

## Community Gardens: alternatives to capabilities expansion and to sustainable development in urban centers in Brazil<sup>1</sup>

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### Abstract:

The capability approach focus on what people are able to do and to be, defining achievement in quality of live in terms of the real opportunities that people has, whether at the basic level as being adequately nourished, whether in complex fields such as taking part in the life of the community. In this view development is a process of expanding the real freedoms that people enjoy, understanding that freedoms also depend on social and economic arrangements. Development requires the removal of major sources of unfreedom, such as poverty, poor economics opportunities, corruption and systematic social deprivation. The creation of the community vegetable gardens in urban centers deal with important social issues as poverty, famine and sustainable development. The community gardens consist of urban agriculture practices, which provides healthy and organic food. The production is cultivated in the common spaces and delivered at low cost or free of charge to the local community, strengthen social relationships, stimulating the collective management of public areas and enhancing the freedom to participate in the community politics and social issues. By giving more socio-economic opportunities to people, they also improve human capabilities and substantive freedoms, enhancing the human dignity and the quality of live.

**Keywords:** Capability approach. Community Gardens. Sustainability. Human Development.

**Riassunto.** *Community Gardens: possibili alternative di espansione e di sviluppo sostenibile nei centri urbani in Brasile*

L'approccio delle capacità conferisce enfasi agli atteggiamenti delle persone e definisce il raggiungimento di qualità di vita in termini delle reali opportunità che le persone hanno, sia basilari che quelle più complesse, pensiamo alla partecipazione alla vita della comunità. In questa ottica, lo sviluppo è un processo di espansione delle reali libertà delle persone, comprendendo che dipendono anche dalle condizioni sociali ed economiche. Lo sviluppo impone di eliminare i principali ostacoli contrari alla libertà, come povertà, opportunità economiche corruzione e privazione economica e sociale. La creazione degli orti comunitari nei centri urbani riguarda questioni sociali come la povertà, la fame e lo sviluppo sostenibile. Gli orti comunitari forniscono prodotti alimentari sani e scuri per la comunità. La produzione è coltivata negli spazi comuni ed acquistabile a basso costo oppure a titolo gratuito per la comunità locale rinforzando i legami sociali, stimolando la gestione collettiva degli spazi pubblici e migliorando la partecipazione nella politica comunitaria. Creando, così, al contempo anche opportunità sociali e economiche per le persone sostenendone la libertà rafforzando la loro dignità umana e la qualità di vita.

**Parole Chiave:** aproccio delle capacità, orti comunitari, sostenibilità, sviluppo umano.

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## 1. Introduction

The main aim of this article it to examine the contribution of community gardens to the achievement of the sustainable development in urban centers. The article discusses two central issues.

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First, the comprehension of sustainable development, in its three dimensions economic, social and environmental, which requires address poverty, famine and other urgent issues pointed by the 17 Sustainable Development Goals (SDG). To scrutinize this multidimensional phenomenon, it is adopted the method of the capability approach proposed by Amartya Sen and his notion of development as freedom.

Second, it presents the main features of community vegetable gardens as new organized systems enhancing capabilities expansion in social, economic and environmental fields.

## **2. Sustainable Development and Development as Freedom**

The theme of sustainable development highlight the discussion in the last decades of the 20<sup>th</sup> century, because of the advanced signs of environmental degradation and impossibility to maintain certain styles of life based on unrestrained consumption and disposal. Since 1987, the United Nations sets forth goals and an international agenda stimulating new paths to conciliate development and sustainability.

The expression sustainable development was first proposed by the Brundtland Report, elaborated by the *World Commission on Environment and Development* (WCED). This was the first international report that refers to sustainable development as that one which allows to meet the need of the current generations without compromise the capacity of the future generations in satisfy their own needs. The Report highlighted the environmental devastation and the limitation of natural resources to ensure the future generations the access to resources needed to live (Santilli, 2005, p. 11). The conclusions of the Brundtland Report have lead to the UN Resolutions nos. 42/187 e 42/186 claiming the urgent necessity to adopt global efforts to follow the goals and recommendations stablished in the Report (De Marco and Mezzaroba, 2017, p. 329).

The notion of sustainable development is quite complex and operates in three distinct fields: environmental protection, economic growth and social justice. It recognizes the need to reduce poverty and meet essential necessities to reach development. It also points that the

stage of social and technological evolution based on the high level of consumption of few people, while millions of people suffering in extreme poverty, results in environmental limitations to satisfy basic needs to current and future generations. Hence, sustainable development is a complex conception that must integrate and balance three dimensions: social, economic and environmental (Santilli, 2005, p. 12).

