



# NUTRITION *in* CITY ECOSYSTEMS

Project Factsheet 2025

## WORKING FOR HEALTHIER CITY DIETS





# Background

Sub-optimal diets are a global problem. About **one-third** of the world's population suffers from some **form of malnutrition**. Many countries face a triple burden: overnutrition, undernutrition and micronutrient deficiencies. While some of the population is overweight or obese, others suffer from stunting and wasting. The common cause is a lack of balanced diets of safe and nutritious foods.

Increased production of staple foods – in other words, of calories – reduces hunger. But diets often lack diversity. Many people cannot afford enough food that is rich in micronutrients. They do not eat enough fruit, vegetables and other sources of fibre, such as whole grains or animal proteins. In rapidly urbanizing areas, highly processed, nutritionally poor food is often more readily available.

Issues of food consumption are often accompanied by others related to its production. Modern agriculture has greatly increased productivity. However, mainstream farming often raises major concerns. These relate, for example, to degradation of natural resources, pollution and loss of biodiversity.

According to the United Nations (UN), 68% of the world's population will live in urban areas by 2050. Almost all the increase will occur in smaller African and Asian cities. A lot of the world's food grows on the fringes of towns; urban sprawl thus eats into farmland. However, many key actors in the food chain are also based in cities: input producers, food processors, traders and consumers. Nutritional challenges and the potential partners to solve them are heavily concentrated in urban areas.

City food systems are complex. They involve a wide range of interlinked activities. These include the production, aggregation, processing, wholesale and retailing of food, as well as its purchase, preparation and consumption.

# The NICE Project



The Nutrition in City Ecosystems (NICE) project forms part of the 'Thematic Section: Food Systems' of the Swiss Agency for Development and Cooperation (SDC). NICE aims to **improve nutrition and health**, and to **reduce poverty**. It does so by increasing both the demand for, and supply of, nutritious foods produced using agroecological practices. NICE focuses on 'secondary cities', away from the capital. These cities are good examples of the urban areas which the UN predicts will grow fastest.

## NICE works to realize three main visions:

- › Populations in city regions demand and access an affordable, healthy diet. This comprises nutritious, safe foods that are locally produced in line with sustainable agroecological practices.
- › Farmers and food producers, local enterprises and start-ups along the value chain encourage the entrepreneurship of women and youth. They respond to changing demand by increasing the supply of nutritious, safe foods to city markets.
- › City governments, the private sector and civil society improve food systems governance, collaborate across sectors, and mobilise resources for nutrition. They share lessons and best practices, and actively scale up the work involved.

## NICE and the Sustainable Development Goals (SDGs)

The NICE project facilitates locally led actions to improve nutrition for vulnerable populations in secondary cities. It does so through agricultural, food and health sector collaborations, as well as public-private partnerships. NICE puts strong emphasis on the empowerment of female and youth entrepreneurs.

### NICE addresses six of the United Nations' 17 Sustainable Development Goals (SDGs):

 <p><b>2</b> ZERO HUNGER</p>	By highlighting diet, and by increasing access to and encouraging use of nutritious local food.	 <p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>	By focusing on urban and peri-urban populations and by strengthening cities' food systems.
 <p><b>3</b> GOOD HEALTH AND WELL-BEING</p>	By improving the immune system and physical functions through diversified foods rich in micronutrients.	 <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	By promoting agro-ecological production and thoughtful consumption.
 <p><b>5</b> GENDER EQUALITY</p>	By empowering women as producers and sellers of healthy food and involving men in decisions on food purchases and preparation of nutritious meals.	 <p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>	By building and running multi-stakeholder partnerships, locally and internationally.



