NUTRITION *in* CITY ECOSYSTEMS

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CITY OVERVIEW
on food and nutrition

KENYA

Busia City

Swiss TPH
Swiss Tropical and Public Health Institute

ETH zürich

sightandlife

SAF Sustainable Agriculture Foundation

Schweizerische Eidgenossenschaft
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Swiss Agency for Development and Cooperation SDC

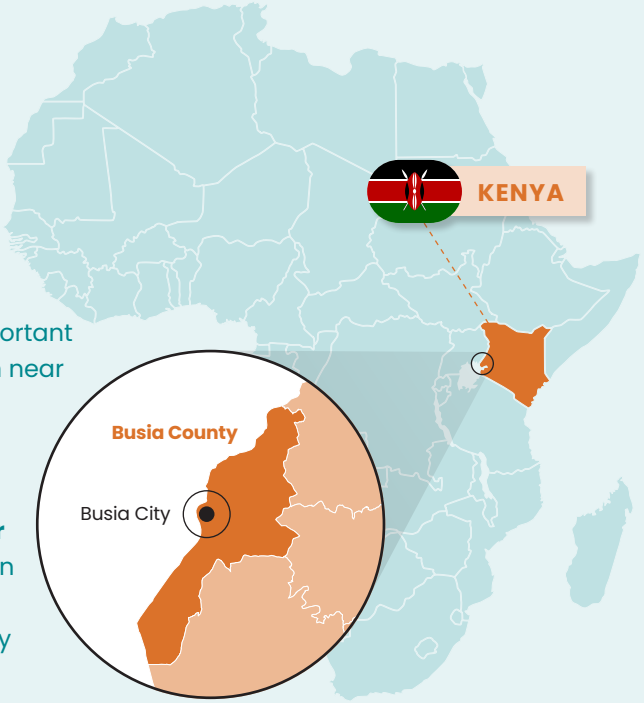
Basic facts

Busia City

Location

Busia City is located in western Kenya and is an important trade and transport hub due to its strategic location near the Ugandan border.

The climate in Busia City is **fairly moist,** receiving between 750 and 2000 mm of rainfall each year, with a **consistent temperature throughout the year** ranging from 21 to 27°C. This means that the northern parts receive higher precipitation rates compared to the southern ones near Lake Victoria, with January to June receiving relatively higher rainfall than July to December. 30% of Busia City is the **urban center,** while 70% is **peri-urban** and rural.[1]



Demographics

- **Population:** 113,753 people
- **Density:** 2,508 people/km^2
- **Average household size:** 6.7 people

Among the surveyed households, a substantial majority (78%) were **headed by men,** while only 20% were **headed by women** and 2% were **jointly led.**

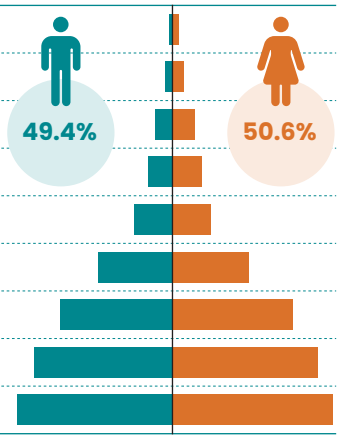
These figures must be considered against Kenya's broader context of gender inequality: in the **2024 Global Gender Inequality Index,** the country ranked 75th out of 146 nations, an improvement from its previous position of 77th in 2023.

The predominant ethnic groups in Busia include the **Teso and Luhya,** who have their own languages, though both **English and Kiswahili** are also spoken throughout the country.

Most are **Christians**, though there is a considerable number of Muslims, especially around the urban heart of the city.[1, 3, 4]

Age distribution [2]

Age	People	Males	Females
80+ years	7,648		
70–79 years	16,059		
60–69 years	32,793		
50–59 years	44,182		
40–49 years	62,304		
30–39 years	124,181		
20–29 years	189,624		
10–19 years	232,677		
0–9 years	259,294		



