



World Food  
Programme



# **Fill the Nutrient Gap: Analysis for Decision-Making Towards Sustainable Food Systems for Healthy, Nutritious Diets and Improved Human Capital**

17 August 2022

# Healthy and Nutritious diets

**Good nutrition** is about consuming **more than 40 nutrients** in different amount **from a wide variety of foods** together with other interventions



**Diets: Underpinning Factor for All Forms of Malnutrition**

**Nutrient needs of young children are very high** compared to the amount of food they consume



# Meeting nutrient requirements is a prerequisite for ending all forms of malnutrition

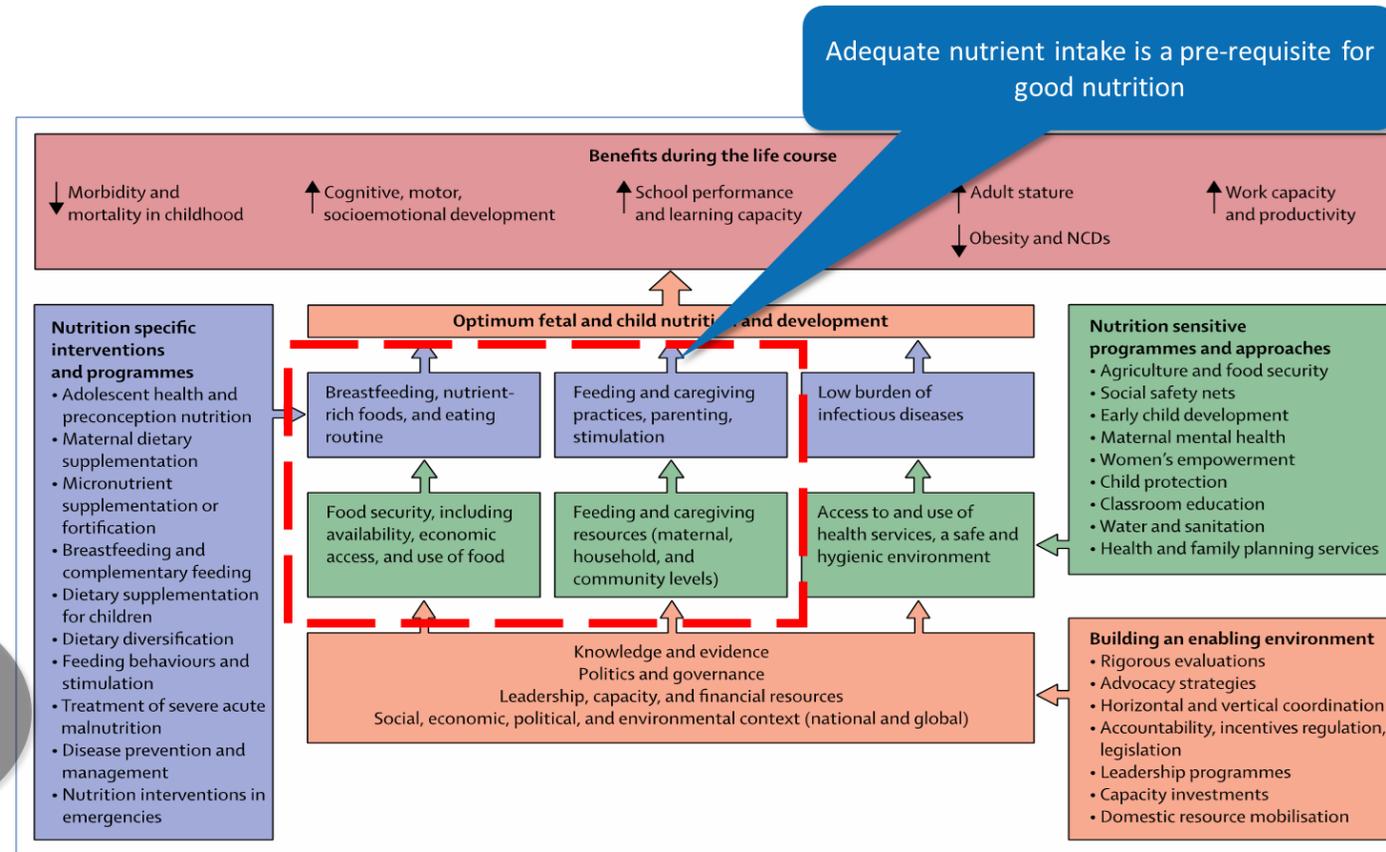
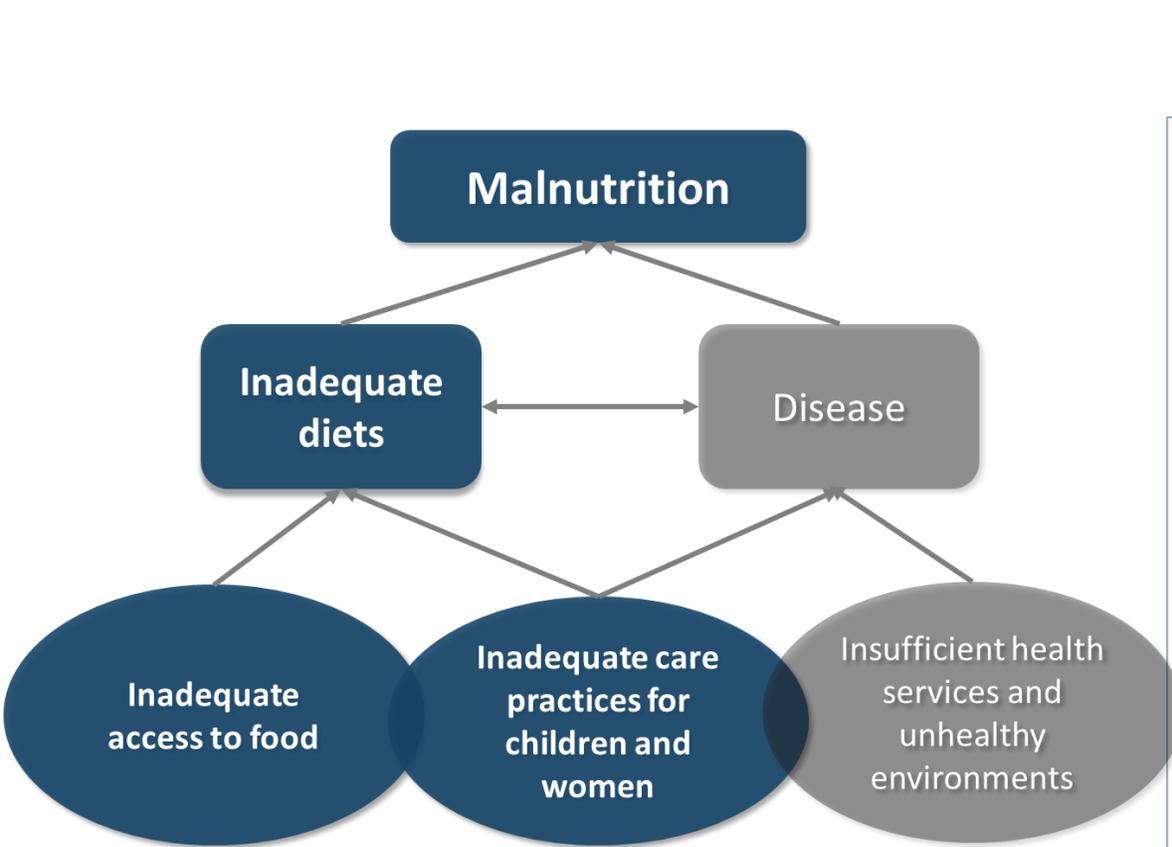


