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“EATING
IS AN
AGRICULTURAL
ACT,”

WENDELL BERRY
AGRICULTURAL PHILOSOPHER



EAT BETTER, LIVE BETTER

From Understanding Diets to Agriculture Investments

Purnima Menon

IFPRI

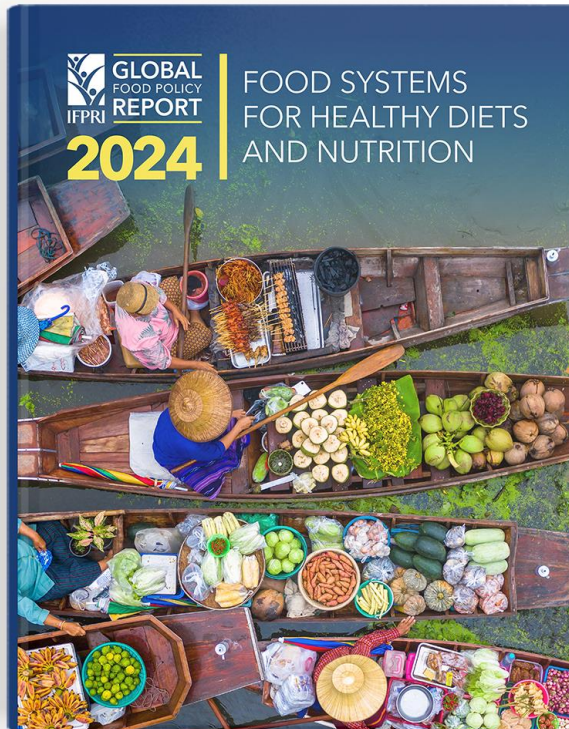
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2024 Global Food Policy Report: Food Systems for Healthy Diets and Nutrition



- **Global commitment to improving nutrition has risen** in recognition of the potential for sustainable healthy diets to improve human *and* planetary well-being.
- The 2024 GFPR examines **approaches to addressing the challenge of sustainable healthy diets** from the demand and supply sides and through better governance.
- When tailored to specific contexts, we hope these recommendations can promote a **shift toward sustainable healthy diets**.



Why care about diets and nutrition?

2.0 Billion

People are affected by micronutrient deficiencies.

2.2 Billion

People are overweight or obese (40% of all men & women).

148 Million

Children < 5 are stunted.

1.2 Billion

People have increased blood pressure.

48 Million

Children < 5 are wasted.

0.5 Billion

People have diabetes.

2.8 Billion

People cannot afford a healthy diet

Poor quality diets are the **primary contributor to all forms of malnutrition** and the **leading cause** of disease worldwide.

1 in 5



Lives could be saved each year by improving diets





Sustainable healthy diets

- Healthy diets provide the foods that deliver the nutrients needed for an active, healthy life.
 - They contain limited amounts of foods like ultraprocessed foods and sugar-sweetened beverages
- Sustainable healthy diets further take into account the environmental impacts of diets.



Challenges to sustainable healthy diets

1 Desirability

Food choices are driven by a complex interplay of a person's cognition, environment, and behavior. Thus, even when diverse, healthy foods are available, accessible, and affordable, people often do not choose healthy diets.

2 Affordability

Low income + high costs of safe and diverse foods (especially fruits, vegetables, and animal-source foods) make healthy diets unaffordable.

3 Accessibility

Consumers are often not close enough to safe sources of diverse, healthy, and affordable foods for intake to be convenient or possible on a regular basis.

