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Article

Agroecology as a Local Development Strategy: Analysis and Proposals for a Food Bank in the Municipality of Maricá, Rio de Janeiro

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ABSTRACT
The growing demand for sustainable and inclusive food systems has placed agroecology at the center of discussions on territorial development and food security in Brazil. In this context, municipalities play a strategic role in formulating public policies aimed at food sovereignty and strengthening short production and consumption circuits. This study analyzed the integration of agroecology into municipal food and nutritional security (FNS) policies in Maricá, Rio de Janeiro, with the aim of proposing guidelines for establishing a food bank guided by agroecological principles. To this end, a mixed-methods approach was employed, integrating the use of a structured questionnaire, a semistructured interview with a public administration representative, and a technical visit to a nationally recognized facility, thereby enabling methodological triangulation. The results indicated growing recognition of agroecology as a strategic pillar of social and environmental policies, although weaknesses persist in intersectoral coordination, the technical qualifications of staff, and the absence of a unified distribution system. It is concluded that strengthening local food and nutrition security (FNS) policy depends on integration among family farmers, public agencies, and civil society, as well as the creation of territorial governance instruments and thematic observatories. Finally, we propose the implementation of an agroecologically based food bank and the consolidation of ongoing training practices, thereby enhancing the resilience and sustainability of the municipal food system.
Keywords: food and nutritional security; public policies; urban agriculture; intersectorality; food sovereignty.

RESUMO
A crescente demanda por sistemas alimentares sustentáveis e inclusivos tem colocado a agroecologia no centro das discussões sobre desenvolvimento territorial e segurança alimentar no Brasil. Nesse contexto, os municípios assumem papel estratégico na formulação de políticas públicas voltadas à soberania alimentar e ao fortalecimento de circuitos curtos de produção e consumo. Este estudo analisou a inserção da agroecologia nas políticas municipais de segurança alimentar e nutricional (SAN) em Maricá-RJ, com vistas à proposição de diretrizes para a estruturação de um banco de alimentos orientado por princípios agroecológicos. Para isso, empregou-se abordagem mista, integrando aplicação de questionário estruturado, entrevista semiestruturada com representante da gestão pública e visita técnica a um equipamento de referência nacional, possibilitando a triangulação metodológica. Os resultados indicaram reconhecimento crescente da agroecologia como eixo estratégico de políticas sociais e ambientais, embora persistam fragilidades na articulação intersetorial, na qualificação técnica das equipes e na ausência de um sistema unificado de distribuição. Conclui-se que o fortalecimento da política local de SAN depende da integração entre produtores familiares, instâncias públicas e sociedade civil, além da criação de instrumentos de governança territorial e observatórios temáticos. Propõe-se, por fim, a implementação de um banco de alimentos com base agroecológica e a consolidação de práticas formativas permanentes, ampliando a resiliência e a sustentabilidade do sistema alimentar municipal.
Palavras-chave: segurança alimentar e nutricional; políticas públicas; agricultura urbana; intersetorialidade; soberania alimentar.

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Introduction

Access to food is a social right guaranteed by the Brazilian Federal Constitution and one of the foundations of human dignity. However, even though Brazil is one of the world's largest agricultural producers, the country has once again been included on the United Nations (UN) Hunger Map following the COVID-19 pandemic, revealing profound contradictions between agricultural productivity and the guarantee of food security (PENSSAN 2021) . This scenario highlights the disconnect between the use of national agricultural land and meeting the food needs of the population, particularly those of historically vulnerable groups.

According to the Food and Agriculture Organization of the United Nations (FAO), food security is based on physical and economic access to adequate, safe, and sufficient food (FAO 2023) . However, the Second National Survey on Food Insecurity in the Context of the COVID-19 Pandemic (PENSSAN 2022) found that 33.1 million Brazilians were experiencing hunger between 2021 and 2022. Gender and racial inequalities exacerbate this reality: households headed by Black women are the hardest hit, underscoring the need for intersectoral public policies focused on equity and the human right to adequate food.

In urban areas, where approximately 87.4% of the Brazilian population is concentrated (IBGE 2024) , social vulnerabilities become even more complex. Job insecurity, unemployment, and informality limit access to food and intensify territorial inequalities. Figueiredo et al.(2017) argue that the right to the city and the right to health are interdependent dimensions for promoting equity, which requires a restructuring of urban planning. In this sense, practices such as urban agriculture and agroecology emerge as strategic tools for productive inclusion, strengthening food sovereignty, and ensuring sustainability in urban spaces.

