# NUTRITION *in* CITY ECOSYSTEMS

# Shaping food systems through the co-creation of knowledge in cities

The current food system is failing to produce and deliver high-quality diets to meet the nutritional needs of more than 8 billion people worldwide. About a third of the world's population suffers from some form of malnutrition, and many countries face a triple burden of malnutrition, meaning the coexistence of overnutrition, undernutrition and micronutrient deficiencies.

The challenges of failing food systems get further aggravated by more and more people moving to cities. In city settings, poor diets often result from a mix of factors, including shifts in the food environment, e.g. easier accessibility to highly processed foods, and changing perspectives and behaviours toward more convenient food. Similarly, degradation of natural resources and pollution often go along with rapid and unplanned urbanization.

The Nutrition in City Ecosystems (NICE) project works to improve nutrition and reduce poverty by increasing the supply of and demand for nutritious food produced using agroecological practices in six secondary cities across Bangladesh (Dinajpur and Rangpur), Kenya (Bungoma and Busia), and Rwanda (Rubavu and Rusizi). The NICE project works closely with local governments at secondary city level and aims to facilitate locally led actions to improve nutrition through agricultural, food, and health sector collaborations and public-private engagements, with strong emphasis on the role of women and youth entrepreneurs *(see › Project Factsheet)*.

Activities for increased and improved production and demand generation for participatively selected food value chains are at the core of the NICE project:

> **Secondary cities** are geographically defined urban jurisdictions or centres performing vital governance, logistical, and production functions at a sub-national or sub-metropolitan region level. Generally, the population of secondary cities ranges between 10–50 % of a country's largest city.
>
> *Source: World Bank*

Besides organizing smallholder farmers around so-called Farmers' Hubs and enhancing training on agroecological and good agricultural practices, public nutrition education and social behaviour change campaigns targeting consumers are run. Additionally, stakeholders involved in food system governance are empowered and supported to better collaborate. Peer-learning and information sharing sessions are other important components of NICE aiming at empowering and inspiring individuals active in food systems with knowledge and skills to drive meaningful food system transformation.

This leaflet presents more information about the peer-learning work in NICE aiming that data on urban population-specific food system indicators guide city authorities' decision-making *(Figure 1)*.
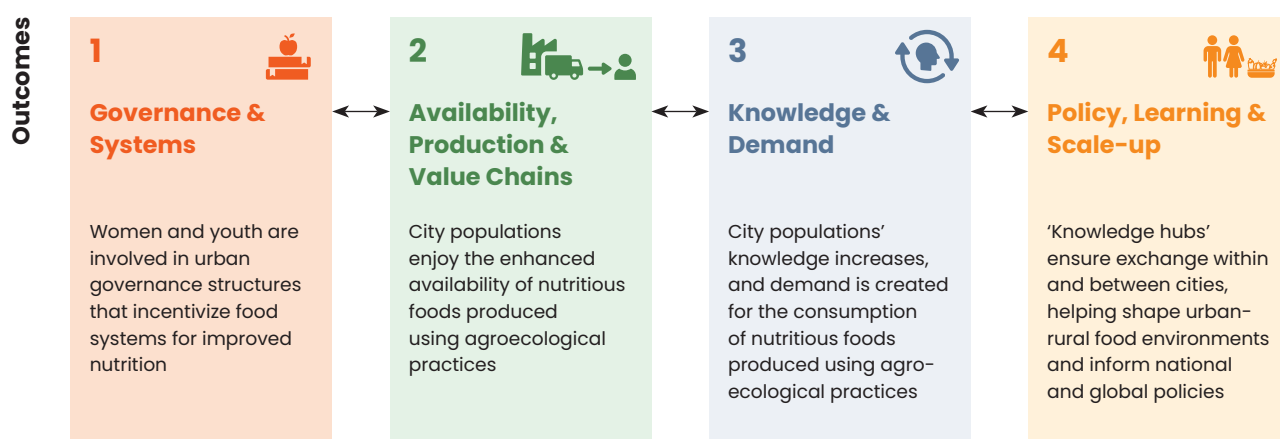
**Outcomes**