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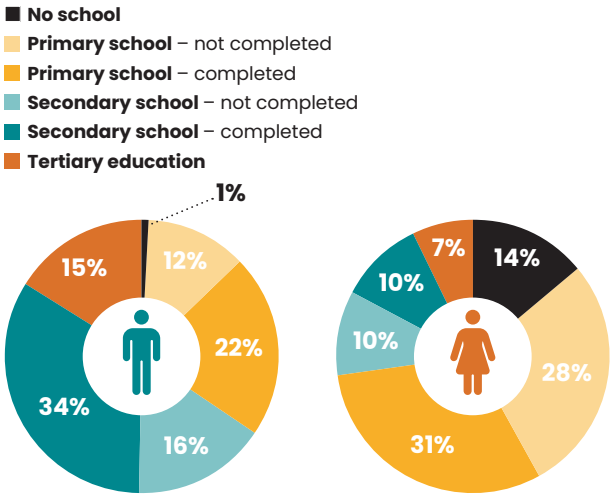
Household head education [5]



Living conditions

Many residents find life in Busia tough; a staggering 66% live below **the poverty line,** one of the highest rates in Kenya. Approximately 71% of the population relies on **subsistence farming,** while the remaining 29% pursue **alternative occupations,** such as trading and fishing.

Unemployment is also rampant at 66.7%. Additionally, a health survey conducted in 2022 revealed that only 31% of households had access to **basic sanitation,** while just 57% had access to **clean drinking water.** With the prevailing problems affecting the socio-economic landscape, proper nutrition and health care stand out of reach.

The socio-economic adversities are reflected in alarming health statistics for the Busia population.[1, 5, 6, 7]

General health statistics

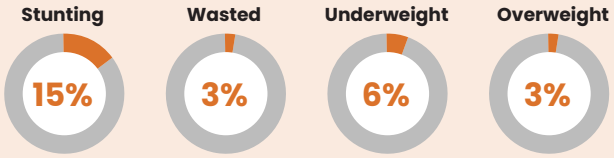
Health status

In Busia City, the socio-economic challenges manifest in alarming health indicators. The **average life expectancy** stands at 66 years for women and 59.5 years for men, while the **maternal mortality** rate is a staggering 273 per 100,000 live births. The **infant mortality** rate is also high at 34 per 1,000 live births. Moreover, only 14 % of the household populations have any **health insurance.**

While Kenya's National Health Insurance Fund (NHIF) is a government strategy meant to realize **universal health cover** for both inpatient and outpatient services in both public and private accredited institutions, only 11 % of the respondents in Busia City reported receiving it. This indicates huge challenges which the people face in accessing essential health services, thus increasing the health burdens among the vulnerable populations.[7, 8, 9, 10]

Key facts [8, 12]

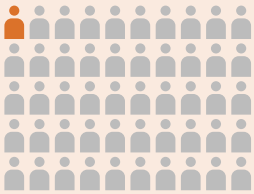
Health of children under 5 years (2022)



Chronic diseases (2022)*

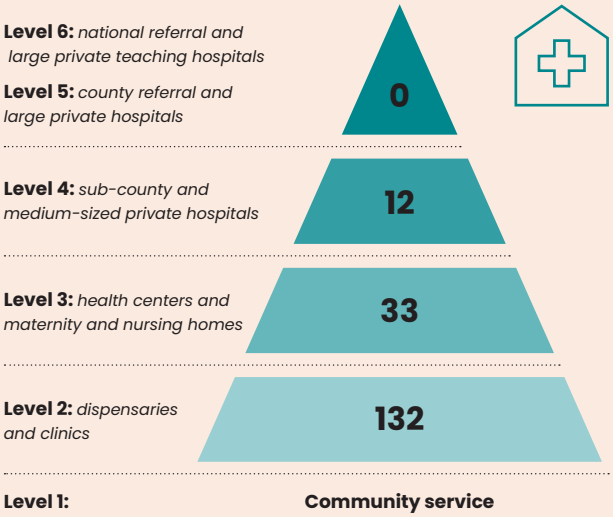
1 out of 5
suffers from Hypertension

1 out of 50
suffers from Diabetes



** sampling data for people between 21 years and 80 years*

Number of health facilities



84.3% of households have access to **healthcare services** whether public or private within 5 km.

The average out-of-pocket **outpatient expenditure** in Kenyan Shilling is 2,510 KSh ($19.45) while out-of-pocket **inpatient expenditure** is 612 KSh ($4.74).

The county has 12 **hospital beds** and 12 **healthcare workers** per 10,000 people which is ranked 28 and 26 within the country respectively.[11, 12]

The burden of **non-communicable diseases (NCDs)** in Kenya as of 2021 was estimated at 33% of **total deaths,** mainly due to cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases. Important modifiable risk factors include tobacco use, unhealthy diets, and environmental pollution.