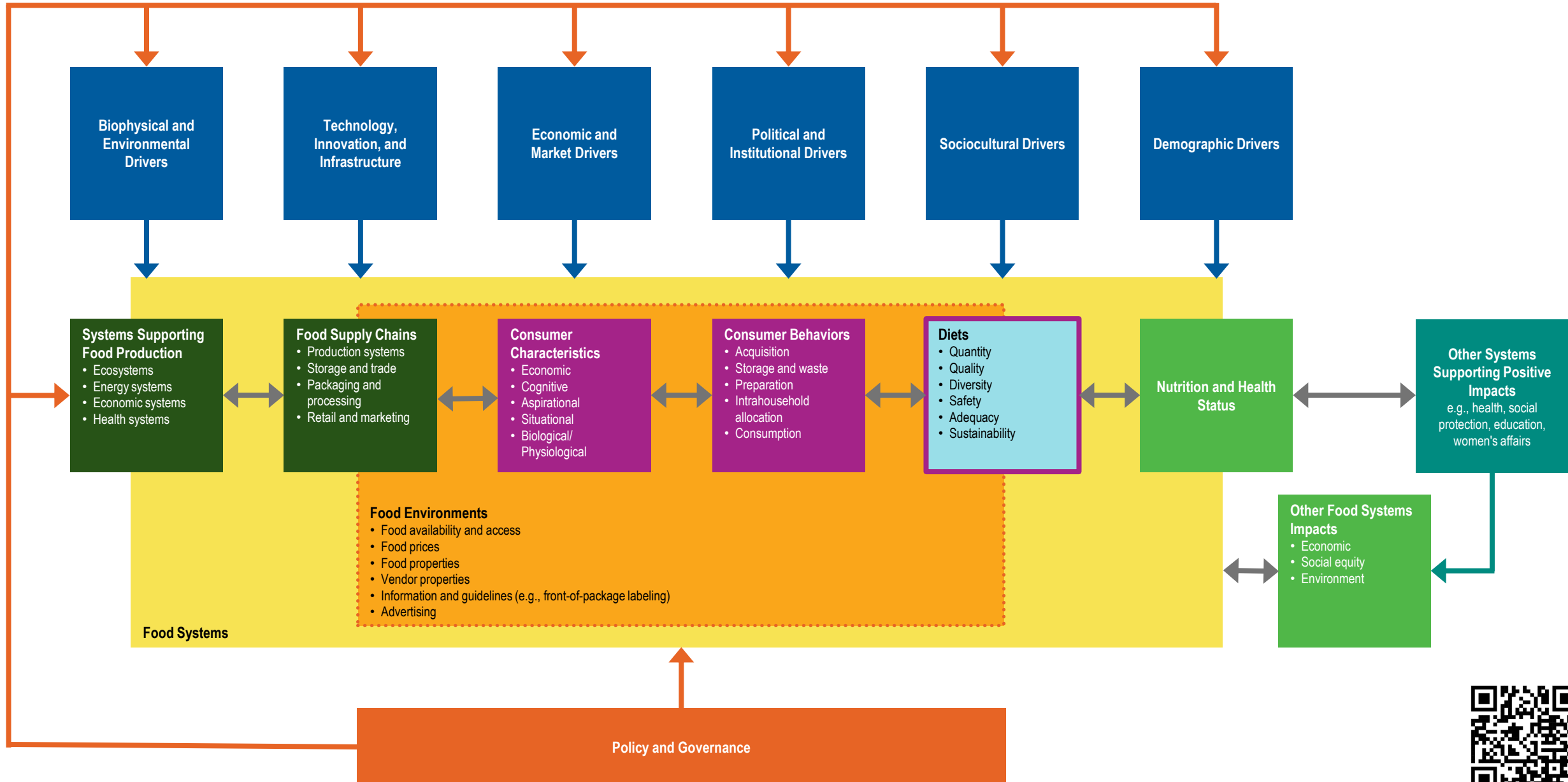
4 Availability

Insufficient year-round availability of diverse perishable foods means high costs and hard-to-find sources.

Policy and Governance



A consumer-focused food systems framework



What is wrong with our diets?



Too much energy
from 'nutrient-poor'
staples



Unbalanced
animal-sourced and
aquatic food
consumption



Low consumption of
fruits, vegetables,
nuts, seeds, legumes



High sugar-
sweetened
beverage, salt, fat,
and sugar intake

What is a healthy diet?



Nutrient adequacy

Sufficient quantity and quality of nutrient (micronutrient, macronutrients, energy) intake to cover nutrient requirements, without excess

Macronutrient balance

Balance of energy-yielding macronutrients carbohydrates, proteins and fats

Diversity

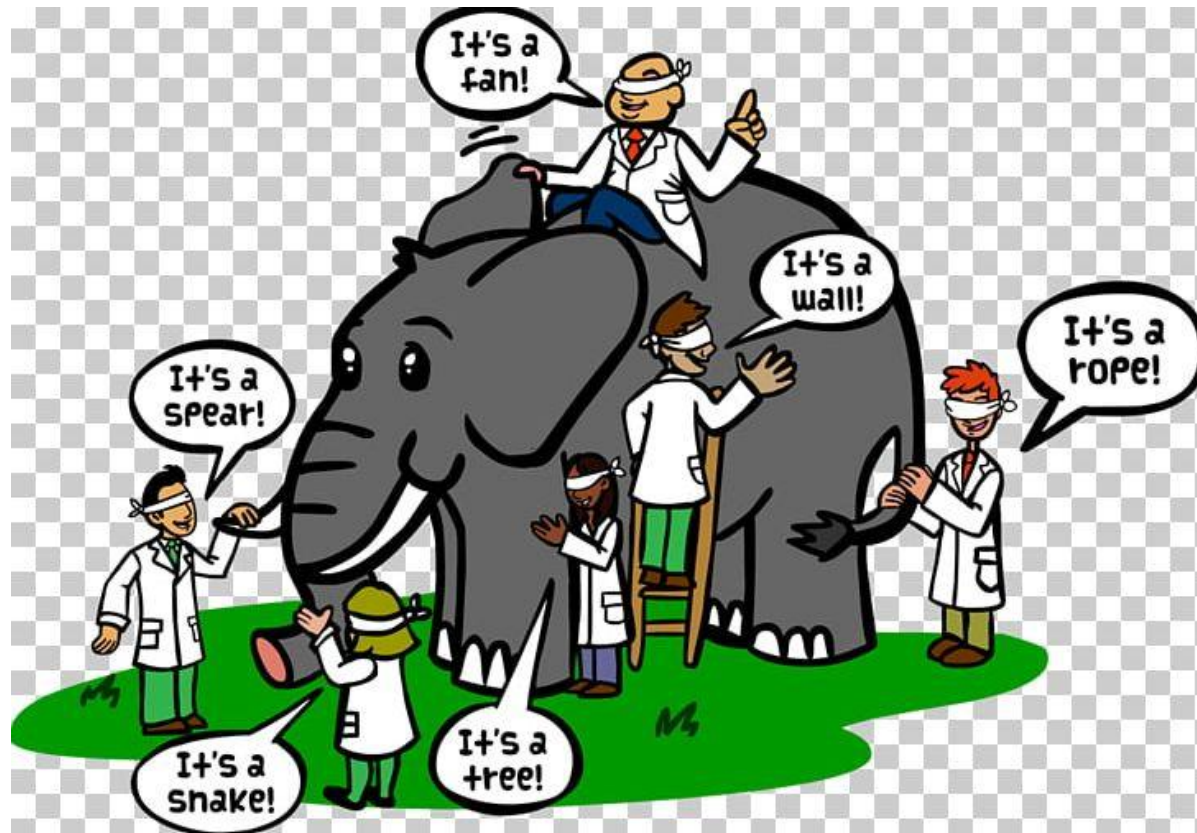
Diets composed of diverse range of foods derived from distinct healthy food groups. Dietary diversity between and within food groups reflects a greater probability of meeting nutrient requirements.

Moderation

Limited intake of foods and nutrients that are associated with risks of NCDs when consumed in excess (e.g., processed meat, sugar-sweetened beverages, salt, trans fats).

From global to local: Crucial to understand food systems in context

It's a food system!



BACKGROUND

Home to one-quarter of humanity—one-fifth of whom are youth—South Asia has the world's largest concentration of poverty and malnutrition (1-3). Despite producing one-quarter of the world's consumed food, the region's agrifood systems face formidable challenges in producing an adequate and affordable supply of the diverse foods needed for sustainable healthy diets (4,5). Unhealthy food consumption is rising, and farming systems are threatened by unsustainable groundwater withdrawal due to poorly developed food and energy policies. In addition, South Asia's farmers are both contributors and victims of climate change and extreme weather, which contributes to rural out-migration—particularly of youth—resulting in rising labor scarcity and increased production costs.