The comprehension that development should integrate other factors than the economic growth has questioned the criterion of summing that measures the progress of a country by looking only at the Gross Domestic Product (GDP) per capita. The GDP per capita is relatively easy to measure, since the monetary value of goods and services makes it possible to compare quantities of different types. The widespread acceptance of this criterion was strengthened by the “trickle-down theory”, which suggests that the benefits of economic growth are bound to improve the lot of the poor, even if no direct action is taken in that direction. That theory has been questionable, because there is no evidence that increased economic growth does automatically improve quality of people’s lives, particularly for those whose existence is marked by inequality and deprivation (Nussbaum, 2011, p. 47).

In 1990, the United Nations program for the development published the first annual report of the Human Development Index (HDI), measuring development not only by the GDP but also aggregating across other indicators such as the performance in education and life expectancy. Over the time others indexes were incorporated to measure development also considering gender and social inequality. This new conception of development contributed to set forth the *Millennium Objective Goals* – MDGs from 2000 to 2015. In 2017, the United Nations proposed 17 *Sustainable Development Goals* (SDG) that must be implemented in global level by the member States. The 17 SDG are those of no poverty; zero hunger; good health and well-being; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry, innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible production and consumption; climate action; life below water; life on land; peace, justice and strong institutions; and partnerships for the goals.

The SDG prescribes a complex approach to face and eradicate poverty and famine, reduce social and gender inequalities, combining economic growth and technology advances with natural resources preservation. The sustainable development requires actions in all its three dimensions understanding poverty and social deprivation as multidimensional phenomenon. Hence, the strategies to formulate public policy and guide actions towards sustainable development might assess several conditions.

For this purpose, the methodology of the capability approach proposed by Amartya Sen emerges as a worthwhile technique for both assess social, economic and environmental conditions and guide the formulation of public policies and actions.

Sen understands development as the process of expanding the real freedoms that people have. This theory focus on what people are able to be and to do in their real lives and understands human life as a set of “doings and beings”, called functionings. Functionings are constitutive elements of living, part of the state of a person, what one manages to do or to be. Whether at the basic level, as being adequately nourished, scape faming and poverty. Whether in many complex fields, such as achieving self–respect, undertaken business and taking part in the life of the community (Sen, 2003, p. 44).

In turn, *capability* represents the various combinations of *functionings* (beings and doings) that one can achieve and reflects the person's freedom to lead one type of life or another, to choose between possible livings (Sen, 1992, p. 39).

This approach sustains a method based upon a wider informational basis to assess well-being claiming to evaluate the actual opportunities that different persons have. It also pays attention to the positive freedoms that a person has in choosing to do (or not) this or that, emphasizing the *agency* aspect of a person. *Agency* includes each person's pursuits and choices, moral concerns and conceptions of good to different states of affairs (Sen, 1985, p. 201). Agency achievement means the person's success in the pursuit of the totality of her goals and objectives (Sen, 1992, p. 56). The notion of agency is quite crucial for the conception of development as freedom proposed by Sen.

Sen sustains that development might be seen as a process of expanding the real freedoms that people enjoy. This approach understands that freedoms depend on many determinants,

such as social, economic and environmental arrangements. Development requires the removal of major sources of unfreedom, such as poverty and systematic social deprivation. The notion of substantial freedom is crucial to this approach of development, since the achievement of development depends on the free agency of the people. Then, the expansion of freedoms must be the target of public policy, improving human capabilities and substantive freedoms rather than treating people as patient recipients of benefits. (Sen, 1999, p. 3).

The notion of development as freedom affirms a strong rationale for acknowledging the positive role of free and sustainable agency, whereas given the adequate social opportunities people can effectively shape their own destiny and help each other. (Sen, 1999, p. 10). The capability approach might guide new strategies to human development and to shape public policy, because it allows the scrutiny of a wide range of social, economic and environmental factors that must be addressed to improve human lives spreading the real opportunities that people have.

Hence, it might examine how the social organization of community gardens in Brazil contributes to increase opportunities for people and to achieve sustainable development in its three dimensions social, economic and environmental.

### **3. Community Vegetable Gardens: New organized systems to face poverty and improve sustainable development**

The Brazilian Constitution prescribes a commitment to the emancipatory values and aims of social justice that had conduce its elaboration. It sets out the human dignity, the social values of labor and free initiative, and the political pluralism as the foundation principles of the State. It prescribes the fundamental objectives of the Brazilian Republic, among them, the national development; the eradication of poverty and the reduction of social and regional inequalities; promoting the good for all without prejudice of any kind (race, gender, age, religion, and so on); and the construction of a free, fair and solidary society.