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| **Governance & Systems** | **Availability, Production & Value Chains** | **Knowledge & Demand** | **Policy, Learning & Scale-up** |
| Women and youth are involved in urban governance structures that incentivize food systems for improved nutrition | City populations enjoy the enhanced availability of nutritious foods produced using agroecological practices | City populations' knowledge increases, and demand is created for the consumption of nutritious foods produced using agro-ecological practices | 'Knowledge hubs' ensure exchange within and between cities, helping shape urban-rural food environments and inform national and global policies |

*Figure 1: The four main outcomes of the NICE project*

# Strategies for learning and scale-up

NICE seeks to inspire individuals active in the food system of the six NICE cities with knowledge and learning from the NICE project experiences and other similar projects. **This aims to empower local food system actors to drive impactful change through advocacy, with the potential to influence policy to foster a more significant and lasting impact on local food systems for improved nutrition.** To achieve this, a series of activities are implemented and documented, which are subsequently shared through the knowledge hubs *(Figure 2)*.

A core activity within this learning strategy is the organisation of **peer-learning workshops.** Peer-learning is a collaborative process where individuals actively exchange knowledge and insights with each other, fostering mutual understanding. Peer-learning workshops bridge the gap between on-the-ground experiences and advocacy, facilitating a more informed and responsive approach to decision-making. Individuals typically involved in peer-learning

**Agroecological practices** apply the concept of agro-ecology (utilization of ecological and social concept and principles in the design and management of sustainable agriculture and food systems) in agriculture. NICE specifically concentrates its efforts on five of the 10 main agroecology elements shaping sustainable food systems transformation: efficiency, recycling, diversity, resilience, and culture and food traditions.

*Source: FAO*

**Nutritious foods** are foods, that in the context where they are consumed and for the individuals that consume them, provide beneficial nutrients (e.g. vitamins, major and trace minerals, essential amino acids, essential fatty acids, dietary fibre) while being poor on potentially harmful elements (e.g. antinutrients, quantities of saturated fats and sugars etc.).

*Source: GAIN*

are "peers" belonging to a similar group or community. In the NICE peer-learning, "peers" refers to key stakeholders that are involved in the food system of a specific city [Topping et al., 2017].
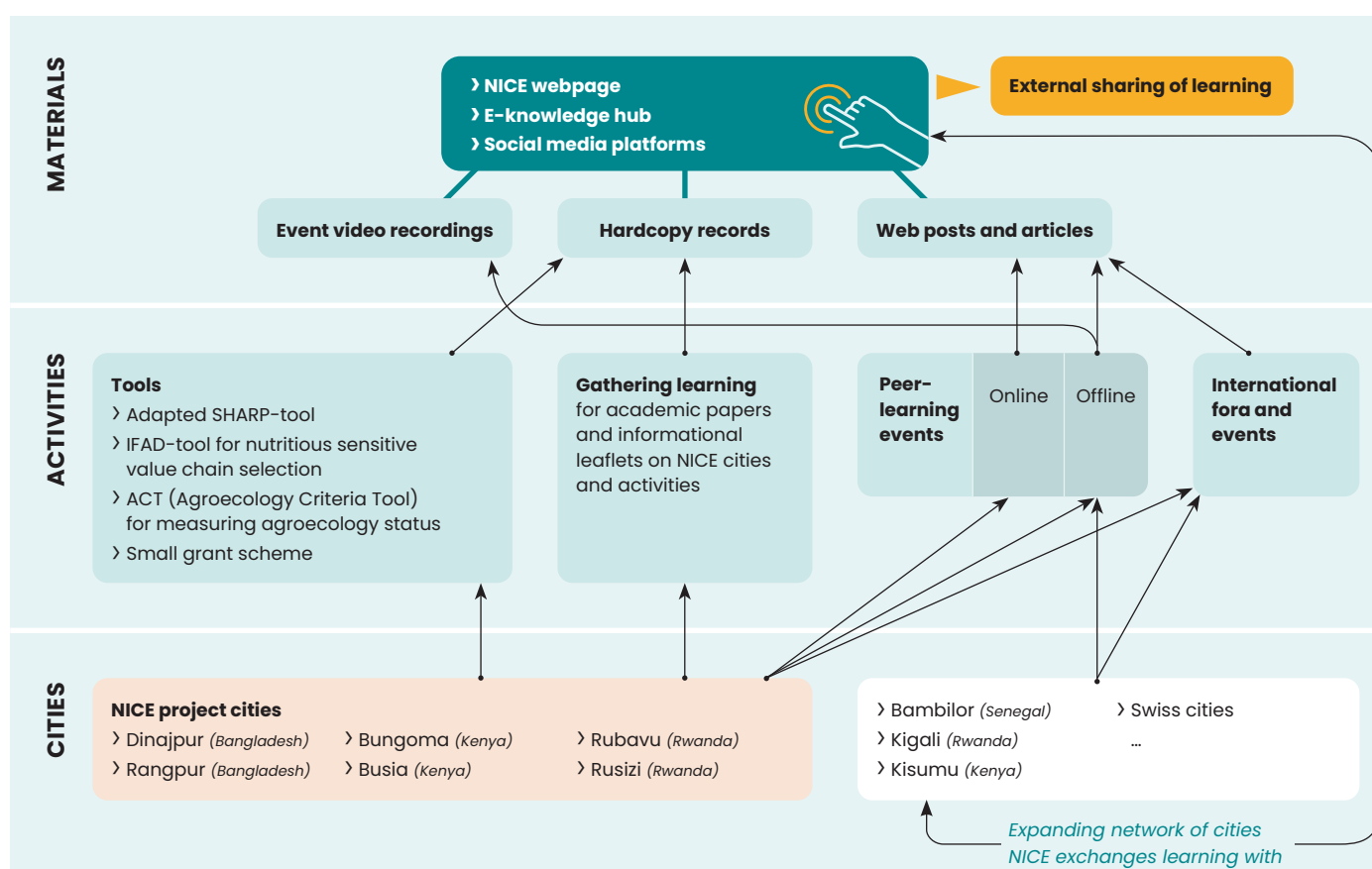