# Local focus, broader benefits

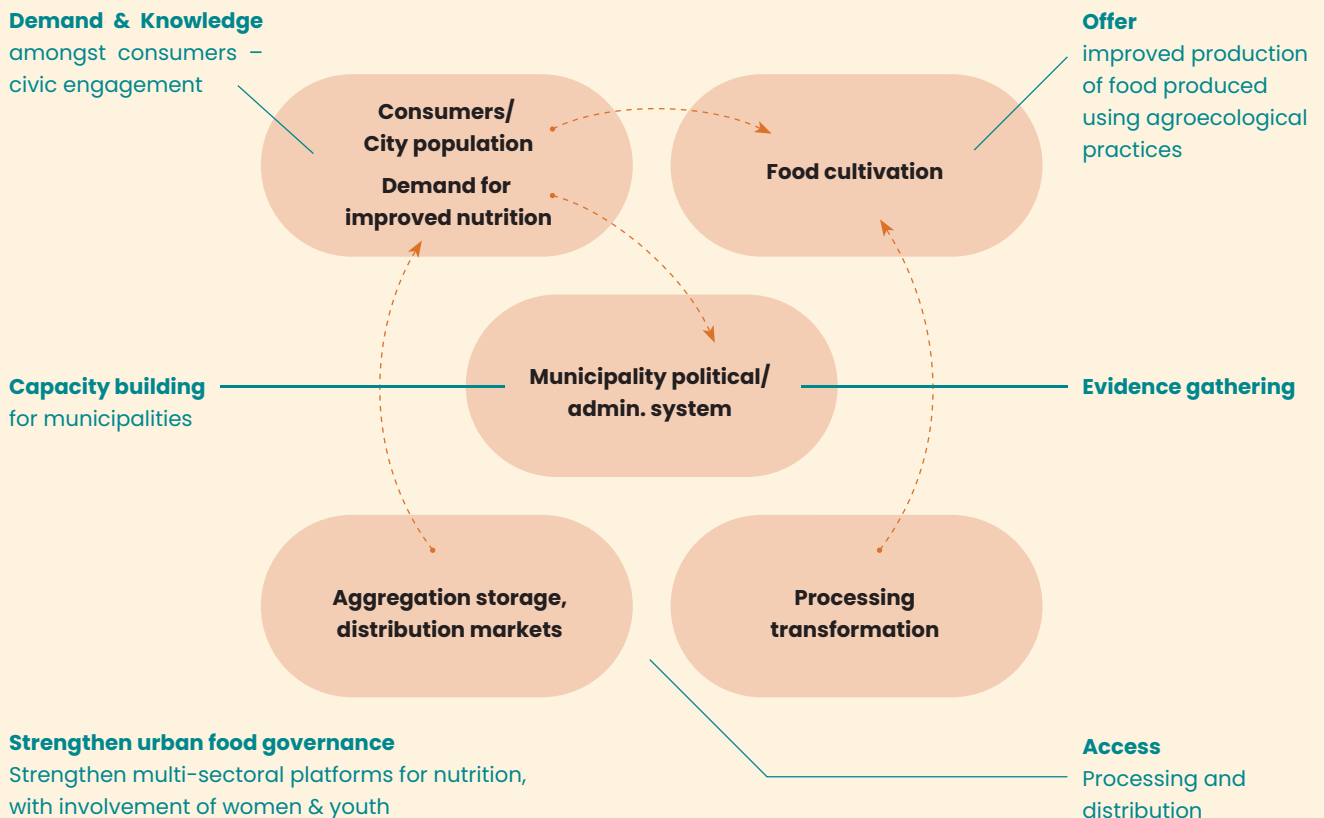


NICE takes a **'context-sensitive' approach**: The project addresses the local food system in each city.

NICE examines bottlenecks and seeks opportunities for change. Food system stakeholders play a key role in the resulting transformation. So do city authorities: Their approach to many topics substantially influences the availability, accessibility, affordability and acceptance of nutritious food. The figure below illustrates some of the interconnections.

