

Strengthening the Economic Evaluation of Multisectoral Strategies for Nutrition (SEEMS- Nutrition)

December 13, 2019

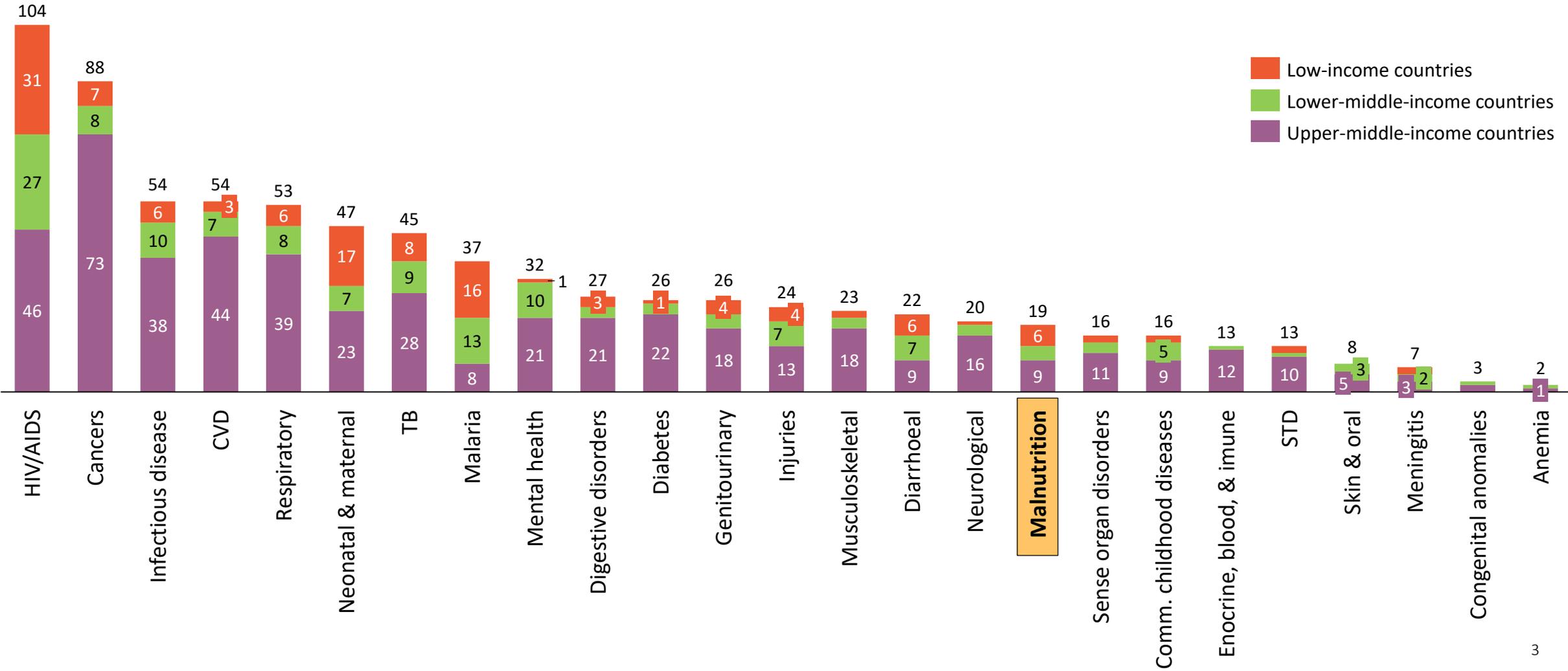
Presented by Carol Levin, PhD

Objectives for today

- Understand **data needs, challenges, and use-cases** of evidence on costs, cost-effectiveness, and cost vs. benefit for agriculture-nutrition investments
- What information do we have on the costs and benefits of nutrition sensitive investments to date?
- Introduce new approach for economic evaluation of nutrition sensitive and multisectoral strategies to improve nutrition

Economic evaluation is used to support decision-making in health, with some health areas more advanced than others

Number of economic evaluations by health area and income group



Types of economic evaluations

Method	Cost measurement	Description
Cost-effectiveness analysis	\$	Compares the net costs and benefits of alternative interventions, where benefits are measured as natural units (eg, deaths or disease cases averted).
Cost-utility analysis	\$	Compares net costs and benefits of alternative interventions, where benefits are measured by a health metric that combines death and disability into a single health metric called quality adjusted life year (QALY) or disability adjusted life year (DALY).
Cost-benefit analysis*	\$	Compares net costs and benefits, where the benefits are assigned a monetary value to the measure of an outcome by alternative interventions.
Cost analysis or cost minimization	\$	Collects and analyzes the cost of an intervention.
Cost efficiency analysis	\$	Cost per outcome or output achieved by an intervention.

*analysis of return on investment (ROI)

Examples where economic evaluation evidence has been used to strengthen decision-making and priority setting

- **Health technology assessment and innovations**

- Eg, in the introduction of new vaccines or investment in underutilized vaccines that are cost-effective (HPV, HepB, etc)

- **Intervention prioritization**

- Eg, CEA is critical in identifying a package of interventions for UHC, otherwise the intervention won't be included
- Eg, in the development of ART treatment guidelines and other policies

- **New program development or scale-up**

- Eg, Benefit-cost analysis of wheat flour fortification by the Copenhagen Consensus led to the creation of Haiti's first food fortification program

- **Funding decisions**

- Eg, GAVI and Global Fund investment cases

Measuring costs and benefits of nutrition sensitive agriculture investments is tricky to do

Why?

