

Towards a definition of nutrition research priorities in Tanzania

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Presented at the Nutrition Research Stakeholders' Meeting

Dar es Salaam, Tanzania

21 May 2018

Background:
Food systems and nutrition

Thesis

Nutrition is the outcome of an economic and social/cultural food system

It can be influenced by policies and directly affected by programmatic interventions

But without attention to and improvement of the food system from which it emerges, nutrition cannot be sustainably improved

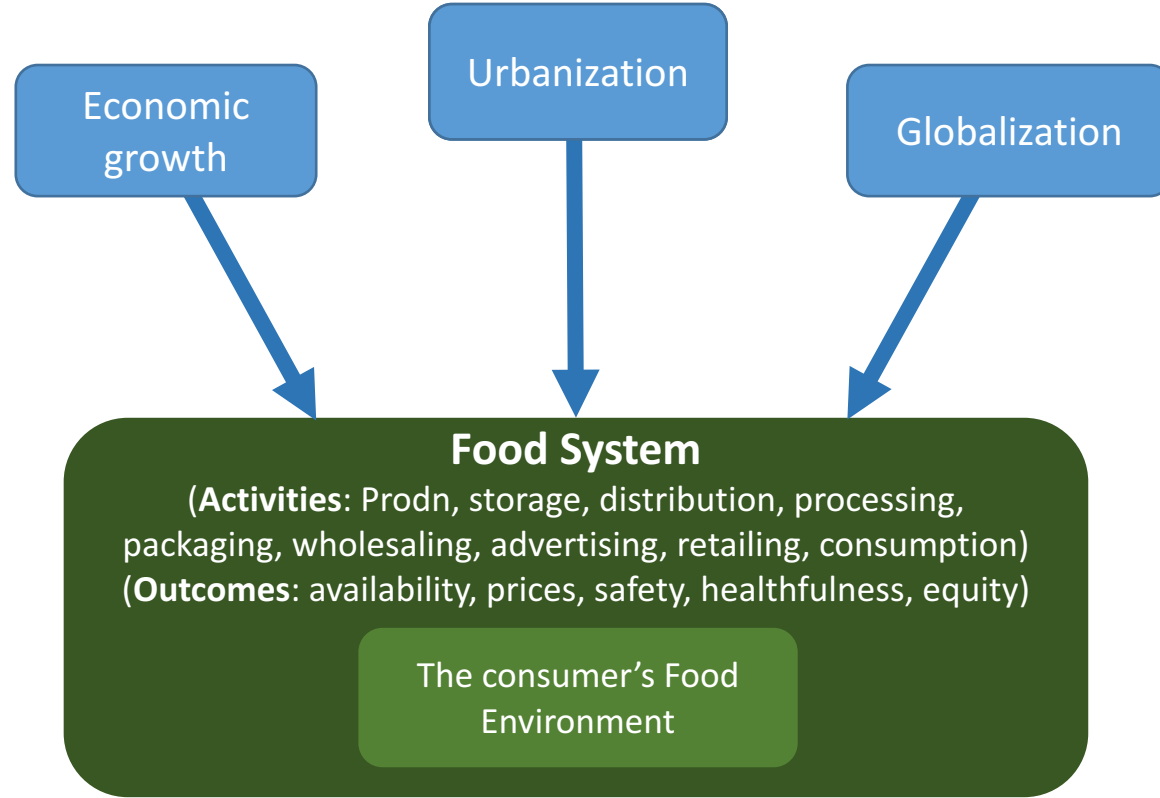
Food System

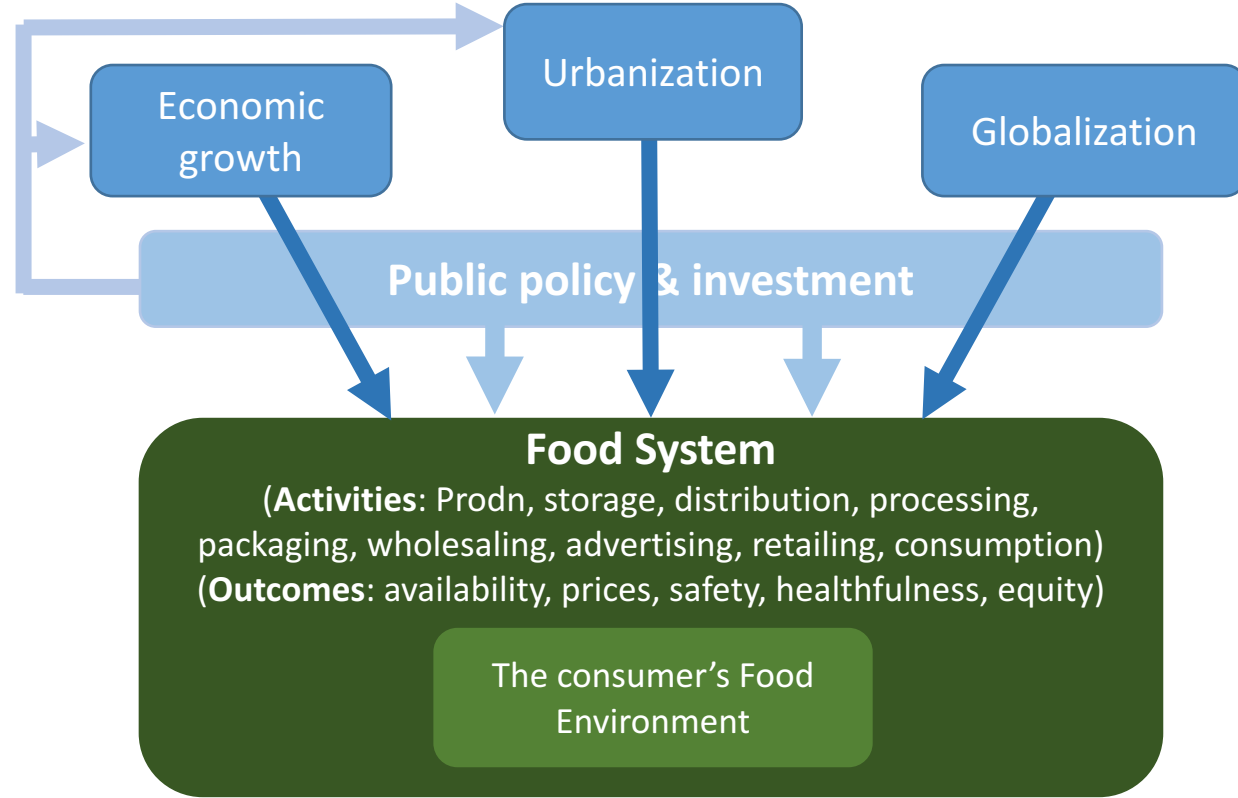
(**Activities:** Prodn, storage, distribution, processing, packaging, wholesaling, advertising, retailing, consumption)
(**Outcomes:** availability, prices, safety, healthfulness, equity)