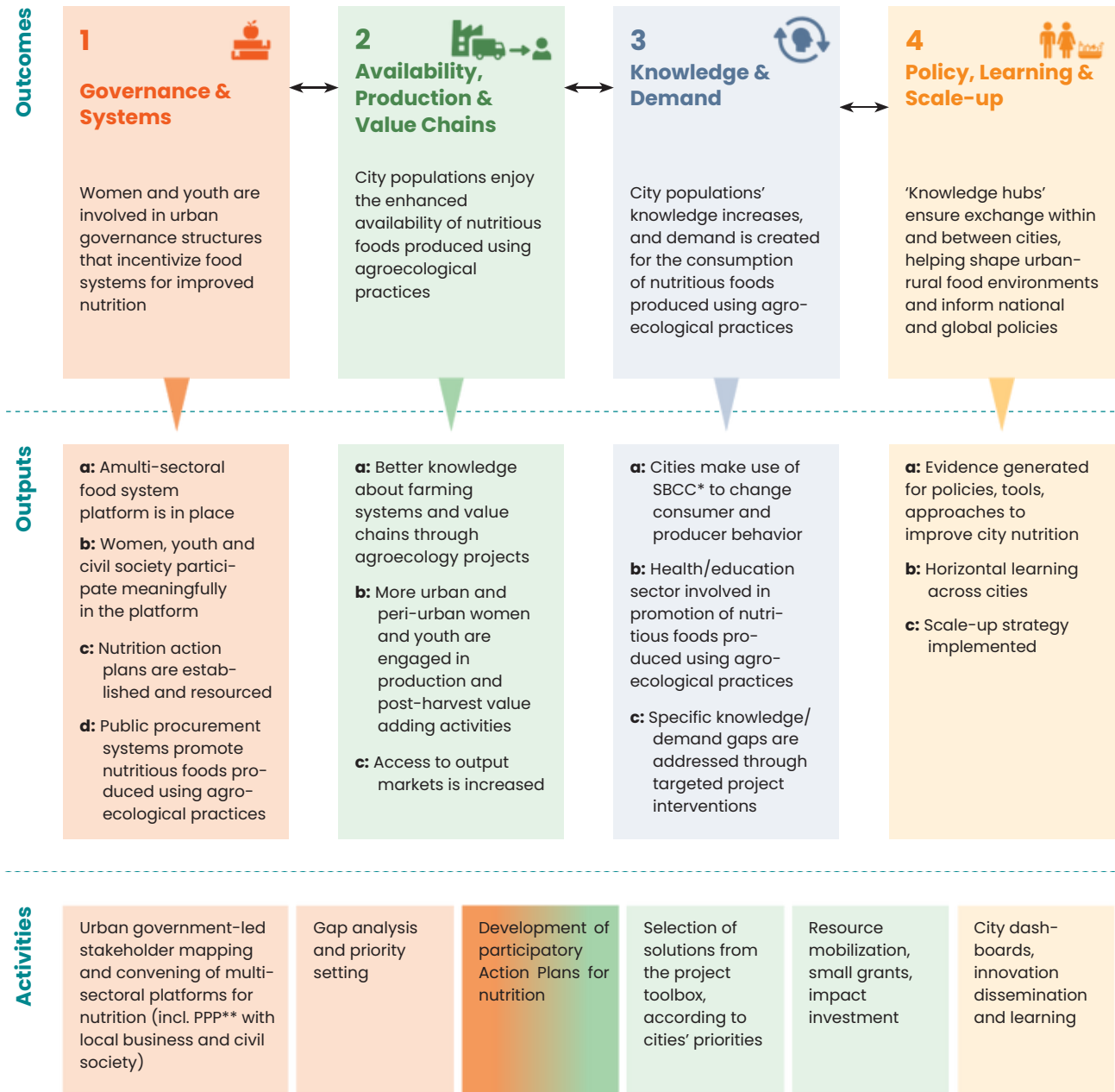
NICE promotes best practices based on latest evidence in nutrition, agroecology and the encouragement of behavioural change. NICE fosters both city-level and national ownership of food system transformation. The aim is for participating cities to channel their experiences into national policies and to share lessons across the country and beyond.