*Figure 2: Circulation of learning in NICE*

# In focus:
# The NICE city-to-city online peer-learning roadmap

NICE organizes a range of online and hybrid workshops occurring roughly every three months and spanning about two hours each. These workshops are designed to be progressive, each building upon the last. Workshop topics comprehensively cover various facets of food systems, specifically on the role of nutrition and agroecology. Workshop inputs consist of expert insights into theories and case studies, as well as interactive discussions centered around NICE learning in the cities *(Figure 2)*.

The online peer-learning sessions are led by experts from two departments at ETH Zurich: the Sustainable Agroecosystems Group and the World Food System Center. They have vast knowledge about food system transformation. The invited participants are actors relevant to the local food system of the cities, external experts who share and interact on food system theory and case study experiences, and the NICE project team.

At the local level, teams in Bangladesh, Kenya, and Rwanda, consisting of the country- and city managers, participate consistently. Delegates from local NICE city governments are actively involved on a regular basis, as are representatives from other similar cities in the NICE countries and local stakeholders who implement the NICE activities.

At the global level, insights from experts associated with the Food and Agriculture Organization (FAO), Global Alliance for Improved Nutrition (GAIN), and



*Figure 3: Rwandan food system stakeholders sharing experience and learning during an exchange between Rubavu and Rusizi in September 2023*

ETH Zurich, with expertise either in nutrition, agroecology, urban food systems, or public procurement, lay the groundwork for the peer-learning sessions. Annually, students from the ETH Zurich Food Security course contribute to the peer-learning sessions, bringing a thoughtful and engaging dynamic to the discussions. This diverse engagement strategy fosters an exchange of ideas and experiences within the NICE project's peer-learning network.

In a typical online peer-learning session, the group is split up into break-out rooms with a mix of participants from different cities. Experiences are shared and discussions held on: project implementation approaches, beneficiary feedback, lessons learned, and existing gaps. Facilitation within break-out rooms may involve tools like virtual boards. Facilitators share feedback from the break-out groups among all participants and make some concluding remarks. The NICE peer-learning agenda undergoes annual review, influenced by feedback from participants and the NICE leadership team.

