on reporting improper waste disposal in areas like vacant lots, commonly referred to as 'bota-foras'.¹

Since the new administration took office in 2021, the council has adopted a more proactive approach, potentially linked to the restructuring of the Secretariat for the Environment. Nonetheless, challenges remain in terms of transparency and meeting deliberative requirements, particularly concerning solid waste management.

5. CONCLUSION

The decentralization of the PNRS enables the development of municipal policies and plans tailored to local needs while adhering to national standards and requirements. In this context, the Municipal Plan for Integrated Solid Waste Management (PMGIRS) serves as a crucial tool for implementing the PNRS at the municipal level. This document was used to assess participation through the Municipal Council for the Defense of the Environment (COMDEMA).

The study of Araraquara/SP revealed that several municipal councils could potentially contribute to solid waste management, including the Municipal Council for Urban and Environmental Planning and Policy (COMPUA), the Municipal Council for Basic Sanitation, the DAAE Consultative Council, and COMDEMA.

However, the analysis showed that COMDEMA did not effectively participate in issuing opinions or making decisions about the PMGIRS. The council's involvement was limited due to several weaknesses, including poor attendance, lack of credibility, political discontinuities, a non-deliberative nature, insufficient accountability, and inadequate publicity and transparency. Those factors make it difficult to include the issue of solid waste on the agendas of the meetings.

These issues reflect a common challenge in the Brazilian context: the separation between technical and political matters. While collegiate bodies are established for political reasons, the technical aspects of developing and implementing management plans are often handled by specialized professionals who may be disconnected from local political dynamics. As a result, these councils frequently mirror the broader techno-political structure prevalent in the country.

Additionally, interviews conducted during the study revealed that environmental concerns remain a relatively minor issue in municipal settings, overshadowed by other public priorities such as health, education, and social assistance. Environmental issues are often

¹ Common name used in Brazil to refer to areas of illegal dumping, mainly of construction and demolition waste.

regarded as secondary and thus lack visibility among citizens. Consequently, solid waste management, perceived as a public service managed solely by authorities, is marginalized in terms of social participation. This perception contradicts the constitutional principles and the objectives of the PNRS.

In this context, research like this is crucial for diagnosing the weaknesses and inefficiencies in social participation spaces. It highlights the need for adaptations to enhance effective societal involvement, foster greater engagement in public issues such as solid waste management, and ensure equitable representation within these spaces. Such actions are essential for developing more effective municipal public policies.

BIBLIOGRAPHICAL REFERENCES

ARARAQUARA. **Lei municipal nº 8.561**, de 13 de outubro de 2015. institui a política municipal de resíduos sólidos e dá outras providências. Tribuna Imprensa. Ano 18 – Exemplar nº 5.784. 2015.

BARDIN, L. **Análise de conteúdo**. Lisboa: Edições 70, 1977.

BRASIL. **Constituição da República Federativa do Brasil**. Brasília, DF: Senado Federal: Centro Gráfico, 1988. 292 p.

CHIAVENATO, I. **Introdução à Teoria Geral da Administração**. 6. ed. Rio de Janeiro: Campus, 2000.

CÔRTEZ, S. M. V. ; GUGLIANO, A. A.. Entre neocorporativos e deliberativos: uma interpretação sobre os paradigmas de análise dos fóruns participativos no Brasil. **Sociologias** 24, Porto Alegre, 2010, p. 44-75.

COSTA, A.B., & ZOLTOWSKI, A. P. C. Como escrever um artigo de revisão sistemática. In S. H. Koller, M.C.P. de Paula Couto, & J. V. Hohendorff (Orgs.), **Manual de Produção Científica (pp. 55-70)**. Porto Alegre, RS: Penso. 2014.

CRESWELL, J.W. Projeto de pesquisa: métodos qualitativo, quantitativo e misto. 3. ed. Porto Alegre: **Artmed**, 2010.