- Limited information on costs and impacts for nutrition sensitive interventions.
 - Much of it is modeled, limited empirical evidence and challenging b/c of cross sectoral nature.
 - Limited published information on costs of agriculture interventions, policies, programs.
- Complex pathways from agriculture to nutrition and health outcomes
- Health and agriculture intervention impacts and costs measured differently—how to combine them?
 - Health: by intervention, facility or individual- derive a unit cost per beneficiary.
 - Agriculture: typically by crop (acre, yield, etc), by household (net income), by enterprise.
 - Spillover effects are harder to measure for agriculture

Current level of economic evidence available for nutrition interventions across sectors

Building on previous work looking at evidence of impact, we reviewed literature for economic evidence for interventions in the Compendium of Action for Nutrition:



Intervention has cost data

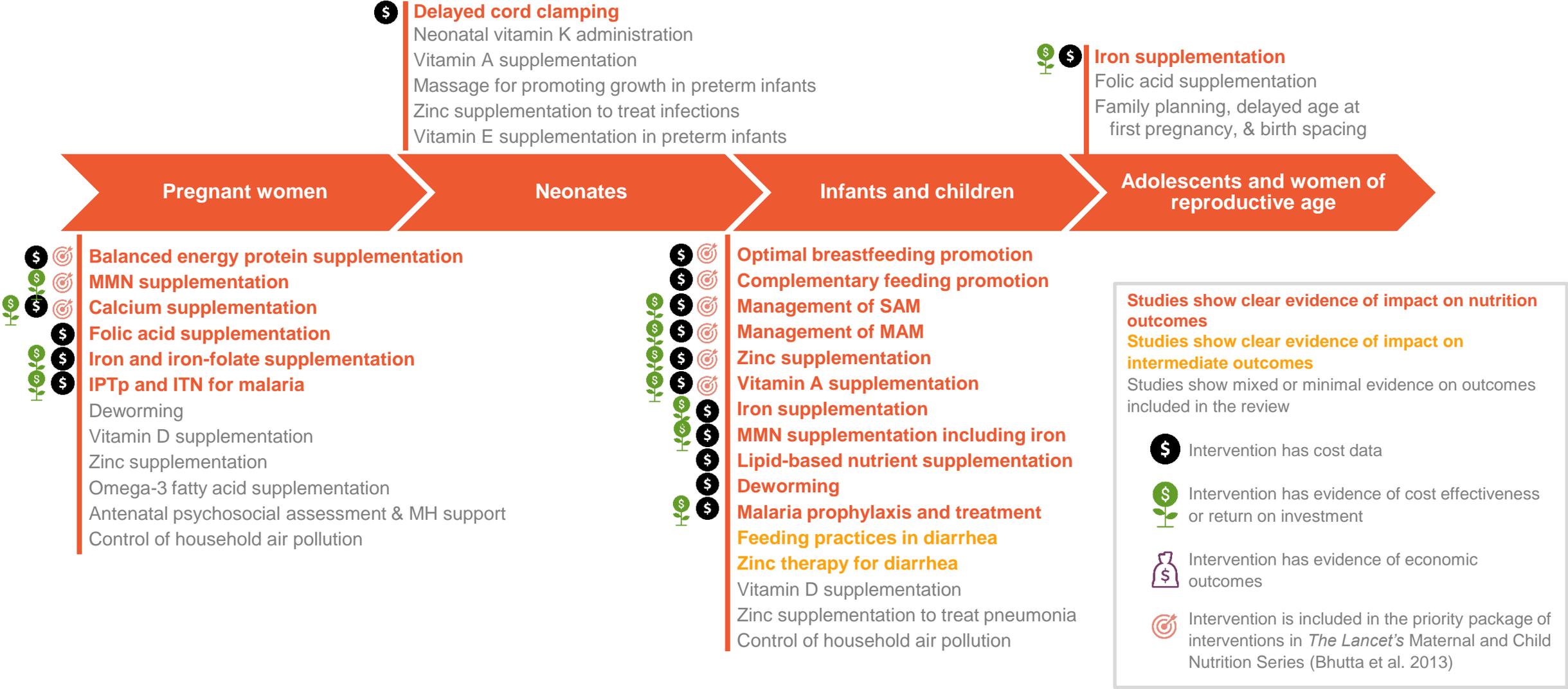


Intervention has evidence of cost effectiveness or return on investment



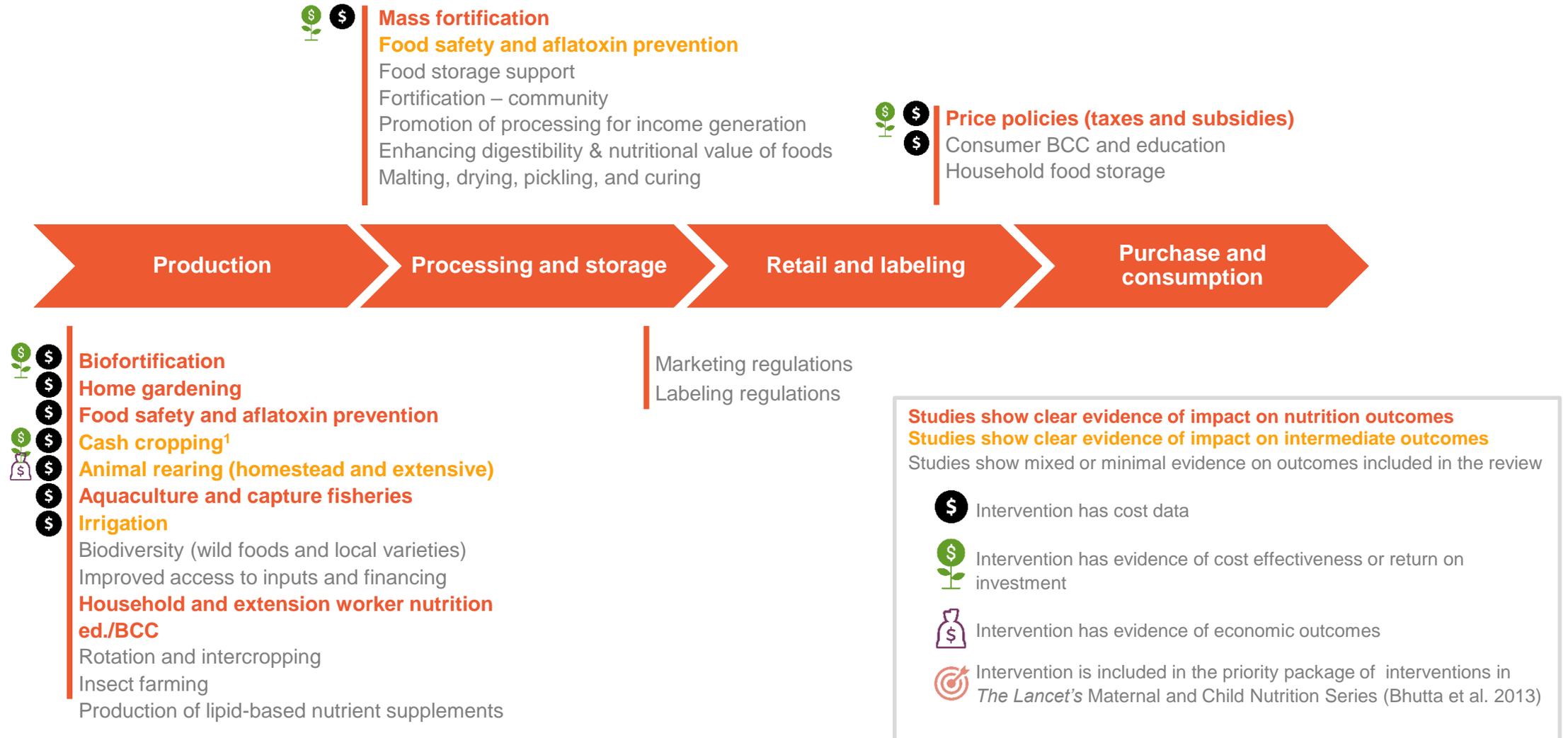
Intervention has evidence of economic outcomes

Nutrition interventions in health that work across the life course



Notes
 1 Adapted from [Synthesis of Evidence of Multisectoral Approaches for Improved Nutrition](#), November 2017, Banking on Nutrition Partnership
 2 Universal salt iodization, included in the agriculture section of the review, is also included in the priority package of interventions listed in Bhutta et al. 2013

Interventions in agriculture that impact nutrition across the farm-to-fork value chain



Notes

Adapted from [Synthesis of Evidence of Multisectoral Approaches for Improved Nutrition](#), November 2017, Banking on Nutrition Partnership

¹ Cash cropping also has potential to do harm by decreasing diet diversity, and therefore should only be promoted in contexts in which it could support both income and consumption pathways

Overview of the common approach

Building on ANH Academy Technical Brief

ANH Academy Technical Brief

Economic Evaluation of Multisectoral Actions for Health and Nutrition

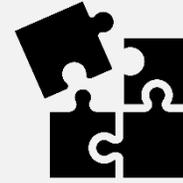


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SEEMS-Nutrition is developing a common approach to guide how economic evaluations for nutrition are conducted

- 1 Develop a typology of interventions
- 2 Map impact pathways and identify program activities, inputs, and costs
- 3 Develop standardized cost data collection tools and collect cost data alongside impact evaluation
- 4 Compare program costs and benefits to reflect the relevant question/decision and sector