TAFSSA (Transforming Agrifood Systems in South Asia), a CGIAR Regional Integrated Initiative, aims to address these challenges by delivering actionable evidence and scalable innovations across these regions through a coordinated program of research and engagement from farmer to consumer.

these challenges is the lack of credible and high-resolution data on food systems in the region. The TAFSSA food systems assessment aims to provide a reliable, accessible and integrated evidence base that links farm production, market access, dietary patterns, climate risk responses, and natural resource management in Bangladesh, India, Nepal and Pakistan. It is intended to be a multi-year assessment.

APPROACH

The approach to the design of the assessment included a review of several conceptual frameworks, consultations with diverse stakeholders and field visits to target locations. A multi-disciplinary team lead the design of the protocol and specific measurement tools.

This research note describes the overall approach and design of the food systems assessment. Detailed protocols, tools and assessment data from the components of the assessment will be available in public domain in the near future.

In this note, we focus on describing the design of the core of the assessment: a primary integrated survey.

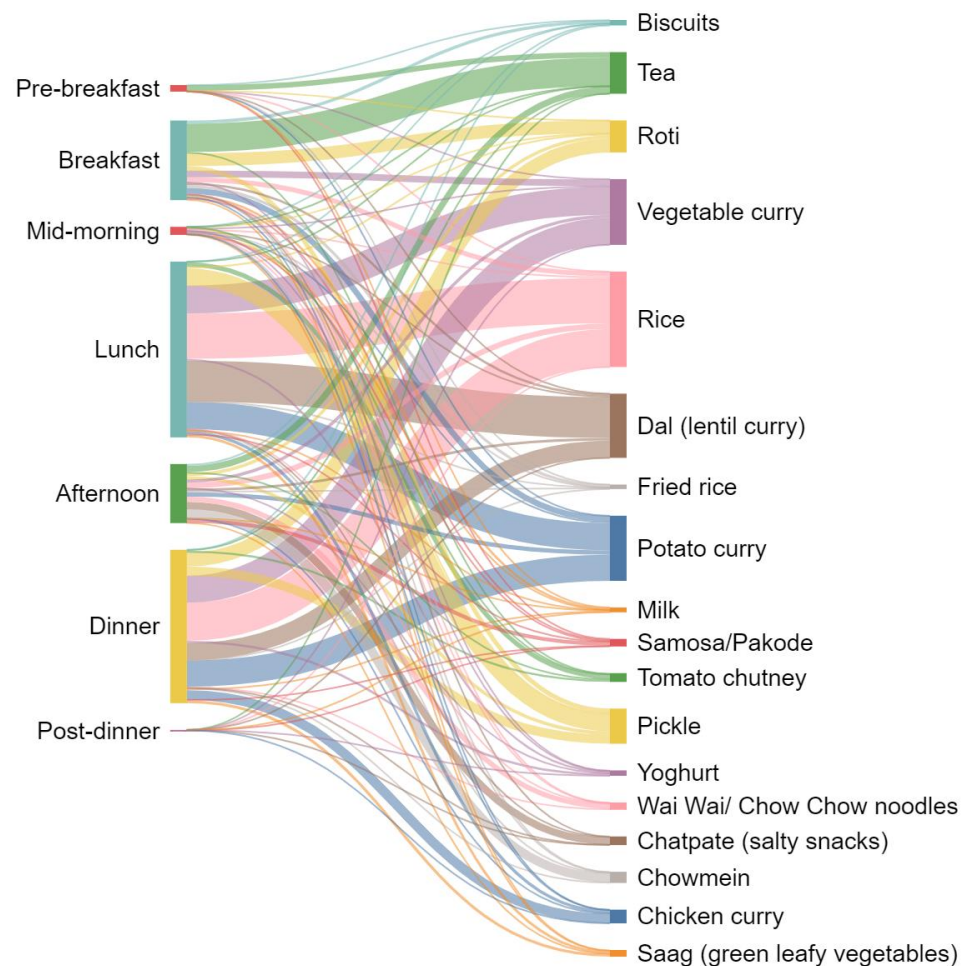
One of the roadblocks to addressing

Diets matter! So let's start by understanding what people eat and where their food comes from