Urban agriculture, as argued by Purcell and Tyman(2015) and Ferreira and Castilho(2016) , should be understood as a coordinating public policy capable of linking the economic, social, and environmental dimensions of local development. In addition to contributing to the reduction of waste and the strengthening of short production chains, this practice brings producers closer to consumers, fostering a solidarity-based economy and the socially just use of land. In this context, agroecology plays a prominent role by proposing resilient, sustainable, and socially inclusive production systems aligned with the Sustainable Development Goals (SDGs), particularly SDG 2 (Zero Hunger and Sustainable Agriculture) and SDG 11 (Sustainable Cities and Communities).

Food Banks (FB) function as public institutions for food and nutritional security, created to reduce waste and redistribute food equitably. Established in Brazil in the 1990s and strengthened by policies from the Ministry of Social Development and the Fight Against Hunger, Food Banks have established themselves as tools for mitigating hunger and coordinating public food supply policies, such as the PAA and the PNAE. However, the National Assessment of Food Banks " shows low participation by agroecological donors and limited integration with local urban agriculture initiatives, revealing gaps in the consolidation of a territorial and participatory management model.

Thus, this study sought to assess the potential of agroecology as a strategy for strengthening a territorial model of local development in Maricá, Rio de Janeiro, by analyzing the institutional, operational, and participatory structure of the municipality's Food Bank. The study aimed to understand how agroecological principles and urban agriculture practices can contribute to improving public policies on food and nutritional security, proposing guidelines for integration among local production, public management, and social inclusion.

Material and Methods

Type of Research and Methodological Approach

This study is descriptive and exploratory in nature, employing a mixed-methods approach (quantitative and qualitative), grounded in field research techniques, the collection of primary and secondary data, and documentary analysis. The methodological design sought to understand the relationship between agroecology, public policies, and food security, considering the institutional and territorial context of the municipality of Maricá, Rio de Janeiro.

According to Gil (2022), this type of research is suitable for identifying characteristics of social phenomena and informing situational assessments. The choice of a mixed-methods approach is justified by the need to integrate quantitative evidence—derived from questionnaires administered to professionals in the public network—with qualitative interpretations, drawn from interviews and field observations (Creswell and Creswell 2023) .

The study was approved by the Research Ethics Committee (CEP) under registration number CAAE 78915724.6.0000.0311, in accordance with the guidelines of Resolution No. 510/2016 of the National Health Council (Resolution No. 510, dated April 7, 2016) .

Participants

The study included 16 professionals affiliated with the municipal public health system of Maricá, Rio de Janeiro, working in various areas of public policies related to food security, social assistance, and urban agriculture. The sample was purposive and non-probabilistic, consisting of 6 participants (37.5%) from the Social Assistance Reference Centers (CRAS), four (25%) affiliated with municipal projects with a socio-environmental and community focus, four (25%) belonging to municipal departments or autonomous agencies—including two managers—and two (12.5%) representatives of the Municipal Council for Food and Nutritional Security (COMSEA).

This composition reflects the institutional and functional diversity of local initiatives focused on Food and Nutritional Security (SAN), in line with Flick et al.(2021) and Minayo(2014) , who highlight the importance of the heterogeneity of contexts and experiences among social actors as an essential element for a broader understanding of public practices and policies in the region.

Inclusion and Exclusion Criteria

The inclusion and exclusion criteria for the samples were defined with the aim of appropriately guiding the composition of the groups participating in the research, ensuring the internal consistency of the data and the institutional representativeness of the subjects involved. Two main groups were considered: managers and staff of municipal projects, and managers and staff of municipal agencies.

The first group, consisting of managers and staff involved in municipal projects, included staff directly involved in agroecology and urban agriculture projects in the municipality of Maricá, Rio de Janeiro, as well as members of technical teams working on agroecological projects and public initiatives focused on urban agriculture and local sustainability. Excluded from this group were staff members who did not have access to systematized information about the projects, such as reports, operational data, or indicators; those who could not trace the data provided back to reliable institutional sources; and staff members involved in intermunicipal or interstate initiatives whose activities were not restricted to the territory of Maricá.

