

Routledge Studies in Food, Society and the Environment

EVALUATING SUSTAINABLE FOOD SYSTEM INNOVATIONS

A GLOBAL TOOLKIT FOR CITIES

Edited by

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3 The role of chefs and gastronomy in transforming the Brasília food system

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3.1 Introduction

Contemporary gastronomy is an innovative field of sustainability practices in the food system (Pereira et al., 2019). Many chefs around the world choose ingredients noted for their sustainable attributes, whether they are local and organic ingredients or products that reflect regional culture and biodiversity (Pereira et al., 2019; Zaneti, 2017). Chefs supporting small-scale, local, agroecological production systems are particularly important in Brazil, where agribusiness is dominant and generates considerable social and environmental impacts (Sauer, 2018).

The link between gastronomy and sustainability refers to many issues concerning how dishes are prepared, where and how ingredients are produced, the environmental impact of restaurants, employment issues, and so on. Nevertheless, scholars have pointed out that the emergence of sustainable gastronomy is mainly due to the loss of value of food as a result of globalization, leading to the disempowerment of people in food preparation processes, including the stages of growing and cooking food (Sloan et al., 2015). “Sustainable Gastronomy Day”, promoted by the Food and Agriculture Organization of the United Nations (FAO), defines the set of activities developed by these chefs to address the sustainability of gastronomy as “a cuisine that takes into account the ingredients—where they come from, how they are grown, how they reach our markets and, ultimately, our plates” (Sternadt et al., 2021, p. 2). In Brazil and other Latin American countries, the kitchen provides a space for introducing local native species that are little used and/or do not have a structured supply chain, thus demonstrating these foods’ potential to (re)integrate the local food culture. Chefs concerned about socio-environmental issues promote actions to develop regional food through the use and dissemination of foods prepared with native plants that support family farming, strengthen ties between rural and urban areas, and reduce food waste (Barbosa, 2009; Niederle & Schubert, 2020; Pereira et al., 2019; Zaneti, 2017). For example, Teresa Corção, a renowned chef in Brazil, stands out for her use of native Brazilian ingredients in her gastronomic dishes and is known for her food activism (Franklin, 2012).

In Brasília, certain chefs have gained strong recognition for their efforts to create a gastronomic identity for the city. For a new city created just over 60 years

ago, Brasília's reputation as the third largest gastronomic hub in Brazil is striking (Congresso em Foco, 2017). Moreover, the population of the Federal District—the administrative area of which the city of Brasília is part—is about 3-million inhabitants (IBGE, 2022), and it is home to many civil servants and employees of international organizations who are endowed with a high financial and intellectual capital and are often concerned about sustainability issues. In the Federal District, one of the major sustainability concerns is the rapid deterioration of the Cerrado biome, which surrounds Brasília. The Cerrado biome is suffering from the expansion of agribusiness with high rates of deforestation and several forms of socio-environmental damage (Eloy et al., 2018).

Against this backdrop, some authors have sought to grasp the role of gastronomy in promoting regional products from the Cerrado biome and to analyse the process of developing markets for these products, which are often unknown to Brazilian consumers (Duarte et al., 2020; Guéneau et al., 2017; Zaneti & Balestro, 2015). Nevertheless, further research is still needed to better understand the relationship between gastronomy, the consumption of these products, and the impacts of the actions implemented by gastronomic actors on the transformation of food systems. Although gourmet chefs in Latin America present themselves as important actors in the development of alternative food systems (Zanella, 2020; Zaneti & Schneider, 2017), systematic studies of their roles and capacity to strengthen these systems are scarce.

This chapter analyses the sustainable practices of chefs working in Brasília and considers their potential to transform the food system of the Brazilian capital. In so doing, we seek to answer the following question: What are the ways in which chefs take action and what challenges do they face in the construction of sustainable food systems in the city of Brasília?

The chapter is divided into four sections. Section 3.2 presents the conceptual framework of the research. Based on a review of the literature on the concepts of food sustainability and gastronomy, we define the concept of “sustainable gastronomy”, a new term used by international institutions such as the FAO but still little studied in the social science literature. This definition then serves as a baseline for our analysis of the changes resulting from the actions initiated by chefs in Brasília. Section 3.3 presents the methodological framework of the research, detailing the data collection process and the Urbal approach (Valette et al., 2019).

Section 3.4 outlines the results of the research in three subsections. The first subsection analyses the chefs' decision-making process surrounding sustainability, including the sustainability criteria they use in their activities and to what extent this may reflect a trend in Brasília's gastronomy. The second subsection considers the political dimension of chefs' work to build an alternative food system. Finally, the third subsection highlights the limitations of the chefs' practices and activism. Section 3.5 presents the conclusions of the research, setting out the main findings and reflecting on the future challenges facing the transformation of Brasília's food system.

