

# MULTI-SECTORAL NUTRITION

Global Learning and Evidence Exchange

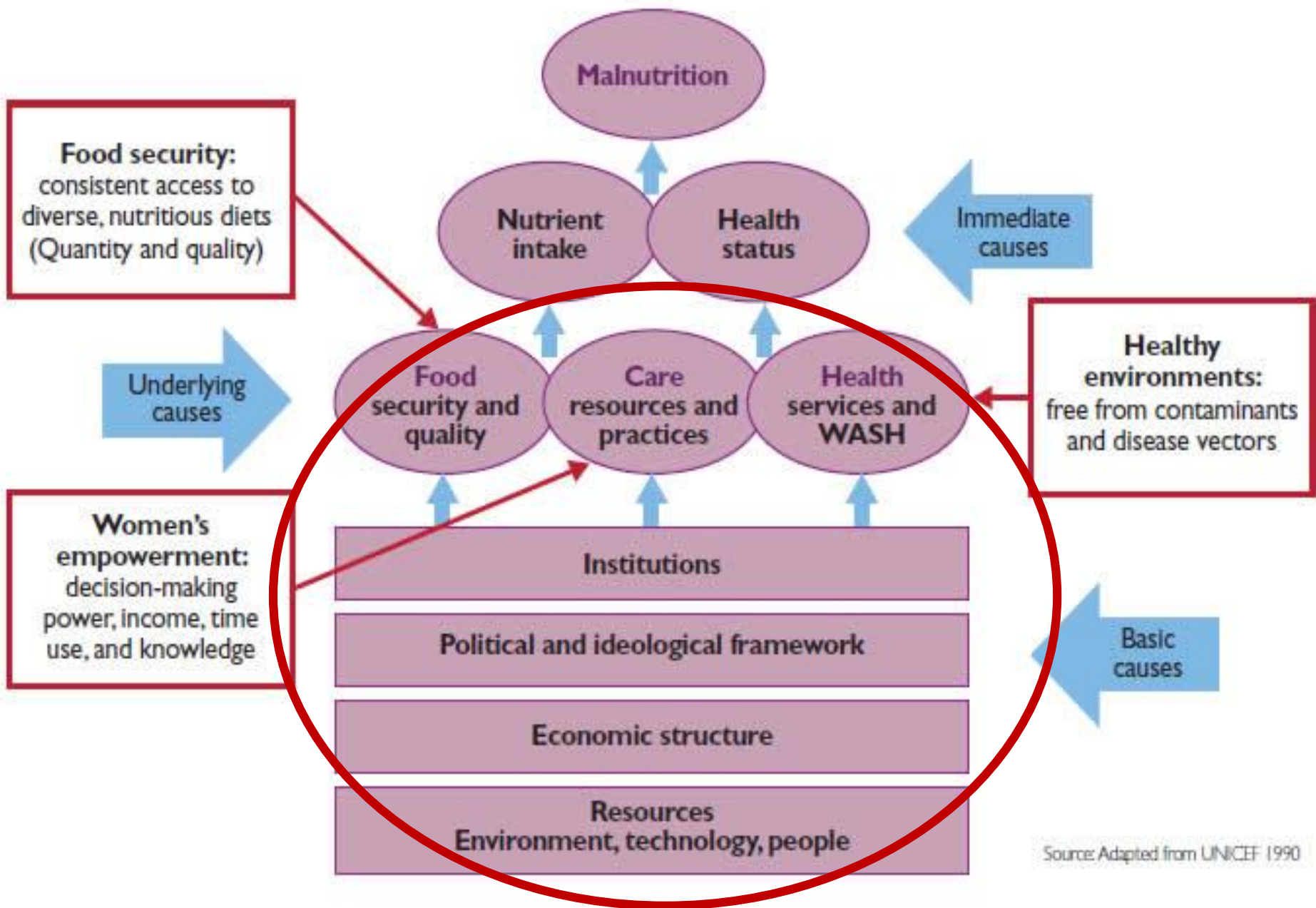
Washington, DC



## Review of the Evidence: Nutrition-Sensitive Programming

Heather Danton, SPRING Director of Food Security, JSI Research and Training Institute, Inc.