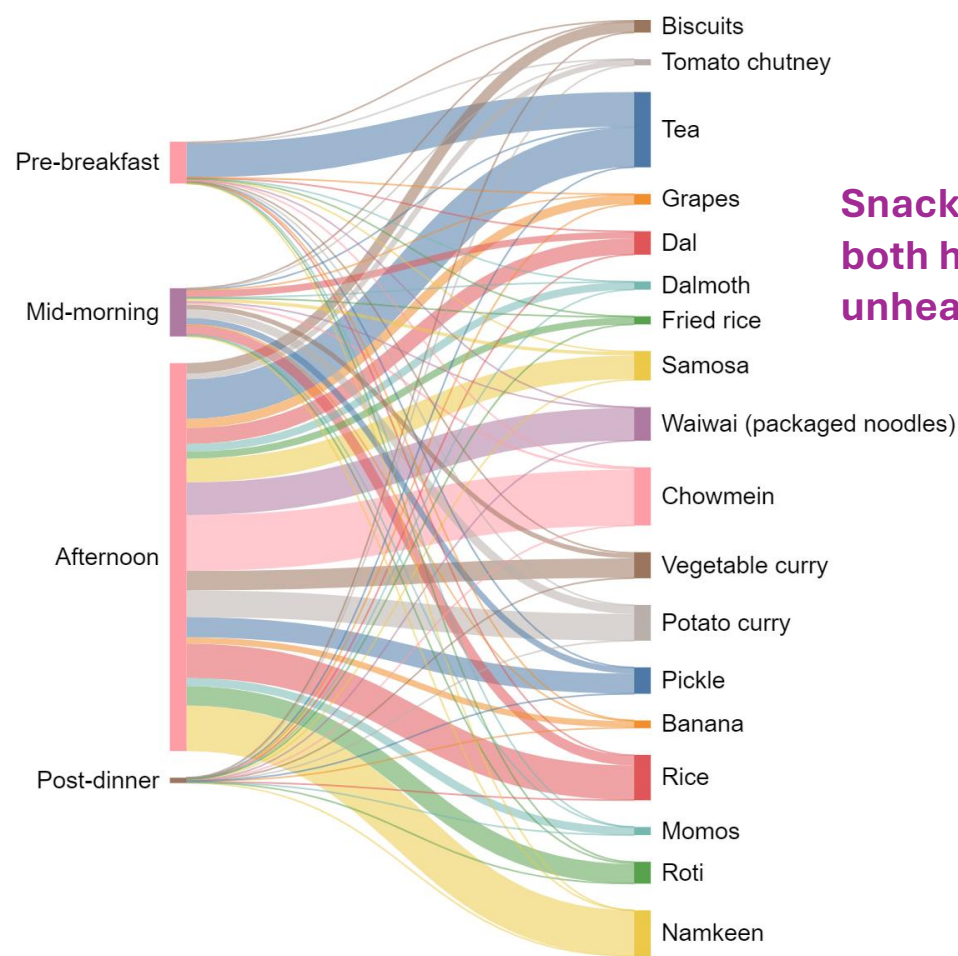


What adults in rural South Asia are eating throughout the day

What is eaten throughout the day

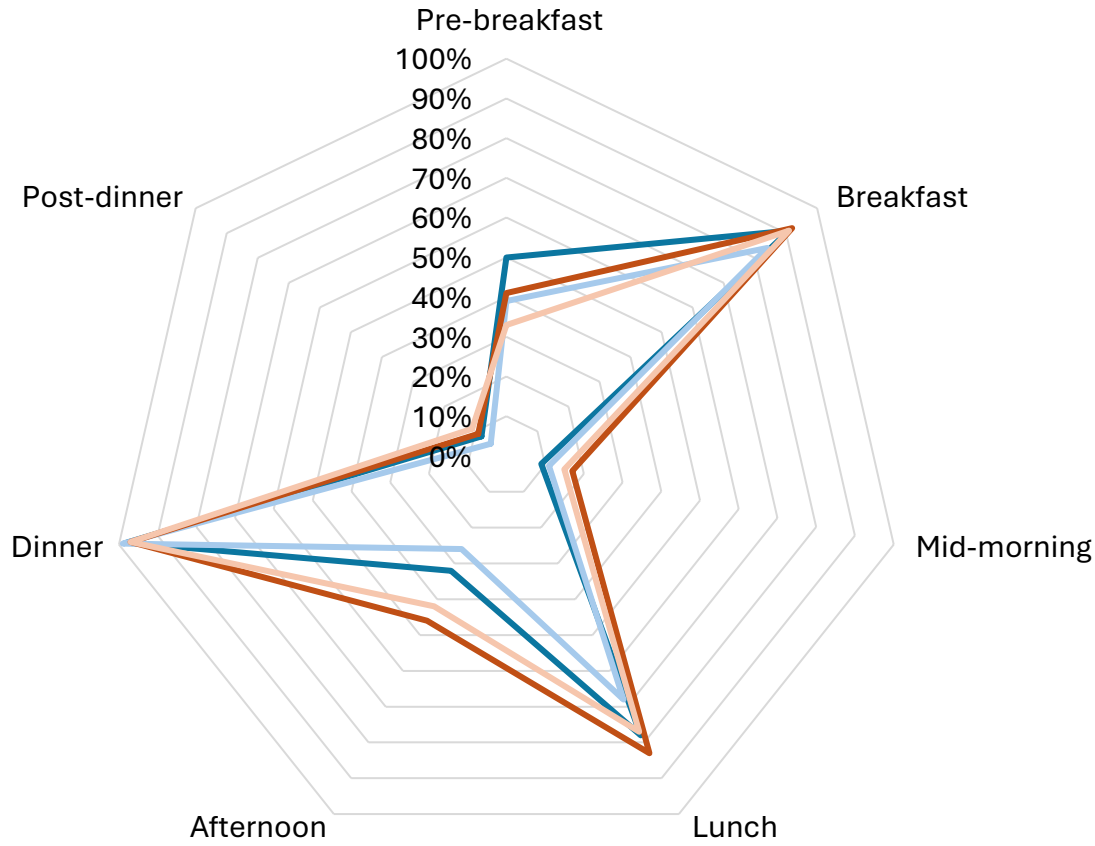


Zooming in on snacking occasions

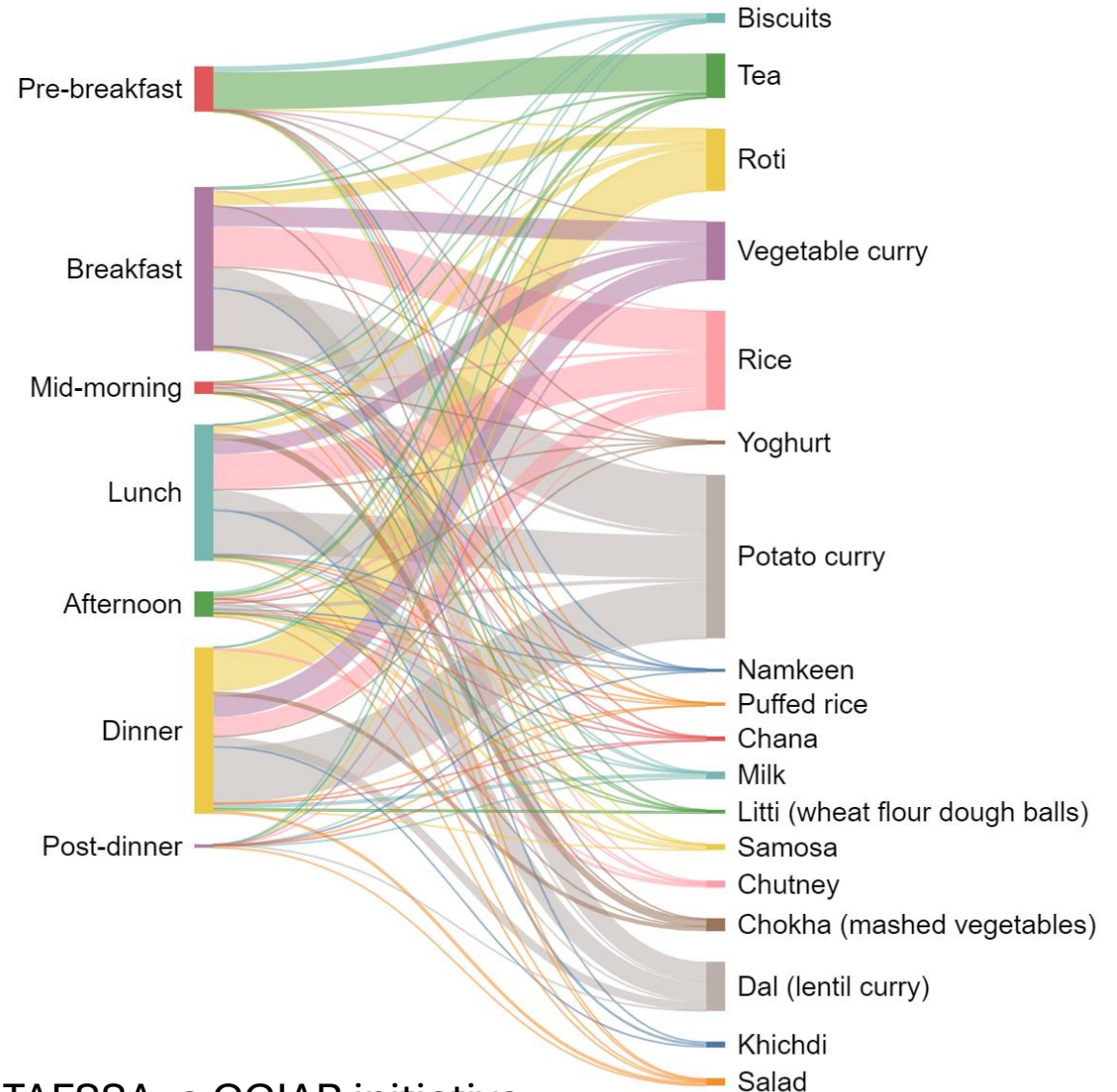


Snacking includes both healthy and unhealthy foods

When food is eaten throughout the day (Nalanda)