Figure 1: Framework for actions to achieve optimum fetal and child nutrition and development

Source: *Lancet series on Maternal and Child Nutrition (2013)*

Adapted from UNICEF conceptual framework 1990

# Very high unaffordability of nutritious & healthy diets

## THREE INCREASING LEVELS OF DIET QUALITY

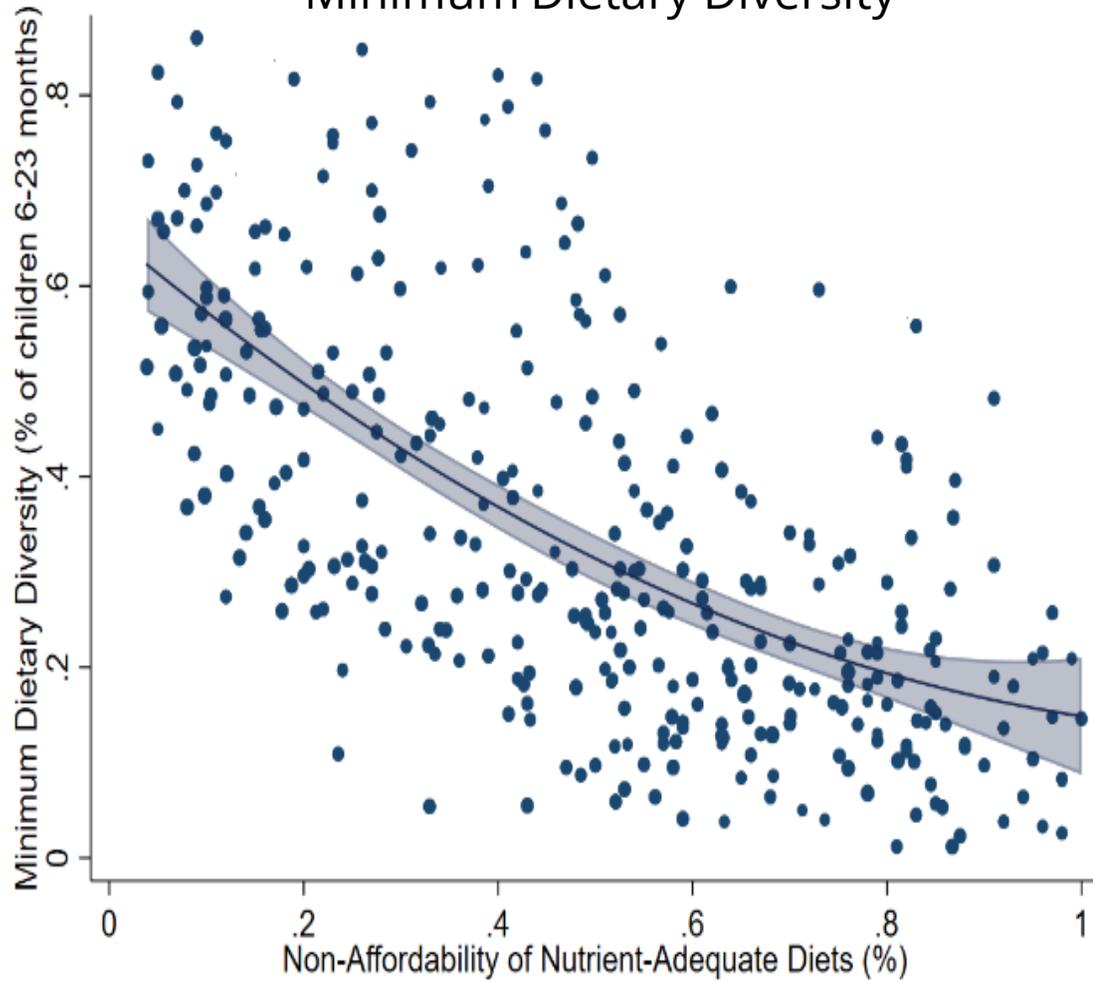


Regions	International \$ purchasing power parity/cap/d	Energy sufficient diet	Nutrient adequate diet	Healthy diet
WORLD		0.79	2.33	3.75

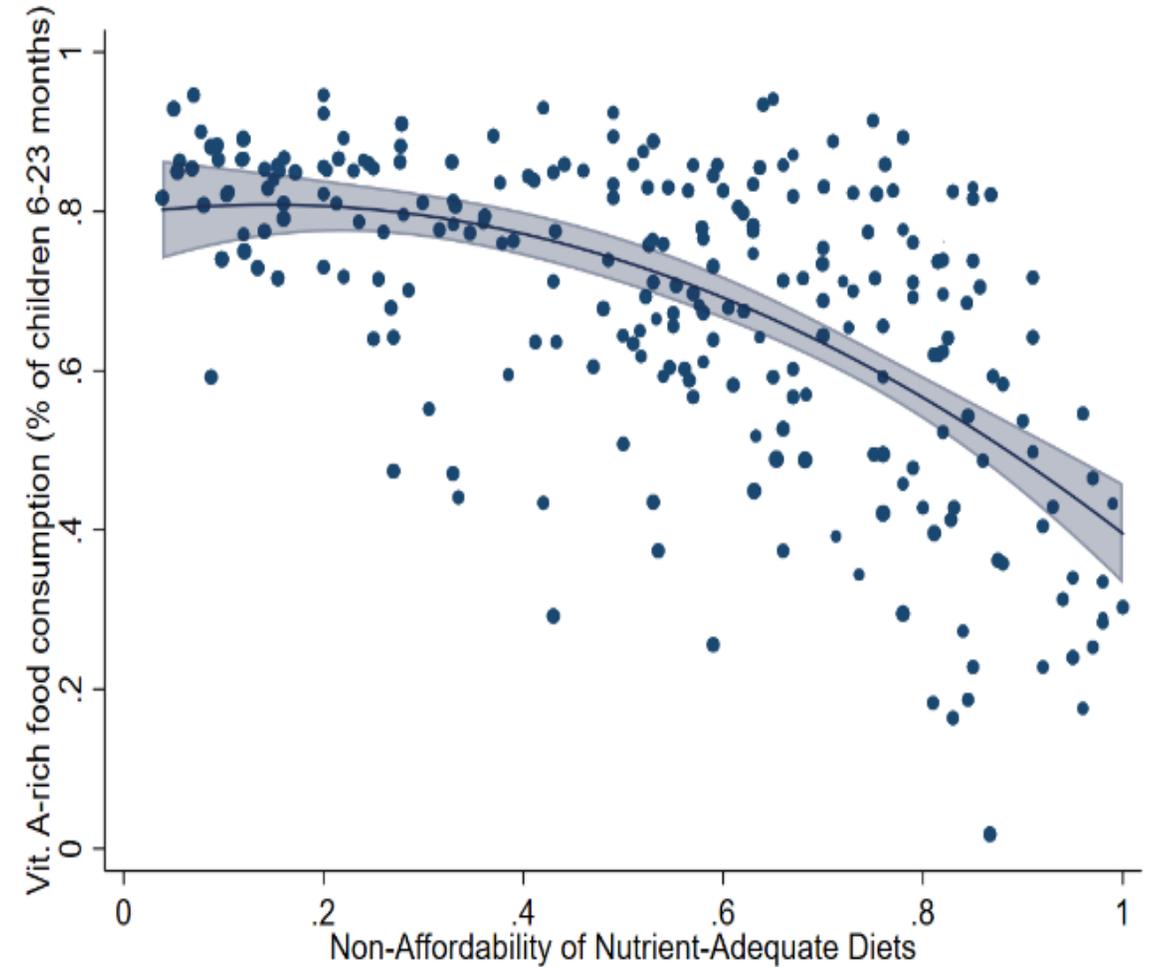
Unaffordability	Energy sufficient diet		Nutrient adequate diet		Healthy diet	
	%	Total number (million)	%	Total number (million)	%	Total number (million)
LOW-INCOME COUNTRIES	12.7	48.3	61.4	354.9	86.2	506.6
LOWER-MIDDLE-INCOME COUNTRIES	6.3	112.2	33.1	1 041.5	58.9	2 087.4
UPPER-MIDDLE-INCOME COUNTRIES	2.1	19.0	11.5	104.5	24.2	408.3
HIGH-INCOME COUNTRIES	0.3	6.0	0.9	12.1	2.0	19.2

