



RESILIENT TERRITORIES

For a sustainable and
fair food system

DURBAN

SOUTH AFRICA

● SÃO PAULO - 36 M

● LONDRES - 14 M

● MOSCOU - 20 M

● ALGER - 7,7 M

● LE CAIRE - 24 M

● LAGOS - 12 M



LET'S FOOD

The Let's Food association was co-founded in 2017 by Anna Faucher and Louison Lançon with the aim of supporting territories in building sustainable and resilient food systems based on territorial cooperation and the exchange of good practices locally, nationally and internationally.

The actions of the association are organised around 3 axes of intervention :

- Support the food dynamics of local authorities in France and around the world by capitalising on successful experiences from other territories.
- Promote and operationalise the sharing of knowledge and initiatives with the various actors of the food system in order to accelerate an agroecological transition on a global scale.
- Raise awareness and offer training in the challenges of sustainable food in order to strengthen the skills necessary for the establishment of sustainable food systems.

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OUR VISION



On April 4th, 2022, the latest report from the IPCC was released. How to ensure food security for a growing global population despite climate change? Experts urge governments to take urgent action to protect land, restore biodiversity, limit meat consumption, and reduce greenhouse gas emissions. They have been doing so for years.

Yet, to date, governments have been unable to take measures commensurate with the challenges we face. They remain bogged down in short-term goals of economic growth and international competition. Cities, which will soon concentrate over 70% of the world's population, are today sources of innovation and more radical decisions, sometimes positioning themselves in illegality vis-à-vis national and international laws to implement a necessary agro-ecological transition.

New local food governance must be built now and must happen through the development of food resilience and cooperation between urban and rural areas. Local authorities have the skills to limit land use change, develop new agricultural practices, and raise awareness about sustainable food among their population while reducing inequalities of access.

All territories must seize this opportunity and quickly build sustainable food systems at the local level, in cooperation with all the relevant actors. It is their role to accelerate this transition, and preserve resources and biodiversity whilst there is still time. We believe in the cooperation of territories to exchange new practices and public policies, and to promote a new way of living together.

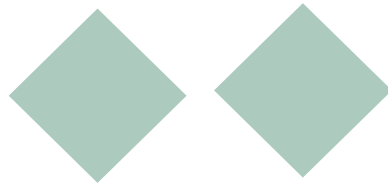
In this sense, the Let's Food Cities project raises awareness and supports local decision-makers around the world, working particularly with universities to form the future decision-makers and professionals, so that they integrate food issues into their upcoming responsibilities.

We hope that this diagnosis, which assesses the sustainability and resilience of Durban's food system, will help to strengthen the place of food issues on the political agenda and inspire elected officials, technicians, businesses, and citizens to commit further to promoting the well-being of all while respecting the environment.

Enjoy reading !

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PREFACE



The Let's Food Cities project, led by the association Let's Food, aims to encourage cooperation between cities to accelerate the sharing of experiences and the implementation of sustainable territorial food systems worldwide.

This 3-year pilot project involves 14 study areas, i.e. 7 pairs made of a French city signatory to the Milan Pact (from 2017) and a cooperating territory abroad.

Based on existing cooperations, the Let's Food Cities project proposes to develop a new theme of cooperation: sustainable food at the territorial level.

The 7 pairs are the following:

- Bordeaux Métropole and State of Guanajuato (Mexico)
- Grand Lyon and City of Lyon and Ho Chi Minh Ville (Vietnam)
- City of Marseille and Valparaíso (Chile)
- City of Paris and Tehran (Iran)
- Montpellier Méditerranée Métropole and Fès (Morocco)
- Grenoble Alpes Métropole and City of Grenoble and Sfax (Tunisia)
- Nantes Métropole and Durban (South Africa)

As part of the Nantes Métropole and Durban cooperation, formalised in 2005 by the signing of a cooperation agreement, the Let's Food Cities project conducted a sustainability study of Durban's food system, initially focusing on the consumption (metropolis of Durban) and production basins formed by the province of KwaZulu-Natal.

All stages of the food system are analysed from four angles that guarantee its sustainability: food security, resource use and impact on the ecosystem, economic system viability and equity, social integration of stakeholders, and local governance.

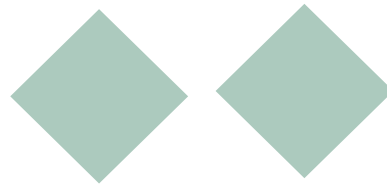
This diagnosis also identifies initiatives in the area with a positive impact, supported by public, associative, and private actors, which are part of the solutions to be encouraged, strengthened, and replicated.

The main results, as well as all the initiatives, were shared with the relevant institutions, stakeholders, and the general public in order to promote informed action and the implementation of new projects in favour of quality food for all.

At the end of the project, Durban benefited from the following deliverables:

- A short film on Durban's food system
- A study of the sustainability of its food system
- An inventory of associative, private (business) and public (public policies) initiatives related to food on its territory, centralised on the Let's Food Ideas platform
- A solutions booklet (based on inspiring initiatives from other cities studied): tailor-made proposals based on the specific issues identified in the territory.

METHODOLOGY



The methodology for studying the sustainability of a food system was co-constructed with the scientific committee of the Let's Food association, composed of international experts and researchers in geography, agronomy, urban planning, international cooperation, and social sciences.

This methodology is primarily based on the definition of a sustainable local food system proposed by the Food and Agriculture Organisation of the United Nations (FAO), IPES Food, and Nicolas Brucas in 2015:

"Sustainable food systems:

- protect the environment and biodiversity without depleting non-renewable resources and biodiversity and without polluting;
- allow access for all to sufficient, healthy, nutritious and culturally acceptable food;
- are based on an inclusive economic system that promotes job creation for all and reduces power inequalities between businesses and within value chains for a more equitable distribution of added value;
- promote social cohesion and respect for the diversity and dynamics of cultures;
- restore trust in the system and enable citizen participation in its evolution."

The methodology consists of analysing the different components of a territory's food system, from production to consumption and waste management, also integrating governance aspects in light of sustainable development components.

The analytical framework is the same for each of the 14 territories to allow for comparisons. It is based on quantitative data from existing national and local studies and on interviews with actors on the ground to assess the situation with local expertise.

In each of the study cities, Let's Food sought to involve universities in the diagnostic process to benefit from academic expertise as well as to sensitise students to a systemic approach and to using the food lens for thinking about the sustainable development of a territory.

A preliminary literature review was conducted. The Let's Food team then led **37 interviews** with food system actors to complete the analysis, with ministries, researchers, agricultural unions, associations, farmers, and individuals leading positively impactful initiatives. All of these actors were later invited to a co-construction workshop with the aim of completing and validating the local food system diagnosis and collectively imagining solutions to be implemented locally.

This report provides an overview of the functioning of Durban's food system and the main sustainability and resilience challenges faced by the territory. Far from exhaustive, it is first and foremost a diagnosis focused on action. Following each point of information, existing projects on the territory are listed, as well as solutions implemented in South Africa and elsewhere that can inspire. Some of which could be implemented and adapted to accelerate the territory's food transition.

UNDERSTANDING THE FOOD SYSTEM

A multitude of actors with diverse interests and levers

From agricultural production to consumption and waste management, public, associative, private, and academic actors must coordinate to form a coherent, sustainable, and resilient food system. This implies a redefinition of the roles of actors within the territory: public authorities become coordinators, animators, and triggers for territorial development; citizens and organisations become a driving force for proposals, potential carriers, and key resources that need to be associated, coordinated and strengthened to support the dynamics of territorial transition (Ciedel, 2019).

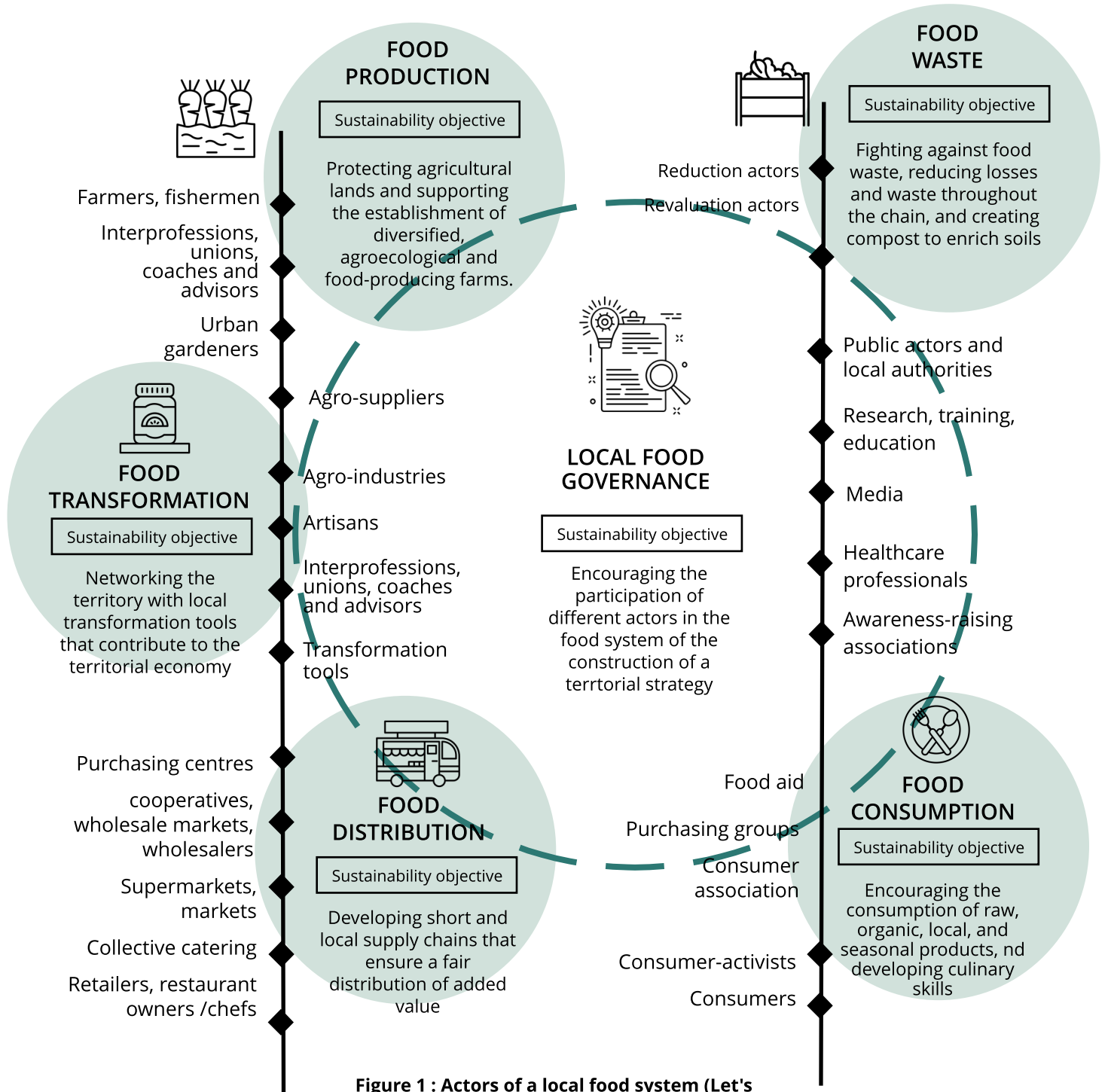


Figure 1 : Actors of a local food system (Let's Food, 2020)

The distribution of institutional competencies on agricultural and food issues

South Africa became a republic in 1961 and a democracy in 1997, following the enactment of its constitution. The 1994 elections marked the end of the apartheid regime and the victory of Nelson Mandela. The Republic of South Africa is a federal parliamentary regime divided into 9 provinces. The provinces are thus endowed with relative autonomy and have their own executive and legislative powers. Each of these provinces is itself divided into municipalities (257 in total). South Africa is therefore governed according to 3 levels: a national level (central government), a provincial level (provinces) and a local level (municipalities). There are three types of municipalities in South Africa: metropolitan municipalities (8 metropolises), district municipalities (44 districts) and local municipalities (205). Metropolitan municipalities rule over the most urbanised territories of South Africa (eThekweni (Durban) is one of them). They have legislative and executive powers, embodied by the Municipal Council, to manage the affairs of their territory.

The agricultural production, markets and value chains in the province of KwaZulu-Natal are primarily under the management of the Department of Agriculture of the KZN province. The "DARD-KZN" department ensures the implementation of national legislation and guidelines, but also takes care of provincial policies. Its main objective is to support farmers to ensure the sustainable development and management of the province's agricultural resources. The municipality of eThekweni has some leeway with regard to central and provincial powers on its territory, which allows it to position itself in favour of sustainable agriculture and food security. South Africa is also governed by a parallel system to the state: the traditional chieftaincy. Traditional chiefs depend on customary law, which governs traditional, mainly rural communities. While they are legitimised by the South African Constitution, traditional chiefs are not democratically elected and the distribution of roles between custom and administration remains unclear (as it is governed by laws, often on a case-by-case basis depending on the regions and communities). Traditional chiefs have competence over the distribution of agricultural land, which is the property of the community in areas governed by customary law (Salcedo, 2014).

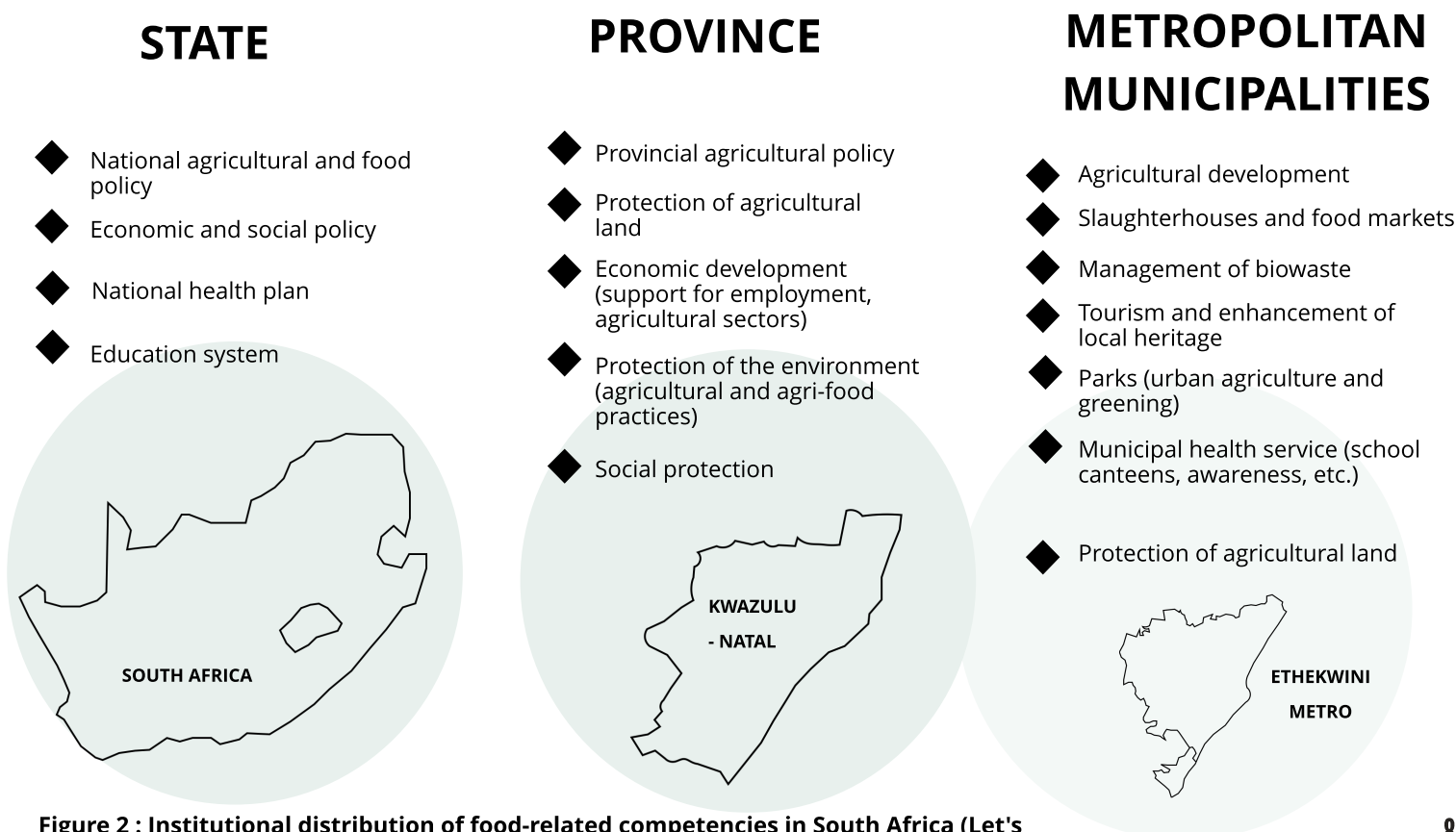


Figure 2 : Institutional distribution of food-related competencies in South Africa (Let's Food, 2022, based on Education Training Unit, 2019)

UNDERSTANDING DURBAN'S TERRITORY

Located at the southern tip of the African continent, South Africa is one of the most developed countries on the continent. Durban is a coastal city located on the eastern coast of the country, in the province of KwaZulu-Natal. It is part of the eThekweni Metropolitan Municipality, which is the third largest urban area in South Africa. Durban is a cosmopolitan city that hosts a large Indian community. The city is particularly known for its port that opens onto the Indian Ocean and is one of the largest in the world, notably in terms of importing and exporting sugarcane.

Population & urbanisation

South Africa has a population of 58.5 million people (2019), of which 29.5% are under 15 years old, making it one of the youngest populations in the world (by comparison, in France, 18% of the population is under 15 years old). With its 11 million inhabitants, the province of KwaZulu-Natal (KZN) is the second most populous province in the country whilst being the third smallest in terms of area (7.7% of the national territory). Like South Africa, KZN's population is young and faces a high unemployment rate (25.9% according to the initial rate yet reaching 41.4% according to the expanded rate, of which 35.6% are young people (Yes!Media, 2020)).

Durban is the largest city in the province and the third largest in the country with 3.7 million inhabitants. The urban population has grown extensively in recent years with an increase of +6.8% between 2007 and 2016. The city has therefore undergone significant urbanisation, and continues to do so due to rural exodus. In the hope of finding work, residents of rural areas move to peri-urban areas and city centres. This phenomenon has led to 70% of the South African population living in urban areas (Von Bormann, 2019).

The majority of Durban's population is of African origin, mainly Zulu. The metropolis is cosmopolitan and hosts a large Indian community (James, 2020).

Living standards

Durban is a metropolis with a relatively high quality of life, although more than half of the population lives below the poverty line (Jones, 2020). EThekweni contains many informal settlements and slums on its territory, including Umlazi and Kwamashu, where thousands of people live. In Durban, 4.7% of the population has never attended school, and only 10.9% have higher education (Yes!Media, 2020).

State of resources

Durban benefits from a very tropical climate that is conducive to vegetation. With its numerous green spaces, representing 60% of the city, Durban was crowned the greenest city in the world in 2019 by Husqvarna (RFI, 2020). In terms of geography, the Durban metropolis (eThekweni) is comparatively larger than other urban areas in the country and is the most hilly, comprising numerous gorges and ravines (Yes!Media, 2020). Considered as the "Garden Province" of South Africa, KZN has vast natural spaces (savannah, mountains) and plays an important role in the country's agriculture (Yes!Media, 2020).

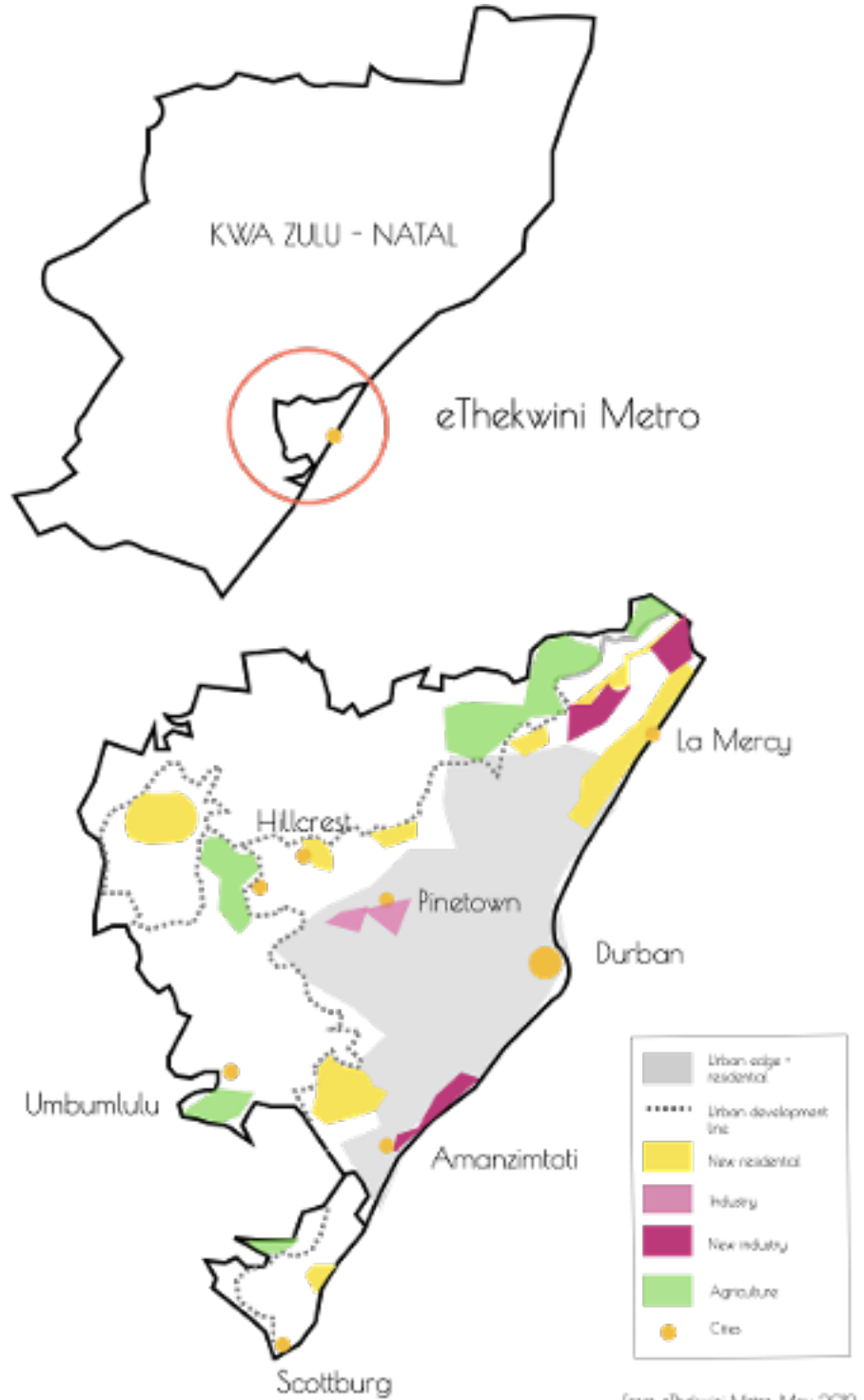
Economic driving forces

Figure 3 : Land use in the Durban metropolis (Zungu et al., 2020)

South Africa is an emerging country commonly included in the BRICS, the most developed emerging countries, along with Brazil, Russia, India and China. South Africa has established a liberal economy in which the state plays an important role in regulating the market.

In Durban, the main economic sectors are finance (22 %), manufacturing (22 %), services (18 %), trade (16 %), construction (3 %) and electricity (2 %) (Yes!Media, 2020). The city is home to the largest commercial port in the country. In this regard, Durban is the gateway to the industrial region and economic centre of the country, Pretoria and its surroundings, and welcomes the world's largest container ships. Significant industries have developed, accompanying the port's development: oil refineries, sugar refineries, soap and margarine factories, shipyards, tire factories, textile factories, fertiliser factories, etc. They are mostly located at the bottom of the bay and in the southern suburbs of the metropolis (Huetz De Lempis, 2020).

Durban is also a tourist city thanks to its subtropical climate, beaches and hospitality. It is one of the main domestic tourist destinations in South Africa. According to estimates, tourism generated \$9.95 million in 2010/2011, equivalent to 8% of the province's GDP (Yes!Media, 2020).



Agriculture

The province of KwaZulu-Natal and the Durban metropolis benefit from a humid subtropical climate, particularly suitable for agriculture. Durban is a primarily rural and agricultural metropolis. Vegetables, maize and meat are produced in small quantities for personal consumption, and any surplus is sold in local markets. KZN produces 30 % of the country's agriculture. Between 18 and 20 % of households in the province are involved in agriculture (KZN DARD, 2020). Of a total of 6.5 million hectares of agricultural land, 82% is suitable for extensive livestock farming and 18% is arable land (KZN Top business, 2021).





Chapter 1

FOOD SECURITY

Does Durban and its province's food system allow access to sufficient and nutritious food for all?



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FOOD SECURITY IN SOUTH AFRICA

"Food security exists when all people, at all times, have physical, economic and social access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life".

(FAO, 2008)

//

We have a significant number of obese people, even in the poorest communities. In my opinion, the biggest challenge of food security is not so much about the absolute availability of food, but about income and eating behaviours. It generates genuine nutritional insecurity, leading to problems of malnutrition, underweight and obesity."

Steve Worth,
Director of the African Centre for Food Security



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In the span of two decades, South Africa has become one of the world's largest consumers of processed products.

 **50 to 75 %**

of the South African population does not have access to a healthy and nutritious diet (FAO et al, 2020)



70 % of women

1/3 of men

are overweight or obese

(Von Bormann, 2019).



14,9 % of the population in a situation of severe food insecurity

in 2020, compared to 7 % in 2019. This rapid increase is partly due to the COVID-19 health crisis, which has pushed a part of the population into precarious situations (Statistics South Africa, 2020).



10th country

with the most alarming prospects for childhood obesity, with 13.3% of children under the age of 5 overweight (World Obesity Federation, 2019 and Global Nutrition Report, 2020.)



AN ONGOING FOOD TRANSITION RESPONSIBLE FOR SERIOUS PUBLIC HEALTH ISSUES

A DIVERSE AND RICH TRADITIONAL DIET IN THE PROVINCE OF KWAZULU-NATAL

In the KwaZulu-Natal region, the main dishes and products consumed are corn, red beans and sweet potatoes. Meat also plays a central role in culinary traditions (beef, pork, chicken as well as wild game such as ostrich, antelope, etc.), especially during the famous braai (barbecue), a popular social event among Durbanites.

Traditional dishes and foods include Boerewors (spicy sausage), Biltong (dried meat), Pap (millet porridge), Chakalaka (spicy vegetable dish), Potjiekos (meat stew), and Vetkoek (sweet filled doughnut).

Local cuisine is multicultural and enriched with a diversity of gastronomic cultural influences including Indian, Asian, English, Portuguese, and Italian. The mix of the population in the KZN province - where 7.4% of the population is of Indian origin, 86.8% is Black, 4.2% is White, and 1.4% is Mixed-race - is reflected in the cuisine, where many vegetarian options have been developed (e.g. curries).

Bunny Chow is the most representative dish of Indian influence on Durban's food culture. It is a spicy sandwich that was popularised by Indian workers and the African black community in the 1940s. During apartheid, people of colour could not enter cafes and restaurants. This sandwich was then served on the streets of Durban and allowed workers to quickly eat without utensils, with the bread serving as the plate.

Today, this dish is offered in the best restaurants and has become an emblem of local cuisine.

Local food also benefits from the province's subtropical climate, which allows for the local cultivation of many tropical fruits such as avocados, bananas, mangoes, etc. The province's extensive coastline also offers a variety of fish and seafood like prawns, oysters, calamari, mussels, crabs, and crayfish (KZN Top business, 2021).



Chakalaka © AmandineCooking



Durban, as Shaka Zulu said, is the place where heaven meets earth. Durban is a beautiful city, with its incredible diversity of people and cultures, its sea, its beach, its climate, its local food, etc. We have a fabulous diversity of dishes that cannot be found elsewhere in South Africa because the community and cultural mix here is unique."

Rosemary Rodriguez, coordinator of the women's group WAVE (Women Adding Value to the Economy)



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“ *Bunny Chow is well-known in Durban's cuisine and there is a lot of folklore surrounding this traditional dish. It refers to the origins of Durban, the history of apartheid, and how Indian flavours have adapted to African flavours.*”

Delwyn Pilay, activist for the Slow Food movement



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THE PROBLEM OF FOOD INSECURITY REMAINS MAJOR IN SOUTH AFRICA, DESPITE A SIGNIFICANT DECREASE SINCE THE 1990S

Although South Africa is one of the top 5 most developed Sub-Saharan African countries and has one of the best food security of the continent, more than half of its population is in a situation of food insecurity, struggling to access sufficient, healthy, and nutritious food. In 2016, severe food insecurity still affected 18% of the population while 42.9% were in a situation of moderate food insecurity (FAO et al., 2020).

Access to food remains a major challenge for South Africa, despite being a fundamental right enshrined in Article 27 of the Constitution. This article guarantees the right to access to food and water, and makes it the responsibility of the State (FAO, 2019). Some government initiatives such as the National School Nutrition Programme (NSNP) or aid for the elderly have helped to maintain the prevalence of undernourishment at less than 5% of the population since the 1990s.

However, since 2011, this rate has been on the rise. The country has gone from 3.5% of the population being undernourished to 5.7% in 2019 (Global Nutrition Report, 2020). The number of undernourished people has thus doubled in a decade and now reaches 3.3 million people (FAO et al., 2020). The COVID-19 pandemic has contributed to accelerating the process. While 7% of the population was in a situation of severe food insecurity in 2019, this figure reached 14.9% in 2020 (Statistics South Africa, 2020).

In the province of KwaZulu-Natal, the issue of food security is particularly worrying. According to the latest national study on health and nutrition, published in 2013, 37.3% of the population in the KZN province is in a situation of food security (as opposed to 45.6% at the national level) (Shisana et al, 2013). After Eastern Cape, KwaZulu-Natal is the province with the highest number of people in a situation of food insecurity. The metropolis has implemented several initiatives to ensure access to healthy, nutritious, and quality food for all, such as urban agriculture, the One Home One Garden project, support for farmers, etc. The municipality is also working on access to available agricultural land for cultivation, as well as combating unemployment to increase purchasing power (eThekweni Municipality, 2012).

FROM UNDERNUTRITION TO MALNUTRITION: THE DOUBLE BURDEN OF NUTRITION

In addition to undernutrition, South Africa is also facing the growing challenge of obesity and overweight. On average, 28.3% of the South African population is obese (FAO et al., 2020). Women are particularly affected by this issue, with an average of 70% of women being obese or overweight compared to 1/3 of men (Von Bormann, 2019).

