



NUTRITION *in* CITY ECOSYSTEMS

January 2025

CITY OVERVIEW on food and nutrition



BANGLADESH

Rangpur City



Basic facts

Rangpur

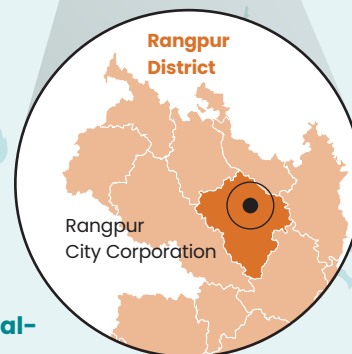
Location

Rangpur City is located in **north-western Bangladesh** and is the major urban center of Rangpur City Corporation. Situated on the banks of the Ghaghat River, it is surrounded by green agricultural fields. The area has **fertile plains**, ideal for growing various crops.

The city corporation has a **subtropical climate** with scorching summers, mild winters, and an average annual rainfall of about **2,498 mm**. The average high temperature ranges from about **22°C** in January to a sweltering **32°C** in the summer months, and the average low temperature ranges from **11°C** in winter to **27°C** in August. Blessed with **alluvial soil** and a **favorable climate**, Rangpur is well-suited for growing crops such as rice, jute, wheat, and potatoes. It also produces a delectable variety of fruits, such as mangoes, jackfruits, and litchis. Overall, Rangpur contributes significantly to **Bangladesh's food supply**. All kinds of vegetables, fruits, and crops are supplied to Dhaka, Chittagong, and other metropolitan cities.¹



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Demographics

- **Population** – Rangpur City Corporation:^{*}
796,556 people
→ 398,274 females (50%)
→ 398,282 males (50%)
- **Density:**
 - Rangpur City Corporation: 1,351 people/km² (*appreciably denser in urban areas*)
 - Rangpur: 3,445 people/km²
- **Average household size:** 4.6 people

^{*} 2022 census

The average household size in Rangpur is **4.6 members**, with approximately **93%** of households **headed by men**. This reflects a broader context where Bangladesh ranks **99th** out of 146 countries in the 2024 **Global Gender Inequality Index** – a significant drop from 59th in 2023. This decline is largely driven by a decrease in economic gender parity, particularly in areas such as income equality and women's participation in senior leadership roles, highlighting ongoing challenges in achieving gender equality at the national level.

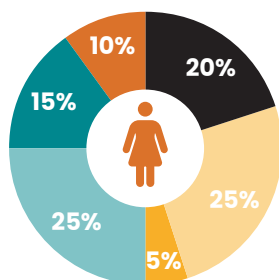
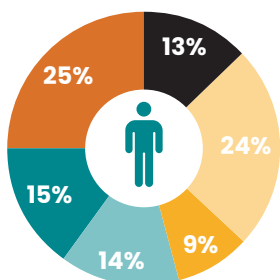
Rangpur is primarily inhabited by the **Bengali** ethnic group. Other indigenous communities, such as **Santal**, **Oraon**, and **Munda**, also inhabit the city. **Bengali** is the predominant language spoken, with regional dialects adding to the linguistic diversity within this region. **English** is used for official and educational purposes.

The population is predominantly **Muslim (90%)**, while **Hindus** make up **9%** of the community. The remaining population, includes **Buddhists**, **Christians**, and other **indigenous religions**, enriching the city's diverse culture.^{4, 5, 6}



Household head education³

- No school
- Primary school – not completed
- Primary school – completed
- Secondary school – not completed
- Secondary school – completed
- Tertiary education



Living conditions

Agriculture forms the backbone of Rangpur's economy with nearly **74%** of the workforce engaged in this sector. Of these, **71%** own **less than 12 acres of land**, and **22%** own **2 acres or less**.

While development has been ongoing for years, poverty remains a prime issue, with about **47%** of the population living **below the poverty line**.