The Kenyan government has launched a five-year **National Strategic Plan** (2021–2025) to reduce NCD morbidity and mortality through enhanced health systems, early detection, and risk factor management. It integrates policies for addressing the root social and environmental causes, adopts **multi-sector approaches** in ensuring healthy lifestyles, and reduces the health and economic burdens of NCDs.[9, 13]

Applying a systems approach to the

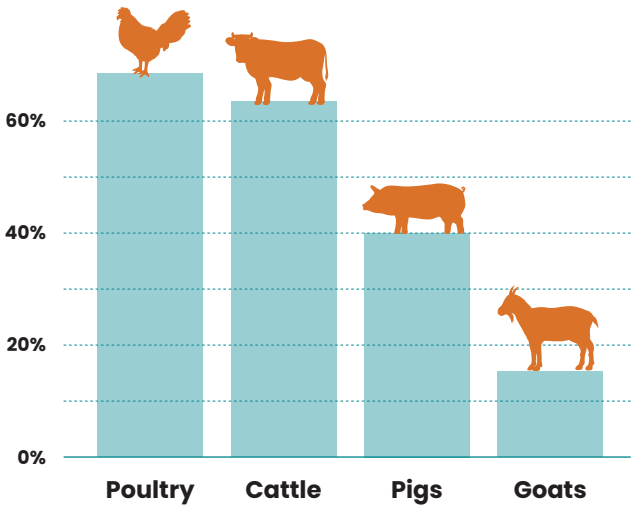
Farm to Fork logic

Production

Agriculture is the backbone of Busia's economy, accounting for 58% of the county's total earnings. While the agricultural landscape is diverse, 88% of households engage in **maize production,** which serves as a primary staple for locals. African Leafy Vegetables and cassava are further vital seasonal crops. Bananas (62%) and avocados (41%) stand out as the dominant perennial crops, contributing to both food security and local economies. Meanwhile, leguminous crops like beans (69%) and cowpeas (27%) play a crucial role in enriching soil fertility and offering protein sources to the community.

Livestock farming is a further key aspect, with poultry and cattle being the most common. Although diversity in livestock production has been limited, there is optimism for growth in dairy farming, thanks to new insurance options. The introduction of **crop and livestock insurance** by ACRE Africa has been a helping hand for a few smallholders providing a safety net and encouraging agricultural expansion. In our 2021 household survey, 6% of Busia City farmers reported to have received a **loan for agriculture.** This development is injecting new hope and stability into the local farming community, potentially transforming the agricultural sector in Busia City.[14, 15]