The second group, composed of managers and staff from municipal agencies, included employees assigned to public agencies in the municipality of Maricá that fund, coordinate, or monitor projects and initiatives to promote agroecology and urban agriculture, including municipal secretaries, advisors, and technical staff involved in policies related to social assistance, the solidarity economy, and agriculture. We excluded staff members who had no direct involvement in monitoring or implementing municipal public policies in the areas of agroecology, urban agriculture, and food and nutritional security, as well as those who lacked access to official information regarding the development and management of institutional projects.

These criteria were designed to ensure the methodological consistency of the study and to guarantee that the information collected accurately reflected the institutional and operational reality of public policies focused on agroecology and urban agriculture in Maricá, Rio de Janeiro.

Data Collection Instruments and Procedures

Data collection took place between March and May 2025, using three complementary strategies to ensure methodological triangulation and the analytical robustness of the study. The first strategy consisted of administering a structured questionnaire containing closed-ended and open-ended questions, designed to identify the participants' areas of activity, their institutional perceptions, and the main operational challenges related to the municipal Food and Nutritional Security (SAN) policy. The questionnaire was administered digitally, ensuring the anonymity and free and informed consent of the respondents, in accordance with current ethical standards.

The second strategy involved conducting a semi-structured interview with Laura Maria Vieira da Costa, Undersecretary of Solidarity Economy and Chair of the Intersectoral Chamber for Food and Nutritional Security (CAISAN) and the Municipal Council for Food and Nutritional Security (COMSEA) of Maricá. The purpose of the interview was to deepen our understanding of intersectoral strategies to combat food insecurity, the implementation process of the Municipal Plan for Food and Nutritional Security " " (PLANSAN), and the challenges faced in establishing the municipality's Food Bank, particularly regarding the incorporation of agroecological practices and the strengthening of short supply chains.

The third strategy consisted of a technical visit to the Laranjais Food Bank, located in Nova Iguaçu (RJ), which took place on May 7, 2025. The purpose of this visit was to observe the operations, infrastructure, and management and institutional coordination practices of a facility recognized as a national benchmark within the Brazilian Food Bank Network. The visit was systematically documented in a field journal, following the

recommendations of Flick et al.(2021) , which enabled a comparative analysis between the Nova Iguaçu model and the context of the municipality of Maricá.

These integrated strategies made it possible to capture different dimensions of the phenomenon under study (institutional, operational, and territorial), fostering a connection between the empirical field and theoretical reflection on agroecology, food security, and public policies for sustainable local development.

Data Processing and Analysis

The quantitative data obtained through the questionnaires were organized into spreadsheets and analyzed using simple descriptive statistics, with calculations of absolute and relative frequencies (%). This approach, according to Dancey and Reidy(2021) , is appropriate for describing response patterns and participant profiles in social and applied studies. The process comprised the stages of pre-analysis, categorization, and interpretive inference, allowing us to identify patterns of meaning associated with the public management of the SAN, social participation, and the integration of agroecology and local development.

Results

Institutional Profile and Areas of Activity

The data indicate a diversity of institutional segments involved in actions focused on food security and agroecology in the municipality of Maricá, including public agencies, municipal projects, and management councils. Responses predominantly came from the Social Assistance Reference Centers (CRAS), followed by representatives of municipal projects, departments/autonomous agencies, and the Municipal Council for Food and Nutritional Security (COMSEA) (Table 1).

Table 1. Respondents' areas of activity.

Institutional Sector	No. of responses
CRAS - Social Assistance Reference Centers	**6**
Municipal Projects	**4**
Municipal Departments / Local Authorities	**2**
Managers of Departments / Municipal Agencies	**2**
COMSEA	**2**
Total responses	**16**

Source: authors (2025).

This composition highlights the presence of multiple actors of different natures and at various levels of management, forming an intersectoral institutional network that is still under development. This institutional diversity reflects a coordination—still in the process of consolidation—between social assistance policies and those related to agroecology and food production, an essential condition for building integrated governance of food security.

Characterization of Municipal Projects

The projects analyzed are primarily concentrated in the areas of Agroecology/Urban Agriculture (3 projects) and Food and Nutritional Security (1 project) (Table 2). The average implementation period ranges from 4 to 5 years, with some collaboration agreements formally beginning in 2020. The activities are distributed across strategic locations, such as Espraiado, Ubatiba, and Fazenda Joaquim Pinheiro—regions recognized for their productive potential and the presence of public agricultural policies. The use of public areas demonstrates the collective and social nature of the projects, reinforcing their alignment with the policy of food sovereignty and the social use of land.