3.2 Conceptual framework: Strengthening the relationship between food sustainability and gastronomy

Some strands of contemporary food culture are increasingly incorporating sustainability considerations into their approaches through movements aimed at reducing meat consumption, banishing food originating from monoculture production systems, promoting organic and agroecological products, and favouring food purchased directly from farmers (Portilho et al., 2011; Preiss et al., 2017).

Contemporary societies' rising interest in food sustainability also coincides with the growing importance given to aestheticization, taste appreciation, and pleasure in eating and cooking. This trend, which Barbosa (2009) describes as a process of gastronomization, has fostered an increasingly close relationship between gastronomy and rural areas, as the pleasure of cooking and eating combines a quest for better-quality ingredients and greater value given to products' origin, on the one hand, with the use of gastronomic techniques and sometimes traditional culinary knowledge on the other (Zaneti, 2017).

There is no consensus on the concept of gastronomy. Historically, it was shaped by the emergence of the first modern restaurants. It has sometimes been associated more closely with elite and taste, and at other times with social movements and markets. For the purposes of this study, we adopted the concept developed by Zaneti (2017), who defines gastronomy as:

[A] socio-cultural process of interaction between, on the one hand, the trajectory of the ingredients—from their production to their distribution, their processing using culinary techniques, their consumption, and their disposal—and on the other hand the relationships established between the actors that make this trajectory possible—such as producers, distributors, chefs and/or cooks and consumers—mediated by knowledge, rituals, and symbolic and aesthetic representations along this path.
(Zaneti, 2017, p. 47)

As a social phenomenon, gastronomy has also found its way into the political arena. Some authors, such as Franklin (2012), Barber (2015), and Niederle and Schubert (2020), argue that chefs play a social and political role surrounding food. This role can be described as gastronomic activism in the sense that, in using specific products in their kitchens and justifying these choices, chefs may influence and educate their consumers towards sustainable gastronomy.

Moreover, owing to their fame, gourmet chefs are also claim-makers who can act as policy entrepreneurs (Kingdon, 1995). As Sloan et al. (2015) note, “chefs have the power to change opinions and have highly influential roles to play in shaping the gastronomic desires of society to a more sustainable future” (p. xvi). Because of their institutional position, famous chefs have a certain legitimacy regarding food issues and are in a position to defend a cause and propose solutions to policymakers.

Krause and Bahls (2013) and Sloan et al. (2015) outline a number of characteristics that can make gastronomy a sustainable activity. These include in particular:

- 1) the creation of sustainable menus, “in connection not only with new gastronomic trends, but also with a rational and sensible method for using our resources” (Krause & Bahls, 2013, p. 439) based on seasonality, organic and local products, and cultural factors;
- 2) the choice of ingredients, informed by packaging and storage, transportation, locality/authenticity, and biodiversity considerations;
- 3) environmental education, with education and training of the sector’s workforce on this subject, so that they can incorporate the tenets of sustainability into their work and everyday practices.

It is interesting to note that although many renowned avant-garde restaurants do not use the term sustainable gastronomy to define their establishments, a significant number of these practices have been adopted by contemporary gastronomy chefs. Moreover, these practices are identified as the basic ethos of restaurants recognized for serving creative haute cuisine (Zaneti, 2017). Renowned chefs, especially the stars of gastronomic guides and rankings, routinely incorporate certified and traceable organic foods into their cooking because these ingredients are produced on a small scale, often by groups of traditional peoples and communities and are endemic to a specific region. Beyond these ingredients’ sensory attributes—qualities that may help define a chef’s creative signature—chefs often choose local and traditional products for ideological reasons (Azevedo, 2015). In this sense, there appears to have been a shift in the very concept of gastronomy, which has emerged from its technical and elitist bubble built around the French school¹ (Pulici, 2012) and which, as Zaneti (2017) argues, is expanding both horizontally in the world of cuisine and vertically to incorporate less elitist cuisines. These cuisines both offer dishes that are more affordable while still being produced using elaborate techniques and, above all, place sustainability criteria at the centre of meal production.

Guided by this shift, several movements are driving contemporary sustainable gastronomy, including: a) the Slow Food movement, created in 1989 in Italy to promote good, clean, and fair food based on a cooperative relationship between farmers, cooks, and other consumers (considered as co-farmers) (Petrini, 2015); b) the Locavore movement, created by Californian chef Alice Waters in 1971, which advocates consuming local products as a way to boost the economy and local development by bringing farmers and consumers together (Azevedo, 2015); and c) the Farm to Fork movement, created by New York chef Dan Barber, which commits participating chefs to not buying products from more than 100 km away (Barber, 2015).