According to a health survey in 2022, only **47%** of the population has access to safely managed **drinking**

water. Additionally, only **45%** of households have access to sanitary **toilets with a water seal**, and just **35%** of individuals possess basic **handwashing facilities** in their homes. **Boreholes** are the major source of drinking water in Rangpur, on which a staggering **93%** of households rely. These statistics highlight key areas that need infrastructural improvement, especially in water supply and sanitation services.^{3, 4, 7}



General health statistics

Health status

The average **life expectancy** in Rangpur is approximately **72.6** years for **females** and **70.6** years for **males**. However, the country faces significant health challenges. **Health insurance** coverage is rather low, with less than **10%** of the national household population covered. As a result, out-of-pocket health expenditures comprise approximately **67%** of the nation's **total health spending**.^{8,9}

Health infrastructure is considered underdeveloped in Rangpur, with around **8 hospital beds** per 10,000 persons, slightly lower than the national average of 8.3 beds. Moreover, there are only about **5 health workers** per 10,000 people, compared to the World Health Organization's minimum recommended number of 23 health workers per 10,000 people.⁸

About **65%** of households in Rangpur have access to **health services**, either public or private, **within a 5 km radius**. However, residents of the rural periphery and peri-urban areas face challenges due to poor road conditions and inadequate transportation. Rangpur has a total of **1,427.25 km** of **roads**, but only **382.25 km** are **paved**. During the monsoon season, rural areas find it even harder to access health facilities as roads sometimes become impassable due to floods.

Although Bangladesh has launched programs such as **Shasthyo Surokhsha Karmasuchi (SSK)** to improve health coverage for the needy poor, it is estimated that only **5%** of the **population in Rangpur** is covered under this scheme.^{8,9,10,11}



As of 2023, the global rates of exclusive breastfeeding for the first six months of life stand at 48%. In sharp contrast, Rangpur exceeds this figure with an impressive **52%** of infants receiving **exclusive breast-feeding** during this vital period.⁵

While underweight, stunting, and wasting are more common, the double burden of malnutrition cannot be overlooked, considering the presence of overweight rates. There is an increasing burden of **non-communicable diseases (NCDs)** in urban settings, and it is important to identify these connections.⁵

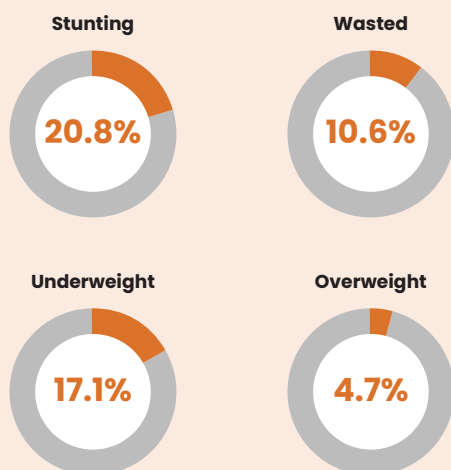
Non-communicable diseases have become a major source of ill health in Bangladesh, accounting for an

estimated **64%** of **all deaths** by 2021. The major contributors to the burden of NCDs include **cardio-vascular diseases, diabetes, cancers, and chronic respiratory illnesses**; many of them are causes of premature death.

This increasing prevalence of NCDs is attributed to risk factors such as tobacco use, unhealthy diets, physical inactivity, and air pollution. In response to these challenges, Bangladesh adopted **multisectoral action plans** to prevent and control NCDs by focusing on intersectoral collaboration in managing risk factors, emphasizing reducing the socioeconomic consequences for families and the community as a whole.^{5, 12, 13}

Key facts^{6, 7}

Health of children under 5 years (2022)



Maternal mortality



Pregnant women with anemia* (Hb<11g/dl)



Infant mortality



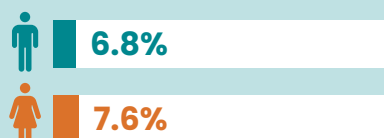
Low birth weight* (<2,500g)



