



NUTRITION *in*
CITY ECOSYSTEMS

#ANH202

Food insecurity and low dietary diversity contribute to malnutrition in secondary city populations in Bangladesh, Kenya, and Rwanda: Time to strengthen urban food systems

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1 Introduction

- By 2050 ~68% of the global population will live in cities, but nutrition data on urban populations of LMICs are scarce.
- The **Nutrition in City Ecosystems (NICE)** project aims to **transform food systems** introducing more sustainable ways of producing and consuming nutritious food in 6 secondary cities in Bangladesh, Kenya and Rwanda, to improve health and nutrition, and reduce poverty.
- We assessed the **baseline situation** on nutrition status, food insecurity, dietary diversity, and food production and purchasing patterns **to guide future interventions**.

2 Methods

- **1200 urban and peri-urban households** in neighborhoods prone to malnutrition (April to June 2021)
- Included households:
 - **Women** of reproductive age (15-49 years)
 - **Adolescents** (10-19 years) or **youth** (15-24 years)
 - **Children** under 5 years
- Household Food Insecurity Access Score (**HFIAS**) in 2021 and pre-COVID-19, Household Dietary Diversity Score (**HDDS**), Minimum Dietary Diversity for Women (**MDD-W**)
- **Anthropometric measurements**
- **Socioeconomic information, food production and consumer behavior**
- Data were collected electronically using **Open Data Kit**.
- Ethical clearance and letter of agreement of city authorities were obtained in all countries prior to the start of the study.



3 Findings

Percentage of household income spent on food

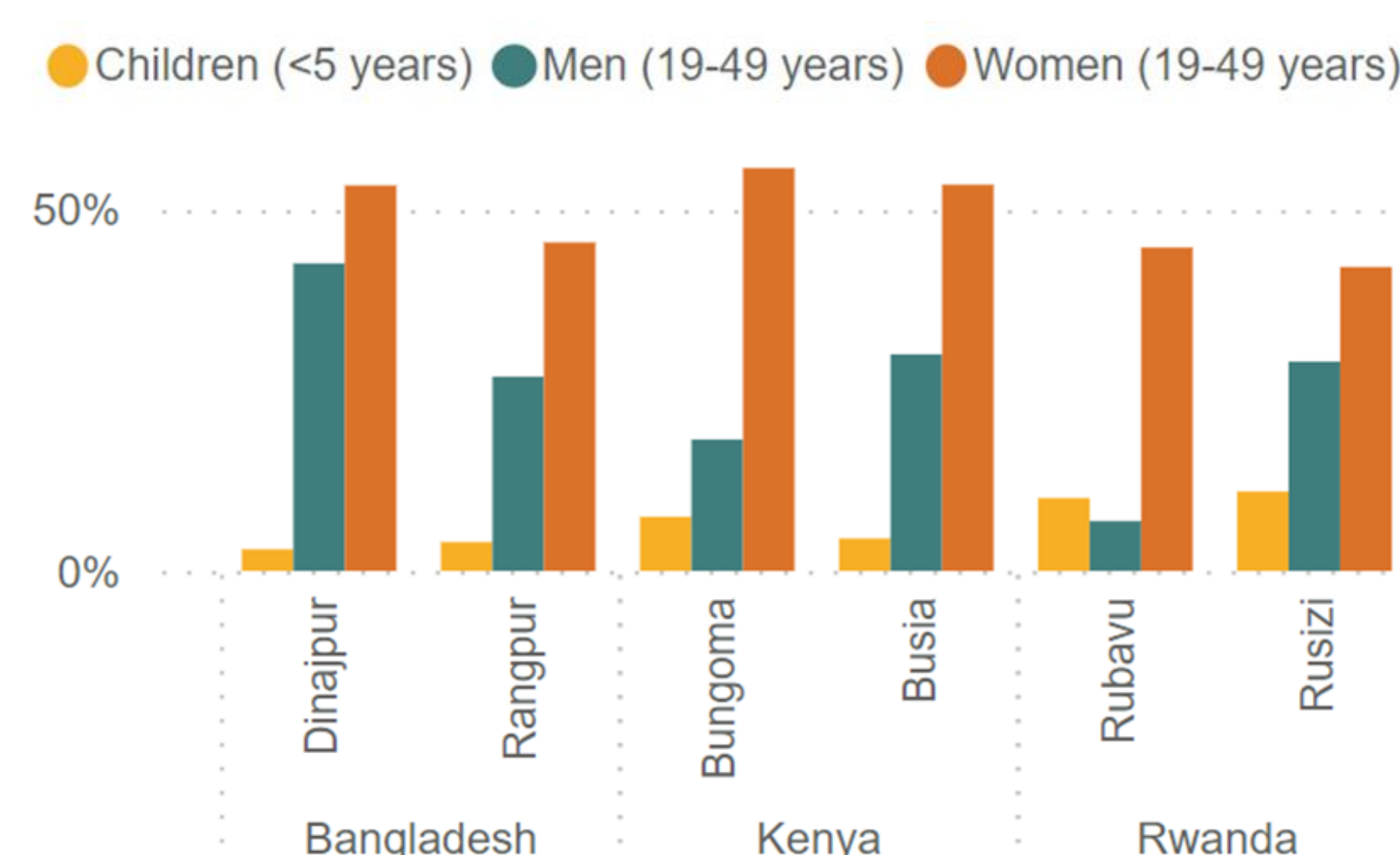
| | |
|----------|-------|
| Dinajpur | 39.7% |
| Rangpur | 36.9% |
| Bungoma | 47.6% |
| Busia | 50.8% |
| Rubavu | 58.7% |
| Rusizi | 65.2% |