Household participation in the production of animals



Household participation in the production of crops

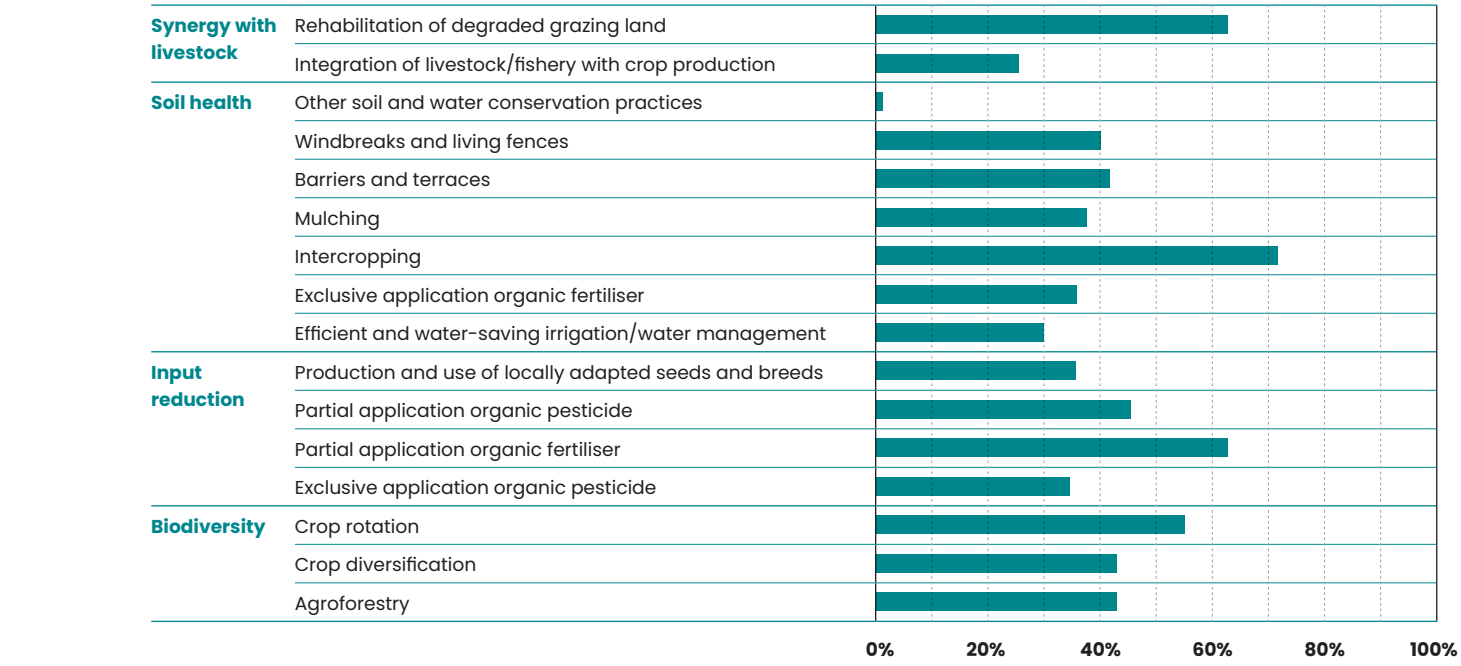
Seasonal crops[a] (Top 3)	% of households engaged in production	**Perennial crops**[b] (Top 3)	% of households engaged in production	**Leguminous crops**[c] (Top 3)	% of households engaged in production
Maize	88%	**Banana**	62%	**Beans**	69%
African leafy vegetables	65%	**Avocado**	41%	**Cowpea**	27%
Cassava	35%	**Mango**	39%	**Groundnut**	24%

*a) **Seasonal crops** are plants that are cultivated and harvested during specific times of the year.*
*b) **Perennial crops** are plants that live for multiple years and produce crops year after year.*
*c) **Leguminous crops** are plants are known for their ability to fix nitrogen in the soil, enhancing soil fertility.*

Farming and agroecological practices

Busia City shows diverse adoption of agroecological practices. **Intercropping** and **rehabilitating degraded grazing land** are popular, with over two-thirds of households using these methods. This suggests they could be effective starting points for expanding agroecology. Notably, a third of households use only organic fertilizers and pesticides, signaling a shift towards sustainable farming.[15]

Agroecological practices



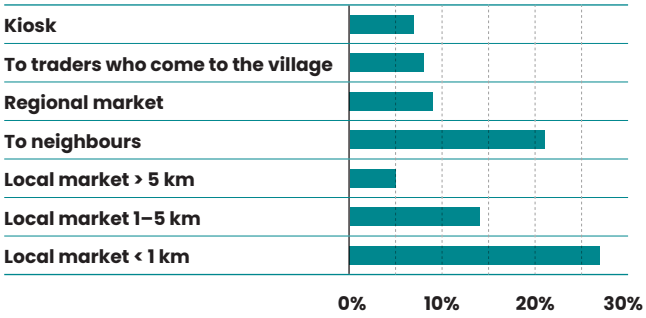
In Busia City, seed sourcing and soil management practices reveal an interesting mix of traditional and modern approaches. About 37% of households obtain seeds **from shops and markets,** while 25% practice **seed saving.** When it comes to **soil fertilization,** mulch leads the way, used by 67% of farmers.

Interestingly, both **synthetic fertilizers** and **livestock manure** are equally popular, each used by 61% of farmers, showing a balance between organic and conventional methods. This demonstrates farmers' strong inclination toward **self-sufficiency** while embracing sustainable and diverse agricultural practices. Many farmers produce their organic fertilizers on farms, highlighting a trend towards self-sufficiency.