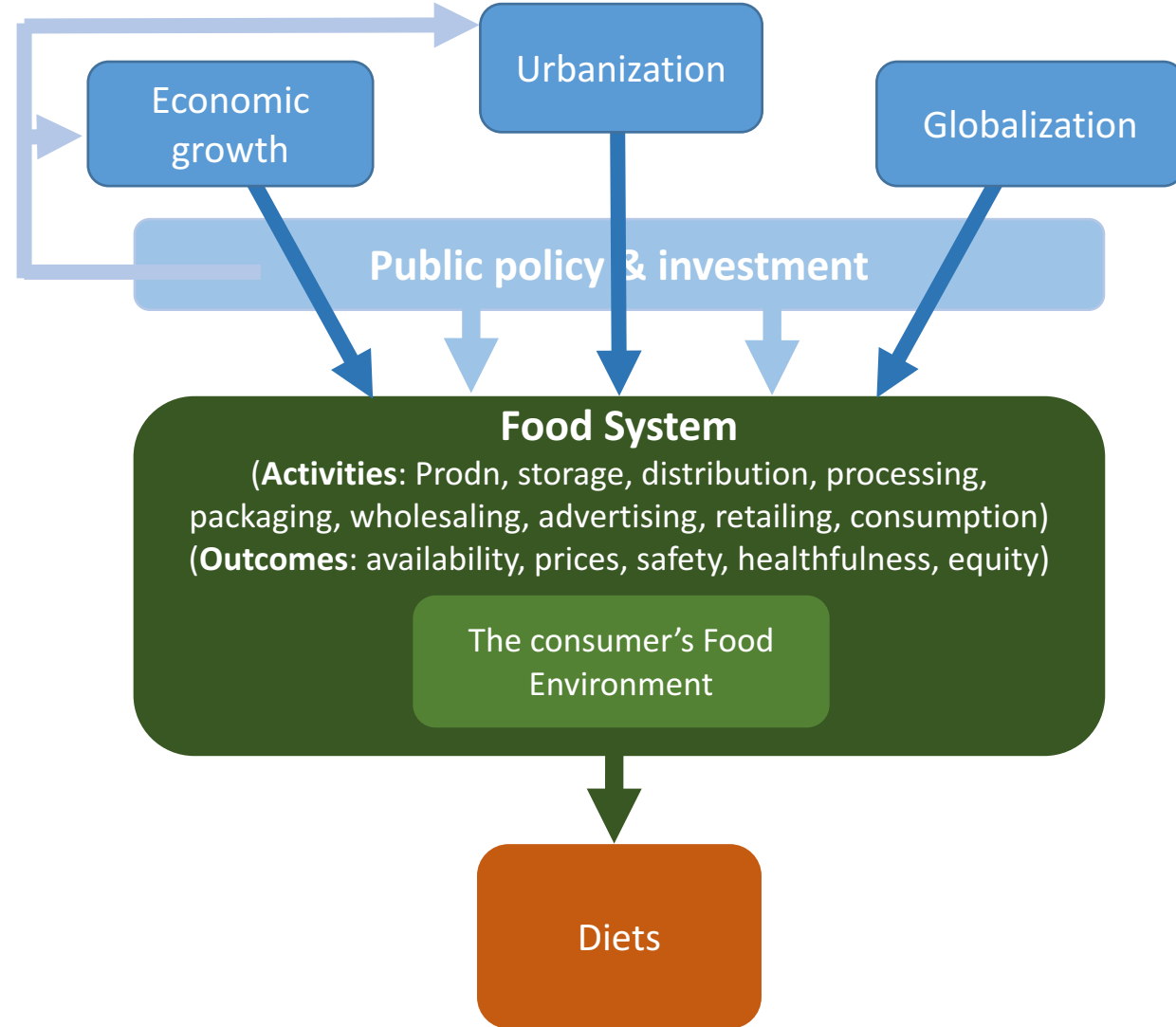
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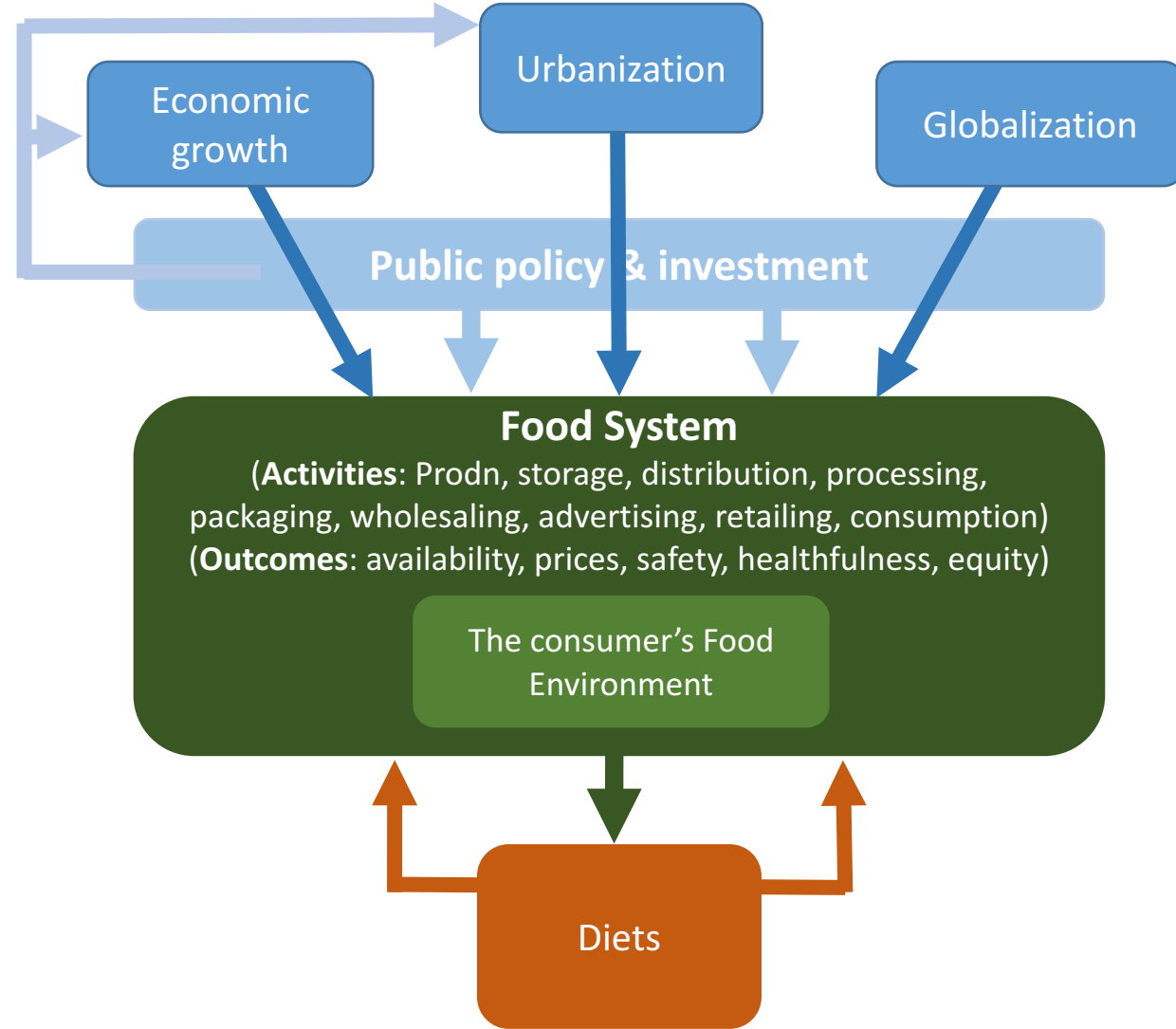
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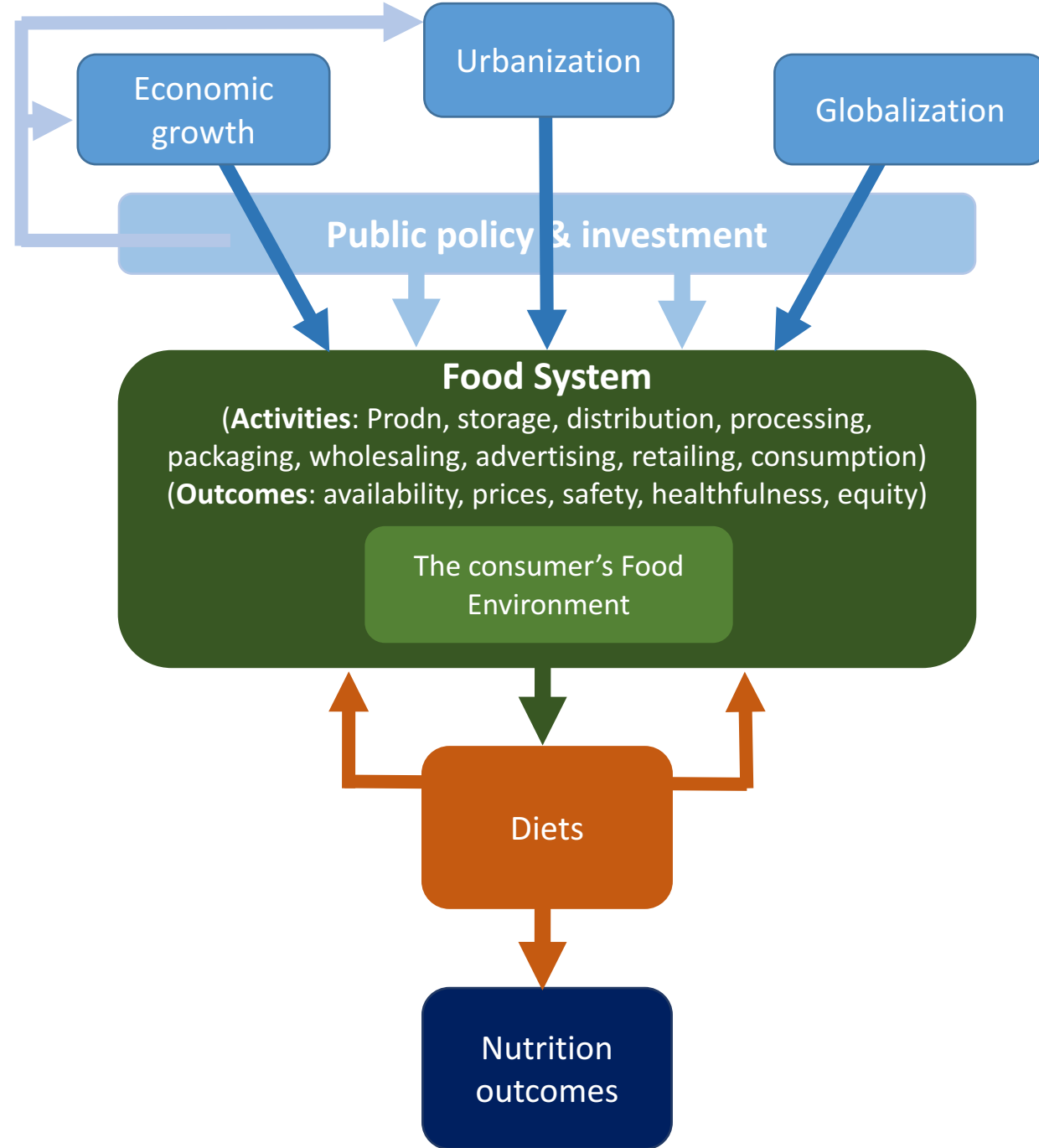
The consumer's Food
Environment