— Adult females — Adult males — Adolescent females — Adolescent males



Adolescent Adult male Adult female

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Consumption of fruits and dark green leafy vegetables was <15% for all respondent types.

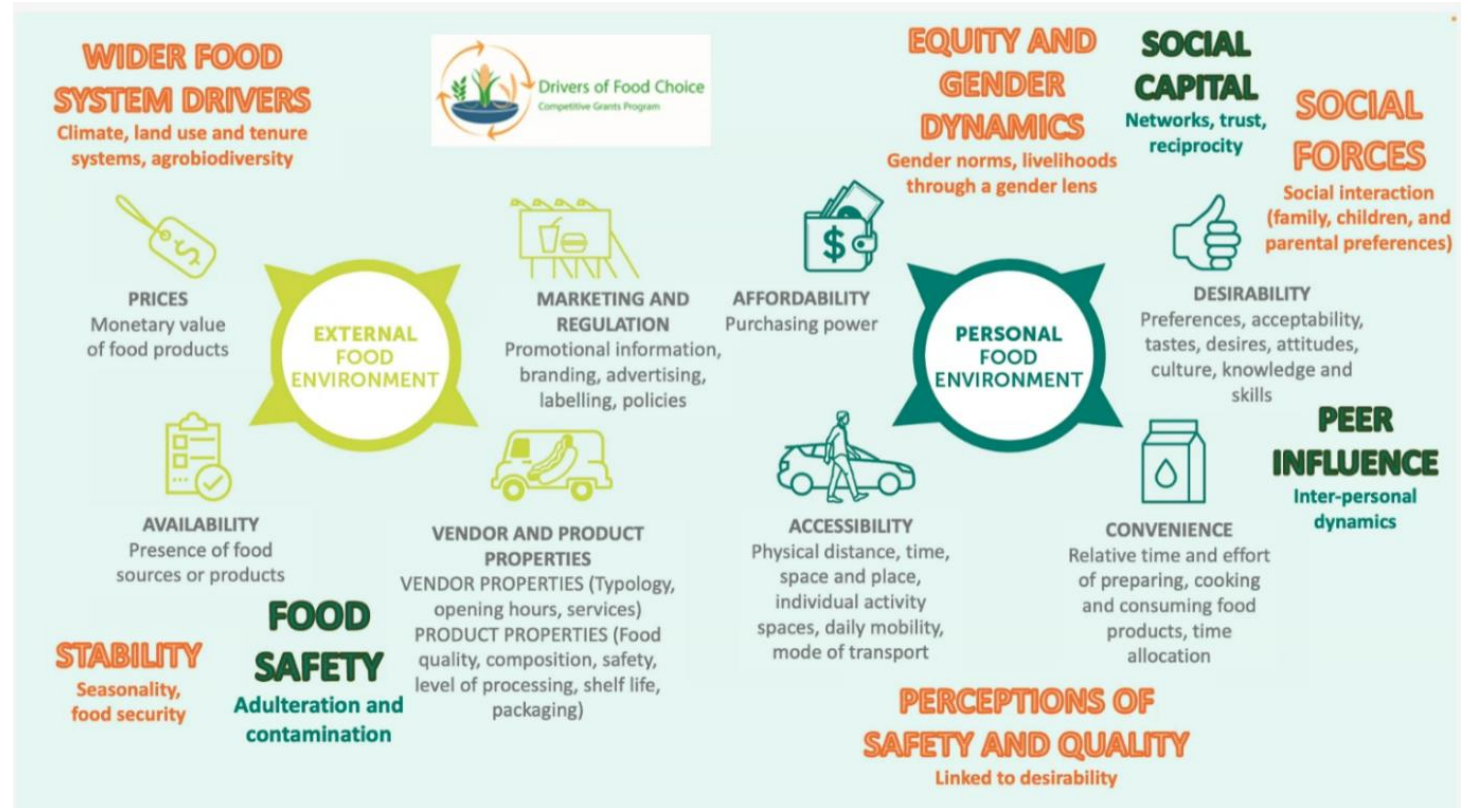


Around 45% of individuals consumed some animal-source foods on the previous day.