Within these movements, it is worth highlighting the work of certain chefs at the forefront of innovative gastronomic practices striving to incorporate

elements of sustainability, namely: René Redzepi, from the now closed restaurant Noma in Denmark, who initiated an itinerant school to improve local actors' gastronomic techniques in order to enable them to cook with local ingredients (Leleux & van der Kaaij, 2019); Virgilio Martinez, from Restaurant Central in Lima, Peru, who applies modern cooking techniques to indigenous Peruvian ingredients and embraces approaches that respect Andean ecosystems (Barandiarán, 2018); and chefs Ray Adriansyah and Eelke Plasmeijer, from the restaurant Locavore in Bali, Indonesia, where 95% of the kitchen's ingredients are Indonesian (Sgarbi, 2019).

Such projects have also developed in Brazil, where several factors have converged to foster sustainable food initiatives. In this country, the agricultural sector is mainly characterized by large-scale monoculture farming and the promotion of commodity exports that contribute to separating society from nature and rendering food issues invisible (Cruz et al., 2016). However, since 1990, debates on the theme of food sustainability have been taking over the policy agenda as well as scientific research and development in Brazil (Monteiro et al., 2015; Portilho et al., 2011). Food activists are eager to better understand and communicate where food comes from, how it is produced, and why it is consumed (Darolt et al., 2016; Martinelli & Cavalli, 2019).

Among the Brazilian representatives of a contemporary gastronomy that promotes sustainable food initiatives, chefs Tainá Marajoara and Teresa Corção in particular are worth mentioning. Together with her companion Carlos Ruffeil, Tainá Marajoara created the food culture centre 'Iacitató' in the Amazonian metropolis of Belém.

Iacitató' promotes the same values and forms of dissidence against the dominant food systems by criticizing the exploitative relations brought about by the industrialization of food production and the attending standardization, reduced varietal diversity, loss of flavours and culinary knowledge, and seed control.

(Granchamp, 2019, p. 13)

Teresa Corção founded the Maniva Institute which aims to restore traditional food knowledge.

Based on a review of the literature exploring how the issue of sustainability has percolated into the concept of gastronomy, and how social actors themselves are implementing innovations to transform gastronomy, the concept of sustainable gastronomy can be understood as an approach whereby ingredients are chosen according to their social, environmental, and health-related characteristics (factoring in dimensions such as proximity, authenticity, fairness, nutritional quality, modes of production, packaging, transport, and distribution). Furthermore, the way these ingredients are combined is informed not only by specific culinary techniques to obtain refined dishes with gustatory and aesthetic qualities but also by the goal of making optimal use of available ingredients in order to preserve the environment and avoid food waste. Beyond

the confines of the restaurant, sustainable gastronomy strives to influence consumption choices and wider policy processes to transform the food system as a whole so that it can become more inclusive and sustainable.

3.3 Tailoring the Urban approach to the analysis of the pathways of food system transformation induced by Brasília chefs

In order to analyse the sustainable practices adopted by chefs working in Brasília, a qualitative research methodology was implemented in two stages. The first stage included interviews with key actors.

Between 2018 and 2019, 26 semi-structured interviews were conducted: 16 with chefs and restaurant owners in Brasília; 1 with a food cooperative; 6 with food producers (including 3 Community Supported Agriculture (CSA) farmers and 3 farmers from traditional communities); 2 with commercial intermediaries; and 1 with the person managing a gastronomic programme that operates in partnership with the Federal District Education Secretariat. All interviews were recorded and transcribed, and a content analysis guided by the research question was performed to identify and categorize the actions associated with sustainable gastronomy and the challenges that the chefs face in implementing them.

Restaurants were chosen on the basis of their own statements about their willingness to engage in sustainability and according to criteria set out in the literature on sustainable gastronomy. We searched for these “sustainability-oriented” establishments using the snowball technique (Vinuto, 2014), until the number of chefs selected and interviewed satisfied the principle of saturation (Glaser & Strauss, 2006).

Several interview guides were produced for the different types of actors interviewed. With restaurants, the questions focused primarily on how the chefs conceive of their restaurants, what differentiates them from other establishments, and the history and trajectory of the restaurants’ creation. A series of questions then explored each chef’s practices: the types of products used; the product selection criteria; the supply chain for the ingredients used in the restaurant; the restaurant’s waste policy; the chef’s relationships with suppliers, customers, and other restaurants; and the innovations implemented specifically to make their establishment or the city’s food system more sustainable. The guides for interviews with the other actors focused on the sustainability of the actors’ practices (for farmers, cooperatives, and intermediaries) or their programmes and actions to advance sustainability in food systems (for the public sector), and on the nature of their relationship with the restaurants of Brasília. The aim was particularly to investigate the type of partnership built with the restaurants and the way in which this partnership was able to change these other actors’ practices or actions.

The second stage of the research consisted of a participatory workshop organized in Brasília in June 2019. The workshop allowed the researchers to analyse the actions, identified through the interviews, which contribute to the

transformation of the food system, using a methodology developed within the framework of the Urbal Project (Valette et al., 2019). Rather than measuring the impact of the innovative actions implemented by the chefs, the Urbal approach aims to identify the sustainability changes produced by these innovations as well as the pathways that led to the changes. A simple participatory method was applied, so as to be able to use the words of the main actors involved, based on the impact pathways pre-identified during the interviews.