The percentage of the population affected by obesity has doubled in the past fifteen years. In 2000, 30.2% of women and 7.6% of men were obese, while in 2016, the obesity rate reached 41% among women and 15.4% among men. This trend is also observed among young people. Over the same period, the rate of overweight among young people (aged 5-19) has tripled and the rate of obesity has multiplied by 7 for both girls and boys. Today, almost 1/3 of young girls and 1/5 of young boys are overweight (Global Nutrition Report, 2020). The youngest are also affected by the scourge of malnutrition, with 13.3% of children under 5 being overweight. The combination of undernutrition and malnutrition has significant repercussions on children's development, with 27.4% of children in 2016 being affected by stunted growth.

In South Africa, diabetes is the 5th leading cause of death

Although this rate has decreased since the 1990s, it has stagnated since 2008 (Global Nutrition Report, 2020).

According to projections by the World Obesity Federation, South Africa is the tenth country in the world with the most alarming prospects for childhood obesity. It is estimated that by 2030, 4,146,329 young people aged 5-19 will be obese (compared to 1,368,893 in France, for example) (World Obesity Federation, 2019).

In total, 43% of deaths in South Africa are caused by non-communicable diseases related to dietary habits (cancer, cardiovascular disease, chronic respiratory diseases, diabetes) (Von Bormann, 2019). Diabetes is the fifth leading cause of death in the country (WHO, 2018).

“ *In the KZN province, there are many operations to treat diabetes. We truly have a major health problem associated with our food system.”*

Vanessa Black, Research and Advocacy Coordinator at Biowatch



GLOBALISATION TRANSFORMS EATING HABITS

With the phenomenon of globalisation, food systems in South Africa and around the world have undergone significant transformations, particularly in the 1990s and 2000s, with the globalisation of the food industry, urbanisation, rising incomes and the development of transnational agribusiness companies (FAO et al., 2020).

Five trends are currently influencing food practices in the most developed African regions like South Africa:

- From home transformation and meal preparation to buying processed and prepared foods;
- From buying unpackaged foods to packaged foods;
- From traditional to non-traditional and processed foods (from sorghum to wheat or noodles)*;
- From purchases only at local small retailers to purchases in urban supermarkets;
- From almost no snacking to more frequent and widespread consumption of snacks.

*For example, while the basis of the African diet traditionally consists of millet, sorghum, maize, or tubers, it has been replaced by Asian white rice and wheat, especially ultra-processed wheat products (bread, noodles, pastries) (Reardon et al., 2020).

The determinants of these new trends lie notably in the lifestyle of South Africans, which have been transformed by the country's massive entry into globalisation and economic modernisation.

The increase in work and the acceleration of lifestyles have led to a decrease in available time for home meal preparation, particularly for women, which often results in the use of prepared dishes, fast food, and meals taken outside the home (Rodriguez, 2020; Worth, 2020). Stress, anxiety, and inactivity are also aggravating factors of malnutrition problems (overweight and obesity).

The consumption of ultra-processed and packaged products has increased by 50 % since 1994.



The consumption of processed meat has increased by 45.8 % since 1994.

”

Women are no longer mere housewives, they are businesswomen, academics, students, etc. They no longer find enough time to cook healthy meals. Eating healthily involves cooking healthy dishes, but we no longer have the time and are under too much pressure for that.”

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)



A DENSE FOOD SUPPLY EMBODIED BY SUPERMARKETS AND INFORMAL SHOPS

In Durban, the most common channels for food distribution are supermarkets, small shops, “Spaza Shops” (informal shops), farmers' markets, street vendors, etc.

THE RAPID DEVELOPMENT OF SUPERMARKETS, WHICH HOLD MOST OF THE MARKET SHARE, HAS BEEN PARTICULARLY PRONOUNCED IN URBAN AREAS

Globalisation has led to what is called "the supermarket revolution", a phenomenon that has been particularly evident in South Africa. The rapid expansion of supermarkets since the 1990s has largely contributed to the increase in purchases of ultra-processed and fast-prepared products (FAO et al., 2020). With the overall increase in income, South African households are looking for more variety and exoticism in their food, which they can more easily find in supermarkets.

In addition, a significant portion of food is more economically accessible in supermarkets. Thanks to efficient management and supply systems, supermarkets benefit from economies of scale and can sell food products at a relatively low price. In South Africa, researchers have observed that supermarkets in small towns, for example, could sell maize flour 17% cheaper than traditional shops, thanks to their economies of scale (D'Haese & Van Huylbroeck, 2005). While the rise of supermarkets has improved access to food in terms of price, quantity, and variety, it strongly encourages over-consumption of processed products, which are often of low nutritional quality.



Supermarkets are the main factor in access to food. It is through this channel that most people access their food. Supermarkets are usually based in shopping centres that encourage consumption”

Vuyo Jayiya, Deputy Director of Agro-Business Services, eThekweni Municipality



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THE OMNIPRESENCE OF ULTRA-PROCESSED PRODUCTS

Ultra-processed products are widely available in supermarkets but are also sold in traditional shops. Supermarkets have a greater variety of products within each category than small shops, yet both sell the same types of products that are high in sugar, salt, fat, and ultra-processed (wheat flour, cookies, cakes, noodles, fruit juice, soda, etc.) (Reardon et al., 2020). It seems that the real increase in availability of these types of foods come from small shops, which are widely spread and present in poorer neighbourhoods and small rural towns.

Contrary to popular belief, the demand for ultra-processed products is ubiquitous. The increase in the consumption of processed products is not limited to the middle classes in urban areas but is developing in rural areas and among the poorest social classes (Reardon et al., 2020).

Due to cost - the industrial package of ultra-processed products is cheaper than traditional products - and taste, these foods are occupying an increasing place in dietary patterns in Sub-Saharan Africa, with concomitant health consequences.



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FOOD OFFER VARIES DEPENDING ON NEIGHBOURHOODS

In low-income neighbourhoods, the offer of food products is less diverse in terms of healthy and quality alternatives than in affluent areas. Store chains like Woolworths or Checkers tend to offer denser and more varied sections of organic, local, or healthy products in neighbourhoods where the population can afford them (Rodriguez, 2020).



“ *Local shops in Durban's townships, like Spaza Shops (informal commerce), offer very few fruits and vegetables. They mainly sell dry goods. To obtain fruits and vegetables, residents must go to malls or to the city centre. Therefore, access to fruits and vegetables is complicated in Durban's disadvantaged neighbourhoods.”*

Xolile Mkhize, Nutritionist at Mangosuthu University of Technology

THE ROLE OF MARKETS AND INFORMAL VENDORS IN FOOD ACCESS

Street vending, whether it be cooked meals (street food) or various food products, is widespread in Durban. Many street vendors operate informally as they are not registered and the South African government is attempting to regulate this economy.



“ *Street vendors play a vital role”*

Richard Dobson, Co-founder of the Asiye eTafuleni Association

By being present in low-income neighbourhoods and strategic locations (along major roads), they nevertheless ensure quantitative access to food. They also provide ease and convenience of supply because they are open early in the morning and late at night, and their prices are affordable.

INCREASING NUMBER OF MEALS CONSUMED AWAY FROM HOME: THE RISE OF JUNK FOOD

The evolution of lifestyles is accompanied by a shift in eating habits: more and more meals are consumed away from home, from street vendors, stalls, and restaurants (Reardon et al., 2020). These practices now concern all social classes. Due to lack of time, South Africans are used to consuming kotas (a typical sandwich) in the morning and at noon and fried chicken or fish in the evening.

”

No one would want to buy spinach on their way to work.”

Richard Dobson, Co-founder of the Asiye eTafuleni Association



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In front of schools, small shops and street vendors are also present and sell crisps, pies, sugary drinks, and snacks that are very high in calories and have low nutritional value (Worth, 2020). The food supply encourages and habituates the population to consume fatty, sugary, salty, and ultra-processed products that are addictive and very likely contribute to obesity and other non-communicable diseases.

STRONG ECONOMIC INEQUALITIES AND UNEVEN ACCESS TO QUALITY FOOD

Hunger remains a reality for a significant portion of the population, mainly due to economic reasons. South Africa has the highest level of economic inequality in the world (Gini index of 0.63 in 2018). 38% of the population lives below the poverty line, with less than \$3.20 per day, and 19.3% of the population lives in extreme poverty (Global Nutrition Report, 2020).

SIGNIFICANT ECONOMIC INEQUALITIES WITHIN THE MUNICIPALITY OF ETHEKWINI

The city of Durban, like South Africa, has high levels of poverty and economic inequality. A small minority holds the vast majority of the wealth (Worth, 2020). Low-income households are more vulnerable to food insecurity, and the issue is not so much the availability of food but rather purchasing power (Kasavel et al., 2014).

The city attracts vulnerable rural populations, who, affected by the high unemployment rate in the KZN province (35.6 % among young people), move to urban areas in search of employment. This partly explains urban poverty and growing economic inequalities in Durban. With a Gini index of 0.63 in 2016, the metropolis is the fourth most unequal city in South Africa.

“

We have one of the highest levels of inequality (Gini index) in the world, and it is getting worse. The gap between the rich and poor is widening. This has a direct impact on food security”.

Steve Worth, Director of the African Centre for Food Security

The youth unemployment rate in the KwaZulu-Natal region is 35.6%.

UMLAZI, THE COUNTRY'S SECOND LARGEST TOWNSHIP IN TERMS OF SIZE

Poverty is particularly concentrated in the 17 townships of the eThekweni municipality (Jayiya, 2020). eThekweni hosts the country's second-largest township, Umlazi, with an official population of 500,000 but an estimated actual population of 2.5 million people. A significant portion of the metropolitan area's population lives in these townships, outside of the urban centre and therefore outside of economic opportunities (James, 2020).

Townships are unregulated spaces where people self-organise the construction of their homes, access to resources, transportation, etc. (Hlongwa, 2020; Jayiya, 2020).

They are a legacy of apartheid, where communities were segregated. While white people settled in pre-existing neighbourhoods with infrastructure built during colonisation, people of colour were confined to the outskirts of the city in undeveloped areas that they had to build with limited resources, which explains the very small houses and lack of infrastructure (Dobson, 2020). In the Umlazi township, 60 to 70 % of residents live below the poverty line and around 40% of the active population is unemployed (Jayiya, 2020).



©Umlazi township/Let's Food

ECONOMIC INEQUALITIES EXACERBATED BY RACIAL INEQUALITIES

As a legacy of apartheid, South African economic inequalities are compounded by racial inequalities. According to a World Bank study, black South Africans are 17% less likely to find employment than their white counterparts. The same study shows that the black population in South Africa has the highest poverty rates in the country. In 2015, 47% of households headed by black individuals lived below the poverty line, compared to less than 1% of households headed by white individuals (World Bank, 2018). Incomes also vary according to communities. The median monthly wage among the white minority is 10,000 rands (approximately 627 euros), compared to 2,800 rands (175 euros) among the black majority, according to the South African Institute of Race Relations (Barbier, 2019).

THE ECONOMIC CRISIS LINKED TO THE COVID-19 PANDEMIC AGGRAVATES FOOD INSECURITY AMONG RESIDENTS

Already significant before the Covid-19 pandemic in 2020, unemployment rates have been exacerbated by the economic crisis resulting from the lockdown and economic slowdown. The latest figures from the national statistics service (Stats SA) reveal that 44.4 % of South Africans are unemployed. This situation is even more dramatic for young people, as 64.4% of people aged 15 to 24 are unemployed (Stats SA Quarterly Labour Force Survey Q2, 2021). In the province of KwaZulu-Natal (except for the municipality of eThekweni where unemployment is lower), some of the highest unemployment rates in the country were recorded, with 47.1% of the population unemployed (Stats SA Quarterly Labour Force Survey Q2, 2021). These high levels of unemployment have repercussions on household incomes and their ability to access adequate, nutritious, and sufficient food.

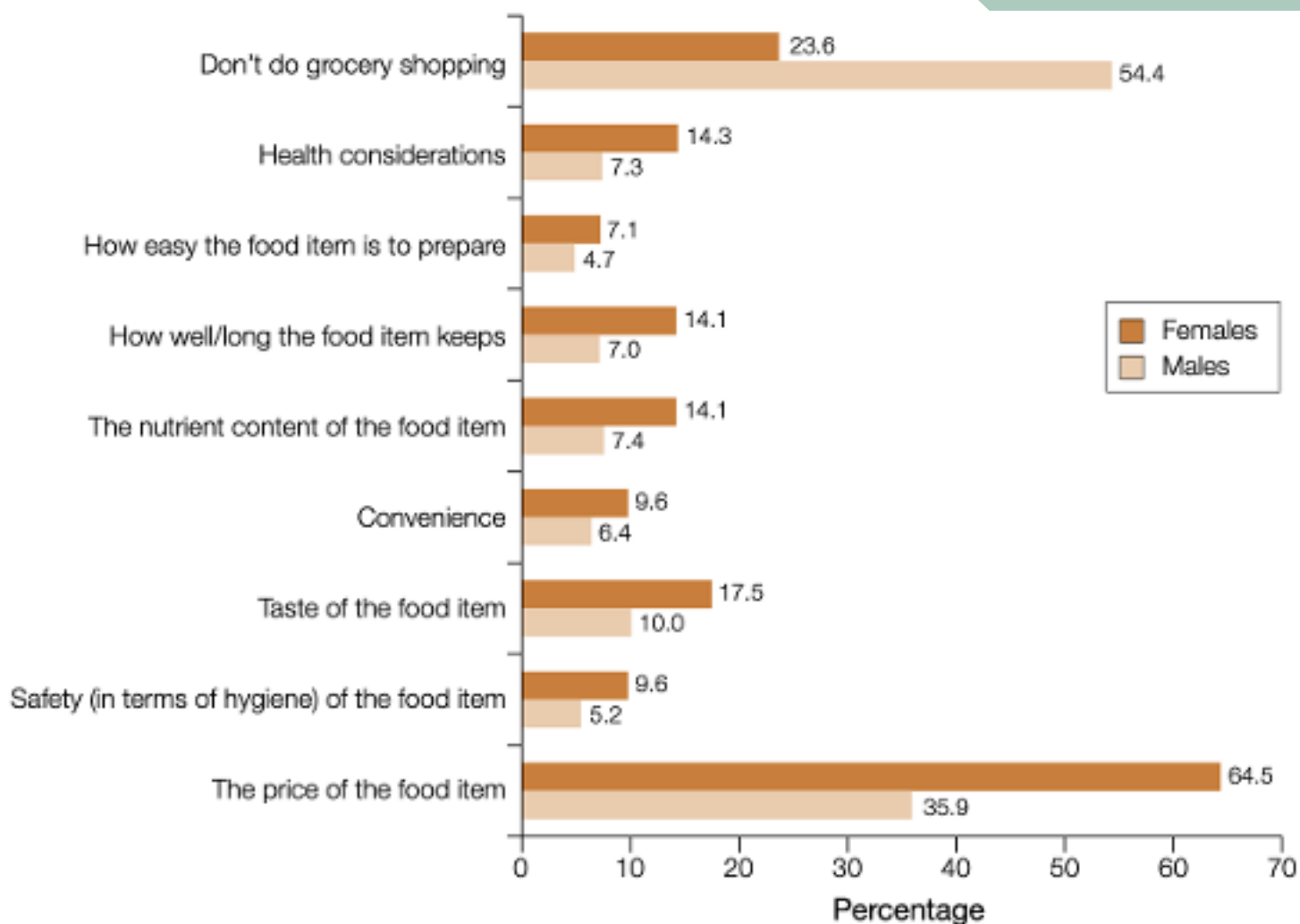
FOOD INSECURITY LIMITS ACCESS TO QUALITY FOOD

In South Africa, some incomes are very low and do not guarantee access to food. A study conducted by the municipality of eThekweni in 2014 showed that many "unemployed" residents work in the informal economy, as street traders for example, but earn very low incomes. With an average of 2,000 rands per month (€107 or \$135) and considering they often have to support an average household of four people, the majority of street traders and their families are food insecure in Durban. These low incomes compromise the nutritional quality of the food they obtain, hence the fact that 59.2 % suffer from lifestyle-related diseases (Kasavel et al., 2014).

To address the issue of low wages, the government has implemented a minimum wage of 3,500 rands per month since 2019 (€190 or \$235), but this is still insufficient in the wake of rising food prices (La Tribune, 2019). Indeed, the price of a basket of basic food items was 973.53 rands in November 2020. Every month, the National Agricultural Marketing Council (NAMC) publishes the price of an urban food basket, made of 28 products, allowing for comparisons of price trends over time. Thus, it can be observed that, in the previous year, in 2019, the price of the same food basket was 872.76 rands, showing an increase of 11.6% in one year. This price increase worsens the food security of already vulnerable households (NAMC, 2020).

35 % of the income of people with the lowest living standards in the country (categories 1 to 3 of the LSM indicator) is dedicated to their food (Von Bormann, 2019). The choice of food products is therefore largely dictated by economic means.

Figure 4 : Factors influencing food purchasing choices, by gender, in South Africa (HSRC, 2012)



According to me, food insecurity is primarily a problem of income. When you have low income, you buy inexpensive food products that are generally high in calories and filling but not necessarily nutritious."

Steve Worth, Director of the African Centre for Food Security



**70 % of household food supply
comes from the informal market
(Von Bornmann, 2019).**

STREET VENDING PROVIDES CHEAP FOOD ON WHICH A LARGE PART OF THE IMPOVERISHED POPULATION RELIES FOR SUSTENANCE

Poor households turn to dry products (rice, etc.) or highly processed foods (canned goods, sauces, etc.) because they lack the means and storage infrastructure to obtain fresh products. For example, slum dwellers consume less fresh products because they do not own refrigerators to store food (Jayiya, 2020).

This also prompts residents to rely on street vendors for their daily supplies (Dobson, 2020). Street food, which is the sale of cooked dishes in the street, is mainly operated within the informal economy. Street vendors prepare meals that they offer at low prices. While these dishes are cheap, they are rarely healthy (crisps, fries, burgers, pies, etc.). One of the emblematic dishes is Amagwinya, a doughnut fried in oil that can be eaten plain or with ham, butter, cheese, curry, etc. It is a particularly popular dish among students and low-income families because it is quick, calorie-dense, cheap, easily available, and considered good-tasting (Hlongwa, 2020).

STUDENTS SUFFER FROM MALNUTRITION DUE TO LACK OF MEANS

In South Africa, nearly $\frac{3}{4}$ of students are in an economically precarious situation and rely on state grants to meet their basic needs. Their lack of economic resources is also affected by their poor budget management and money transfers to their families. Some students from poor families send a portion of their grants, intended to cover their food needs adequately, to their families who are in economically vulnerable situations (Kwazini, 2020). The lack of economic resources does not allow them to prioritise healthy and good-nutrition quality food.

Additionally, students' eating habits are unhealthy. Many skip meals, consume snacks that are mostly high in fat, sugar, salt, and calories, and consume ultra-processed foods, fried foods, etc. This range of highly processed foods is more accessible than "healthy" snacks. They also quickly provide a feeling of satiety and can be consumed quickly, without having to cook or shop (Mkhize, 2020). A significant portion of students, therefore, prefer to buy ready-made meals or street food because it is quicker and more accessible, although it may be more expensive than cooking for themselves (Worth, 2020).



THE INFLUENCE OF SOCIAL AND CULTURAL FACTORS ON FOOD CHOICES



“

Unfortunately, we have a Western food culture here in South Africa, particularly within the middle classes. It is not a racial or community matter but an income one. We have very Western food and people love brands, their KFC and takeaways. People flock to shopping malls and buy. They wait in their cars for their McDonald's on Saturdays.”

Paul James, Director of LUMEC

Current food trends, such as the preference for ultra-processed products, are influenced by economic and sociodemographic factors deeply rooted in society, and not merely by the importation of a new food culture (Reardon et al, 2020).

A LACK OF AWARENESS ABOUT HEALTHY, BALANCED, AND SUSTAINABLE EATING HABITS

The Western consumption model, consumerist, rich in ultra-processed, fatty, sugary, salty, and calorie-dense products, is adopted by a large portion of South Africans (Von Bormann, 2019). The arrival of the industrial food system was accompanied by advertising campaigns, films, and television promoting the consumption of processed foods and junk food. The definition of happiness is strongly influenced by the Western model (Worth, 2020).



“

There is a lot of work to be done on consumer education, such as teaching them how to cook and prepare healthy meals, developing knowledge about all types of grains, and creating more interest in healthier food.”

Vanessa Black, Research and Advocacy Coordinator at Biowatch

The definition of happiness is strongly influenced by the Western model (Worth, 2020).

“BIG IS BEAUTIFUL”, THE VALORISATION OF OVERWEIGHT BODIES

Socially and culturally, the South African population tends to value voluptuous bodies and reject thin ones. In 2010, researchers interviewed black women with chronic diseases (72 % were specifically diagnosed with diabetes mellitus) in a Durban hospital, an area where the rate of HIV/AIDS is high. 90 % of women were overweight or obese, yet they perceived their bodies as thinner than reality. In addition, 99% responded that they associated thin silhouettes with HIV/AIDS infection (Devanathan et al., 2013). The perception of the body by black women living in areas where HIV/AIDS affects many people is skewed and tends to favour size. This can be a barrier to weight loss and the adoption of dietary and physical practices that limit risk factors for chronic diseases such as diabetes.

“ *I think African women are very comfortable being voluptuous, especially black women and women of colour who are not attached to becoming thin because men do not prefer thin bodies. There is no problem with being a round woman.”*

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)

“ *There is a trend around the concept of "big is beautiful", according to which it is possible to be overweight and beautiful at the same time.”*

Steve Worth, Director of the African Centre for Food Security

Having curves or an overweight body, whether for men but especially for women, is a sign of desirability. Similarly, South Africans prefer round and chubby babies, because it is a sign of good health. This cultural factor partly explains the high number of overweight children in the country (Mkhize, 2020).

South Africa has adopted the Western dietary model that values junk food and supermarkets but not Western thinness mandates. South African culture continues, on the contrary, to value curves and reject thinness (Worth, 2020).



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THE CHALLENGE OF A FOOD EDUCATION BEYOND SOCIAL CONSTRUCTS

There is a need to educate the population to deconstruct false beliefs and promote the adoption of better dietary practices. This would limit health problems associated with overweight (Rodriguez, 2020).

The challenge is also to make healthy and balanced, as well as sustainable and local, food attractive. It is not yet socially valued to source locally or produce one's own food. For example, walking around with a plastic bag from a recognised supermarket like Woolworths is a sign of social wealth that is particularly valued in disadvantaged neighbourhoods and townships (Hlongwa, 2020). Similarly, carrying a bag of oranges is much less valued than carrying a box of pizza, especially among young people (Mkhize, 2020).

Connecting the local identity to that of organic food is the objective of the Green Camp Gallery project, which relies on graffiti, music festivals, etc. for its purpose (Nilsson, 2020).

SHORT-TERM FOOD INSECURITY MANAGEMENT PROGRAMS AND POLICIES, A LACK OF REFLECTION ON THE LONG-TERM

The right to food is enshrined in the South African Constitution. The National Development Plan identifies food security and nutrition as directly correlated with poverty and inequality. In 2013, the government launched a national strategy, the "National Policy on Food and Nutrition Security", which aims to ensure the availability and accessibility of safe and nutritious food at the national and household levels.

South Africa has for example joined the list of 44 states that have implemented a tax on sugary drinks, becoming the first country on the continent to implement this law in 2018. This levy is charged to the agri-food industries and is intended to limit the consumption of processed products (Stacey et al., 2019; Reardon et al., 2020).

South Africa therefore seems to be taking note of the food security issues experienced by its population and to be working towards resolving them. However, the country has not, to this day, designed a strategy to implement the right to access to food enshrined in its Constitution. There is also no coordinating bodies between ministries and socio-economic actors, experts, associations, and civil society. While it is worth noting that social protection measures exist and contribute significantly to mitigating food insecurity (e.g. family allowances and assistance to the elderly), the government and its social partners must gain coherence and effectiveness. To do so, they are seeking to improve the implementation of the National Food and Nutrition Security Plan in a more integrated manner (South Africa, 2019).

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STRENGTHENING ACCESS FOR ALL TO HEALTHY FOOD

- LOCAL SOLUTIONS

Facilitating access to a healthy diet for everyone

FOODFORWARD SA - FIGHT AGAINST FOOD WASTE AND SOCIAL REDISTRIBUTION

Observing that one-third of the food produced in South Africa is wasted while 14 million people suffer from hunger, FoodForward SA was created in 2009 to connect food chain actors with organisations that work for disadvantaged people. The organisation collects surpluses from farmers, industries, and stores to benefit the 1,005 organisations spread across the 9 provinces. The main beneficiaries are nurseries, schools, as well as shelters for vulnerable people, or establishments for disabled people. Nearly 500,000 people are directly served each day (1.5 million indirectly). Beyond food banks, FoodForward SA has also created a digital platform to directly connect supply chain actors with beneficiary organisations and has set up an internship to enable young people to better integrate into the food supply sector.

NATIONAL SCHOOL NUTRITION PROGRAM - ENSURING CHILDREN'S FOOD SECURITY

The National School Nutrition Program currently provides meals to more than 9 million children in South Africa and 428,000 in eThekweni. Thanks to this program, primary and secondary school students in low-income neighbourhoods can benefit from a healthy, complete, and diverse meal every day. Allowing these students to eat well while at school ensures that they receive a portion of the recommended nutritional intake to be healthy and able to learn in good conditions. In that sense, it strengthens equity among disadvantaged students who do not have the same resources as others. Students' health, well-being, as well as attendance, concentration and academic performance have overall improved thanks to the program.

UKZN - FOOD SECURITY PROGRAMME

The University of KwaZulu-Natal (UKZN) is located in Durban and has about 50% of students coming from disadvantaged families. In 2012, the university launched the Food Security Programme (FSP) to assist students facing food insecurity. Students identified by the university team are offered vouchers or food baskets to collect from the university cafeteria. This allows them to have access to a complete and balanced meal each day. In addition to providing sufficient food for students, the Food Security Programme also sheds light on food insecurity and the numerous other problems that arise from it for students (academic failure, dropping out of courses, difficulty entering the job market, loss of self-confidence, etc.). The university is now considering other forms of support that would be even more effective and less stigmatising for students.

ETHEKWINI MUNICIPALITY - SUPPORT FOR SOUP KITCHENS

The eThekweni Municipality is committed to reducing poverty and improving the quality of life for its residents. Recognising the benefits of soup kitchens, the municipality has set up a system to finance these initiatives. Since its establishment, the support fund has continued to expand to other soup kitchen initiatives in the city's neighbourhoods. These daily soup kitchens are located in the most disadvantaged neighbourhoods of the city. There are currently about one hundred soup kitchens and more than 16,000 beneficiaries per day. The community is committed to further supporting soup kitchens and ensuring the presence of a soup kitchen in each disadvantaged neighbourhood (Jayiya, 2020).



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CARROT & PEAS - COMMUNITY SOUP KITCHEN

"Carrots & Peas" is a community soup kitchen initiative led by a group of women living in a neighbourhood of eThekweni to help people in need. This initiative emerged in 2009, led by Zandile Ntaka, without external support, to assist vulnerable people who cannot meet their food needs, are unemployed and homeless, and many of whom are also ill (tuberculosis, HIV, diabetes, hypertension, etc.). "Carrots & Peas" distributes a cooked meal three times a day, three times a week (Tuesday, Wednesday, and Thursday) to the community. This soup kitchen attracts residents from surrounding neighbourhoods, representing nearly 75 people per day.

Raising awareness for healthy and sustainable eating

NATIONAL SCHOOL NUTRITION PROGRAM - SCHOOL GARDENS

The second pillar of the National School Nutrition Program focuses on school gardens and projects for producing fruits and vegetables within schools. In 2014, 45% of the schools where the program was implemented had a school garden where they produced fruits and vegetables for student meals. This project has multiple objectives: to produce fruits and vegetables on-site for students, as well as to ensure a source of income through external sales; to use the garden as a source and support for teaching for students, teachers, and parents; and to improve the school environment. The presence of a school garden allows children to improve their knowledge, but most importantly, increase their consumption of fruits and vegetables, which contribute to a healthy diet. *revenu avec la vente à l'extérieur, utiliser le potager comme source et support d'enseignements pour les élèves*

STATE - A TAX ON SUGARY DRINKS

In order to limit the consumption of processed and unhealthy products, South Africa has implemented a tax on sugary drinks: South Africa's Health Promotion Levy on SSBs. Implemented in April 2018, this tax is set at 0.021 rand (about 0.15 US cents) for every gram of sugar above the initial threshold of 4 g/100 mL. The products concerned thus cost 20% more per additional gram of sugar. This new levy on producers of sugary drinks is directly aimed at limiting diabetes, obesity, and other non-communicable diseases related to diet (Stacey et al., 2019). South Africa is one of the 44 countries that have implemented a tax on sugary drinks (SSB), and it is the first country on the continent to have done so (Reardon et al., 2020).



HEAR FOUNDATION - RAISING AWARENESS FOR HEALTHY EATING TO COMBAT YOUTH OBESITY

The Heart Foundation is fighting against cardiovascular diseases, the second leading cause of death in South Africa after HIV/AIDS. At least 80% of these diseases could be prevented through a healthy diet, regular physical exercise, and not smoking. The foundation operates various awareness-raising activities, as well as research and fundraising. Among these awareness-raising activities, the "Schools' Health Promotion initiative" was launched as a pilot program in 2017 in schools in disadvantaged neighbourhoods to combat youth obesity. Two objectives are targeted: raising awareness among young South Africans about the benefits of a healthy lifestyle; and enabling school teams to know their health status by undergoing a risk assessment. The number of targeted schools has gradually increased, and the program is still ongoing.



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HEALA - AN NGO PROMOTING HEALTHY EATING AGAINST OBESITY

Healthy Living Alliance (HEALA) is an alliance of non-governmental organisations with a mission to improve the health of the population. The organisation advocates for policies and regulations that enable South Africans to access healthy diets and lifestyles to prevent non-communicable diseases such as diabetes, the second leading cause of mortality in the country after tuberculosis (VitalStrategies, 2019). Additionally, their main objectives are: to combat the hegemony of large food companies over the food system; to promote access to clean water and healthy food; to better educate citizens, policymakers, and health actors on non-communicable diseases related to food; and to fight against junk food advertising campaigns aimed at children. The NGO is currently conducting awareness campaigns to promote the display of warning labels on the front of packaging and is taking action to limit the consumption of sugary drinks. The active involvement of HEALA between 2016 and 2018 in advocating for a tax on sugary drinks led to the adoption of a bill to make the country the first in Africa to implement a tax on sugary drinks. In response to this success, Lawrence Mbalati, who directs the program at Healthy Living Alliance, said "*The health promotion tax proves that it is possible to win political victories that protect the health of our populations if civil society, researchers, and other stakeholders mobilise with tenacity and commitment*".

FOOD AUTONOMY: A RECENT DYNAMIC OF URBAN AND PERI-URBAN AGRICULTURE

THE PROVINCE OF KWAZULU-NATAL : A NATIONAL HUB FOR DIVERSIFIED AGRICULTURAL PRODUCTION

The province of KwaZulu-Natal benefits from a humid subtropical climate that is particularly favourable to agriculture. Agriculture is a key strategic sector that represents 4% of the regional economy (KZN DARD, 2020). Due to its topography, climate, soils, and natural resources, agriculture in the province is highly diversified. KwaZulu-Natal has abundant rainfall and water resources that are currently sufficient, unlike other provinces in the country that are facing water stress (Pilay 2020).