Source: Adapted from UNICEF 1990

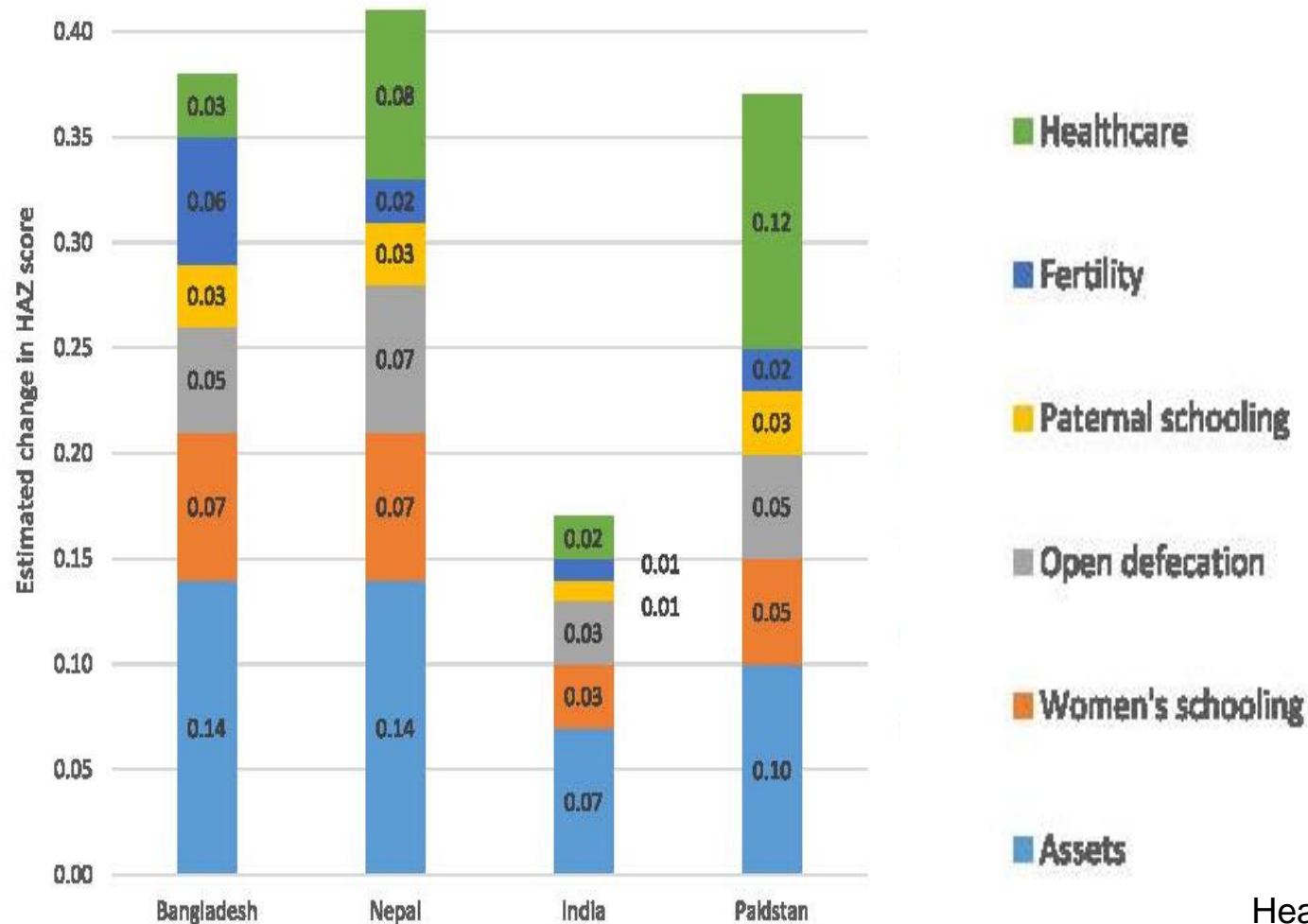
# Nutrition-sensitive interventions

---

- Social safety nets
- Water, sanitation and hygiene
- Agriculture and food security
- Women's empowerment
- Early childhood development
- Adult education
- Governance



# Estimated contributions of selected factors to change in stunting (HAZ)



Heady et al, MCN, 2016

# Why Nutrition-sensitive programming?

---

*“The economic consequences of malnutrition represent losses of 11 percent of gross domestic product (GDP) every year in Africa and Asia, whereas preventing malnutrition delivers \$16 in returns on investment for every \$1 spent.”*