The workshop brought together several actors of interest for this research: two chefs; two family farmers; two representatives of traditional peoples and communities; two representatives of cooperatives in the Cerrado product supply chain; two representatives of the government; and two researchers. It also included an audience of university students and professionals in the fields of education, nutrition, health and gastronomy, public servants, farmers, and representatives of traditional peoples and communities.² Although they speak and understand Portuguese, some of the participants from traditional populations express themselves more easily in their own languages. For this reason, guiding questions were pre-established by the researchers and organized into four impact pathways: social inclusion, economic justice, nutrition, and the environment. In order to ensure full engagement by all participants, the food system actors were invited to answer questions orally and to interact with others in the workshop. Video and audio recordings were collected to produce a summary video, and the audio recordings were transcribed for content analysis.

3.4 Sustainability and gastronomy practices, innovations and challenges in Brasília

3.4.1 Characterization of sustainable gastronomy practices

This subsection first characterizes chefs' diverse range of sustainability practices, mainly identified through the interviews, to produce a typology. Second, we highlight our findings regarding the impact pathways towards sustainability induced by these practices, based on the indications provided by the stakeholders during the participatory workshop.

The sustainable gastronomy practices implemented by the group of chefs involved at least five characteristic actions. The sustainable practice most frequently identified among the establishments surveyed was the inclusion of foods from local producers in the menu. This practice was mentioned in almost all the interviews, evidencing a connection between chefs and family farmers from the region surrounding Brasília. The goal of this close relationship with farmers is not only to supply restaurants with local products which chefs deem to have better taste and freshness attributes but also to foster the social inclusion of a category of farmers who are often marginalized.

Unsurprisingly, the second sustainable practice most frequently identified in the interviews was the use of organic products, which highlights a strong

interest, among the chefs, in the environmental and health impacts of food. The use of organic products is clearly a political act to oppose the overuse of chemicals in industrial agriculture in the Cerrado. Yet some of the restaurants justify their practices by emphasizing the nutritional benefits and impacts on consumer health rather than environmental impacts. Providing healthy food was the main objective of most of the vegan restaurants surveyed.

Some restaurants, however, both purchase food from local farmers and use organic products in their culinary practices. The relationship with local agroecological farmers is the product of the chefs themselves seeking out this type of supplier. They first make contact by visiting local open fresh markets, where farmers and consumers can come together. The chefs can also draw on the support of the Technical Assistance and Rural Extension Company of the Federal District (Emater-DF) which, in addition to promoting an exclusive open fresh market for family farmers, provides contact details and fosters dialogue between chefs and producers upon request. This is highlighted by Zaneti (2017), who notes that the relationship between chefs and farmers influences both the menu of restaurants and the selection of ingredients grown by the farmers.

Another practice which the actors interviewed saw as innovative and sustainable was the commitment to systematically using Cerrado fruits in the composition of the dishes of the establishments surveyed. Apart from a few fruit varieties that are part of the regional culinary heritage, such as the pequi fruit (*Caryocar brasiliense*), most fruits native to the Cerrado biome are consumed very little in Brazilian cities and are even unknown to most Brazilian consumers (Garcia, 2017). For instance, baru (*Dipteryx alata*), now known as the Cerrado nut, was hardly consumed a few years ago, even by traditional peoples. The inclusion of Cerrado fruits in the dishes of the establishments surveyed appears to evidence that for chefs, sustainable gastronomy involves not only an appreciation of products from the region where the restaurant is established but also chefs playing a key role in preserving local biodiversity through the use of specific local foods in fine dishes. Choosing foods based on both their environmental qualities and their origin, be it produce from local farmers or products that are typical of specific regions, is a defining feature of sustainable gastronomy in Brasília. Other studies also identify these approaches as guiding principles for establishing more sustainable kitchens (Zanella, 2020). However, the use of Cerrado fruits by chefs does not guarantee that the fruit is grown sustainably (Guéneau et al., 2020). For this reason, some chefs seek to combine their local supply of Cerrado fruit with a direct relationship with the farmers, which enables them to visit the farms and observe the sustainability of the farming systems.

The fourth important innovative practice witnessed among chefs in Brasília is the use of Non-Conventional Food Plants (NCFP).³ These edible wild plants usually grow spontaneously and are classified as “weeds”. They are consumed on a small scale or are no longer used by most of the population, who are not aware of the plants’ nutritional and economic value and potential uses. More

than half of the interviewees confirmed that their menus featured NCFP, such as ora-pro-nóbis (*Pereskia aculeate*)—common English names for which include Barbados gooseberry leaves and leaf cactus—and taioba (*Xanthosoma sagittifolium*), known as arrowleaf elephant ear in English. The frequent use of these plants demonstrates strong adherence to a movement driven by the publication of the NCFP guide (Kinupp & Lorenzi, 2014), which seeks to revive the consumption of neglected wild plants in Brazil, in clear opposition to the dominant species grown in industrial agriculture.