**Topic roadmap** of the NICE peer-learning sessions:

1. Assessment tools for sustainability and resilience
2. Synergies between the NICE outcomes
3. Linking food and nutrition security with agroecology
4. Nutritious food consumption patterns through agroecology among smallholder farmers
5. 5-days in-person peer-learning workshop in Busia, Kenya, around the themes of governance, demand, and supply
6. The social principles of agroecology: exchanging on interventions in the NICE cities
7. Measuring agroecology: NICE results of the Agroecology Criteria Tool
8. From farm to fork: the crucial role of markets in food systems
   … more peer-learning activities in development
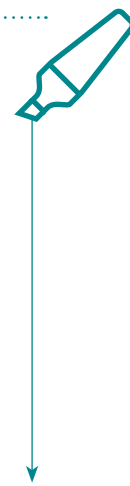
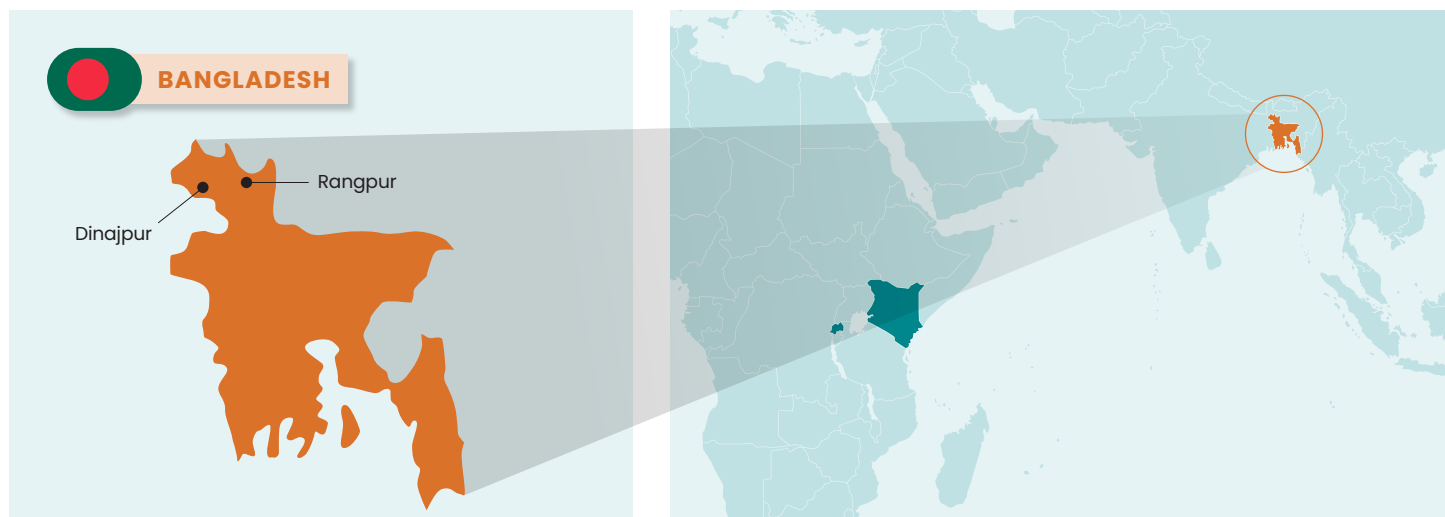# Roundtables in Bangladesh





*Figure 4: Entire panel of the roundtable on the pivotal role of women in transforming agrifood systems to enhance nutrition in secondary cities in March 2023 in Dhaka, Bangladesh*

Roundtables are an effective way to bring forward and open dialogue on food system topics. Organized with a diverse array of stakeholders from across the food system, they can ensure a representation of multiple perspectives on an issue and bring forward viable ways forward.

In Bangladesh, four such roundtables have been organized to date initiated by the NICE project. In October 2022, the first roundtable in Dhaka centered around the theme "Creating a Nutrition Vital City: The Role of Multisectoral Platforms." Following this, an

**Roundtables** are group discussions involving a relatively small number of participants who discuss or deliberate on a topic that is usually identified beforehand. The key principle underpinning a roundtable is that all participants are on equal footing.