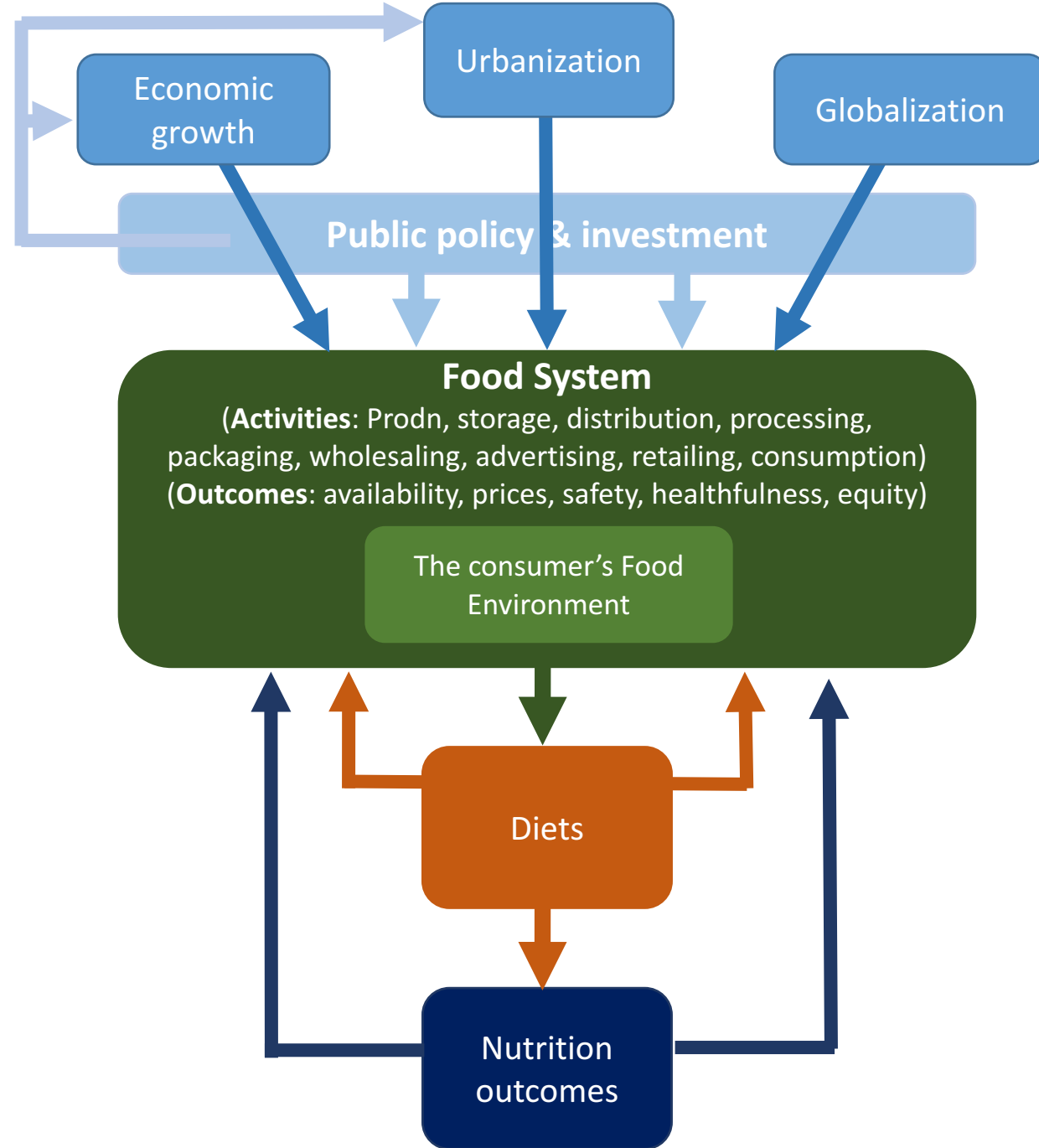


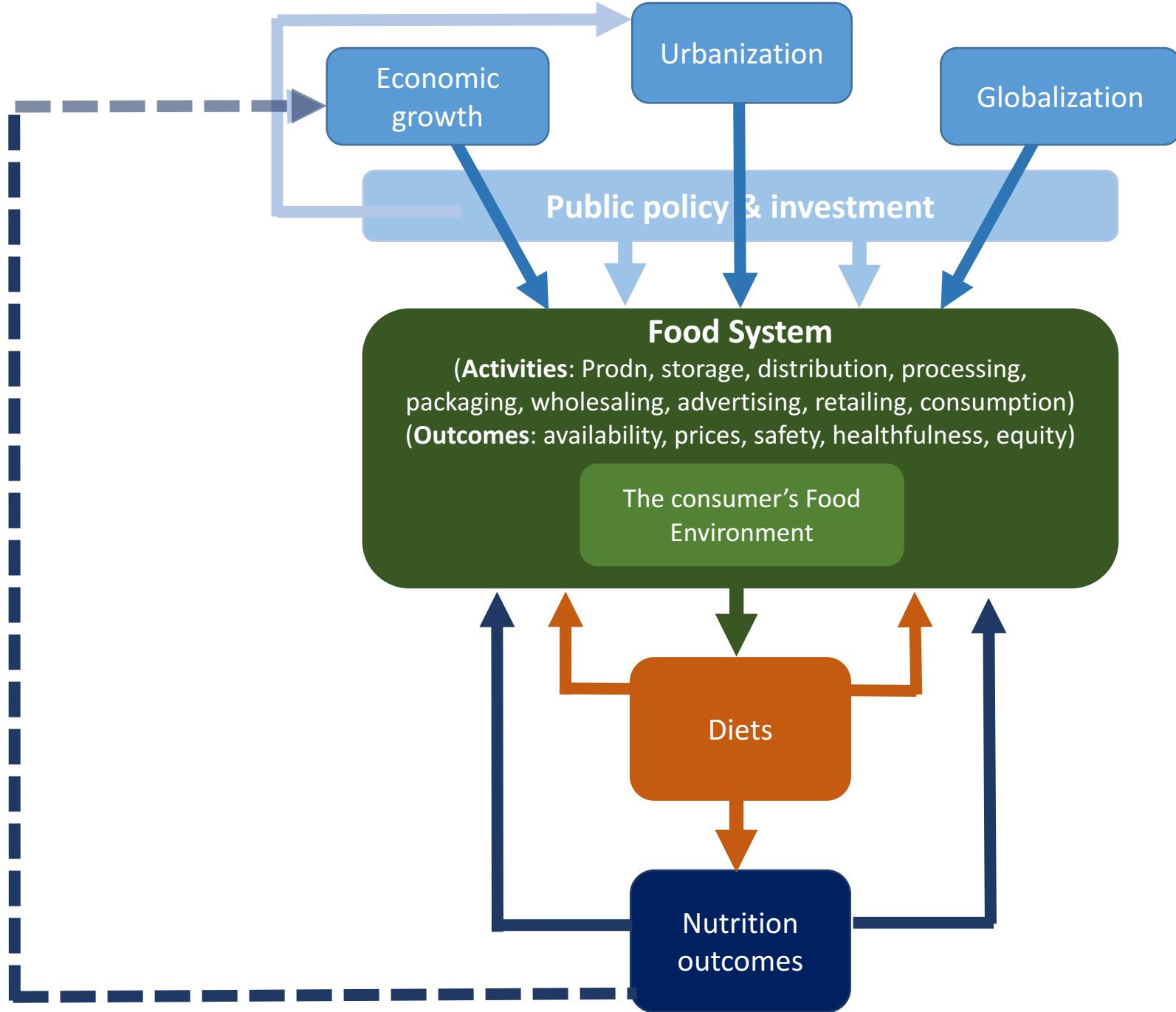


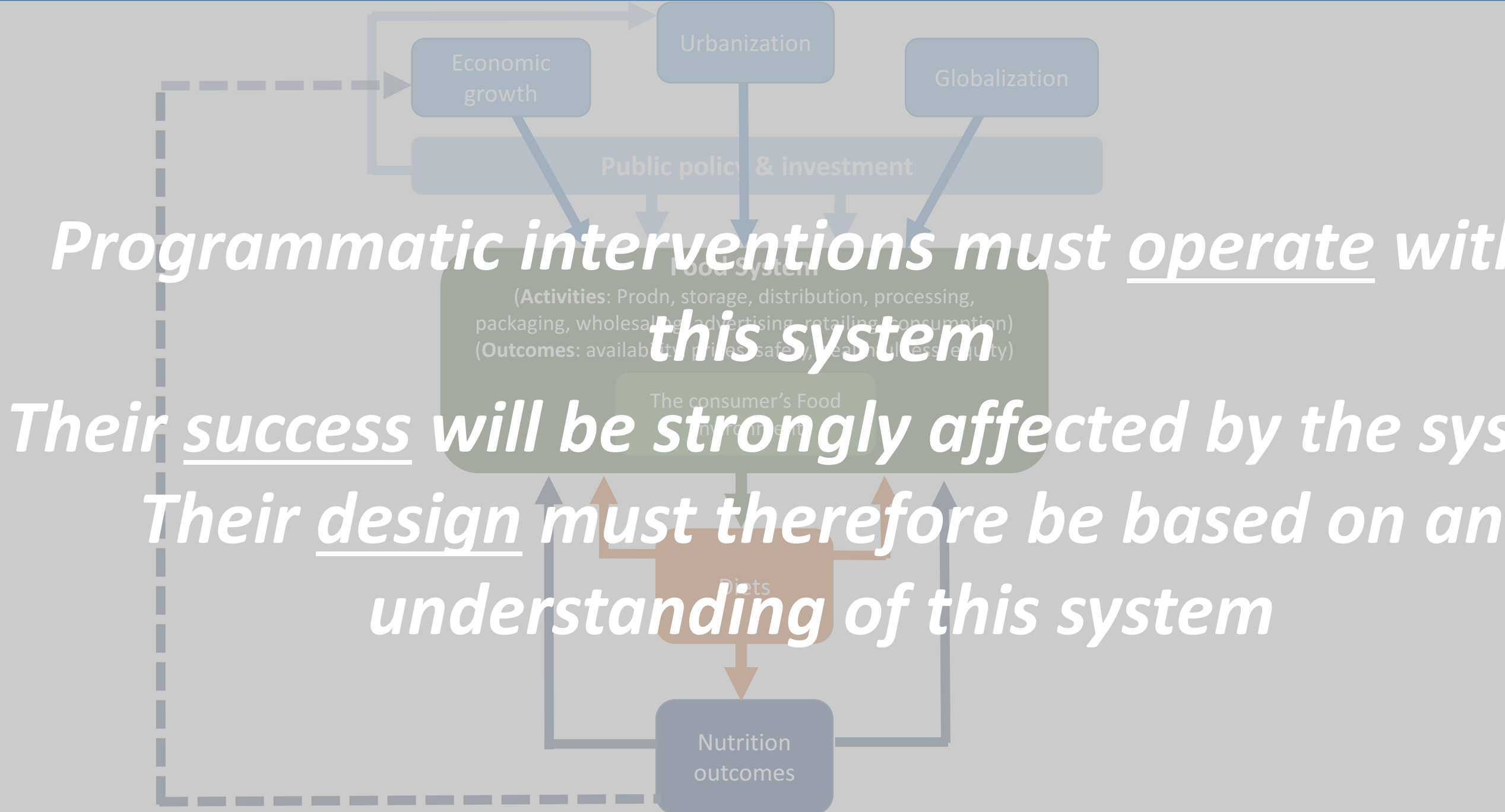












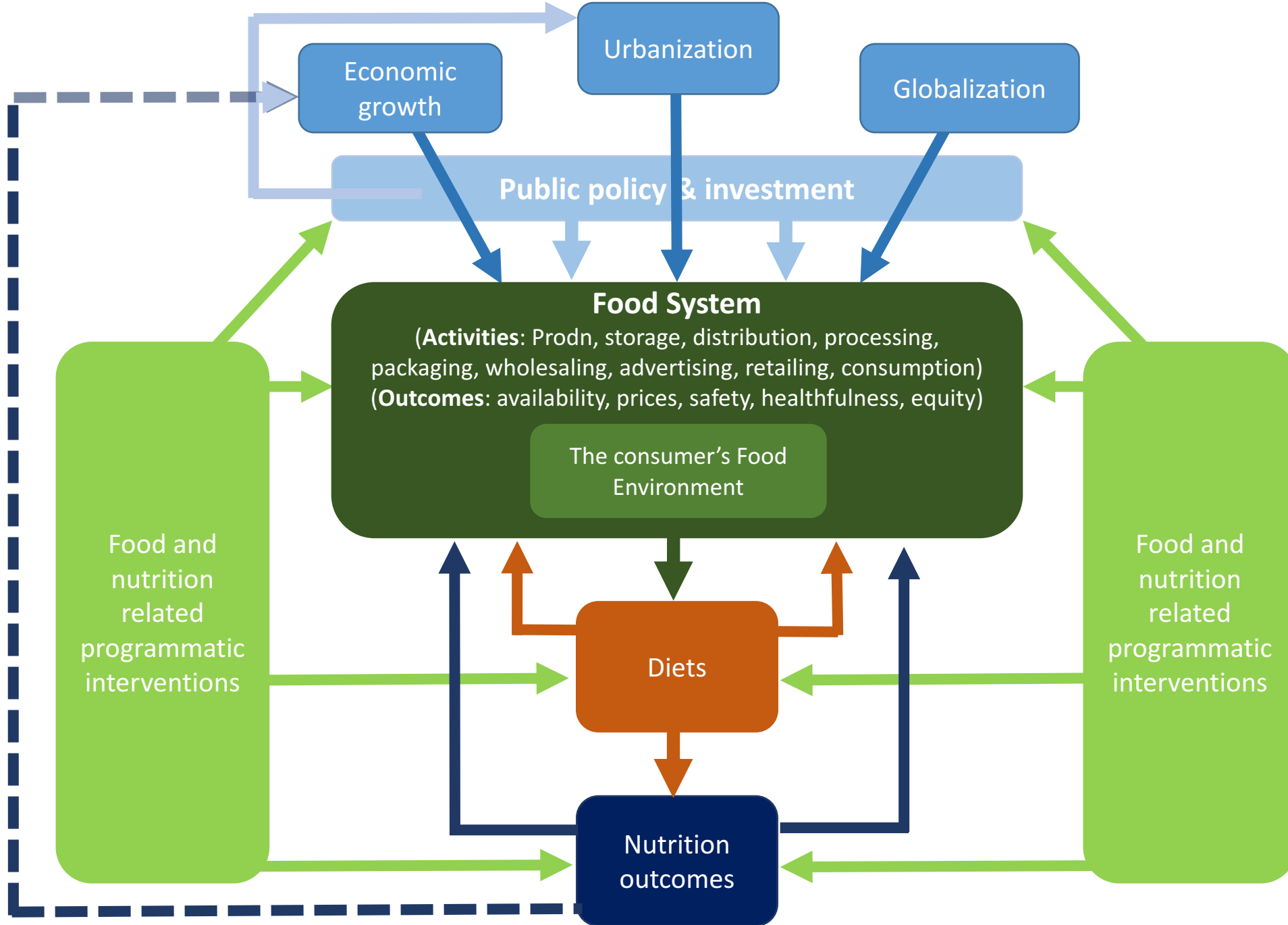
Programmatic interventions must operate with