# Applying a nutrition-lens

**TABLE 6.4** Differentiating a nutrition-sensitive water, sanitation, and hygiene (WASH) program from a conventional WASH program

Feature	Conventional WASH	Nutrition-oriented WASH
Primary outcomes of interest (impact indicators)	Clinical disease outcome (for example, diarrhea, trachoma, neglected tropical diseases)	Nutritional outcome (for example, stunting, anemia) in addition to clinical disease outcomes
Primary target group	All age groups, communitywide	The first 1,000 days from conception through two years (focus is on caregivers, since the fetus/baby is dependent on their actions)
Infrastructural choices	Toilet, water supply	Toilet, water supply, protected play space
Sources of contamination	Human feces	Human and animal feces
Vectors of feco-oral transmission	Fingers (with a focus on caregiver hands), fluids, flies, fields	Fingers (focusing on both caregiver and baby hands), fluids, flies, fields (especially soil)
Targeted behaviors (behavioral/process indicators)	Disposal of feces, handwashing with soap, water treatment, food hygiene	Disposal of feces (with added emphasis on animal stool and child feces), handwashing with soap (focusing on both caregiver and baby hands), water treatment, food hygiene, exclusive breastfeeding
Factors influencing choice of combinations of intervention components	Communicable disease prevention or control; ministerial or donor priorities	Nutritional outcomes
Evidence base	Strong randomized trial evidence	Strong observational evidence base and plausibility basis

Source: Mduduzi Mbuya.

# How does agriculture affect nutrition?

---

## Food Consumed

- Calories
- Protein
- Micronutrients

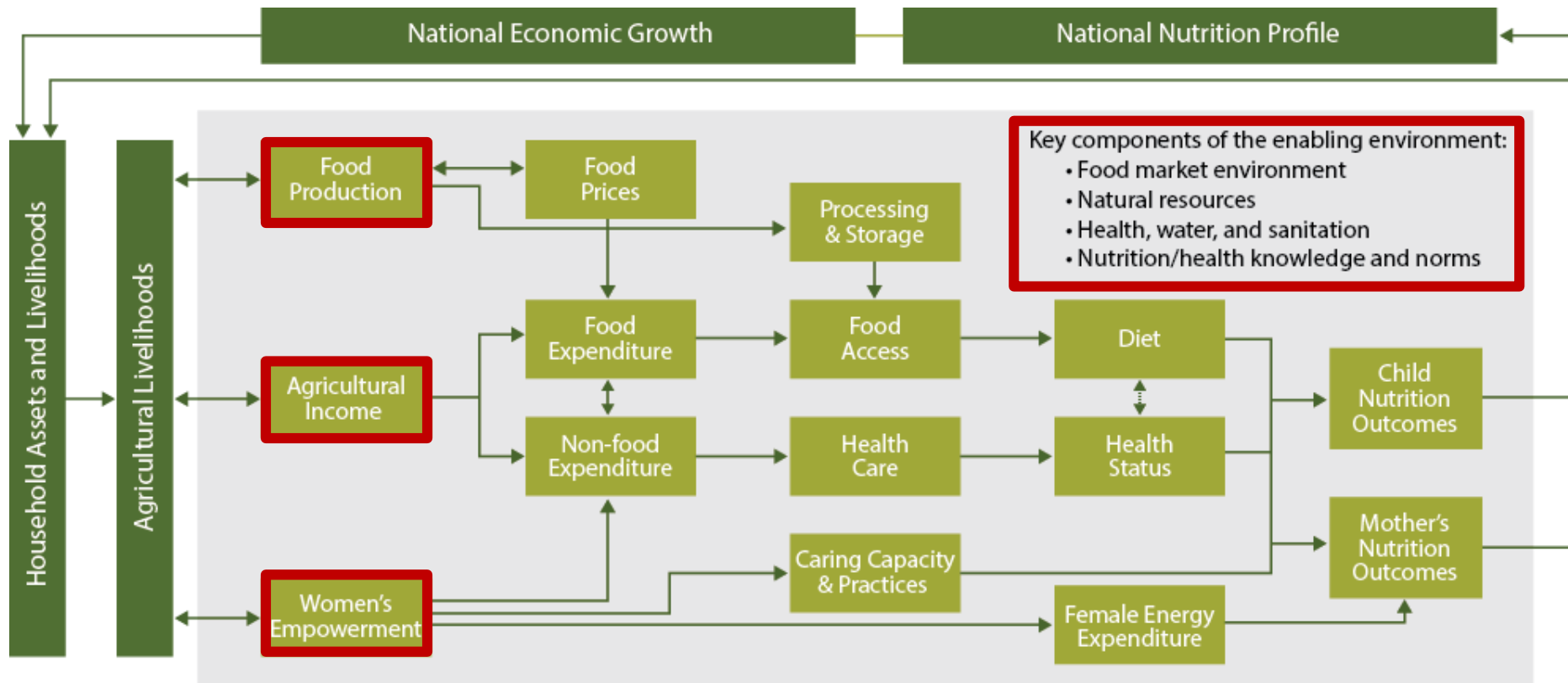
## Income Invested in...