Adolescents were the most likely to consume sweets & ice-cream and refined grains/baked goods.

Understanding drivers of diets is complex!









- Turner, C., Kadiyala, S., Aggarwal, A., Coates, J., Drewnowski, A., Hawkes, C., Herforth, A., Kalamatianou, S., Walls, H. (2017). Concepts and methods for food environment research in low and middle income countries. Agriculture, Nutrition and Health Academy Food Environments Working Group (ANH-FEWG). IMMANA Programme. London, UK.

Womens' perceptions (Nalanda) highlight affordability and other factors that shape dietary choices

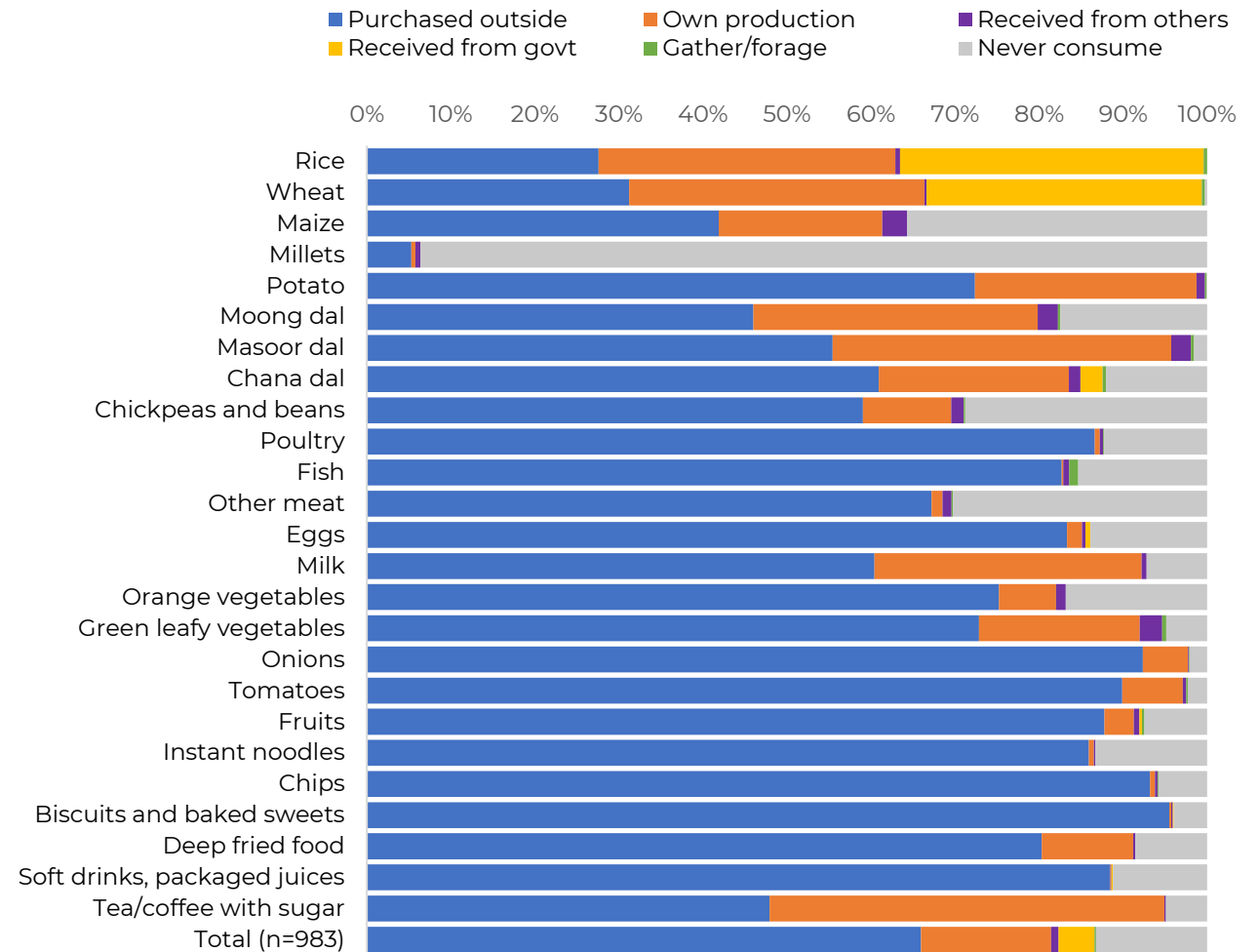


Transforming Agrifood Systems in South Asia

Statement (agree, disagree, or neutral)	 Dal	 Eggs	 GLVs	 Banana	 Biscuits	 Deep fried food
I know of at least one vendors/shop who sells _____	94	89	86	78	97	87
_____are safe to eat	98	98	81	93	78	56
It is easy to acquire _____close to where I spend most of my time	88	77	78	45	93	60
Given my income, _____ are not too expensive.	20	44	28	22	54	29
_____ are fast and easy to prepare, in general	91	91	80	37	29	58
I like the taste of _____	90	96	76	93	85	86
_____ fills my stomach	84	93	62	83	55	75
_____are nutritious	97	96	81	94	67	46
My family enjoys eating _____	92	94	79	92	82	82

Households (Nalanda) primarily get their food from markets, despite being farming households

- Many of the foods that contribute to a healthy diet are purchased rather than produced
- Many foods that contribute to poor diets are also purchased!
- Public safety net programs do play a role



Insights from studies in Ghana and Vietnam highlight importance of understanding diets, sources of acquisition and importance of food environments



- Diets were micronutrient inadequate
- 61% of energy intake from food acquired away from home
- More direct engagement with the food environment associated with poorer diets



- Diets were micronutrient inadequate
- ~23% of energy intake from food acquired away from home
- More direct engagement with the food environment associated with poorer diets