DODMAN, D.; MCGRANAHAN, G.; DALAL-CLAYTON, B. **Integrating the environment in urban planning and management**: key principles and approaches for cities in the 21st century. Nairobi: United Nations Environment Programme (UNEP), 2013. Disponível em: <https://www.unclearn.org/wp-content/uploads/library/unep247.pdf>. Acesso em: mai 2024.

FEDERAÇÃO DAS INDÚSTRIAS DO ESTADO DO RIO DE JANEIRO (FIRJAN). **Índice Firjan de Desenvolvimento Municipal**. 2009. Disponível em: < <https://www.firjan.com.br/ifdm/consulta-ao-indice/ifdm-indice-firjan-de-desenvolvimento-municipal-resultado.htm?UF=SP&IdCidade=350320&Indicador=1&Ano=2009>>. Acesso em: mai 2024.

GUSHIKEN, O. H. **Avaliação das Virtudes e Fragilidades de Programas Municipais de Economia Solidária**: um estudo de casos múltiplos. 2015. 163p. Dissertação (Mestrado em Desenvolvimento Regional e Meio Ambiente) – Centro Universitário de Araraquara, Araraquara, 2015.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). **Censo Demográfico 2010**. Disponível em: <https://www.ibge.gov.br/>. Acesso em: mai de 2024.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). **Censo Demográfico 2022**. Disponível em <https://cidades.ibge.gov.br/brasil/sp/araraquara/panorama>. Acesso em: mai 2024.

JURAS, I. A. G. M. **Legislação sobre Resíduos Sólidos**: comparação da Lei 12.305/2010 com a legislação de países

desenvolvidos. Consultoria Legislativa da Câmara de Deputados. Brasília. Abr 2012.

LUCHMANN, L. H. H. Participation and representation in managing councils and in participative budget. *Cad. CRH* [online]. 2008, vol.21, n.52, pp.87-97. ISSN 0103-4979. <https://doi.org/10.1590/S0103-49792008000100007>.

MARTINS, A. M.; DE LORENZO, H. C.; ALVES DE CASTRO, M. C. A. Plano municipal de gestão integrada de resíduos sólidos no município de Araraquara-SP: formulação e implementação. **Revista Brasileira Multidisciplinar**, v. 20, n. 1, p. 81-92, 2017. DOI: 10.25061/2527-2675/ReBraM/2017.v20i1.499. Disponível em: <https://www.revistarebram.com/index.php/revistauniara/article/view/499>. Acesso em: mai. 2024

MESJASZ-LECH, A. Municipal waste management in context of sustainable urban development. **Procedia-Social and Behavioral Sciences**, v. 151, p. 244-256, 2014.

SANTIAGO, C. D. **Planos municipais de gestão integrada de resíduos sólidos: desafios na implementação da política nacional de resíduos sólidos na bacia hidrográfica Tietê Jacaré/ SP**. Dissertação (Mestrado). Universidade Federal de São Carlos, São Carlos, 2016. 174 p.

SANTOS JR, O. A.; RIBEIRO, L. C.; AZEVEDO, S. (Orgs). **Governança democrática e poder local: a experiência dos conselhos municipais no Brasil**. Rio de Janeiro: Revan, Fase, 2004.

SISTEMA NACIONAL DE INFORMAÇÕES SOBRE SANEAMENTO (SNIS). Ministério das Cidades. **Diagnóstico do manejo de resíduos sólidos urbanos 2021**. Disponível em: <http://app4.mdr.gov.br/serieHistorica/#>. Acesso em mai 2024.

SISTEMA NACIONAL DE INFORMAÇÕES SOBRE SANEAMENTO (SNIS). Ministério das Cidades. **Diagnóstico do manejo de resíduos sólidos urbanos 2022**. Disponível em: <http://app4.mdr.gov.br/serieHistorica/#>. Acesso em mai 2024.

SPRATT, C.; WALKER, R.; ROBINSON, B. Practitioner research and evaluation skills training in open and distance learning. **Module A5: Mixed research methods**. Commonwealth of Learning, 2004. Disponível em: <http://oasis.col.org/bitstream/handle/11599/88/A5%20workbook.pdf?sequence=1&isAllowed=y>. Acesso em: mai. 2024.