*Source: Participedia, "Roundtable Discussion. Method." Accessed: Dec. 07, 2023. [Online]. Available: https://participedia.net/method/5309*

additional two roundtables took place, one in Dinajpur and the other in Rangpur in June 2023, with the topic: "Improvement of Health and Nutrition for Urban Residents through City Food Systems." In March 2023,

another roundtable held in Dhaka delved into the pivotal role of women in transforming agrifood systems to enhance nutrition in secondary cities. Women, together with youth, stand as the primary target groups of the NICE project. In this leaflet, we will discuss insights from the latter roundtable.

A key objective of the pivotal role of women in transforming agrifood systems to enhance nutrition in secondary cities roundtable was to share insights on the role of Bangladeshi women in agriculture and safe food production, with a focus on women's economic and social independence and stability. Emphasis was put on the challenges faced by these women and exploring potential solutions for overcoming them.

The event featured a panel of distinguished speakers representing various organizations and sectors, including the Syngenta Foundation for Sustainable



*Figure 5: Engaged statement on the need of women and youth empowerment in Bangladesh's agrifood system by Syeda Zinia Rashid from the Swiss Embassy in Bangladesh during a roundtable on the pivotal role of women in transforming agrifood systems to enhance nutrition in secondary cities in Dhaka*

Agriculture, the Embassy of Switzerland in Bangladesh, the Swiss Tropical and Public Health Institute, Farming Future Bangladesh, Sight and Life, the Food and Agriculture Organization, and the Bangladesh Institute of ICT in Development.

**Key outcomes** and **next steps** formulated by the panel of the pivotal role of women in transforming agrifood systems to enhance nutrition in secondary cities roundtable:

› Bring women into the governance of the agri-food system based on a comprehensive assessment of the entire food environment

› Empower women farmers to fully utilise their resources and having right over their income by addressing the gender gap

› Enhance training of women in modern production and marketing technologies

› Ensure women, youth, and children have access to a well-balanced and nutritious diet for a healthy generation

› Incentivize private sector investment in the capacity building of smallholder women farmers

› Invest in the next generation of farmers who are enthusiastic, educated and tech-savvy

› Develop nutrition education engaging farmers, women, and youth

> *"… Women comprise 50-60% of the farm labour force in Bangladesh, they still face significant challenges in accessing resources, services, inputs, and production assets such as land and livestock, compared to their male counterparts. This gender gap is a critical issue that must be addressed to empower women farmers to fully utilize their resources and have agency over their income."*
>
> *Syeda Zinia Rashid (Senior Programme Officer, Embassy of Switzerland in Bangladesh)*

> *"… women farmers in Bangladesh do not identify themselves as farmers but as helpers to their male family members. The study suggests that land ownership is a crucial factor in women recognizing themselves as farmers."*
>
> *U S Rokeya Akhter (National Gender Specialist, FAO)*

> *"As our food consumption habits continue to evolve towards more processed foods, there is a great opportunity for women to play a significant role in food processing and the agrifood sector as a whole."*
>
> *Pedro Andres Garzon Delvaux (Food system Policy Economist, FAO)*