## Interlinkages between activities across city food systems in NICE



# Intended outcomes

NICE focuses on **four main outcomes**:



\* SBCC = Social Behavior Change Communication - \*\*PPP = public-private partnership

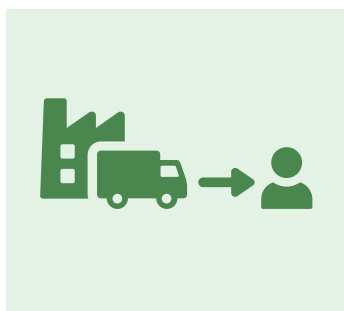


Social behaviour change communication campaign on the importance of good nutrition around the Mahoko city market in Rubavu

## The outcomes in **more detail:**



**Outcome 1: Strengthens food system governance**, in close alignment with national policies, and boosts the participation of women and youth. Building on the specific local situation, NICE brings different sectors together in a single platform. They include the municipal authorities, civil society and local business. The ambition is for each platform to be strongly city-led and anchored in a by-law or other formal mechanism. Nutrition Action Plans are developed, and local capacity-building helps mobilise public and private sector funding for their implementation.



**Outcome 2: Increases the availability and production of nutritious foods produced using agroecological practices** to tackle dietary deficiencies. NICE lays the basis by acquiring a good understanding of the agroecosystem in each city's 'foodshed'. It facilitates a participatory process to identify the key value chains. Outcome 2 also makes critical improvements to market access, storage, processing and value-addition along each chain. It pays careful attention to involving women and youth. Digital innovations help improve links all the way from farms to families.

