

HOW CAN AGROECOLOGICAL FOOD SYSTEMS HELP IMPROVE NUTRITION FOR LOW-INCOME URBAN AREAS IN SENEGAL?

Nutrition Research Facility - February 2026

Senegal faces the double burden of malnutrition, marked by high levels of anaemia among women of reproductive age (53 % in 2019¹) alongside a growing prevalence of overweight and obesity (29 % nationally, and 41 % in Dakar²). An active agroecological social movement exists in Senegal, supporting all principles of agroecology including fairness, knowledge co-creation, connectivity, social values and diets as well as land and natural resources governance. There are several markets in Dakar and its periphery - including socioeconomically mixed neighbourhoods - that sell agroecological products. Agroecological products are foods produced using ecosystem-based practices with reduced chemical inputs or without, and are explicitly promoted as such. They are referred to in Wolof as “*mbey mu sell*”, meaning “healthy agriculture”.

Though there is evidence that agroecology has positive nutritional effects in rural areas, few studies have been conducted in African urban contexts, where low-income populations are particularly exposed to ultra-processed foods and unhealthy. As part of the *Knowledge and Research for Nutrition project* of the European Commission, the Nutrition Research Facility (NRF) conducted a [study](#) to examine the potential impact pathways between agroecological food systems and nutrition, with a focus on low-income urban women. This study highlights conditions for creating “win-win” solutions that improve diets while supporting sustainable food systems.

Key messages

1. Agroecological markets can reach low-income urban consumers provided that social principles of agroecology are considered. These should include equity, connections between producers and consumers and rights-based approaches.
2. Agroecology can improve urban nutrition through different ways, such as the types of food exchanged (fresh, diverse and healthy), increased farmer and vendor incomes as well as shared knowledge between vendors and consumers.
3. Agroecological markets in urban consumers’ food environment can improve nutrition but require stronger support from production to marketing of agroecological products.



