

DONATION OPPORTUNITY

Access to Adequate Food

Urban Gardens



**ORGANIZAÇÃO
CIDADES SEM FOME**



doebem 

DONATION OPPORTUNITY

Cause: Access to Adequate Food

Organization: Cities Without Hunger

Intervenção: Urban Gardens

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Sumário Executivo

doebem's work focuses on finding and recommending the most cost-effective donation opportunities. In our research on food insecurity in the country, we identified a highly cost-effective intervention that promotes significant social impact for every real donated. This solution comprises urban and peri-urban gardens implemented in the states of São Paulo, Rio Grande do Sul, and Rio de Janeiro by the organization Cidades Sem Fome (CSF, Cities Without Hunger).

1 Average monthly household income of the poorest 4th quintile in the state of São Paulo (Source: PNADC).

2 Exchange rate of 1 USD = 5 BRL used as an estimate for reference, based on the average value over the past 5 years. For a more precise estimate, we suggest performing the conversion at the time of reading due to the significant volatility of the BRL-USD exchange rate.

Urban gardens transform degraded, underutilized, or abandoned areas into spaces for producing nutritious foods that are sold at affordable prices to members of the adjacent community. The intervention is implemented in demonstrably vulnerable communities, socially and economically, located in areas with low or no access to nutritious foods (food deserts or swamps). Community members who, before the arrival of the gardens, lived on an average monthly income of R\$550 (USD 110)^{1, 2}, are trained to work as farmers and develop food production, receiving salaries as service providers hired by the organization. The surplus produced in the gardens is distributed among the workers and their families. In this way, the intervention promoted by CSF addresses two of the main causes of hunger: poverty and the poor distribution of healthy food.

CSF's operating states are in the Northeast and Southeast regions, which are most affected by food insecurity in absolute terms, and in pockets of poverty in the South region; in these territories, the organization works with populations vulnerable to significant nutritional deficiencies. By recently expanding its operations to the states of Bahia

and Rio de Janeiro, the organization gains prominence in terms of reach, serving populations facing high rates of hunger. In general, the states where CSF is present show high rates of hunger-related hospitalizations, especially Bahia, which also presents high mortality rates from this cause. These factors indicate that donations directed to CSF's urban gardens will be highly cost-effective.

Evaluation highlights:

- The gardens demonstrably improve dietary diversity and reduce nutritional deficiencies in the communities where they are implemented.
- By promoting income generation, the intervention provides one of the necessary conditions to solve the problem of food insecurity.
- CSF is a solid, award-winning organization with several partners that strengthen its financial sustainability, and it enjoys legitimacy in the community and among its peers.

The Problem

Food insecurity affects approximately 64 million people in Brazil—about 30% of the population. Severe food insecurity, which we refer to here as hunger, affects 8.7 million individuals. The highest rates are found in the Northeast and Southeast regions³.

In some states, nearly half the population lives with food insecurity; in certain cases, up to 10% of a state's population experiences hunger. Nutritional deficiencies—most commonly calcium, vitamin D, vitamin B6, and iron—affect a substantial portion of the population, particularly children and women of reproductive age.

Fifteen people die from hunger each day in the country. Beyond its effects on physical health, the problem impacts cognitive development, labor productivity and income generation, child growth, and mental health. The populations most affected by food insecurity are the poorest, Black, Pardo, and Indigenous people, women, and rural residents.

Brazil has made structured efforts to combat hunger since the 1990s, though success has varied across decades. Resource distribution among states and regions shows significant inequalities, and closing these gaps has been a joint objective of public authorities and organized civil society.

³ DORNELLES, V. Cause Study: Access to Adequate Food in Brazil. São Paulo, SP: doebem Doações Efetivas, 2025.

The Organization



The organization Cidades Sem Fome (CSF) has been working since 2004 with vulnerable communities in the state of São Paulo and, in the last 5 years, has expanded its operating territory to the states of Bahia, Rio de Janeiro, and Rio Grande do Sul. To date, the organization has implemented 33 gardens, generating 512 direct jobs and producing 120 tons of food per year. Thirty units remain under the organization's responsibility, while the others have been handed over to local organizations that manage and benefit from their production. Other projects include School Gardens, which implement gardens within public schools to improve the quality and diversity of school meals, with various positive effects on the physical and mental health of students and staff, and the provision of food and nutritional education for students, staff, and their families. CSF also has a sustainable family farming program in which it offers technical, financial, and commercial support to small producers, focusing on strengthening short and sustainable supply chains. The states of São Paulo and Bahia already have school garden units, while family farms are still restricted to the interior of São Paulo state.



doebem's institutional solidity assessment of CSF highlights the following points, according to its evaluation criteria:

Legitimacy

The organization has almost 40 years of activity, is well-known in the region, respected in communities, and highly active in its core causes.