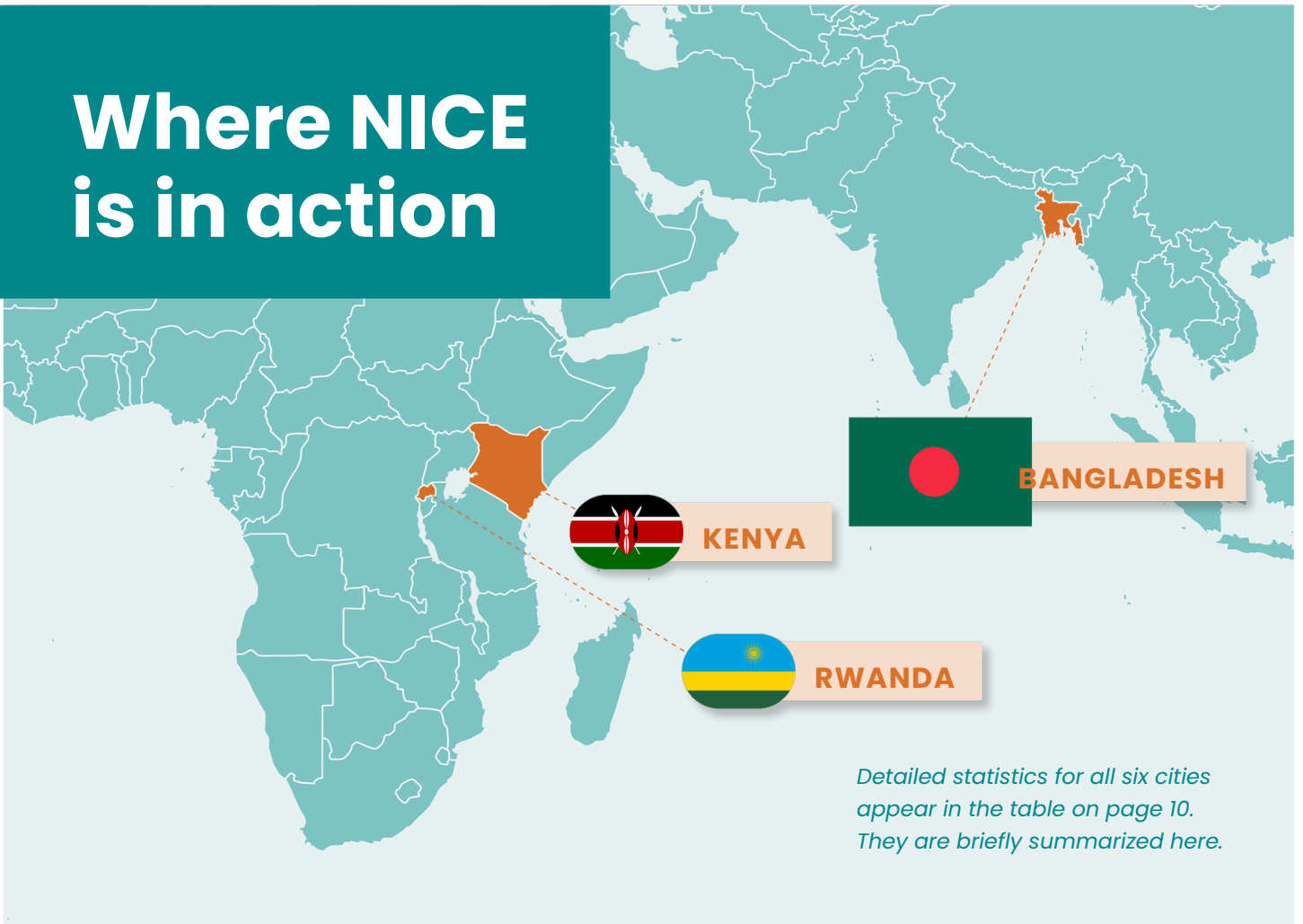


**Outcome 3: Stimulates demand for nutritious foods produced using agroecological practices.** Creating demand includes shifting the perception of city food consumers. Rather than being the beneficiaries of behaviour change interventions, city food-consumers become active change participants and promising purchasers. Local insights shape the demand creation strategy in each city. NICE engages the education and health sector as change agents and multipliers of new food habits. City inhabitants learn more about nutrition and adapt their consumption accordingly.

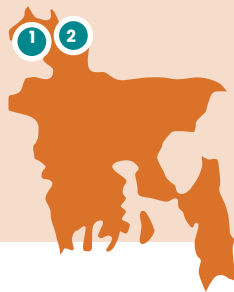


**Outcome 4: Consolidates city lessons and brings them to national level to shape policies and countries' nutritional environment.** The secondary cities serve as hubs for sharing knowledge with further cities in each country. 'South-to-South' exchange is encouraged between the countries and in international city networks. With time, the NICE cities will also link up with Swiss cities that are driving innovations in their own food systems.

# Where NICE is in action



## BANGLADESH



### 1 Dinajpur



Dinajpur is situated about 400 km northwest of the capital, Dhaka. Some 300,000 inhabitants live on only 24.5 km<sup>2</sup>. The project's main partner here is the municipality. The NICE 2021 baseline survey\* showed that food insecurity increased substantially during the Covid-19 pandemic. About 16% of children under five are stunted; almost half the women of reproductive age are overweight. Many women consume unbalanced diets. About 30% of surveyed women have Diet Diversity scores below five – in other words, their diets include fewer than five out of ten defined food groups.

### 2 Rangpur



Rangpur is also located in northwestern Bangladesh. Its population of nearly 800,000 is spread across more than 200 km<sup>2</sup>. The project's partner is Rangpur City Corporation. Here, too, food insecurity rose significantly during the pandemic. About one-fifth of infants are stunted; more than 40% of women of childbearing age are overweight. Women's lack of dietary diversity is similar to that in Dinajpur.

\* In Bangladesh, the baseline surveys examined 300 households in each city. In Kenya and Rwanda, 150 households participated per city.



# KENYA



## 1 Bungoma



Bungoma is located near Lake Victoria in Western Kenya, close to the Ugandan border. It has a population of around 270,000. The NICE partner is the County of Bungoma. Food insecurity, already high before the pandemic, increased to almost 89%. Under-5 stunting rates are lower than in Bangladesh, but a higher percentage of young women is overweight. Almost half the women surveyed have highly unbalanced diets.

## 2 Busia



Similarly situated to Bungoma, Busia has around 110,000 inhabitants living on 45 km<sup>2</sup>. The NICE partner is the County of Busia. Food insecurity before and after the pandemic mirrored that in Bungoma, but few young children were stunted. About half the women of reproductive age are overweight, a similar proportion scores low on dietary diversity.

# RWANDA



## 1 Rubavu



RUBAVU DISTRICT

In Rubavu, northwestern Rwanda, some 150,000 inhabitants live on 45 km<sup>2</sup>. The project's partner is the District of Rubavu. The COVID-19 pandemic left almost the entire population food insecure. Half the children under five are stunted, and more than 44% of young women are overweight. Almost three out of four women consume one-sided diets.