The future of people and the planet is strongly affected by food environments – i.e., what food markets offer us

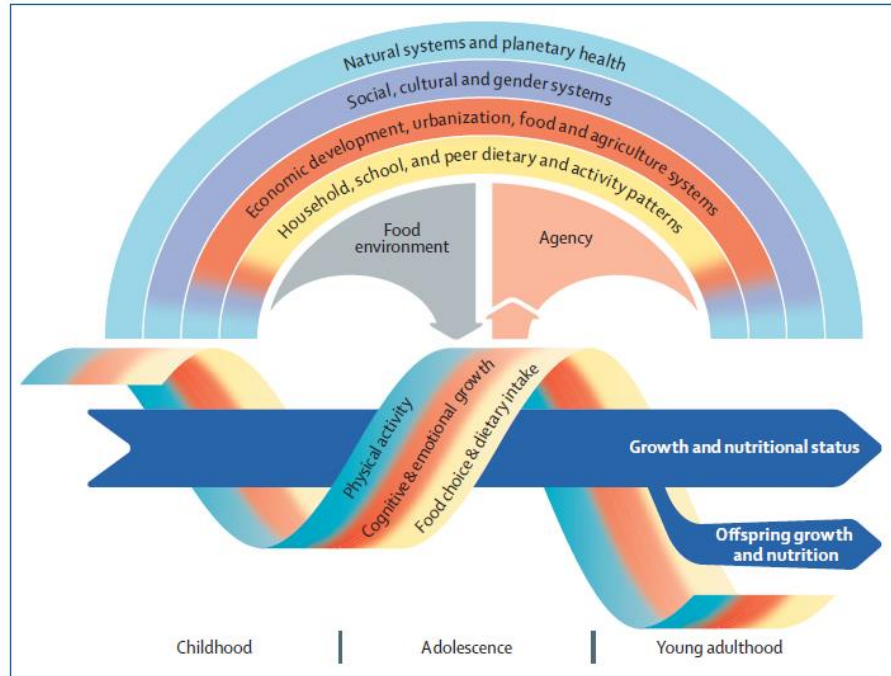


Figure: A conceptual framework for adolescent growth and nutrition
Adolescence occupies a middle ground in human growth, affected by nutrition in earlier life but also setting trajectories for nutrition into later life and the next generation (blue arrows). The growth and maturation of physiological systems is affected by an adolescent's immediate food environment (grey arrow), shaping dietary intake and norms, physical activity, and body image preferences (multicoloured ribbon). That food environment is shaped by cultural, economic, commercial, and environmental ecosystems that extend down to the family and community settings in which adolescents are growing up. Conversely, adolescents have a growing agency (salmon arrow) to influence these ecosystems shaping their food environment.

Lancet Series on Adolescent Nutrition, 2021



Food environments in India: prominent presence of packaged ultra-processed foods



All photos: Purnima Menon, various years, India

Vietnamese adolescents are exposed to a substantial variety of unhealthy foods in their food environment alongside healthy foods



UNDERSTANDING WHAT ADOLESCENTS EAT
RESEARCHERS EXAMINE FOOD ENVIRONMENTS IN VIETNAM

Gabriela Fretes, Phuong Hong Nguyen, and Jef L. Leroy



**M SMEs in Vietnam:
Prominent, selling
various foods and
widely used**





**MSMEs in Vietnam:
Informal value chains
for vegetables**

Credit: Alan de Brauw



**MSMEs in Vietnam:
Not just local
commodities!**



In sum – understanding diets, sources of consumption, and state of play of food environments and markets provides crucial insights on food systems entry points for action

Consumers

Markets

Value chains

Production

Potential food systems entry points to support sustainable healthy diets

1 Desirability

- Marketing laws and policies
- Nutrition education policies and programs
- Menus and food composition rules for public programs and schools

2 Affordability

- Agricultural subsidies (e.g., minimum support prices)
- Pro-poor economic growth policies
- Social safety net policies and programs

3 Accessibility

- Market linkage investments
- Cold chain investments
- Roads and rural markets
- Supermarkets
- Food and nutrition programs

4 Availability

- Agricultural policies (including support prices, irrigation for agriculture)
- Cold chain investments
- Food and nutrition programs

Food safety and standards and other governance issues



CONNECTING SOLUTIONS: Leveraging diverse systems for equitable diet and nutrition impacts is essential

Food systems actions are necessary to improve diets and nutrition outcomes but will not be sufficient to **equitably** address **affordability**, **accessibility**, and **desirability** even if availability is improved.



Systems to connect with food systems actions

- Community-based nutrition programs and nutrition-sensitive health systems
- Nutrition-sensitive gender-transformative programs and policies
- Nutrition-sensitive social protection systems
- School-based nutrition programs
- Multisectoral programs and policies

Evidence building must test diverse solutions using impact evaluations, implementation research, costing studies, fiscal analyses and policy and political economy analyses

CONCLUSION: Multiple components of the food system converge on the same geographies and same individuals, changing over time: *Research, policies and actions must account for this*