this system

Their success will be strongly affected by the system

Their design must therefore be based on an

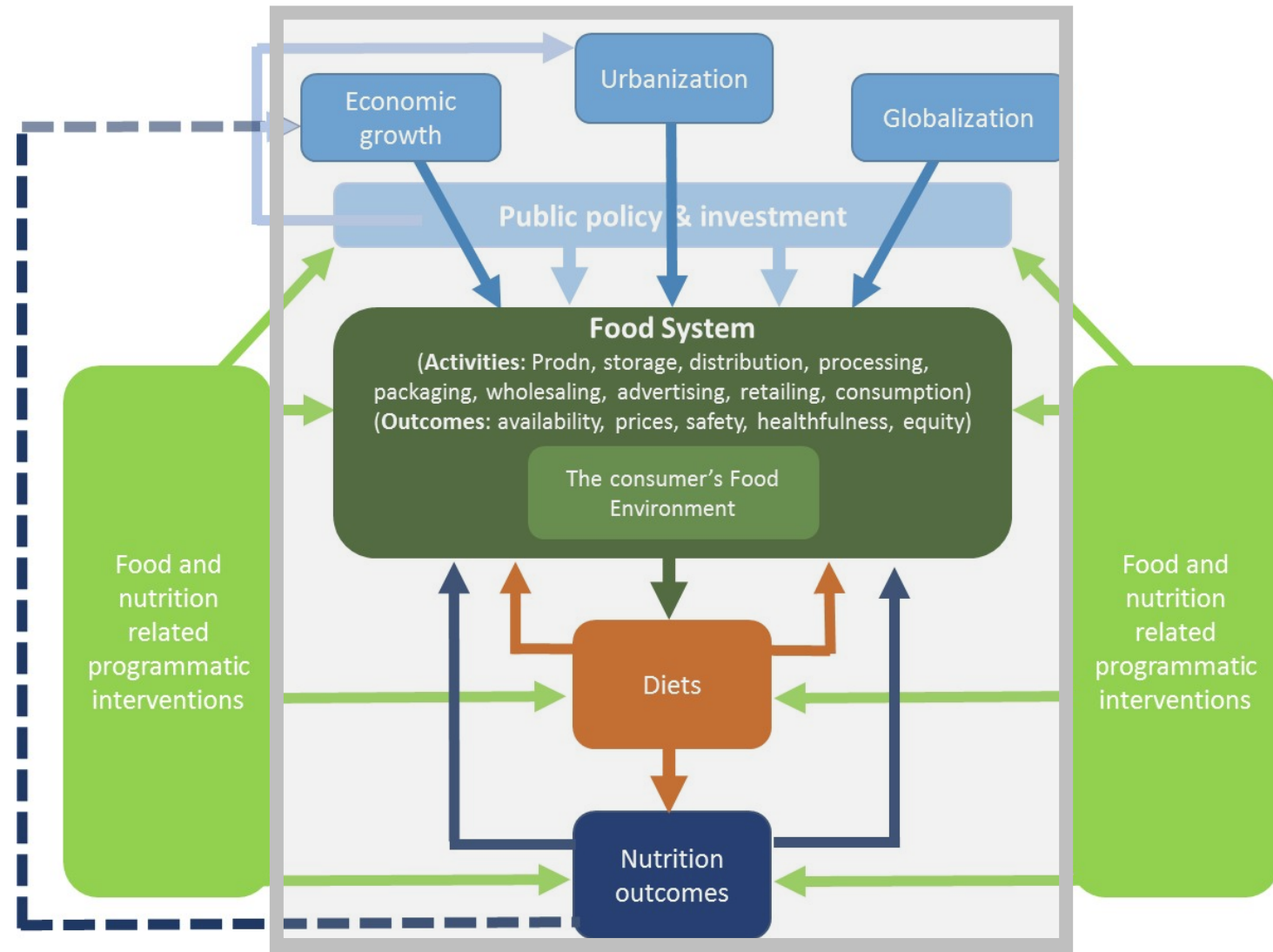
understanding of this system



Knowledge needed in two broad areas

- Fundamental drivers in the local context
- Programmatic interventions
 - Given local context, how can programmatic interventions be designed to achieve maximum sustainable impact on nutritional outcomes?