Table 2 . General Characterization of the Projects

Parameter	Key Information
Main area of operation	Agroecology / Urban Agriculture (75%)
Average implementation period	4–5 years
Project Locations	Espraiado, Ubatiba, Joaquim Pinheiro Farm
Managed area	***2,400 m² to 5 ha***
Type of area	100% public

Source: Authors (2025).

Cross-Sectoral Integration and Partnerships

Of the projects evaluated, 50% carry out intersectoral actions, and half maintain direct cooperation with the CRAS (Table 3). This cooperation is strategic, as it allows for the integration of the productive dimension (agroecology) with the social protection dimension (food security). This integration highlights the growing role of agroecological projects as mechanisms of social protection, going beyond agricultural production and serving as instruments of inclusion and equity.

Table 3 . Degree of intersectoral integration of the projects.

Type of intersectoral action	No. of responses	Percentage
Joint actions with other projects	**2**	50%
Joint actions with CRAS	**2**	50%
Participation in SAN programs	**4**	100%

Source: Authors (2025).

Production, Destination, and Beneficiaries

All participating projects produce food, with a primary focus on vegetables, fruits, grains, and cereals, and an average monthly production ranging from 600 kg to 7.2 metric tons, depending on the scale and type of crop. The number of varieties already produced exceeds 120 species, reflecting productive diversification and the restoration of local agrobiodiversity.

Table 4 . Production and distribution indicators.

Indicator	Observed Values
Average quantity produced	**600 kg to 7,200 kg/month**
Number of varieties produced	**70 to 120**
Main destination	Social institutions, school meals, training and education
Number of direct beneficiaries	Up to 1,890 people/month

Source: authors (2025).

The food is primarily distributed to social institutions, schools, and public facilities, in line with policies aimed at ensuring food security and combating food waste. The data underscore the role of municipal projects as hubs for solidarity-based food distribution, directly contributing to the mitigation of food and nutritional insecurity.

Food Governance and Municipal Food Bank

Unanimously, the projects and units interviewed recognized the importance of creating a Municipal Food Bank (Table 5), justifying the measure as strategic for distributing produce, managing surpluses, and expanding social reach. This demand appears repeatedly in the responses from COMSEA managers, technical staff, and advisors. This unanimity suggests institutional maturity and recognition of the Food Bank as a structural policy, rather than merely an emergency measure.

Table 5 . Perceptions regarding the creation of a Municipal Food Bank.

Respondents' Position	Main justification
Yes (100%)	Facilitates the distribution and flow of food
—	It allows for more consistent production and prevents losses
—	Strengthens the intersectoral food security network

Source: the authors (2025).

Role of COMSEA and Public Management

COMSEA has been increasingly active in the formulation of local public policies, participating in the 1st Municipal Conference on Food and Nutritional Security and the creation of CAISAN Maricá, as well as in the development of the Municipal PLANSAN. The results indicate that the council has been monitoring initiatives such as changes to school menus and the promotion of family farming and solidarity markets. However, the involvement of public officials and civil society is still described as sporadic and insufficient, suggesting challenges related to social mobilization and political continuity.

Food Security and the Role of CRAS

CRAS units report that cases of food insecurity are frequent (83%) (Table 6) and that, although they are often unable to fully resolve these situations, they play a fundamental role in coordinating the intersectoral network and facilitating access to ad hoc benefits, such as vegetable baskets and food donations. This role positions the CRAS as key operational links between social assistance and food production policies.

Table 6 . CRAS perceptions of food insecurity.

Question	Observed trend
Frequency of food insecurity cases	High (5 out of 6 units)
Capacity for direct resolution	Partial
Related partner projects	COOPERAR Cooperative, community gardens, donations
Gender and age group served	Predominantly women (ages 18–64)

Source: authors (2025).

Challenges and Prospects

Analysis of the results identified a set of structural and operational challenges that limit the consolidation of a Food and Nutritional Security (FNS) policy that is effectively integrated into the municipality of Maricá, Rio de Janeiro. Among the main obstacles are the lack of coordinated intersectoral actions among the departments and agencies involved; low levels of political and social participation in decision-making processes regarding FNS; the absence of a unified and permanent food distribution system, as evidenced by the incomplete structuring of the Food Bank; and the lack of ongoing technical training for teams working both at the Social Assistance Reference Centers (CRAS) and in agroecological production projects. These factors highlight the need to improve intersectoral governance and strengthen participatory management mechanisms in order to enhance the effectiveness of actions and ensure greater coherence among the productive, social, and environmental dimensions of public policies.