Out of a total of 6.5 million hectares of agricultural land, 82% of the land is suitable for extensive livestock farming, and 18% is arable land (KZN Top business, 2021). Livestock farming includes cattle, sheep, pigs, and poultry. Agricultural production is mainly represented by sugarcane, which is produced industrially for the national and export markets (Africa and Asia). Soybeans and maize are also important local productions, alongside some tropical fruits (bananas, mangoes, pineapples, peanuts).



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The main productions in the province of KZN are maize, sugarcane, soybeans, vegetables, and some specific crops such as avocados or macadamia."

Walter Coughlan, Director and Co-founder of the Fair Food Company

KwaZulu-Natal provides nearly 30 % of the national agricultural production (KZN DARD, 2020)

EXPORTS OF LOCAL AGRICULTURE, IMPORTS TO FEED THE LOCAL POPULATION

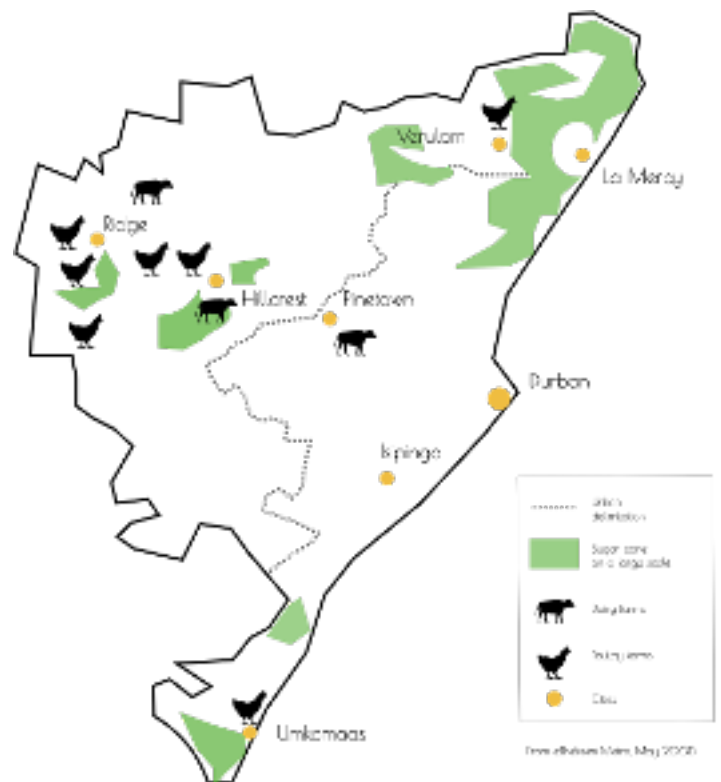
KwaZulu-Natal plays an important role in the country's balance of trade, thanks to its agricultural exports (e.g. sugarcane, timber, meat, and macadamia nuts). The region is the largest sugarcane-producing area in South Africa, with around 200,000 hectares dedicated to its crop (FAO, CIAT & AfDB, 2020).

However, since the local agriculture is mainly focused on exports, the city of Durban imports a large part of the food consumed by its growing urban population. Most fresh produce comes from other provinces such as Free state and arrives in the city through fresh produce markets (Jayiya, 2020). About 80% of fruits and vegetables are sourced from other provinces (Mpumalanga, Limpopo, and Free State) or from foreign countries such as Europe and Argentina). Cereals are mostly imported from a neighbouring province (Free State), or from abroad (e.g. rice). These products usually pass through the bulk market in the port of Durban before being distributed to local markets.

As for meat, it is mostly produced locally in the central area of KZN (Midlands), where there are many processing plants. The population consumes a lot of meat and prefers fresh meat, especially from local butcheries (Jayiya, 2020).

The KwaZulu-Natal region is the largest producer of sugarcane with more than 200,000 hectares dedicated to it

Figure 5 : Schematic representation of agriculture in the metropolitan area of eThekweni (eThekweni Metropole, 2008)



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Durban is primarily a coastal city that serves the country through its port and infrastructure. We are an entry point into the country and the rest of the continent, but also an exit point (...). Most of the rice is imported. We hardly grow any in the country, even though we are big consumers. "

Vuyo Jayiya, Deputy Director of Agro-Business Services, Municipalité d'eThekweni



A RAPID URBANISATION THAT THREATENS DURBAN'S AGRICULTURAL LAND

There are numerous pressures on the land in the metropolitan area, including residential and industrial development, which threaten peri-urban agriculture. Additionally, 55% of the rural area within eThekweni is under the authority of traditional chiefs who offer precarious leases to farmers, limiting access to land and investments.

Urban agriculture, which was one prevalent in Durban, has already declined significantly over the decades. Traditionally, residents, particularly those of Indian origin, cultivated small plots of land along the river in Durban. However, the city's development and economic activities, led in particular with the British and large industries, gradually occupied these flat spaces to establish their activities (Black, 2020). As a result, the available land has diminished due to artificialisation.

55 % of the rural area within eThekweni is under the authority of traditional chiefs

THE ETHEKWINI MUNICIPALITY AIMS TO STRENGTHEN LOCAL FOOD RESILIENCE

About 40% of the eThekweni municipality's territory is considered rural. In order to promote local agriculture and preserve agricultural land in peri-urban areas, the municipality is using its land use planning tools. Through its "Spatial Distribution Framework", which identifies cultivable land, the eThekweni municipality has blocked the use of certain land for non-agricultural purposes in its planning documents. Thus, a company cannot build a factory on land declared as agricultural (Jayiya, 2020).

The municipality has also planned its food system through the "Agribusiness Masterplan" to better understand where locally consumed food comes from. This diagnosis allows it to better identify avenues and modalities of action to meet local food needs (Jayiya, 2020).

However, with regard to the distribution and use of agricultural land, the Durban municipality only has authority over a certain area. Outside of this area, traditional chiefs (who answer to the Zulu King) decide on land allocation (some public services such as running water or electricity are then absent). This area represents more than 55% of the municipality's territory. It is sometimes difficult to limit fragmentation and protect agricultural land because when producers are granted land, they do not own it and can be evicted at any time, which limits their access to loans (Jayiya, 2020). The municipality must maintain open and ongoing governance with traditional chiefs to best preserve agricultural spaces.

THE RAPID DEVELOPMENT OF URBAN AGRICULTURE IN DURBAN

Urban agriculture is a proven response to limit food insecurity and raise awareness among consumers about healthier eating.

Studies have shown that domestic urban agriculture is a source of income (selling vegetables), savings (less food expense), and better quality food by providing more diverse and nutrient-rich food (vegetables, fruits, meat). For low-income households, food production can meet between 20% and 60% of their food needs (Van Der Merwe, 2011; Bikombo, 2014). For several years, the eThekweni municipality has been seeking to encourage urban and peri-urban agriculture in order to contribute to poverty reduction in the more urbanised areas (Shezi & Ngcoya, 2016).

”

Urban agriculture is definitely a tool against poverty because by producing one's own food, there is no need to buy it. One can also generate income by selling some of the harvest, and save money. It is therefore really important to have one's own space, one's own garden.”

Thobile Ngcobo, Project Manager of the Urban Regeneration and Management Program of the d'eThekweni City Centre, eThekweni Municipality

Durban is a pioneering metropolis in urban agriculture (Khan, 2018). Urban agriculture includes livestock farming (12.8 %), poultry farming (20,9 %), and vegetable farming (39.6 %). The rest is dedicated to other crops (12.3 %) or other production workshops (15.4 %). According to a survey conducted in 1992 and published in the Urban Agriculture Magazine by Smith et al., nearly 25% of eThekweni households were actively engaged in forms of urban agriculture (Shezi & Ngcoya, 2016). Although in 2011 only 105,567 in the eThekweni metropolis were engaged in forms of urban agriculture, out of the 956,713 households surveyed in the area, researchers observed a true momentum in place to revalue this practice, which is historically rooted in Durban's culture (Shezi & Ngcoya, 2016).

Durban stands out for its numerous urban agriculture projects led by diverse actors: municipality, student organisation, associations, communities, churches, and sometimes individuals.

Public spaces have been rehabilitated into edible gardens. Roofs have been converted into cultivation spaces. The city itself has created gardens on the roofs of its buildings. Agroecological initiatives are encouraged. The One Home One Garden program is developed to encourage food production in all households, and agreements are created with different communities (Jayiya, 2020).

Today, agriculture in Durban generates only 1% of GDP, but urban agriculture seems to be increasingly rooted in the city and part of the lives of its inhabitants (Bikombo, 2014). However, monitoring and supporting projects over the long term can sometimes be difficult due to lack of funds and regular mobilisation of beneficiaries and volunteers.





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CLIMATE CHANGE THREATENS TERRITORIAL PRODUCTION CAPACITY

In South Africa, the main expected effects of climate change are increasing temperatures, increased rainfall variability, rising sea levels, and more frequent extreme events such as droughts (WHO, 2016). Climate change will have a negative impact on agricultural productivity, for example due to thermal stress, increased disease incidence, and soil erosion. According to the Department of Agriculture and Rural Development of the KZN province, agricultural production decreased by over 7% in 2019 due to the drought that affected the region as well as the rest of the country. This decline will have a direct impact on the population's food security.

The department thus regularly allocates a budget to assist the farmers particularly affected by droughts (160 million rands in 2019) (SABC, 2019).



Disasters will accelerate in the next 50 years, and it will be much more difficult to have productive agriculture, unless we organise ourselves and work collectively to find solutions. I believe we have the capacity and collective power to find solutions."

Walter Coughlan, Director and Co-founder of the Fair Food Company

ENSURING THE FOOD RESILIENCE OF THE TERRITORY - LOCAL SOLUTIONS

Developing urban agriculture and protecting agricultural land

ETHEKWINI MUNICIPALITY - PROTECTING LAND FOR AGRICULTURE

The eThekweni municipality, through its urban planning framework called "Spatial Distribution Framework" and its land management policy, has blocked the use of certain lands for agriculture. The community is thus seeking to protect the agricultural use of its land. However, this requires negotiating with traditional chiefs, owners of the land.

GREEN CAMP GALLERY - URBAN AGRICULTURE

Green Camp Gallery is a place located on Umbilo Road with a triple objectives: biodiversity and urban agriculture hub, museum and art gallery. By bringing nature and agriculture back to the city, Green Camp aims to reconnect rural and urban areas, and raise awareness about food production in the city. Their urban farm is based on the principles of recycling and reusing original cultivation tools and supports. In order to raise awareness about sustainable agriculture, workshops on organic farming and gardening are organised, but the NGO also integrates themes of anti-racism and cultural integration. The NGO now delivers, once a week, baskets of organic vegetables and other products from local farmers. The activities offered bring together residents and visitors, forming now a real community of which Green Camp Gallery is the landmark.

ETHEKWINI MUNICIPALITY - ROOFTOP GARDENS ON MUNICIPAL BUILDING

In 2010, the eThekweni municipality decided to turn the roof of one of its offices in the city centre into an agroecological and educational urban garden. The objective of the garden is to show that it is possible to produce in large quantities in urban spaces, and that this process creates oases of freshness, places of relaxation in the city centre, and fresh food for direct consumption. This project is part of the city's green strategy and support for local agriculture. The 1300 m² garden consists of 3 large areas: succulents and aromatic herbs; tunnels for vegetable production; and a space made of benches and tables for festive events and visitor reception. The garden welcomes many groups of children to discover and initiate them to agriculture. All vegetables produced on the roof are distributed to retirement homes in the city centre and to food banks managed by the municipality. The implementation of this garden has allowed the creation of 6 full-time jobs and a municipal service dedicated to the garden.

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PROVINCE OF KZN - ONE HOME ONE GARDEN

In the spring of 2020, the government of KwaZulu-Natal launched the “One home one garden” program aimed at improving the province's food resilience while helping those most affected by Covid-19. The program aims to encourage vulnerable people who have been most affected by the health crisis to cultivate a small garden. Through the distribution of kits containing seeds, compost, and gardening equipment, as well as the creation of gardens, the program provides families with the means to grow their own food. This not only enables them to meet part of their food needs but also to sell their surplus, thus creating a source of income (Times Live, 2020: KwaZulu-Natal province, 2020).

ENACTUS UKZN - URBAN VEGETABLE BAGS

The Enactus network at the University of KwaZulu-Natal (UKZN) brings together students, professors, and economic actors with the aim of encouraging social entrepreneurship among young people and supporting local communities. Students in the Enactus UKZN network have responded to food insecurity and socio-economic challenges faced by local communities by implementing sustainable agricultural projects for both rural and urban communities. Their project "SackSpace" is an innovative system of vegetable bags that allows for vertical cultivation of edible plants in very limited spaces, with reduced labour and water usage (nearly 60% less water compared to conventional agriculture). This project enables urban residents to grow plants to meet their own food needs and generated income by selling products. A truly ecological, social, and solidarity initiative, “Sack Space” provides hope to poor and vulnerable populations.

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SLOW FOOD - SHARED GARDENS

Slow Food is a network and foundation committed to creating shared gardens throughout the African continent. The Slow Food Gardens were established as part of the “10,000 gardens in Africa” project created in 2010 by the Slow Food Foundation. As of 2021, there were already 3,420 gardens spread throughout Africa, including 62 in South Africa.

As part of its shared garden program in South Africa, Slow Food plays the role of an incubator to bring about shared gardens designed by and for communities. Slow Food finances, coordinates, and supports garden projects. Most of the gardens are managed by communities and serve to feed residents as well as generate additional income. $\frac{1}{3}$ of the gardens are also school gardens, with a primary educational goal in addition to their function of producing fresh and healthy products. The creation of shared gardens not only raises awareness among younger generations about the importance of a diversified diet with fresh and local products, but also establishes a network of people committed to valuing their land and culture to engage in a transition towards greater sustainability.

THE VALLEY TRUST - SUPPORTING THE DEVELOPMENT OF RURAL COMMUNITIES

The Valley Trust (TVT) is a non-governmental organisation located in KwaZulu-Natal, which was created in the 1950s by a doctor, Halley Scott, to help the many people suffering from tuberculosis in rural areas. TVT's objective is to ensure the good health, and as a result the food security, of the inhabitants of rural communities in the region. The NGO has a holistic vision of health that leads it to take into account in its actions, nutrition, sustainable agriculture, water preservation, income, etc. It helps local communities by building infrastructure such as roads, sport fields, gardens, running water, and health centres to make healthcare and healthy food accessible to people in remote villages.

TVT has, for instance, created a training centre for health, social, agricultural, and other professions, to provide the means for people to acquire the knowledge and expertise necessary for their professional advancement. TVT has also developed programs targeted towards young people who are subject to nutritional problems, leading to growth retardation, and who are not sufficiently stimulated cognitively, particularly due to their lack of access to digital tools. Through its actions and programs, TVT seeks to improve their development and give them access to more job opportunities.

ARE THE SOLUTIONS UP TO THE CHALLENGES ?

MALNUTRITION AND URBANISATION THREATEN THE FOOD SECURITY OF THE POPULATION

South Africa's entry into globalisation in the 1990s marked a genuine change in the eating habits of South Africans. New food trends such as overconsumption of processed foods, eating out, or snacking throughout the day have resulted in micronutrient deficiencies and significant weight gain in the population. While the country's main challenge was previously undernutrition, South Africa must now also face that of overnutrition.

Overweight and obesity, which affect more than 50% of the population, as well as nutritional deficiencies, lead to a deterioration in the health of residents who are more exposed to the risks of non-communicable diseases (diabetes, hypertension, cardiovascular diseases, etc.). The nutritional status of the population is alarming and continues to worsen, particularly in children who experience significant growth retardation. Although South Africa is one of the most unequal countries in the world, malnutrition affects all socio-economic strata of the country.

Processed, prepared, and supermarket-sourced foods are more culturally attractive and accessible than fresh and local products. Solving malnutrition requires raising awareness among the population about healthy and sustainable eating, but also giving everyone the means to obtain sufficient quantities of quality products. Some initiatives are working in this direction, but the priority remains access to sufficient food for all. Popular soup kitchens or nutrition programs in school canteens aim primarily to address emergencies and do not always consider quality.

While national public policies remain largely inadequate, public authorities in the metropolis of Durban are mobilising in favour of urban agriculture to improve the food security of residents. Urban agriculture also makes it possible to raise awareness among residents about consuming fresh and local products, and to reduce poverty by providing some food and income to households selling part of their harvest. Reintroducing agriculture in the city and protecting agricultural land is the challenge of a metropolis that continues to expand and whose population is increasing exponentially (+ 6.8 % between 2007 and 2016). The municipality sets an example by transforming the roofs of its buildings into agroecological and educational gardens. Citizen movements such as the ENACTUS student network also encourage self-food production, using alternative techniques such as growing plants in bags to allow residents of informal settlements to grow their own food despite the lack of land.



INSPIRATION FROM ELSEWHERE

CITY OF NANTES - SUPPORT FOR SHARED GARDENS AND STREET GARDENER CHARTER

Nantes, France

To meet the high demand from residents, the City of Nantes has created 200 additional plots for shared gardens between 2014 and 2020. Managed by around fifty associations with the support of municipal gardeners from the Department of Green Spaces and Environment, the collective gardens are open to all Nantes residents provided that they have less than 100m² of garden space. The policy continues in 2021; every Nantes resident wishing to cultivate a garden can apply on the metropolitan website. To regulate the functioning of shared gardens that are developed on public spaces made available to residents, the local authorities in the Nantes area have put in place the "Charte du jardinier de rue" (Street Gardener Charter). This charter commits gardeners to choose plants adapted to the local environment and to adopt environmentally friendly practices: prohibition of mineral fertilisers, manual weeding, choice of plants adapted to soil and climate, and economical watering practices for example.

SCOPÉLI, THE COOPERATIVE SUPERMARKET

Nantes, France

Scopéli is a cooperative supermarket project born in the spring of 2019, in Nantes, and financed and led by its members. The participation of its members, that is, the members and co-organisers of the supermarket, allows them to offer quality food at reduced prices, prioritising local producers, bulk products, short circuits and seasonal products. Members are stakeholders in governance and decision-making bodies. Depending on the time they have, they invest in the project in different ways.

TOWARDS A NETWORK OF SHARED PURCHASES

France

The VRAC association promotes the development of purchasing groups for quality products (organic, local, and ecological), especially in disadvantaged neighbourhoods of the Bordeaux metropolis. The VRAC project aims to fight against consumption inequalities. It allows low-income households access to organic and local products at affordable prices. It also fights against isolation by strongly involving residents in the association's functioning and participates in the fight against malnutrition-related illnesses. VRAC makes no profit on products, buys in bulk, limits intermediaries and unnecessary packaging in order to offer healthy and responsible products at affordable prices.

SMERRA & CROUS- COOKING COMPETITION TO PROMOTE HEALTHY AND SUSTAINABLE EATING

Grenoble, Lyon, Clermont-Ferrand, Chambéry, France

During the month of healthy eating, SMERRA (student health insurance) organises, in partnership with CROUS (university restaurant), a cooking competition that allows students to showcase their culinary skills, with the objective of raising awareness about healthy eating. Students submit their balanced and low-cost recipe on the SMERRA website. The jury, made up of professionals in public health and catering, as well as some SMERRA staff, selects 4 finalists per city. They compete in a cooking challenge in a university restaurant or residence hall.

LES PETITES CANTINES

Lyon, France

Les Petites Cantines is a network of neighbourhood canteens, open to all, whose objective is to develop proximity links (intergenerational and multicultural) and to promote sustainable food through the preparation of a meal. This initiative offers residents and employees of a neighbourhood the opportunity to prepare a meal and eat together. Each guest is invited to join the association at a free price in order to enjoy the meals. Some meals are organised around a theme: a country, a product, an anti-waste initiative, etc.

CHILEAN MINISTRY OF HEALTH- LAW ON LABELING AND ADVERTISING OF FOOD PRODUCTS

Chile

In 2016, Chile voted for a new legislation that aims to facilitate the understanding of nutritional contents of processed products, promote nutrition education for young people and control the products that these children have access to. The legislation adopted by the Ministry of Health consists of several components :

1. Labeling of food products that are high in calories, sugars, salt and saturated fats with an octagonal logo on a black background *Étiquetage des produits alimentaires riches en calories, sucres, sel et graisses saturées sous forme de logo octogonal* containing the words "alto en" (high in) followed by "grasas saturadas", "sodio", "azúcares" or "calorías" (saturated fats, sodium, sugars and calories).
2. Control of advertisements targeted at children and young people. Any advertisement containing children's characters and animations is banned if encouraging the commercialisation of products high in sugars, saturated fats, salt and calories.
3. Integration of educational modules on healthy eating and physical activity in schools.
4. Withdrawal from the market of certain products and prohibition of using promotional tools for children in the marketing of products whose composition exceeds established thresholds.

MONTPELLIER MÉDITERRANÉE MÉTROPOLE- SUPPORT FOR THE INSTALLATION OF NEW METROPOLITAN PRODUCERS

Montpellier, France

The metropolis wishes to reclaim currently unused land in order to accompany the installation of new producers. To this end, different tools are being mobilised:

- The creation of authorised agricultural land associations to facilitate the identification and revaluation of unused agricultural land. There are currently two: in the North (Prades-le-Lez, Montferrier-sur-Lez, Clapiers, Jacou) and in the West (Grabels, Juvignac, St Georges d'Orques, Lavérune, Pignan, Murviel-lès-Montpellier) ;
- The mobilisation of irrigable land for agriculture in the West plain ;
- The mobilisation of public agricultural land and support for the installation of new producers. Two projects that have already been launched can be cited as examples : the Viviers and Condamine domains (M3M, 2018).

CITY OF NANTES, CENTRAL CANTEEN

Nantes, France

Thanks to its central canteen, the city of Nantes produces 16,000 meals every day that are delivered to Nantes' 87 school canteens. School catering operates in cold link. Meals are prepared in the central kitchen, then quickly cooled and stored at low temperature. On the day of consumption, the trays are delivered to schools in a refrigerated truck and then reheated in schools for immediate consumption.

Products from organic farming (yogurt, cheese, apple, grated carrots, etc.) are included in the meals. The city also favours short or local supply chains: coarse salt from Guérande, Campbon cheese, Saint-Omer de Blain yogurt, Ancenis farm chicken, etc. The municipality of Nantes aims to increase the proportion of organic and quality-labeled products offered in the canteen. The share of organic products has already increased from 6% to 18% since 2010, but the city aims to reach 50% of quality-labeled products, including 40% organic, by 2022.

AGORAÉ - SOLIDARITY GROCERY STORE FOR STUDENTS

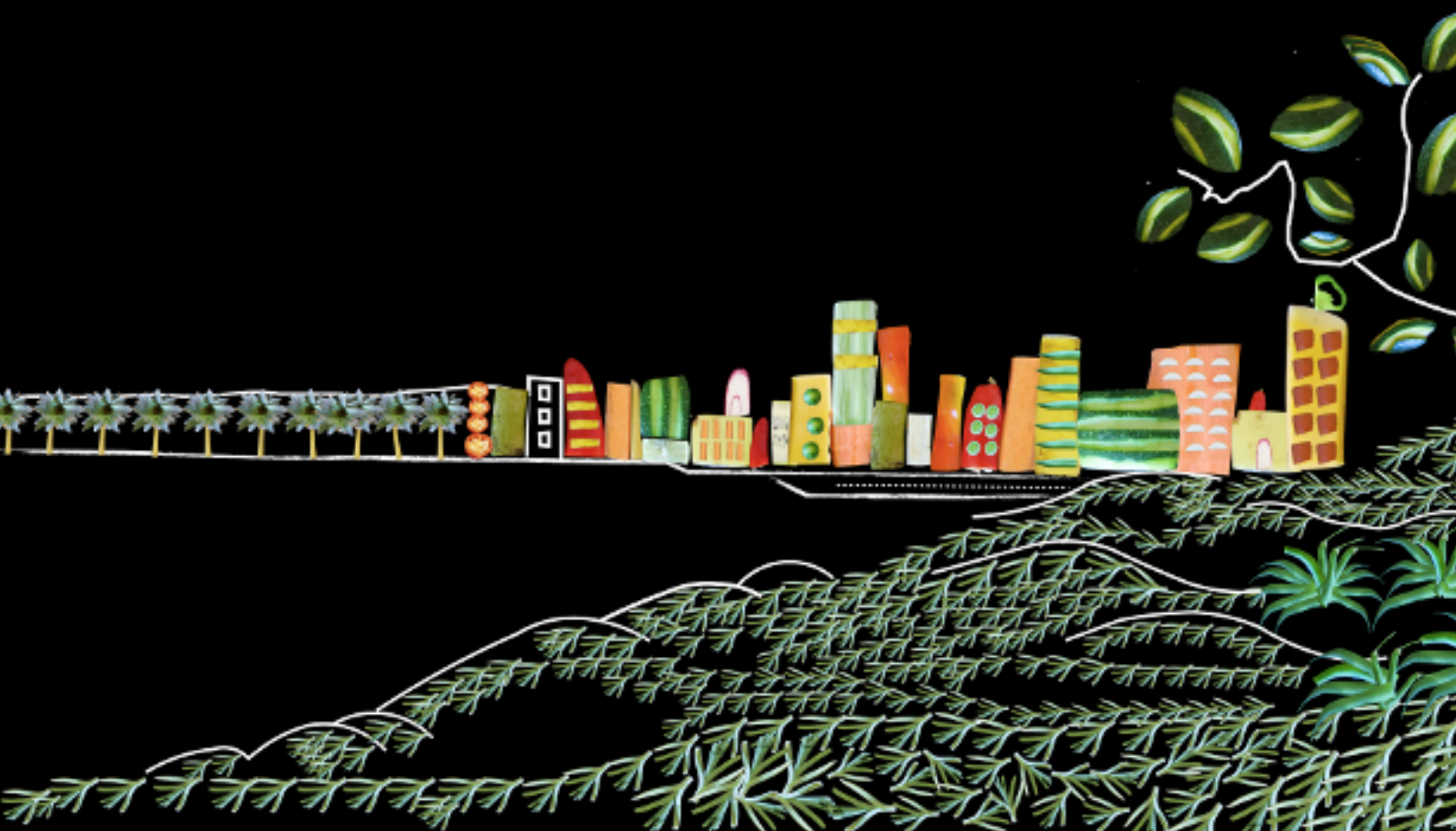
Marseille, Grenoble, Lyon, Nantes, Paris, France

AGORAÉ is a space of exchange and solidarity imagined by and for students. Present in Grenoble since early 2020, AGORAÉ offers students in need (after study and acceptance of applications) access to a grocery store with various and quality products, for a small financial contribution; around 20% of the usual price. The Inter-asso association, which carries the project on the Saint-Martin-d'Hères campus, also offers support to students in their projects. Many activities are proposed: workshops, outings, evenings, sports activities, solidarity breakfasts, etc. This centre is also a friendly place to have lunch, work, relax, read, inform oneself, discuss, meet people, etc.

Chapter II

ENVIRONMENTAL SUSTAINABILITY

Does Durban and its province's food system protect the environment and biodiversity without depleting non-renewable resources and without polluting?



ENVIRONMENTAL IMPACTS OF THE FOOD SYSTEM

A food system is considered environmentally sustainable when the agricultural and food production, transportation, processing, distribution, and consumption processes limit water and air pollution, soil depletion, biodiversity loss, and depletion of aquifers.

The agricultural and food system is currently responsible for 19 to 29% of global greenhouse gas emissions (CGIAR, 2012). It is the largest water consumer and the primary source of water pollution through the runoff of nitrates and pesticides into surface water and infiltration into groundwater (UFC Que Choisir, 2012). While agricultural systems were initially sources of biodiversity, specialisation and the artificialisation of agriculture have contributed to their weakening. The positive externalities of agriculture no longer compensate for the negative ones.

PRODUCTION

MAJOR SOUTH AFRICAN PRODUCTIONS

- 13% of the country's land area consists of arable land. The main annual volume productions include sugarcane (17 million tons), maize (12 million tons), potatoes (2.3 million tons), grapes (1.9 million tons), and wheat (1.7 million tons).
- Maize plays a crucial role in the country's food security, serving as the staple food for nearly 40% of the population (white maize). It is also an essential component of animal feed (yellow maize). Furthermore, maize is a wealth-generating crop for the country, with 14% of the production being exported.
- In the province of KwaZulu-Natal, sugarcane dominates agricultural production with approximately 200,000 hectares dedicated to its cultivation (FAO, CIAT, and AfDB, 2020).

AGRICULTURE, WATER AND CLIMATE

- South Africa, ranked 29th among the driest countries on the planet according to a UNESCO survey (2006), is a water-scarce country with unpredictable and unevenly distributed rainfall.

- Some regions receive less than 100 mm of rainfall per year. The agricultural sector consumes 60% of the country's available water resources, making it the main water consumer. Droughts in the western part of the country have repercussions on agricultural production and threaten food security, particularly for small-scale farmers.
- Climate change exacerbates the country's vulnerability and water stress, making crop yields uncertain and complicating herd management. 90% of vegetable, fruit, and wine production depends on irrigation, and 12% of wheat cultivation area is irrigated (Von Bornmann, 2019, and FAO, CIAT, and AfDB, 2020).

SOIL EROSION AND RESOURCE DEPLETION

- While 80% of South Africa's land is suitable for extensive livestock farming, overgrazing on eroded land leads to soil degradation and reduces carbon storage in the soil. Over 70% of South Africa is affected by soil erosion (Von Bornmann, 2019).

THE ENVIRONMENTAL DEGRADATION CAUSED BY SOUTH AFRICAN CORPORATE AGRICULTURE

The agricultural practices of large specialised farms in the region have significant environmental impacts. Corporate agriculture relies on intensive land cultivation, monocultures, concentrated animal feed, heavy mechanical equipment, large-scale irrigation, petroleum resources, chemicals, seeds, and animal feed. The size of the largest farms, as well as the marketing strategies of agrochemical companies, encourage greater use of chemical, pharmaceutical, and synthetic fertilisers for production (Von Bornmann, 2019).

RARE ORGANIC AGRICULTURE

Certified organic agriculture is booming globally but struggles to establish itself in South Africa. Only 0.04% of the national agricultural land is dedicated to organic farming, according to the International Federation of Organic Movements (IFOAM), amounting to 41,377 hectares and 281 producers (FiBL & IFOAM, 2019).

PROCESSING

The activity of transforming raw products for consumption is referred to as the agri-food sector. The agri-food sector includes businesses of all sizes, from large international corporations to artisans, as well as farmers who process their own production (Ritzenthaler, 2016).

SMALL-SCALE FOOD PROCESSING BUSINESSES

According to estimates, small and medium-sized local enterprises produce 80% of processed foods in Sub-Saharan Africa. In other words, these countries do not directly import processed foods but import raw materials to process them (such as wheat, oil, sugar, etc.).