## 2 Rusizi



RUSIZI DISTRICT

The District of Rusizi, NICE partner at the other end of Lake Kivu, covers some 88 km<sup>2</sup>. Almost all its 70'000 inhabitants suffered from food insecurity after the pandemic. The infant stunting rate is over 28%; two-fifths of women of reproductive age are overweight. 60% of surveyed women have Diet Diversity scores below 5.

For more details about the cities, see the **factsheets**:

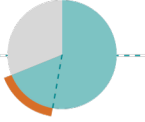
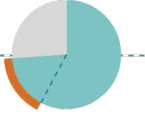
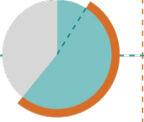
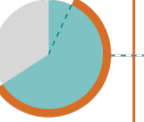
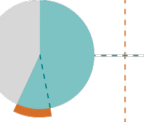
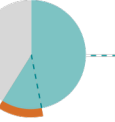


All photos are from consortium members unless otherwise indicated.

The photo on page 4 and the Rwanda photo on this page are from Alice Kayibanda/Swiss TPH/Fairpicture.



# Facts & Figures

	BANGLADESH		KENYA		RWANDA	
	1 Dinajpur	2 Rangpur	1 Bungoma	2 Busia	1 Rubavu	2 Rusizi
<b>Population</b>	300,000 <sup>a</sup>	800,000 <sup>a</sup>	270,000 <sup>b</sup>	110,000 <sup>b</sup>	150,000 <sup>c</sup>	70,000 <sup>b</sup>
<b>Urban area</b>	25 km <sup>2</sup>	206 km <sup>2</sup>	56 km <sup>2</sup>	45 km <sup>2</sup>	45 km <sup>2</sup>	88 km <sup>2</sup>
<b>% of inhabitants who own or access farmland</b>	69 %	74 %	61 %	66 %	57 %	59 %
<b>% of those whose farmland is &lt;2 acres</b>						
<b>Stunting rate for children under five</b>	16 %	21 %	13 %	9 %	49 %	29 %
<b>WRA overweight / prevalence</b>	49 %	42 %	51 %	49 %	44 %	41 %
<b>Diet diversity: MDD-W &lt;5 d</b>	29 %	29 %	47 %	48 %	73 %	61 %

**Stunting** is defined as height-for-age Z-score <-2 - **Overweight/obesity** is defined as BMI > 25 kg/m<sup>2</sup> - **WRA** = women of reproductive age - **MDD-W** = Minimal Diet Diversity for Women, based on consumption of ten different food groups - **HFIAS** = Household Food Insecurity Access Scale

<sup>a</sup> 2021 - <sup>b</sup> 2019 - <sup>c</sup> 2018

<sup>d</sup> Percentage of women consuming fewer than five out of ten food groups according to MDD-W and thus characterized as having a poorly diverse diet.

<sup>e</sup> Percentage of households defined as food insecure during COVID-19 pandemics (April-June 2021), based on HFIAS.

# Progress so far



**NICE has made a strong start in all three countries since it was initiated.** By early 2025, the project had advanced in areas as varied as demand and supply, governance, knowledge exchange and advocacy. The table below provides some examples.

## Achievements in 2021–2025

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### Evidence-generation

For all six secondary cities, NICE conducted research to inform the co-creation of locally led interventions.

- Examining the nutritional and socioeconomic status and the food consumption of 1'200 malnourished urban inhabitants (See > [Where NICE is in action](#)).
  - Surveying 900 farmers in the city foodsheds to understand their current and potential agroecological practices.
  - Interviewing a total of 90 urban women and 45 farming households about nutrition practices, including food purchase and preparation.
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### Food Systems Governance through multisectoral platforms