Post-harvest practices, however, are less diverse. Most farmers, especially with staple crops like maize, opt for immediate consumption. In fact, 82% of households consume their maize **right away.** More advanced processing techniques such as cleaning, sorting, and packaging are less common, suggesting potential areas for improvement in post-harvest handling and value addition.[15]

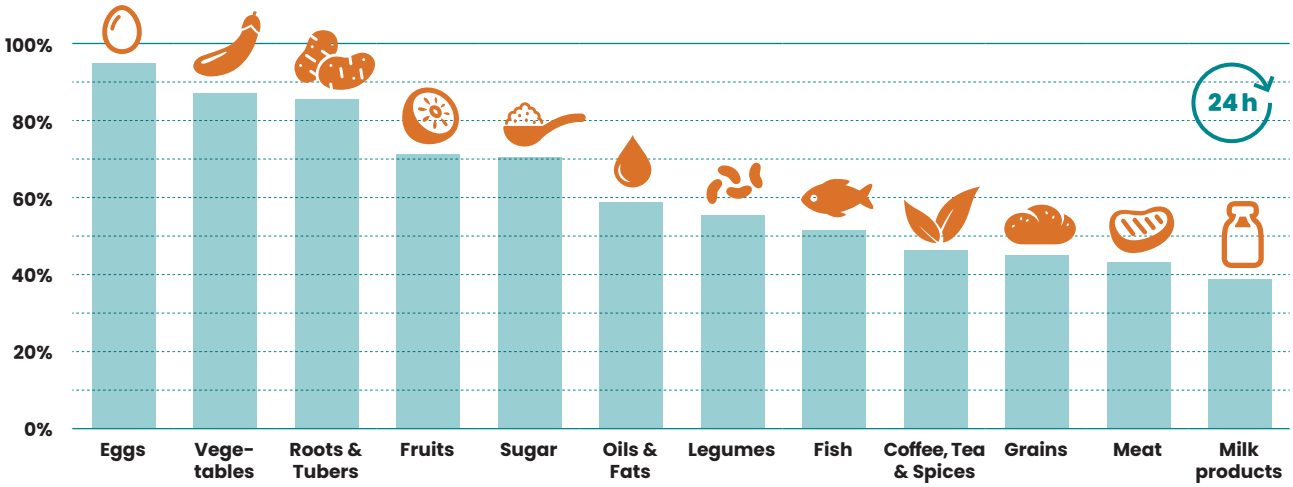
Selling locations

Most prominent selling channels/locations of farming output in Busia



Food consumption

Respondents' household food consumption patterns in the 24 hours prior to the survey

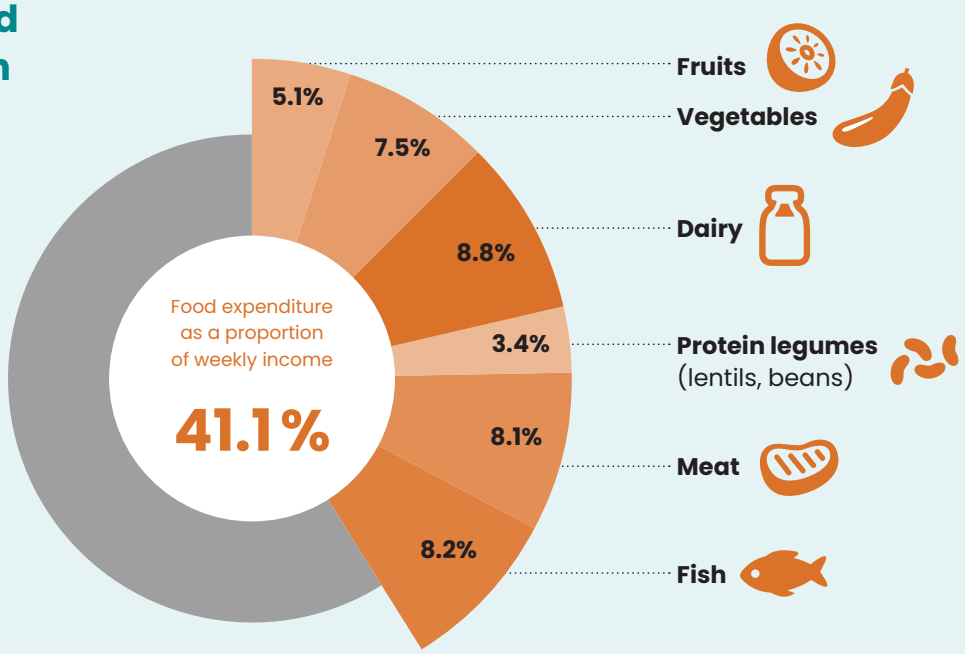


In Busia City, **local commerce** plays a vital role in the agricultural economy as it provides more than 65% of the total earnings. After measuring dietary intake through surveying, it was found most households prefer selling their produce either at nearby markets within a kilometer's reach or directly to neighbors, highlighting the importance of convenience and community ties in their trading practices. Local markets, particularly those within 1 km, are also significant, contributing around 15%. Sales to intermediaries or dealers are another key route. Other channels, like regional markets, kiosks, and group selling, play smaller roles in overall sales distribution.