# Non-affordability of nutritious diets is associated with indicators of dietary quality and nutrition outcomes at the subnational level

Minimum Dietary Diversity



Consumption of vitamin A-rich foods



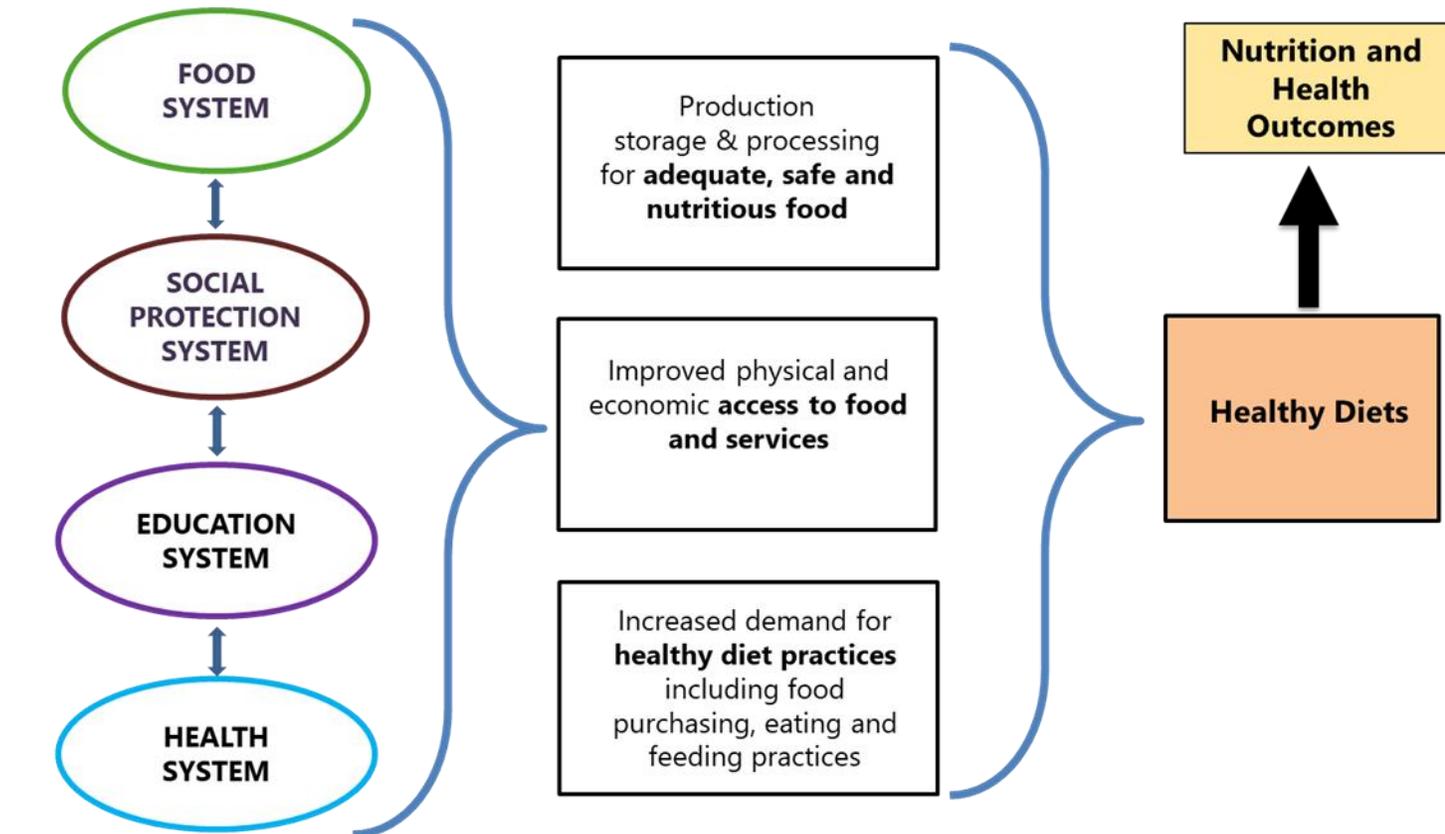
Kuri et al. Non-affordability of nutrient-adequate diets as an indicator for nutrition insecurity. Evidence from Fill the Nutrient Gap analyses. *Forthcoming*.