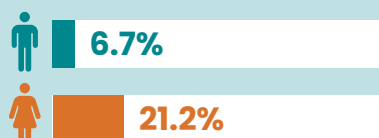
* measured at the antenatal clinics from January to March 2021

Prevalence of overweight

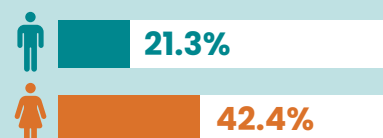
Adolescent 10–19 years



Youth 15–24 years



Reproductive age 15–49 years



Applying a systems approach to the Farm to Fork logic

Production

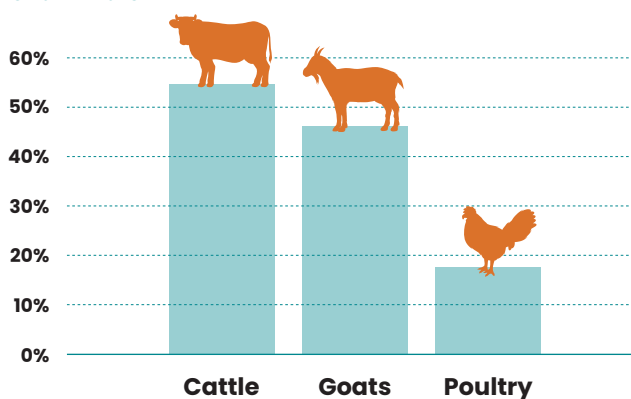
Agriculture is central to Rangpur's rural and peri-urban economy, with mixed farming systems predominating. Most households engage in both **crop cultivation** and **livestock rearing**, focusing primarily on cattle, goats, and poultry.

Staple crops like rice and potatoes dominate production, serving as primary sustenance for the local population. Beyond these staples, households cultivate a variety of **seasonal and perennial crops**, including vegetables such as brinjal and bitter gourd, and fruits like mangoes and litchis. **Leguminous**

crops like lentils and alfalfa further diversify the agricultural landscape.¹⁴

The introduction of **agricultural loans** by NGOs like **Asa, Podokhep, Grameen Bank, and Gak** has provided crucial support to smallholders, offering a safety net and encouraging agricultural expansion. Although only a small percentage (1.3%) of farmers have accessed these loans, this development injects new hope and stability into the local farming community, potentially transforming the agricultural sector in Rangpur.^{5, 14}

Household participation in the production of animals



Household participation in the production of crops

| Seasonal crops ^a (Top 4) | | % of households engaged in production |
|--|---|---------------------------------------|
| Rice | ➤ | 89% |
| Potato | ➤ | 69% |
| Brinjal | ➤ | 38% |
| Bitter gourd | ➤ | 19% |

| Perennial crops ^b (Top 4) | | % of households engaged in production |
|---|---|---------------------------------------|
| Mango | ➤ | 61% |
| Litchi | ➤ | 23% |
| Guava | ➤ | 18% |
| Lemon | ➤ | 21% |

| Leguminous crops ^c (Top 4) | | % of households engaged in production |
|--|---|---------------------------------------|
| Lentils | ➤ | 23% |
| Alfalfa | ➤ | 15% |
| Neem | ➤ | 15% |
| Soya bean | ➤ | 8% |



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 known for their ability to fix nitrogen in the soil, enhancing soil fertility.