The fifth most frequent sustainability-oriented practice identified among chefs and their establishments concerned waste generation. The chefs consistently stressed the importance of properly disposing of what has been discarded in restaurants. This illustrates that for the interviewees, the sustainability of gastronomy is not restricted to the production of dishes and food in general, but also extends to the actions that establishments take or can take to protect the environment. Moreover, the interviewees showed concern about producing less waste and not just disposing of it properly. The establishments thus reflect on practices they can adopt to better manage their waste, as well as actions to reduce the quantity of waste they generate.

The interviews also revealed other less frequently mentioned sustainable practices of the establishments surveyed. For instance, a few interviewees mentioned having a seasonal menu and selling food produced by family farms in the restaurant, but these actions do not appear to be consistently carried out or of immediate interest to chefs and their restaurants. Surprisingly, only a few restaurants have close relationships with Community Support Agriculture (CSAs) initiatives, even though the latter are one of the main channels for bringing urban consumers closer to the rural world in Brasília. As of 2020, 36 CSAs were registered in Brasília, the largest concentration of this type of initiative in the country's major cities.

Based on the interview data we analysed, we organized the 16 sustainably-oriented restaurants into three categories according to each establishment's adherence to the criteria of sustainable gastronomy:

- 1) **Conventional:** these restaurants are primarily focused on the nutritional dimension of sustainability, with menus informed by functionality considerations and which prioritize generic foods that appeal to most customers. Generally, these menus consist of salads, types of rice, beans, pasta, dishes with white and red meat, and desserts. The choice of ingredients is based on cost/benefit attributes and objective qualities relating to food safety and nutritional balance.
- 2) **Gastronomic:** these establishments are led by a chef, who interacts with the diverse segments of the gastronomic world, for instance at events, in social networks, and in the media.⁴ This type of restaurant is based on classic and French cuisine, but brings in contemporary elements such as techniques, ingredients, and presentation styles. The choice of ingredients is based on

both objective qualities (free of contaminants) and subjective qualities (artisanal, seasonal, regional, sensory, terroir), informed by sensory as well as authenticity considerations.

- 3) **Alternative Gastronomic:** these establishments are led by a cook or chef who establishes kitchen practices informed by a political or ideological position that they share with their audience. This is also coupled with other sustainability practices, such as composting and serving organic and/or agroecological food. The choice of ingredients is primarily guided by the cook's ideology (grown by family farmers and/or traditional groups; agrochemical free; free of certain types of ingredients such as soy and wheat), but also takes into account the ingredients' objective and subjective qualities, as the gastronomic restaurants do. These establishments use culinary techniques from both classic cuisines and politicized cuisine movements, such as veganism and live cooking.

The impacts of sustainable gastronomy practices are very different depending on the type of restaurant concerned, as we can observe in Table 3.1 regarding the use of native products (Cerrado fruits) and NCFP. These impacts vary

Table 3.1 Use of native Cerrado fruits according to the types of restaurants surveyed

	<i>Name</i>	<i>Type of establishment</i>	<i>Category</i>	<i>Use of Cerrado fruits and/or NCFP</i>
1	Aquavit	Gourmet	Gastronomic	Yes
2	Atelier café	Gourmet coffee shop	Gastronomic	Yes
3	Authoral	Gourmet	Gastronomic	Yes
4	Baco Pizzeria	Pizzeria	Gastronomic	Rarely
5	Buriti Zen	Vegan alternative restaurant	Alternative Gastronomic	Yes
6	Daniel Briand	Gourmet confectionery	Gastronomic	No
7	Ernesto Cafés Especiais	Gourmet coffee shop	Gastronomic	No
8	Faz Bem	Vegan restaurant	Alternative Gastronomic	No
9	Finatec	Company restaurant	Conventional	No
10	Girassol	Vegan restaurant	Alternative Gastronomic	Yes
11	Mysth	Organic/vegetarian restaurant	Alternative Gastronomic	No
12	Piauíndia	Fusion restaurant	Alternative Gastronomic	Yes
13	Sallva	Gourmet restaurant	Gastronomic	No
14	Mesa pra Doze	Gastronomic project	Alternative Gastronomic	Yes
15	Olivier	Gourmet restaurant	Gastronomic	Rarely
16	Rubato Chocolates	Chocolate & coffee shop	Gastronomic	Yes

from cases where only the nutritional dimension is taken into consideration, in conventional restaurants, to practices focusing on the socio-cultural identity of foods with limited sustainability impact (mainly promoting local products from family farms) in the case of gastronomic restaurants, to more pronounced impacts on several dimensions of sustainability in the case of alternative gastronomic restaurants. The latter impacts consist of economic benefits and the social inclusion of local communities (through direct relationships in geographical proximity), the sustainable use of neglected native species of the Cerrado biome, the non-use of chemical or monoculture products, recycling, food waste reduction, nutritional education, and diet improvement (diversifying the range of food products in the meals).