- Diverse diet, nutrient-rich foods
- Health care
- Sustainable livelihood for year-round food and health care access

## Gender in Agriculture

- Maximizing women's control of income
- Managing time and energy demands

# Primary pathways linking agriculture and nutrition





# Agriculture as a source of food: Homestead food production

---



- Producer households are more likely to consume a diversity of foods grown than non-producing households
- Home production is associated with better household and women's dietary diversity. However, market access may play a more important role in dietary quality.
- Production decisions are influenced by market prices, relative costs and risks, productive assets, preferences and cultural norms
- Processing and storage impact food access and nutrient content

# Agriculture as a source of food: Production, processing, storage, & food safety

---

- Use of GAP a good place to start
- Micronutrient Fortification
- Good management, processing and storage can increase food access.
- Occupational risks – address through good ag practices:
  - Contaminants in agricultural wastewater, open markets
  - Increased malaria where water is stored or standing
  - Risks in value chains (e.g., zoonoses)



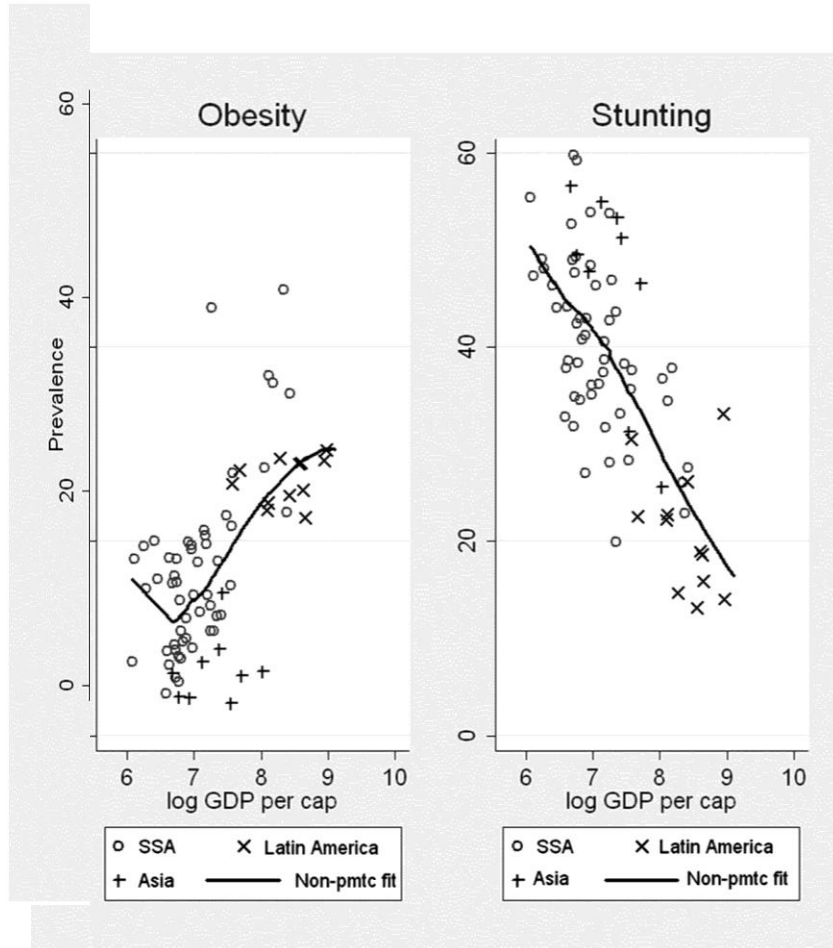
# Agriculture as a source of income: The pathways