In recent years, small and medium-sized enterprises specialising in food processing, such as bread or noodle production, have multiplied. With external investments, for example, from Tanzania or Indonesia, industries producing ultra-processed foods and snacks are also emerging (Reardon et al., 2020).

HIGH ENERGY CONSUMPTION

The more a food product undergoes processing stages, the more energy it requires and, consequently, the more greenhouse gas emissions it produces (Les cahiers du développement durable, 2019). Among the energy consumption and greenhouse gas emission sources are the combustion of gas in heating processes (ovens and boilers), the combustion of oil to fuel vehicles and generators, end-of-life product treatment processes, warehouse lighting, and maintaining the cold chain (ADEME, 2011).

DISTRIBUTION

The South African food system, from production to consumption, is also highly energy-intensive, particularly due to the use of coal extracted from the country's mines, which increases the carbon footprint of the food system (Von Bornmann, 2019).

THE GROWTH OF LARGE RETAIL DISTRIBUTION, MORE POLLUTING

- The products available in supermarkets are almost exclusively sourced from conventional agriculture. Some organic brands available in stores also have a negative impact due to their distant origins (Arning et al., 2008).
- A significant portion of the product range offered is imported from other regions and transported via road transport. The majority of retailers source their products from centralised purchasing centers, giving little preference to local sourcing.

- With lighting, air conditioning, and refrigeration, it is estimated that a large food store consumes 800 to 900 kWh per square meter on average (ADEME, 2018).
- Packaging represents 52% of the waste produced by a large supermarket (ADEME, 2018).

RETAIL MARKETS AND STREET VENDORS OFFER FRESH BUT NOT ALWAYS LOCAL PRODUCTS

Many markets are primarily composed of resellers who source their products from wholesale markets, and these products are not always local (and very few are organic). Street vendors, who are prevalent in South Africa, sell fresh products, sometimes directly from local agriculture, but they also sell prepared meals and ultra-processed products that are not locally produced (purchased from the wholesale market).

SHORT SUPPLY CHAINS WITH SEEMINGLY LIMITED IMPACT

While short supply chains bring many positive externalities, their environmental benefits are difficult to evaluate. The reduction in the number of intermediaries does not necessarily mean fewer kilometers traveled (producers traveling for small quantities due to lack of consolidation and consumers traveling to access the products). Nevertheless, the flow of goods generally occurs quickly after production, limiting the need for storage space and thus reducing energy consumption, particularly for street vendors who are numerous in South Africa. Non-standardised products are also better utilised, reducing waste.

CONSUMPTION

RAPID TRANSITION TO DIETS WITH NEGATIVE EXTERNALITIES

Economic growth, coupled with rapid urbanisation, has led to a shift in dietary preferences towards staple foods consisting of refined grains and options for fast food, prepared and over-packaged meals.

These trends have contributed to increased waste and greenhouse gas emissions, as well as the overconsumption of non-renewable natural and energy resources. What we eat has direct repercussions on the food system, from how we grow and process food to how we distribute it. In the case of South African consumer demand, alongside the influences of the neoliberal economic model, it has also encouraged the industrialisation of the food system, with its implications for water, energy, and the environment (Von Bornmann, 2019).

MEAT CONSUMPTION AND PREPARED MEALS AS MAJOR SOURCES OF POLLUTION

While greenhouse gas emissions associated with food may vary from one country to another depending on production methods, they are relatively comparable: meat products are responsible for much higher greenhouse gas emissions than products from horticulture or cereal cultivation (MTES, 2017). Livestock farming is also highly water-intensive. As an indicative figure, it takes 50 to 70 litres of water to produce one kilogram of live weight in beef cattle farming (Massabie et al., 2013).

FOOD WASTE

In South Africa, nearly 34% of all products intended for human consumption are wasted, mostly fruits and vegetables. This corresponds to approximately 210 kg of food per person per year. Nearly 95% of this food waste occurs before consumption, at the production, processing, logistics, and distribution stages (FAO et al., 2020; Von Bornmann, 2019).

EMERGING AGROECOLOGICAL SYSTEMS DESPITE A DOMINANT INTENSIVE AGRICULTURE

KWAZULU-NATAL, AN IMPORTANT AGRICULTURAL REGION

Agriculture is a major component of the economic life in the province of KwaZulu-Natal. It generates 30% of the country's agricultural production, and between 18% and 20% of households in the province engage in agricultural activities (KZN DARD, 2020). KZN is a large agricultural region with 6.5 million hectares of agricultural land, favourable climate, and water resources for agriculture. Among these vast agricultural areas, 82% are suitable for extensive livestock farming, and 18% consist of fertile arable land suitable for crops. Sugarcane plantations along the coastal zone are the backbone of the province's agricultural economy. Along the coastal agricultural belt, there are also plantations of tropical fruits and citrus, while inland agriculture is more focused on livestock, vegetable production, and dairy products (Yes! Media, 2020).

LACK OF AGRICULTURAL DATA IN THE PROVINCE OF KWAZULU-NATAL

KwaZulu-Natal lacks precise and up-to-date data on agriculture within its territory. There are very few recent agricultural statistics available on trends in the region's agriculture. Access to reliable data becomes a key challenge for the government of KwaZulu-Natal in order to implement appropriate policies and strategies.

COMMERCIAL AGRICULTURE RELIANT ON CHEMICAL INPUTS

As a key economic and strategic sector, agriculture in the KwaZulu-Natal region is largely shaped by the hyper-productivist model. With 5% of the country's maize production and approximately 80% of the sugarcane production, which is mainly destined for export, producers have the primary goal of maximizing their yields (KZN DADR, 2020).

“ *In general, but particularly in South Africa, agriculture is dominated by an industrial agricultural system. The agricultural system is characterised by increasingly large-scale farms with extensive mechanisation and the use of inputs such as seeds, fertilisers, and pesticides, as well as a few very large companies that dominate the sector.* **”**

**Vanessa Black, Research and
Advocacy Coordinator at Biowatch**



In order to maintain their productivity levels, producers must pay particular attention to pests, diseases, and weeds that can destroy crops. For large-scale producers, the most direct and straightforward method is to use pesticides.

The use of pesticides remains the most commonly employed method to protect crops because it is the most cost-effective solution for producers. They rely on these inputs, for example, to eradicate *Seriphium Plumosum*, an endemic and pioneering plant that colonises the soil and poses a threat to grasslands in the KwaZulu-Natal region (KZN DARD, 2018).



The production of sugarcane is dominant around Durban. The problem is that this monoculture consumes a significant amount of agricultural land, water, fertilisers, and so on. It is, therefore, a highly intensive type of production."

Delwyn Pilay, Activist for the Slow Food movement



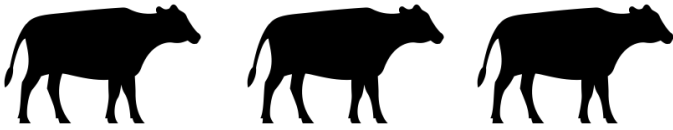
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If I could get rid of pesticides, I would, but unfortunately, we are entrenched in a model that forces us to be highly productive, so we use chemical products."

Jeremy Cole, Sugarcane, Timber, and Macadamia Producer





INTENSIVE LIVESTOCK FARMING IN THE KZN PROVINCE TO MEET THE GROWING DEMAND

Although the agricultural spaces dedicated to livestock farming are vast, the increasing livestock population is causing overgrazing issues, leading to land degradation. KwaZulu-Natal is one of the South African provinces most affected by this phenomenon. In 2017, it was estimated that there were 2.496 billion cattle, 692 million sheep, 712 million goats, and 147 million pigs raised in the KwaZulu-Natal province. According to government statistical data, there are on average 9 to 19 heads of livestock per household in the KwaZulu-Natal region (KZN DARD, 2018). The number of animals ranges from 1,000 for large farms to 50 for small farms with few animals.

New livestock farming trends also contribute to the concentration of animals. Indeed, an increasing number of KwaZulu-Natal cattle farmers feed their animals in feedlots before selling them. Nationwide, it is estimated that 60% of livestock is fattened with grains and other nutritious feed before being sent to processing facilities to maximise their weight and volume (KZN Top Business, 2021).

This high concentration of livestock on the territory and in feedlots inherently accelerates soil erosion and increases the demand for land, water, livestock waste management, and cereal crops (such as maize and soybeans) to supplement the animals' feed. The growing meat demand from the population and the developing industrial model further contribute to increasing animal production and exacerbating environmental impacts with less sustainable methods.



The majority of meat is raised in intensive farms. Most animals are raised in feedlots because there is a high demand for meat from the population, and the population is growing."

Vuyo Jayiya, Deputy Director of Agribusiness Service, eThekweni Municipality

LOCAL AGRICULTURE THREATENS THE WATER RESOURCE

South Africa is a country heavily reliant on rainfall for its agriculture. Climate change, with its accompanying droughts, compromises agriculture, particularly water-dependent crops. To ensure production levels for these crops, farmers resort to irrigation. As a result, 90% of vegetable, fruit, and wine productions depend on irrigation, and 12% of the wheat surface is irrigated. Currently, 1.5 million hectares are irrigated, representing 1.5% of the national agricultural land but contributing to 30% of national harvests. The decreasing precipitation necessitates a more extensive use of irrigation, which in turn causes major environmental problems, such as water wastage, soil acidification, salinisation, destruction of natural ecosystems, and more (Von Bornmann, 2019; FAO, CIAT, & AfDB, 2020).

Durban is currently spared compared to the western part of the country where droughts are more severe. The department responsible for water management in the eThekweni municipality has strengthened greywater recycling, but there is still work to be done to improve the efficiency of irrigation systems and the quality of water, which require costly investments (Jayiya, 2020).

In addition to quantity issues, local agriculture also affects water quality. The pesticides and fertilisers required for intensive monocultures of sugarcane and citrus in the region infiltrate waterways and soils, polluting the local resources and ecosystems.

A DIVERSITY OF INDIGENOUS CROP VARIETIES IN KZN TO PROTECT

The majority of our food comes from commercial, high-yielding agriculture relying on a very small number of plant species. As highlighted in a recent FAO report, out of the approximately 6,000 plant species cultivated for food purposes, less than thirty provide 90% of the consumed calories, particularly the cereal trio of wheat/rice/maize (FAO, 2019). The homogenisation of cultivated varieties leads to a loss of agro-biodiversity and poses risks in the face of climate change because the currently cultivated highly productive and genetically modified varieties are less resistant to pests, diseases, weeds, and climatic fluctuations.

However, Indigenous varieties in South Africa are still used by 60% of households according to a survey conducted in 2013. They represent a rich diversity and require more sustainable cultivation methods as they are less reliant on inputs. The most well-known are millet, sorghum, and amaranth. The people of KwaZulu-Natal particularly use "cowpeas" (a legume), peanuts, African melon, pumpkin, and squash (Bikombo, 2014).

Despite their nutritional and economic value, Indigenous plant varieties are primarily cultivated by small-scale farmers and informally traded within communities.

The agricultural sector consumes 60% of the country's available water resources, making it the main water consumer (FAO, CIAT, and AfDB, 2020).

The problem is that knowledge about Indigenous and traditional plants is being lost, leading to a decrease in their consumption. However, the recognition of their role in adapting to climate change and ensuring food security in the country is leading to increased attention from public and private stakeholders.



We need a new approach to the food system that promotes seed and production diversity, the production of staple and local products, and encourages diverse food cultures and the return of traditional foods."

Vanessa Black, Research and Advocacy Coordinator at Biowatch

URBAN AGRICULTURE IN DURBAN HAS A LOWER ENVIRONMENTAL IMPACT

Farmers in Durban use fewer chemical products compared to other regions of the country, as the peri-urban area is known for its cattle farming, which provides a source of organic fertilisers. Therefore, the majority of producers have access to low-cost organic materials of animal origin to fertilize their crops. However, the use of chemical products such as pesticides, herbicides, and fungicides has increased as it is the most cost-effective method in terms of cost-benefit to protect crops, which are becoming less resilient. Nevertheless, the high cost of phytosanitary products limits their use by small-scale farmers. A survey conducted in 2009 revealed that only 30% of urban and peri-urban farmers in Durban used pesticides (Shackleton et al., 2009).

CERTIFIED ORGANIC FARMING REMAINS A MINORITY DUE TO LIMITED MARKET DEMAND

Certified organic farming is growing worldwide but struggles to establish itself in South Africa. According to IFOAM, the International Federation of Organic Agriculture Movements, South Africa has 41,377 hectares of organic farmland, accounting for 0.04% of the national agricultural land. Organic agriculture involves only 281 producers (FiBL, and IFOAM, 2019). However, the country relies heavily on small-scale producers and subsistence farming, which generally follow environmentally-friendly practices without the use of chemical products. This situation is due to the certification system for organic agriculture.

The definition of organic agriculture in South Africa is not associated with a common certification system, which makes the concept confusing and sometimes misunderstood by the South African population. Organic agriculture is understood as a production system that maintains soil health, ecosystems, and populations. It is based on ecological processes, biodiversity, and adaptation to local conditions rather than the use of inputs, as is the case with conventional systems. The term

"organic" in South Africa is not limited to certified products, which leads to further confusion. Only a small portion of organic production is certified, meaning that products meet the determined standards of national organic criteria (SASO, 2019).

As a result, many farmers practice organic agriculture in practice but are not certified. These producers use very few or no pesticides and chemical fertilisers, which are too expensive. They mainly sell their produce in local markets but do not specifically label them as organic.



We would love to transition to organic agriculture, but certification is expensive, and the organic market is still too limited."

Walter Coughlan, Director and Co-founder of the Fair Food Company

South Africa has 41,377 hectares of organic farmland, accounting for 0.04% of the national agricultural land. Organic agriculture involves only 281 producers (FiBL & IFOAM, 2019).

One of the challenges of organic production is the lack of structured markets and low demand. Organic supply chains are underdeveloped, but the organic market does exist. It has been developed by a few pioneering producers who ventured into organic production and obtained certification to enhance its value. Today, organic products constitute a niche market with potential, driven by the growing interest of the middle class in healthy and local food (Black, 2020).

Organic vegetable production projects are also emerging in the eThekweni municipality, notably with the support of the University of KwaZulu-Natal's food security program, as was the case in the Umbumdlu area in the early 2000s. However, overall, organic agriculture is still very limited both at the local level and nationally.

FOCUS ON ORGANIC CERTIFICATION

South Africa does not have a national certification system. Certification is based on international criteria, specifically those of the International Federation of Organic Agriculture Movements (IFOAM), which governs the organic agriculture sector globally, and third-party organisations, often international companies. Official organic certification requires undergoing a procedure with an accredited certification body such as SGS or CERES. The certifying body audits the producer to assess their practices and their compliance with organic agriculture standards and norms. If everything is in compliance, the producer receives certification associated with a valid label for one year. This certification is particularly necessary for long supply chains and exports (SAOSO, 2018). However, this market is accessible only to productions with significant volumes and high-added value. Consequently, small-scale producers are excluded from this niche market of organic exports (Black, 2020).

In addition to this option, small-scale producers can use a Participatory Guarantee System (PGS). This self-certification system is collective, established by a group of producers, consumers, and market operators, sometimes assisted by experts, and based on the national criteria of the South African Organic Sector Organization (SAOSO) for defining organic agriculture. Each producer is evaluated annually by the group, without intermediaries or external members to the participatory system. In South Africa, this system is overseen by the "Participatory Guarantee Systems - South Africa" (PGS-SA), a national organisation governed by voluntary elected members and operating under the auspices of SAOSO. These alternatives still involve very few producers. In 2019, IFOAM identified only four operational PGS, five in development, with a total of 271 producers certified by a PGS (compared to 981 in France) and 371 engaged in the process (FiBL & IFOAM, 2019).

Given this certification model primarily led by the private sector, some advocate for the establishment of organic product regulations directly by the government, government accreditation of private certification bodies, and government monitoring of organic farms in collaboration with the private sector. A legal regulatory framework established by the government could facilitate the better development of organic agriculture in South Africa (Lim Tung, 2016).

NATIONALLY, WEAK AND INADEQUATE GOVERNMENT SUPPORT FOR AGROECOLOGY DEVELOPMENT

The limited development of organic agriculture and agroecological practices, in general, is also attributed to the weak support from the government. While the government recognises the weaknesses of the current food system and has begun to embrace more sustainable alternatives such as agroecology, the implementation of policies and their effects are not materialising on the ground despite the allocated budgets for the transition. This is due to a lack of expertise regarding small-scale producers, their systems, and their needs, particularly those utilising alternative production systems. Furthermore, the fragmentation of the South African agroecological movement restricts the scope of its actions (ACN, 2015). Additionally, government support for industrial agriculture remains predominant (Black, 2020).

The government has started to show interest in implementing an agroecological strategy (presented in 2012), but it remains insignificant. The draft agroecological strategy of the Strategic Plan 2013/2018 received strong criticism from several associations and NGOs, such as Biowatch.

” *Instead of taking bold measures to integrate agroecology as a key approach to rural development, the strategy has turned agroecological agriculture into a niche sector for certain markets, and the government continues to support the agro-industry.”*

Vanessa Black, Research and Advocacy Coordinator at Biowatch

This plan had the merit of highlighting agroecology, but it limited its definition to conservation agriculture, failed to provide sufficient means or regulatory frameworks for implementing solutions, did not address gender issues, and did not question the functioning of the industrial food system, among other things (Alitamit, 2013). The Department of Agriculture, Forestry, and Fisheries (DAFF) claims to have partnered with the FAO to develop a comprehensive agroecology approach for the country's agriculture, but the work appears to still be in progress (DAFF, 2013).

THE EMERGENCE OF AGROECOLOGY IN THE ETHEKWINI METROPOLITAN MUNICIPALITY

The eThekweni municipality has established a dedicated agroecology department that contributes to its local food procurement strategy, particularly through the training of new farmers. Thanks to this policy, the municipality provides a stable market for local producers and ensures local and sustainable food for children.

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CERTAIN PRODUCERS ENGAGE IN MORE SUSTAINABLE CLIMATE CHANGE ADAPTATION STRATEGIES

KwaZulu-Natal is one of the most vulnerable regions in South Africa to the effects of climate change and is ranked poorly in terms of adaptation strategies. In response to this situation, some producers are exploring alternative approaches. Particularly due to the high vulnerability of monocultures to the effects of climate change (such as droughts, pests, and extreme weather), some farmers are moving towards diversifying their productions. As a result, large-scale producers have implemented other economic activities on their farms, such as tourism or outdoor activities. Others have reintroduced livestock alongside their sugarcane plantations, for example. Adapting to climate risks also involves diversifying the cultivated plant varieties. Certain varieties of sugarcane, for instance, are more resistant to drought, pests, and diseases. Lastly, it is important to adopt more sustainable agricultural practices. Some sugarcane producers have abandoned the practice of crop burning, which has devastating effects on the soil, in favor of manual techniques that reduce soil erosion and improve water runoff (Shezi and Ngcoya, 2016).



BIOWATCH

Biowatch is a South African NGO that exposes the ravages of the industrialised food system and advocates for agroecology as an environmentally sustainable alternative that protects and enhances biodiversity, empowers farmers, and promotes food sovereignty - understood as the control by local communities over their food and how it is produced.

Biowatch works with small-scale farmers, primarily women, in five communities in northern KwaZulu-Natal to develop sustainable agroecological practices. Since its inception, household food security has increased; traditional seed varieties have been reintroduced and increasingly adopted by local communities; and land, water, and other natural resources are managed sustainably.

AN AGRI-FOOD INDUSTRY DOMINATED BY THE SUGAR INDUSTRY, A SOURCE OF NEGATIVE EXTERNALITIES

“ *Most processed foods are produced by multinational corporations. In Durban, we have Unilever, which supplies a significant portion of what you find in the food basket, and some of their products are imported. There are also other national companies like Pioneer Foods or Tiger Brands, which are South African processed and packaged food companies that have expanded extensively in the country, throughout the continent, and in some parts of the world.”*

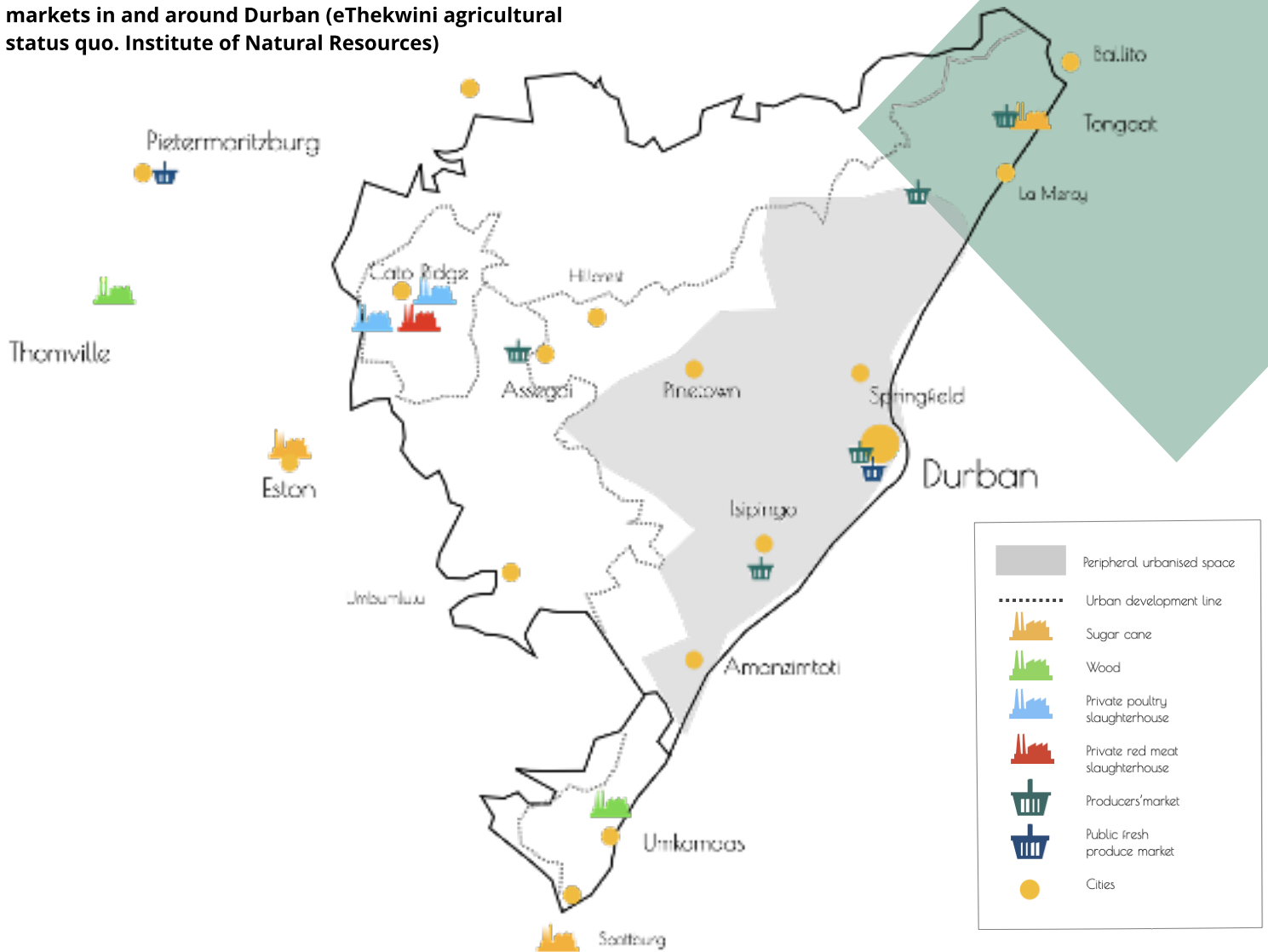
Vuyo Jayiya, Deputy Director of Agribusiness Services, eThekweni Municipality

LARGE AGRI-FOOD COMPANIES DOMINATE THE MARKET

In recent years, small and medium-sized enterprises specialising in food processing, such as bread and noodles, but also increasingly in snacks and ultra-processed foods, have been growing in the country and across the subcontinent. In South Africa, large agri-food companies are already well-established. Among the top 10 agri-food firms producing food and beverages in Sub-Saharan Africa, 8 are South African: Tiger Brands, RCL Foods, Distell Group, Pioneer Foods Group, Tongaat Hulett, AVI, Astral Foods, and Novo Sugar (Reardon et al., 2020).

Some of these agri-food groups have production units located in Durban, such as Unilever, Tongaat Hulett, Coca-Cola, Nestlé, Kerry Food, etc. They produce products such as noodles, flour, mayonnaise, yoghurt, sugary drinks, sliced bread, biscuits, and compotes. These products are primarily packaged in plastics, leading to waste management issues. They source ingredients from across the country as well as internationally and rely on a wide network of suppliers and distributors.

Figure 6: Agricultural processing facilities and farmers' markets in and around Durban (eThekweni agricultural status quo. Institute of Natural Resources)



AGRI-FOOD PROCESSING PRIMARILY FOCUSED ON SUGAR PRODUCTION AND MEAT CUTTING AND PROCESSING

The KwaZulu-Natal region specialises in the sugarcane industry. It has a significant ecosystem dedicated to the processing of raw materials into sugar and other by-products such as syrups, speciality sugars, and a wide variety of by-products including ethanol and biogas. The majority of these industrial products are marketed through long supply chains for both the domestic and international markets.

The territory also has significant dairy processing facilities, including dairies owned by companies such as Nestlé or Clover Industries.

Industrial production of milk, cheese, and yoghurt is carried out for the national and global agri-food markets. There are also small-scale dairy processing units that primarily sell their products locally, in the informal market, which implies a lower environmental impact compared to the industrial methods employed by large corporations.

Durban is also primarily known for its meat production, including poultry, cattle, pigs, and sheep. There are approximately five slaughterhouses in the area. Small-scale slaughterhouses exist, such as Kia Ora for poultry and rabbits, employing about ten people. However, most slaughterhouses are large-scale facilities like Crafcor Abattoir in Cato Ridge (eThekweni municipality, 2004).

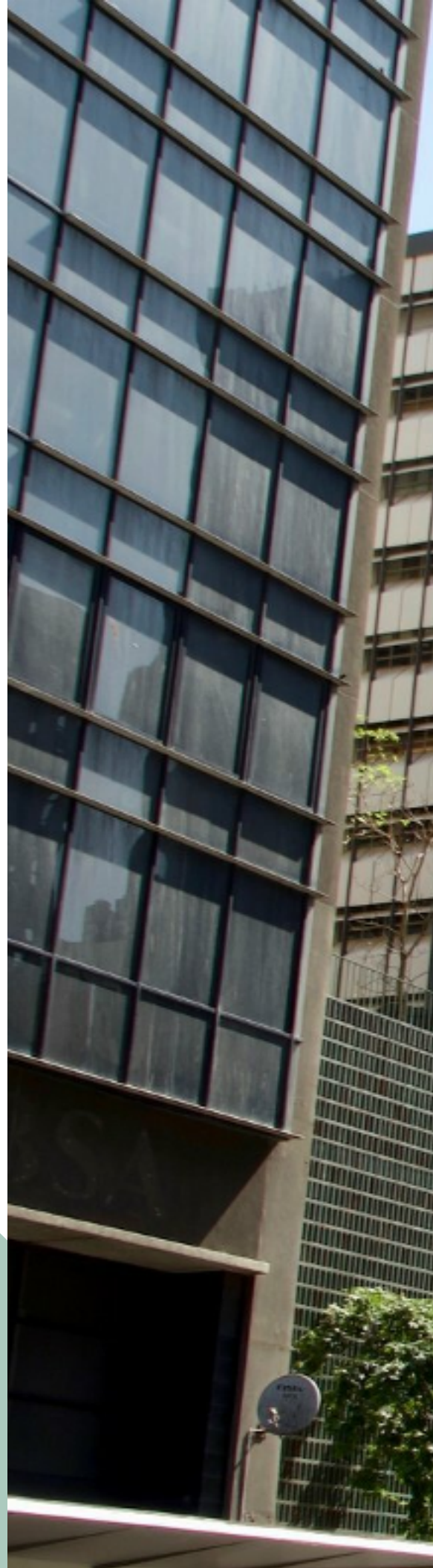
FOOD PROCESSING: A NUMBER OF ENVIRONMENTAL IMPACTS STILL POORLY IDENTIFIED

In practice, the operation of long and industrial processing chains has certain effects on the environment, but these effects are still poorly identified and studied. Agro-industrial processing, for example, is highly resource-intensive (water, energy for machinery, fuel for transportation of raw materials, etc.), and the concentration of these processing units results in significant waste production (packaging for packaging and sales, losses and waste, etc.), as well as polluting emissions into the environment (greenhouse gases, chemicals, etc.).

Studies have shown that the production of ultra-processed foods requires a tremendous amount of energy derived from predominantly non-renewable resources (coal, oil, gas, and electricity). Among processed and ultra-processed foods, those with the highest energy requirements observed include chocolate, sugar, breakfast cereals, instant coffee, beef, smoked and cooked pork, and distilled spirits. Additionally, agro-industrial processes such as breaking down basic food into massive quantities of ingredients to produce different ultra-processed foods are highly energy-demanding (Fradet and Rock, 2020).

Presumably, sugar production, meat production, and dairy production in the Durban region entail negative externalities for the territory. However, agro-industrial companies are often not transparent about the environmental impact of their activities, and very few studies are conducted on this subject, especially at the local level.

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*Anton Lembede
Law*

THE MULTIPLICATION OF ENERGY AND WASTE-INTENSIVE SUPERMARKETS

THE RETAIL SECTOR: A MAJOR SOURCE OF ENVIRONMENTAL IMPACTS IN DURBAN

Supermarkets now account for at least 50% to 60% of food sales in South Africa, with the majority of this growth occurring after 1994 (D'Haese and Van Huylenbroeck, 2005).

Traditionally, the poorest populations relied on what they produced themselves, but now, on average, 40% of their food comes from supermarkets (Deloitte, 2016).

Supermarkets, although more prevalent in urban areas, attract both urban and rural populations (Drysdale et al., 2019). A study conducted by two Belgian researchers showed that the majority of residents in poor rural communities in the Transkei region of the KZN province purchase a significant portion of their food from supermarkets rather than local shops and farmers (D'Haese and Van Huylenbroeck, 2005).

While the rise of supermarkets has improved access to food in terms of price, quantity, and variety (although the nutritional quality is debatable), the environmental effects are significant. This has led to increased consumption of packaged, ultra-processed, and imported products, which have a much higher carbon footprint than fresh, local, and traditional products sold by small producers and local traders. Additionally, this system generates a significant amount of plastic waste and food losses and waste, which are currently underutilised and poorly managed.

A DOMINANT DISTRIBUTION MODEL LEADING TO WASTE

95% of food waste in South Africa occurs during transportation, storage, processing, and distribution. The main wasted or discarded foods include 44% fruits and vegetables, 26% cereals, 15% meat and dairy products, and 13% roots and oils (WWF, 2017). The distribution stage has the most significant impact in terms of waste, accounting for an estimated 20% of food losses. In comparison, in France, distribution-related losses represent 14% of the total. The main reasons highlighted are shelf management, sales forecasting, and a lack of valorisation systems (ADEME, 2016).

