



Léopold Ghins

Jill Bouscarat

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How should we understand sustainable food systems in West Africa?

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As food demand in West Africa surges and the region undergoes rapid change, questions loom large over how to support sustainable food systems, particularly for cities. For an effective policy dialogue, understanding the spatial structure of urban food supply chains, the impact of production on natural resources and changes in consumer preferences all matter, which must be grounded in local realities.

Population growth, urbanisation and higher incomes are causing a surge in food demand in West Africa. The share of the urban population is projected to go from the current level of 50% to almost 66% in 2050. In parallel, projections foresee that the value of regional food markets will rise from 263 billion USD in 2020 to 480 billion USD in 2030, continuously representing about 30% of regional GDP.

Will West African food systems be able to feed growing cities in a sustainable way? The question is attracting considerable global attention. International talks on themes like desertification, climate-smart agriculture, agroecology, urban agriculture or curbing food imports are intensifying in the run-up to the 2021 UN Food Systems Summit. Although the vibrancy of these discussions should be welcomed, they often focus on agenda-setting and fairly general recommendations on what needs to be done. There is insufficient attention to the emerging realities of the food sector in West Africa. Policy proposals frequently rely on a thin evidence base and remain poorly sensitive to local situations.

Feeding cities sustainably requires increasing the resilience of food supply chains while reducing their environmental footprint and ensuring consumers have access to healthy and affordable diets. This can only be achieved by taking the specificities and contexts of ongoing food systems transformations into consideration. In this regard, three transformations are particularly worth keeping in mind in the West African case: changes in the spatial structure of food supply chains, the increasing pressure on natural resources and changes in food consumption habits. They illustrate the urgent need to deepen understandings of food sustainability challenges and invest in data and evidence.

Mapping longer and more complex food supply chains

As cities grow bigger, food needs to be sourced from territories that are further away. In Nigeria, for example, most of the maize available on Southern urban markets now comes from the Northern regions, travelling more than 1,000km before reaching consumers. During the peak season in Ouagadougou, Burkina Faso, 60% of the city's food supplies cover more than 150km before reaching local markets.

Food supply chains are not only getting longer, but also more complex. Nodes appear within food supply networks as food markets in secondary cities grow bigger. The Bouaké market in Côte d'Ivoire, for instance, has become a major food trade platform through which large flows of bananas and attiéké transit before reaching Mali, and large flows of maize and yam transit before reaching Abdijan. About 45% of Abidjan's yam supply originates from Bouaké.

In addition to the emergence of nodes, food origins become increasingly diverse. Some products come from farther away, but there is also a strong development of short circuits. Horticultural farms mushroom in the vicinity of cities due to rising urban demand for fruits and vegetables. A case study conducted in Ziguinhor, a city with more than 200,000 inhabitants in Southwestern Senegal, shows how horticultural plots intertwine with built-up areas (Figure 1).



Figure 1. Horticultural plots intertwine with built-up areas in Ziguinhor, Senegal. Source: Diedhiou, Sy and Margetic (2016).

Managing natural resource use across rural and urban areas

Next to the changing spatial structure of food supply chains, the environmental impact of food production is booming. Existing mappings suggest that cropland in West Africa went from covering 10.7% of the land surface in 1975 to 22.4% in 2013. Land use maps reveal the extent of agricultural expansion (Figure 2) and more intensive and commercial farms are burgeoning after years of high food prices. In Ghana, the contribution of business-oriented, medium-sized (5-100ha) farms to national crop production value went from 20% to 43% between 1999 and 2013. These evolutions have important consequences for soil, water and biomass resources. The Food and Agricultural Organization of the United Nations estimates

that about 80% of farmlands in the West African Sahel are subject to land degradation and soil erosion.