Despite these challenges, the analyzed responses revealed a clear expression of political will and institutional commitment to advancing food security and agroecology agendas. There is a growing awareness among local stakeholders regarding the strategic role of agroecology—not only as a sustainable production alternative but also as a foundational public policy capable of promoting territorial development, reducing socioeconomic vulnerabilities, and ensuring the human right to adequate food. This perception, shared by both managers and staff, reinforces the importance of consolidating agroecology as a guiding principle for municipal policies aimed at food sovereignty and the strengthening of the solidarity economy.

Discussion

The results obtained reveal a significant overview of professional activities in the municipality of Maricá, notably the majority presence of public servants affiliated with the Social Assistance Reference Centers (CRAS) and, to a lesser extent, participants involved in municipal projects. This configuration reflects the coexistence of established public policies and innovative initiatives, in line with studies that emphasize the need for coordination between permanent institutional structures and community-based agroecological experiences (Calbino et al. 2018; Grisa and Porto 2023) . Mixed arrangements that combine public administration and local experimentation are recognized as fundamental to structuring resilient food systems, based on cooperation among actors and the promotion of short supply chains (Diekmann et al. 2020; Martinez et al. 2022; Silva and Souza 2023) .

The predominance of CRAS professionals (60%) highlights the central role of these units in mediating between production and consumption, acting as operational links between social assistance and food security policies, which confirms the interdependence between food security, social protection, and agroecology (Burigo and Porto 2019; Silva et al.. 2021)). The 40% of respondents from Municipal Projects represent the realm of innovation and institutional experimentation, a space identified by Becker and Ximenes(2023) as crucial for the consolidation of urban agroecological arrangements and sustainable transition policies. This complementarity between formal structures and local actions contributes to strengthening food governance and expands the municipality's capacity to integrate productive, distributive, and educational actions, in line with the pillars of the National Food Security Strategy (SAN): availability, access, utilization, and stability (Diekmann et al. 2020; Silva and Simões 2023) .

The coordination observed among CRAS, COMSEA, CAISAN, and productive projects reflects an emerging intersectoral governance arrangement, an aspect identified by Pozzebon et al.(2017) and Santos et al.(2024) as essential to the effectiveness of food security policies. This polycentric governance model fosters shared decision-making among public agencies, local networks, and civil society organizations, promoting social control and efficiency in the allocation of resources. Georges et al.(2025) and Ghinoi et al.(2018) highlight that governance within supply networks is a determining factor for the resilience of local food systems and the success of food security policies.

The presence of agroecological projects that utilize public spaces and allocate food for social purposes aligns with the analyses by Cunha and Cardoso(2022) and Leão et al.(2022) , who identify urban agriculture as a tool for social inclusion, income generation, and the strengthening of the solidarity economy. These projects

embody the integration of agroecological principles with the objectives of the National Food Security Strategy (SAN), bringing producers and consumers closer together, reducing food losses, and optimizing food use, as advocated by Martinez et al.(2022) and Pu et al.(2022) . In Maricá, diversified production and the institutional distribution of harvests to schools, public facilities, and social initiatives reinforce the role of agroecology as a public policy for food supply and combating food insecurity (Santos and Machado 2019; Savian et al.. 2021)).

The unanimous support for the creation of a Municipal Food Bank confirms the importance of this structure as a tool for solidarity-based logistics. Albuquerque and Lima(2023) and Belik(2015) recognize food banks as structural components of the National Food Security System (SAN) and as mediators between local production and equitable redistribution. Georges et al.(2025) demonstrate that these facilities serve as connection points between production surpluses and the food needs of vulnerable populations, functioning as strategic nodes in local supply networks. The success of these banks depends on robust institutional arrangements and integrated governance, linking the public, community, and private sectors (Ghinoi et al. 2018; Sencébé et al.. 2020)). Thus, the proposal to create a Food Bank in Maricá has empirical and theoretical support, positioning itself as a structural policy within the context of the local Food Security System (SAN).