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Methodology

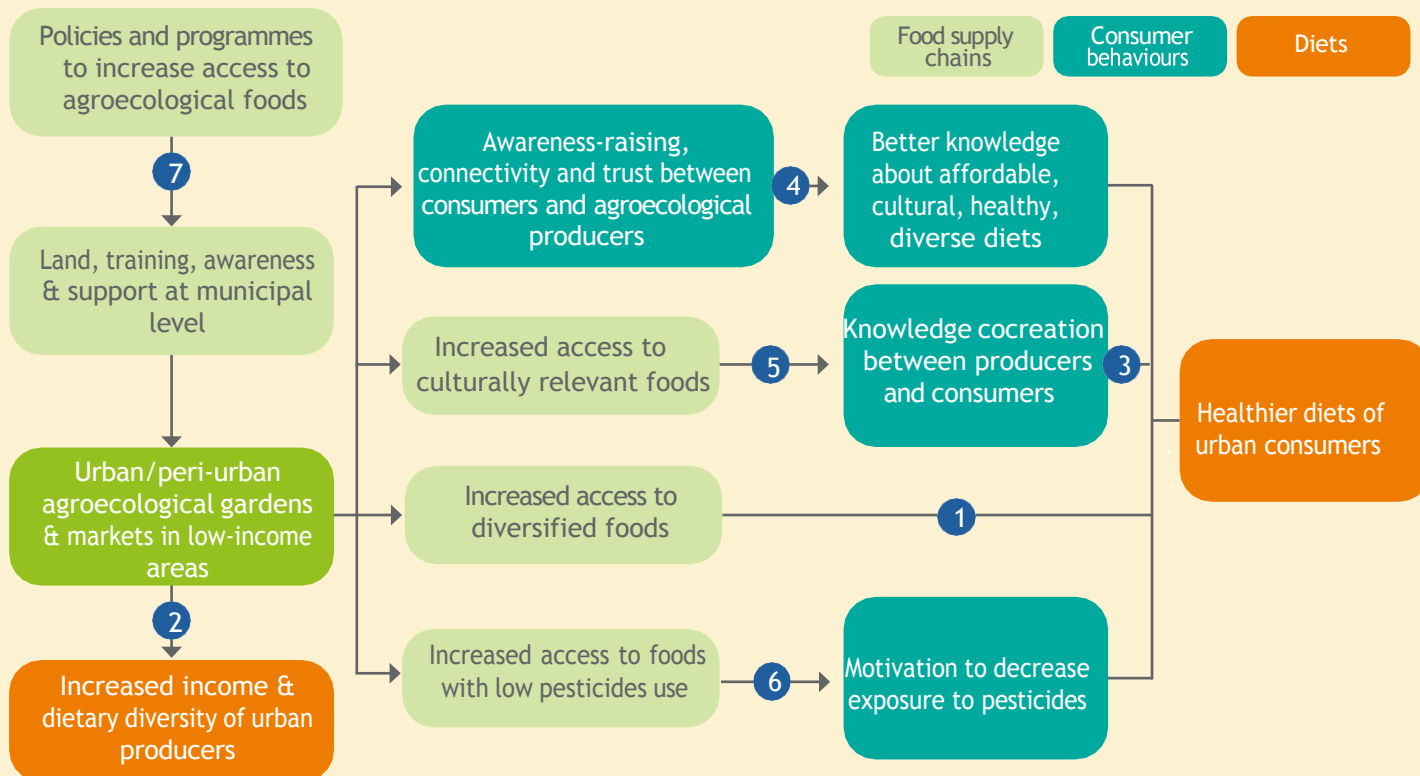
Based on a literature review on alternative food networks and preliminary fieldwork, 16 initiatives supporting the marketing of agroecological products in Dakar. Four of them were selected based on criteria such as location in low-income urban or peri-urban areas for in-depth semi-structured interviews (12) with farmers, vendors and development partners. Consumption behaviours were assessed by combining in-depth interviews of consumers and non-consumers of agroecological foods and of resource persons (39); focus group discussions (3); direct observations in six markets; and a quantitative survey with 180 women consumers of agroecological products in those markets.

This exploratory study examines the potential impact pathways linking agroecology and urban nutrition. It does not provide evidence of causal relationships between the consumption of agroecological products and nutrition outcomes. Findings, including the proposed conceptual framework, as well as recommendations should therefore be used as food for thought for the design of interventions that aim to support agroecology and nutrition.

¹ World Health Organisation (WHO). Prevalence of anaemia in women of reproductive age (aged 15-49), by pregnancy status. Global Health Observatory data repository. [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-anaemia-in-women-of-reproductive-age-\(15-49\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-anaemia-in-women-of-reproductive-age-(15-49))

² SECNSA (Secrétariat exécutif du conseil national de sécurité alimentaire). 2019. National Survey on Food Security, Nutrition and Resilience. Dakar. <https://anads.ansd.sn/index.php/catalog/187>

Figure 1: Conceptual framework for agroecology to improve the nutrition of low-income urban consumers and producers.



- 1 Agrobiodiversity:** urban consumers can access diversified vegetables, fruits, and herbs (including indigenous and non-indigenous varieties) in response to their health concerns.
- 2 Livelihoods & social empowerment:** increased incomes for farmers particularly empowered women farmers and vendors enable them to purchase more nutritious foods.
- 3 Local knowledge systems:** shared knowledge on food and nutrition practices (including food safety and cooking practices, such as using herbs and spices instead of high-salt bouillon cubes) between producers, vendors and consumers may contribute to healthier diets.
- 4 Participation & connectivity:** direct and frequent interactions between producers and consumers build trust and understanding of agroecology's health benefits, which can contribute to healthier diets.
- 5 Cultural foodways:** increased access to culturally relevant foods (e.g. mint, spices, local cereals) helps knowledge cocreation about their health benefits and use in culinary practices.
- 6 Reduced exposure to pesticides:** increased access to foods with low or no pesticide use reduces the risk of exposure to chemicals, for consumers and producers alike, and of diet-related diseases and other metabolic disorders such as diabetes, kidney disease, or cancer.
- 7 Rights-based approaches** (e.g. right to healthy food, food sovereignty): these approaches improve access to healthy food for all, including through land access for urban or peri-urban production, secured market spaces, and strengthened urban food governance (e.g. through Food councils) to "democratise healthy food".