Durban's fast-food and coffee shop establishments are predominantly large American chains (KFC, McDonald's, Burger King, Starbucks, Subway, Domino's Pizza, Pizza Hut, etc.), with the exception of Hungry Lion, which is a South African chain and has 17 restaurants in the KZN province (Reardon et al., 2020). Similar to supermarkets, fast-food establishments contribute to waste and food waste.

TRADITIONAL AND INFORMAL STORES HAVE LESSER IMPACT

The numerous small street shops, whether formal or informal, known as "Spaza Shops," play a major role in food distribution in Durban. Their small size limits their environmental impacts as they consume less energy (e.g., no air conditioning) and do not generate significant traffic flows.

However, they sell very few local food products and do not specifically promote local supply chains. Most of their offerings come from agro-industrial food chains, consisting of dry and over-packaged products: wheat flour, cookies, chips, snacks, cakes, noodles, fruit juice, sodas, etc. (Reardon et al., 2020).

Street food vendors offer fresher and cooked food, but they still rely on disposable plastic boxes and bags for packaging. Bulk sales at market stalls, particularly for fruits and vegetables, are indeed more environmentally sustainable, provided that consumers use their own reusable packaging.

In contrast to fast food chains and supermarkets, street vendors generate minimal waste. Firstly, the quantities they handle are much smaller than those of large chains. Secondly, as Richard Dobson, co-founder of the Asiye eTafuleni association, emphasizes, the fact that meals are prepared based on demand results in minimal waste because vendors "cannot afford" to waste food (Dobson, 2020).

ORGANIC PRODUCTS ARE MAINLY AVAILABLE IN SUPERMARKETS AND OFTEN IMPORTED

The distribution of organic products in South Africa is still relatively limited (FiBL & IFOAM, 2019). While organic products are available in most small, medium, and large South African stores, a significant portion is imported.

However, data on the distribution of organic products in the country, particularly in the KwaZulu-Natal province, is challenging to identify. It is particularly difficult to estimate the number of specialised organic stores. In the vicinity of Durban, the presence of Wellness Warehouse stores is noteworthy. Wellness Warehouse is a chain established in 2007 and operates 34 stores nationwide. They offer certified organic products sourced from small-scale producers. Supermarkets like Woolworths and Pick n Pay also offer organic products, as do other small grocery stores. Furthermore, markets for organic and local products are emerging, primarily in affluent neighbourhoods of the metropolis, such as the weekly market at the French Institute or the Shongweni Farmer's Market.



ZOOM - FOOD WASTE IN SOUTH AFRICA

In South Africa, approximately one-third of the country's annual production ends up in the trash (Consumer Goods Council, 2019).

Nearly 34% of all food intended for human consumption is wasted in South Africa, with fruits and vegetables being the main contributors (Von Bornmann, 2019; FAO et al., 2020). Most of the waste occurs before the household consumption stage.

Reducing food waste could contribute to improving food security in the country and also help reduce the carbon footprint of the food system, where wasted food accounts for an average of 3.3 billion tonnes of CO₂ per year. Additionally, food waste represents a loss in terms of economic growth, circular economy, and resources such as money, water, and energy that are needed to dispose of food waste. The eThekweni municipality is home to the country's second-largest township, with an estimated population of nearly 2.5 million people facing food insecurity, struggling to access food, especially healthy options. Despite the significant impact of food waste on the food system and food security, few actions have been taken.

Nevertheless, studies and reports are increasingly highlighting the potential impact that reducing food waste could have, not only in improving the overall food system but also in terms of food security, agricultural economic development, and job creation. For example, preventing post-harvest losses presents a remarkable opportunity to enhance national food security, develop the agricultural economy, and maximize resource efficiency (FAO et al., 2020).

VERY FEW ACTIONS FROM AGRIBUSINESSES AND RETAILERS

The WWF conducted a study among major agri-food industries and retailers in South Africa, and the results indicate that the majority recognise food waste as a significant problem within their companies. 86% of the respondents stated that they set goals and have active policies for food waste reduction. However, the survey also revealed several challenges, including a lack of information within the company due to inadequate data collection, demands from large retailers and consumers for aesthetically pleasing products, and conformity (WWF, 2017). Some companies have committed to better environmental sustainability, such as the South African group Massmart, which has implemented waste reduction and recycling initiatives and redistributes food surpluses to minimise food waste.

ON THE POLITICAL AGENDA, YET FEW BINDING ACTIONS

While the issue of food waste is beginning to appear on the country's political agenda (the United Nations' Sustainable Development Goal aims to reduce food waste by 50% by 2030), few binding actions have been implemented. Voluntary agreements have been reached among various stakeholders (farmers, retailers, and traders), and the government has established incentive programs for food waste reduction, but their effects have been limited (James, 2020). At the level of the eThekweni municipality, very few projects addressing this issue exist, highlighting the disconnect between the set objectives and actual on-the-ground activities.

VOLUNTARY AGREEMENTS TO REDUCE FOOD WASTE

In October 2019, South Africa organised a multi-stakeholder workshop aimed at encouraging collaboration between the government, NGOs, non-profit organizations, and agro-industry to combat food waste. This effort resulted in a voluntary agreement in 2020 with the goal of achieving the Sustainable Development Goals (SDGs) that South Africa committed to, including reducing food waste by half by 2030. This agreement enables action at various levels regarding food waste: mapping sensitive areas in South Africa, implementing a monitoring report for the agreement's signatories, and establishing a South African knowledge hub on food waste. Additionally, in 2020, the government approved a new National Waste Management Strategy 2020, which should better guide the government's decisions and actions in favour of the circular economy (South African Government, 2020).

WASTE SORTING, ABSENT FROM PUBLIC POLICIES

Currently, there is no organised waste sorting system, and the majority of organic waste (food leftovers, etc.) that could be converted into compost or biogas is typically stored in landfill sites. Some isolated initiatives attempt to valorise agri-food waste, particularly in the distribution and consumption stages. The informal sector is also active in collecting unsold items from retailers. Informal workers, known as "biffins" or "waste pickers," collect discarded waste to reuse, recycle, and resell. Some marginal initiatives aim to integrate them into the formal job market by developing equitable relationships that provide a decent income. However, public authorities have not implemented a comprehensive strategy to promote waste sorting and recycling.

LIMITED VALORISATION OF ORGANIC WASTE IN DURBAN

In Durban, a source separation project for plastic and paper waste emerged but failed due to corruption issues that sparked controversy in the media. There are also no significant policies or initiatives promoting composting (James, 2020). While there are some composting initiatives in South Africa, such as Earth Probiotic, or Oricol, there are no active composting projects in Durban.

A LOW SENSITIVITY TO ENVIRONMENTAL ISSUES FROM CONSUMERS

La consommation de viande transformée a augmenté de 45,8 % depuis 1994 (Von Bornmann, 2019).

CONSUMPTION CHOICES THAT PROVE LESS AND LESS SUSTAINABLE

Traditionally, maize has been crucial to the South African economy and food security by providing the most important form of carbohydrates for both human and animal consumption. However, since the 1970s, the consumption of maize has been steadily decreasing in favor of imported, meat, and ultra-processed foods.

In fact, the consumption of chicken, beef, lamb, and pork is on the rise. This trend has environmental repercussions, as animal protein requires much more land and water resources to produce and is also associated with higher greenhouse gas emissions. Similarly, demand for processed foods is increasing, despite their production requiring more energy and water than whole grains, fruits, and vegetables, which are richer in nutritional value (Von Bornmann, 2019).

ORGANIC PRODUCTS, A NICHE MARKET RESERVED FOR AFFLUENT AND INFORMED HOUSEHOLDS

A basket of healthy food can cost up to 65% more than junk food (Von Bornmann, 2019). Few South African consumers can afford to consume healthy, local, organic, and high-quality products (Von Bornmann, 2019). A healthier food offer in terms of nutrition, health, and environment exists, but it is aimed at an informed and financially affluent audience.

Furthermore, Durban consumers are not sufficiently aware of the importance of buying organic and local products for the environment and society (Rodriguez, 2020).



We do not have enough markets or local producer markets in Durban. People do not understand the benefits of organic farming and its pesticide-free and chemical-free cultivation. We still have a lot of education to do among the population."

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)

SIGNIFICANT MEAT CONSUMPTION ROOTED IN THE COUNTRY'S CULINARY TRADITIONS BUT CHALLENGED BY INDUSTRIAL MEAT

South Africans generally have a strong affinity for red meat, which is prominently featured in the local culinary culture, as exemplified by the Braai (barbecue). Many iconic dishes in the country are meat-based, such as Boerewors (spiced sausage), Biltong (dried meat), Pap (maize porridge), Chakalaka (spicy vegetable relish), Potjiekos (meat stew), Vetkoek (filled pastry), Bunny Chow (curry and meat sandwich), and more.

In the province of KwaZulu-Natal, there is a significant network involved in meat production, processing, and distribution. However, with the massive influx of ultra-processed foods, red meat has become less competitive due to the lower prices of industrial meat. Low-income households, who often cannot afford high-quality meat, opt for more affordable industrial meat (Jaiyiya, 2020). The local gastronomy and culinary identity are so heavily based on meat-centred meals that it becomes challenging to make vegetarian meals desirable, for instance, in canteens (Worth, 2020). Nevertheless, vegetarian options are slowly gaining traction in the restaurant industry and some businesses.

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SOUTH AFRICANS HOUSEHOLDS ARE RESPONSIBLE FOR 5% OF TOTAL FOOD WASTE

South African consumers tend to limit food waste. With 6% of the population experiencing food insecurity, food waste at the consumer level is a "luxury" reserved for wealthier populations. Since 5% of food waste is attributed to consumption, the issue is less visible to citizens. However, this still amounts to 210 kg of food per person per year. Currently, this issue is not high on the agenda (James, 2020). Awareness and education are needed to reduce consumer food waste, including actions that improve understanding of packaging use, expiration dates, as well as food preparation and storage. The social and environmental responsibility of consumer choices and the food supply is poorly addressed in public policies (WWF, 2017).

“Consumers are less responsible for food waste in South Africa compared to other more developed regions of the world. With a significant portion of the population living on low incomes and struggling to put even a piece of bread on the table for their families at the end of the day, food waste is low on their list of priorities.”

Paul James, Director of LUMEC

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LIMITING THE ENVIRONMENTAL IMPACTS OF THE FOOD SYSTEM

- THE LOCAL SOLUTIONS

Raising awareness and training farmers in practices that are more respectful of resources and ecosystems

MGUNDENI - A RURAL COMMUNITY COMMITTED TO SUSTAINABLE AGRICULTURE

The rural community of Mgundeni in the KwaZulu-Natal province has implemented an innovative program of sustainable agriculture, strengthening both their ecosystem and economic resilience. With support from the WWF, farmers have adopted agro-ecological practices to manage their herds of sheep, cattle, and horses, preserving their land and preventing overgrazing. In 2009, the Mgundeni community became the first in the country to sign a biodiversity conservation agreement for their land, starting with 124 hectares and expanding to 455 hectares by 2019. In addition to more sustainable farming practices and improved attention to biodiversity, including birds, the community has seen improved economic income. Through the sale of surplus livestock and diversification of activities (such as timber plantation for sale), they no longer rely on social assistance. Water quality has also improved as residents and livestock now reside further away from water sources. The community's commitment and partnerships with associations and universities make it a shining example of sustainable agriculture and resilience.

ETHEKWINI MUNICIPALITY - TRAINING FARMERS IN AGROECOLOGY

The agroecology unit of the municipality is dedicated to local agriculture and strengthening ecological practices for a more sustainable food system. Within the metropolis, the service supports nearly 426 small-scale farmers who mainly cultivate in community gardens of 1 hectare, 2 or 3 hectares maximum. Within the 7 agri-hubs of the community, technicians accompany the producers and encourage them to adopt practices based on permaculture. The municipality thus encourages small-scale producers to have practices that are more respectful of ecosystems but also that represent greater independence from the agro-industrial system.

BIOMIMICRY SA - A TRAINING AND PROMOTION CENTER FOR REGENERATIVE AGRICULTURE

Drawing inspiration from nature to make our lifestyles and ecosystems more resilient is what Biomimicry SA proposes through the principles of biomimicry. The Biomimicry Center for Regenerative Living, such as the one in the KwaZulu-Natal province, is designed as a living laboratory for biomimicry. Through a multidisciplinary approach, the aim is to invent resilient communities in the fields of agriculture, housing, health, and education. These centres offer numerous training programs, conferences, and workshops for all audiences to acquire the foundations of biomimicry and collectively experiment with these new approaches. The principles of regenerative agriculture are specifically taught through immersive stays on permaculture farms. Through these initiatives, Biomimicry SA seeks to demonstrate that innovative solutions to current environmental, social, and economic challenges can be found in nature.

Facilitating the marketing of healthy and ecological products

THE VEG BOX COMPANY - DELIVERY OF LOCAL AND SUSTAINABLE BASKETS

The Veg Box Company is an online platform for ordering local food products that offers home delivery of baskets containing fresh produce such as vegetables, meat, dairy products, eggs, etc. Some of these products come directly from Firle Farm, located 140 km from Durban, and are grown without chemicals, following the rhythm of the seasons. The other products come from local farms, ensuring traceability for better quality and support for local farmers. The website provides recipe suggestions to inspire incorporating seasonal vegetables into daily meals. The company delivers in the KZN province, primarily in the Pietermaritzburg area northwest of Durban.

SHONGWENI FARMER'S MARKET - A SMALL ORGANIC MARKET

Shongweni Farmer's Market is a small Sunday market located on the outskirts of Durban that emerged about twenty years ago and offers a selection of local and organic products. It is primarily a friendly place that brings people together around organic agriculture and food. The market offers fruits, vegetables, local speciality products, as well as culinary specialities from around the world (falafel, baklava, pastries, cheeses, etc.) and tools and techniques for cultivating a small garden. It is particularly popular among affluent families who come to enjoy breakfast and take a stroll.



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MORNING TRADE MARKET - THE WEEKLY MARKET AT THE FRENCH INSTITUTE

The Morning Trade Market is a Sunday market located in an affluent neighbourhood in Durban that showcases local producers and organic products. It features about ten stalls offering items such as local organic fruits and vegetables from Green Camp Gallery, as well as processed products from the women's collective WAVE. It is a friendly place where visitors can enjoy food and spend their Sunday morning.



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WOOLWORTHS - A SUPERMARKET COMMITTED TO ENVIRONMENTAL SUSTAINABILITY

Woolworths is a South African grocery store chain that focuses on providing quality products. The brand has a significant presence in Durban and emphasises healthy, local, and organic products, as well as its environmental commitments, particularly in combating food waste. For example, Woolworths partially sources its products from the Fair Food Company in Durban. In 2015, the company partnered with the NGO WWF to conduct a study on its production chain to reduce food waste. The brand aims to reduce packaging and provide clear information on packaging regarding storage and recycling. Woolworths is also involved with charitable organizations, donating food, and supporting small producers by promoting sustainable agriculture. The stores strive to divert 95% of their waste away from landfills, redirecting it to other uses such as composting or energy (WWF, 2017).



PICK N PAY - A SUPERMARKET CONTRIBUTING TO THE PROMOTION OF LOCAL AND ORGANIC OFFERINGS

Pick n Pay is a South African food retail chain that is particularly involved in local sourcing, with approximately 95% of fresh products in its stores coming from South African producers. The brand works in collaboration with the Fair Food Company to source from local producers. It has also implemented several initiatives in association with Feed the Nation to assist individuals facing financial difficulties and has a sustainable approach throughout its supply chain, from sourcing to sales.

Encouraging responsible consumption

NATIONAL SCHOOL NUTRITION PROGRAM - SUSTAINABLE SUPPLY OF SCHOOL CANTEENS IN DURBAN

The eThekweni municipality takes charge of the food supply for schools. Three-year contracts have been established with local farmers to partially supply the school canteens. To enable sourcing from emerging small-scale producers, the municipality has implemented support measures. It provides training adapted to nearly 400 farmers to develop environmentally friendly techniques based on permaculture. The municipality purchases their produce to supply schools with fresh and organic vegetables. Contracts have been signed with women's groups and small businesses for more local sourcing, which contributes to both the social aspect (economic empowerment of local communities) and the environmental aspect (environmentally friendly production methods, short supply chains). A dedicated space at the fresh produce market is used for the collection, cutting, and packaging of fresh products to be distributed to schools.

SLOW FOOD DURBAN - A CITIZEN MOVEMENT FOR SUSTAINABLE FOOD

"Slow Food" is an international movement that emerged in response to fast food and aims to raise awareness among citizens about food, its origin, taste, and how food choices impact the rest of the world (Slow Food, 2020).

A specific focus is placed on seasonal and locally sourced products, as well as the conviviality of meals. In the city of Durban, South Africa, the movement started in July 2017 with the organisation of the "Slow Meat Festival," bringing together 10 local chefs for a culinary competition. After a two-year break, the movement regained momentum with a permaculture workshop held in 2019. This workshop was initiated by two friends who wanted to demonstrate that vegetables could grow anywhere. For this occasion, they transformed an unused space on a municipal swimming pool site into a lush vegetable garden. The movement is still in its early stages but shows great promise, bringing the citizens of Durban together around a common passion for sustainable food.

Combatting food waste and valorising organic waste

MASSMART - A SUPERMARKET COMMITTED TO SUSTAINABLE WASTE MANAGEMENT

Massmart is a South African retail group present in Durban and the KwaZulu-Natal region. The company has taken measures to reduce waste and recycle packaging, especially plastic packaging, and encourages consumers to do the same by providing recycling bins in stores. This approach focuses on three commitments:

- Reduction and recycling of packaging, including plastic bags and cardboard;
- Redistribution of food to food banks like Food Forward;
- Reusing surplus and food losses for animals, including expired products or organic items that can no longer be sold.

The company is also committed to improving the environmental sustainability of its stores through actions such as energy efficiency and optimising equipment. Their efforts extend to water resource savings through rainwater harvesting for cooling systems in factories, among other initiatives.

BAOBAB - A THIRD PLACE FOSTERING ENTREPRENEURSHIP AROUND RECYCLING

Baobab is a third place inaugurated in Durban in December 2020 with the support of The Maker Space Foundation and Veolia. It is a circular economy-based third place with the slogan "Upcycling the future," promoting waste reduction while creating green jobs. Its program, called Zero Waste, aims to raise awareness among citizens about environmental challenges, particularly waste issues such as food waste. Baobab seeks to promote eco-design and waste prevention. By 2023, Baobab's ambition is to train 300 unemployed women and youth in recycling technologies while empowering 30 entrepreneurs. During the same period, the establishment aims to transform 30,000 kg of waste into useful products and reach 30,000 visitors and participants within its programs (Baobab, 2020).

EENACTUS - A VERMICOMPOST PROJECT

In Pietermaritzburg, a team of students from the ENACTUS network is implementing a project to collect food waste from professionals to produce vermicompost, which would then be redistributed to local farmers to fertilise their soils. This Vermicompost project also aims to teach farmers and retailers how to recycle their organic matter to produce compost. The goal is to reduce greenhouse gas emissions, such as CO₂, emitted in landfills by recycling organic waste and turning it into a valuable resource.

This project is led by Enactus UKZN, but employees will be responsible for collecting organic materials from farmers and producing compost. This will promote employment and ensure the sustainability of the initiative.



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PLASTICS PACT SOUTH AFRICA - A PACT FOR PLASTIC REDUCTION AND RECYCLING

Since January 2020, the Plastic Pact seeks to address issues related to the production and consumption of plastics in South Africa, such as the degradation and pollution of natural resources or the increasing volume of waste. This pact brings together key actors in the sector with the aim of transforming the production and consumption of plastics in a sustainable manner, including industry players, retailers, government authorities, non-governmental organisations, and more. It includes a roadmap and collective actions that will be implemented until 2025. The planned actions include the development of a guide to reduce the use of plastic packaging and the design of reusable and recyclable plastic packaging. By addressing multiple sustainable development goals, the pact aims to establish an efficient circular economy that creates jobs and respects the environment. As of the end of 2020, 25 organisations have signed the pact (WWF, 2020).



ARE THE SOLUTIONS UP TO THE CHALLENGES?

IN A SITUATION WHERE AGRICULTURE IS BECOMING INCREASINGLY VULNERABLE, LOCAL AGRICULTURAL POLICIES MUST PROMOTE AGROECOLOGICAL PRACTICES AND RAISE AWARENESS AMONG CONSUMERS ABOUT SUSTAINABLE FOOD

Durban and its surrounding region benefit from favourable agro-climatic conditions that allow it to contribute 30% of the country's agricultural production. Despite diversified agricultural productions (grains, fruits and vegetables, legumes, various livestock, etc.), the majority of the land is cultivated according to an export-oriented corporate model that is not correlated with the population's food needs. This highly specialised agriculture is characterised by the cultivation of sugarcane, which is predominant in the province of KZN. It involves intensive land cultivation and the use of chemical products to increase yields on large-scale farms. The majority of farmers are small-scale producers with diversified and more sustainable practices that respect the environment, but they occupy a very limited portion of the land.

Organic agriculture and agroecology are extremely minority practices and struggle to develop due to the lack of state support aligned with markets and the financial and human resources to transition to a different production system. The government needs to redirect its support from industrial agriculture towards more sustainable production models.

However, KwaZulu-Natal is one of the most vulnerable regions in South Africa to the effects of climate change and is less well-ranked in terms of adaptation strategies.

South African corporate agriculture must evolve towards greater sustainability to adapt to the increasing soil erosion and climate change impacts, particularly the droughts that threaten crops and livestock management. In light of this, some alternative approaches by producers are emerging, and the eThekweni municipality is implementing ambitious programs to promote sustainable agriculture through its agroecology unit.

A minority of agribusinesses control the majority of food processing and distribution in the territory. The transformation of sugar and meat, which are predominant in Durban, has negative environmental externalities. Moreover, the food supply for residents relies mainly on long chains and imports of highly processed and over-packaged foods. The environmental impacts are numerous, including overconsumption of water resources, energy, and packaging, as well as the release of pollutants, waste, and greenhouse gas emissions.

Food waste is one of the main negative externalities of the food system, contributing to its carbon and ecological footprint, with an average of 3.3 billion tons of CO₂ emitted annually nationwide. Private and public initiatives hold hopes but are still far from achieving the country's ambitious international commitments (50% reduction by 2030).

South African consumers are limited by their purchasing power and strongly influenced by the globalised diet, which is rich in meat, processed, and over-packaged products, distancing them from local and traditional food productions. The few alternatives to conventional supply chains, such as CSA deliveries, farmers' markets, or organic and local grocery stores, are still largely anecdotal. Raising consumer awareness about the environmental impacts of their food choices becomes crucial, not only for their health and the environment but also for maintaining local and diversified agriculture.

INSPIRATION FROM ELSEWHERE

NANTES MÉTROPOLE - TRANSFORMING BROWNFIELDS INTO PRODUCTIVE LANDS FOR LOCAL FOOD

Nantes, France

Due to a combination of rising land prices resulting from speculative practices, significant urban sprawl, and strong population growth, agricultural brownfields multiplied in Nantes during the 1980s and 1990s. In 2009, a study conducted by Nantes Métropole and the Chamber of Agriculture identified between 1,500 and 2,000 hectares of potential agricultural land. 133 priority sites were identified on the territory, totalling nearly 1,900 hectares, to be cleared and redeveloped. These territories underwent evaluation through approximately 300 shared meetings involving Nantes Métropole, the Chamber of Agriculture, municipalities, and various local stakeholders, including landowners. This approach yielded impressive results: 450 hectares were cleared and re-cultivated across 51 different sites. Since 2014, this policy has allowed the Métropole to support the clearance of 70 hectares, assist 34 agricultural installations (including 18 new projects in organic farming), and subsidise agricultural development with a total amount of 434,000 euros. This action directly benefited numerous farms that diversified, restructured by welcoming new partners, or maintained their operations thanks to a significant reduction in clearing costs.

NETWORK OF AGROECOLOGICAL INITIATIVES IN MOROCCO - FARMERS' MARKETS

Maroc

The RIAM is a network of stakeholders whose objective is to highlight initiatives and facilitate territorial cooperation to encourage agroecological transition. In collaboration with CIRAD, the RIAM has initiated a process to create farmers' markets, associated with the implementation of an "agroecology" label based on the participatory guarantee system. Through these farmers' markets, the RIAM aims to promote environmentally-friendly agriculture while democratising and raising awareness among consumers about organic approaches. By drastically reducing the number of intermediaries, these markets provide better remuneration for producers. Currently, there are three farmers' markets in Morocco.



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EAT ORGANIC ISÈRE

Grenoble, France

The association of producers called "Mangez Bio Isère" was born out of the desire of organic farmers in Isère to supply organic products directly from their farms to collective catering services. The association brings together around fifty Isère-based producers and processors who deliver their products to schools, central kitchens, recreational centres, and corporate restaurants. Restaurateurs or managers of collective kitchens contact the association to create a menu with the Mangez Bio team based on the available products. The products are then delivered, accompanied by visuals or presentations to showcase the daily meal.

NANTES MÉTROPOLE, "LÉGUMERIE DE LA FÉE AU DUC"

Nantes, France

Nantes Métropole has established a vegetable processing facility within the agricultural high school in the municipality of Saint-Herblain. Since 2015, "L'Atelier de la Fée au Duc" has been employing individuals in professional reintegration programs to wash, peel, and cut local vegetables for school restaurants in the metropolitan area. The vegetable processing facility facilitates the sourcing of raw products from local producers (Lycée général et technologique agricole Jules Rieffel, 2018).



BREAD & SHARING

Marseille, France

The Solidarity Bakery network, Pain et Partage, produces organic bread for charitable associations, businesses, schools, nurseries, collective catering services, solidarity purchasing groups, and more. It is also a social integration project that offers employment contracts to individuals facing difficulties in accessing the job market.

SUPER HALLE D'OULLINS

Lyon, France

The Super Halle is a multifunctional venue located in Oullins, near Lyon, which aims to facilitate access to and promote local products from sustainable agriculture. It consists of 3 spaces:

- A grocery store with organic products, bulk items, local and artisanal products, and short-circuit products from regional producers;
- A restaurant-catering service called "La Fabrique des Producteurs" which offers fresh, seasonal, local, and responsible cuisine;
- An independent store.

The Super Halle is a cooperative that employs 13 people. The venue also occasionally hosts events to raise awareness about sustainable food.

AB EPLUCHE - MUNICIPAL VEGETABLE PROCESSING FACILITY

Grenoble, France

AB Epluche is a company created with the financial support of the European LEADER program in 2012. It is a vegetable processing facility that transforms organic fruits and vegetables from the Isère region for collective catering. The products are peeled, cut, and ready to be cooked. AB Epluche is supported by Pays Voironnais, with the support of Grenoble Alpes Métropole and the Department of Isère.

LA GRANDE BARGE - SUSTAINABLE BAR, RESTAURANT AND GROCERY STORE

Nantes, France

La Grande Barge is a bar-restaurant-grocery store managed by the cooperative "Le Début des Haricots". It is a place for meetings and sharing that aims to promote a sustainable food system. Through a network of local, artisanal, and/or organic producers and suppliers, La Grande Barge offers healthy food to its customers. The bar, located on L'île de Nantes, organizes various events and activities. The cooperative aims to expand the concept of hybrid venues like "La Grande Barge" in the Pays de Loire region, connecting producers, processors, local actors, and consumers. For example, they have launched the "micromarchés" initiative, which consists of mini-markets mainly targeting people in precarious situations, providing them with affordable and commitment-free organic/local food baskets.

In 2017, the SCIC Le Début des Haricots consisted of:

- 31 cooperative members, including 4 employees;
- 4 producers from the network;
- 3 partner associations.

ANNUAL FAMILY POSITIVE NUTRITION CHALLENGE

Nantes, France

The challenge consists of bringing together families who are willing to modify their food practices in a friendly and supportive environment, fostering mutual assistance and motivation. The objective is to transform households' purchasing and consumption habits towards a balanced, organic, local, and seasonal diet without increasing their budget. This challenge is based on an 8-month educational program for households, which are divided into teams. Once the teams are formed, key events are organized with professionals, including a launch evening, cooking classes, shared meals, organic gardening workshops, farm visits, etc. A follow-up of food purchases is also undertaken within each team. Nantes Métropole offers an annual Family Positive Nutrition Challenge, which is facilitated by the association of organic farmers in Loire-Atlantique.

GRENOBLE ALPES MÉTROPOLE - WASTE MASTER PLAN 2020-2030

Grenoble, France

The Waste Master Plan 2020-2030 has set two ambitious goals to be achieved by 2030: to halve the amount of household waste and increase the proportion of recycled waste to two-thirds. To achieve these objectives, waste sorting and collection will be promoted in order to reduce food waste by 3,000 tonnes per year. Two projects are currently underway: the construction of a methanisation plant to produce biogas from food waste, and the implementation of a tax to incentivise waste recycling and composting.

Focus on food waste collection

Grenoble-Alpes Métropole is implementing a separate collection of food waste throughout its territory. To facilitate this, the Métropole provides residents with various guides and explanatory booklets. After successfully piloting organic waste collection in two neighbourhoods of the agglomeration, the Métropole is gradually expanding the program to cover the entire territory. In 2020, 80% of the metropolitan area was covered by food waste collection, with the objective of reaching 100% coverage by 2022. The collected food waste is then composted or used for biogas production (through a plant under construction).

Focus on individual and collective composting support

The Métropole provides individual and collective composters, as well as free vermicomposters, in all 49 municipalities of the territory. Over sixty shared composting sites allow residents of the agglomeration to valorise their food waste. In 2020, 3,900 individual composters were distributed. A practical guide and training sessions are offered to help residents familiarise themselves with these practices.

Chapter III

ECONOMIC SUSTAINABILITY

Does Durban and its province's food system rely on an inclusive economic system that promotes job creation and reduces power inequalities among stakeholders?



THE ECONOMIC AND SOCIAL IMPACTS OF THE FOOD SYSTEM

The local food system involves numerous actors at each stage. It also generates value, creates employment, and has a strong potential for enhancing local knowledge and traditions. An economically and socially sustainable food system can be defined as one that: creates sustainable and non-outsourced jobs, provides favourable working conditions, promotes the development of local businesses, encourages the production of sustainable services or products that reduce environmental footprint, and enables an equitable distribution of value among different actors in the food chain.

EMPLOYMENT AND WEALTH DISTRIBUTION

THE AGRICULTURAL SECTOR IN SOUTH AFRICA

TWO AGRICULTURES COEXIST

- **Commercial and industrial agriculture**
 - Large-scale farms (>100 hectares and even between 2,000 and 10,000 hectares).
 - They produce vegetables, fruits, and cereals for national supply chains and export.
 - Approximately 35,000 farmers supply the majority of the food markets (almost 95%) (Black, 2016).
- **Subsistence agriculture**
 - Very small-scale farms (<20 hectares and even between 0.1 and 3 hectares).
 - They primarily produce vegetables and raise a few animals for personal consumption and their community.
 - Approximately 300,000 farmers supply 5% of the country's food markets (Jayiya, 2020).