---



- Improved year-round income and cash flow to meet household needs, including diverse, nutritious foods, and health care
- Assumes nutritious foods and health services are accessible – reflects the importance of generating demand for nutritious foods to stimulate timely supply

# Agriculture as a source of income: Evidence



Patrick Webb, and Steven Block PNAS 2012;109:12309-12314

- Income correlated with stunting reduction at macro level, but evidence at micro level is sparse
- Increased obesity in rural areas- trends are alarming
- Household income correlated with household dietary diversity, especially for female-headed households
- Role of non-agricultural income during lean season
- Correlation between income and diet diversity, but no evidence of effects on nutrition at household and individual level

# Agriculture as it affects gender: Evidence



## Control Over Assets and Use of Income

- Women's control leads to better diets for women & children

## Time Use & Child Care

- Tension between earning income and caring for child
  - Effect of socioeconomic status
- Relationship between time and dietary diversity scores for WRA various

## Female Energy Expenditure

- Physical work compromises pregnancy and lactation nutrition
  - Low birthweight, small-for-gestational age, preterm deliveries

# Enabling environment

---



## Reminder!

The pathways are:

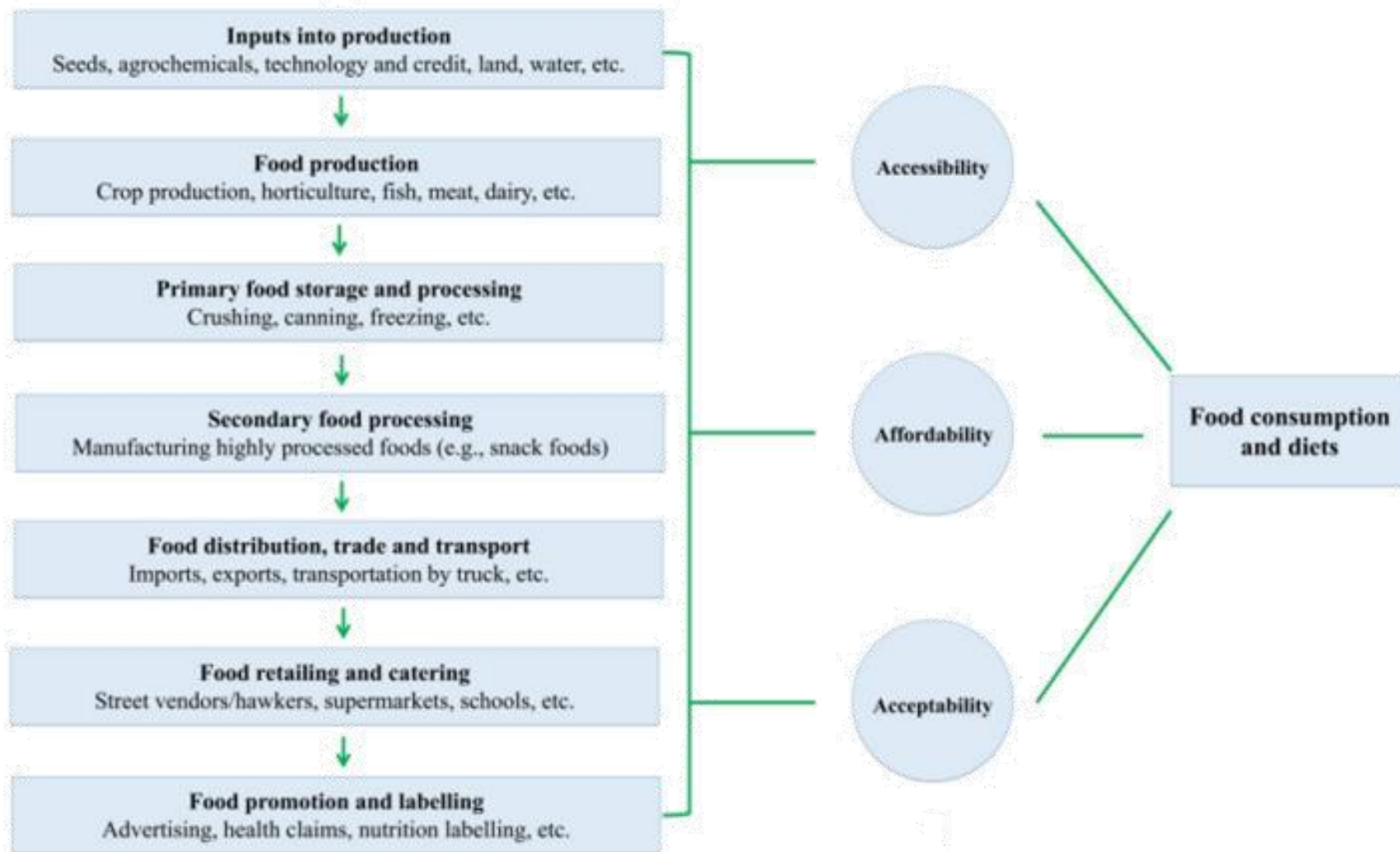
- Complex
- Context-specific
- Do not affect everyone equally
- Behavior change and systems strengthening are essential