Farming and agroecological practices

Rangpur's farming households employ various agro-ecological practices focused on sustainable and input-reducing methods. A significant majority use partial **organic fertilizers** (87%) and **organic pesticides** (67%), reflecting a commitment to reducing chemical inputs. Over a quarter of households (28%) practice **crop rotation**, promoting soil health and biodiversity. While 56% of farmers adopt **new crop varieties**, there is a strong preference for traditional livestock breeds, with 71% of households raising local **animal breeds**.¹⁴

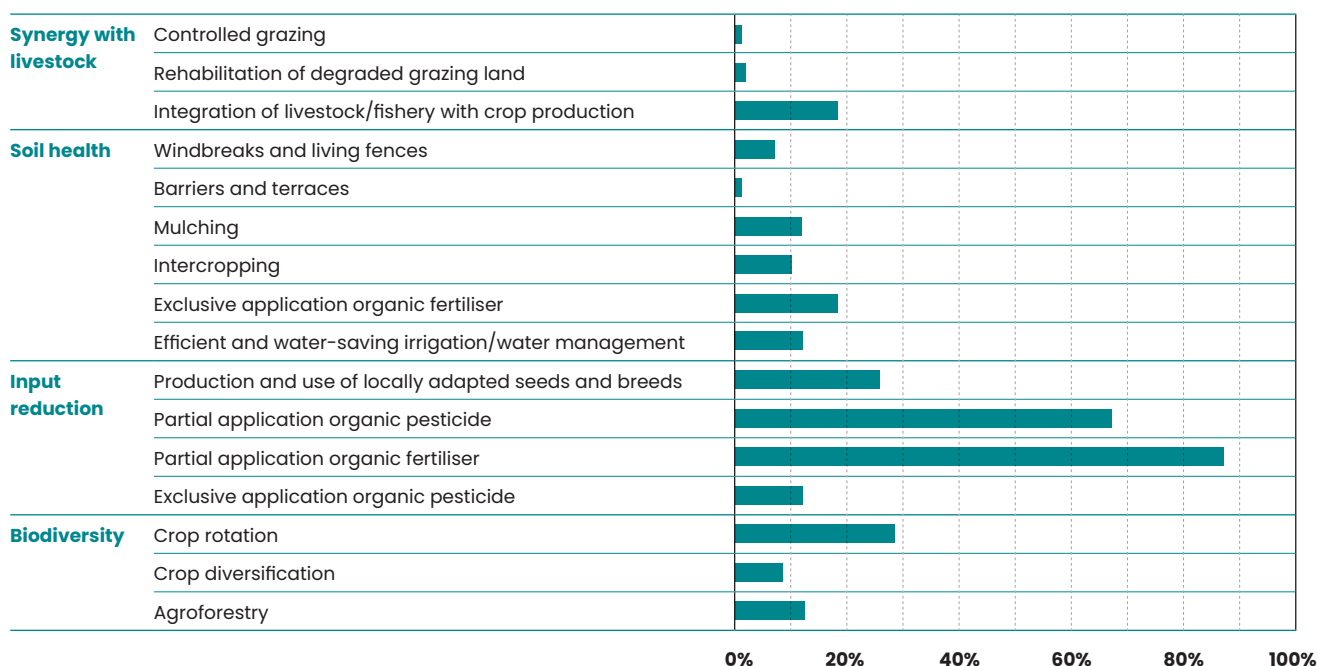
Soil fertility is managed through on-farm organic inputs like **livestock manure** (59%) and **compost** (53%), often produced directly on the farm. Nearly

half of the households produce their **own manure** (48%), and a third make their **own compost** (34%). Despite the emphasis on organic inputs, **synthetic fertilizers** are still widely used, indicating that there is still a reliance on such external inputs.¹⁴

In addition, local initiatives and support from organizations are encouraging farmers to adopt more **sustainable practices**. Efforts are underway to promote **integrated pest management** and **conservation agriculture**, aiming to enhance productivity while minimizing environmental impact. These practices not only improve soil health but also contribute to the **long-term sustainability** of agriculture in Rangpur.¹⁴