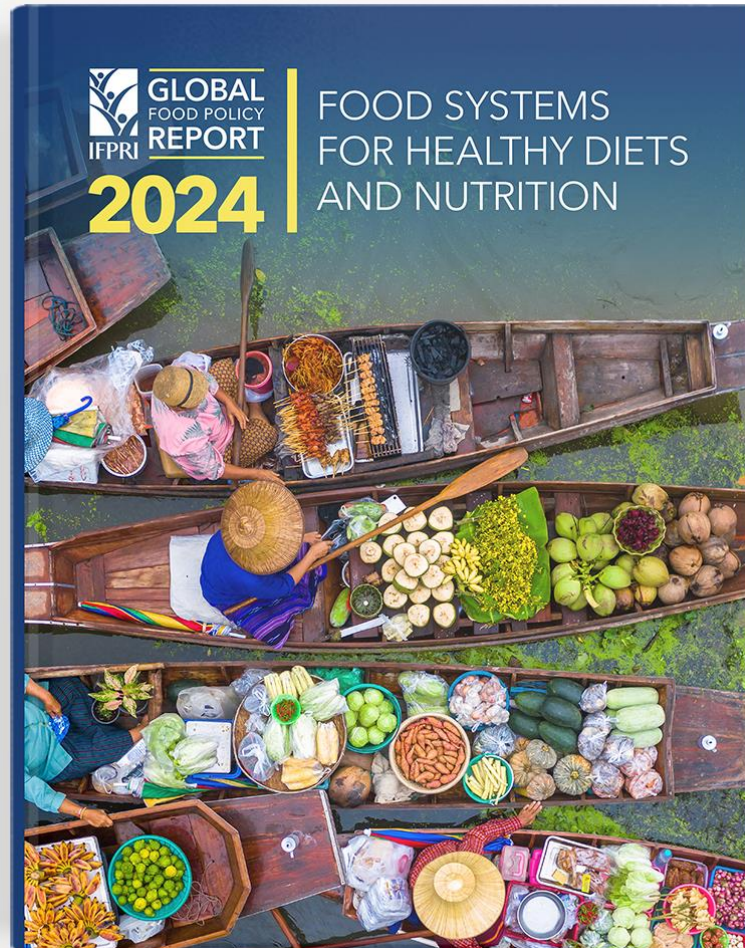


No single intervention, approach, or policy can accomplish the change we need.

To achieve sustainable healthy diets, context-relevant actions must be people-focused, interlinked across the food system *and* supported by good governance to address evolving desirability, affordability, accessibility, and availability constraints

All photos by Shawn Sebastian, for IFPRI, in Dindori, Madhya Pradesh, 2018

Further reading!



[Global Food Policy Report 2024: Food Systems for Healthy Diets and Nutrition - \(ifpri.info\)](https://www.ifpri.info)

EXTRA

Tackling affordability of nutritious diets by combining social protection (cash transfers) and nutrition behavior change in Bangladesh



Photo credit: Aminul Khandaker, IFPRI-Dhaka

Cash plus behavior change had the greatest impact on diversity of diets			
NORTH		SOUTH	
Cash	Fruit	Cash	Eggs
Food	Legumes	Food	Legumes
½ Cash, ½ Food	Legumes	½ Cash, ½ Food	No significant impacts
Cash+BCC	Legumes Leafy green vegetables Fruit Meat Fish Eggs Milk/dairy	Food+BCC	Legumes Leafy green vegetables Fruit Fish Eggs





Studies on large-scale multisectoral women's group programs in India shows mixed impact on diets

Diet-related outcomes	JEEVIKA-MC (Bihar)	PRADAN (5 states)
Diet diversity	↑	↔
Food security	↔	↑
Knowledge about food-related behaviour	↑	↑
Use of kitchen gardens	↑	↑
Use of safety nets or program funds to purchase food	↔	N/A

Sources: Scott et al, Current Developments in Nutrition (2022)

Raghunathan et al., World Development (2023)



Combined agriculture-nutrition-gender interventions improved women's empowerment, production diversity, *and* diet quality in Bangladesh (ANGeL RCT)

- Evidence from a 5-arm RCT indicates that **training husbands and wives together** contributed to
 - more joint decisionmaking in domains traditionally segregated by gender (and improved men's attitudes around cooking and childcare responsibilities)
 - Increased gender parity by 55%, did not disempower men
 - Did not increase women's time burden or intimate partner violence
- Agriculture+nutrition+gender training together also **improved production diversity and diet quality**
- One arm was implemented by Ministry of Agriculture extension agents, thus scalable



Behavior change interventions to address unhealthy food consumption: Critical evidence gaps in low- and middle-income countries

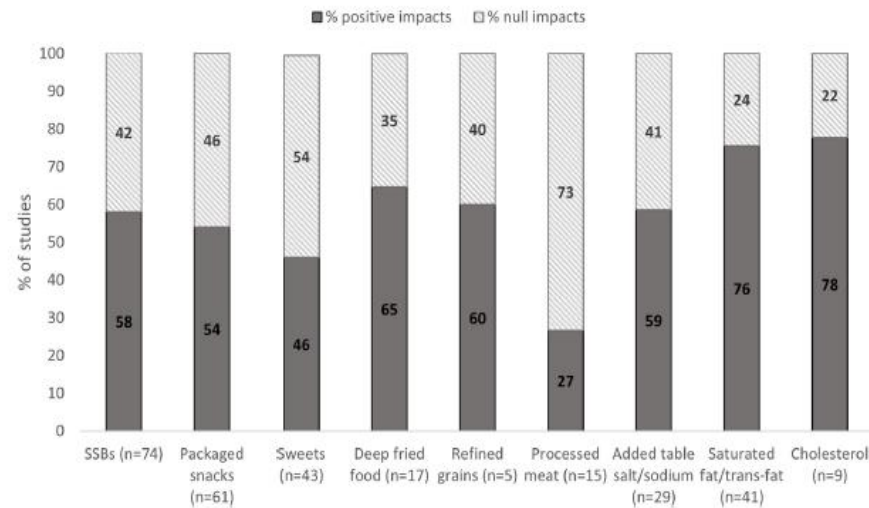


FIGURE 2. Percentage of studies reporting impact by unhealthy food consumption outcome (n = 145). SSB, sugar-sweetened beverage.

Critical evidence gap of interventions from LMICs and of documented behavioral drivers to understand HOW to deter unhealthy food consumption and sustain behavior change.

- Only 28 out of 145 BCI studies (**19%**) were from **LMICS** – 12 from Latin America, 5 each from South Asia and Middle East/North Africa, 4 from Central/East Asia, and 2 from Sub-Saharan Africa.
- **Mixed results observed for reported impacts** of BCIs across unhealthy food consumption outcomes.
- More than half of studies reported impacts in reducing **saturated fat (76%)**, **added table salt (59%)**, **SSBs (58%)**, and **packages salty snacks/fast food (54%)**.
- **Null impacts** reported for most studies targeting processed meats (73%) and sweets (54%).
- More studies that applied interventions with **multiple IEC components** reported positive impacts compared with those providing information alone.