Locally, fast urban development can disrupt the balance of ecosystems. A study of territorial dynamics in the Rufisque Department (Dakar neighbourhood, Senegal) shows that between 1978 and 2015, vegetal land cover decreased by 12%, water areas decreased by 54% and built-up areas increased by 476%. Urban waste is a major issue. On average for the biggest cities in Ghana, Côte d'Ivoire, Nigeria and Senegal, 10-30% of urban waste is dumped in uncontrolled areas. When unregulated, urbanisation threatens the quality of the soil, water, air and other resources that are used to produce food.



Figure 2. Evolution of land cover in Nigeria, 1975 (left) and 2013 (right). Agricultural land is in yellow. Source: CILSS (2016) .

Putting consumers at the heart of food sustainability strategies

A food system that is unsupportive of public health cannot be sustainable, if only because it considerably increases the costs of public health insurance. As is observed in other world regions, undiversified diets are often synonymous with intensive and environmentally unsustainable monoculture practices. 'Healthy diets, healthy planet', the slogan goes.

West Africa continues to suffer from the 'double burden' of under- and overnutrition. Undernourishment rates range from 5.5% (Ghana) to 37.5% (Chad). About 5% of the West African population is currently in need of food and nutrition assistance. In cities, obesity is spreading rapidly (17%) and so is the proportion of people overweight (more than a third in the region).

Regionally eating habits are also changing very rapidly. Economic openness, urban lifestyles and the greater circulation of people and ideas reshape local food cultures. Dishes from different West African countries and cities blend with one another. Simultaneously, corporate food giants like Coca-Cola, Kentucky Fried Chicken, Nestlé or Frito-Lay influence consumer behaviour and tastes. The changing food consumption landscape offers opportunities for food innovation and the promotion of terroirs, but also accelerates the diffusion of unhealthy eating habits.

Monitoring food systems transformations for agile sustainability policies

Understanding the spatial structure of urban food supply chains, the impact of food production on natural resources or changes in consumer preferences all matter when it comes to designing food sustainability policies.

Mappings of food flows in and out of cities are essential to resilience and the anticipation of shocks, natural (Covid, drought, locust) or man-made (border closures, conflicts). Such mappings are currently unavailable beyond a handful of case studies. Data on natural resource use is also scarce. Most existing indicators are region- or country-wide estimates, or come from one-off case studies, whereas effective natural resource management requires regular monitoring of water, soil and other biophysical resources from the local to the global level. Similarly, achieving healthy diets necessitates having a clear view of the latest nutrition trends and the role of changing consumption habits therein. The Nigerian Bureau of Statistics recently published data on household food expenditures, but in many West African countries such data is yet to be produced.

As of now, sustainability talks have hardly started to consider the latest food systems transformations in West Africa. A brief look into some of the salient aspects of these transformations reveals the extent of information gaps. Feeding cities in a sustainable way starts by taking local realities into consideration, and investing in data and monitoring tools that shed light on ongoing transformations and their implications for resilience, natural resources and health. Such evidence is also necessary to build a shared understanding of sustainability challenges in West Africa. Only with such an understanding will policy dialogue on feeding cities become truly effective.

More information on food systems and feeding cities in West Africa can be found on the OECD/SWAC website and in this recently published brochure.

Photo: 'Livelihood in Northern Ghana'. Weekly market of Chiana, Kassena Nankana District – Ghana. Photo by Axel Fassio/CIFOR. Licensed under CC BY-NC-ND 2.0.

About the author



Léopold Ghins

Léopold Ghins is a Policy Analyst at the OECD Sahel and West Africa Club. His work focuses on regional food systems, job creation and urbanisation issues. Before joining OECD, he worked for the FAO and the World Bank on agricultural and rural development policy reforms in several African countries.



Jill Bouscarat

Jill Bouscarat is a Research Consultant at the OECD Sahel and West Africa Club. She holds a Master's degree in development economics from Paris-Dauphine University. During her studies, she worked as a research assistant for the JPAL before joining the agricultural training division of the IECD (a French NGO) as assistant project manager.

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