## 5-days global in-person peer-learning workshop in Busia, Kenya
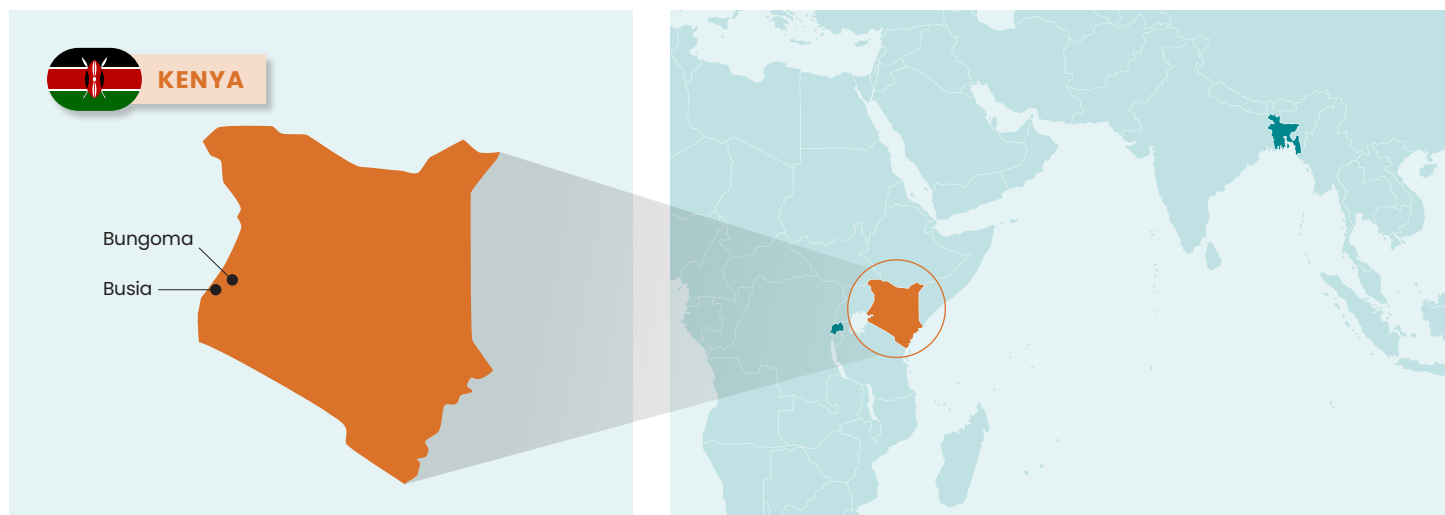


**KENYA**

Bungoma

Busia



*Figure 6: Participants to the 5-days global in-person peer-learning workshop in Kenya in February 2023*

**The global in-person peer-learning workshop** held in Kenya in 2023 stands out as the most significant peer-learning session conducted in NICE thus far. This face-to-face gathering, a rarity given the team's diversity across three continents, occurred from February 13th to 17th in 2023. The event attracted 45 participants coming from diverse professional and cultural backgrounds yet all having expertise in urban food systems.

The workshop programme was agreed between the city leadership, the Sustainable Agroecosystems Group and the World Food System Centre of ETH Zurich, and Food and Agriculture Organisation (FAO) headquarters, and made the link to the FAO Green Cities Initiative that works in Kenya in Nairobi, Mombasa and Kisumu. The opportunity was taken to involve the city of Bambilor from Senegal which is also part of the FAO Green Cities Initiative. Jointly with officials from all these cities, national partners from the Kenyan Ministries of Education, Health and Agriculture, FAO Kenya representatives, and the Swiss Embassy in Nairobi, the peer learning event involved visits to Busia and Nairobi. The peer-learning

locations provided a dynamic environment for learning and discussions on agroecology and nutrition, involving direct interactions with farmers and various stakeholders across the value chains. Under the food system governance theme, focus was put on the facilitation of multisectoral engagement from nutrition, health and agriculture, as well as from civil society and local businesses involved in food production, processing and sales. Here the NICE cities learnt in particular from Kisumu, Mombasa, Nairobi and Bambilor about their food city charters, school feeding initiatives, and anchoring of food system platforms through local legislation and by-laws.


*Figure 7: Exchanges about food (cultures) were an insightful additional asset of the global in-person peer-learning workshop in Kenya in February 2023*

**Key elements** **of the global in-person peer-learning workshop in Kenya included:**

❯ Discussions on Food System Platform functioning and city level perspectives by FAO

❯ Case study on leafy indigenous vegetables in school canteens by the Kenya Agricultural and Livestock Research Organization (KALRO) and how this has enhanced nutritious vegetable consumption in schools

❯ Case study on Sustainable Income Generating Initiative by Mundika High School

❯ Perspectives on school meals through public procurement by ETH Zurich

❯ Functioning of a social marketing campaign on nutritious food by Sight and Life

❯ Visiting a Farmers' Hub by Syngenta Foundation for Sustainable Agriculture

**Key take-aways** **from the in-person peer-learning workshop in Kenya included:**

❯ Sharing views and experiences among cities within the NICE project and with other stakeholders and similar projects empowered all participants

❯ Building of personal linkages and establishing trust to strengthen the network among the cities in the NICE project

❯ Encouragement of all cities in the project to deepen connections to other cities working on city region food system coordination

❯ NICE's alignment to FAO's Green Cities Network aiming to have 1000 cities joining by 2030