A THIRD WAY

- Approximately 200,000 farmers operate between commercial and subsistence agriculture (Black, 2016).
- Since the political reforms of 1994, the government has implemented affirmative action measures to enable small-scale producers, mainly from black communities, to access agri-food markets.
- These entrepreneurial farmers have benefited from government support policies as part of agrarian reform and the development of the black community's economy.



More than 300,000 small-scale farmers supply less than 5% of the country's food needs, while about 30,000 conventional farmers and businesses supply the remaining 95%."

**Vuyo Jayiya, Deputy Director of
Agribusiness Services, eThekweni
Municipality**

SOUTH AFRICAN AGRICULTURAL PRODUCTIONS

- The agricultural sector is very diverse and includes the production of all major cereals (except rice), oilseeds, fruits, sugar, citrus fruits, wine, and most vegetables. Animal production includes cattle, pigs, and sheep, a well-developed dairy industry, as well as the poultry and egg industry (Von Bornmann, 2019).

AGRICULTURE: A KEY SECTOR OF THE SOUTH AFRICAN ECONOMY

- The agriculture, forestry, and fishing sector currently contribute only 2.2% to the national GDP, which amounts to 366 billion US dollars (2018).
- Its contribution to the country's economic development has been declining since 1960 when this sector represented 11% of the GDP, due to the emergence of other sectors.
- Nevertheless, the total value of the sector has multiplied by 6 between 1970 and 2018. Therefore, agriculture in the broad sense is a major economic sector for South Africa, especially when considering the entire value chain: 12% of the GDP (FAO, CIAT, and AfDB, 2020).

A JOB PROVIDING SECTOR

- 8.5 million people depend directly or indirectly on the agricultural sector for their income (FAO, CIAT, and AfDB, 2020).
- The agro-industrial sector provides jobs for 748,113 people. However, the number of workers has decreased compared to the 2000s when there were over 2 million jobs in this sector (Von Bornmann, 2019).
- South Africa has approximately 2.5 million small-scale farming households and 35,000 commercial farms (FAO, CIAT, and AfDB, 2020).

THE AGRI-FOOD SECTOR IN SOUTH AFRICA

A JOB AND WEALTH CREATION SECTOR

- The agro-industrial sector generates jobs in processing, distribution, transportation, and sales.
- On average, in Sub-Saharan Africa, 20% of rural employment and 25% of urban employment are components of the agro-industrial system, such as wholesale and processing (Reardon et al., 2020).
- In South Africa, the agro-industrial sector contributes 12% to the GDP (Von Bornmann, 2019).
- Among the top 10 largest agri-food companies producing food and beverages in Sub-Saharan Africa in 2016, 8 were South African, such as Tongaat Hulett in Durban.

A SECTOR MONOPOLISED BY A FEW POWERFUL COMPANIES

- In recent decades, the agri-food market has been concentrated around a handful of players who now have decisive market power, allowing them to dictate prices, establish their models, and influence public policies in the sector (Von Bornmann, 2019).
- The influence of powerful players in the agri-food industry affects all levels of the food system, particularly small producers and the informal market, weakening shorter, local, and healthier food value chains.

VALUE CHAINS TO THE DETRIMENT OF SMALL LOCA ACTORS

- The agri-food value chains in South Africa tend to favour large producers and actors who control capital and flows (wholesalers, distributors, banks, traders, insurance companies, processors, etc.).
- These value chains exclude small-scale producers, whether they are farmers, artisan-transformers, or traders, who cannot benefit from economies of scale or compete with commercial actors (FAO, CIAT, and AfDB, 2020).

THE FOOD RETAIL SECTOR IN SOUTH AFRICA

SUPERMARKETS DOMINATE THE FOOD DISTRIBUTION SECTOR

- Globalisation has led to what is called the "supermarket revolution," which is particularly pronounced in South Africa.
- Supermarkets now account for 50% to 60% of food product sales, with most of this growth occurring after 1994 (D'Haese and Van Huylbroeck, 2005).
- Supermarkets primarily source directly from farmers or wholesale markets, usually through a wholesaler. The sector is increasingly monopolistic and leaves very little room for small businesses.

**4 supermarket chains control
97% of the retail sector
(Von Bornmann, 2019).**

A FOOD SYSTEM WITH MANY INTERMEDIARIES THAT LEAVES LITTLE ROOM FOR SMALL PRODUCERS

- Small-scale producers often lack the means to market their products themselves. Their products mainly pass through wholesalers and platforms that then redistribute them to buyers.
- Direct sales are very marginal. However, agribusinesses are increasingly developing contract systems with emerging farmers, but this does not necessarily result in better remuneration for them due to their weak bargaining power.

FOOD CONSUMPTION IN SOUTH AFRICA

FOOD SHOPPING TRENDS OF SOUTH AFRICANS

- Food supplies are mainly obtained from grocery stores as well as street vendors.
- The low purchasing power of South Africans limits access to quality products from organic agriculture.
- Food culture has largely shifted towards ultra-processed and imported products, at the expense of traditional food culture.
- There is limited data on food purchasing trends among the South African population. It is difficult to know the evolution of purchasing local products, fair trade products, or purchases from supermarkets or neighbourhood grocery stores.

STRONG ECONOMIC AND SOCIAL INEQUALITIES BETWEEN TWO AGRICULTURAL MODELS

The South African food system is a microcosm of the inequalities and challenges of the global system. Land dispossession under colonialism and apartheid, globalisation, and the deregulation of agriculture after 1994 have contributed to the configuration of a dual agricultural system. On one hand, there is commercial agriculture implemented by a small number of powerful actors that dominate the South African food system. On the other hand, there is extensive subsistence agriculture that is not sufficiently supported, and its contribution to food security in South Africa is underestimated and poorly documented (Black, 2016).

AGRICULTURE, A KEY SECTOR FOR LOCAL ECONOMIC DEVELOPMENT

Agriculture is a strategic economic sector for the province of KwaZulu-Natal, accounting for 30% of national agricultural production. It significantly contributes to the creation of formal and informal employment. The agricultural sector contributes around 4% to the province's GDP. Livestock production is among the most wealth-generating activities, accounting for nearly 50% of the economic value of KZN's agricultural sector (KZN DARD, 2020).

In the province, both large-scale commercial farming and subsistence farming coexist. Some large farms specialize in specific productions such as sugarcane, which is particularly prominent in the region, as well as broiler chickens, milk, eggs, beef, and pork. Their productions are generally aimed at industrial markets and/or exports (EThekweni Municipality, 2004; James, 2020).

Simultaneously, small-scale farmers cultivate fruits and vegetables, including potatoes, strawberries, spinach, eggplants, and cabbages, and raise a few animals such as chickens, goats, and cows. They consume a portion of their production for personal consumption and sell the remaining portion, sometimes directly from their farms to local consumers (Mkhize, 2020). Although the province covers only a small portion of the national agricultural land, a significant number of small-scale farmers in the country are based there (KZN Top Business, 2021). These small farms provide food for nearly 50% of the poor populations in rural areas. Therefore, they play an important role in poverty reduction by providing a source of income and food.

KwaZulu-Natal produces nearly 30% of the national agricultural production (KZN DARD, 2020).

“ At one extreme, we have farmers with 100 hectares or more who cultivate sugarcane, cereals, and soybeans on the best lands, using high-tech equipment, possessing significant capital, and having access to lucrative markets. On the other side, we have very small producers who cultivate as best they can, using tires or even the rooftop of their house, and employing permaculture methods. In between, there is a wide variety of small-scale producers, either individual or grouped in collectives, ranging from small farmers with 1 to 3 hectares to those approaching commercial agriculture with around ten hectares.”

Walter Coughlan, Director and Co-founder of Fair Food Company

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FOCUS ON SUBSISTENCE AGRICULTURE IN DURBAN

Within the eThekweni municipality, small-scale producers own very small plots of land ranging from 0.1 to a maximum of 3 hectares. Most of them cultivate maize, beans, and peanuts. Some produce exotic fruits such as bananas, mangoes, papayas, and citrus fruits. The importance of livestock varies in different areas. When practised, farmers only have a very limited number of animals, ranging from 2 to 8 on average for cows and from 1 to 3 for goats. However, many farmers raise poultry, often in groups of 100 to 300. The majority of what is produced by these small-scale farmers within the metropolitan area is consumed by their households or sold locally. However, some of them sell their maize and dried beans in the markets of Tongaat and Verulam (eThekweni municipality, 2004).

FOCUS ON COMMERCIAL AGRICULTURE IN DURBAN

The primary agricultural production in the metropolitan area is sugarcane, particularly located in the northern part of the municipality along the coast, as well as in the south. Another characteristic agricultural activity in the area is the production of broiler chickens. This market is dominated by the company Rainbow Chicken. Other productions such as pork, eggs, milk, and market gardening are also present in the metropolitan area. However, beef farming is less prevalent and is more developed in the rural areas of the province (eThekweni municipality, 2004).

A NET EXPORTER OF RAW MATERIALS AND A NET IMPORTER OF PROCESSED PRODUCTS

The South African agricultural sector liberalised following the country's democratisation process in 1994. Deregulation of prices, imports, and markets has led the agricultural economy to align with international markets, meeting their standards and norms. Exports play a significant role in the country's agricultural GDP and have earned it a reputation as the breadbasket of the region. In 2013, South Africa was a net exporter of primary agricultural products and a net importer of processed agricultural products.

The country primarily exports its agricultural raw materials to the Netherlands, the United Kingdom, and Zimbabwe, while importing a significant portion of its processed agricultural products from China, Brazil, and Argentina.

The main products exported in terms of volume are maize (1.7 million tonnes), oranges (1.1 million tonnes), and wine (0.5 million tonnes).

In terms of economic value, the top products are wine (\$740 million), oranges (\$630 million), and grapes (\$497 million). The exported citrus fruits alone accounted for approximately 2 million tonnes of products valued at \$1.4 billion in 2017 (average data for the period 2014-2017). Moreover, South Africa is the seventh-largest wine producer in the world. The sector employs around 270,000 people directly or indirectly (FAO, CIAT, and AfDB, 2020). These types of exports pass through Durban, with its international hub, the Dube Trade Port, connecting it to the rest of the country and the world. The port has state-of-the-art logistics capable of handling large volumes.

However, exports are limited to a few large-scale farms in the country that can provide significant volumes at low costs and have the technical, financial, and human resources to access such lucrative markets. This wealth-generating export-oriented agriculture is also encouraged by the government.



SUBSISTENCE AGRICULTURE, WHICH REPRESENTS THE MAJORITY OF AGRICULTURE, YET DOES NOT HAVE SUFFICIENT RESOURCES TO DEVELOP

Most small-scale South African producers engaged in subsistence agriculture live in provinces where the percentage of communal land is high due to the legacy of the apartheid system. Thus, 24.9% of small-scale producers in the country are in the province of KwaZulu-Natal, 20.7% in the Eastern Cape, and 16.3% in the Limpopo province (SA statistics, 2013, cited in Black, 2016). These farmers only have access to 14% of the country's 100 million hectares of agricultural land (Black, 2016).

24.9% of farmers practicing subsistence agriculture live in the KwaZulu-Natal region.

The agriculture practised by small-scale farmers, whether subsistence or intermediate, is highly uncompetitive. Production costs and, consequently, their prices are high compared to large commercial producers, and they lack the means to develop their own comparative advantages (such as irrigation to cultivate year-round and offer off-season products at a higher price) (Jayiya, 2020). Furthermore, small-scale farmers face multiple challenges in terms of:

- Access to capital and credit to invest in projects and grow
- Access to agricultural land
- Access to production tools and agricultural equipment
- Access to water for irrigation to enable year-round production
- Access to markets
- Training and support (eThekweni municipality, 2004)

“ *The major challenge for small-scale producers is to obtain better access to land, financial capital, and technical skills to improve and meet the volume and quality demanded by the municipality for its programs, without reproducing the model of large-scale farms and the heavy use of chemicals that are harmful in the long term for consumers.”*

Vuyo Jayiya, Deputy Director of Agro-Business Services, eThekweni Municipality

ACCESS TO LAND, A SOURCE OF CONFLICT BETWEEN COMMUNITIES

Access to land in South Africa is a historical problem and a sensitive issue. South Africa is supplied by a small group of large producers (30,000), mainly from the white community, who own farms ranging from 2,000 to 10,000 hectares. At the same time, the country's 400,000 small-scale farmers are mostly from the black community and share a few lands of which they are rarely the owners. In Durban, most of the land (about 55% of the community's territory) is under the authority of traditional chiefs who answer to the Zulu King. The use of land is not secure, and local leaders can reclaim the land at any time (Black, 2020, and Mkhize, 2020). This system undermines the status of small-scale farmers as they can be evicted (thus losing their means of livelihood), which can hinder access to financial credit. Additionally, the land they have access to is often fragmented (Jayiya, 2020, and Chamane, 2020).

Furthermore, in some cases, traditional authorities create obstacles to the economic development of small-scale farms by slowing down the implementation of agricultural projects through administrative processes (Rosemary, 2020). Local chiefs sometimes abuse their land ownership rights by leasing the land to developers, to the detriment of small-scale farmers, as it brings them more money (Jayiya, 2020, and Black, 2020). Due to this coexistence with a traditional administrative system, the eThekweni Municipality is limited in the actions it can take to protect agricultural land for the benefit of small-scale farmers..



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“ *Here, access to land is a sensitive issue due to historical reasons. The black South African population owns very little land and must also defend their right to cultivate the allocated lands.”*

Sbusiso Chamane, Director of the Agro-Ecology Service, eThekweni Municipality



FOCUS ON THE HISTORY OF LAND INEQUALITIES IN SOUTH AFRICA

The history of social exclusion and economic inequalities based on race in South Africa still shapes the agricultural sector today. For decades, black population groups were denied land ownership, had limited access to electricity, and were the last to benefit from clean water supply systems. This legacy has deepened poverty.

Today, small-scale farmers, mostly black, are dispossessed of land, excluded and marginalised, unable to access financing or markets (Von Bornmann, 2019).

With the end of apartheid in 1994, the democratic government implemented a program of agricultural land redistribution, through which it purchased 30% of land from large white landowners to redistribute it to black communities.

This policy is somewhat controversial as it challenges the right to property, which is guaranteed by the Constitution, and has led to the expropriation of white farmers who have owned the land for decades. However, it remains essential for the sustainability of the country's agriculture and the equitable reallocation of land. The process of redistribution has been slow to take effect. It is estimated that the white South African community, which represents 9% of the population, owns more than 70% of agricultural land (Aljazeera, 2019). Furthermore, the government has so far been unable to successfully carry out the proper allocation of redistributed land. While some black communities benefiting from the program have been able to engage in subsistence farming, others have eventually leased the land to commercial farmers to generate income (Black, 2016). However, today we observe a nascent form of solidarity between white and black producers in certain areas where mutual assistance is developing (Rodriguez, 2020).

”

I think there are still issues of race and inequality. Small-scale farmers are mostly black, and commercial producers are mostly white. Nevertheless, the situation is evolving, as many white producers are trying to train black producers.”

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)

AGRICULTURAL PROFESSIONS BECOME LESS AND LESS ATTRACTIVE, ACCELERATING RURAL EXODUS

The profession of farmer is currently unattractive. Farmers, especially small-scale producers, face significant challenges and increasing risks due to climate change, which makes them particularly economically vulnerable (Von Bornmann, 2019).

The rapid urbanisation of the country has led young people to disengage from family farms and seek other economically viable career opportunities. This rural exodus and decline in the agricultural population have been largely exacerbated by the difficulties faced by farmers, such as lack of access to means of production, low remuneration, and limited access to markets (Jaiya, 2020). Furthermore, agriculture is mainly seen as a subsistence profession rather than a family business that requires specific expertise in agronomy, finance, marketing, and risk management (FAO, CIAT and AfDB, 2020, and Kwazini, 2020).

In the face of this situation, South African agriculture is aging and struggling to renew itself. The average age of South African farmers is 60. In a context where 55% of young people and 27% of the workforce are unemployed, there is an urgent need to stimulate new agricultural vocations (FAO, CIAT and AfDB, 2020).



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”

Young people are not interested in working in agriculture because they associate it with rural environments, isolation, lack of infrastructure and amenities, and governed by traditions, unlike the city that they see as full of opportunities.”

Zizile Yoliswa Jele, Student and Member of ENACTUS UKZN

The average age of South African farmers is 60.

55% of young people and 27% of the workforce are unemployed.



“

Young people are leaving rural areas because they don't see employment opportunities and wealth creation. We need to show them that wealth exists in rural areas. We need a change in mentality and also support from the government to provide them with the means to make a decent living from agriculture.”

*Rosemary Rodriguez, Coordinator of the women's group
WAVE (Women Adding Value to the Economy)*

THE OLIGOPOLISTIC AGRO-INDUSTRIAL SECTOR OF SUGAR CANE

KWAZULU-NATAL, THE MAIN SUGARCANE-PRODUCING REGION

Sugarcane is the most characteristic crop in the metropolis and province of KwaZulu-Natal. It is the largest agricultural industry in the area, with nearly 22,500 registered producers and approximately 200,000 hectares of land dedicated to sugarcane (FAO, CIAT, and AfDB, 2020).

A SECTOR THAT PROVIDES EMPLOYMENT AND CREATES VALUE

KwaZulu-Natal produces the vast majority of South Africa's sugarcane. Nationally, 2.2 million tons of sugar are produced each season. The sector generates a direct income of over 8 million rand, equivalent to 520,000 US dollars, contributing to about 7% of the national agricultural gross product. Sugarcane is one of the sectors that generates the most foreign exchange for South Africa, as nearly 40% of the production is exported.

In addition to the production of raw and refined sugar, the sector also produces syrups, specialty sugars, and a wide variety of by-products (including ethanol). Sugarcane requires processing plants in the territories and a workforce. This ecosystem creates numerous jobs and economic development, generating 77,000 direct employment opportunities as production and processing workers, as well as 350,000 indirect jobs (Freguin-Gresh et al., 2011).



SUGARCANE, THE ARCHETYPE OF DUALITY IN PRODUCTION MODELS

The sugarcane sector illustrates the coexistence of two very distinct agricultural systems and their inherent inequalities. A small group of sugarcane producers owns large commercial farms and controls the majority of production (82% of volumes), while a multitude of small and medium-sized producers (around 20,000 at the national level) account for approximately 8% of the volumes (Freguin-Gresh et al., 2011).

Sugarcane cultivation represents an intermediate form of agriculture, situated between large-scale commercial agriculture and small-scale subsistence farming. The eThekweni metropolis has around 8,000 small sugarcane producers whose plots range from 0.5 hectares to 1.5 hectares on average. In contrast, in the northern parts of the territory and neighbouring areas of eThekweni, commercial sugarcane farms cover extremely large areas ranging from 2,000 to 10,000 hectares (eThekweni municipality, 2004).



I am the fourth generation on the farm. I have 800 hectares, including around 200 hectares of sugarcane, which produce 2,000 tons of cane per year."

Jeremy Cole, Sugarcane, Timber, and Macadamia Producer



"Only a few industries, which can be counted on one hand, control the sugarcane market. It's like a mafia, to be honest."

Delwyn Pilay, Activist for the Slow Food Movement

THE PROCESSING OF SUGARCANE, THE DOMAIN OF A MINORITY

In addition to production dominated by a few large farmers, the sector is highly concentrated downstream. In 2011, only 6 mills and 14 sugar refineries were recorded in the three production provinces (KwaZulu-Natal, Mpumalanga, and Eastern Cape) (Freguin-Gresh et al., 2011). In the eThekweni metropolis, two major groups control the majority of the sector: Illovo Sugar and Tongaat Hulett's. They are supplied by both large and small producers (eThekweni municipality, 2004).

A SECTOR DEDICATED TO EXPORTS

At least 40% of South Africa's sugarcane production is exported. In the Durban area, approximately 60% of the production is marketed by the Southern African Customs Union (SACU), which primarily exports the raw material to Africa, Asia, and the Middle East (eThekweni municipality, 2004). Durban benefits particularly from significant port infrastructure, allowing it to directly export its agricultural raw materials worldwide.

SOUTH AFRICAN SUGARCANE PRODUCERS VULNERABLE TO GLOBAL MARKETS

The industrial production model of sugarcane relies on intensive agricultural practices and input use (pesticides, fertilisers, plowing, etc.). Producers often specialise in a single type of production, planting monocultures of sugarcane. Their income depends primarily on the sugarcane price, which is highly volatile in international markets. Moreover, South African producers face competition from other countries for market access and price determination. This international competition has led to a decline in the incomes of this sector in recent years. Some producers have diversified their production, like Jeremy Cole, who ventured into macadamia farming to secure and diversify his income. The sugar industry is also seeking diversification, particularly through the production of bioethanol and biogas (Cole, 2020; KZN Top Business, 2021).

THE EMERGENCE OF ALTERNATIVES IN THE INDUSTRIAL TRANSFORMATION

AN INDUSTRIAL AGRI-FOOD SECTOR CREATING WEALTH FOR THE EXTERNAL MARKET

The agro-industrial sector in South Africa has a strong potential for development. Some of the country's largest agri-food firms, such as Unilever, Tongaat Hulett, Coca Cola, Nestlé, Kerry Food, and Anheuser-Busch, are located in Durban. The sector contributes to 3.6% of the country's GDP and employs 3.8% of the population in KwaZulu-Natal (eThekweni municipality, 2004).

This growth of the agro-industry creates jobs and, considering the entire value chain, contributes to 12% of South Africa's GDP. However, this process of industrialisation and market dominance by major players in the food system has a negative impact on small-scale producers and the informal food market. It weakens shorter food value chains and healthier and more diversified rural and local food networks. Increasingly concentrated and consolidated agro-industrial value chains dominate small-scale producers and processors (Von Bornmann, 2019).

For example, although there are significant dairy companies in the area such as Nestlé and Clover Industries Ltd, they do not source milk locally but through wholesalers. In contrast, milk produced by small-scale producers is usually sold in informal markets and to local community members (eThekweni municipality, 2004).

LIMITED ON-FARM PROCESSING TOOLS DUE TO LACK OF RESOURCES AND SKILLS

Alternative models to the dominant agri-food model struggle to emerge, mainly due to the control exerted by large companies in the market, as well as a lack of investment and resources. Currently, when a producer sells their products for processing, it often goes through intermediaries who collect goods from farm to farm and negotiate wholesale prices, which penalises the farmer. While processing would add value, farmers lack the necessary skills and tools.

Furthermore, stringent regulations in the agri-food sector favor large companies that have the necessary resources to comply, to the detriment of small businesses that cannot afford to meet the requirements (Black, 2020; Jayiya, 2020).

“
Most of the companies that provide processed foods are large corporations and multinationals. As a result, you will find few small agri-food processing companies due to stringent regulations, compliance requirements, and the associated costs. Therefore, we are mostly dominated by a corporation of large companies.”

**Vuyo Jayiya, Deputy Director of the Agro-Business Service,
eThekweni Municipality**

THE EMERGENCE OF "CONSCIOUS PROCESSORS" ENHANCING SUBSISTENCE AGRICULTURE PRODUCTS

Alternative models are gradually developing, thanks in part to the support of the eThekweni municipality, which seeks to promote local product transformation and value addition projects. The municipality has established a dedicated service for agriculture and the local food system, led by Deputy Director Vuyo Jayiya. The objective of the eThekweni municipality is to assist producers in developing the technical skills required for establishing processing activities (cleaning, cutting, packaging) to overcome certain barriers (Vuyo Jayiya, 2020).

Private initiatives are also emerging, such as the Fair Food Company, a social enterprise that supports and facilitates market access for small-scale producers. By signing long-term contracts with the Fair Food Company, producers can benefit from support services and, most importantly, processing services (pre-cutting, packaging). Fair Food supplies products to supermarkets, corporate canteens, and school cafeterias. The women's cooperative, WAVE, comprises 200 women who produce and process their own products. Through WAVE, they have access to a support network and receive assistance with product transformation and sales. The cooperative enables easier market access, particularly through the sharing of material resources.

“
By selling raw products, you don't make profits, but by processing them, you add value.”

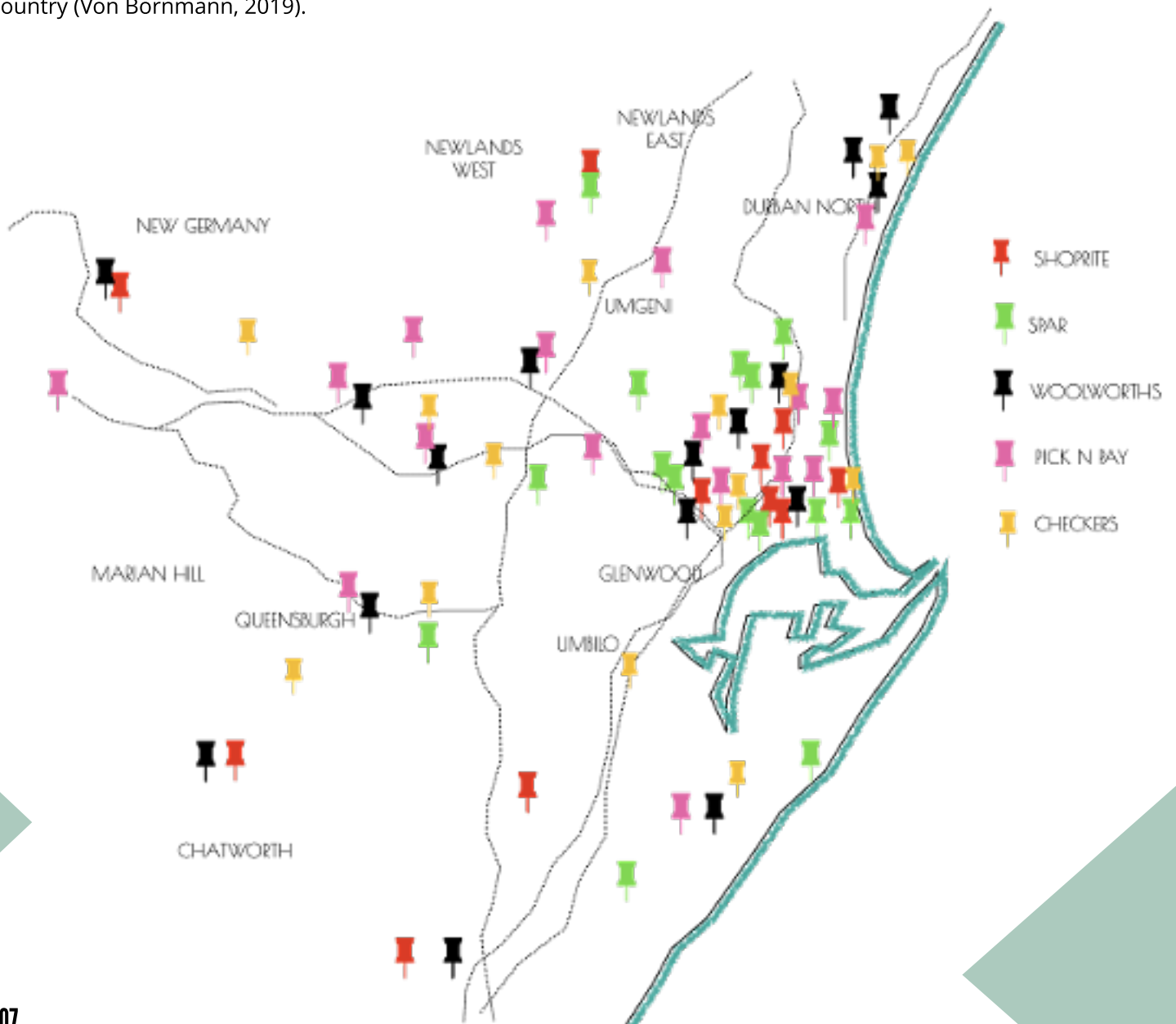
**Sbusiso Chamane, Director of the
Agro-Ecology Service, Municipality
of eThekweni**

A DISTRIBUTION SYSTEM THAT TENDS TO MARGINALISE SMALL-SCALE PRODUCERS

THE RETAIL SECTOR LARGELY DOMINATED BY SUPERMARKETS

Supermarket chains such as Pick n Pay, Shoprite, SPAR, and Woolworths overwhelmingly dominate the retail sector in Durban and throughout the country, with a presence in all provinces and the majority of market share. There are nearly 1,700 supermarkets in the country (Von Bornmann, 2019).

Figure 7: Distribution of supermarkets in the Durban metropolis (Google Maps)



THE WHOLESALE MARKETS MANAGED BY MUNICIPALITIES STILL PLAY A CENTRAL ROLE

While agriculture is almost completely liberalised in South Africa, wholesale markets managed by municipal authorities continue to play a major role by centralising a significant portion of fresh fruits and vegetables destined for processing by the agro-industry or for commercialisation by large distribution chains (Freguin-Gresh et al, 2011). It is through these types of wholesale markets that wholesalers and supermarkets source their products. In total, there are 33 such markets throughout the country (Von Bornmann, 2019).

In Durban, these municipal wholesale markets are known as "Municipal bulk fresh produce markets" (MBFPMS). They are located in the Clairwood neighbourhood in Durban and in Mkondeni in Pietermaritzburg (EThekwinini municipality, 2004). The wholesale markets are a mandatory passage for fresh products entering and exiting the territory, such as vegetables, fruits, dairy products, eggs, and meat (Jayiya, 2020).

Large producers, wholesalers, and resellers who supply the retail sector all converge at these wholesale markets.

In addition to these municipal wholesale markets, the multi-modal platform called "The Dude Tradeport," located 30 kilometers north of Durban, also plays a decisive role in the export and import of agricultural and food products. The Dude Tradeport is both a hub consisting of an airport located near the port and a significant road transport network, as well as a vast commercial and industrial zone that includes an agricultural area. The "Dude AgriZone" is one of the largest integrated supply chains on the continent, which, among other things, prepares agricultural products for domestic and international markets through its perishable food packaging factories (particularly fruits and vegetables) and specialised distribution and logistics companies..

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A POWER IMBALANCE UNFAVORABLE TO SMALL PRODUCERS IN TRADITIONAL DISTRIBUTION CHANNELS

Small producers in the KwaZulu-Natal region, like the rest of the country, are still disadvantaged compared to large producers when it comes to accessing markets. The food system favours commercial agriculture, as these producers provide large volumes and can transport their goods more easily to markets where there is demand (Coughlan, 2020). What interests traders and retailers is the guarantee of consistent supply, and it is the large producers who can meet their requirements, not the small farmers (Chamane, 2020). Factors such as distance, lack of well-maintained road infrastructure, and limited access to vehicles complicate the market access for small-scale producers, who may have to travel over 50 km using public transportation to sell their goods in Durban's markets (Rodriguez, 2020).

“ *Small producers are limited by their capacity to increase volumes, transport them, and negotiate with market actors.”*

Walter Coughlan, Director and Co-founder of the Fair Food Company

Emerging and medium-sized producers are forced to sign contracts with processors or distributors to access markets. These contracts provide them with opportunities for commercialisation through channels that offer better market outlets compared to local markets. Producers, especially the smaller ones, lack the capacity to access infrastructure (storage, transportation, refrigeration, logistics, etc.) like agro-industrial enterprises can, and at a lower cost. Contracts allow farmers to delegate complex logistical problems to these companies.