Credibility

The organization's solid performance is expressed in projects that have gained regional notoriety and become a model for partnerships with public authorities⁴.

Openness to external audits and evaluations

The project undergoes regular audits (by public and private bodies) and has already received awards and quality seals.

Sustainability

The organization has dedicated teams and competent partners, seeking alignment with local knowledge in conjunction with alliances with social movements and other organizations active in the region. They demonstrate appropriate use of their resources and tend to end the year with a surplus.

Reputational risk

The organization has already undergone investigations that confirmed its integrity and presents no risks that could compromise its reputation and that of its partners.

Transparency

The team regularly produces and disseminates activity reports, presenting active and updated communication channels.

Operational team's delivery capacity

The team is qualified for accountability of operational activities, though still insufficient in number of employees. The organization's leadership is aware of the issue and is working to expand the team.

Strategic use of additional resources

The organization has a clear strategy for using financial resources from new partnerships, regardless of the amount made available.

⁴ CSF is a partner of the Municipal Secretariat of Education of the City of São Paulo in the Rolê Agroecológico Program, part of the Food and Nutritional Education strategy of the School Food Program - see <https://educacao.sme.prefeitura.sp.gov.br/programa-de-alimentacao-escolar/educacao-alimentar-e-nutricional/role-agroecologico/>

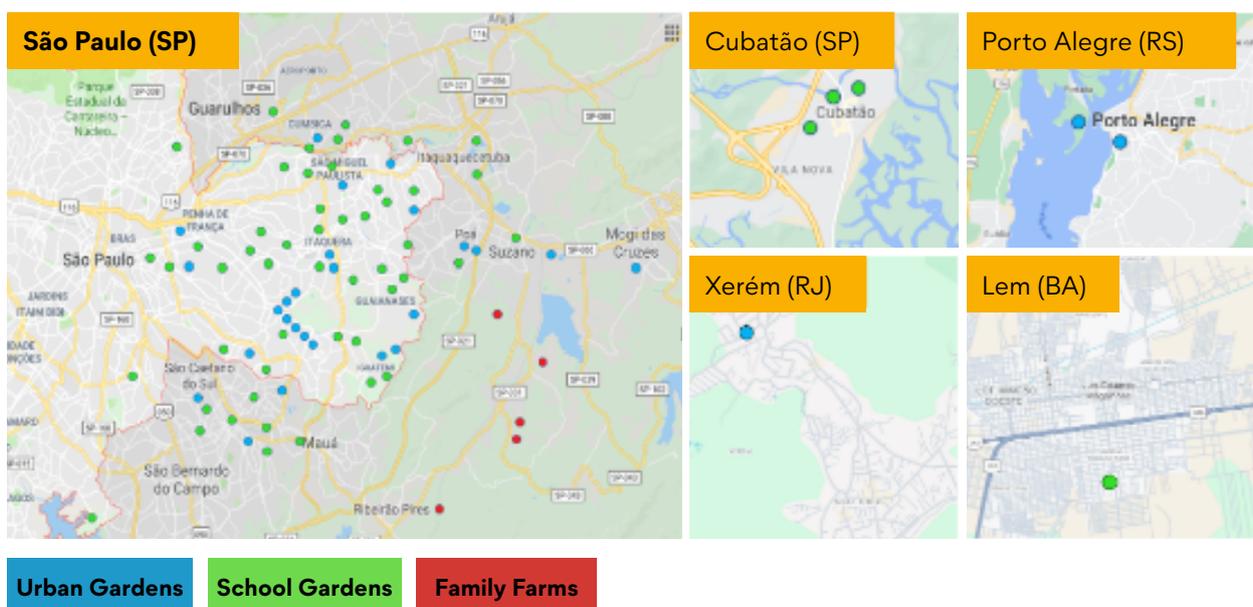


Beneficiary of an urban garden with her vegetable production. Source: Cidades Sem Fome.

In the evaluation, CSF satisfied most of these aspects, with emphasis on the institutional solidity of the organization and the intervention's income generation mechanism. As a point of attention, we note that, although it can improve access to food, income generation alone does not produce the most direct impact on food insecurity. Additionally, it is important to understand if, and how much, of the income generated in the gardens is used for the acquisition of healthy foods rather than ultra-processed foods, whose consumption corresponds to moderate and mild forms of food insecurity. Other points of attention regarding the clarity of content available on the organization's communication channels were identified during the evaluation. Upon formalizing the partnership, the organization committed to making specific improvements to its website for communication with donors and increasing transparency in its accountability, assuring doebem and its donors that this is a solid recommendation.