> *"Food system issues are quite complex. Therefore, having multi-stakeholder processes is a critical pivot towards sustainability and meaningful operations."*
>
> *Elizabeth Imbo (NICE country manager, Kenya)*

> *"We are really happy to be part of this network and we look forward to future synergies, how we can all engage and collaborate to ensure that we are leaving no one behind."*
>
> *Rebeccah Wanjiru (Urban Food System expert, FAO Kenya)*

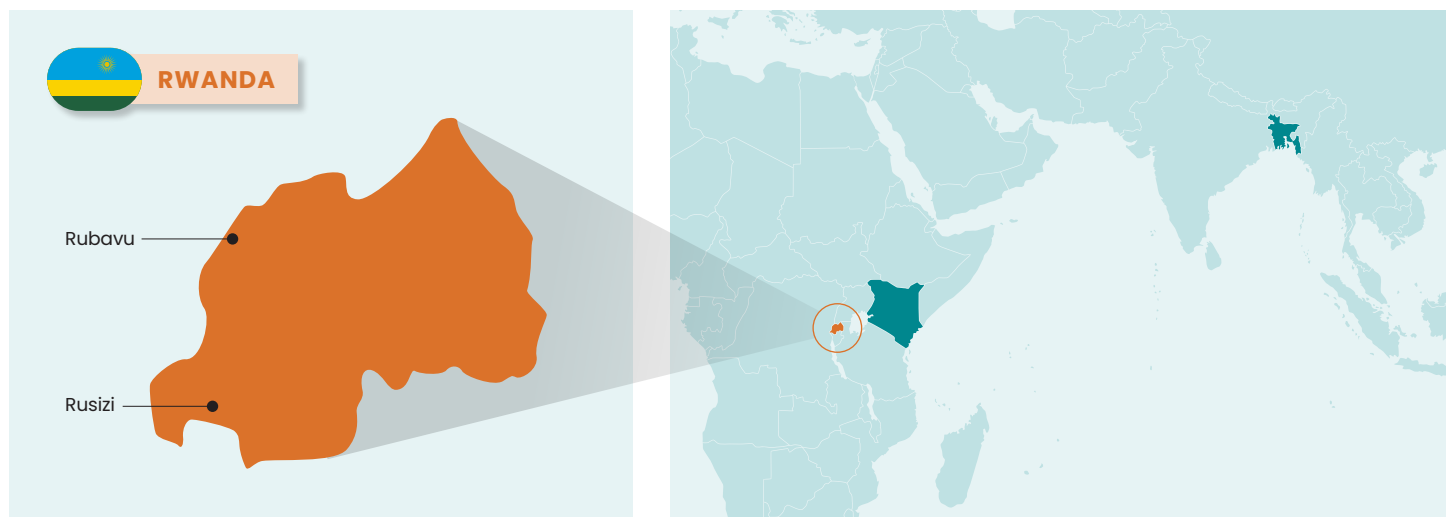# Peer-learning between food system platforms in Rwanda







*Figure 8: Panel discussion on the operational framework of food system platforms in Rwanda*

Food system platforms bring together people from various sectors who are active in a local food system. In Rwanda, both NICE cities, Rubavu and Rusizi, newly established food system platforms, with the support of the NICE project, in April 2022. Besides fostering collaboration and joint planning, the food system platforms are important fora for peer-learning between different food system stakeholders and their interdependencies. For more information on food system platforms and their functionality, see
› *NICE leaflet on Outcome 1.*

In September 2023, the two food system platforms of Rubavu and Rusizi met for a joint peer-learning among the two platforms in Karongi , Rwanda. After more than a year of existence and dealing with similar challenges such as limited recognition from senior and national level, the platform members shared their experiences for mutual encouragement and working on promising solutions and strategic avenues to ensure growth, ownership, and sustainability for the platforms themselves but also for food system transformation in general.

Learning from an already well-functioning food system platform in Bambilor, Senegal, le Comité d'Initiatives pour la Gouvernance Alimentaire (CIGA), was a particular highlight during this peer-learning event, fostering many encouraging discussions and reflections; CIGA successfully continues in Bambilor as a legal entity even though the FAO project supporting its establishment phased out.