The **dietary habits** in Busia City reflect a unique blend of local preferences and availability. Vegetables and roots and tubers form the cornerstone of most meals, with eggs emerging as a surprisingly prominent protein source – featured in the diets of an impressive 96% of households. Interestingly, other animal products like dairy and meat appear less frequently on local tables, consumed by only 39% and 44% of households respectively. This pattern suggests a diet heavily influenced by local agricultural availability and traditional food tendencies. Additionally, close to 20% of the total farming area in the county is used for **cash crop production.**[15, 16]

Purchase and consumption

Weekly household expenditure on food



Women, youth, and other vulnerable groups

In Busia, women and youth are pivotal in the local food system, especially in small-scale farming activities, yet often undervalued. **Women,** in particular, take an active role in decision-making around subsistence crops and small livestock, though their influence in cash crops is more limited.

Youth are actively engaged in farming, with 79% of households reporting at least one youth aged 10–35 involved in agriculture, with female youth showing more involvement in crop production compared to their male counterparts. The high participation rates of vulnerable groups in subsistence farming highlight the potential for increasing food security and improving nutrition, especially through targeted interventions focusing on agroecological practices.[15]

For more detailed insights into farming systems, please refer to the › Farmers Survey Report

Nutritional challenges

Food production

While there are a variety of crops grown, staple crops like **maize** and **beans** are still the majority, resulting in a lack of diversification in other food groups. Additionally, most of the food is consumed immediately after harvest. Processing techniques, including cleaning, sorting, and especially **packaging,** were not extensively utilized.[1, 15]

Dietary diversity

Busia City scored an average minimum dietary diversity of 4.5 out of 10 among **women of reproductive age.** Only 52.3% of women consumed at least 5 **food groups.** The consumption of at least 5 out of the 10 food groups is an indicator of a balanced and nutritious diet. At the household level, the average **dietary diversity score** was 5.7, which seems decent. However, this number can be misleading. The real issue lies in the lack of diversity in food production, which limits access to a wide range of nutritious foods, especially those rich in essential vitamins and minerals (**micronutrients**). Because of these production challenges, many households find it difficult to consistently meet their dietary needs, even if some manage to reach adequate diversity at times.[1, 15]

Climate effects

Drought continues to be the primary constraint for both crop and livestock production, with less than 1% of the county's arable land under **irrigation.** Furthermore, declining **soil fertility** compounds the issue, resulting in consistently low agricultural productivity.[1, 15]

Trade

Busia City, a major East African border crossing, relies heavily on food imports from Uganda and counties like **Kakamega, Bungoma,** and **Siaya.** The county's infrastructure is challenged by poor **road conditions,** with most being **unpaved.** During rainy seasons, inadequate drainage renders many roads impassable, hindering transportation and food distribution.[1, 15]

Food insecurity

In **Busia City,** only 20% of children are reported to be getting adequate **dietary requirements.** Nearly 54% of households faced **food insecurity,** unable to access preferred or sufficient food due to resource constraints or financial burdens. For instance, **food expenditures** account for 41% of weekly income, a challenge even more pronounced in rural areas.[1, 15, 16]

Policy environment

National

The National Food and Nutrition Security Policy – FNSP

First introduced in 2011, the FNSP emphasizes **food security** and enhanced **nutrition** for all Kenyans. It outlines strategies for dealing with **chronic and emergency food insecurity,** especially for the vulnerable groups like children and the elderly. It merges long-term development with crisis response and focuses on improvements in **food production,** addressing **malnutrition,** and accessing more food. This calls for **diversified diets** in the realization of **micronutrient deficiencies** such as **Vitamin A, iron,** and **iodine** deficiencies. This policy encourages **sustainable agricultural production** to enhance food security in Busia City and regions annually ravaged by unfavorable climatic and economic changes.[17]

Kenya Health Policy (2014–2030)

The policy lays a firm foundation in health enhancement through improved **nutrition** and **foods' safety.** The policy outlines how **nutrition at the maternal and child levels** is at the core, while it also relates to bigger contexts of general public health-advocating for **exclusive breastfeeding,** strategies for child survival, and early child development as some of the important building blocks of achieving its health objectives. The policy is thus very key in Busia City, where the rate of **stunting** among children has remained high, for interventions that focus on both preventive and curative nutrition services.[17]

National School Meal and Nutrition Strategy

This initiative was initially launched in the year 2017 and aimed at ensuring students get at least one **healthy meal** per day for success in school and overall well-being. This is thus a vital policy in Busia City, where **food insecurity** is among the major challenges facing many children.