*“Diet is now the number-one risk factor for the global burden of disease. The diet choices available to us are shaped by our food (market) systems, which are not sufficiently well geared toward enabling us to consume high-quality, healthy, and nutritious diets.”*

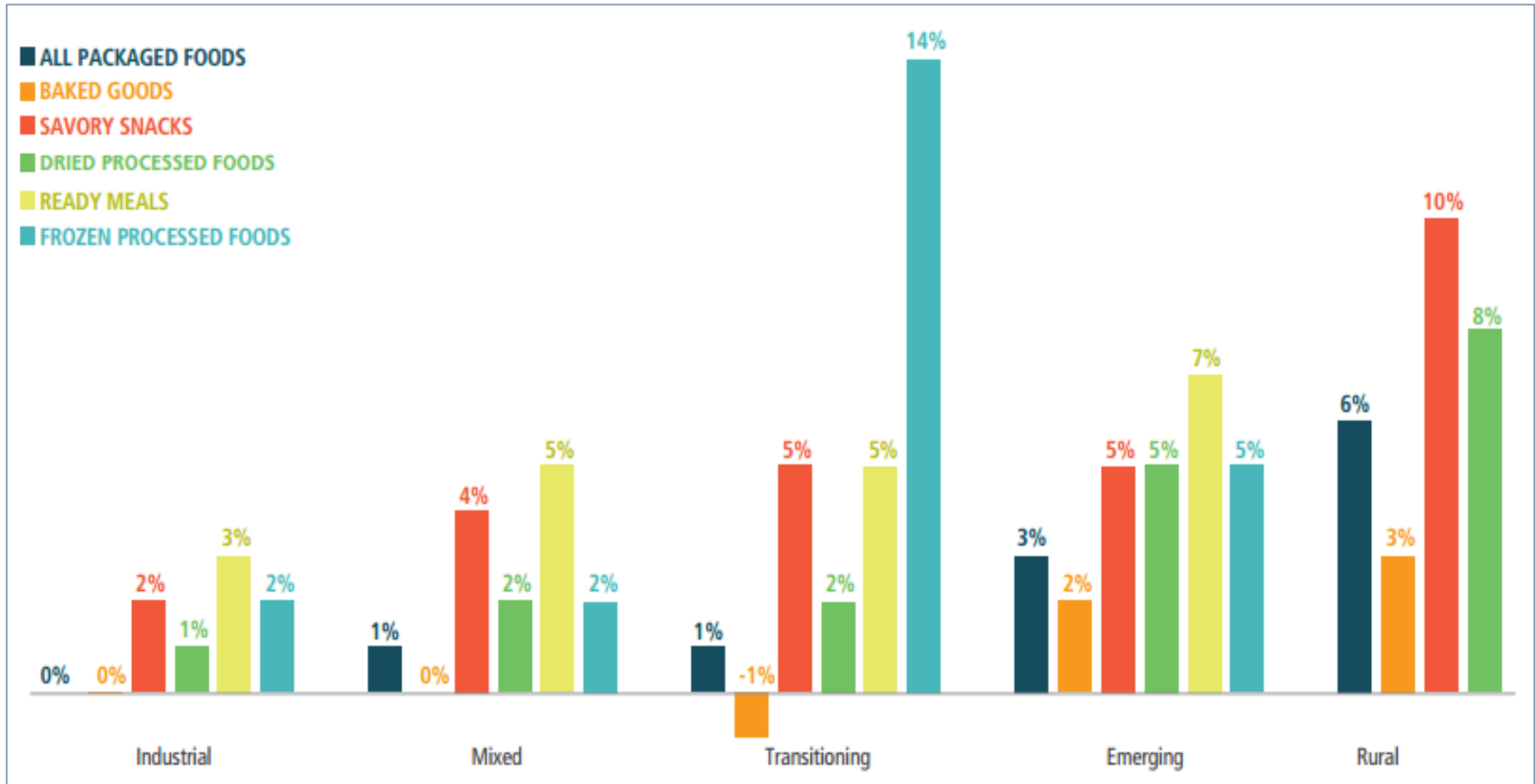
Global Nutrition Report, 2016

# Food market systems & malnutrition





# The different types of food market systems: Change in consumption of processed foods, 2000-2014



**TABLE 6.3** Some of the changes that can be made in food systems to achieve dietary goals

Dietary goal	Food system element			
	Food production	Food storage, transport, distribution	Cross-border food trade and investment	Food packaging and processing
<b>Increase fruit and vegetable intake</b>	Invest in mixed and integrated cropping systems in areas where markets are poorly developed	Invest in distribution infrastructure to enable establishment of local markets for low-income groups; develop public procurement mechanisms to ensure fruits and vegetables are served in public institutions	Use the World Trade Organization Aid for Trade initiative facility or Enhanced Integrated Framework aid for trade partnership to increase the supply of fruits and vegetables in low-income countries	Develop microenterprises for local processing to reduce waste
<b>Increase intake of legumes/pulses</b>	Improve varieties to boost yield	Train farmers on management practices to reduce loss during storage to insect damage/improper drying	Safeguards to prevent distortions that discourage local production and regional trade in legumes	Develop quick-cooking bean flours
<b>Increase intake of grains high in protein, micronutrients, and fiber</b>	Incentivize the production of underutilized grains; promote biofortification using conventional breeding	Develop more efficient threshing and milling technologies for underutilized grains	Ensure that policies support open regional trade where neighboring countries produce underutilized grains	Set standards and marketing incentives for use of whole grains in processed food products; develop novel foods with underutilized species