3.4.2 *Food activism to make food systems more sustainable*

The actions taken by Brasília chefs to transform the food system are not limited to the sustainable gastronomy practices implemented in their establishments. They are also involved in social movements defending specific causes. Many actors consider this activism to be far more impactful than the gastronomic practices alone, as mentioned by a representative of the Central do Cerrado, the main cooperative that supplies restaurants with Cerrado products:

These types of restaurants do not have the capacity to absorb these Cerrado products in large volumes. ... In terms of consumption, it does not generate much direct impact. ... Making a dish with Kalunga monkey pepper,⁵ the chef will buy 1 kg from me every 6 months. ... But the moment she or he features in an article in the *Correio Braziliense*⁶ and talks about monkey pepper, this generates a lot of indirect sales.

(Interviewee 17, 2019)

The Central do Cerrado, created in 2004, brings together several community organizations involved in developing farming activities through the sustainable use of the biodiversity from the Cerrado biome, with a view to promoting and introducing community products on regional, national and international markets. Various chefs in Brasília support the cooperative, not only through direct purchases, but also through various activities implemented in partnership with the Central do Cerrado and other actors promoting sustainable food systems. For instance, together the chefs and the cooperative managers take part in training sessions, cooking workshops and even policy events on sustainability issues related to food production and consumption.

Another form of political activism observed, though not directly focused on food sustainability, is the development of a coalition of chefs to build a food identity for the city of Brasília. This movement seeks to ground Brasília's cuisine in local ingredients that are characteristic of the region and to ensure that it is recognized among peers and consumers across the country. An important action supporting this activism was the launch of the *Panela Candanga* (Brasília Pan)

initiative, which celebrates the foods and culinary traditions of the citizens of Brasília, known as Candangos. The purpose of the movement is to:

provide a different culinary experience. It is to present, through gastronomy, a Brasília that its people still do not know. It is to bring the history of its ingredients to each dish. It is to offer new ways of understanding food and identifying each mouthful with our own culture. It is to be able to meet and feel part of this *panela candanga*.

(*Panela Candanga*, 2021)

As a strategy for action, the *Panela Candanga* project launched a biannual fair that is now in its fifth edition, as well as a website and a blog to share information, tips and recipes for using the fruits and products of the Cerrado biome.

Another important movement is *Slow Food Cerrado*. With a social network of almost 5,000 followers, this movement created in 2004 promotes a “greater connection with and appreciation of the rich biome of the Cerrado. And nothing could be more pleasurable than to do so through ecogastronomy” (*Slow Food Cerrado*, 2019). *Slow Food Cerrado* organizes courses, lectures, festivals, parties, fairs, celebrations, tastings, meetings between producers and consumers, and countless other activities around the overarching theme of the protection of the Cerrado biome and ecogastronomy, an approach that combines respect for and interest in gastronomic culture with support for those fighting to defend food and agricultural biodiversity around the world (*Slow Food Cerrado*, 2019).

A network of chefs in Brasília is also working to implement circular economy initiatives, in order to foster practices, within and across restaurants, to reduce, reuse, share, and recycle products. As mentioned earlier, there is concern about restaurants properly disposing of their waste, while implementing practices to help reduce the amount of resources used and of waste to landfill. In 2018, a group of chefs created a civil society organization called *Instituto Ecozinha* (Ecokitchen Institute) which operates in Brasília, collecting the waste generated by participating establishments and supporting a network of zero-waste restaurants (*Instituto Ecozinha*, 2021). This initiative is particularly important, as the Brasília region was previously home to the largest open-air landfill in South America (the second largest in the world). Although this landfill was closed in 2018, without viable large-scale waste treatment solutions for residues such as glass and plastic in the Federal District, another place has been designated in the area for a new, equally polluting landfill. According to the chefs interviewed, *Ecozinha* is an initiative that shows the authorities of Brasília that waste collection and recycling are possible. With more than 80 participating establishments, the Institute collects and sends over 100 tons of waste per month to specialized recycling units located in São Paulo, thus diverting it from the public landfill of the Federal District and preventing thousands of tons of greenhouse gas emissions per year. These actions make the Institute one of the most significant waste treatment organizations in the Federal District.

