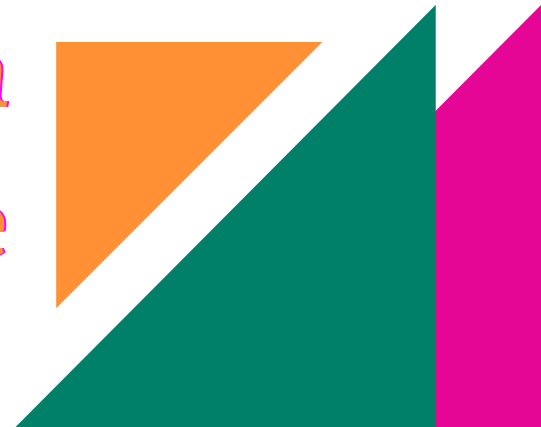# Food environments in the Cape Flats of Cape Town

FOOD ENVIRONMENTS IN THE CAPE FLATS OF CAPE TOWN

Discussion paper – Supplementary material

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Food environments in the Cape Flats of Cape Town

Introduction

The city of Cape Town in the Western Cape is located at the southern tip of the African continent. It is South Africa's second-largest city. Approximately 4.6 million people live on 2.446 km². The City of Cape Town metropolitan, however, is much smaller and located on about 400 km².

Cape Town is symbolic of an economic divide along racial lines. More than half of the population live in so-called townships. In recent years, these townships have expanded, and inequality increased. Unemployment and high levels of poverty dominate these areas. COVID-19 lockdowns worsened the hardship of many in the townships. In 2018, the GINI coefficient was at 0.620, and the Human Development Index stood at 0.74[1]. The GINI coefficient in Western Cape is representative of the gap between South Africa's most affluent and poorest people. In 2022, according to the World Bank, South Africa had the highest GINI coefficient in the world. The HDI is above the global average, following Bolivia and preceding Indonesia and Libya[2].

Cape Town's racial and economic division is deeply rooted in the apartheid, a deliberate choice of government to exclude non-white citizens from any form of public participation through segregationist policies, education and economic systems. Segregated urban planning by race and ethnicity locating non-whites at the periphery of towns and cities excluded black communities and people of colour from public participation by design. Although the end of apartheid formally began in 1991, the urban designs that shape the South African cities -- and most likely also the mindsets and core values of Cape Town residents – remain in place in some versions.

Food environments, the subject of this short paper, reflect this divide created by the apartheid and must be seen in the historical context and developments South Africa took over the past 200 years. This is because food environments shape the impact on food and nutrition security of residents in townships. Most of the townships considered in the short paper are on the Cape Flats, an area located north- and southeast of the central business district and the Table Mountain.

The Cape Flats sit on an extensive Aquifer that is central for groundwater security of Cape Town and the peri-urban surrounding. This reference to the Cape Flat's aquifer is non-trivial. Strictly speaking, aquifers are components of food environments, especially in view of food production in peri-urban areas

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[1] https://www.westerncape.gov.za/provincial-treasury/files/atoms/files/SEP-LG%202020%20-%20City%20of%20Cape%20Town.pdf

[2] https://worldpopulationreview.com/country-rankings/hdi-by-country

serving townships and upper-class settlements such as Llandudno, De Bosch and Constantia but also Seaside and the City Bowl. Although the Cape Flat Aquifer is no explicit focus of the TMG project, significant trade-offs exist between food security, flood resilience and urban water supply to Cape Town residents -- for details, see Rodina et al. (2017). Ignoring these complex trade-offs implies ignoring the complexity of negotiations among geographically dislocated food environment actors. Further details can be obtained by the chapter on food flows submitted to TMG[3] or through the co-author Kathrin Krause directly.

This literature review picks aspects of the discussion about food environments in the Cape Flats of Cape Town. It is part of the TMG programme on Urban Food Futures funded by BMZ. The literature search we based on search codes comprising food environment, food outlets, food retail, supermarkets and variables to narrow down to the specific geography and location in Cape Town. We used Google Scholar search, Elsevier to identify published literature. In the absence of terms of references for this review, we anticipated potential utilities TMG has for this report and collated literature that highlights aspects of the debate about food environments in Cape Town townships. Ideally, the collated insights inform the design of action research in Cape Town and related transition pathways.

Why focus on food environments?

In recent years, food environments have gained momentum in the academic literature covering food choices, food security, food systems, and urban planning. In its most condensed form, food environments are the contexts in which people trade, process, consume and dispose of food. A food environment comprises the physical, financial, social, institutional and political infrastructure that shapes access to food. In some contexts like Cape Town, food environments also encompass food production. Although neglectable, farming, gardening and livestock keeping in urban areas comprise are part of the food environment to be assessed and understood by urban planners. The same applies to food environments in rural areas. Farmers in the countryside, for example, typically consume part of the food they grow. Hence, from their perspective, farmers and those nearby are food environment elements.