**Standardized data
across programs
and countries**

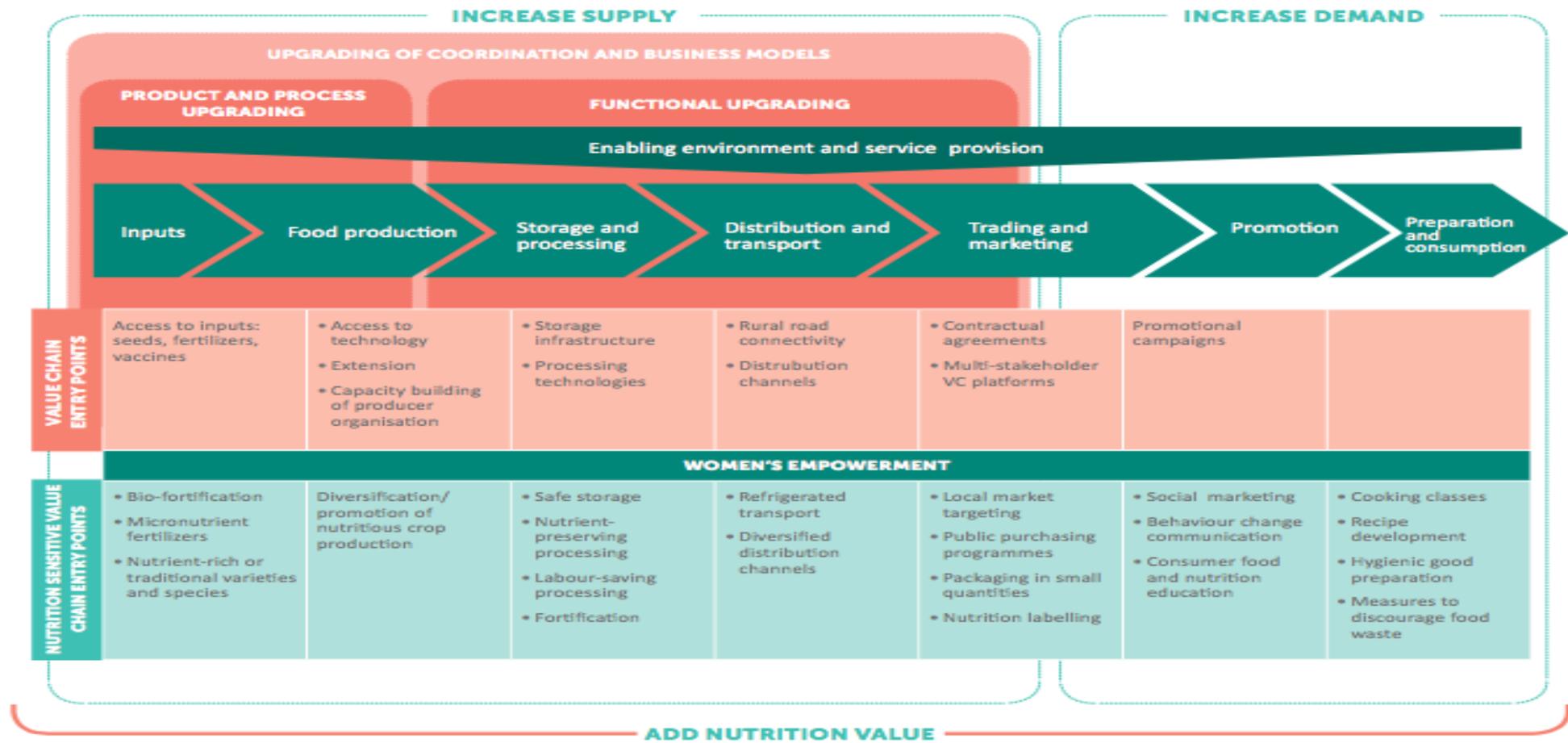


**Relevant
information to
decision makers**



**Stronger evidence
for nutrition**

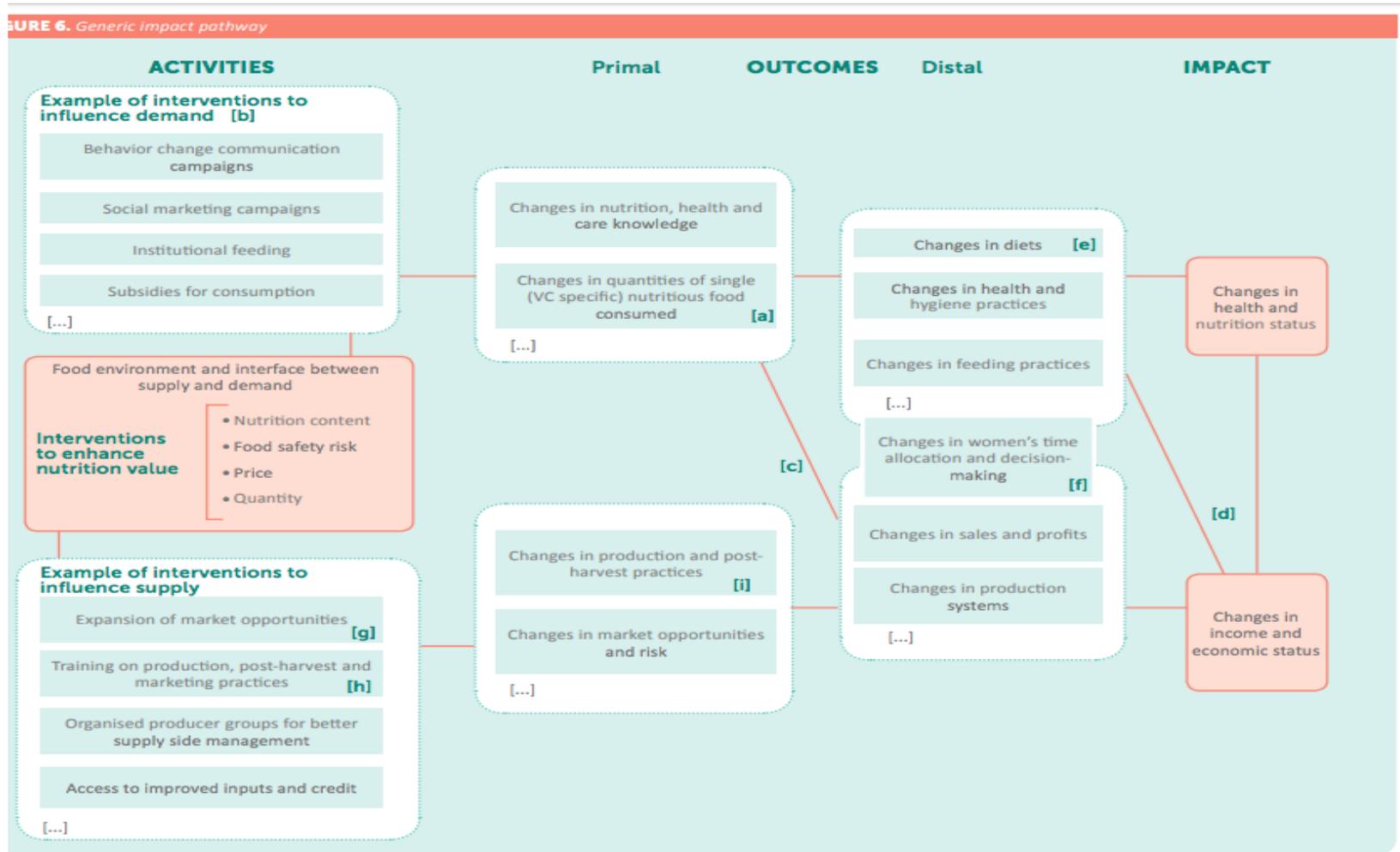
Step 1: Build on generic typology for interventions