Food insecurity (not being able to eat desired variety, quality or quantity of food, due to lacking resources):

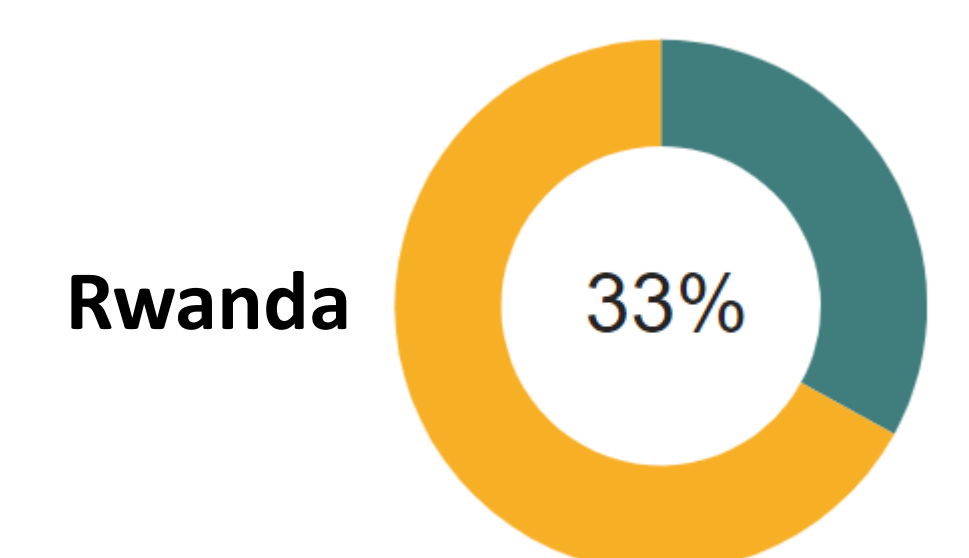
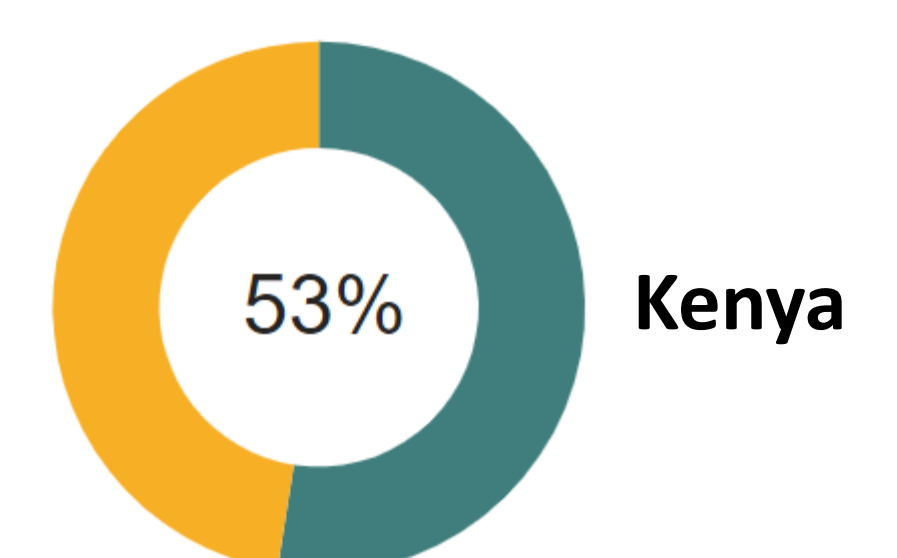
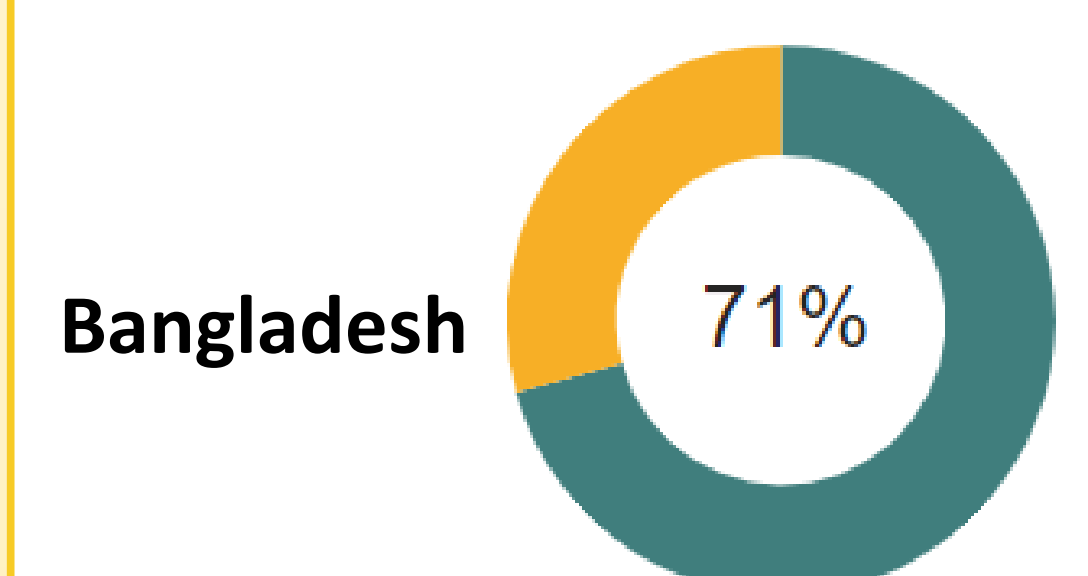
>HFIAS 2021: 55.2-99.3%