However, these contracts come with strict specifications and post-harvest procedures to ensure product traceability, especially for export purposes, which leads producers to be under the control of agro-industrial actors. These types of contracts are particularly common in the sugar cane and citrus industries (Freguin-Gresh et al., 2011).

Supermarkets also directly source from producers, such as Pick n Pay, SPAR, and Fruit and Veg City in Durban. Some purchase through contracts with the producer, while others rely on competition and buy based on the best value for quality (EThekweni municipality, 2004). However, these contracts with agro-industrial groups do not necessarily ensure decent remuneration for producers, who have little bargaining power against these market-controlling actors.

“ *I think that retailers are now truly encouraged to support small-scale producers more widely. There are more and more support programs from supermarkets like Pick n Pay because it improves their image, but in reality, there are still few tangible results.”*

Walter Coughlan, Director and Co-founder of the Fair Food Company

INTEGRATION OF SMALL FARMERS' PRODUCTS INTO MORE EQUITABLE DISTRIBUTION CHANNELS

Despite the obstacles and difficulties, small producers still have some means to sell their products in more rewarding and equitable distribution channels.

For example, they have access to municipal farmers' markets, also known as "Municipal bulk fresh produce markets." To facilitate access for small producers, the eThekweni municipality and the South Durban Community Environmental Alliance have created a specific space where they can have their own stands without having to pay fees to agents (Jayiya, 2020).

They can also choose to sell their products at farmers' markets such as "the Assegay Farmer's Market," which is a significant farmers' market located west of the metropolis in the Hillcrest and Peacevale areas. This provides them with an opportunity to sell directly to consumers, unlike municipal markets where consumers are less likely to visit (EThekweni municipality, 2004).

eThekweni has also established Agri-Hubs, which are logistical platforms that collect produce from small farmers and distribute it to other distribution channels such as school cafeterias, soup kitchens, and supermarkets. These platforms facilitate the sale of local products by handling quality control, centralising products, setting prices, and managing logistics (Jayiya, 2020).

However, small producers sell very little to street vendors, who tend to source more from wholesalers (EThekweni municipality, 2004).



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“ *Small producers sell their products directly to wholesalers and distributors in these municipal producer markets. This access to municipal producer markets allows them to compete with commercial producers.”*

Vuyo Jayiya, Deputy Director of the Agribusiness Service, eThekweni Municipality

THE LACK OF COORDINATION AMONG PRODUCERS TO BALANCE POWER DYNAMICS

The agricultural sector in South Africa still bears the scars of segregation, and although markets are now open to all producers, regardless of race, the situation is still unequal. South African farmers from black communities have only had the opportunity to organise themselves into unions, producer associations, or value chains since 1994. Collective organisation allows for better defence of their interests and improved negotiating power, but it takes time to establish. Despite some initiatives, small producers still struggle to organise themselves to have more weight in negotiations with agro-industrial companies and to structure their own value chains (Freguin-Gresh et al., 2011).

STREET VENDING: AN INFORMAL FOOD DISTRIBUTION SECTOR CREATING NUMEROUS JOBS

Street vendors and informal traders continue to play a crucial role in food supply, particularly in rural areas and disadvantaged neighbourhoods. Spaza Shops (informal shops), which are numerous in Durban and throughout South Africa, play a central role in the food security of residents in poor urban areas. At least 66% of street vendors sell food. The informal market is difficult to evaluate, but it is estimated to generate between 46 billion and 176 billion Rands (equivalent to \$3 to 12 billion) (WWF, 2017).



Cooperatives are not doing enough, and I believe they are partly responsible because they talk a lot about the development of emerging producers and rural communities, but very little is actually being done."

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)

The informal trade is fueled by both small-scale producers and processors who do not have access to mainstream distribution channels, as well as larger producers and processors who sell their surpluses and non-conforming products, such as slightly cracked eggs, in these markets (eThekweni municipality, 2004).

However, it plays a minor role in South Africa compared to other countries in Sub-Saharan Africa.

On average, 70% of households source their food from the informal market and street vendors (WWF, 2017).

There are over 35,000 street vendors specialising in food in South Africa (WWF, 2017).

The authorities in Durban acknowledge the role played by the informal economy in the overall economy of the region, particularly in terms of job creation and food supply. In 2011, the eThekweni municipality identified 262,758 jobs in the informal economy, accounting for nearly 24% of the total employment in the region. Half of these jobs were in the commerce sector (eThekweni Municipality, 2012).

The municipality has established a specific department for the informal economy, which is responsible for creating accessible sales spaces for informal producers and traders. The Asiye eTafuleni association also promotes the recognition and valorization of the informal economy, advocating for better recognition of street vendors.



“ 20% of our economy is conducted in informal markets. As a municipality, we play an important role in providing and supporting the informal market.”

Vuyo Jayiya, Deputy Director of the Agribusiness Service, eThekweni Municipality

“ Durban is the first international metropolis to implement a policy in favour of informal producers and traders.”

Richard Dobson, Co-founder of the Asiye eTafuleni association

RELOCATING THE FOOD DISTRIBUTION ALSO REQUIRES ENTHUSIASM FROM CONSUMERS, WHICH HAS BEEN SLOW TO EMERGE

The lack of local sourcing in the region is also due to the low interest of consumers.

In addition to creating local supply, it is also necessary to change the consumption patterns of residents. Building a demand for a local food economy is a major challenge. Alternatives are emerging in this direction, such as the WAVE cooperative, the farmers' market at the French Institute, or the Green Camp to raise consumer awareness about local and sustainable food.

“ In my opinion, consumers are not sufficiently informed about the added value and potential of short and local supply chains for the local economy and the environment.”

Walter Coughlan, Director and Co-founder of the Fair Food Company

BUILDING A FAIR AND TERRITORIAL FOOD ECONOMY

- LOCAL SOLUTIONS

Supporting the establishment of new farmers and promoting small-scale and diversified agricultural activities

ETHEKWINI MUNICIPALITY - A DEDICATED SERVICE FOR LOCAL AGRICULTURE PROMOTION

To support producers in developing the necessary technical skills for establishing transformation activities and to promote small-scale farmers, the metropolis has implemented various policies that are coordinated by a dedicated service. Indeed, the metropolis has a specific department for agriculture and the food system, with Vuyo Jayiya serving as the Deputy Director.

This service has:

- Established Agrihubs throughout the metropolis to collect farmers' produce and act as intermediaries with supermarkets;
- Reserved space for farmers at the "Municipal Bulk Fresh Produce Markets" (MBFPMS);
- Provided technical support for farmers engaged in commercial or subsistence farming;
- Offered financial loans to small and large producers to invest in suitable production tools;
- Encouraged mentorship programs between large-scale and small-scale farmers to promote knowledge transfer and social cohesion.

Promoting short and local marketing channels (without intermediaries)

MUNICIPAL AGRIHUBS - A PLATFORM TO SUPPORT SMALL-SCALE PRODUCERS IN THE METROPOLIS

The eThekweni municipality supports farmers through 7 "Agrihubs" spread across the metropolis. These hubs provide infrastructure (irrigation, fencing, seeds) to farmers and centralise access points to markets. They function as logistics platforms, collecting produce from small-scale farmers and supplying school canteens, soup kitchens, and supermarkets. The program enables farmers to expand their activities, improve food security, and generate income by selling their produce at fair prices. However, in reality, the volumes collected are still insufficient to meet the majority of the territory's school canteen needs.

ETHEKWINI MUNICIPALITY - LOCAL PROCUREMENT FOR SCHOOL CANTEENS

The South African National School Nutrition Program does not specifically encourage local procurement. The majority of the food provided to students, especially staples and proteins, is purchased by schools from local wholesale markets or large national supermarkets. The eThekweni metropolis contributes to promoting local sourcing of fruits and vegetables through a public market initiated by the province. Through this program, the province of KwaZulu-Natal has empowered local communities by engaging a significant number of local women's groups (109) and small businesses (1,671) to supply food to the National School Nutrition Program (Faucher and Lançon, 2021).

UMHLANGA FARMERS MARKET - A PRODUCERS' MARKET

The Umhlanga Farmers Market in KwaZulu, open on Wednesday mornings, is a provincial market that brings together various food products such as fruits and vegetables, dried fruits, meat, fish, syrups, and lemonades, among others. Producers also offer prepared dishes, and artisans are present as well.

WAVE - WOMEN'S FOOD COOPERATIVE

WAVE (Women Adding Value to the Economy) is a group of 200 women who produce and transform their goods in the South Durban area. Unable to earn enough income to lift themselves out of poverty, they started processing their products to add value, such as flour, jams, sauces, pickles, and more. Through WAVE, they have access to a network of support, assistance, and guidance for processing and selling their goods. Thanks to this support, the women have better market access, share equipment, and help each other in the production of their goods. The association's goal is to continue developing producer markets to sell their products locally and raise awareness to strengthen local economic development.



DURBAN FOOD MARKET - A SUSTAINABLE AND TRADITIONAL PRODUCTS MARKET

The Durban Food Market is a producers' market located in the Umgeni Park neighbourhood. It takes place on the last Saturdays of the month. This market offers typical regional dishes, attracting tourists looking for culinary experiences. Suitable for both young and old, this market welcomes a diversity of organic products, allowing consumers to buy fresh goods and enjoy prepared products on-site.

MUNICIPAL BULK MARKET - A SPACE FOR LOCAL PRODUCERS WITHIN THE WHOLESALE MARKET

The "South Durban Community Environmental Alliance" is an association working for environmental justice in Durban. In collaboration with the eThekweni municipality, they have established a dedicated space for small local producers within the Durban Municipal Bulk Fresh Produce Markets (MBFPMS), which serves as the main food transit platform. This measure supported by the municipality facilitates small producers' access to lucrative markets.

Facilitating market access for small local producers

MASSMART - ACTIONS PROMOTING LOCAL SOURCING

Massmart is a regional South African company established in 1990, engaging in both wholesale and retail trade. It operates 423 stores in 13 cities across Sub-Saharan Africa, including 62 in the KwaZulu-Natal province and 2 in Durban. The company is committed to social and local sourcing. It has created an assistance program to enable small agricultural and manufacturing units to consolidate and trade directly with Massmart. The support fund allocated to these small businesses in South Africa amounted to 200 million rand (\$13 million) for the five-year period from 2012 to 2017. This fund aims to benefit black communities and women, although not exclusively. For example, this program supported a noodle processing unit located in Western Cape, The Noodle Factory, mainly managed by members of the black community, allowing it to find an important local market and improve its production tools. Massmart currently supports 33 local suppliers.

SPAR - SUPPORTING EMERGING PRODUCERS

The SPAR supermarket chain is committed to supporting small South African producers by providing them with easier access to their markets. In December 2018, SPAR established three rural hubs in three different provinces, centralising products from nearly 100 emerging producers that are sold in SPAR stores. Through these measures, the retailer reduces the number of intermediaries and promotes the availability of local products in its stores.

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FAIR FOOD COMPANY - SUPPORTING AND FACILITATING MARKET ACCESS FOR SMALL PRODUCERS

The Fair Food Company is a social enterprise that works with emerging farmers in the KwaZulu-Natal province, facilitating their access to markets and supporting them in improving their production. The company adds value to these products by pre-cutting and packaging them. A long-term contract is signed with each producer for the supply of a certain quantity of vegetables. The contract includes various services provided by the company, such as seed distribution, inputs, and training in more environmentally friendly techniques. For the past four years, the Fair Food Company has been supplying some major retail chains with pre-cut vegetables, as well as corporate restaurants and school canteens that require large quantities of ready-to-use vegetables. The company has developed strong commercial relationships with retailers like Woolworths and more recently with Pick n Pay. 80% of the Edamame beans sold in Woolworths stores are produced by small producers through the Fair Food Company.

Supporting the development of local actors

ASIYE ETAFULENI - SUPPORTING STREET VENDORS

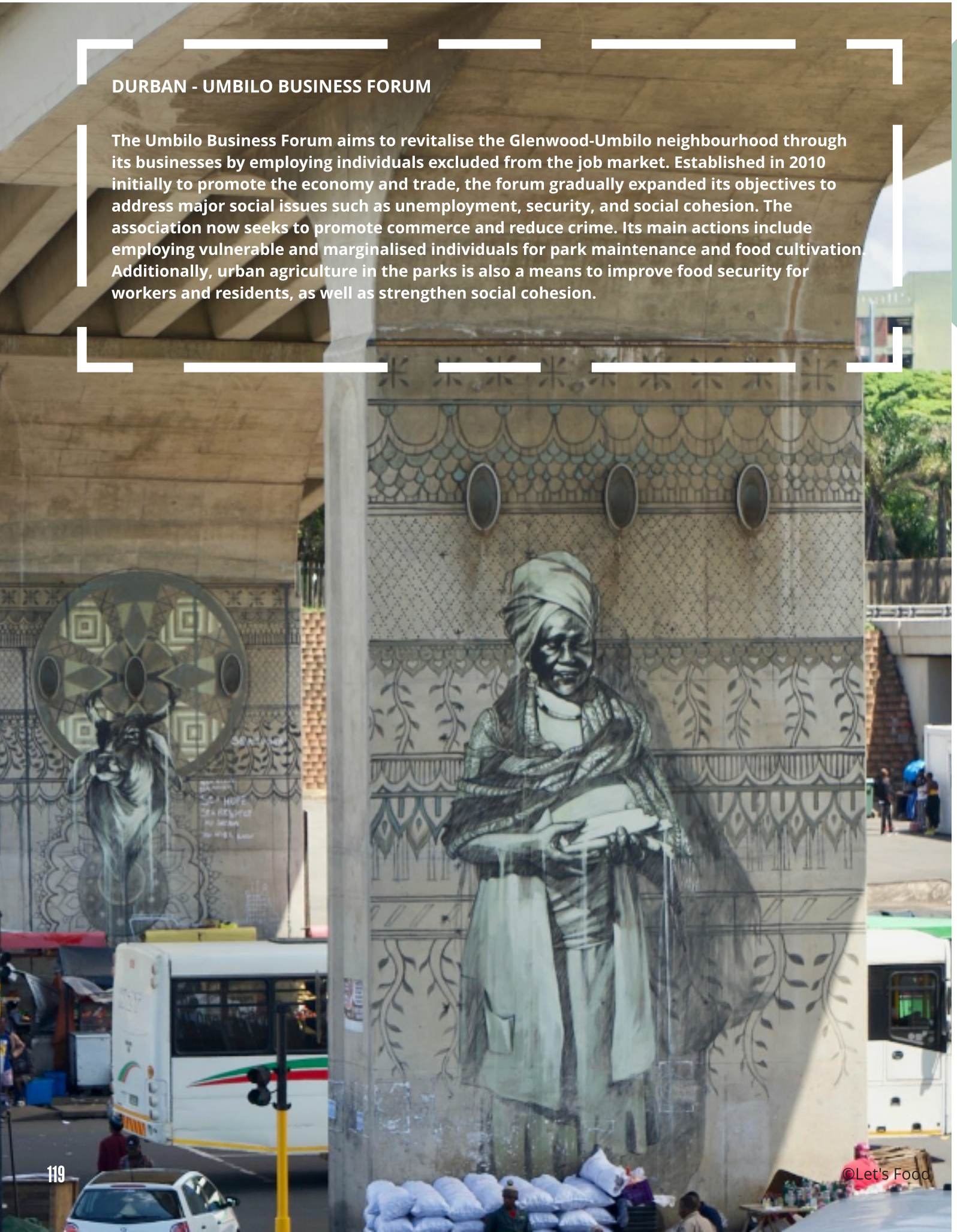
Asiye eTafuleni is an association in Durban that supports the development of the informal economy, including street vendors and markets, in the city. Founded in 2008 by Richard Dobson and Patrick Ndlovu, former members of the eThekweni municipality, Asiye eTafuleni aims to support economic activities of the population, even if they are informal, in order to address the devastating economic, racial, and spatial inequalities resulting from the apartheid era. The association seeks to revalue the informal economy and reintegrate it into the urban space. Asiye eTafuleni is also an internationally recognised research center on the informal economy and urban environment, contributing to a better understanding of the role of the informal economy and its integration into urban planning and development policies. The team works closely with the main stakeholders and carries out its actions in four areas: research, advocacy, design, and education. The goal is to provide greater visibility to street vendors, promote social acceptance, and enhance their inclusion in public policies.

BAOBAB - A THIRD SPACE PROMOTING ENTREPRENEURSHIP AND JOB CREATION

This recent initiative emerged as a response to major challenges in South Africa: poverty, divisions, and social exclusion. Baobab aims to assist disadvantaged populations by offering various programs for students, unemployed youth, and small business owners. The different programs in this third space seek to develop skills, collaboration, and equity among participants. The objective is to empower them to undertake initiatives in favour of a green, sustainable, and responsible economy (Baobab, 2020).

DURBAN - UMBILO BUSINESS FORUM

The Umbilo Business Forum aims to revitalise the Glenwood-Umbilo neighbourhood through its businesses by employing individuals excluded from the job market. Established in 2010 initially to promote the economy and trade, the forum gradually expanded its objectives to address major social issues such as unemployment, security, and social cohesion. The association now seeks to promote commerce and reduce crime. Its main actions include employing vulnerable and marginalised individuals for park maintenance and food cultivation. Additionally, urban agriculture in the parks is also a means to improve food security for workers and residents, as well as strengthen social cohesion.



ARE THE SOLUTIONS UP TO THE CHALLENGES?

SUPPORTING THE DEVELOPMENT OF SMALL PRODUCERS AND STRENGTHENING LOCAL AND SHORT SUPPLY CHAINS IS ESSENTIAL FOR THE DEVELOPMENT OF A LOCAL, EQUITABLE, AND VIABLE AGRICULTURE

The activities generated by the food system significantly contribute to the economic development of the KwaZulu-Natal province and the overall growth of the country, accounting for more than 12% of the GDP. KZN is an agricultural region specialised in sugar cane exports and is home to numerous agri-food businesses. This sector illustrates the damages caused by an unequal, monopolistic food system that is disconnected from local consumption and dependent on international markets.

The dispossession of land from black small-scale farmers during colonialism and apartheid, globalisation, and the deregulation of agriculture after 1994 have shaped a dual food system that benefits a few large companies. Commercial agriculture, agro-industry, and supermarkets are controlled by a handful of actors who hold the majority of market shares and value-added. On the other hand, small-scale and emerging producers have limited access to commercial markets that demand large production volumes and require resources they don't have access to, such as large-scale infrastructure, advanced agricultural equipment, financial capital for investment, and agronomic knowledge.

As small-scale producers face significant challenges in accessing lucrative markets, local stakeholders have implemented solutions to facilitate their market access.

Initiatives such as the municipal Agrihubs and the Fair Food Company enable them to sell their produce through conventional channels, including collective catering and large and medium-scale distribution, which are increasingly seeking to expand their offerings of local products. Some supermarkets establish contracts with emerging farmers, but the bargaining power of these farmers remains too weak to significantly increase their remuneration.

Food distribution remains highly centralised, and the flow of agricultural and food products to wholesale markets and retailers bypasses local channels. Street vendors, in fact, rely more on wholesalers than local producers for their supplies.

However, this small-scale agriculture manages to provide food for nearly 50% of the population living in rural areas and plays a crucial role in poverty reduction by serving as a source of income and sustenance.

Durban must diversify its agricultural productions and make them accessible to consumers by developing small local processing tools and facilitating local market access for both large and small farmers. Genuine policies to valorise local productions, similar to the initiatives of the WAVE women's cooperative or emerging local brands elsewhere in the world, should be encouraged by the eThekweni municipality. Redistributing value-added is also necessary to enhance the image of the farming profession and provide young people with more promising prospects for entrepreneurship in this field.

INSPIRATION FROM ELSEWHERE

TEST SPACES OF CIAP PAYS-DE-LOIRE

Nantes, France

The permanent test space of CIAP (Collective for Peasant Agriculture Installation) is an equipped production space made available (land, equipment, supervision) to project holders in organic market gardening as part of a Creative Peasant Internship. This space is a means of testing one's ability to collectively manage a production unit, from sowing to marketing, including daily management, as well as reflecting on investment choices. Young farmers benefit from support from professionals.

This test space is a member of the national network of agricultural test spaces (RENETA), which currently brings together more than 60 similar structures in France. RENETA is also a space for exchanging practices that leads to the development of research-action projects, such as the Newbie project, which aims to develop and disseminate new economic models, including new installation models, to all new entrants.

OCÉANE COOPERATIVE

Nantes, France

The Océane cooperative now represents $\frac{1}{3}$ of the market gardening in Nantes and employs 1,300 people. The CSR (Corporate Social Responsibility) approach implemented by Océane is published annually and is committed to improving the working and hygiene conditions of cooperative members. For example, the Health, Safety, and Working Conditions Committee monitors the number of work accidents within the cooperative each year and seeks to reduce risks by involving ergonomists to optimise the main platform. Similarly, the cooperative invests in suitable work equipment to reduce the physical strain on producers. For instance, they have purchased stacker pallet trucks to raise the pallets to a comfortable height for employees to load without strain.

LES CHAMPS DES POSSIBLES

Paris, France

Les Champs des Possibles is an agricultural business incubator, a cooperative of activities and entrepreneurs, and a training organisation. The incubator allows project holders who wish to establish themselves to test their activity on a real scale while limiting their risk-taking. Les Champs des Possibles provides future farmers with means of production and technical support. The agricultural cooperative of activities allows farmers to start their own business while relieving themselves of legal and accounting aspects by having employee status. Their accounting is managed by the cooperative, and they can share certain means of production.

Les Champs des Possibles also offers continuous training modules for established farmers and supports aspiring farmers in the development of their projects.

TERRE DE LIENS

France

Terre de Liens was born in 2003 from the convergence of several movements with the aim of facilitating the installation of new farmers in France through the solidarity investment of committed citizens. The main action of Terre de Liens is the acquisition of farms and land that join the network of Terre de Liens farms. These lands are part of the desire to regain social and economic usefulness while taking their place within a territory. They welcome projects in peasant, organic, or biodynamic agriculture and generate human dynamics and social connections. Terre de Liens also supports farmers in their installation.

COLLECTIVE TRANSFORMATION WORKSHOPS

France

A collective transformation workshop is a structure managed by a collective of farmers who pool their resources to have the necessary equipment for processing their products and ensure their commercialisation through local food circuits. There are more than 130 workshops of this kind in France (Thomas, 2016). Often led by CUMA (Cooperative Society for the Use of Agricultural Equipment), these workshops create new processing activities for meats, fruits, vegetables, honey, dairy products, etc. The Loire-Atlantique region has 4 of them.

NETWORK OF AGRO-ECOLOGICAL INITIATIVES IN MOROCCO - FARMERS' MARKETS

Maroc

The RIAM is a network of stakeholders whose objective is to highlight initiatives and facilitate territorial cooperation to encourage agro-ecological transition. In collaboration with CIRAD, the RIAM has initiated the creation of farmers' markets, associated with the implementation of an "agro-ecology" label based on the participatory guarantee system. Through these farmers' markets, the RIAM aims to promote environmentally friendly agriculture while democratising and raising consumer awareness of "organic" approaches. By significantly reducing intermediaries, the markets allow for better remuneration for producers. Currently, there are 3 such markets in Morocco.

LE FRUIT - A BRAND ENSURING RESPONSIBLE PRODUCTION AND PROCESSING IN THE MEKONG DELTA

Vietnam

Les Vergers du Mékong is a French company based in Vietnam for the past 20 years. They offer fruit juices and jams under the brand Le Fruit, and coffee and tea under the brand Folliet. The company has implemented an exemplary policy of social and environmental responsibility. It supports its guava, pineapple, and mango producers in the Mekong Delta towards more sustainable practices while ensuring decent incomes, thereby reducing the impact of market price fluctuations. The fruits are processed into juices and jams at the Can Tho processing site, then distributed to restaurants, hotels, supermarkets, and specialised stores mainly in Vietnam (70% of the market) and abroad (30%).

Long-term contracts are established directly between the company and the producers, without intermediaries. This provides the producers with income security and better traceability. The company has also established three centers for producers, providing them with production advice, training, and serving as fruit collection platforms.

SONANTES - LOCAL COMPLEMENTARY CURRENCY

Nantes, France

The SoNantes system, officially launched in April 2015, is managed by the municipal credit institution of the Nantes community. The project is the result of active co-construction between citizens, representatives from the economic sector, public authorities, and institutions in Nantes. This local currency aims to promote economic relocalisation towards local businesses and services and can be used by professionals and individuals. After free membership and opening an account for individuals, each resident of Nantes receives a personalised payment card that allows them to make payments of up to 1,000 SoNantes (1,000 euros) per year at participating merchants and businesses, using conventional payment card terminals.

MONTPELLIER MÉDITERRANÉE MÉTROPOLE NATIONAL INTEREST MARKET

Montpellier, France

The Montpellier National Interest Market brings together nearly 220 producers, wholesalers, traders, transformation workshops, and 3,000 professional buyers. Thanks to the agro-ecological and food policy of Montpellier Méditerranée Métropole, the Montpellier NIM is one of the pioneers in integrating alternative approaches into its operations, including flagship actions to strengthen the presence of local products and those from organic farming, optimise energy use, and reduce and valorise waste.

"Carreau Bio & Local"

Since 2017, around thirty producers have been offering local seasonal products, including around ten certified as organic (from Aude, Hérault, Tarn). This service allows local producers to access a diversified professional clientele by reducing transportation time and logistical flows within the city. In total, 50% of the products sold at the NIM (fruits and vegetables, meat, wine) are produced in the South of France.

Energy optimisation

A strategy of streamlining and consolidating flows at the MERCADIS has led to a reduction in the number of delivery vehicles. Access to the NIM has been made free for certain carriers committed to reducing their greenhouse gas emissions.

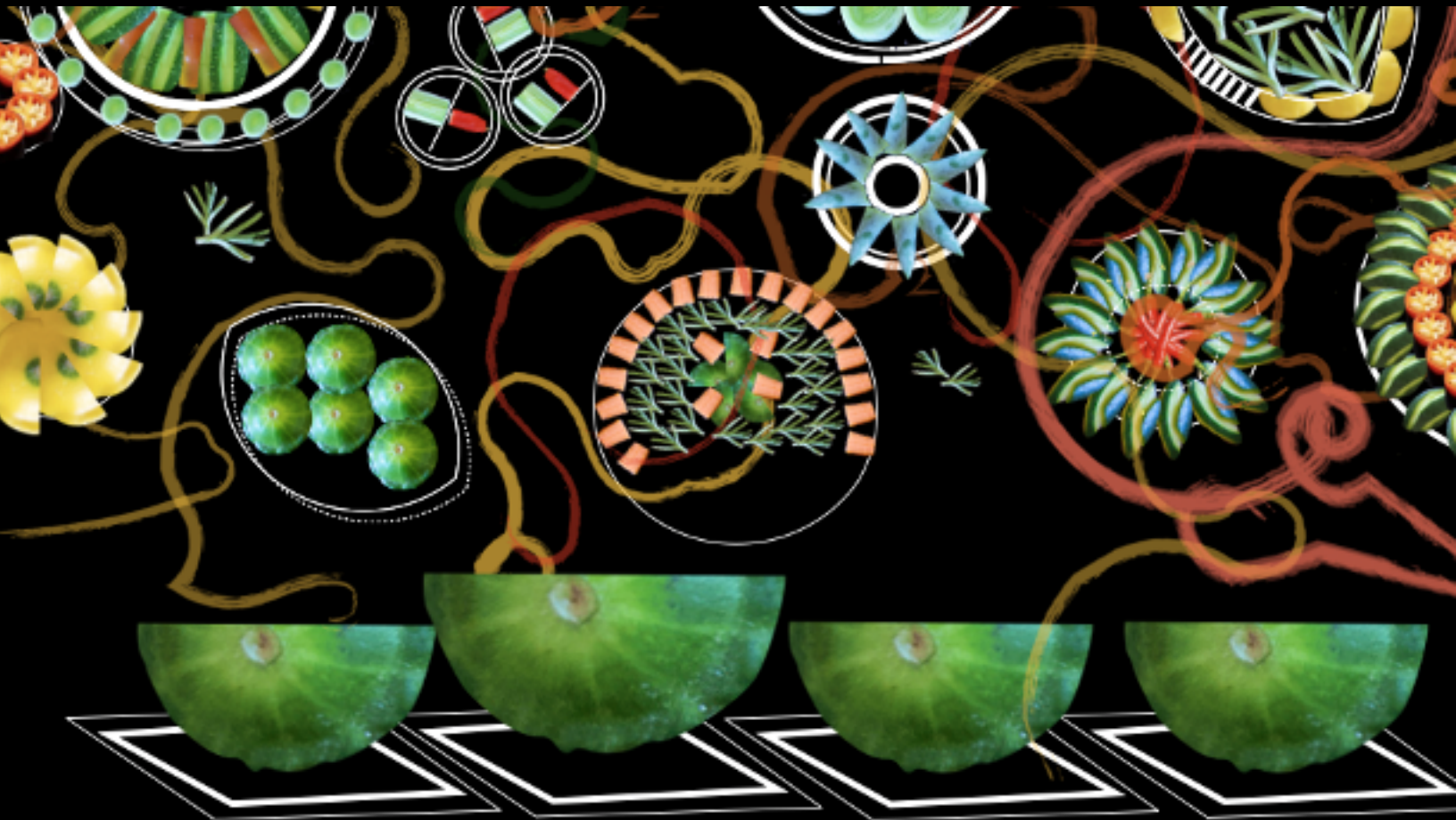
Waste management

Currently, 73% of the waste produced at the NIM is recycled through five channels: methanisation, animal feed, wood and cardboard recycling, and metal recycling. Since 2016, NIM wholesalers have also been donating their unsold consumable products to food aid associations.

Chapter IV

FOOD GOVERNANCE

Does Durban and its province's food system provide the necessary information to enable social cohesion, trust and citizen participation?



THE SOCIAL ROLE OF FOOD

“The history of the relationship between agriculture and food, between agricultural producers and consumers, is one of distancing: geographically, with the increasing distances in food supply chains; economically, with the multiplication of intermediaries in the food system; cognitively, with the specialisation of knowledge and consumers' access to increasingly complex information. Food product labels become overloaded without fully reassuring consumers.”

Nicolas Bricas, Nature Sciences Sociétés, 2013



Nicolas Bricas © CIRAD

Food plays a role in the dialogue and integration of citizens in a society driven by values of sharing, openness, and culinary curiosity, but not only that. Only informed and enlightened citizens about their food choices and their environmental, social, and economic implications can make responsible choices for their own food and that of the community in which they live.

Local authorities have a crucial role to play in building a local food system that is adapted to the constraints and resources of their territory. In order to make decisions in this direction, they need the appropriate skills and finances. Local authorities also have a role as mediators and coordinators in their territory: they must more than ever involve civil society and citizens in decision-making processes so that they take ownership and participate in the construction of a sustainable and resilient food system.