The Brazilian Constitution adopts a complex conception of development that is also sustainable. It dedicated a whole chapter to the environment protection and prescribes in the article 225 the right of all to the ecological balanced environment as an essential common good for quality of live, obligating the public authorities and the whole society to protect it to the current and future generation. Hence, the notion of development prescribed by the Brazilian Constitution also operates in the three dimensions (social, economic and environmental) that support the sustainable development.

However, the social data in Brazil demonstrates that is still much work to do. The Gini Coefficient points Brazil as the 10<sup>o</sup> most unequal country in the world (Pires, 2017) and we still have millions of people suffering famine and extreme poverty in the country. The failure in achieve the constitutional goals derives from the lack of efficient public policy but also from many complex factors. The methodology of the capability approach might be useful to address this problem, since it suggests to assess the several concrete conditions that might influence and undermine the achievement of the sustainable development goals.

The Brazilian scenario shows a wide range of social, economic and environmental conditions that impose barriers to sustainable development. In the social and economic fields, the high costs of products combine with the average low-income of most families obstruct improve quality of live. Nowadays, the unemployment affects around 13 millions of people. There are also more than 55 millions Brazilian under the line of poverty, since 25% of the population earn income lower than R\$406 (nearby U\$100 per month) and suffer many kinds of deprivations. According to the Report of the United Nations about food and nutrition safety (2018), there are 5.2 millions of people suffering from famine in Brazil. The data show that poverty and famine have increased in the last 4 years and still huge problems to face in the country.

Another report, elaborated by the Civil Society Work Group for the Agenda 2030, also has revealed worrying information to the challenges fields of poverty eradication, famine combat, socio-productivity inclusion, guarantee of health life and sustainability. The report, prepared for the high-level United Nations Forum in 2017, has pointed the setback in public policies. Contrary to the SDG, the public actions have contributed to aggravate

unemployment and indecent work. The fields of food safety, environmental balance and sustainable production were negatively impacted either. The regression in the implementation of fundamental rights, especially in education and in the public health assistance, imposes more barriers to reduce inequalities and improve the quality of life for most part of the population.

In the environmental sphere, the widespread path of using high level of pesticides is going from bad to worst. Only in 2019, the Federal Government has authorized the usage of more than 290 new pesticides, most of them banished in others countries and some even proven carcinogenic. The usage of a wide range of pesticides results in two consequences. First, it increases the risks of environmental contamination and illnesses caused by the consumption of high level of toxic substances. Second, it makes organic agriculture and health food quite expensive.

In this sense, the technique of community gardens emerges as a new organized system able to address social and environmental problems contributing to sustainable development.

The community gardens are created and developed in order to improve quality of life for people, especially poor people who don't have economic conditions to afford and access ordinary food at all, least of all health and organic food. These gardens consist in urban agriculture practices providing health and organic food for the community members. The wide range of salads, fruits and vegetables are cultivated in common spaces, such as public squares, vacant lots and flowerbeds. The vegetable crops are delivered at low cost or free of charge to the local community, reducing the common high price of these products.

The vegetable cultivation follows the organic agriculture principles, without using traditional pesticides and fungicides, resulting in a higher-quality and healthier food. Since in Brazil most agriculture productions commonly use pesticides, in high levels forbidden in many others countries, the farming of organic food in public areas is a path to defy the traditional system and trace both different productive practices and social innovation. The obstacles faced by the majority of population to access basic quality food under affordable prices make the community gardens an important option for food and nutritional security for Brazilian.

Moreover, community gardens can be understood as a toolkit that provide a plural approach to face poverty, combat famine and promote sustainable development. The creation of community gardens is a whole process that transfers human resources from the informal labor market to the formal. They also contribute to a learning process of all the citizens involved in these projects, through the framework of the working groups, improving environmental and collective consciousness and increasing the sense of belonging to the community (Gallo, Spavorek and Martins, 2004).

These gardens might contribute to achieve a wide range of social goals, promoting public health and food security through educational actions dealing with environmental, food education and behavior. They stimulate people to work environmental and social features in a pleasant way. Also allow the creation of social, emotional and solidary bonds. The community gardens enable people to exercise the ability of managing their own collective ventures, generating work and income and reducing the charges of production by eliminating the transportation costs. Even the organic waste can be used to soil fertilization resulting in an efficient and sustainable productive cycle (Gallo, Spavorek and Martins, 2004).