<b>Encourage balanced consumption of safe milk</b>	Improve availability of animal health services; ensure women can have title to the animals they milk and care for	Invest in infrastructure to ensure safe transport of milk from farm to cooling center	Ensure effective food safety checks of imported milk powder	Train milk processors in food safety and quality assurance
<b>Replace saturated and trans fats with unsaturated fats</b>	Switch investments in palm oil to oils with healthier fatty acid profiles	Encourage cooperatives between healthier oil producers to lower prices	Lower tariffs on healthier oils relative to oils with saturated fats	Prohibit public investment and disincentivize private investment in facilities producing hydrogenated oils
<b>Reduce intake of high-calorie, nutrient-poor sugary drinks and salty snacks</b>	Use competition laws to combat excessive concentration in the agribusiness sector	Tax transportation of high-calorie, nutrient-poor sugary drinks and salty snacks	Codex Alimentarius Commission sets international guidelines for consumer-friendly nutrition labels	Mandate downsizing of all package sizes of sugar-sweetened beverages sold through retail outlets

Source: Authors, adapted from information in Anand et al. (2015); Bereuter and Glickman (2015); de Schutter (2014); Fanzo et al. (2013); FAO (2013); Global Panel on Agriculture and Food Systems for Nutrition (2014); Hawkes and Ruel (2010); Hawkes (2015); Nugent (2011); UNSCN (2014).

# Conclusions



- Link nutrition-sensitive activities, outcomes, and indicators with nutrition-specific activities
- Targeting of nutrition-sensitive interventions is key: context
- Good agriculture practices a good place to start in applying a nutrition lens
- Role of gender is paramount
- A food systems approach is needed: scale, cost-effectiveness

# Thank You

For more information on SPRING's Agriculture-Nutrition work,  
visit:

<https://www.spring-nutrition.org/technical-areas/ag-nut>