# Systems approach is required for healthy diets



Improving maternal and child nutrition requires a systems approach

S  
B  
C  
C



Adapted from: FNG 2019, UNICEF 2019

# The FNG objectives: Recognizing the need for a shared understanding of issues, context and solutions

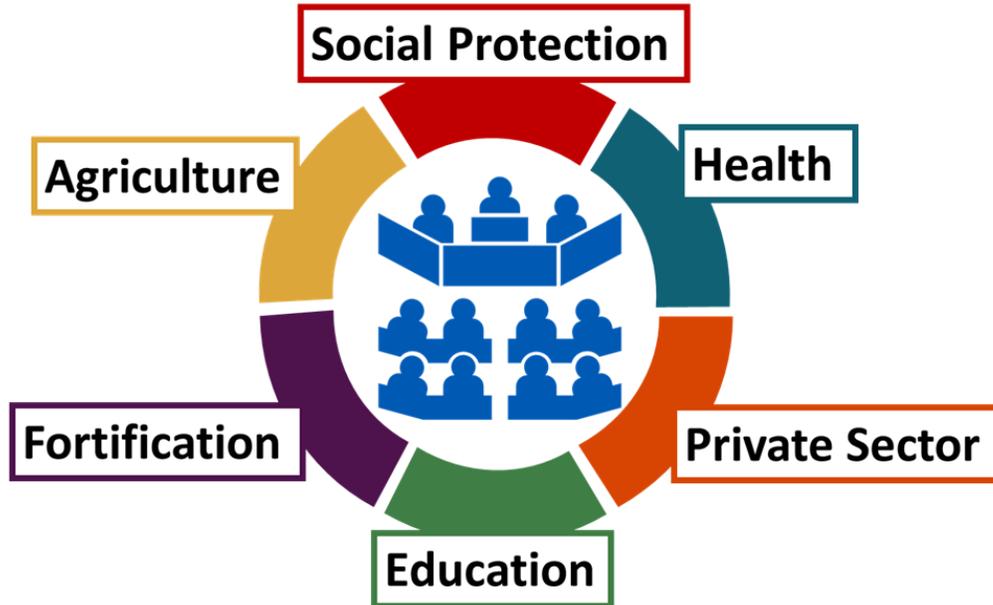


Aims to identify the barriers to adequate nutrient intake for specific target groups in a specific context

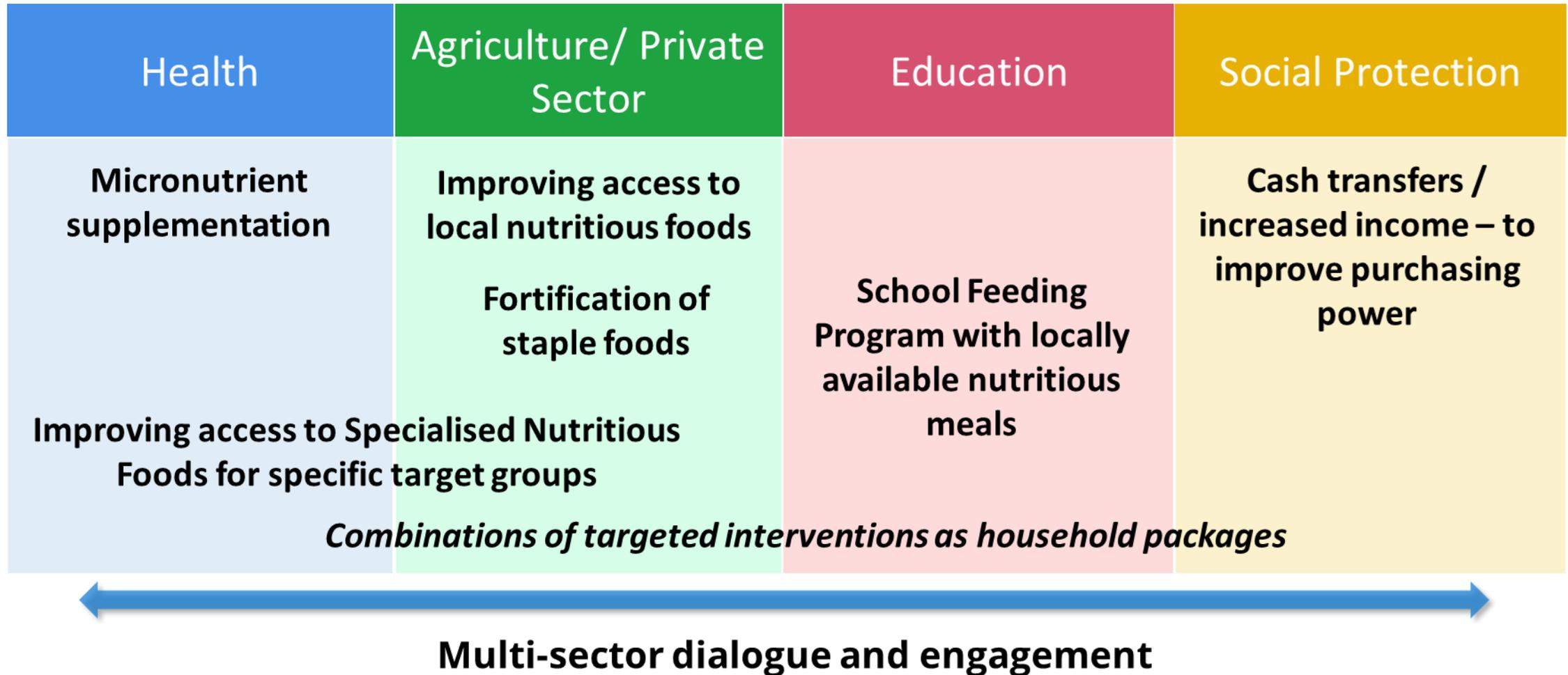
Multi-stakeholder input and involvement



Models interventions to improve access and availability of nutritious diets



Brings together stakeholders from different sectors and helps prioritise interventions for programme and policy decision-making