Participatory management, as exemplified by the work of COMSEA and CAISAN, aligns with Grisa and Porto's concept of "proximity governance"(2023) , in which social control and dialogue between the state and society are fundamental to the effectiveness of food policies. This approach is consistent with studies on sustainable food networks, which recognize social capital, trust, and cooperation as determinants of the resilience of local systems (Adefila et al. 2024; Birtalan et al.. 2020) . However, the consolidation of this governance depends on overcoming challenges related to policy continuity, the institutionalization of participatory mechanisms, and the technical training of teams(2020) .

The challenges reported—such as insufficient coordinated intersectoral actions, low social participation, the absence of a unified distribution system, and a lack of ongoing technical training—are consistent with gaps identified by Ronconi et al.(2021) and Becker and Ximenes(2023) . Such limitations compromise the stability and efficiency of these actions, especially in contexts characterized by dependence on external resources and political constraints. Overcoming these barriers requires the institutionalization of the National Food Security System (SAN) as a state policy, integrating food supply, family farming, nutrition education, and solidarity-based redistribution (Diekmann et al. 2020; Silva and Souza 2023; Verano et al.. 2023) .

Governance, collaborative arrangements, and social participation constitute central analytical dimensions for understanding the processes involved in implementing a food bank. Coordination and cooperation among public authorities, the productive sector, farmers, civil society, and charitable organizations define rules, decision-making spaces, and accountability mechanisms that structure collective action (Buttenbender et al. 2022; Castro Júnior et al. 2024; Pinheiro et al.. 2021) . Formal and informal governance structures should promote not only the efficient allocation of resources but also the social legitimacy of actions—an aspect illustrated by intersectoral experiences in Ceará involving the creation of coordination forums and steering committees (Castro Júnior et al. 2024; Pinheiro et al.. 2021)).

The exploration of partnership models with the third sector demonstrates how agreements, contracts, and strategic alliances can support the implementation of local networks (Albuquerque and Lima 2023; Buttenbender et al.. 2022) , thereby expanding institutional capacity to respond to food security demands (et al.. 2025) . The alignment of public objectives, local interests, and cooperative practices ensures transparency, accountability, and organizational learning (Leite et al. 2021; Silva and Souza 2023) . This coordination is essential in food networks operating in territories with multiple actors and distinct needs, requiring flexible and adaptable modes of governance (Albuquerque and Lima 2023; Castro Júnior et al. 2024) .

The governance of local food networks involves coordination among government agencies, farmers, civil society, and aid organizations in forums capable of reducing power imbalances and promoting shared decision-making. The experience of the Steering Group for the State Health Promotion Policy of Ceará illustrates how an intersectoral approach can facilitate coordination among sectors, even in the face of budgetary constraints (et al. 2024) . Local initiatives show that building networks depends as much on formal agreements as on informal networks based on trust and shared goals (Albuquerque and Lima 2023; Buttenbender et al. 2022) . Collaboration with the third sector stands out as an essential element for expanding technical capacities, mobilizing resources, and expanding service coverage, reinforcing the need for strategic alliances guided by the Sustainable Development Goals, especially SDG 17 (Buttenbender et al. 2022; Pinheiro et al.. 2021) . The consolidation of this governance depends on shared decision-making spaces, accountability mechanisms, and a cooperative approach that recognizes the autonomy of stakeholders, while supporting the common goal of food security (Albuquerque and Lima 2023; Castro Júnior et al. 2024; Leite et al.. 2021) .

Finally, political will and awareness of the strategic role of agroecology create a favorable environment for the consolidation of sustainable and integrated public policies. The perception that agroecology should be understood as a state policy aligns with approaches that recognize it as a scientific and sociopolitical framework capable of promoting sustainable development and food equity (Grisa and Porto 2023; Savian et al.. 2021)). The results indicate that food security and agroecology policies in Maricá align with national trends toward the municipalization and territorialization of food security, outlining concrete paths for strengthening food resilience and social justice in the local context.

Final Considerations

The analysis of the Maricá Food Bank revealed that agroecology constitutes a foundational and promising pillar for strengthening a territorial model of local development, especially when combined with public food and nutrition security (FNS) policies guided by intersectorality, the solidarity economy, and social participation. Based on institutional research, interviews, and a comparative technical visit, it was found that the municipality possesses political and operational conditions favorable to the consolidation of a territorialized food system capable of integrating local production, public management, and social inclusion.