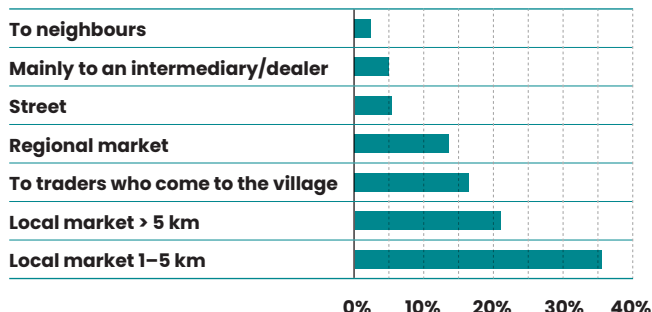


Agroecological practices



Selling locations

Most prominent selling channels/locations of farming output in Rangpur

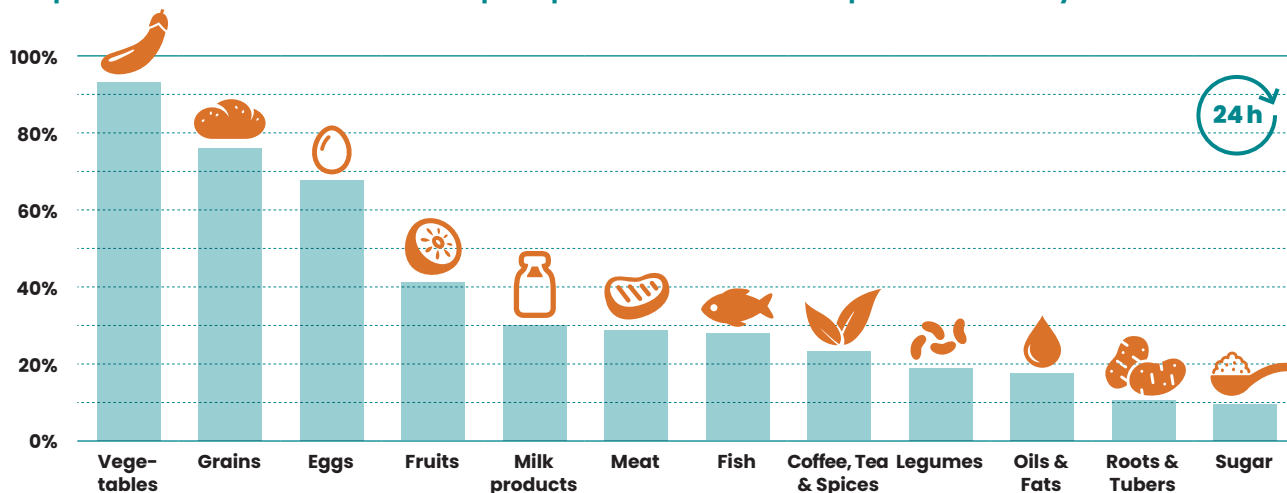


Farmers in Rangpur primarily sell their produce in **local markets**, with **35%** selling within a **1–5 km radius** and **21%** traveling **more than 5 km** to sell their goods. Direct sales to **visiting traders** (**16%**) and **regional markets** (**14%**) are less common, highlighting a preference for local, easily accessible markets. However, limited access to more distant or larger markets reduces income potential for many farmers.¹⁴