Source: De la Peña, Garrett and Gelli, 2018. Nutrition-sensitive value chains from a smallholder perspective: A framework for project design. Research Series Issue 30 (51 pages). Rome: IFAD.

Figure source: de la Peña et al. IFAD 2018

Step 2: Map impact pathways and broadly identify program activities, costs and benefits

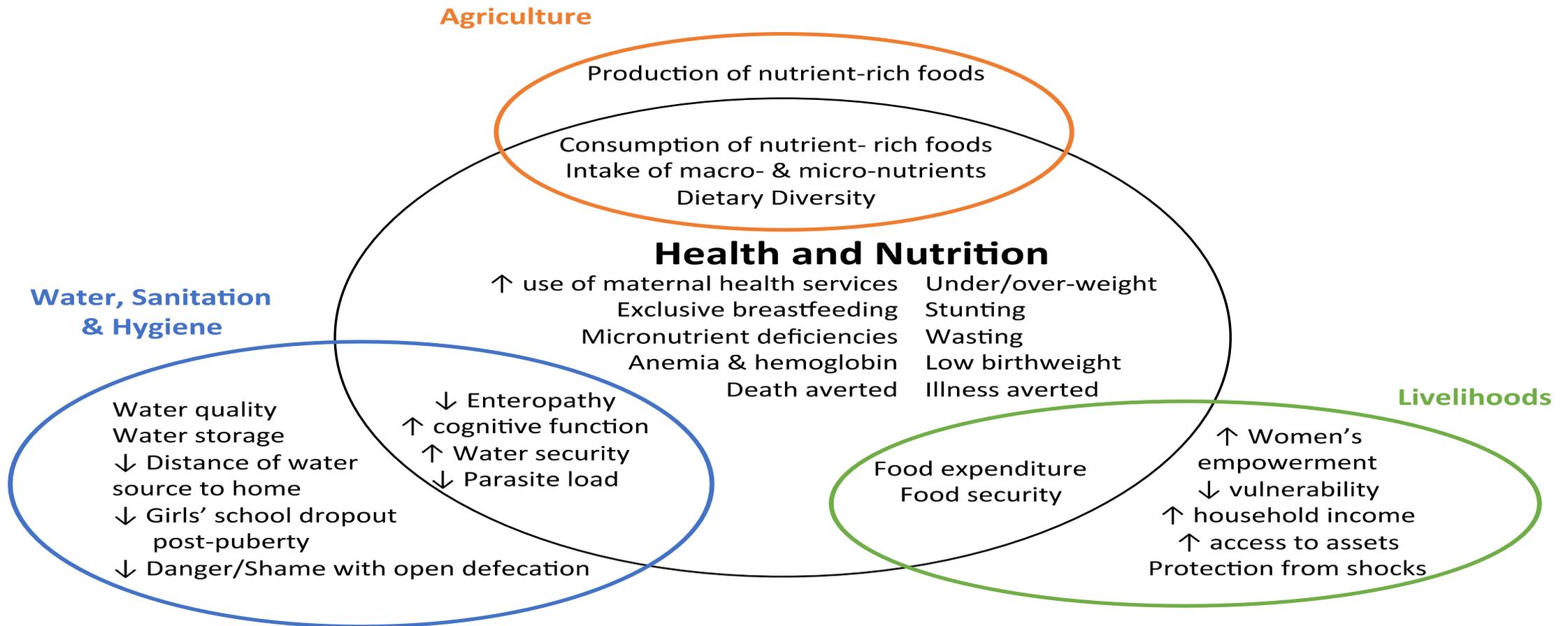


Source: de Pena et al. 2015

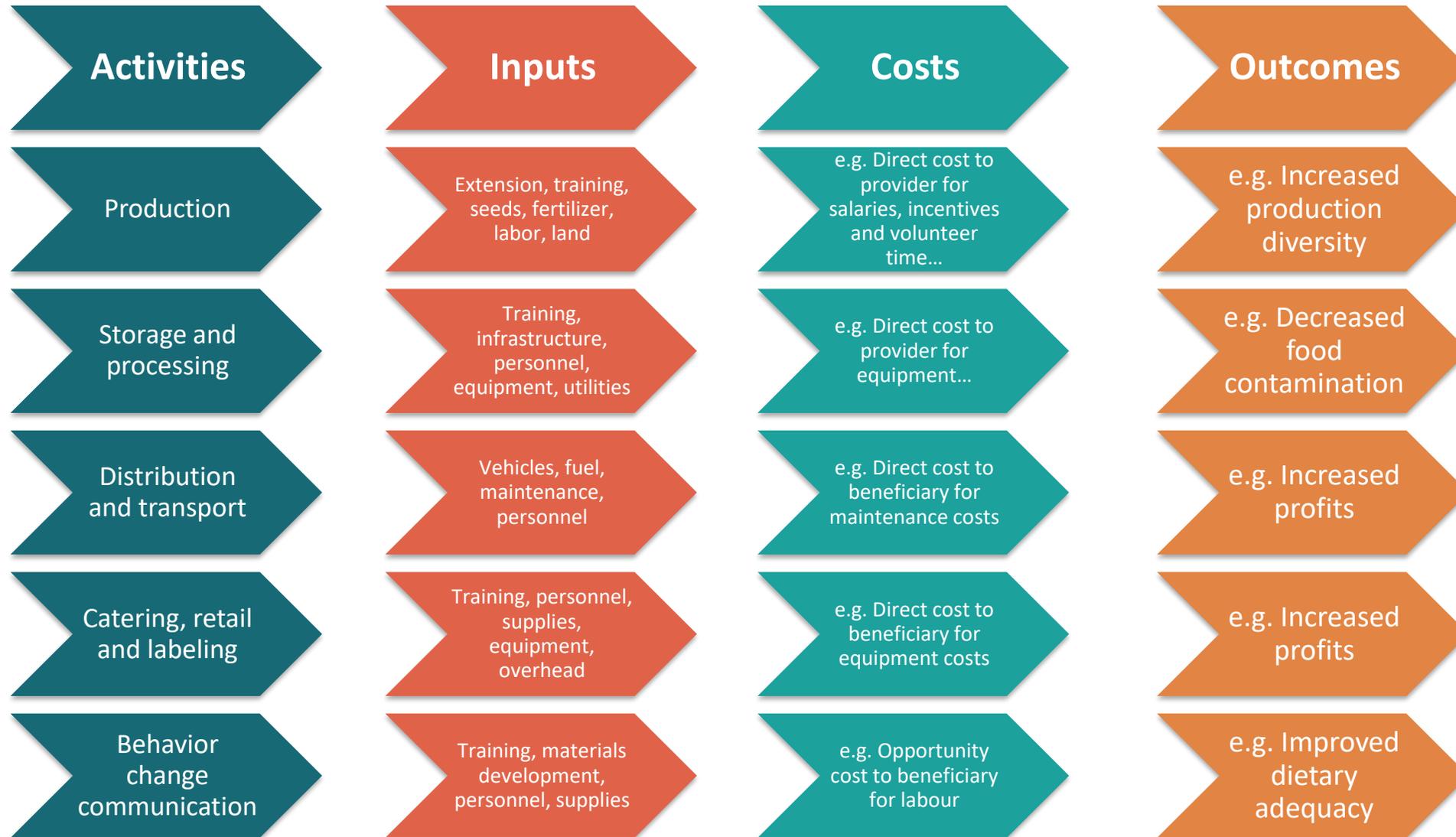
Define activities, inputs and costs based on PIPs

ACTIVITIES	INPUTS From provider	COSTS To provider, beneficiary and other partners and service providers			
 Extension	Personnel Organisational infrastructure	Direct costs to provider for salaries, incentives, volunteered time, and other staff costs e.g. travel and subsistence	Institutional fixed and variable costs to provider , e.g. personnel management, training, and monitoring systems; office space and utilities; donations	Opportunity cost to participant for time taken to engage with extension service	Direct cost to other service provider of any increased demand for government services
 Production	Physical inputs – e.g. seed, fertiliser, livestock, equipment Labour, land, water	Direct costs to provider for physical inputs	Direct costs to beneficiaries for additional inputs needed, such as fuel to use equipment	Opportunity cost for beneficiary for labour, land use, and water use	
 Storage and processing	Equipment, e.g. thresher	Direct cost to provider for equipment (e.g. thresher)	Direct cost to beneficiary for equipment maintenance and utilities (e.g. fuel), and space for storage and processing	Opportunity cost to beneficiary for labour, space, and water use	
 Distribution and transport	Vehicles, fuel	Direct cost to provider for vehicles / fuel provided	Direct cost to beneficiary for maintenance costs	Opportunity cost to beneficiary for labour	
 Catering, retail, labelling	Supplies, equipment, overheads	Direct costs to provider of supplies, equipment, overheads	Direct cost to beneficiary for additional inputs needed	Opportunity cost to beneficiary for labour	
 Behaviour change	Materials, e.g. manuals, videos, leaflets Platform, e.g. space for meetings, radio airtime, billboards, home visits Personnel, e.g. facilitators / counsellors, management	Direct cost to provider for materials, platform, personnel	Direct cost to beneficiary for changing behaviour	Opportunity cost to participant for uptake of new behaviour	Direct cost to other service provider of any increased demand for government services