The results showed that, although there is expressed political will and growing recognition of the strategic role of agroecology, significant challenges still persist. The absence of a unified distribution system and a food bank structured on agroecological principles limits the scope of actions to combat hunger and hinders the implementation of short supply chains. Furthermore, the lack of ongoing technical training for CRAS teams and those involved in productive projects compromises the effectiveness of assistance efforts and coordination among sectors.

Strengthening the Maricá Food Bank, guided by agroecology, requires the institutionalization of integrated and participatory governance, the creation of regulatory instruments that ensure the public procurement of local agroecological foods, and the establishment of permanent partnerships between family farmers, public institutions, and community networks. Such measures can transform the Food Bank into a cornerstone of a territorially-based food policy, grounded in the human right to adequate food and in the promotion of food sovereignty and security.

Looking ahead, we recommend expanding mechanisms for ongoing technical training of intersectoral teams, developing demonstration projects for urban and peri-urban agriculture, and implementing a municipal system for monitoring and evaluating food security and nutrition (SAN). Furthermore, the creation of a local observatory on agroecology and food can contribute to the production of applied knowledge, supporting innovative and sustainable policies. Thus, Maricá will be able to establish itself as a national model for solidarity-based food management, integrating production, consumption, and citizenship through an agroecological approach.

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Appendix

Survey Questionnaire

Section 1 – Informed Consent Form

Section 2 – Definition of Category by Sector

In which sector do you work within the municipality of Maricá?

☐ Municipal project

☐ (Managers) Municipal department / autonomous agency

☐ CRAS – Social Assistance Reference Centers

☐ COMSEA

Section 3 – Area 1: Municipal Projects

This section is specifically for managers and staff of municipal projects.

Which public entity is the project you're part of affiliated with?
☐ Municipal Secretariat
☐ Municipal agency
☐ Other: _____

Main area of the project's scope:
☐ Agroecology / urban agriculture
☐ Food and nutritional security

Section 4 – Municipal Project: Agroecology / Urban Agriculture

How long has the project been active in the municipality of Maricá, Rio de Janeiro?

In which location (neighborhood and district) is the project being implemented?

What is the area (m^2) managed by the project?

Is the project carried out on public land?
☐ Yes ☐ No

Does the project carry out intersectoral activities or collaborate with other projects?
☐ Yes ☐ No

Does the project carry out joint activities with the municipality's CRAS?
☐ Yes ☐ No

Are any of the project's objectives and goals related to food and nutritional security?
☐ Yes ☐ No

Section 5 – Project Strategies

Describe which project strategies align with food and nutrition security initiatives for the municipality:

Section 6 – Food Production

Does the project produce food?
☐ Yes ☐ No

What are the project's main products?
☐ Vegetables ☐ Fruits ☐ Grains and cereals ☐ Minimally processed foods ☐ Processed foods ☐ Other: _____

Does the project have a specific goal or action plan for the distribution of its produce?
☐ Yes ☐ No

Section 7 – Allocation of Production

Where is the food produced distributed?

How many people benefit from the food?

What is the average monthly quantity (in kg) of food produced by the project?

How many varieties are produced by the project?

Section 8 – Distribution of Food Produced

Where does the food produced by the project go?

Section 9 – Importance of the Food Bank

Would it be important for your project to have a municipal food bank that manages the distribution of food produced in the municipality? Why?

In your opinion, are municipal agroecology/urban agriculture projects working together to ensure food and nutritional security?
☐ Yes ☐ No

Given the context of the project you're involved in, is there a possibility of collaborating with a local food bank?
☐ Yes ☐ No

Section 10 – Challenges

Describe the main challenges that would prevent the project from collaborating with a municipal food bank:

Section 11 – Municipal Project: Food and Nutritional Security

How long has the project been carrying out activities in the municipality of Maricá, Rio de Janeiro?

In which area (neighborhood and district) is the project carried out?

Does the project carry out intersectoral or joint activities with other projects?
☐ Yes ☐ No

Section 12 – Intersectoral Initiatives

What intersectoral or multidisciplinary activities are carried out by the project?

Is there collaboration with the municipal agriculture/agroecology department?
☐ Yes ☐ No

Does the project carry out joint initiatives with the municipality's CRAS?
☐ Yes ☐ No

Section 13 – Food Handling or Production

Does the project handle or produce food?
☐ Yes ☐ No

Section 14 – Food Produced

What are the main foods handled or produced by the project?
☐ Vegetables ☐ Fruits ☐ Grains/cereals ☐ Minimally processed ☐ Processed food ☐ Other: _____

What is the monthly quantity (kg) produced/handled (average)?