3.4.3 *Challenges to and limitations of sustainable gastronomy*

The perspectives shared by the group interviewed suggest that the first challenge faced by the chefs and other actors of sustainable gastronomy in Brasília is local farmers' limited supply capacity. This is due to the fact that the large restaurants of Brasília require a guaranteed supply of specific products on a regular basis, but also to the expansion of sustainable gastronomy in the region. According to the interviewees, many of the family farming businesses are small and informal, which hinders the development of strong partnerships with restaurants. This precarious supply structure among family farmers entails legal and contractual difficulties, as many farmers cannot issue invoices and restaurants have to fragment their purchases, adding on greater fiscal complexity for the establishments. An account by one of the interviewees exemplifies this situation:

A huge difficulty in working with family farming is that, in my view, it is still a group that has not organized itself very well, and our weekly purchase is gigantic, and I have already faced several difficulties in getting hold of the farmer and saying “man, can you supply me with 200 kilos of tomatoes?” and he said “no, I can offer you 40” and I said “and next week?” and he said “next week I can’t offer you anything, because 40 is my whole production.” The trickle of contact is very difficult, because nowadays you go to Ceasa,⁷ you can find a giant wholesaler, or three giant wholesalers that can supply an entire restaurant [on their own], and it’s difficult to work with family farming like this.

(Interviewee 15, 2019)

This type of situation, brought on by local producers' limited supply capacity, tends to favour restaurants that adapt their menus to the available food supply, creating dishes from what the farmers can provide. These restaurants generally have a clientele that can adapt to the offer: consumers who come not to taste a specific dish, but rather because they adhere to a set of principles upheld by the restaurant while also appreciating the overall quality of the dishes offered. These customers normally spend a greater amount on purchases. In this sense, referring to our typology of restaurants engaged in sustainable gastronomy in Brasília, it appears that “alternative gastronomic” restaurants are generally restricted to small establishments that serve a higher social class (see Table 3.1).

Although the use of fruits from the Cerrado was a practice mentioned by more than half of the chefs interviewed, these fruits generally feature in small quantities and often on an irregular basis, for instance on special occasions such as gastronomic festivals dedicated to the Cerrado, with the exception of a few restaurants in the alternative gastronomic category (Duarte et al., 2021). A second challenge for sustainable gastronomy in Brasília is thus the inclusion of larger quantities of Cerrado fruits in establishments' dishes, on a more regular basis. Two important factors help to understand this challenge.

The first is the chefs' lack of commitment to including Cerrado fruits in their cuisine. This may be linked to the trend already identified by Zaneti and Balestro (2015), who point to a gap between the chefs' rhetoric on the protection of the biome and their actual commitment to changing their culinary practices. According to the authors, this trend can be due either to operational considerations by the restaurants (associated with the difficulty of working with a changing menu, or the purchasing relationship with farmers), or to consumers choosing these restaurants for the refinement of their dishes rather than to preserve the Cerrado biome. Furthermore, the lack of specialized staff who understand the importance of following the guidelines of sustainable gastronomy can make it difficult to turn discourse into reality (Krause & Bahls, 2013), ultimately leading to the maintenance of the status quo.

The second factor that explains the low quantity of Cerrado fruits in the everyday menus of Brasília's restaurants relates to chefs constantly sensing their customers' reluctance to try these specific fruits. Many of them reported that when they offer their customers the choice between two dishes, the one containing Cerrado fruits and the other without these fruits, the customers consistently choose the option without Cerrado fruits. The following interview excerpt clearly illustrates this situation:

I think people here are not very comfortable leaving their comfort zone, trying something new, trying something different. I see it a lot here in Brasília, it seems that other people have to test it and say that it is good for it to be accepted. We have a lot of cases like that, when I get called to a table to suggest it and the person says "no, I want the steak with risotto".
(Restaurant 15, 2019)

This account indicates that the clients of gastronomic restaurants are not willing to change their consumption habits and have a very conservative gastronomic profile. Many of Brasília's upper-class residents still see meals made from Cerrado products as popular dishes, as in the case of the traditional "rice with pequi", which would remove them from their elitist bubble. In this sense, the more consistent inclusion of Cerrado fruit is hampered by a market rationality that is not yet socially constructed (Guéneau et al., 2017). The following account illustrates this problem:

A restaurant that serves dinner and that wants to sell something sophisticated ... ends up creating a cycle where you need to have commercial dishes to be able to pay the rent, and this ends up diluting the concept with standard options, because that's what people buy. And so the restaurant ends up selling, I don't know, risotto with fillet steak to be able to pay the rent.
(Restaurant 14, 2019)

Some collective initiatives involving chefs are striving to change this representation among consumers. The publication of gastronomic recipe books and the organization of gastronomy festivals and culinary events hosted by groups of

chefs—private banquets of sorts dedicated to Cerrado gastronomy, the entrance fee for which necessarily limits participation to the upper classes—are examples of such initiatives by the abovementioned activist movements. These events communicate the need to support the gastronomy based on Cerrado products in order to protect this threatened biome.