Identify the full range of outputs and outcomes along the program impact pathway



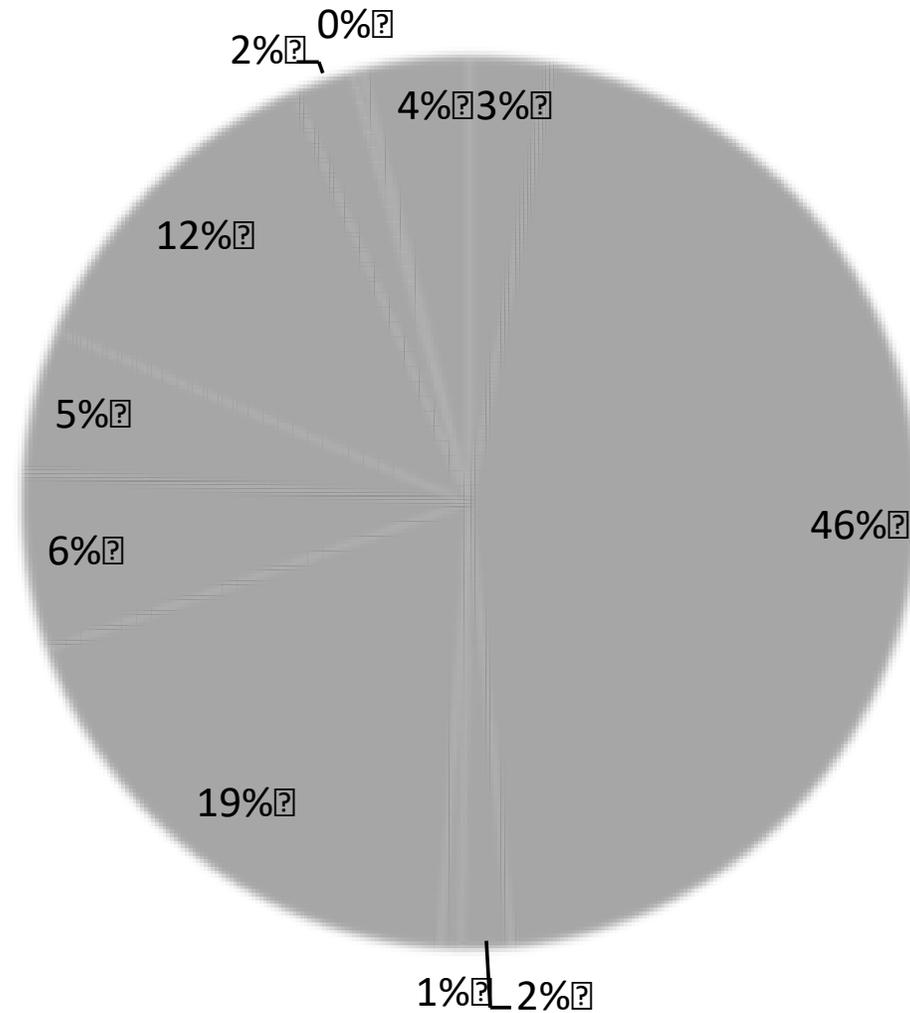
Step 3: Toward a standard set of outputs and outcomes



Toward a standard unit cost typology

Intervention specific					Shared/multisectoral intervention costs	Standard unit cost intervention (I+G+H)
Intervention Typology	Intervention	Intervention details	Activities/technology	Standard unit of direct (activity/output) cost	Standard unit cost integration/multisectoral actions	
Increase demand of nutritious foods	Behavior change and communication	Providing information to caregivers to produce nutritious meals for consumption	<ul style="list-style-type: none"> Development of training materials Training of trainers nutrition package for Agriculture extension workers Use of training materials Production of meals 	<ul style="list-style-type: none"> Cost per nutrition training Cost per agricultural extension agent changed Cost per mother/caregiver reached Cost per meal per preschool child 	<ul style="list-style-type: none"> Cost per planning meeting Cost per awareness raising* 	<ul style="list-style-type: none"> Cost per preschool child
Increase supply of nutritious foods	Diversification/promotion of nutritious crops	Training on improved farming practices along with provision of inputs for nutritious foods	<ul style="list-style-type: none"> Development of training materials Training of trainers agriculture package (production, post-harvest, processing) for Agriculture extension workers. Use of training materials Seed distribution and agriculture extension support 	<ul style="list-style-type: none"> Cost per agriculture training Cost per agricultural extension agent changed Cost per household reached with inputs Cost per agriculture extension visit Cost per household producing nutrient rich foods 	Shared across interventions, no separate or additional costs	<ul style="list-style-type: none"> Cost per household Cost per person
Enabling Environment	Strengthening childcare and parenting practices	Providing information to caregivers for improved care practices	<ul style="list-style-type: none"> Development of training materials Training of trainers caring practices package Use of training materials 	<ul style="list-style-type: none"> Cost per caring practices training Cost per local agent changed Cost per mother/caregiver reached 	<ul style="list-style-type: none"> Cost per education planning meeting Cost per awareness raising* 	<ul style="list-style-type: none"> Cost per preschool child