# The FNG methodology



## 1. Secondary data analysis and review



Identify possible interventions and entry points

## 2. Linear programming on Cost of the Diet

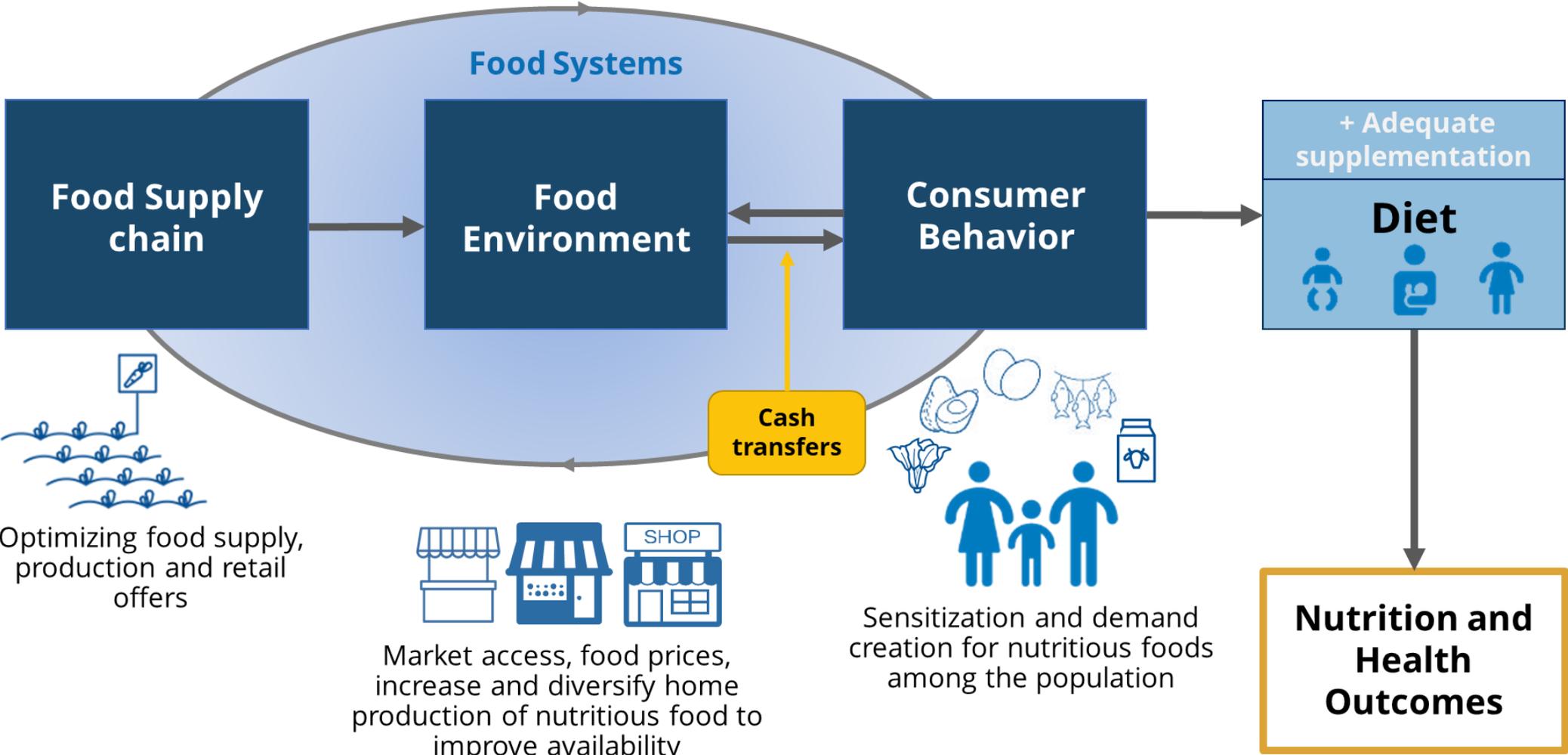


Estimate the minimum cost of a nutritious diet and its economic accessibility



**Model interventions to improve access to nutritious diets**

# A food systems approach for a nutritionally adequate diet



Adapted from the HLPE 2017

# The FNG methodology



## 1. Secondary data analysis and review

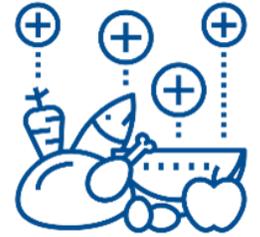


Identify possible interventions and entry points

## 2. Linear programming on Cost of the Diet



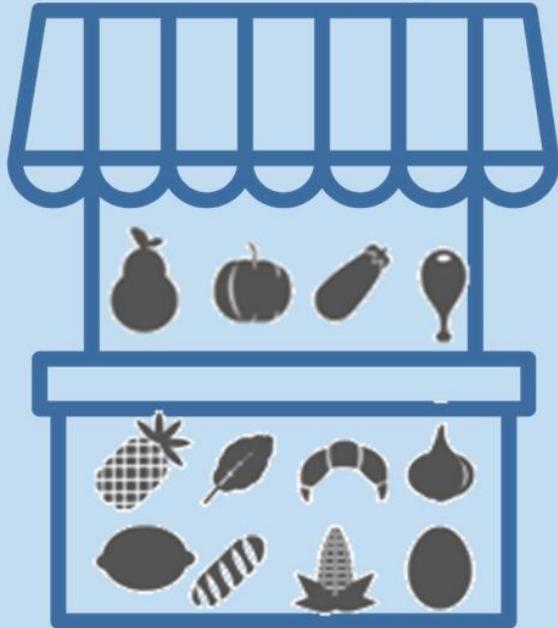
Estimate the minimum cost of a nutritious diet and its economic accessibility