At the political level, agencies such as FAO (2019) refer to the food environment as the interface between consumers and the food system. Interfaces such as market institutions, norms and rules mediate people's access to food. Some institutional factors enable access to healthy and affordable food, while others do the opposite. Food environments depend a lot on the geographical context, such as economic development, education, general infrastructure, supply chain stricture but also attitudes and core values of a society. These contexts shape food environments, and it is important to see

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[3] Hauser, M; Edel, I; Kahwai, J; and Krause, K. (2022) Food Flows: Building resilience against compound risks in Nairobi and Cape Town, TEP Working Paper, TMG Berlin, 45 pages, in review

how food environments differ between and within countries, and the same administrative unites of cities.

Given the diversity of food environments, Downs et al. (2020) offer a typology distinguishing wild, cultivated, informal, and formal food environments. The collection and consumption of non-timber forest products, for example, takes place in wild and informal food environments. In contrast, food environments in urban slums are typically managed but informal. Although this typology may not be directly applicable to townships on the Cape Flats, the idea of developing a typology matters to speak about the context which shapes food intake. One option for researchers is to co-develop such food environment typologies with residents. If backed with robust data, such a community-designed food typology could improve communication between township residents and city authorities.

Any food environment typology would have to consider enablers and barriers to healthy eating. The food environment influences the food acceptability of people, their choices and food intake. While food intake measures food consumption per person and day, a food choice refers to how people consume food and beverages. Although a food choice ultimately leads to food intake, other processes such as food consideration, acquiring, preparation and sharing influence food intake. As global food systems change, so do urban food environments and thus food choices and intake (Blake et al., 2021). In other words, the system in which food intake takes place intersects with other food system domains in a given locality. A food environment typology should reflect horizontal and vertical food system intersections. For details on how we frame food environments, see the respective TMG report[4].

Cape Town food environments

Food insecurity remains a widespread issue in Cape Town's food environments. Food insecurity typically manifests as a temporary lack of access to food, reduced food options and deliberate choices for unhealthy but affordable food. In most cases, residents could not access the food necessary for an active and healthy life. As in other parts of Southern Africa, also Cape Flat residents experience **hunger and obesity concurrently**. In a recent study, Hunter-Adams et al. (2019) attest that township residents across peri-urban South Africa – including Cape Town – are food insecure.

Given the changing nature of food insecurity (see the triple burden of malnutrition) and increasing obesity figures, for instance, the influence of the food environment on food intake requires attention from public health. Access to sugar and processed foods and differences between rural and urban food environments are essential in this regard. Reardon et al. (2021) explain that urban food environments encourage consumers to buy processed foods compared to rural areas. Also, food choices in low-income neighbourhoods in

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[4] Hauser, M.; Edel, I; Kahwai, J. (2022) Food environments: Actions to improve sustainable diets in the informal settlement of Mukuru, Nairobi, Discussion Paper, TMG Berlin, 34 pages, in review.

towns and cities are limited. For example, many African food environments of poor urban communities offer low-cost, high-energy-dense street food. The typical variables mediating access to food apply of course. In Cape Town, for example, Boatemaa et al. (2018), argue that although fruit and vegetables exist, poor households with low education are less likely to consume them. Hence, Income and purchasing power are two central variables that should be coupled with food literacy to explain food intake through food environments. In areas with limited purchasing power, social assistance to make food available for poor and vulnerable households' steps in to support food and nutrition security for temporary or chronically undernourished household members. For details, see respective TEP reports collated by TMG.

Much has been written about food security in Cape Town. Food security in townships and respective food environments is often seen as a township issue. Along these lines of thinking, food environments in townships that are ill-equipped to access healthy, safe and affordable food are an outcome of issues independent of the rest of the Western Cape. In this light, a valid question is the extent to which independencies between food environments located along a wealth gradient maintain the status quo. A few, like Scheba et al. (2021) argue that the concentration of poor households on the periphery of urban centres contradicts the goal of creating an integrated, inclusive and efficient city. If this argument is valid, then the question of intersectionality must be asked – including advantages one group gains at the cost of disadvantages of others.

Many townships **lack adequate food infrastructure**, including health services and access to water and sanitation. These conditions are precarious and exacerbate food-related risks to public health. As such, many township food environments are ill-equipped to serve the purpose of access to affordable, sustainable and healthy diets for their population.