Food consumption

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

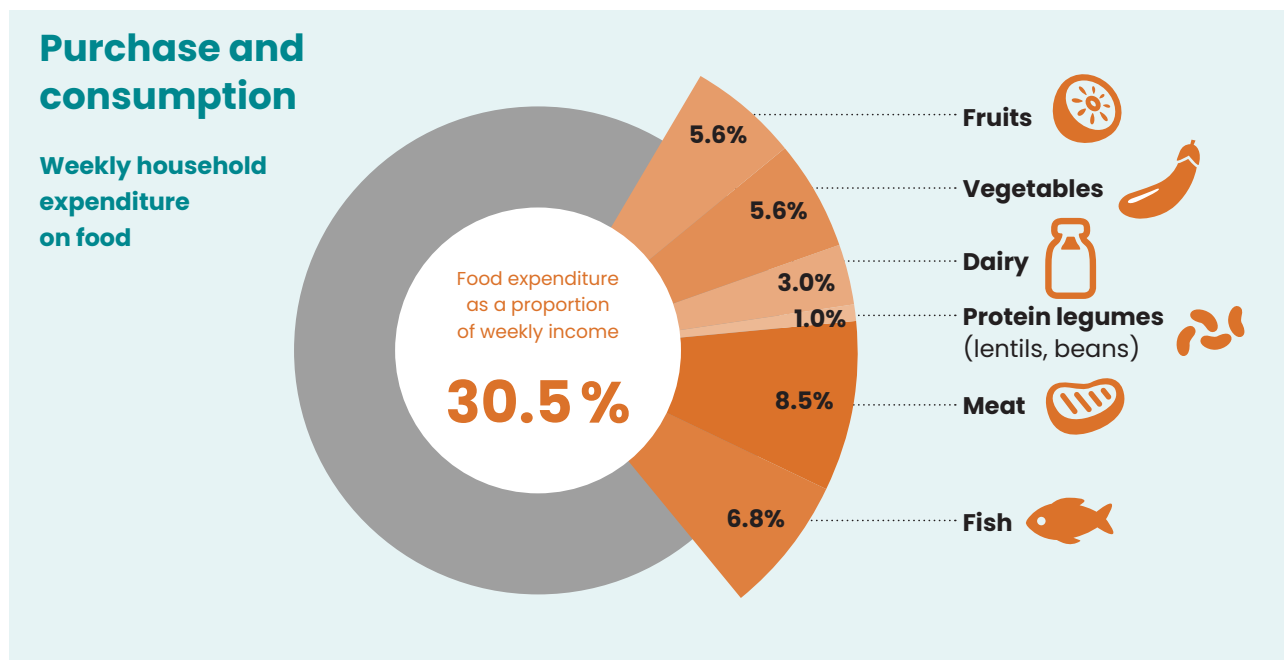


Diets in Rangpur are primarily plant-based. **Vegetables** are consumed by **92%** of households. **Grains** are another important component of daily meals, consumed by **75%**. **Eggs** are included in the diets of **67%** of households, while animal protein sources like **dairy** and **meat** are consumed by a lesser percentage, at **30%** and **29%**, respectively. Protein-rich **legumes** are part of the diet for about **19%** of households. These consumption patterns indicate a strong preference for

plant-based foods, with limited inclusion of animal-based nutrients. The **average household dietary diversity score** in Rangpur is **7.9**, higher than in most other cities, suggesting that households are consuming a wider range of food groups. However, there is still room for improvement to ensure that all residents have access to a **fully balanced** and **nutritious diet**.^{5,14}

Dietary choices are likely influenced by the economic aspects of food and their availability, as most **animal-based** items have become more expensive or less accessible than **plant-based** options. Improved access to affordable protein sources – both plant-

and animal-based – will enhance nutritional diversity and help reduce any potential protein gap in Rangpur. Additionally, **nutrition education** can encourage the consumption of a variety of protein-rich foods for **better health and well-being**.



Women, youth, and other vulnerable groups

Women and youth entrepreneurs play a **crucial role** in the local food system in Rangpur, contributing to **production, processing, and marketing**. Although often restricted in household decision-making roles, women make significant contributions across nearly all levels of the **agricultural value chain**, from post-harvest handling to sale.