1994

Emergence of democracy and the end of the segregationist regime

63

Highest GINI index in the world (WHO, 2019)

7

Dedicated services for food and agroecology within the eThekweni Municipality.

THE LEGACY OF APARTHEID WEIGHS ON GOVERNANCE PRACTICES

// *If we could somehow realise that there is more to life than money and that we have a greater capacity to work collectively, we could achieve great things. But we are so far along the path of greed, mistrust, anger, and conflicts that it is sometimes difficult to see if we can truly find a way to come together."*

Walter Coughlan, Director and Co-founder of the Fair Food Company

A PRESENT MARKED BY THE TIME OF APARTHEID

South Africa remains deeply marked by the scars of apartheid, with persistent racial segregation as its legacy. This system of population separation based on skin colour was established as early as the 17th century during the colonisation of the country by the Dutch and was subsequently systematised and institutionalised after the victory of the National Party in 1948. The policy of apartheid resulted in racist oppression towards non-white populations, including indigenous African populations, people of Asian origin, and mixed-race individuals, who constitute over 80% of the population. This system was based on a population registration law called the Population Registration Act of 1950, which categorised residents into four skin colour groups referred to as "races" (Whites, Indians, Coloureds, and Blacks), thereby determining every aspect of their existence. Non-white populations were prohibited from buying land, accessing agricultural markets, engaging in interracial relationships, and living in certain areas reserved for Whites, among other restrictions.

Millions of people were forcefully evicted from their lands or neighbourhoods assigned to Whites following the Group Areas Act of 1950, which institutionalised spatial segregation and led to the creation of townships on the outskirts of cities, where predominantly Black communities still reside today.

Nearly thirty years after the end of apartheid, South Africa has not become the envisioned "rainbow nation" that Mandela had hoped for. Society remains highly polarised, racialised, and territorially fragmented (Ohayon and Mione, 2020). The elimination of racial discrimination, enshrined in the Constitution, remains an ideal concept that has not yet truly taken hold in people's minds (Huon, 2020).

“ *The racial question is the country's main challenge as it gives rise to many other problems: precariousness, unemployment, lack of education and healthcare, security, and more. Black communities bear the heavy burden of this legacy, which affects both their wealth and their health. This must change.”*

**Rosemary Rodriguez,
Coordinator of the women's
group WAVE (Women Adding
Value to the Economy)**

In South Africa, socioeconomic inequalities intersect with racial inequalities, with a median household income for the White minority being 3.5 times higher, even though they represent only 8% of the population. For example, individuals from the Black community have 17% less chance of finding employment compared to those from White communities, and Black households are much more affected by economic precarity than White households. White populations also continue to have better access to education, employment, and better living conditions than the majority of the population in the country (The World Bank, 2018).

In addition to the highly unequal socio-economic legacy of apartheid, this policy also affects social cohesion, sharing, and South African culture. Racism is still present in society. Certain fast-food chains have been criticised for their stereotypical and even racist communication strategies. For instance, the Spur Group had predominantly white individuals being served by black individuals in their advertisements and television commercials (Bongwana, 2017).

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Different communities still harbour suspicion and mistrust towards one another (Rodriguez, 2020). Nevertheless, there are emerging efforts of mutual assistance, such as between black and white producers. Some white farmers provide support and share their knowledge with emerging producers, mainly from black communities. This is being encouraged by the agro-ecological hub of the eThekweni municipality (Chamane, 2020).

“ *Apartheid has been extremely devastating for solidarity.”*
**Richard Dobson, Co-founder of
the Asiye eTafulen association**

//

The current issues in the territory, such as unemployment and access to markets for small producers, are perceived as race-related problems since they primarily affect black individuals, unlike white individuals. This hinders dialogue and fuels mistrust. Our municipality must create spaces for dialogue between communities to address this issue. Social cohesion should be further encouraged and driven by our government."

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)

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HIGH LEVELS OF CORRUPTION UNDERMINE TRUST IN LEADERSHIP

The Corruption Perceptions Index in the public sector in South Africa is 44 (on a scale of 0 to 100, with 0 being highly corrupt), ranking the country 69th out of 180 countries. This score corresponds to the global average but still indicates a corrupt environment (Transparency International, 2020).

Conflicts of interest, power struggles, and corruption are deeply rooted in South African politics. The African National Congress (ANC) is at the centre of corruption scandals, including the trial of former President Jacob Zuma for embezzlement and the trial of the ANC Secretary-General, Ace Magashule, who was accused in 2021 of embezzling tens of millions of euros during his time as governor of the Free State Province. Misappropriation of funds and other forms of corruption that permeate the South African administration at the highest levels are considered the main challenges undermining the country's economy to this day. In October 2019, President Cyril Ramaphosa stated that corruption under Jacob Zuma's regime cost South Africa nearly 10% of its GDP over ten years. According to analyses, corruption during Jacob Zuma's presidency cost the country between 33 billion and 100 billion dollars in revenue (Adjibi Nourou, 2020). This scourge tears the country apart and leads to a loss of citizens' trust in politicians. A portion of the population has become highly suspicious of public authorities that do not always act in the community's best interest, ultimately undermining citizens' and private actors' initiatives (Cole, 2020).

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“There are people in South Africa who work for a better society and the well-being of the population, but there are also actors in power who constantly fight to acquire more power and disregard the communities' suffering.”

***Ian Campbell, Co-founder of the
Umbilo Business Forum***

THE KZN REGION AND THE MUNICIPALITY HAVE SOME CAPABILITIES TO PROMOTE A SUSTAINABLE FOOD SYSTEM

South Africa is a federal system where power is decentralised across three levels: national (central government), provincial (provinces), and local (municipalities).

eThekweni, as a metropolitan municipality, exercises full municipal power and has numerous capabilities. Its objectives, shared with other municipalities, include democratic governance of local communities, promoting economic and social development, ensuring a healthy and safe environment, and encouraging citizen participation (Yes!Media, 2020, Perspective Monde Usherbrooke, 2020, France Diplomatie, 2020).

Agricultural production, markets, and value chains in the KwaZulu-Natal province are primarily managed by the provincial Department of Agriculture. The "DARD-KZN" department implements national legislation and guidelines but also develops provincial policies. Its main objective is to support farmers through financial assistance, training, administrative support, etc., to ensure sustainable development and management of the province's agricultural resources.

The eThekweni municipality has some leeway compared to the central government and provincial authorities within its territory, which allows it to advocate for sustainable agriculture and food security. Similarly, many associations, NGOs, citizens, and even businesses are engaged in agriculture and urban agriculture. However, there is a lack of coordination among these different initiatives, as well as a lack of cross-cutting collaboration with other municipalities, provincial and national levels, for the implementation of a systemic and sustainable policy.

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“ Food production is not a central mandate of the municipality, but the Constitution grants municipalities competencies in local economic development. Since agriculture is an economic sector of the region, the municipality has seized this opportunity to integrate it into its economic program. **”**

Vuyo Jayiya, Deputy Director of the Agro-Business Service, eThekweni Municipality



The national and provincial agriculture ministries, as well as municipalities, have the means to support agriculture, particularly small-scale producers. Various programs are implemented throughout the year, providing funding, skills sharing, training, and collective support to assist small-scale producers. However, this approach lacks coordination and systemic actions."

Walter Coughlan, Director and Co-founder of the Fair Food Company

THE ETHEKWINI MUNICIPALITY IS COMMITTED TO SUPPORTING AGROECOLOGY AND SMALL-SCALE AGRICULTURE

Although agriculture is not a mandatory competence of local authorities, the eThekweni municipality has established a service responsible for agroecology and is committed to improving food security for its population. It promotes urban agriculture and has created Agri-Hubs to facilitate the marketing of small-scale farmers' produce and supply canteens. In doing so, it assists small-scale producers and vulnerable households. With nearly 40% of the population unemployed, developing agroecology allows them to cultivate small plots of land and meet their food and economic needs by selling their surplus.

Several units within the municipality work on food-related issues:

- Agroecology unit
- Agro-business unit
- Business and market support unit
- Community participation and support action unit
- Planning, environment, and development management unit
- Health unit
- Parks, green spaces, and culture unit



The goal of the municipality's agroecology service is food sovereignty and food security."

Sbusiso Chamane, Director of the Agroecology Service, eThekweni Municipality



By focusing on developing more sustainable and accessible ways of production for all, we contribute to creating a more livable and enjoyable city where access to food is no longer a major concern for the most vulnerable households."

Vuyo Jayiya, Deputy Director of the Agro-Business Service, eThekweni Municipality

FOOD AND AGRICULTURE, A SOURCE OF SOCIAL COHESION IN A FRAGMENTED SOCIETY?

The development of urban agriculture also contributes to fostering social cohesion in a way. Urban agriculture helps bring together different people around a common subject. Various actors are involved in urban agriculture in Durban, including Amnesty International, Greencamp Gallery, eThekweni municipality, ENACTUS, and others.



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Community gardens provide us with healthy food and also allow us to interact with others. I believe people come together when they share their skills and knowledge. For me, it's an opportunity to work with women from other communities that I might not have had the chance to connect with otherwise."

Coral Vinsen, Vice President of Amnesty International Durban

In addition to agriculture, food is also a factor in social cohesion. Curry is a dish that brings communities together in Durban. Curry dishes are accessible and abundant in the city; people from different communities and social classes come together in the same places to enjoy them (James, 2020).

"Food tells a story. And that story creates culture, brings people together at the table, and helps break down animosity and tensions, etc., because everyone loves food, everyone loves to eat, and it can go beyond class, gender, race, etc."

Delwyn Pilay, Activist for the Slow Food movement

While food is a powerful vehicle for social cohesion, it does not, however, overcome the deep social divisions inherited from segregation.

"I remember during the World Cup, there were many braais that brought people together. But people didn't really mix. There is a real racial challenge that we need to address."

Xolani Hlongwa, Co-founder of Green Camp Gallery

The current food system also creates a divide between those who can afford quality food and those who can only afford affordable food. The model needs to evolve to create more cohesion than divisions (Pilay, 2020).



SPACES FOR DIALOGUE ARE SLOWLY EMERGING

AN ACTIVE CIVIL SOCIETY LACKING SUPPORT

In Durban, numerous citizen initiatives are emerging and collaborating, such as Enactus and the vegetable bag project, the Umbilo Business Forum, Green Camp, Slow Food, Biowatch, the Valley Trust, Baobab, and others. The culture of entrepreneurship is growing strongly, especially among students. The students' interest in social entrepreneurship is particularly virtuous and important for addressing community problems like unemployment (Yoliswa Jele and Kwazini, 2020).

Despite their presence, citizen initiatives face difficulties in establishing themselves as sustainable solutions for the food system. They lack coordination, a viable economic model, long-term committed volunteers, and, most importantly, they compete against each other for funding. While associations and NGOs are present, they remain relatively few in number and have limited power. They lack funds and financial support to fully implement their actions (Dobson, 2020). Public funding for associations and NGOs has significantly decreased in South Africa in recent years, and the government is being questioned (Campbell, 2020).

FRAGILE MULTI-STAKEHOLDER COLLABORATION

The real challenge lies in successfully mobilising different stakeholders around a common project and getting them to work together to achieve concrete and sustainable solutions (Coughlan, 2020).



We know that we can cultivate the land and feed ourselves. The real challenge we must now address is how to implement this and, most importantly, how to do it collectively."

**Walter Coughlan, Director and
Co-founder of the Fair Food Company**

The eThekweni municipality is aware of the need to implement actions in close collaboration with other stakeholders, especially with the project beneficiaries. Top-down solutions from the government or groups of farmers struggle to be truly appropriate and effective within rural communities. The eThekweni agro-business service has sought to better understand the needs and strengths of communities through the development of a database before initiating "ready-made" solutions.

Vuyo Jayiya, the deputy director of the municipality's agro-business service, aims to avoid programs that do not meet the communities' needs with this strategy. Vuyo Jayiya illustrates this need with a telling example: a community had received agricultural vehicles, irrigation equipment, and fences. Six months later, the vehicles were being used for other purposes or had been sold, and the irrigation system was in disuse. Moreover, the provided equipment was insufficient to encourage the beneficiaries to cultivate the land, as they lacked the necessary knowledge. The urgent need of this community was to obtain money to buy food (Jayiya, 2020).

“ *There is a real issue with resource allocation, sometimes due to corruption, but mostly due to a lack of analysis of needs and issues. This has created distrust and inefficiency. I believe the best way to avoid this is to implement solutions that are expected by local stakeholders and incorporate an economic model that allows small-scale producers to sustainably continue with rewarding and long-term solutions.”*

Vuyo Jayiya, Deputy Director of the Agro-Business Service, eThekweni Municipality

CITIZENS STILL HAVE LIMITED INVOLVEMENT IN DECISION-MAKING

The municipality is aware of the importance of co-construction and citizen participation in implementing sustainable solutions. The agroecology unit has established a food security committee consisting of representatives from the three spheres of government (national, provincial, and local), as well as the private sector, farmer associations, and the communities directly benefiting from the programs (Chamane, 2020).

Similarly, the department responsible for citizen participation has implemented a program called Community Based Planning, which aims to create an enabling environment for citizens to participate in improving their quality of life by mobilising their own assets (eThekweni municipality, 2021). In doing so, the municipality seeks to enhance citizen involvement. However, developing a culture of engagement and citizen participation takes time. Citizens are still reluctant to engage more actively in the policies of their city and have a certain distrust of institutions (Jayiya, 2020).

“

Our resilience, as a city, in Durban, lies in the people. Connected to one another to address the city's main challenges - unemployment and poverty - we can accelerate the transition towards a resilient city.”

Ian Campbell, Co-founder of the Umbilo Business Forum



AN ACTIVE COOPERATION ON CLIMATE AND FOOD-RELATED ISSUES

THE MUNICIPALITY OF ETHEKWINI WISHES TO LEARN FROM ITS INTERNATIONAL PEERS

Durban is a city that is open to the world and committed to environmental and climate issues. In 2011, it hosted the United Nations Annual Conference on Climate Change (COP 17). The metropolis brought together representatives from over 190 states as well as numerous members of civil society for two weeks.

The municipality of eThekweni also looks outward and promotes exchanges with its cooperation partners. In addition to its cooperation with Nantes, Durban is a partner to fourteen cities, including Leeds in the United Kingdom, Chicago in the United States, Oran in Algeria, Libreville in Gabon, and others. These collaborations aim to promote the exchange of best practices and improve the city's development and environmental sustainability. It also contributes to establishing and strengthening economic exchanges as well as in the areas of health, culture, sports, education, environment, etc. The benefits of these collaborations are manifold. The municipality of eThekweni particularly seeks knowledge exchange, the implementation of mutually beneficial partnership projects, and the acquisition of skills to enhance its management of local issues.

Furthermore, Durban is a member of the "NEPAD city program" led by the United Nations, particularly by the UN agency UN-Habitat, which aims to promote the development of sustainable cities and good living conditions for residents. The New Partnership for Africa's Development (NEPAD) specifically aims to address African issues related to urbanisation, inclusive cities, youth, as well as governance and youth participation. Through NEPAD projects, cities share models of best practices in service delivery, government structures, and develop partnerships. Durban has been designated as a leader in an initiative aimed at addressing challenges faced by local authorities in terms of service delivery. Thus, Durban is a strategic partner for other African cities, including Bamako in Mali, Douala in Cameroon, Lagos in Nigeria, Lusaka in Zambia, Nairobi in Kenya, and Rabat in Morocco.

THE DURBAN-NANTES COOPERATION AND THE LET'S FOOD CITIES PROJECT

The cities of Nantes and Durban have shown their willingness to collaborate by signing their first cooperation agreement in 2005. Visits have been organised to exchange primarily on projects related to tourism, art and culture, environment, and economic cooperation. Both cities are particularly committed and comparable in terms of sustainable development in their respective territories, including the greening of their spaces: Durban was crowned the greenest city in the world in 2019, and Nantes was the European Green Capital in 2020.

As part of this cooperation, the association Let's Food has carried out work to encourage the exchange of best practices to accelerate the food transition in both territories. A two-month mission was conducted between January and March 2020 in Durban to meet with local actors in the food system in order to analyse its sustainability. In addition to assessing the sustainability of the local food system, Let's Food identified areas for improvement and cooperation, as well as local initiatives to strengthen. This project also helped raise awareness among local stakeholders and citizens about sustainable agriculture and food through meetings with actors, workshops, and two events that brought together about a hundred people.

Despite these shared values, cooperation between the two cities is currently limited regarding food issues.

Results

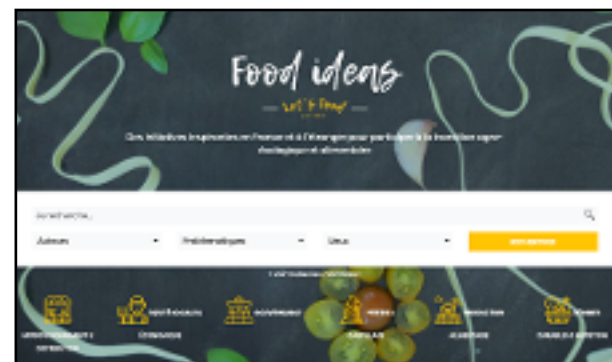


THE REPORT
DIAGNOSIS OF THE SUSTAINABILITY OF NANTES' FOOD SYSTEM



THE MOVIE
THE FOOD SYSTEM OF DURBAN

ACTOR MAPPING
INVENTORY OF SUSTAINABLE FOOD INITIATIVES



SOLUTIONS BOOKLET
SHARING INITIATIVES FROM HERE AND ELSEWHERE

MAKING TERRITORIAL FOOD POLICY A PRIORITY

- LOCAL SOLUTIONS

Raising awareness on environmental issues

BIOWATCH - A PODCAST FOR HEALTHY AND SUSTAINABLE FOOD

Biowatch provides the general public with a wealth of resources to support the agroecological transition. In addition to its written materials (monthly bulletins, various reports, etc.), the NGO has launched a podcast to reach a wider audience. Launched on World Food Day in 2020, "Good Food Conversation" is a podcast about healthy and sustainable food. It consists of a series of conversations aimed at celebrating the diversity of what we grow, cook, eat, and store, as well as promoting healthy food for both the body and the planet.

THE SOUTHERN AFRICA FOOD LAB - AN INNOVATIVE MULTI-PARTNER PLATFORM ON FOOD

The Southern Africa Food Lab (SAFL) is a research, innovation, and dialogue centre focusing on food and its challenges. According to SAFL, a lack of engagement from civil society, governments, and the private sector exacerbates the pressures on the food system and makes it more vulnerable. Established in 2009 at the University of Stellenbosch in Cape Town, SAFL aims to promote creative responses to the problem of hunger through dialogue, action, and the integration of different stakeholders. The centre brings together researchers, experts, NGOs, political and institutional actors, local stakeholders, and businesses. By creating a space for dialogue and interconnection between all stakeholders, the Food Lab aims to address various food issues in South Africa, including malnutrition, food access, and health problems, through innovative and systemic approaches. SAFL is involved in various research-action projects, such as the Resilient Food Systems Incubation Program in South Africa, or support for local farmers with institutional partners such as FAO. According to WWF, the South African Food Lab is one of the most advanced multi-stakeholder dialogue platforms in the world.

Facilitating synergies between local actors and the implementation of sustainable projects

ETHEKWINI MUNICIPALITY - DEVELOPMENT OF A FOOD STRATEGY

In 2020, the municipality commissioned the African Agricultural Council to develop a food strategy for the metropolis. This strategy will provide a precise diagnosis of the food system and ensure coherence among ongoing programs.

ETHEKWINI MUNICIPALITY - FOOD SECURITY COMMITTEE

The Food Security Committee brings together public authorities at the national, provincial, and local levels, as well as all private and associative actors involved in food insecurity programs in eThekweni. The committee is being reactivated and will enable collective and co-constructed decision-making with local stakeholders.

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ARE THE SOLUTIONS UP TO THE CHALLENGES?

RESTORING TRUST BETWEEN COMMUNITIES AND PUBLIC AUTHORITIES IS ESSENTIAL FOR THE TERRITORIAL FOOD TRANSITION

South Africa remains deeply marked by the scars of apartheid, which are still manifested today through mistrust among communities. Nelson Mandela's dream of a united "rainbow nation" has not yet fully overcome the cultural and spatial fragmentation of society. This social climate does not favour the emergence of multicultural collectives and actions, although knowledge exchanges are beginning to take place in the agricultural world.

These emerging forms of solidarity between black and white farmers deserve greater encouragement from public authorities. Food and meals, through their convivial and social nature, could be leveraged to create more spaces for dialogue and interactions among residents. The famous Bunny Chow rightfully symbolises the blurring of community boundaries. Overcoming the deep social divisions inherited from segregation will undoubtedly take time but cannot be achieved without massive mobilisation of civil society and unwavering support from the community.

However, corruption scandals, conflicts of interest, and power struggles within the African National Congress (ANC) further deepen the rift between civil society and public authorities. **Public authorities face the dual challenge of regaining the trust of citizens and fostering their civic engagement in territorial projects.** The eThekweni Municipality is particularly committed to strengthening the sustainability of its food system and has recognised the importance of involving communities in co-constructing solutions to ensure their long-term viability. While these ambitions are commendable, they only represent a small part of the food system, and there is no real constraint on industrial stakeholders to actively drive sustainable and equitable territorial development.

Civil society timidly supports the food transition through the development of third places, ecological markets, awareness of sustainable food, and social and solidarity initiatives. However, these actions are scattered and often disconnected from each other. **Better coordination of these initiatives would foster the creation of synergies to advance further and faster in the agroecological and food transition of the Durban territory and its region.** The possibilities for action in Durban are manifold, and the community draws inspiration from what is being done elsewhere in the world, but time is running out to establish the foundations of a sustainable food system.

INSPIRATION FROM ELSEWHERE

NANTES MÉTROPOLE - TERRITORIAL FOOD PROJECT

Nantes, France

The development of the Territorial Food Project (TFP) in Nantes Métropole is part of a proactive approach to agriculture and transitioning territories, including the Energy Transition roadmap, commitment in 2015 to the Milan Urban Food Policy Pact, selection as a winner of the National Food Program 2015, and signing in 2017 of the State-Metropolises Pact in favour of innovative projects and innovative facilities in the region (National Interest Market - NIM, Technocampus, etc.). Thus, as part of the call for projects of the national food program, the Metropolis began its reflection on the implementation of a Territorial Food Project in 2015, with the objective of strengthening the consideration of environmental issues through environmentally friendly production, preservation of landscapes and cultural heritage, and agriculture's contribution to the energy transition. The goal is to produce local, sustainable, and accessible food for all through various approaches, including: i) Strengthening the economy and employment (relocalisation of economic flows, value chains, attractiveness of the region), ii) Enhancing environmental considerations (environmentally friendly production including organic, preservation of landscapes and cultural heritage, contribution to the energy transition), iii) Promoting social cohesion and facilitating access to healthy food for all: mutual trust between producers and consumers, combating inequalities and malnutrition. The realisation of this TFP was also an opportunity for the metropolis to consult citizens and involve them in the reflections on this food project.

BORDEAUX MÉTROPOLE - SUSTAINABLE FOOD GOVERNANCE ADVISORY COUNCIL

Bordeaux, France

After extensive diagnostic work and participatory workshops, the Bordeaux metropolis established a Sustainable Food Governance Advisory Council (Conseil Consultatif de Gouvernance Alimentaire Durable) in May 2017, as part of its High Quality of Life metropolitan policy. The advisory council is composed of five stakeholder groups, making it the first institutionalised food policy council in France. The aim is to ensure the representation of all stakeholders in the food system, including public policies, food and agricultural production, food processing, food distribution, awareness-raising, advocacy, and support for changing consumer practices.

KEY TAKEAWAYS

REDUCING DEPENDENCY ON EXTERNAL SOURCES THROUGH SUSTAINABLE LOCAL AGRICULTURE

Exports play a significant role in the country's agricultural GDP and have earned it a reputation as the breadbasket of the region. The eThekweni municipality contributes 30% to the national agricultural production, but the predominance of the corporate model steers agriculture toward exports. South African agricultural policies focused on intensive and export-oriented agriculture leave little room for small-scale farmers. Despite representing 50% of the rural population in Durban, they receive limited subsidies to train in agroecology and organise into collectives. By doing so, the municipality would reduce its dependency on external sources and invigorate the local economy, which is marked by significant unemployment.

SUPPORTING AGRICULTURAL ENTREPRENEURSHIP

The economic challenges faced by farmers in South Africa, as in many countries, contribute to discouraging young people from pursuing agricultural vocations. The prospect of low income and the arduous nature of the profession are among the reasons pushing them toward rural exodus. South African agriculture is ageing, with the average age of farmers being 60 years old. Therefore, it is urgent to support small-scale producers and facilitate their access to markets. Establishing an equitable and ecologically sound local food system should create new jobs across all stages of the supply chain. It would also help combat youth unemployment by redirecting young people toward agricultural careers.

INVOLVING CITIZENS IN PUBLIC POLICIES

Inter-community conflicts have marked the contemporary history of South Africa. As a result, it is difficult to unite all communities around similar values to drive collective action, which is evident in the lack of coordination between initiatives for a transition towards a sustainable food system. In addition, there is a disconnect between the government and civil society following several corruption scandals, poor governance, and malpractices. The municipality of Durban must assume its role as a territorial facilitator and establish consultation mechanisms to create synergies among all stakeholders involved in food-related issues.

ADAPTING TO CLIMATE CHANGE BY PROMOTING ORGANIC AGRICULTURE AND AGROECOLOGY

The climatic conditions in Durban have been favourable, making it a rich agricultural region. However, climate change is altering the situation, with predictions indicating that the KZN province will be heavily impacted. Furthermore, the use of intensive methods, particularly in sugarcane cultivation, is accelerating the depletion of water resources, soil erosion, and water pollution. To enhance the sustainability of the food system, indigenous plants deserve to be valued. Additionally, a regulatory framework established by the government could facilitate the better development of organic agriculture. At its scale, the eThekweni municipality must rely on its agroecology unit to continue its efforts in promoting urban agriculture and environmentally friendly practices.

FIGHTING AGAINST FOOD INSECURITY

South African society is characterised by significant socioeconomic inequalities, resulting in food insecurity among the most disadvantaged groups. Moreover, the population residing in the 17 informal settlements in the municipality of Durban is marginalised from distribution channels due to spatial remoteness and very low purchasing power. This undernutrition leads to deficiencies and long-term health issues, particularly affecting children. It is therefore urgent for the Durban metropolis to implement food distribution programs (soup kitchens, nutritional programs in school canteens) for residents facing difficulties.

DIRECTING DIETARY HABITS TOWARDS A HEALTHY AND VARIED DIET

In parallel with undernutrition, 50% of the South African population is obese or overweight. The dominant dietary pattern is characterised by excessive consumption of ultra-processed and over-packaged industrial products. Consuming industrial foods distributed by supermarkets is the most common consumption habit. To address this issue, Durban must raise awareness among its population about the consequences of such a diet and promote the benefits of varied meals composed of organic and quality products purchased from conscious intermediaries.

REBALANCING POWER RELATIONS AMONG ACTORS IN THE FOOD SYSTEM

Agro-industrial value chains, increasingly concentrated and consolidated, dominate small-scale producers and processors. The South African system favours large producers and actors controlling capital and flows (wholesalers, distributors, banks, traders, insurance companies, processors, etc.). A handful of actors control the processing and distribution, enabling them to impose their conditions.

SUPPORTING COOPERATIVES AND COLLECTIVE INITIATIVES OF LOCAL PRODUCERS

In the face of pressure from large retailers, local producers have difficulty accessing marketing channels that reach the general public. Furthermore, the supply of raw materials is monopolised by wholesalers who source from other provinces. As a result, both grocery stores and street vendors have limited connections with local producers. The distance between them and the consumer base in Durban hinders the growth of selling organic and healthy products through short supply chains. By supporting initiatives such as Agrihubs and the Fair Food Company, the municipality of Durban contributes to the empowerment of small-scale producers. It must continue its efforts by financing the establishment of cooperatives, farmers' markets, supporting local farmers through public procurement, and subsidising collective transformation projects. Through such actions, producers will be better remunerated and more autonomous in the face of large retail chains.

GLOSSARY

ANC : African National Congress

BRICS : Brazil, Russia, India, China and South Africa

CIAP : Collective for Peasant Agriculture Installation

CO₂ : Carbon dioxide

DAFF : Department of Agriculture Forest and Fisheries

DARD-KZN : Department of Agriculture and Rural Development of KwaZulu-Natal

FAO : Food and Agriculture Organisation

IFOAM : International Federation for Organic Agriculture Movements

KZN : KwaZulu-Natal

MBFPMS : Municipal bulk fresh produce markets

NIM : National Interest Market

NEPAD : New Partnership for Africa's Development

SDG : Sustainable Development Goals

NGO : Non-Governmental Organisation

TFP : Territorial Food Project

GDP : Gross Domestic Product

RIAM : Network of Agroecological Initiatives in Morocco ("Réseau des Initiatives Agro-écologiques au Maroc")

SACU : Southern African Customs Union

SAFL : The Southern Africa Food Lab

SAOSO : South African Organic Sector Organisation

SCIC : Collective Interest Cooperative Company ("Société Coopérative d'Intérêt Collectif")

PGS : Participatory Guarantee System

UNESCO : United Nations Educational, Scientific and Cultural Organisation

WAVE : Women Adding Value to the Economy

WWF : World Wildlife Fund

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INTERVIEWS

Coral Vinsen, Vice President of Amnesty International Durban

Delwyn Pilay, Activist for the Slow Food movement

Ian Campbell, Co-founder of the Umbilo Business Forum

Jeremy Cole, Sugarcane, Timer and Macadamia Producer

Paul James, Director of LUMEC

Richard Dobson, Co-founder of the Asiye eTafuleni association

Rosemary Rodriguez, Coordinator of the women's group WAVE (Women Adding Value to the Economy)

Sbusiso Chamane, Director of the Agroecology Service, eThekweni Municipality

Steve Worth, Director of the African Centre for Food Security

Thobile Ngcobo, Project Manager for the Regeneration and Urban Management Program of the eThekweni city center, eThekweni Municipality

Vanessa Black, Research and Advocacy Coordinator at Biowatch

Vuyo Jayiya, Deputy Director of the Agribusiness Service, eThekweni Municipality

Walter Coughlan, Director and Co-founder of the Fair Food Company

Xolani Hlongwa, Co-founder of Green Camp Gallery

Xolile Mkhize, Nutritionist at Mangosuthu University of Technology

Zizile Yoliswa Jele, Student and Member of ENACTUS UKZN

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This assessment of Durban's food system was conducted by the association Let's Food as part of the Let's Food Cities project (2017-2021). Fourteen territories worldwide, including seven in France, are partners in this project. They now benefit from a detailed analysis of the food system in their respective territories and have collaborated and shared best practices to accelerate the food and agro-ecological transition together. All reports are available on the association's website: <http://www.letsfood.fr>