Implementation Territory

In the Southeast region, where CSF's work began and is concentrated, 35% of people in Brazil suffer from food insecurity; in the case of severe food insecurity, 29% are in the region. CSF works with favelas and urban communities, areas where the concentration of people without adequate access to food is highest. By expanding its operations to the states of Bahia and Rio de Janeiro, CSF seeks to serve the populations most susceptible to hunger, as the Northeast region contains 37% of the population in Brazil suffering from food insecurity, and 29% of the population suffering from hunger. Bahia has rates above 3.9 annual deaths per 100,000 inhabitants as a result of hunger, ranking among the worst states in this situation.



CSF's area of operation (2024). Source: Cidades Sem Fome

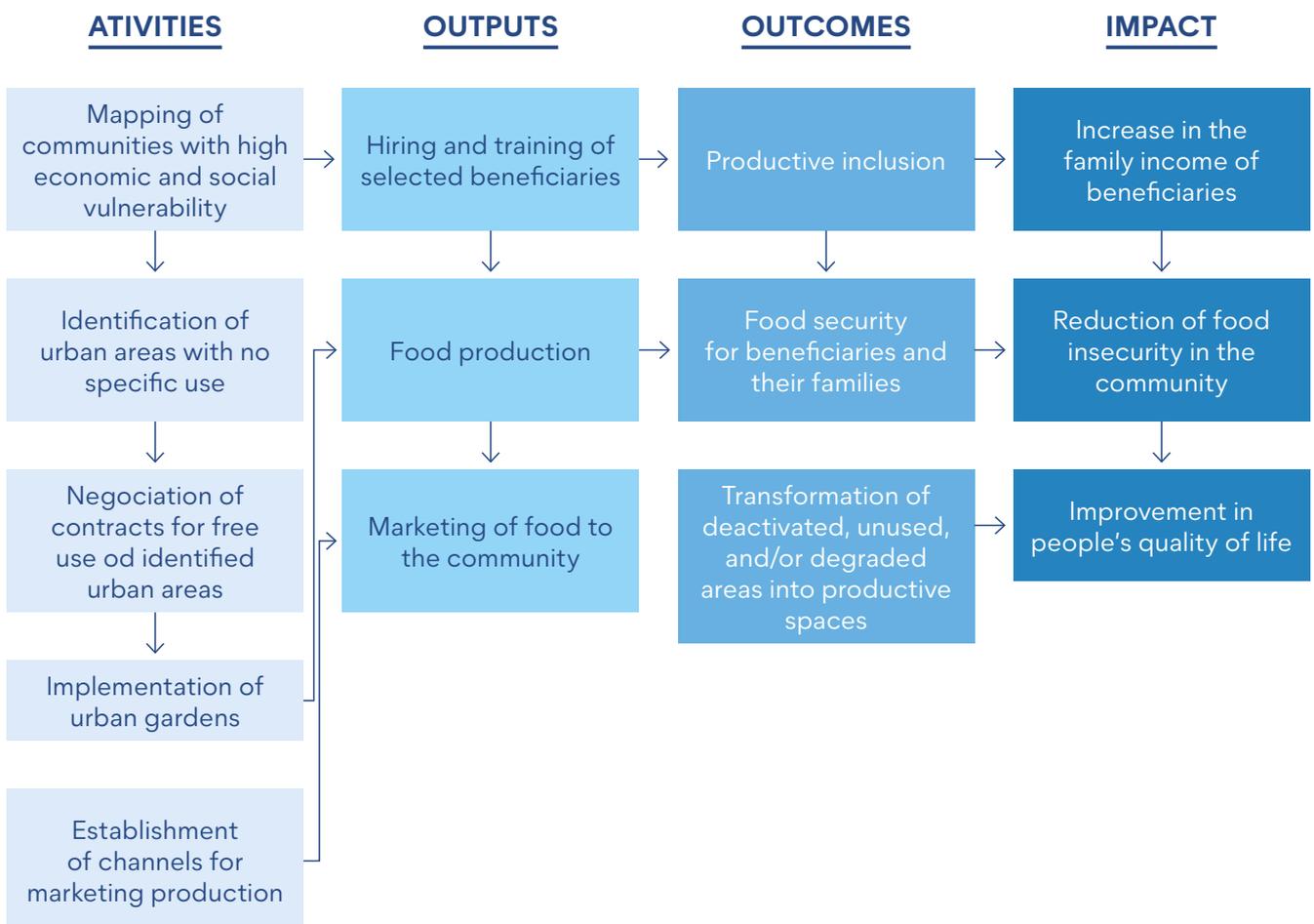
The Intervention

Urban gardens are horticulture areas, generally implemented in degraded, abandoned, or underutilized areas located in cities. In these areas, the implementation of gardens requires attention to resolve eventual soil contamination problems, which frequently pose risks to human health. CSF implements gardens of different sizes (between 3,000 and 10,000 m²), with a prevalence of smaller interventions of 3,000 m² – doebem’s evaluation took the costs for the most prevalent garden as reference. These gardens have an average net implementation cost of R\$295,000 (USD 59,000) diluted over three years, the time required for the garden to reach its break-even point for self-sufficiency. Each 3,000 m² garden employs 4 farmers who receive 2 minimum wages per month, which represents an average increase of R\$2,458.00 (USD 491.60) in the monthly income of each worker.



Urban garden in São Mateus (east zone of the city of São Paulo) (2024). Source: Cidades Sem Fome.

The community—including farmers and their families—acquires the produce from the gardens sold at affordable prices at Hortifruti da Horta (in São Mateus). Hortifruti also supplies food to hospitals, public schools, supermarkets, and small businesses in the region for resale. Additionally, surplus produce is regularly distributed among farmers. In this way, CSF contributes to solving the problem of food deserts and swamps that characterize the peripheries of large Brazilian cities.



Summarized theory of change for the intervention carried out by Cidades Sem Fome. Source: doebem team.

Evidence of Impact

CSF's work aligns with productive inclusion strategies. Specialized literature indicates that this type of intervention can expand access to food by increasing families' purchasing power, in addition to fostering direct consumption of locally produced foods. However, available studies on the direct impact of these initiatives on nutritional or food security indicators show methodological limitations and inconclusive evidence.

A systematic review⁵ identified moderate evidence that the effects of productive inclusion on anthropometric measures related to undernutrition are small or nonexistent. Additionally, there is weak evidence of its direct influence on dietary diversity and food security more broadly. On the other hand, urban and community gardens show comparatively stronger evidence⁶ regarding the improvement of diet quality and diversity, with an increase in fruit and vegetable consumption.