It also supports local farmers by promoting the production of local foods into school meals and improves the state of **food security** by putting an end to over-dependence on external supplies. The approach is closely related to wider efforts by Busia City in trying to raise **nutrition** and public health; it forms a critical part of the city's strategy on health and food security.[17]

Kenya Climate-Smart Agriculture Implementation Framework (2018–2027)

This framework for **agricultural practices** focuses on enhancing productivity, promoting environmental sustainability, and building resilience. The policy entails the protection of poor farming communities, especially in Busia City and elsewhere, with the introduction of **climate-smart technologies** such as **drought-resistant crop varieties** and proper management of available water against unpredictable changes in climate. It also works to achieve equal opportunities for women and youth in using climate-smart agricultural tools, in addition to contributing to the improvement of **food security and nutrition.**[17]

Kenya Agri-Nutrition Implementation Strategy – ANIS (2020–2025)

Its core strategy is to bring down the rates of **malnutrition** through the stimulation of collaborative efforts by state and non-state actors toward assured community production and access to safe, varied, and **nutritional food.** It involves the integral **value chain of food** - from production to consumption - and focuses highly on aspects related to the improvement of the availability of **nutrient-rich foods.** This is also directly related to the objectives of the NICE project, ensuring that nutrition-sensitive agriculture will contribute to reducing malnutrition while at the same time enhancing **food security.** The ANIS initiative is designed to address nutrition deficiencies among Kenyans in a sustainable manner by linking agriculture and nutrition goals for improved long-term health and economic development.[17]

County

Busia County Nutrition Action Plan – CNAP (2018–2023)

CNAP is a localization of the Kenya Nutrition Action Plan implemented to enhance **nutrition outcomes** across sectors such as health, agriculture, and education. Its objectives are to enhance **nutrition-sensitive agriculture** through promoting the growth of **nutrient-dense crops** and improving **dietary diversity.** It also emphasizes governance and coordination at multi-departmental levels, such that **nutrition policy** is incorporated within the broad county development strategies. This is one of the reasons why the multisectoral approach of CNAP makes it an integral policy in improving food security and **nutrition** in Busia City.[17]

Agriculture Sector Transformation and Growth Strategy (2019–2029)

This long-term strategy targets the county level, promoting **nutrition-sensitive agriculture** through training of agricultural extension workers to integrate nutritional considerations into farming practices. It flags the integration of health and nutrition programs along with agricultural interventions, especially to improve outcomes for mothers and children. Given Busia's fundamental agricultural background, this approach leverages it to enhance **food diversity** and **nutrition** through agricultural reforms.[17]

Busia County Integrated Development Plan – CIDP (2023–2027)

The CIDP is an all-inclusive five-year guide to the development of the county. These are summarized under the key themes: **food security, sustainable agriculture,** and **biodiversity conservation.** Prioritizing **indigenous crops** will be in tune with the twin goals of Busia City for **nutrition** and **environmental sustainability** due to their importance for climate resilience and nutritional benefits. It also clearly outlines goals aimed at enhancing the utilization of indigenous crops, infrastructure development dealing with **food production,** and support to small-scale farmers.[17]

Busia County Fisheries and Aquaculture Bill (Draft)

The policy shall strive to promote **sustainable fisheries and aquaculture** within the region. Fish is a very good source of food that contains very important **proteins** and **omega-3 fatty acids.** While developing the local fisheries sector, the policy can enhance the quantity of affordable but quality animal protein in Busia City, while adding its effort to improve **food and nutrition security.**[17]

Final notes

Limitations

Despite the involvement of local city officials and the use of data generated by the NICE project, there remains a dearth of information that is focused solely on Busia City within the larger administrative unit. In cases where city-level data was unavailable, urban data from the broader administrative area or national data has been used as a reference.

Acknowledgments

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Further information is available on the **NICE webpage:** ❯ *nice-nutrition.ch*