- NICE supported the successful establishment of multi-sectoral Food System Platforms in the Kenyan and Rwandan cities, and ran Food System awareness and capacity-building workshops.
  - In Bangladesh, NICE supported the successful establishment of a Municipality-Led Multi-sectoral Nutrition Coordination Committee in Dinajpur, following the example of Rangpur where a City-Led Multi-sectoral Nutrition Coordination Committee was already in place when NICE started.
  - Bangladeshi Food System Platforms / Nutrition Coordination Committees drafted and validated City Nutrition Action Plans Jan2023-Dec2025 with Rangpur City Corporation pledging an own contribution of BDT 3'000'000.
  - The platforms enable exchange with youth, farmers and other food system actors. Women, civil society and the private sector are represented in all cases. Peer-exchanges between in-country Food System Platforms have taken place in all the countries involved in NICE.
  - With oversight by the platforms, small grants schemes started in all six cities. These aim to improve vulnerable city inhabitants' access to more diverse diets.
  - Gender awareness trainings have been run in all the NICE countries.
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## Demand-generation

- In Bangladesh we launched “*Shukrishi*” – Good food is the future of good health, a major 1.5-months demand generation campaign including two rallies, group discussions with families, and farmers’ fairs involving more than 21,000 people.
- In Kenya we launched “*Tuelimike – Chakula Bora Maisha Bora*” (engl. *Good food, good quality of life*), a major 3-months demand generation campaign including market, health center, school, and farmers’ activations involving more than 13,000 people.
- In Rwanda, we launched “*Neeza*” – *All is well*” a major 3-months demand-generation campaign including market, health center, and farmers’ activations” involving more than 9,000 people.
- In Bangladesh, we established Nutrition Clubs in twenty urban schools per city, supporting them with training and support for an educational school nutrition garden that now generates sufficient fruit and vegetables to supply the poorer students that board with a more diverse diet.
- In Kenya, we support six 4-K clubs in Bungoma and Busia with training and inputs for educational school nutrition gardens that make use of agroecological practices and are having positive community spillover effects into the students’ family small-holdings.
- In Kenya and Rwanda, we provided nutrition sensitization workshops for Early Development Center caregivers, and are working with community health and nutrition officers.
- In all three countries NICE contributed to municipality-led nutrition awareness campaigns linked to World Food Safety Day, National Breastfeeding Weeks, World Food Day etc.
- Smart food tips to enrich local recipes with NICE value chains have been piloted and are now being rolled out

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## Production and Supply

- Based on 5–9 value chains per city, we have now established 100 Farmers’ Hubs in Bangladesh, 85 Farmers’ Hubs in Kenya, and 48 Farmers’ Hubs in Rwanda.
- We trained 6,528 smallholders (among them 4,165 women) in Kenya on Good Agricultural Practices and 5,839 farmers in Bangladesh (among them 2,682 women) on agroecological farming.
- In Rwanda, we trained 127 Farmers’ Hubs owners, network managers and local agriculture extension workers on (i) soil health, (ii) recycling, (iii) inputs reduction, (iv) production of composts, (v) liquid fertilizers and green manure, and (vi) black soldier flies farming and new technology for animal feeding – 33% of the training participants have been women.
- In Kenya, we have successfully implemented a Quality Management System as well as Food Traceability System across 96 clusters emerging from 10 Farmers’ Hubs and trained 80 traders specializing in vegetables and groundnuts so they can also talk to consumers about the quality and safety of their produce while interacting with consumers.
- We support closer supplier-consumer links through the subsidization of hygienically high-standardized mobile vegetable selling vans and street food carts as well as vegetable transportation vans collecting food at Farmers’ Hubs in Bangladesh and selling in the local cities.

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## Knowledge exchange

- Internationally, NICE runs regular ‘peer-to-peer’ learning sessions with officials from the different cities, as well as in collaboration with the UN Food and Agriculture Organization (FAO) Green Cities Initiative, and the AgriFOODLinks project.
- NICE convened stakeholders from all NICE cities as well as from Kisumu and Nairobi (Kenya) and Bambilor (Senegal) for exchange and peer learning.
- Other numerous project exchanges also included peer visits between 12 country managers and teams.