⁵ Duraó, S., Visser, M. E., Ramokolo, V., Oliveira, J. M., et al. (2020) Community level interventions for improving access to food in low and middle income countries. *Cochrane Database of Systematic Reviews*, (8). [online] Available from: <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD011504.pub3/full> (Accessed 24 April 2024).

⁶ Alaimo, K., Beavers, A. W., Coringrato, E., Lacy, K., et al. (2023) 'Community Gardening Increases Vegetable Intake and Seasonal Eating From Baseline to Harvest: Results from a Mixed Methods Randomized Controlled Trial'. *Current Developments in Nutrition*, 7(5), p. 100077.



↘
Before and after -
abandoned area in Itaquera
(east zone of the city of São
Paulo), transformed into
a garden (2024). Source:
Cidades Sem Fome.



Despite these limitations, it is reasonable to assume that CSF contributes significantly to mitigating structural barriers to food access and income generation, especially in territories marked by urban poverty and food insecurity. Local food production, associated with technical training and connection with consumer markets, represents a promising strategy, especially when complemented by educational actions and community mobilization.

For this reason, doebem recommended that the organization conduct more rigorous and long-term monitoring and recording of food insecurity metrics for the people served by the organization, so that more accurate evidence of impact can be tracked.

**COMMUNITY GARDENS
SHOW COMPARATIVELY
STRONGER EVIDENCE
REGARDING THE
IMPROVEMENT OF DIET
QUALITY AND DIVERSITY,
WITH AN INCREASE IN
FRUIT AND VEGETABLE
CONSUMPTION**

Cost-Effectiveness

Through cost-effectiveness analysis, Doebem calculates the relationship between the impact generated by the intervention and its associated costs. This considers variables such as intervention characteristics, institutional solidity of the organization, health and socioeconomic conditions of beneficiary communities, and reference studies that estimate the impact of similar interventions using robust methodological strategies. The impacts of CSF's Urban Gardens were estimated considering solely their causal effects on income generation for individuals in vulnerable situations.

After the analysis, which included specific intervention data and socioeconomic characteristics, an estimated investment of R\$200,000 (USD 40,000) in Cidades Sem Fome's urban gardens can provide the equivalent of 0.7 units of urban gardens that employ a total of 2.4 farmers over an effective period of 30.8 years. Each of these farmers, on average, receives a fixed salary of 2 minimum wages, currently equivalent to R\$3,036.00 (USD 607.20). Considering that each worker resides with 3 other people, and that the income generated by the garden is distributed among the 4 household members, a total of 9.8 people would see their monthly income counterfactually increase by 106% over 30.8 years.