One (and perhaps South-Africa specific) approach to **resolve structural inequality** in township food environments has been to foster the presence of fast food and supermarket chains. One argument supporting this strategy had been that there was insufficient food retail present in townships. But this argument overlooks the informal food sector and seems blind to structural inequality. Hence, Battersby (2012) rightly argues that the food desert concept (a descriptor frequently used for residential or business areas with limited access to food retail) neglects what she calls "non-market sources of food" and household decision-making processes. She suggests a new approach considering the household's assets, abilities and decision-making. There is also a need to make market and non-market dimensions of food environments visible and thus subject to structural support in future.

In line with the above argument, others show that food is one central pillar of the informal economy in townships. For example, Petersen and Charman (2017) conducted a study in Cape Town and Durban. They found that out of the 10 049 micro-enterprises explored, about 39% of the total trade in food. According to their study, these include enterprises along the entire value chains, including food production and informal food service enterprises.

Hence, these businesses are essential to making food affordable and locally accessible. They also create cash employment.

Hence, there is a need to redefine the **relation between formality and informality in food environments**. Battersby et al. (2018) argue that both do not exist independently of each other. On the contrary, the informal and the formal food markets intersect along supply chains at various points. Hence, it is essential to view the formal and informal sectors as components of food environments and support each in contributing to food system goals. Because policy and planning responses have not sufficiently acknowledged the importance of formal and informal sectors in meeting food security in townships, there is scope and opportunity for deliberate policy actions supporting this agenda.

Authors like Petersen et al. (2017) refer to informal food markets as 'informal food service' – a central component of the cash economy of fast food, takeaways, and prepared meals. This is what they call "deeply informal trade" often in the hands of women preparing takeaway foods and conducting street braai. Their study asserts that the business demonstrates high dependence on the immediate place of operations, including local input suppliers and selling to a narrow pool of trade from close neighbourhoods. Petersen et al. (2017) also write that supply chains are short and linked to agriculture and wholesale sectors. These value chains also help satisfy local food demand and have an essential social protection and neighbourhood relationship function.

Finally, Battersby (2019) suggests false assumptions associated with the **food desert framing** in Africa. For Kenyan cities, for example, supermarkets do not provide better access to healthier food simply because low-income areas have poor access to healthy food (Wanyama et al., 2019). According to Battersby (2019), food desert policies in Africa are ill-informed by the lived experiences of food insecurity in African cities, presumably appraised through ethnographic studies and direct interactions with township residents. Hence, the food desert policy narrative should be rejected because it erodes the capacity of food systems to meet food security needs. Applied to TMG's Urban Food Futures project in Cape Town, Battersby's thesis requires a nuanced definition of food environments.

Depending on the context, **urban gardening and livestock farming** are food environment components. In their article, Olivier and Heinecken (2016) capture the lived experiences of farmers and gardeners on the Cape Flats in Cape Town. Their study shows that urban agriculture contributes to **food security, builds social capital, and strengthens interpersonal relations**. They argue that these effects of urban gardening are especially the case where NGOs fund, train and oversee schemes. Although it remains unclear what "overseeing" implies and means, their assessment of urban gardening is positive.

Olivier and Heinecken (2017) further argue that urban agriculture empowers women on the Cape Flats. Based on interviews with cultivators, their findings seem to show that urban agriculture help women develop supportive

networks. These networks, in turn, help unlock "benefits across the personal, social and economic spectrum". They confirm earlier research such as the one of (Kanosvamhira and Tevera, 2019). Although there are what (Zimmerer et al., 2021) call grand challenges, urban farming can contribute to solutions that expand the sustainability and resilience of food systems and cities.

The sustainability of urban gardening, however, is a concern to some. Cilliers et al. (2020) highlight that urban gardening initiatives are not autonomous and fully citizen-driven, requiring constant support and resources from multiple stakeholders. This attaches a cultural stigma to urban farming activities. This stigma, in turn, hampers more uptake, especially among the youth. Also, there is limited national support as no dedicated national policy on urban agriculture exists to direct the spatial planning community. Interestingly, Cilliers et al. (2020) also argue that South African spatial planners generally exhibit limited knowledge of UA and green infrastructure.

With reference to others, Paganini (2021) suggests that urban agriculture is a "misplaced livelihood strategy of the urban dwellers in the Cape Flats". She bases this argument on early writing, such as Paganini and Lemke (2020). Because in Cape Town, urban agriculture is an NGO-led and subsidized initiative based on regulating production decisions and market access. Gardening in informal settlements settlers almost exclusively do for a niche market of wealthy consumers in the nearby city. As such, farmers are not only disconnected from consumers but also dissociated from what they grow. Apparently, only 15% of the farmers consume the vegetables they grow. This, according to Paganini and Lemke (2020) does not enhance self-determination. From this perspective, urban food production plays a minor role in Cape Town's food environments.