The **NICE project** empowers women and youth entrepreneurs by strengthening their, often undervalued, roles at all levels of the food system, from production to market access. One notable example is the increase of **food carts** and **street vending**, where both women and youth entrepreneurs are highly involved. These **mobile businesses** create accessible opportunities to sell fresh produce, snacks, and processed goods directly to consumers, fostering **economic independence** while enhancing community visibility.¹⁴

These approaches to improving farming practices and enhancing market access will be further supported. Different value chains need to build their capacities to enable women and youth, among others,

to participate in **decision-making** regarding crop selection, production techniques, and marketing strategies, fostering a more **resilient and inclusive food system**.¹⁴

For more detailed insights into farming systems, please refer to the
 › [Farmers Survey Report](#)



Nutritional challenges



Food production and diversity



Rangpur's agricultural system is dominated by **staple crops**, particularly **rice** and **potatoes**, which are cultivated by the majority of farming households. This dependence on a **narrow range of staples** has raised concerns about **food insecurity** in Rangpur, compounded by a limited diversity in diet. In addition to these staples, a variety of other crops are grown; however, the heavy reliance on these primary staples significantly limits diversification in food production. These relatively few crops grown in large monoculture

fields result in **limited crop diversity**, and contribute to less availability of **nutrient-rich foods**, exacerbating nutritional challenges such as **micronutrient deficiencies** and conditions like **malnutrition** – more so among the more vulnerable groups, including **women and children**. The low adoption of **post-harvest processing** and **preservation practices** makes most of the produce intended for consumption fresh at once, with little chances for value addition and prolonged shelf-life.¹⁴

Climate and ecological impacts



Rangpur has a tropical type of climate with **high humidity** and **regular rainfall**, which enables agricultural production. However, the region faces challenges in terms of pests; **74%** of the farmers reported having **pest-related issues**, but only **25%** have practiced **pest management** in the last 12 months.

This suggests that there is either lack of resources or knowledge regarding pest management. The low adoption of sustainable ecological practices like **agroforestry** (**12%**) and **water-efficient irrigation** (**12%**) highlights the need for more integrated and climate-resilient approaches to farming.¹⁴



Market access and post-harvest practices

Most of the farmers in Rangpur sell their produce to local markets, which are usually not very far from where they live. Poor access to larger market systems **limits income** and also the variety of foods available for local communities. In addition, the lack of better **transport facilities** in Rangpur further limits the farmers' access to larger markets. **Poor road conditions**, coupled with a lack of responsible transport services, make transport beyond the local market costly and time-consuming. Such a scenario not only constrains the farmers' potential for better income

but also hinders the flow of varied types of food into the community, affecting nutrition and food security among its citizens. Moreover, due to the **lack of storage facilities**, they have to sell the produce just after harvesting; most of the time, they end up selling at low prices due to market saturation. In our survey with farmers, their **fair income score** was 6.4/10, suggesting that while some of them do manage to stay afloat financially, many are indeed exposed to market and environmental stresses.¹⁴



Farm resilience and knowledge sharing

The survey in Rangpur shows that farmers have strong social resilience with a high level of local cooperation and solidarity. However, there are critical gaps in **ecological resilience** and **knowledge sharing**. Low scores in indicators such as '**reasonable use of nat-**

ural resources' and '**knowledge sharing**' hint at the need for better training in sustainable farming techniques, improved resource management, and knowledge networks that can help farmers adapt to environmental changes.¹⁴



Policy environment



National

National Food and Nutrition Security Policy – NFNSP (2020–2030)

Rangpur is one of the areas in Bangladesh where food insecurity and poverty are deeply entrenched. The goals of NFNSP, which are to ensure access to **nutritious food** and increase **food security**, are closely related to the challenges faced by Rangpur, as extreme poverty is widespread and malnutrition affects a large segment of the population. The policy's emphasis on access to food and nutrition will be very important for Rangpur, especially in improving the nutrition of women, youth, and children. The **NICE project** can leverage this policy to push for **nutrition-sensitive interventions** that include supporting local food systems to ensure that nutritious food is available throughout the year.^{15, 16}

Second National Plan of Action for Nutrition – NPAN2 (2016–2025)