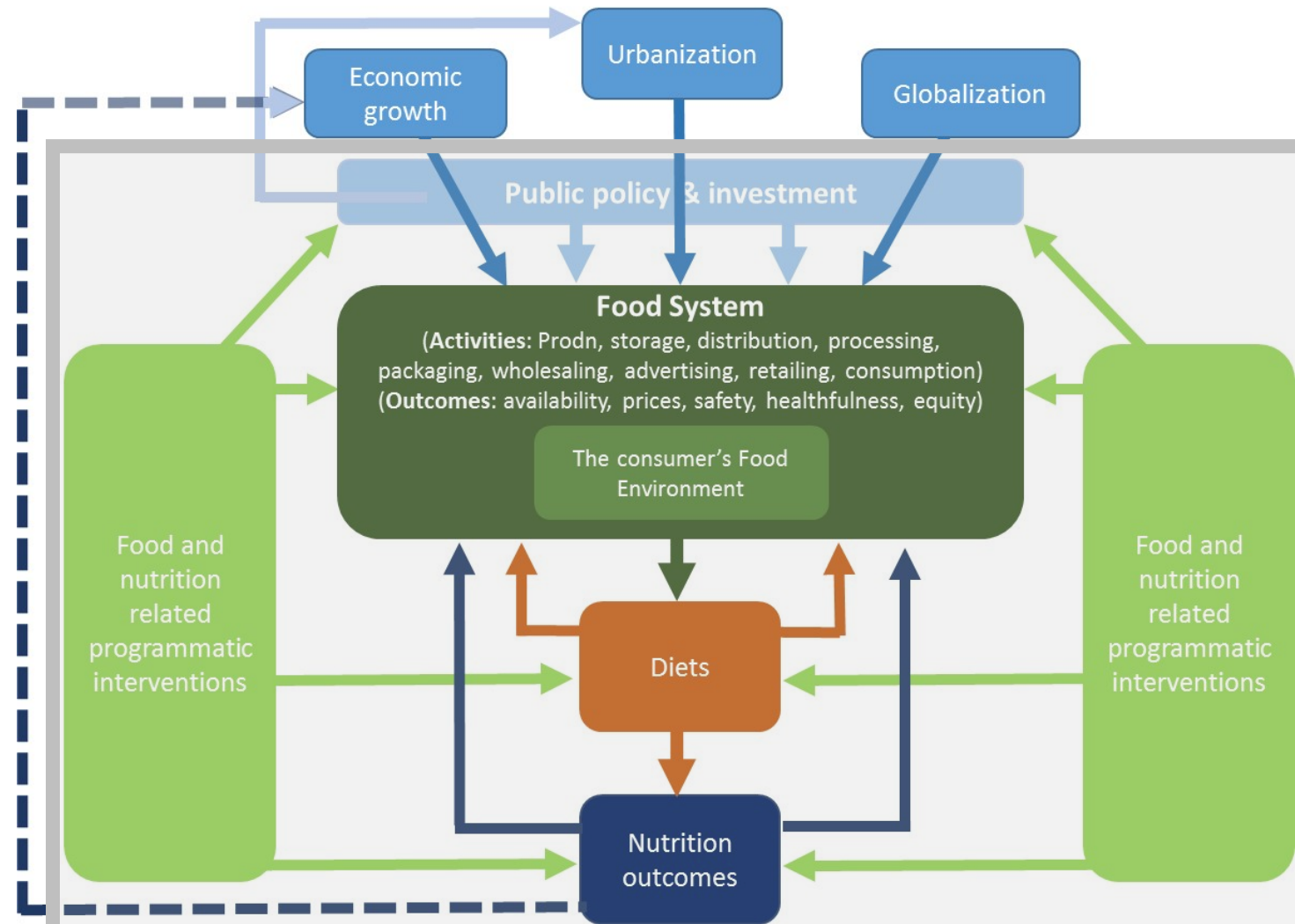
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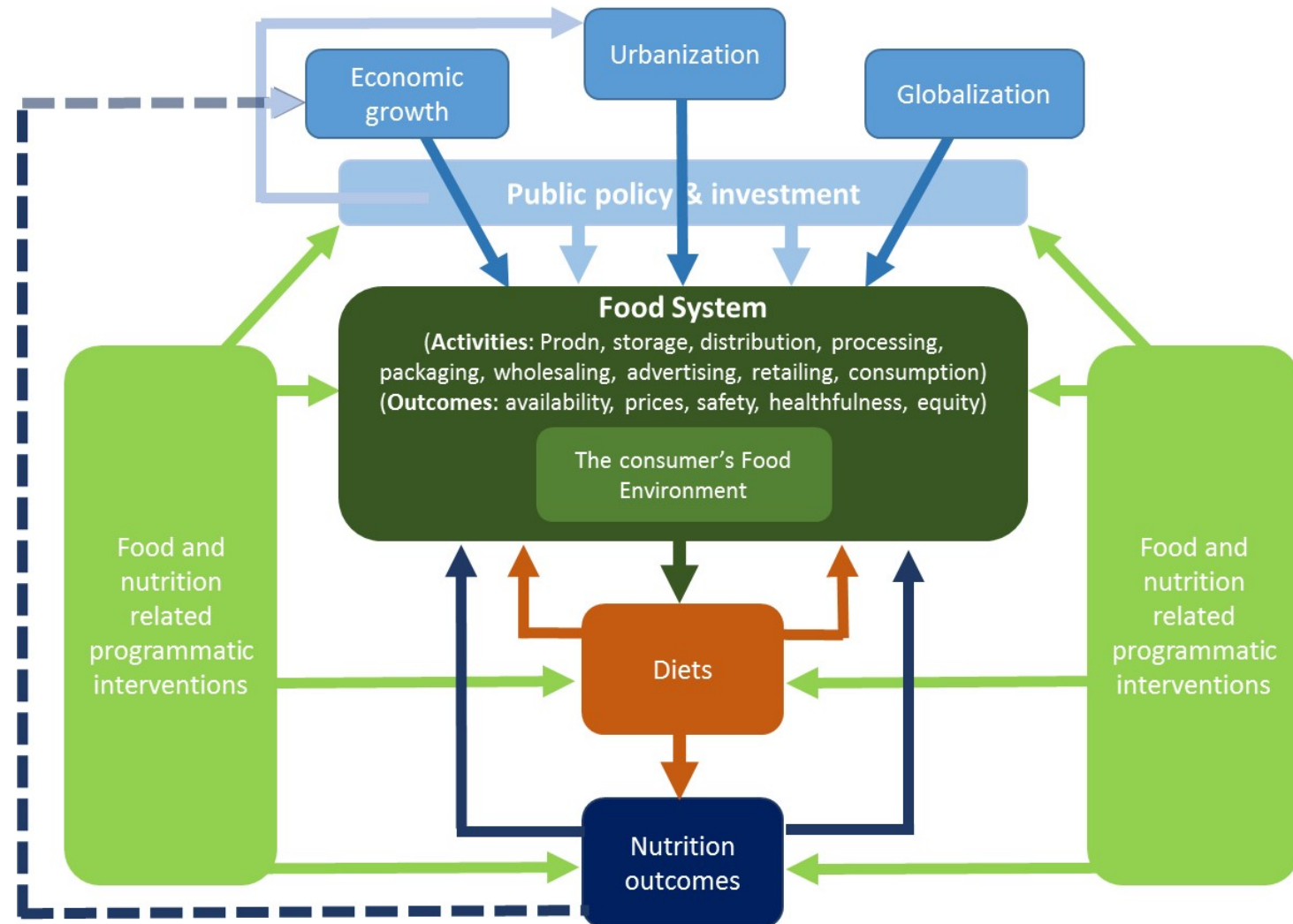
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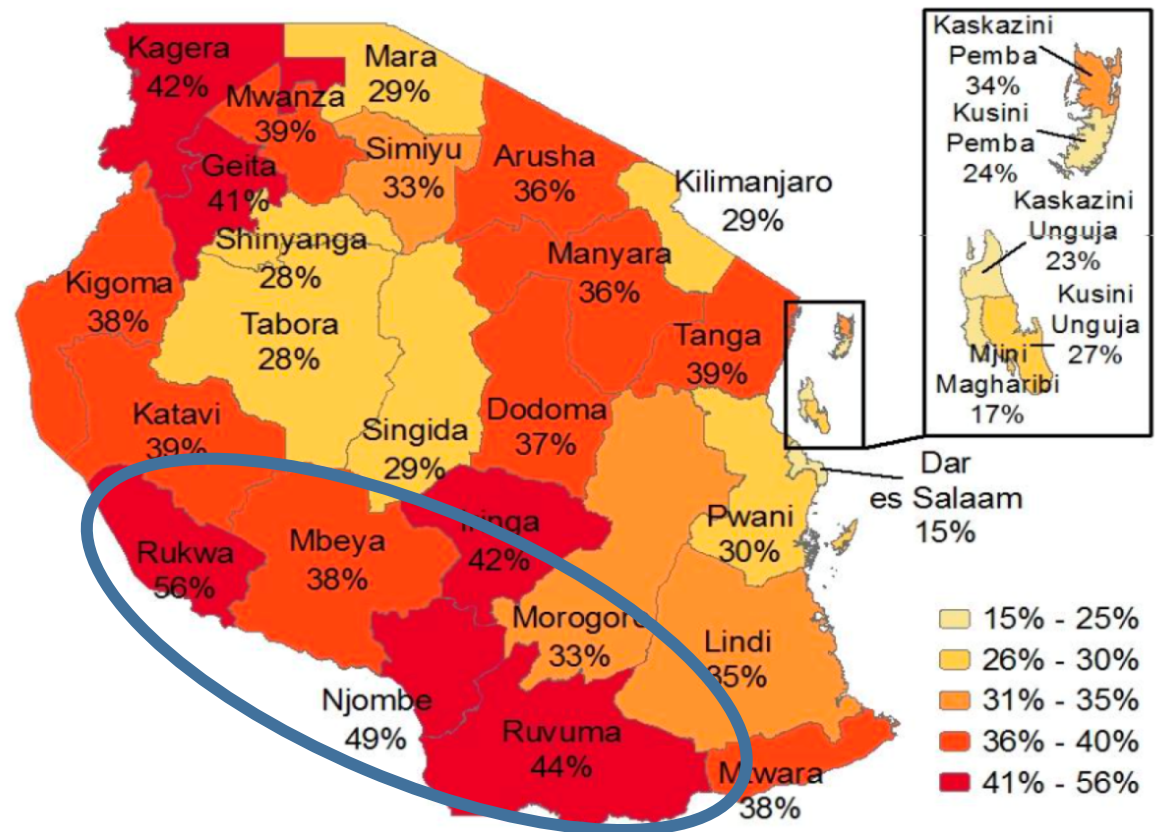