Here are some more highlights from the current debate:

Supermarkets are often presented as enablers of access to food in informal settlements. But (Battersby and Peyton, 2014) are two authors criticising that narrative. In their study, they show that the distribution of supermarkets is highly unequal, and the distance between low-income from high-income areas hinders access to supermarkets for the urban poor. Also, they argue that the supermarkets in low-income areas typically stock less healthy foods than those in wealthier neighbourhoods. Consequently, the supermarkets do not increase access to healthy foods and may accelerate the nutrition transition.

Coste et al. (2022) outline how households employ various strategies to access food. These include purchasing hampers, a combination of staple foods sold in bulk at a discounted price: cake wheat flour, super maize meal, white sugar, cooking oil, and white parboiled rice. They explored the barriers and opportunities for hampers to advance sustainable diets in the context of Cape Town. In their paper, they show that hampers contain energy-dense, nutrient-poor foods. Furthermore, they suggest that brand loyalty plays a vital role in households' purchase of hampers. According to the authors, there is potential to leverage hampers to become a sustainable strategy through which people

can access healthier food. But it would require working with retailers to offer nutritious and sustainably produced alternatives.

In a recent study, Odunitan-Wayas et al. (2020) explored the shelf space ratio of total healthy foods v. unhealthy foods in all the supermarkets was low, with supermarkets located in high SEA having the lowest ratio but better quality of fresh F&V. The authors found that the share expenditure on SSB and snacks was higher than F&V in all SEA. Food secure shoppers spent more on food, but food items purchased frequently did not differ from the food insecure shoppers. Socio-economic status and food security were associated with more significant expenditure on food items in supermarkets but not with overall healthier food purchases. They conclude that urban supermarket shoppers in South Africa spent substantially more on unhealthy food items, which were also allocated greater shelf space, compared with healthier foods.

Peyton et al. (2015) used spatial analysis at a city-wide scale combined with a qualitative case study utilizing semi-structured interviews and observational research in Philipp to explore the limitations of supermarket expansion as a market-oriented alleviation strategy for food insecurity. While supermarkets have been successful in penetrating some low-income communities, they are often incompatible with the consumption strategies of the poorest households, revealing the significance of the informal economy in Cape Town and the limitations of a food desert approach toward understanding urban food security.

Charles and Buttersby (2019) correctly write that the food system's resilience relies on the choices and decisions made by the system's users – the residents of Cape Town – and cannot be attributed solely to the characteristics of the assets that constitute it. City residents require information and incentives to navigate the food system to enhance resilience to food insecurity effectively. Such information should be provided by food environments.

What next

Battersby (2017) argues that the absence of concerted food system planning has negatively impacted food and nutrition security. It concludes by suggesting that new opportunities for more inclusive urban food systems planning are being afforded by UN-Habitat's New Urban Agenda and Sustainable Development Goals.

In their working paper, Haysom et al. (2020) in their working paper, describe Food Sensitive Planning and Urban Design but expand on the notion of design -- elevating this beyond simply the design practice. They also recommend different practices are required. These practices include conceptual practice, analytical practice, organisational practice and design practice. This approach demonstrates that what is needed is for local governments to understand what urban food governance would mean in their contexts, to gather the necessary data and assess needs, to structure operations and interventions in such a way that could respond to these needs and

governance imperatives, and to then design actions and interventions, including support of food environments.

Paganini and Stöber (2021) find that participants in community-led research on urban agriculture perceive the research process to be much more important than the results. According to the authors, this is how they learned to "challenge their own preconceptions, dismantled the cultural scaffolding which impeded their understanding of their world, and developed agency over processes for change". The authors suggest that mutually developed results by the co-researchers can establish a representative body (of knowledge) to advocate for policy action and address the needs of urban farmers. Most likely, there is a lot to learn about engaging as researchers with communities from this research for the work on food environments on the Cape Flats.

In closing, reference to Paganini et al. (2021) who takes a critical feminist research approach, matters. Authors call for co-developed research designs which allow for collective analysis of findings. What is relevant for food systems research, in general, is also critical for food environment research. For example, creating a safe space for food environment analysis can address unequal power relations resulting from constructs around educational status and perceptions about food environments. Hence, giving credence to anecdotal information, creative expression, and cultural knowledge, as well as digesting the findings through physical activity (stretching, dancing, laughing) to "let the findings arrive", will be central for food environment research in Cape Town.

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