The issues described above point to the third challenge to and limitation of sustainable gastronomy in Brasília, which is the need for social inclusion or, in other words, the need to expand gastronomic sustainability to less privileged customers who have a lower per capita income. Brasília has the highest per capita income in Brazil (IBGE, 2021), and this income is concentrated within a small group of residents of the capital—usually civil servants and their families—who live in more centralized and upmarket areas of the city. This is also where the researched establishments with a sustainability profile are located. Based on our findings, it is clear that the city of Brasília promotes sustainable gastronomic actions for a more affluent social class. These are the actors who seek, consume in and sustain this gastronomic circuit striving to develop sustainable practices. Even so, there are exceptions, especially in the case of chefs linked to local universities, which are working to establish university extension practices in less affluent areas, such as schools on the outskirts of the city. However, this is not the dominant pattern of sustainable gastronomy observed in the capital of Brazil. On the contrary, the prevailing approach is elitist and restricted to more affluent social classes, thus raising questions about future challenges for socially inclusive sustainable practices and the extent to which such practices, even though they exist on a small scale in the capital⁸ (IESB, 2016), can serve as an instrument for improving the diet of Brasília residents.

3.5 Conclusion

This chapter analysed the role of Brasília chefs in transforming the local food system, and the challenges they face in this endeavour. Our findings shed light on an activist profile shared by the chefs surveyed that steers their actions towards:

- Improving the quality of the food served, using organic, neglected, and native species, and sourcing their supply from local family farmers, thereby generating support for local small-scale producers and cooperatives such as the Central do Cerrado.
- A set of activities that promote a sustainable gastronomy based on products from the Cerrado biome, which suggests the beginnings of building a food identity for the region of the Federal District, based on sustainability principles and supported by movements that seek to give the Cerrado political visibility, such as Slow food Cerrado and Panela Candanga.
- Attentiveness to the waste generated by their establishments, which has encouraged the search for self-organized alternatives for the adequate collection and treatment of waste with the innovative organization Ecozinha, the largest zero-waste restaurant initiative in Brazil.

This set of innovative actions, arising from coordinated engagement by a specific group of chefs in the city of Brasília, demonstrates the potential for food systems transformation towards more sustainable practices. This transformation has not happened yet in Brasília. Innovative actions are still restricted to higher-income consumers, even though they increasingly include rural communities in Brasília and the surrounding area. It can also be said that this higher-class audience, which embraces a European ideal of gastronomy, shares a somewhat romanticized understanding of sustainability. Despite chefs' environmental concerns, regarding modes of production and the conservation of biodiversity for instance, economic considerations often limit new action, in addition to such action having little social impact, with a large part of the local population still excluded.

Chefs' very limited adoption of some of the most relevant sustainable practices, such as making full use of the ingredients, serving seasonal menus, and fostering links with CSAs, reflects the significant gap between their discourses and their practices. Moreover, it reveals the shortcomings of public policies dedicated to the transformation of food systems, with a lack of technical assistance and rural extension services, for instance, to support innovative chefs in their efforts to build sustainable food markets and help farmers and traditional communities to access these emerging markets.

Gastronomy provides a space for the creation of new markets and new products. In various places around the world, it has come to encompass solidarity restaurants, participatory canteens, and 100%-bulk or zero-waste restaurants, which can increasingly be found in working-class neighbourhoods. The initiatives that have emerged in Brasília are still in their early stages, but could draw inspiration from these innovations to transform the city's food system.

Notes

- 1 Pulici conducted surveys among members of the Brazilian elite and analysed gastronomic reviews published in the *Paulist Press* between 2005 and 2009. She showed how the Brazilian elite created a gastronomic universe, guided by French professional gastronomy in the 2000s, in order to distinguish itself from the working class. Classical or professional gastronomy takes the French school as its frame of reference, as the discipline was born in the post-French Revolution era when the ex-cooks of the fallen nobility started to open restaurants for the emerging bourgeoisie.
- 2 The Brazilian term "traditional peoples and communities", as defined in the Brazilian Constitution (Decree 6.040 of 07/02/2007), includes native, Afro-descendant, and multi-racial populations.
- 3 In Portuguese *Plantas Alimentícias Não Convencionais* (PANC).
- 4 Social media has become an extension of the restaurant as well as the chef. Both the chef's persona and the restaurant's image are constructed through their media presence. The media are used as a space for marketing, nurturing a relationship with the public and, most of all, gastronomic branding.
- 5 A species native to the Cerrado, *Xylopia aromática*.
- 6 A very popular local newspaper.
- 7 Ceasa (Centrais de abastecimento) are the main supply centres of metropolitan areas in Brazil, bringing together most food wholesalers in the same location.

- 8 The Bandeneón social project developed by chef Sebastian Parasole is one of the few examples of sustainable gastronomy in Brasília catering to the lower classes. The project provides itinerant education for vulnerable people, and works towards solidarity and sustainability around the theme of food. Information about this project is available at <https://www.sebastianparasole.com/bandoneon>

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