The strategy to expand capabilities and address social issues is sustained either by the creation of socio and economic opportunities. Besides providing health and organic food to their families, the members of community gardens can sell the surplus production, what results in income generation for them. It is also common to promote the affiliation in cooperatives guided by solidarity-based economy, resulting in self-food provisions for community, self-organization of production, distribution and sale off the surplus.

The community gardens strength social relationships, because over time these gardens aggregate the participation of the whole community members, even those who do not benefit from the gardens production. It is common to neighbors to donate seeds and seedlings for new plantation and provide water for irrigation. They also stimulate the collective management of public areas, enhancing the participation in the community politics and social issues.

For the municipal authorities, these projects are beneficial either, since it is cheaper to stimulate the production than to provide land and public areas cleaning. In the other hand, these community gardens create economic opportunities, reducing the negative impacts of unemployment and relieving the public burden. However, in some cases there was initial resistance of public authorities against these projects.

For example, in the city of Curitiba, the capital of the State of Paraná, the municipal authority had fined the responsible members of a community garden under the argument that there was not allowed to cultivate food in public areas. The community reacted and the public authorities gave up after a public petition signed by 3.000 citizens. Nowadays, there are almost 1.400 community vegetable gardens in Curitiba, including 9.000 persons involved in the collective production and distribution of organic food. One of the community gardens, cultivated in the Cristo Rei district, was recognized by the United Nations as an example of resilience, since it emerged from a degraded context and has transformed into an environment of abundance of food and positive social relations.

The community gardens constitute a new organized system that emerges from the network of independent agents, interacting without a central controller and reinforcing community bounds. By pursuing their own interests the members reach collective conscious, improving social and economic achievement. This is a case of innovative complex social system. A complex system involves large and heterogeneous quantity of agents interacting with one another in many ways. The interactions allow the system to spontaneously organize itself, without a central authority, acting by adaptation to the environment and to the disturbances. These dynamic interactions and adaptations lead the agents to transcend themselves producing new realities with relative unity and autonomy (Folloni, 2016, p. 37).

The community gardens emerge through the interaction of many different actors in economic and social networks, resulting in a self-organized system in a local level, creating new realities to the community. In most cases, these gardens provide access to health and organic food facing famine and poverty in the absence of public policies. The usage and wide acceptance of collective organic cultivation by the community members stimulates

both meeting feeding needs and sustainable production, bringing new solutions towards local necessities. The community gardens also create economic opportunities generating income for their members by selling the surplus, stimulating people to creating their own jobs. These productive gardens are a great example of how the communities can organize themselves to enhance local economy and social bounds, responding better to the needs of their members and to social urgent problems.

Nowadays, some public authorities in Brazil recognize the advantageous of the community gardens and adopt concrete measures to stimulate these projects, aiming to promote productive and social inclusion for people at nutritional risk and social deprivation. The incorporation of community gardens into public policies shows how the social innovation and the community self-organization might contribute to change the mindset of public authorities and to framework strategies to face urgent social issues, such as famine, poverty, unemployment and lack of economic opportunities.

#### **4.Final considerations**

The international agenda that aims to achieve the Sustainable Development Goals requires a complex method to assess the various conditions that might impose barriers to the sustainable development, in its three dimensions economic, social and environmental. The capability approach, theorized by Amartya Sen, seems to be a worthwhile method to assess the wide range of conditions in real life and the obstacles to freedom that might be removed to increase the opportunities for people and address multidimensional phenomenon such as famine and poverty.

The technique of the community gardens in Brazil emerges as a new organized social system that contributes to address urgent social issues and to promote sustainable development. The self-organized practices of organic cultivation in public and common spaces in urban centers contributes to expand capabilities of their members in many fields. Community gardens improve quality of life of their members by providing health and

organic food under low costs, creating economic opportunities, increasing social bonds and the political participation in the community.

The community gardens seem to be promising social practices to the achievement of many SDG. Providing health food at low costs or free of charge, they contribute to the goals of no poverty, zero hunger, good health and well-being. Promoting income generation, by selling the surplus, they generate decent work and economic growth, helping to reduced social inequalities. Adopting organic agricultural practices, free from pesticides, they help to develop sustainable cities and communities, enforcing responsible production and consumption. Last, but not least, they enhance partnerships for the goals, whether strengthening community bounds, whether creating new partnerships between the community and public authorities.

Hence, the examples of community gardens might be studied as strategies to frame public policies and social organization towards the achievement of human and sustainable development.

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