**Model interventions to improve access to nutritious diets**

# Cost of the Diet estimates the cost of meeting nutrient requirements using locally available foods

**Market Survey  
Data: Food  
prices and  
Availability**



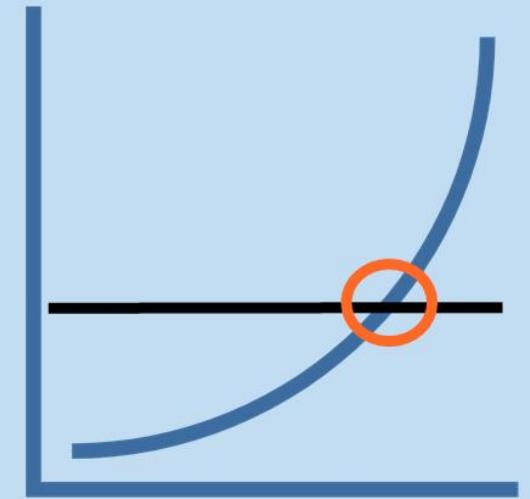
**Linear Programming  
used to optimise  
food combinations  
and model diets**



**Lowest cost food  
combination  
meeting nutrient  
requirements of  
model household**



**Diet cost compared  
to household food  
expenditure to  
estimate how many  
could afford it**



Using a “model” household, the FNG considers nutrient needs across the lifecycle and identifies different entry points targeting specific individuals and the household

## 5 person household

1. Child 12-23 months
2. School-age child 6-7 years
3. Adolescent girl 14-15 years
4. Lactating woman
5. Adult man



Different needs  
at different stages

**LIFECYCLE  
APPROACH**

Different entry point  
& opportunities

**Cost of the Diet and consumption/ expenditure data is used to estimate affordability**

# Lowest cost for meeting only energy requirements and for meeting nutrient requirements



## Energy-only diet

Optimized combination  
of foods that  
for the lowest possible cost  
meet the  
energy requirements  
of the modelled household



## Nutritious diet

Optimized combination  
of diverse nutritious foods that  
for the lowest possible cost  
Meet the **macro (energy, protein, fat) & micronutrients (vitamins, iron, calcium etc.)** requirements, including  
two daily portions of staples