- We participated in various international conferences and fora sharing our experience among other also through dedicated sessions at Women Deliver, Micronutrient Forum, Geneva Health Forum and the NCD Alliance NCD Forum in Kigali in February 2025.
  - There have also been exchanges between the NICE cities and the Swiss cities of Zürich and Geneva NICE was cited twice with specific examples in the High Level Panel of Experts on Food Security and Nutrition (HLPE-FSN) of the World Food Security Committee, Report “Strengthening Urban and Peri-Urban Food Systems to Achieve Food Security and Nutrition in the Context of Urbanization and Rural transformation” that launched on July 2, 2024.
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## Policy dialogue

- NICE assessed food system-relevant policies in all three countries for “quick wins” in city regulations.
  - We’ve closely supported the government of Bungoma in drafting and validating its Food Safety policy
  - We have and are actively engaged and supporting the local governments in Busia, Rubavu, and Rusizi in the process of reviewing and drafting new County Nutrition Action Plans, County Agri-Nutrition Implementation Strategies, or District Plans to Eliminate Nutrition, respectively.
  - In Bangladesh, NICE successfully advocated for the formation of a new Standing Committee on City Nutrition and Food System at the municipality / city corporation in Dinajpur / Rangpur, overseeing among other duties the work of the respective Food System Platforms.
  - In Bangladesh, NICE has also organized two round tables on food friendly cities and to sensitive government actors on the WHO Framework for Public Procurement, attracting media attention.
  - In Rwanda, and Kenya we organized national stakeholder engagement events to further strengthen connection between local and central / national players in sustainable food system transformation
  - We took part in the International Agri-Food Network Roundtable: *Business Accelerating Gender Equality and Women’s and Girls’ Empowerment in Food Systems*.
  - In Kenya, NICE representatives participate in the local UN Food Systems Summit Dialogue.
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## Communication

- We relaunched our [website](#) and regularly informed about activities via various channels. These included social media and a photo exhibition.
  - NICE team members authored several peer-reviewed publications such as on [nutrition and agroecology, secondary cities \(2\)](#), [digitalization in food systems](#), and more importantly published our project outline as well as the findings from our nutritional and socioeconomic status baseline assessment.
  - We presented eleven posters at local and international scientific conferences ([ETH Food Days](#), [Geneva Health Forum](#), [AHN weeks](#), [NUTRITION](#), [Micronutrient Forum](#), [Conferences of the World Association of Public Health and Nutrition](#), [Science of Agroecology Days](#)).
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# The NICE Consortium

Overview of the Swiss public-private NICE consortium:

The infographic is divided into two main horizontal sections. The top section, 'Local government engagement', features six logos of local government entities: Dinajpur Municipality, Rangpur City Corporation, Bungoma County, Busia County, Rusizi District, and Rubavu District. The bottom section, 'Public-private partnership', features four logos of partner organizations: Swiss TPH, ETH zürich, sightandlife, and SAF Sustainable Agriculture Foundation. In the center, a circular graphic with four colored segments (orange, green, blue, and purple) surrounds a central image of a woman and a child in a field. Each segment contains an icon representing a different aspect of the partnership: a family, a factory, a truck, and a recycling symbol.

**Local government engagement**

**Public-private partnership**

**Swiss TPH**  
Governance, policies and systems  
› [swisstph.ch](https://swisstph.ch)

**ETH zürich**  
Agroecology, city region resilience  
› [sae.ethz.ch](https://sae.ethz.ch)

**sightandlife**  
Behaviour change communication & Social marketing  
› [sightandlife.org](https://sightandlife.org)

**SAF Sustainable Agriculture Foundation**  
Supply chains and markets  
› [susagfoundation.org](https://susagfoundation.org)

The Swiss Tropical and Public Health Institute works in global health and nutrition, with a focus on low- and middle-income countries.

ETH Zürich Sustainable Agroecosystems Group holds globally recognised expertise in agriculture, agroecology, food systems and city region resilience

Sight and Life is a global nutrition think tank, which fosters public-private partnerships for improved nutrition and develops viable social business models.

Sustainable Agriculture Foundation is an international NGO that supports smallholder farmers in Asia and Africa to improve their incomes, productivity, and resilience.

Further information, including city factsheets, is available on the **NICE webpage**:

› [nice-nutrition.ch](https://nice-nutrition.ch)

NICE forms part of the 'Thematic Section: Food Systems' of the › [Swiss Agency for Development and Cooperation \(SDC\)](https://www.sdc.ch).