***Issues, knowledge gaps, and
illustrative research topics***

Issue #1: Stunting and wasting

- What is the issue?
 - Rates are declining, but are still high
 - Rates are highest in some of the most productive areas of the country
 - Southern Highlands

Figure III: Stunting Prevalence among children under age 5 in the Regions of Tanzania, 2016



Source: Demographic and Health Survey and Malaria Indicator Survey, 2015-16

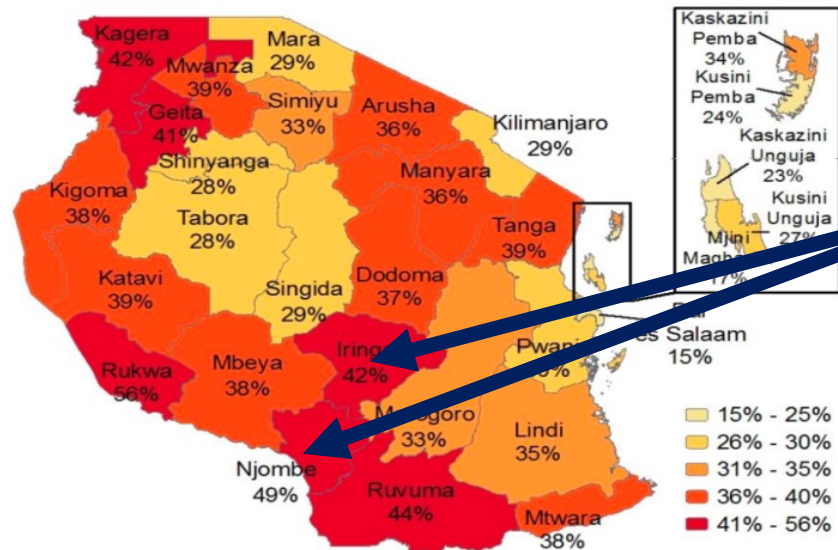
Issue #1: Stunting and wasting (cont'd)

- What is the knowledge gap?
 - Why are geographical areas with higher farm level productivity not seeing better nutritional outcomes?
 - What are the drivers of nutritional outcomes at household level? Do these vary by rural- and urban areas?
- Possible research
 - Note the ongoing IFPRI work using DHS
 - Use NPS to explore the correlates of nutritional outcomes
 - What is the spatial and demographic distribution of wasting and stunting?
 - What are the factors, at hh or community level, that mediate the impact of an area's agricultural production on nutrition outcomes?
 - What does this imply about programmatic design?