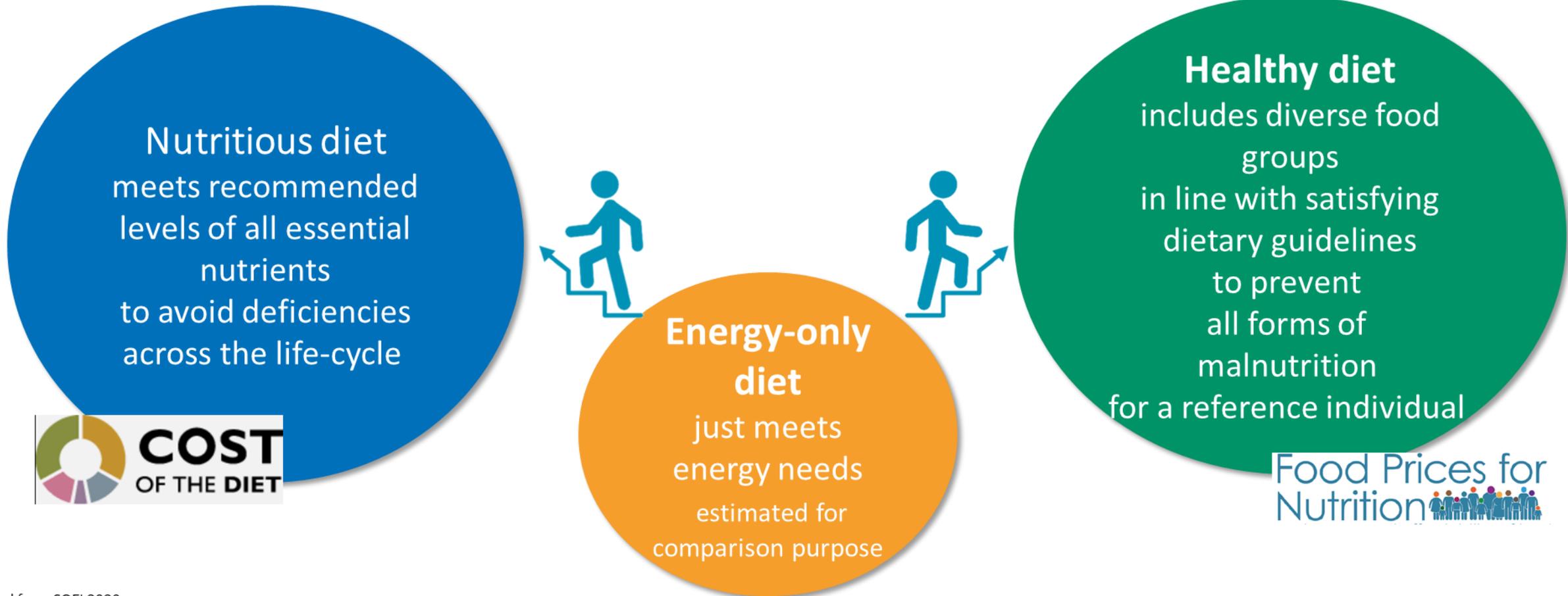


Staple  
selection



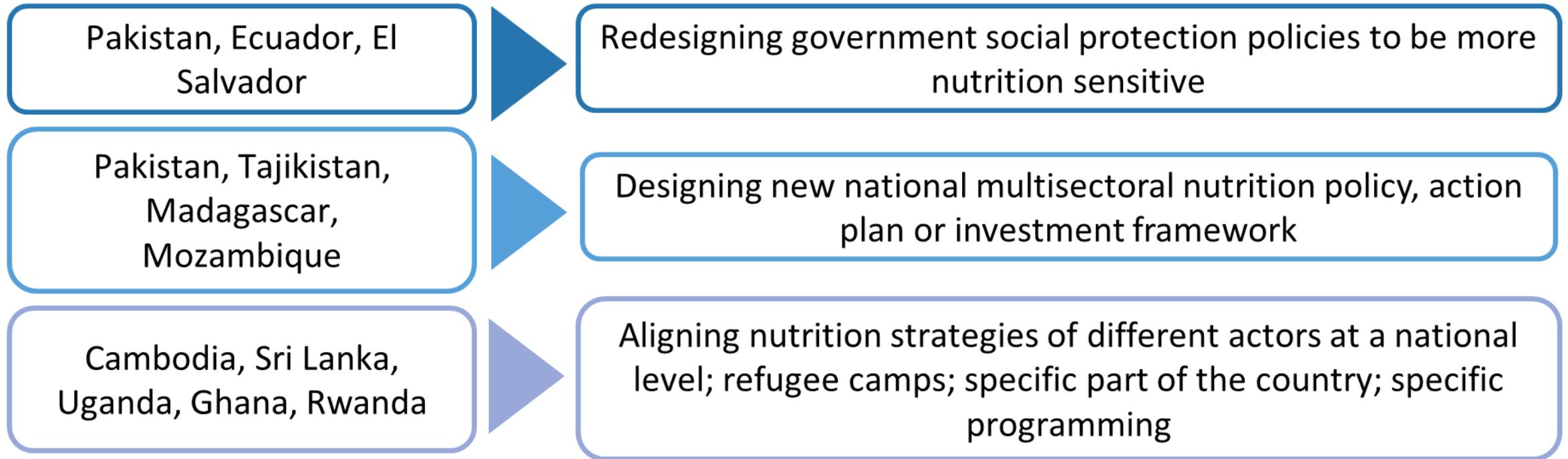
Actual composition varies on context

# The FNG estimates the cost of 3 different diets contributing to on-going evidence generation on food systems and diets



Adapted from SOFI 2020  
Note: The costs are calculated using different standardized methodologies

# How have FNG results informed national processes

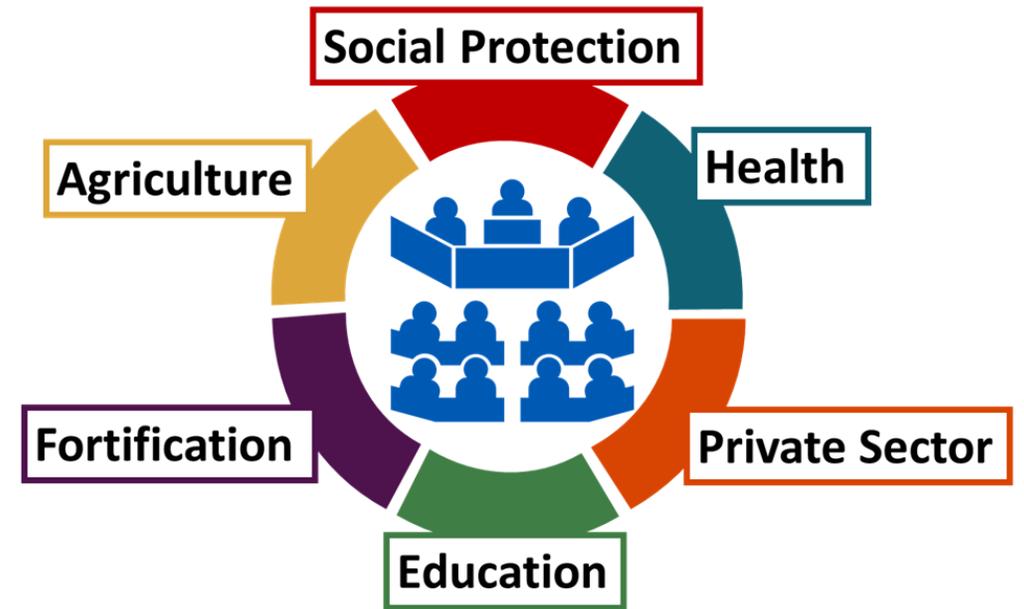


FNG also informs WFP's strategic planning processes  
**(Zero Hunger Strategic Reviews and Country Strategic Plans)**

# FNG Potential components and objectives

**Could support country-specific evidence generation on:**

- Factors that reflect or affect food availability and access, and dietary intake
- Barriers and dietary choices preventing adequate nutrient intake
- Potential impact on affordability of nutritious diets by possible interventions from across sectors/systems that could increase nutrient intake and fill nutrient gaps



➔ To support consensus and decision-making to bring a healthy diet within people's reach  
One potential example: National policy and strategies such as the national food security strategy

For more information, visit: <https://www.wfp.org/fillthenutrientgap>