Example of standardized activity cost categories



Materials Development

Training

Distribution Inputs

Integration and Coordination

School Meals

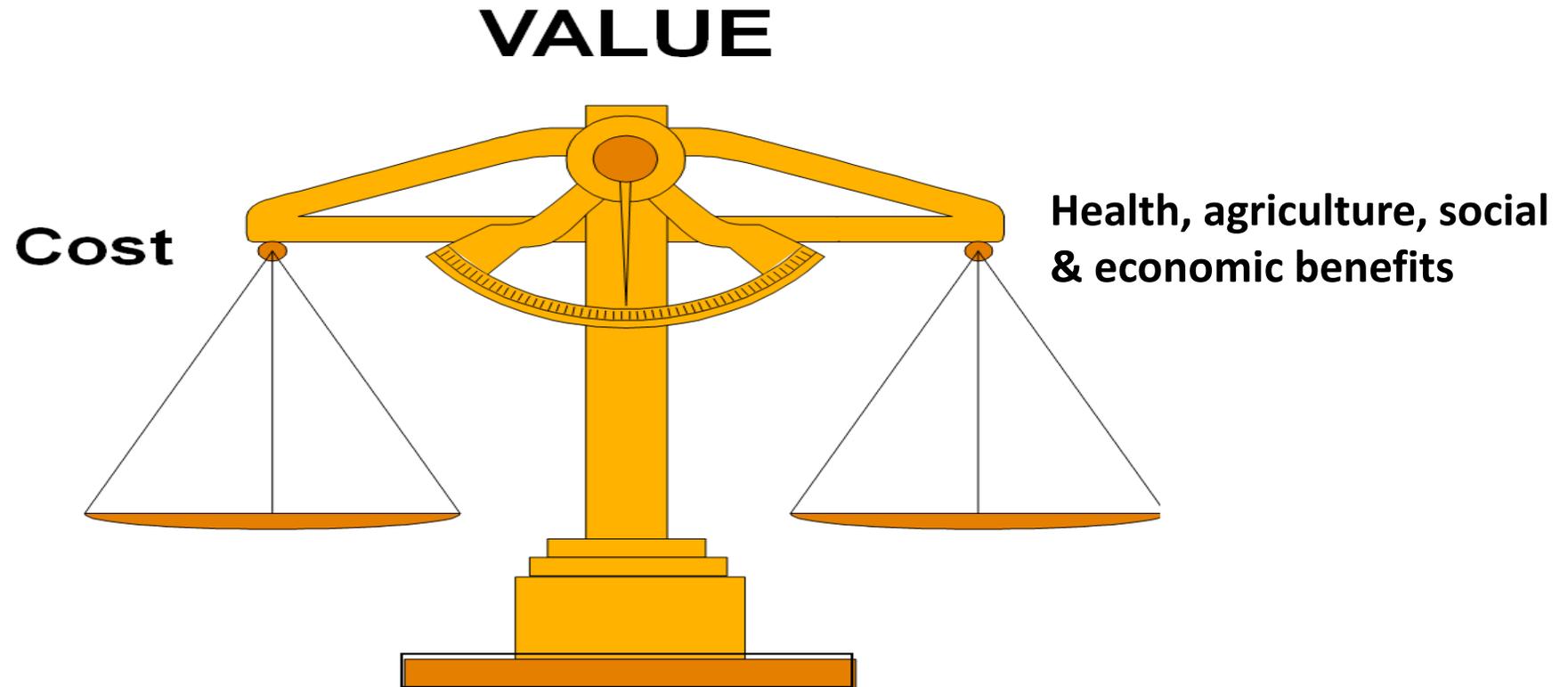
Establishing and Running Community Groups

Home Visits: Agriculture Extension

Monitoring and Evaluation

Planning/microplanning

Step 4: Estimate net costs and benefits



The SEEMS-Nutrition common approach is being applied to 6 nutrition projects to generate data on costs and benefits

Nepal

Suaahara II



A nationwide multisectoral nutrition strategy aiming to improve nutrition outcomes in women and children in 42 of Nepal's 75 districts.

Burkina Faso

Soutenir l'Exploitation
Familiales pour Lancer
l'Elevage des Volailles et
Valoriser l'Economie
Rurale (SELEVER)



An integrated poultry value chain and nutrition intervention to improve nutrition status and diets.

Kenya

MoreMilk



A market-based intervention in the informal dairy sector to generate nutrition and health benefits for children

Bangladesh

Targeting and realigning
agriculture to improve
nutrition (TRAIN)



A maternal and child health and nutrition behavior change communication strategy integrated within an agricultural credit program aiming to improve production diversity and income generation.

Malawi

Nutrition Embedded
Evaluation Programme
Impact Evaluation (NEEP-
IE)*



A community-based pre-school meals and household food production intervention to improve children's diets, currently planning for nationwide scale up.

Kenya

Marketplace for
Nutritious Foods



A skills-building and financial investment project to create local markets full of diverse, nutritious, and affordable foods.

* Indicates retrospective analysis

Malawi case study
Watch the IFPRI policy
seminar to see an
application of SEEMS-
Nutrition

<http://www.ifpri.org/event/using-malawis-community-based-childcare-centers-implement-agriculture-and-nutrition>

Thank you

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