Findings

Seven main ways through which agroecological food systems can contribute to improved nutrition in low-income urban settings have been identified and are illustrated in a conceptual framework that highlights their systemic and interconnected nature (Figure 1).

A growing demand for healthy food

Women consumers of agroecological products who were surveyed generally have a higher-than-average education level. They primarily purchase these foods to preserve their health (89% of the quantitative sample), followed by taste (63%) and avoidance of chemicals (34%). Many women decided to consume these foods preventively or after being diagnosed with a diet-related non-communicable disease such as hypertension or diabetes. Most surveyed women were overweight or obese (60%) and one third reported diet-related diseases, but more than half reported eating more fruits and vegetables since they visited the agroecological markets.

Local agroecological market initiatives show promise...

For nearly two decades, small-scale initiatives in Dakar have relied on short supply chains and direct sales, building trusted relationships between producers and consumers. They promote food without or reduced levels of chemical residues, including culturally valued products such as mint, spices, rice, and *fonio*, while remaining relatively affordable for diverse socioeconomic groups, including low-income households.

...but remain vulnerable to structural constraints

The potential for scaling up agroecological markets is constrained by low production volumes driven by limited land availability and a small number of committed agroecological producers. Strong seasonal variations reduce supply consistency and product diversity during the rainy season. In addition, physical access to the market remains a challenge for many consumers.

Price perception also plays a role

Agroecological product prices tend to be more stable as they are based on production costs rather than on market fluctuations. However, they can still be higher than those of the conventional market, depending on the season and on the product. This is reinforced by the widespread perception that “*agroecology is for the rich*”, which creates a social barrier that limits inclusiveness. While most interviewed women considered these products affordable, nearly a third highlighted that some financial effort was still required, indicating a persistent price barrier.

Lack of certification or official labelling

Trust relies entirely on interpersonal relationships and word-of-mouth communication. It strengthens loyalty within existing local networks but limits outreach visibility to new consumers. Without a guarantee system, these initiatives struggle to scale up and expand.

Enabling role of local and national authorities

The involvement of intermediary actors such as local or national authorities and non-governmental organisations has been essential to the emergence and sustainability of agroecological initiatives. Their support in providing human resources, training, access to land and market sites, and in strengthening food systems governance, plays a key role in the long-term viability and expansion of these markets.

Recommendations

There are six priority areas for intervention to strengthen the consumption of agroecological food products to address multiple forms of malnutrition among the low-income urban population in Senegal.

1. Supporting agroecological producers in urban and peri-urban areas to increase agroecological production and address seasonal supply shortages and issues that might limit production (e.g., lack of knowledge on agroecological practices to control pests during the rainy season).
2. Strengthening short agroecological food chains in low-income areas via small-scale infrastructures (storage, cold rooms), kiosks or mobile markets, collective price-setting mechanisms.
3. Supporting the production and consumption of agroecological products through public procurement, for example in the case of schools, hospitals, direct food aid, etc.
4. Raising public awareness and strengthening education on the health, cultural and livelihood benefits of agroecology through campaigns and events and adapting school curricula.
5. Improving food governance through urban Food councils, national action plans, and networks to exchange knowledge on agroecology and build trust (e.g., through participatory guarantee systems).
6. Investing more in participatory research on agroecology, particularly on nutritional impacts of urban interventions.



For more information:

<https://www.nutrition-research-facility-studies.eu/Agroecology-nutrition-Senegal>

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