**Key successes and opportunities as well as challenges encountered by the food system platforms in Rubavu and Rusizi include:**

**Key successes and opportunities:**

› Local government buy-in, as food security is a key priority for both the local District Development Strategy and the food system platforms
› Functional capacity building on food system thinking through the NICE project
› Diversified but complementary membership
› Members' commitments to collaboration and participation

**Key challenges encountered:**

› Complexity of the food system concept (food system ≠ food security)
› Limited leadership and governance structures in the food system platforms as roles and responsibilities in and for the food system platforms not yet familiar
› Setting up long-term growth and sustainability strategies
› Limited maturity to mobilize resources and partners

At their peer-learning event, the food system platforms of Rubavu and Rusizi also further elaborated their activity plans. Currently, they place primary emphasis on capacity building on the food system approach not only among their members, but also extending it to the educational sectors, including schools. Other planned activities mainly emphasize on capacity building on food safety in markets, with the outlook to work and push for food waste policies in the future. Furthermore, the members pointed out the need for formalization/ institutionalization of the food system platforms to support the interventions and interaction with cities' administration and other partners.



*Figure 9: Food System Platform members from Rubavu and Rusizi attending an in-person peer-exchange about the food system platforms' challenges and achievements in September 2023*

## NICE's support to local food system policy work

**In the Kenyan cities,** NICE has recently contributed to the County Integrated Development Plans (CIDPs), integral documents guiding developments over a five-year span.

More exemplary, in Bungoma, Kenya, NICE played a substantive role in the development of a food safety policy in 2023 while in Busia, Kenya, NICE contributed recently in shaping the County Agri-Nutrition Implementation Strategy (CANIS), conducted a workshop to review the Busia County Nutrition Action Plan 2018–2023 (CNAP) as a foundation for a new CNAP, and hosted the Busia Early Childhood Development Centres (ECDEs) Nutrition Policy workshop to formulate implementation guidelines for the ECDE Nutrition Policy.

**In Bangladesh,** NICE recently supported the installation of City Nutrition and Food System standing committees at the municipality/city corporation-level of Dinajpur and Rangpur, aiming to inform the nutrition and food system agenda of the cities.

## Concluding remarks and outlook

NICE seeks to inspire individuals active in the city food system with knowledge and learning from the NICE project experiences and other similar projects. The overarching objective of the Policy, Learning & Scale-up workstream of NICE is to facilitate a broader reach, ensuring that peer-learning activities not only resonate within the NICE cities but also prompt NICE city officials to disseminate their experiences to other national city networks. Recently, this commitment was exemplified when the mayor of Rusizi, a NICE focus city in Rwanda, contributed valuable insights at the Micronutrient Forum in The Hague in October 2023. Additionally, during the two-year reflection of NICE activities in Rwanda in a national stakeholder meeting held in Kigali, Rwanda, in November 2023, both mayors from Rubavu and Rusizi interacted with national stakeholders, addressing the achievements made and remaining challenges. This outreach could extend to exchanges with secondary cities in other countries, including Swiss secondary cities, drawing inspiration from models such as the Milan Urban Food Policy Pact to benchmark and enrich the collaborative journey.

Looking ahead to 2024, a major face-to-face peer-learning event will be held between the six NICE cities and cities in Switzerland that have developed an urban food system political agenda. The ETH Zurich's



*Figure 10: Rwandan youth packing carrots for transport*

Sustainable Agroecosystems Group and the World Food System Center will oversee the organization of this event. During this in-person event, participants from all NICE countries will share experiences of NICE in the first three years in plenary sessions with officials and experts from Swiss cities. Visits to agroecological citizen-led initiatives within and around cities will further inspire participants. Building on these interactions, a final plenary session will allow further exchange and reflections on ways forward to improving nutrition and reducing poverty by increasing supply and demand for nutritious foods produced using agroecological practices.

**Sources:**

K. Topping, C. Buchs, D. Duran, and H. van Keer, Effective Peer Learning: From Principles to Practical Implementation. Taylor & Francis, 2017.

Participedia, "Roundtable Discussion. Method." Accessed: Dec. 07, 2023. [Online].
Available: https://participedia.net/method/5309.

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Please note that all participants whose pictures are published have given their explicit consent.

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