>HFIAS pre-pandemic: 33.4-86.0%

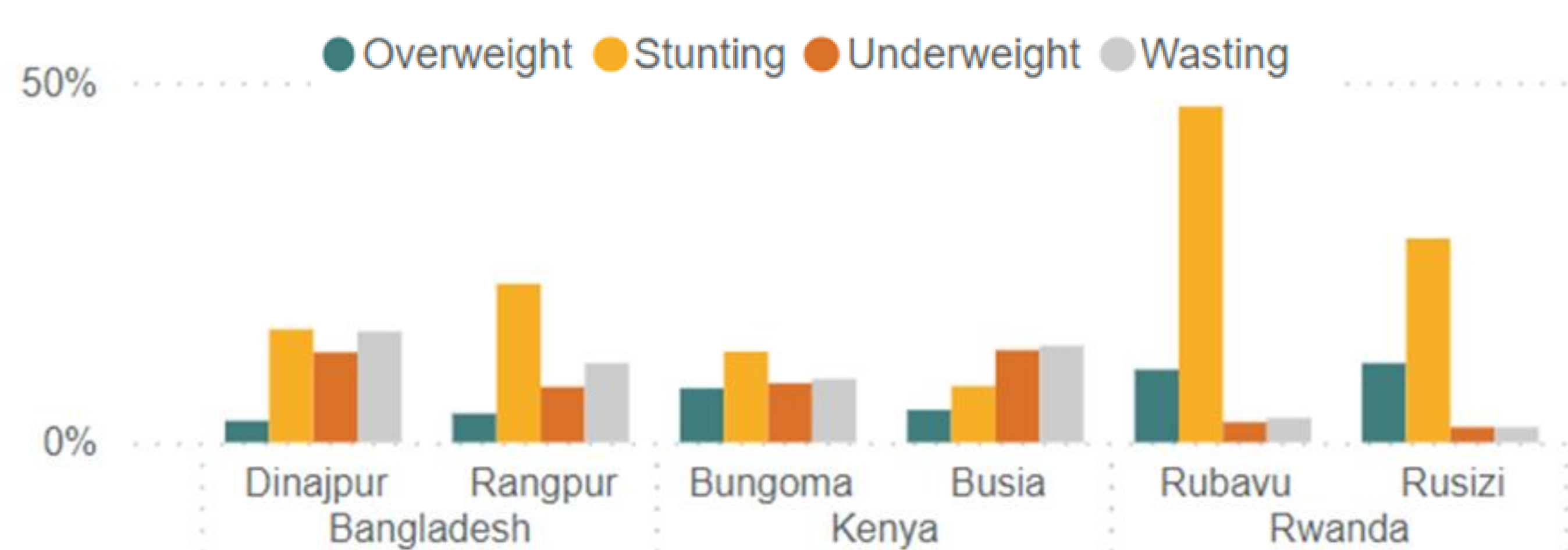
Overweight



Women consuming an adequately diverse diet (Minimum Dietary Diversity (MDD-W) \geq 5 food groups per day)



Malnutrition in children under 5 years



4 Conclusions

- In secondary cities, food insecurity, malnutrition and poverty are alarming.
- City populations often do not consume an adequately diverse diet.
- The double burden of malnutrition calls for an increase in nutrient-dense and healthy diets.
- Accessibility and availability of diverse, nutritious, locally produced foods at city markets; as well as demand generation activities, and nutrition education would benefit the urban population.
- NICE encounters these identified gaps, among others, through social business models (farmers' hubs) and behavior change campaigns. Using a systematic approach, we aim to tackle the challenges around the production and consumption of nutritious foods in the urban environment.