Issue #2: Anemia

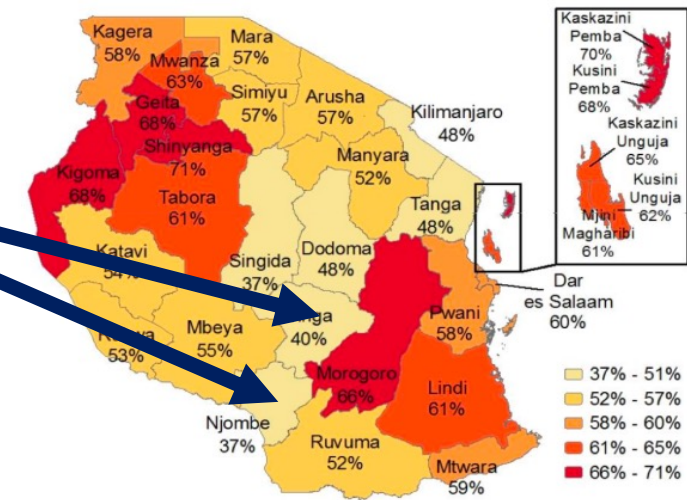
- What is the issue?
 - The DHS shows recent increases in anemia among women and children, due to iron and folic acid deficiency, even as wasting and stunting have declined
 - Rates are *lowest* in the Southern Highlands, where wasting and stunting are *highest*

Figure III: Stunting Prevalence among children under age 5 in the Regions of Tanzania, 2016



Source: Demographic and Health Survey and Malaria Indicator Survey, 2015-16

Figure IX: Percentage of Children with any Anemia by Country Region, 2016



Source: Demographic and Health Survey and Malaria Indicator Survey, 2015-16

Issue #2: Anemia

- Knowledge gap
 - How do the drivers of stunting and wasting differ from those for anemia? What programmatic interventions would be most effective in sustainably and cost-effectively addressing the issue?
- Possible research
 - Investigate more carefully the distribution of wasting, stunting, and anemia across households in Iringa and Njombe
 - Spatially (urban, rural)
 - Demographically (male vs. female heads, age of HHH, education)
 - Economically (poor compared to non-poor)
 - Could start with DHS
 - But might require additional data collection

Issue #3: Food safety

- What is the issue?
 - Concerns about food safety likely to rise as
 - HHs rely more on markets for their food ... and market infrastructure continues often to be deplorable
 - Supply chains become longer (cities reaching further out into rural areas to source their food), and
 - The consumption of perishable and processed foods increases
 - More and more food is consumed outside the home ... and it's preparation is often under highly unhygienic conditions
 - Chemical (e.g. mycotoxin in maize or sunflower)
 - Microbial (especially in perishables)

Issue #3: Food safety (cont'd)

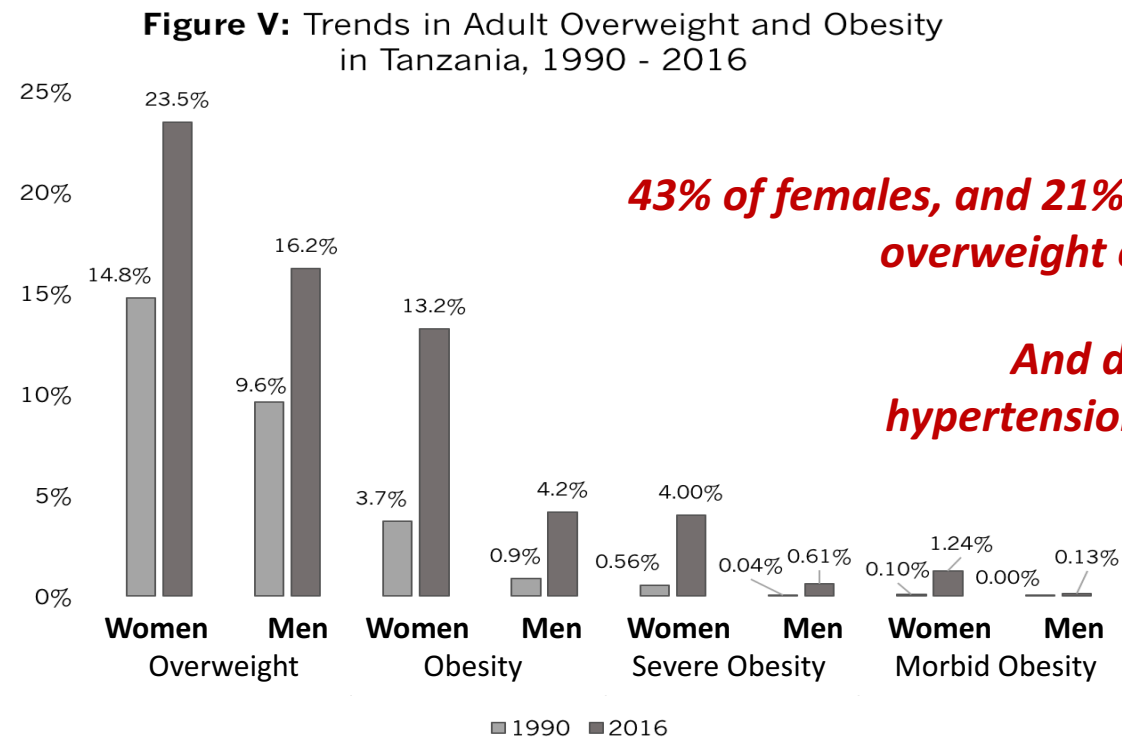
- What is the knowledge gap?
 - Do large companies produce safer processed foods than SMEs?
 - Regulatory implications?
 - How prevalent is mycotoxin in Tanzania's value chains? What type of consumer is most exposed to these toxins?
 - Educational and testing implications?
 - How prevalent is microbial infection, at levels dangerous to human health, in
 - Perishable value chains? Which value chains are most affected? Where?
 - Prepared food away from home? What types of establishments and what types of food are most risky?

Issue #3: Food safety (cont'd)

- Possible research
 - Follow-up the earlier work on mycotoxin in sunflower with a more definitive study. Consider maize as well
 - Estimate burden of disease and its economic cost (DALYs)
 - Assess microbial contamination in fresh produce, by source and end-point
 - Geographic (urban, peri-urban, rural)
 - Type of farmer (large, medium, small)
 - Type of retail outlet (soko vs. supermarket)
 - Assess food safety in the food-away-from-home sector
 - Distinguishing between types of outlets

Issue #4: Overweight, obesity, and diet quality

- What is the issue?
 - Overweight and obesity and related NCDs are rising rapidly in Tanzania



Source: HLPE

Issue #4: Overweight, obesity, and diet quality (cont'd)

- What is the knowledge gap?
 - What are the demographic (education, income, gender, age) correlates of overweight and obesity?
 - What are the spatial correlates? (regional, rural-urban)
 - How do variations in the consumer's food environment correlate with overweight and obesity?
 - What measures of diet quality best predict the likelihood of being overweight or obese?
 - Does nutritional knowledge correlate with overweight and obesity?

Issue #4: Overweight, obesity, and diet quality (cont'd)

- Possible research
 - Quantitative monitoring over time of the food environment, linked to changes in consumer diets and their attitudes and knowledge relative to nutrition
 - *community food environment*: number, type, location and accessibility of food outlets; type and density of food advertising/messaging
 - *consumer food environment*: availability, cost, and quality of healthy and unhealthy food options within outlets
 - Consumer knowledge and attitudes towards healthy and unhealthy foods
 - Consumer behavior
 - Outlet types visited
 - Foods purchased
 - Outcomes in terms of diet quality and nutritional status
 - Original data collection in cities of varying sizes, and peri-urban and rural areas linked to those cities

Issue #5: Effectiveness of interventions

- What is the issue?
 - A need for impact evaluation to better understand what approaches achieve impact, and operational research to understand the pathways through which impact is achieved (or not)
- What is the knowledge gap?
 - There has been very little impact evaluation or rigorous operational research done on nutrition interventions in the country
- Possible research
 - A combination of *ex-post* and *ex-ante* research
 - Design of interventions to allow impact evaluation
 - Stakeholders to identify key priorities

Now the stakeholders need to define the priorities!

- Additional or different key issues?

- If so, define knowledge gaps and propose research