NPAN2 aims at reducing stunting, wasting, and other forms of malnutrition, with a focus on **maternal** and **child health**. Given that stunting and child malnutrition have been stubborn issues in Rangpur, this policy provides the framework through which these can be addressed. The **NICE project** in Rangpur can work towards these goals by promoting **community-based nutrition education** and interventions aimed at improving the nutritional status of vulnerable populations, particularly **pregnant women, lactating mothers, and young children**.^{15, 17}

National Urban Health Strategy

The National Urban Health Strategy, launched in 2020, is a continuing effort interwoven in a larger undertaking of responding to **health inequities** driven by rapid urbanization. As Rangpur transforms from a largely rural setting into a more urbanized one, the importance of the National Urban Health Strategy becomes all the more acute. The policy will ensure that the expanding urban populations have access to **clean water, sanitation, and nutrition services**. In Rangpur, where urban poverty has been increasing and access to health services remains a constraint, the NICE project may advocate for improved nutrition and health services integrated into Rangpur planning. This calls for access to nutritious food items and clean water within the **peri-urban areas**.^{15, 18}

National Social Security Strategy – NSSS

Rangpur faces increasing poverty levels, which presents significant challenges. However, the National Social Security Strategy (NSSS) in 2025 aims to address these issues by targeting **cash transfers, feeding assistance, and other social protection programs** to vulnerable groups. While these initiatives are designed to meet the needs of those affected, there remains a dilemma regarding targeting and effectiveness. Specifically, the urban poor in peri-urban areas, where poverty is prevalent, often suffer most from food insecurity.^{15, 19}

National Nutrition Policy

The National Nutrition Policy was adopted in 2015, which is an ongoing, phase-by-phase implemented initiative to combat malnutrition nationwide and has given much focus on the nutrition of **mothers and children**. This focus is of particular importance in Rangpur, given that the high rates of stunted children and anemic mothers are among the greatest health concerns. The policy calls for a multi-faceted collaboration, which weaves health, agriculture, education, and social services into a basic approach to combat under-nutrition. It aims at improving the nutrition status of the most vulnerable, particularly women and young children, through **nutrition-sensitive agriculture**, increasing the **diversity, and availability of nutrient-dense foods** in the peri-urban areas of Rangpur supported by community-based nutrition programs, including school feeding schemes under this policy for improved health in the region.^{15, 20}

National Agriculture Policy

The National Agriculture Policy, launched in 2018, is a continuous endeavor aimed at enhancing **agricultural productivity** while safeguarding environmental sustainability. Since Rangpur relies on agriculture, this policy will benefit the region greatly. This initiative encompasses farm-level strategies that promote the adoption of **climate-resilient and high-yield crop** varieties, alongside agroecological practices. By fostering sustainable agriculture in Rangpur, the policy plays a vital role in improving **food security and nutritional standards**. Other interventions include supporting farmers to grow **nutrition-enhancing crops** through responsible farming practices, such as integrated pest management and organic fertilization methods, which reduce **environmental degradation** and enhance **resilience to climate change**. Moreover, the empowerment of farmers can be brought about by strengthening extension services, improving access to credit, and enhancing market access for the development of the agricultural sector in Rangpur.^{15, 21}

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 Rangpur 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

We acknowledge the efforts of all those who have contributed to this City Overview. The information was consolidated by Sanath Yeduri, with oversight by Mikayla Hug and Swiss TPH colleagues, and valuable input from the teams in the respective cities. Any views and ideas expressed herein are those of the author(s) and do not imply or reflect the opinion of the Swiss Agency for Development and Cooperation nor the NICE Consortium member institutions.

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Authorship: Swiss Tropical and Public Health Institute

Pictures: NICE Bangladesh

The NICE project is supported by the Swiss Agency for Development and Cooperation and implemented by a public-private consortium which includes the Swiss Tropical and Public Health Institute, ETH Zürich, *Sight and Life* foundation, and Sustainable Agriculture Foundation.

Further information is available on the **NICE webpage:**

nice-nutrition.ch