Thus, an estimated R\$200,000 (USD 40,000) would avert 73.99 DALYs in total, meaning a donation of R\$2,700 (USD 540) would promote one year of healthy life for an individual who would have died or suffered from the consequences of food insecurity if they had not been hired to work in the urban garden.

Funding Opportunities

After implementing 33 urban gardens, mostly in the state of São Paulo, CSF plans to expand its activities to other regions of Brazil, notably the Northeast. However, the organization limits its commitment to opening new gardens to an investment that covers the total cost of their implementation for the first three years, as a way to ensure the financial sustainability of the project until it becomes self-sufficient.

The volume of resources needed to implement the expansion plans would be approximately R\$300,000 (USD 60,000) to R\$600,000 (USD 120,000). However, smaller amounts of resources have a clear direction from CSF in maintaining already established gardens through the purchase of inputs for preparing beds, new seedlings, and remuneration of farmers.



Highlights

- **Cost-effectiveness:** cost per DALY below US\$5,000. Strategic use of resources, with clear application of funds, even in new contributions.
- **Scale-up potential:** regionally recognized and replicable projects, with solid partnerships (public authorities and other organizations), allowing for increased impact.
- **Operating region:** consolidated operation in territories marked by food insecurity and multidimensional poverty.
- **Target audience:** beneficiaries and community in socially vulnerable situations.
- **Good reputation and institutional health:** credibility demonstrated through years of operation, institutional partnerships, and legitimacy in the community. Financial sustainability.
- **Technical capacity:** operational team qualified for accountability and project execution, with expansion plans.

Points of Attention/ Uncertainties

→ **Sensitivity to average population income:** the cost-effectiveness of the solution was calculated based on an average individual income of R\$578 (USD 115.6). Our analyses show that the cost per DALY result is quite sensitive to this income, and gardens implemented in areas whose average income exceeds this value may not be cost-effective.

→ **Transparency:** the organization does not share financial reports on its website, making them available only upon request.

Questions and Answers

WHY MEASURE THE IMPACT OF GARDENS IN DALYS?

DALY is a metric commonly used to evaluate and, especially, compare interventions from a cost-effectiveness perspective by encompassing both mortality and morbidity aspects in a single measure.

WHY IS THE INVESTMENT REQUIRED TO AVERT 1 DALY R\$2,700 (USD 540) IF THE IMPLEMENTATION COST OF A GARDEN IS R\$295,000 (USD 59,000) AND IT DIRECTLY BENEFITS 4 PEOPLE?

doebem's cost-effectiveness analysis applies the counterfactual concept to estimate the expected impact of donation opportunities—that is, it compares what happened to people who received the intervention with what would have happened if those people had not received it. Since not all people who benefit from the gardens would have starved and suffered its consequences without receiving it, this discount is necessary to estimate the expected impact of a garden. In short, it is a rigorous way to more precisely measure the real impact of donations.

HOW CAN I BE SURE THAT MY DONATION WILL BE USED FOR THE IMPLEMENTATION OF URBAN GARDENS?

doebem monitors donations with partner organizations to verify effective use and periodically analyzes financial statements and activity reports to maintain the partnership. Additionally, it updates the evaluation of the donation opportunity every 2 years on average.

WHAT HAPPENS TO AN URBAN GARDEN AFTER 3 YEARS?

After 3 years, a garden normally achieves financial sustainability and does not require new financial contributions for its maintenance, since the revenue from the sale of vegetable produce is sufficient to cover recurring costs. CSF has gardens with about 20 years of productive life whose financial sustainability was achieved in about 5 years.

WHAT IS THE COST-EFFECTIVENESS OF A GARDEN THAT IS NOT 3,000 M²?

Although we have not evaluated gardens of other sizes, it is reasonable to expect that the total costs of the garden and the number of farmers will vary proportionally to the area of the garden, which would not significantly impact the final cost per DALY.



Donate to the **Effective Fund** and support this intervention.

If you prefer, make a PIX bank transfer directly to **contato@doebem.org.br**



R\$50 (USD 10) → allows the acquisition of 70 short-cycle vegetable seedlings

R\$200 (USD 40) → allows the purchase of inputs and soil preparation for 1 vegetable bed

R\$2,700 (USD 540) → averts the loss of one year of healthy life due to premature death or disability caused by the consequences of food insecurity

R\$8,200 (USD 1,640) → ensures the maintenance of 1 urban garden for 1 month

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