Is there a goal or action plan for food distribution?
☐ Yes ☐ No

Please specify where the food is distributed: _____

How many people are served with this food?

Section 15 – Collaboration and Food Banks

In your opinion, should municipal food and nutrition security projects carry out joint initiatives?
☐ Yes ☐ No

Would it be important for your project to have a municipal food bank that manages food distribution? Why?

Given the context of the project you're involved in, is there a possibility of collaborating with a local food bank?
☐ Yes ☐ No

Section 16 – Follow-up 2: Municipal Department / Agency

Describe the actions taken by the department/agency regarding initiatives to combat hunger in the municipality:

Explain the actions taken by the department/agency on issues related to sustainable local development:

Section 17 – Department/Municipal Agency Projects

Does the department/agency carry out projects in the field of agroecology?
☐ Yes ☐ No
If yes, list them: _____

Does the department/agency carry out projects in the area of food and nutritional security?
☐ Yes ☐ No
If yes, please list them: _____

Section 18 – Intersectorality and Public Participation

Which other agencies or departments does the department/municipal agency collaborate with?

Does it work on projects coordinated with the CRAS?
☐ Yes ☐ No

How has the administration been developing solutions to ensure food and nutritional security in the municipality?

How does the administration assess the role of agroecology in ensuring food security?

Does the administration take public participation into account when drafting calls for project proposals?
☐ Yes ☐ No

How often does the administration participate in public hearings, meetings, and forums on agroecology and food security (annual average)?

Section 19 – Track 3: CRAS

What is the reference region or district?
☐ Ponta Negra ☐ Inoã ☐ Itaipuaçu ☐ Downtown ☐ Other: _____

Which neighborhoods does the center serve?

Average number of people served: _____

Predominant gender served:
☐ Female ☐ Male ☐ Non-binary

Age group most commonly served:
☐ Under 18 ☐ 18 to 64 ☐ Over 65

Section 20 – Relationship to the Topic

Do you frequently provide services to people experiencing food and nutritional insecurity?
☐ Yes ☐ No

Is the CRAS able to resolve cases of food and nutritional insecurity?
☐ Yes ☐ No
If yes, in what way: _____

In your opinion, is it the CRAS's responsibility to help those it serves overcome hunger and food insecurity?
☐ Yes ☐ No

Are there any municipal projects that work directly with your unit and address food security and agroecology?
☐ Yes ☐ No
If so, how do they operate: _____

Are lectures or other training sessions held for CRAS staff on food security and agroecology?
☐ Yes ☐ No

Section 21 – Evaluation and Outlook

In your opinion, how important is it for the municipality to ensure food security for those served by the CRAS?

Do you believe there is political will behind the efforts to address food insecurity?
☐ Yes ☐ No

Would the involvement of agroecology and food security projects at your facility be important?
☐ Yes ☐ No

Would it be important for your facility to have a municipal food bank to refer people experiencing food insecurity?
☐ Yes ☐ No

Section 22 – Follow-up 4: COMSEA

How do you assess the municipality's intersectoral efforts to promote food and nutritional security?

☐ They operate in a coordinated and systematic manner

☐ They are coordinated but sporadic

☐ The intersectoral initiatives are insufficient

☐ I am unaware of any relevant intersectoral initiatives

Section 23 – COMSEA's Activities and Policies

What actions are initiated or carried out by COMSEA to address cases of food and nutritional insecurity?

In your opinion, is there political will to take action to overcome food insecurity in the municipality?
☐ Yes ☐ No

Do public officials participate in council meetings and other follow-up activities?
☐ In a satisfactory and active manner
☐ They participate, but do not engage
☐ Participation by only a few public sectors
☐ Sporadic or insufficient participation

How do you assess civil society's participation in board meetings?
☐ Active participation
☐ They participate, but with little engagement
☐ Low participation
☐ Insufficient participation

What are the main public policies that COMSEA has been promoting in the municipality?

In your opinion, are the municipality's public services able to address cases of food insecurity?
☐ Yes ☐ No

Does COMSEA's agenda include plans for a food bank in the municipality?
☐ Yes ☐ No

In your opinion, would it be important to have a municipal food bank?
☐ Yes ☐ No
If yes, why do you think it is important: _____

Please provide a suggestion regarding this proposal here: