



BUILDING CAPACITIES FOR BETTER...

# Monitoring and Evaluation: what, why and how?

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**NUTRITION AND FOOD SECURITY PROGRAMMING  
SEED SECURITY ASSESSMENT  
ACCOUNTABILITY TO AFFECTED POPULATIONS**

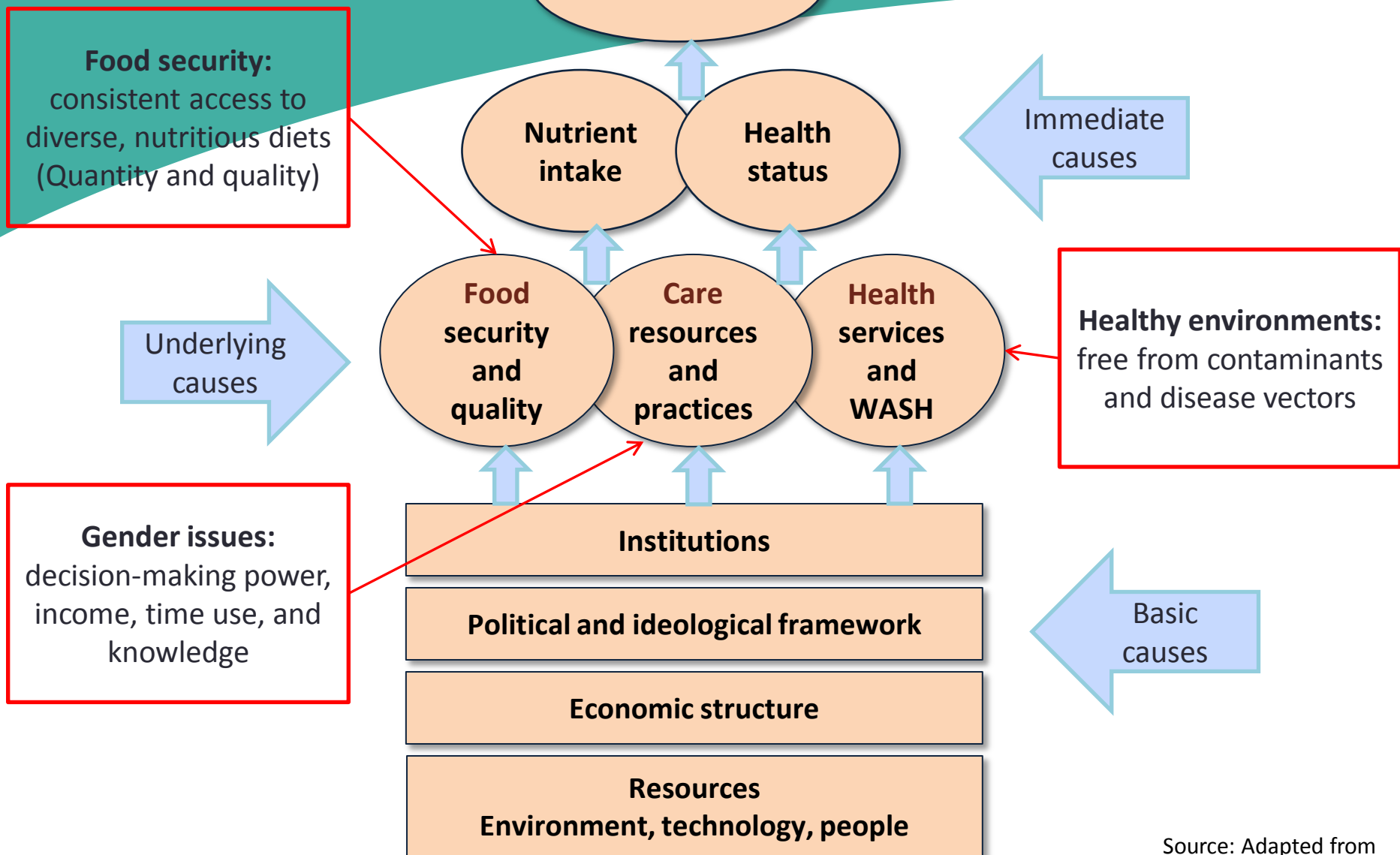
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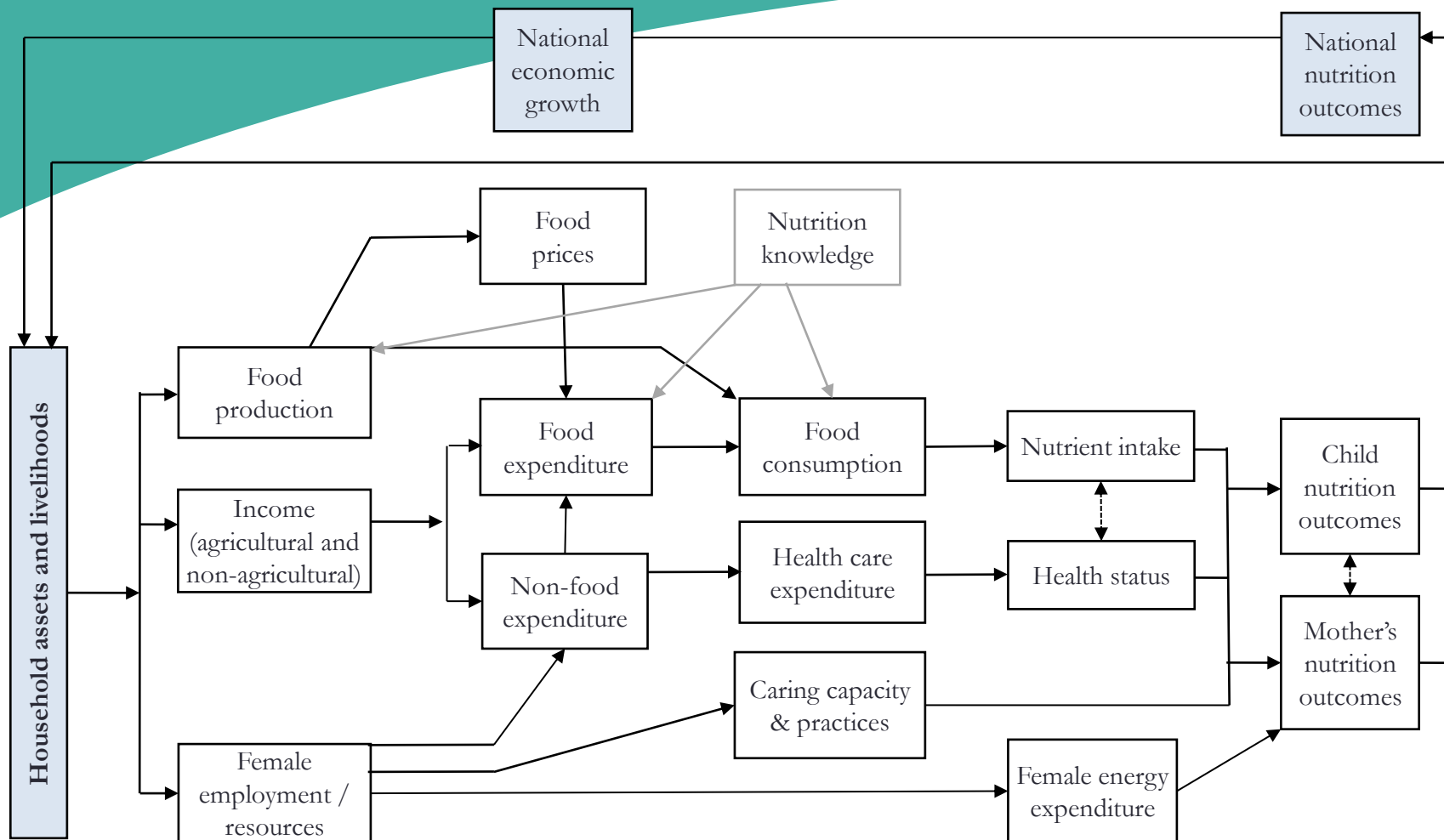


# **WHAT TO MEASURE AND WHY**



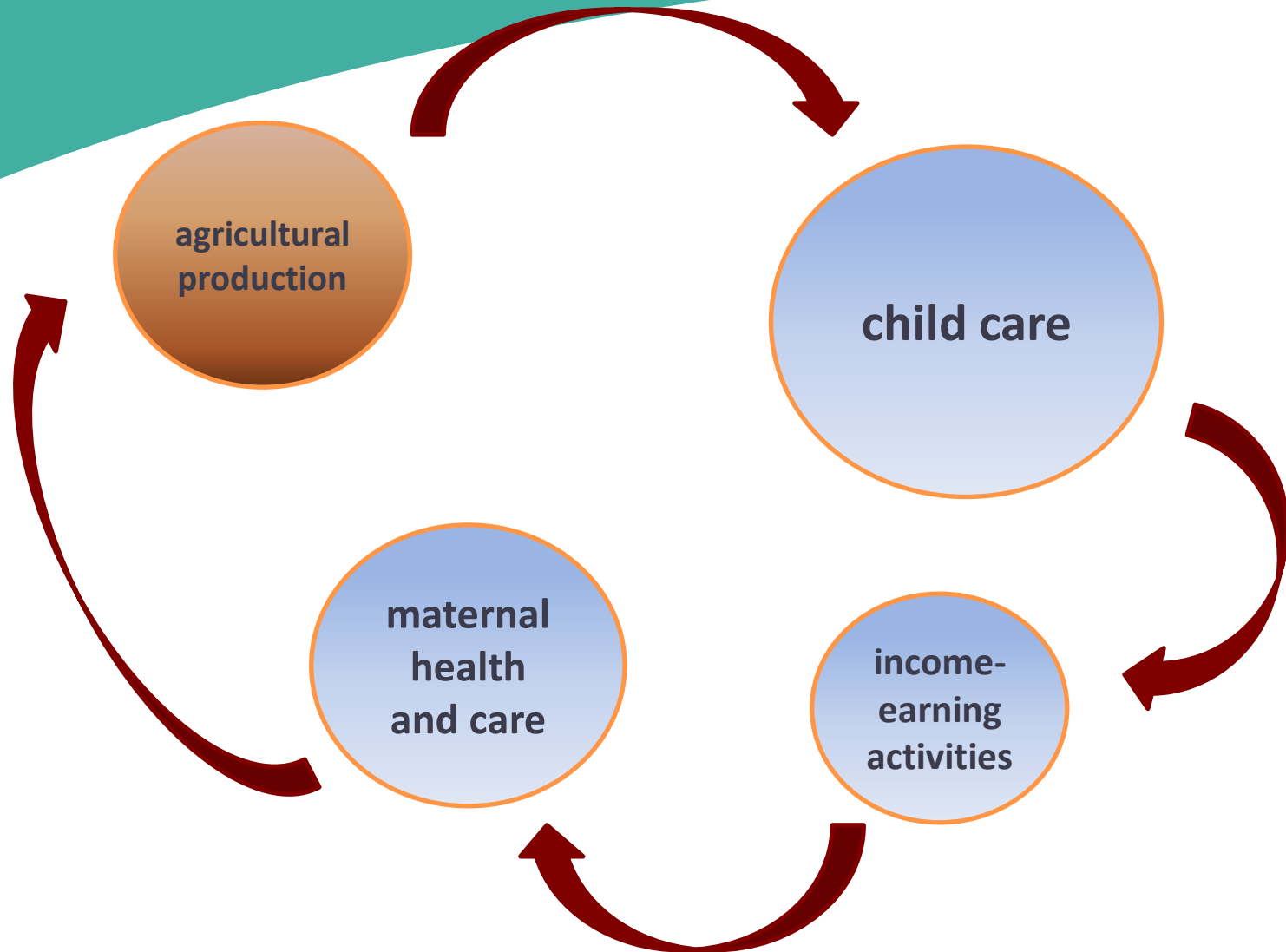


# Pathways from agriculture to nutrition



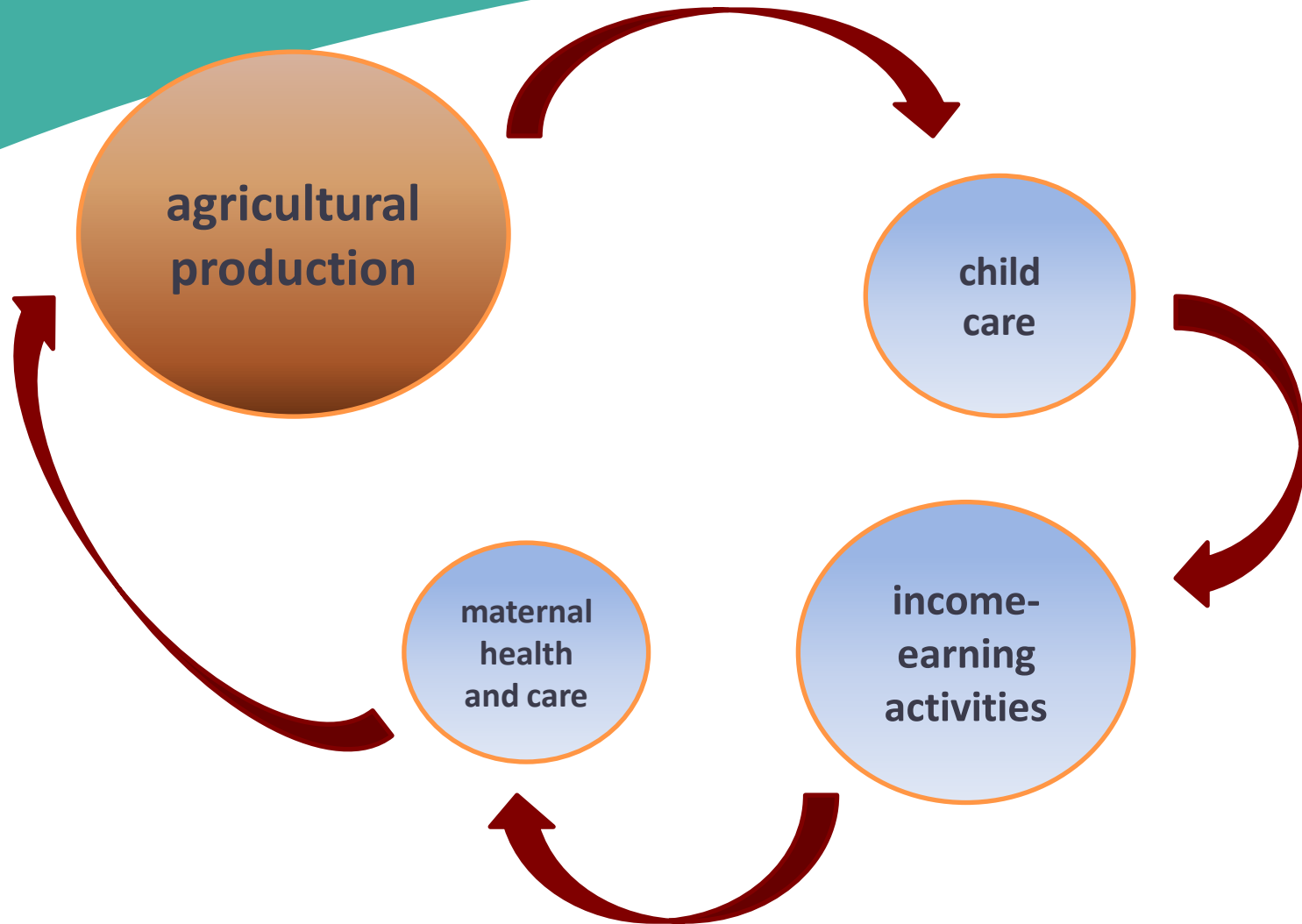


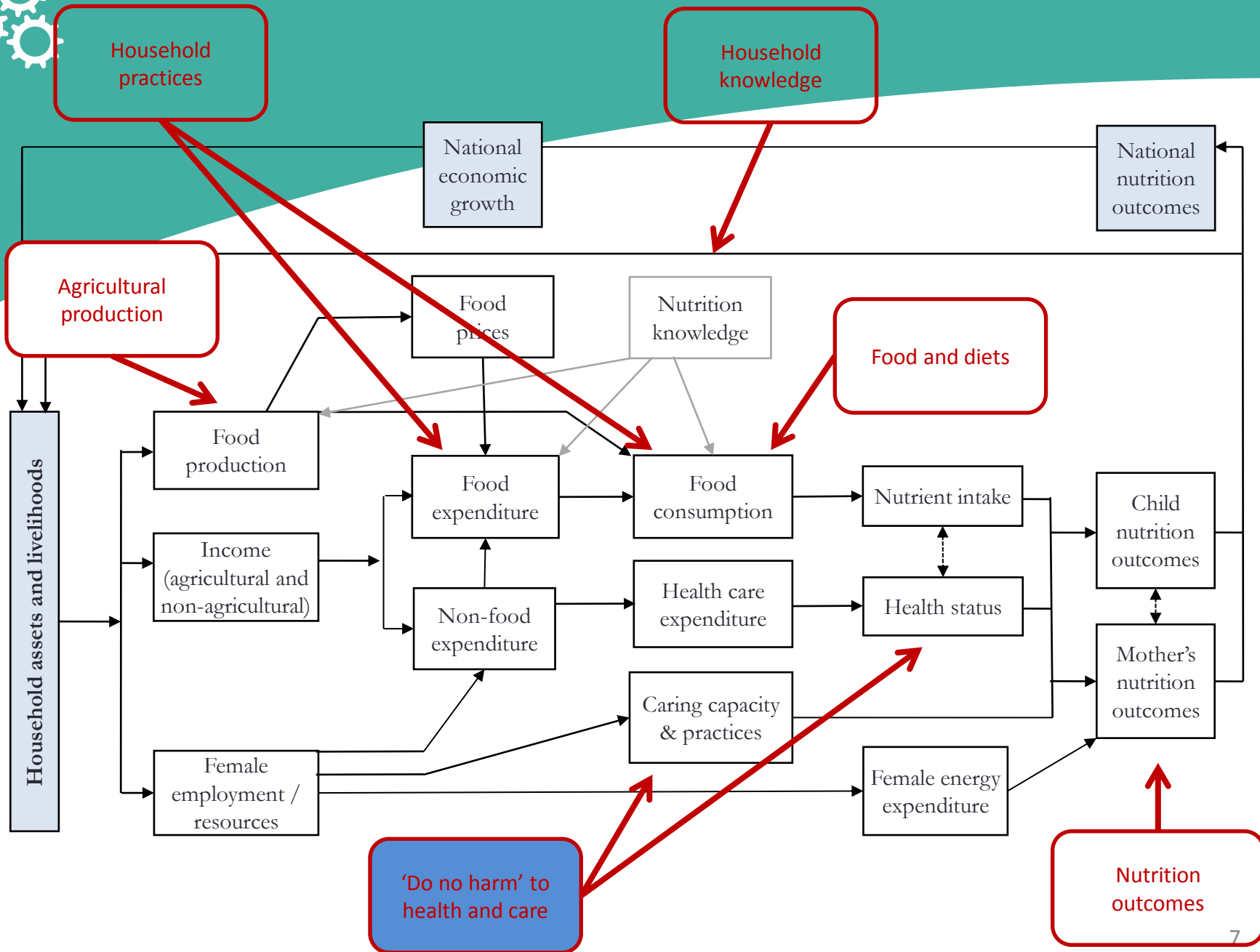
# The zero-sum game





# The zero-sum game







# **HOW TO MEASURE IT WELL**





# Monitoring vs. Evaluation

## Monitoring

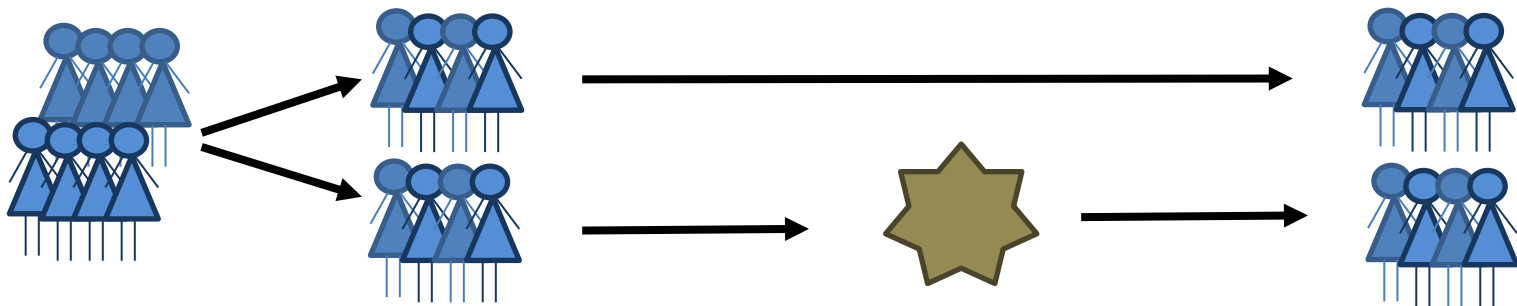
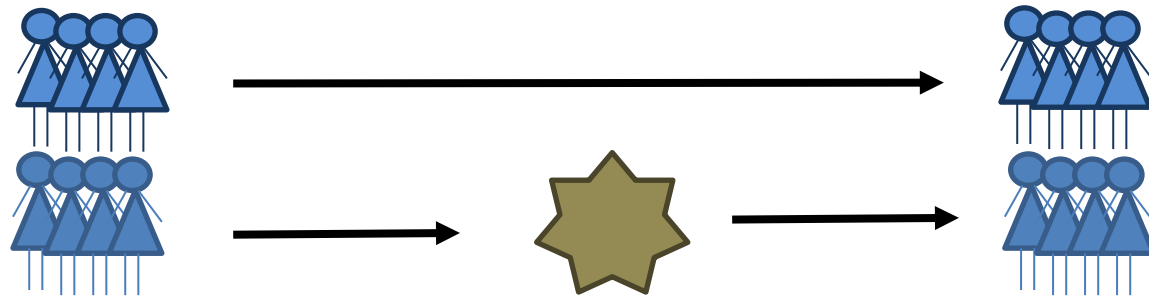
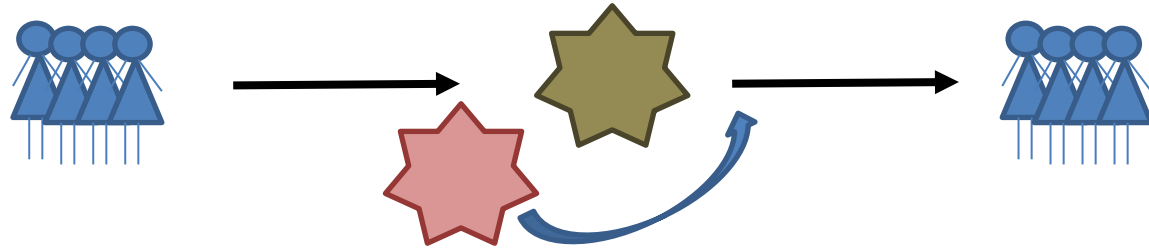
- Involves routine tracking of program performance (e.g. inputs and outputs) during program implementation
- Is a tool for management
- Feeds into an evaluation

## Evaluation

- Measures the effect of the program on outcomes and objectives
- Attempts to attribute outcomes to their causes
- May assess associated costs



# Evaluation designs

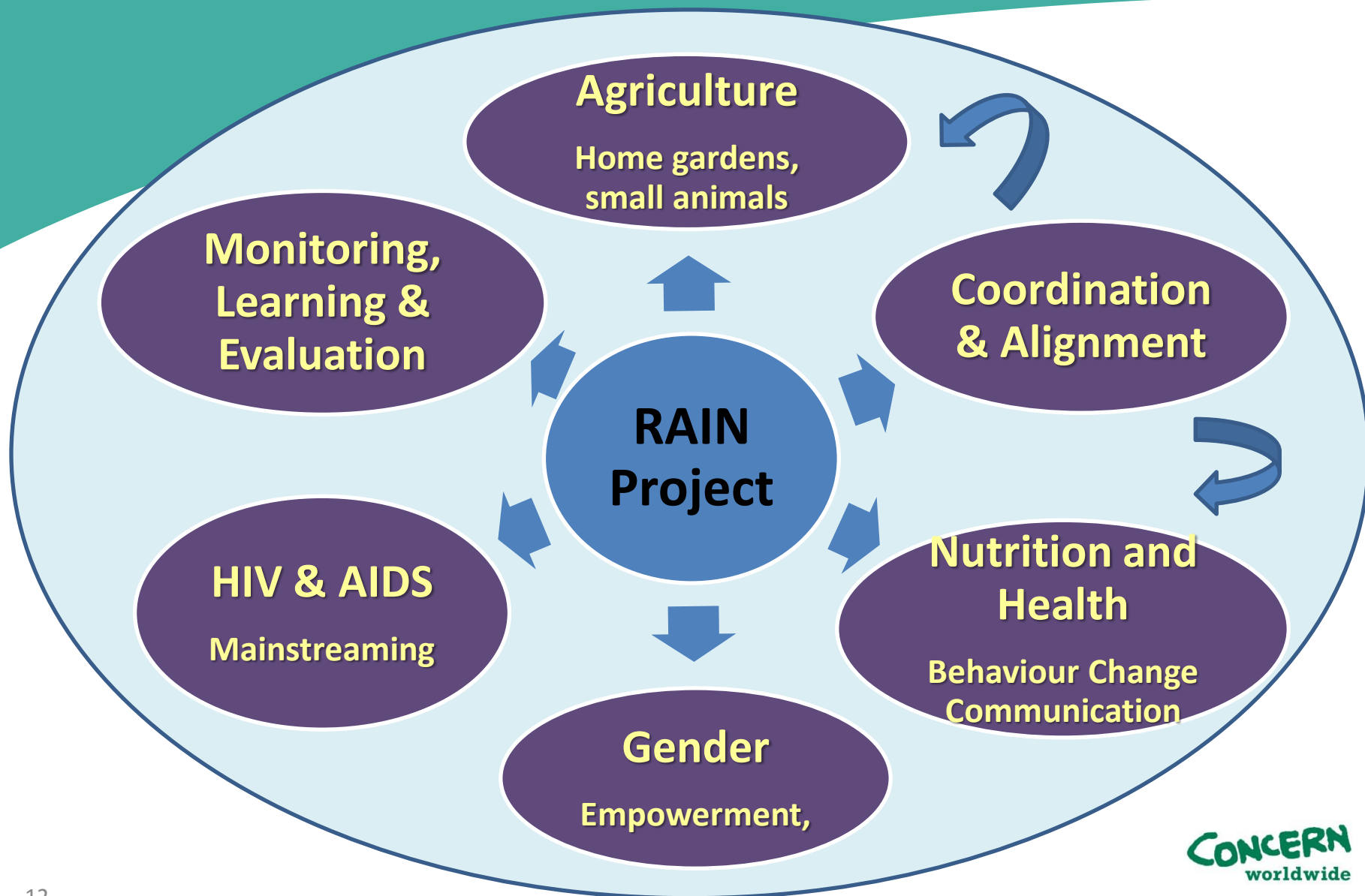




# **EXAMPLE: RAIN PROJECT**

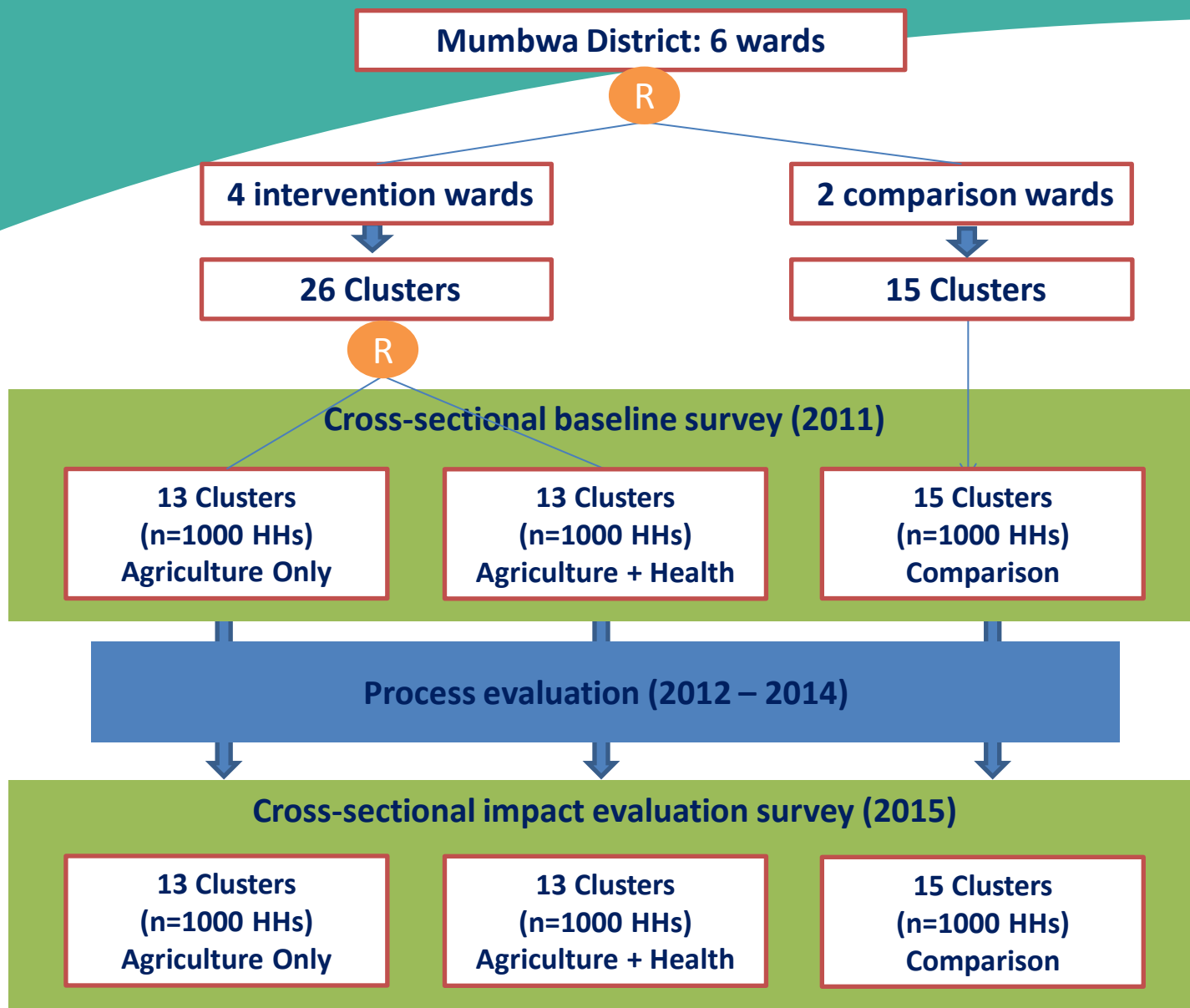


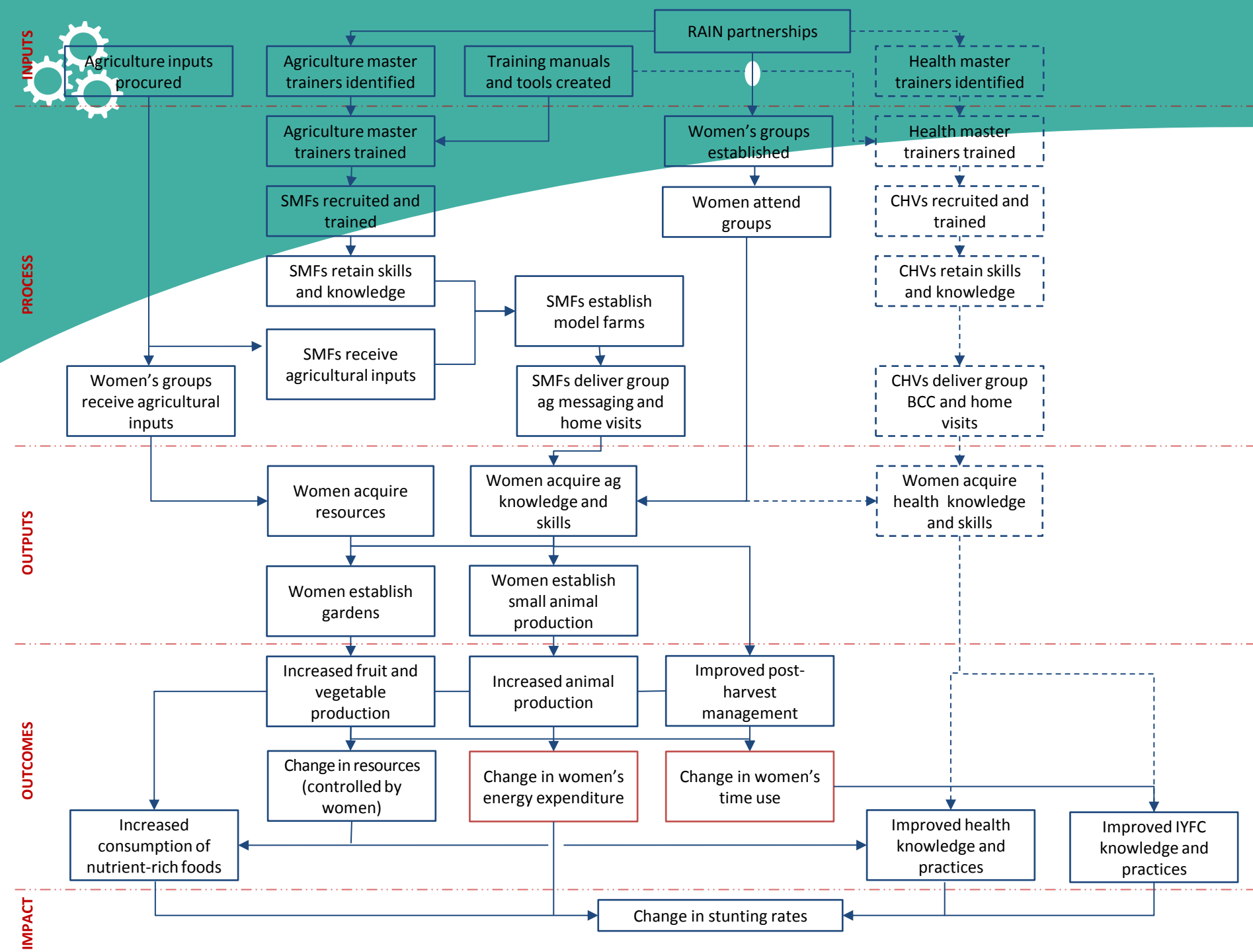
# RAIN Project Components





# RAIN evaluation design



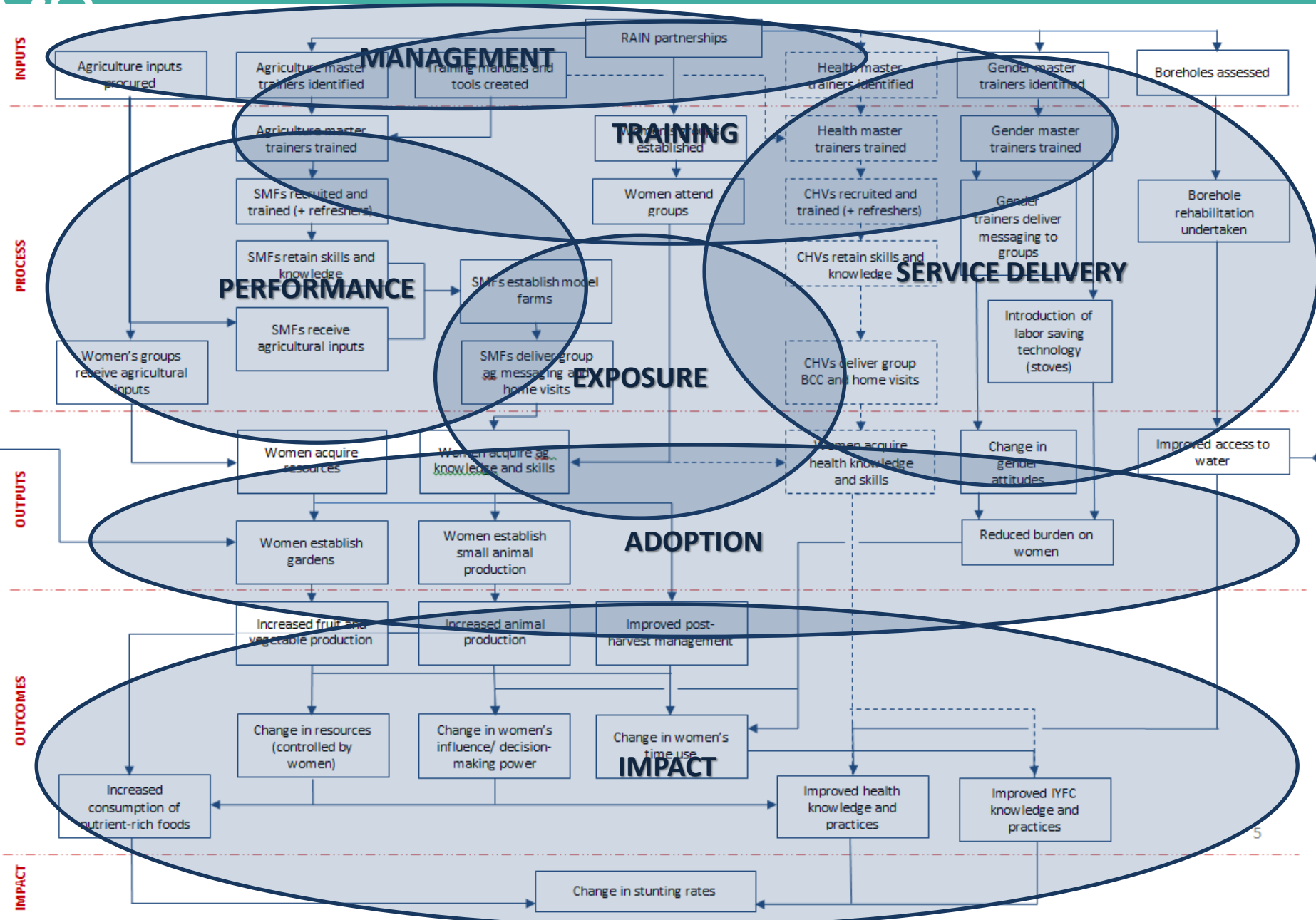




# Impact evaluation: Objectives

- **To assess the impact of the two different RAIN intervention packages on **stunting** among children aged 24 to 59 months**
- To assess the impact of the different RAIN packages of interventions on:
  - Availability of and access to a year-round supply of diverse and micronutrient-rich plant and animal source foods at household level = **production diversity (and purchase)**
  - Infant and young child feeding (IYCF) indicators among children 0-23 months of age = **Dietary Diversity + care**
  - Preventive and curative health practices and nutrition knowledge among mothers = **health and knowledge**

# RAIN program impact pathway (PIP)







# RAIN evaluation

## Impact evaluation

- Main impact indicator is stunting
- Measures dietary diversity as an outcome of agricultural intervention
- Measures health and care indicators as outcomes of nutrition and health intervention
- Uses a randomized control group and pre-post surveys

## Process evaluation

- Based on detailed Program Impact Pathway (PIP)
- Assesses program delivery and program usage
- Tells us what is working and why, to explain impact results



# Questions

- What can be challenging in doing the kind of impact evaluation the RAIN project is using?
- What are positive features that you could potentially replicate or use in your programmes?



# INDICATORS



# Indicators along the impact pathway

Nutritional status	Food consumption and diets	Household food access		HH Nutrition-related knowledge and practices	Food production
		Household food consumption	HH consumption-related behaviours		
Stunting: H/A Wasting: W/H Micronutrient Deficiencies	Individual dietary diversity score Women's DDS IYCF: % exclusive breastfeeding Minimum acceptable diet	Food Consumption Score (FCS) Household Dietary Diversity Score (HDDS)	Coping Strategy Index (CSI) Reduced Coping Strategy Index (rCSI) Household Food Insecurity and Access Scale (HFIAS) Household Hunger Scale (HHS) % Income spent on food	KAP on: Nutrition IYCF Hygiene & health-seeking behavior, Etc. → e.g. % of mothers who can identify local vitamin A rich foods	Ex: Increase yields in micronutrient rich crops



## Individual Dietary Diversity (consumption)

### Individual Dietary Diversity Score (IDDS)

- Dietary diversity represents the **number of different foods or food groups consumed** over a reference period - **usually 24-hour recall**
- Designed to capture micronutrient adequacy
- Number of **food groups examined: 12**
- Target: **individuals** (IDDS)
- Designed for simplicity of use
- Variation: Women's Dietary Diversity Score (being improved)
- Widely promoted by the UN FAO and USAID (FANTA).

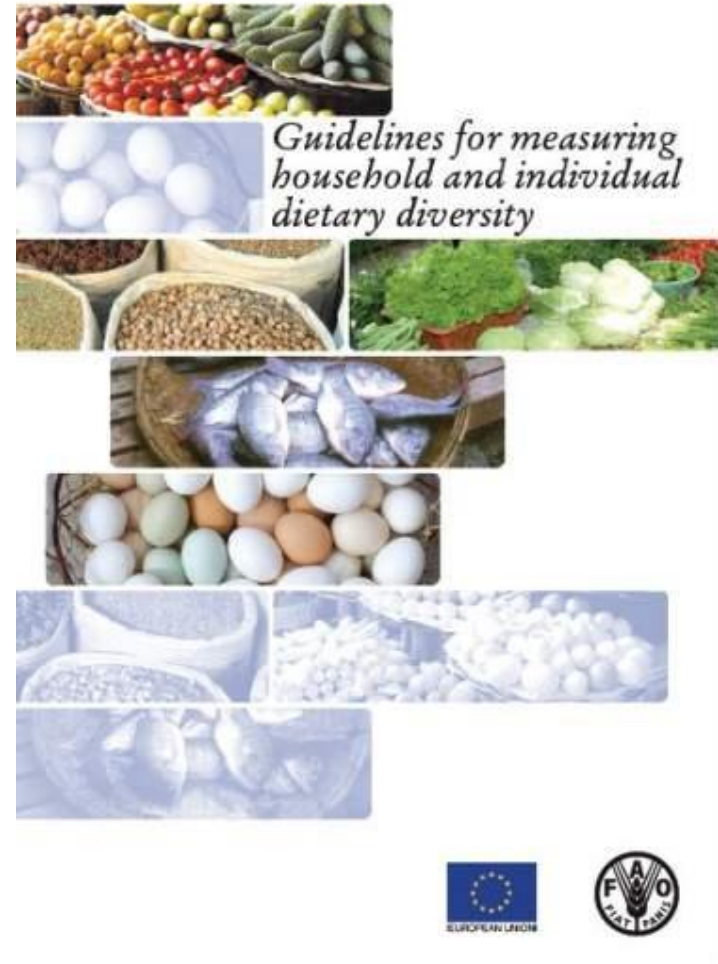
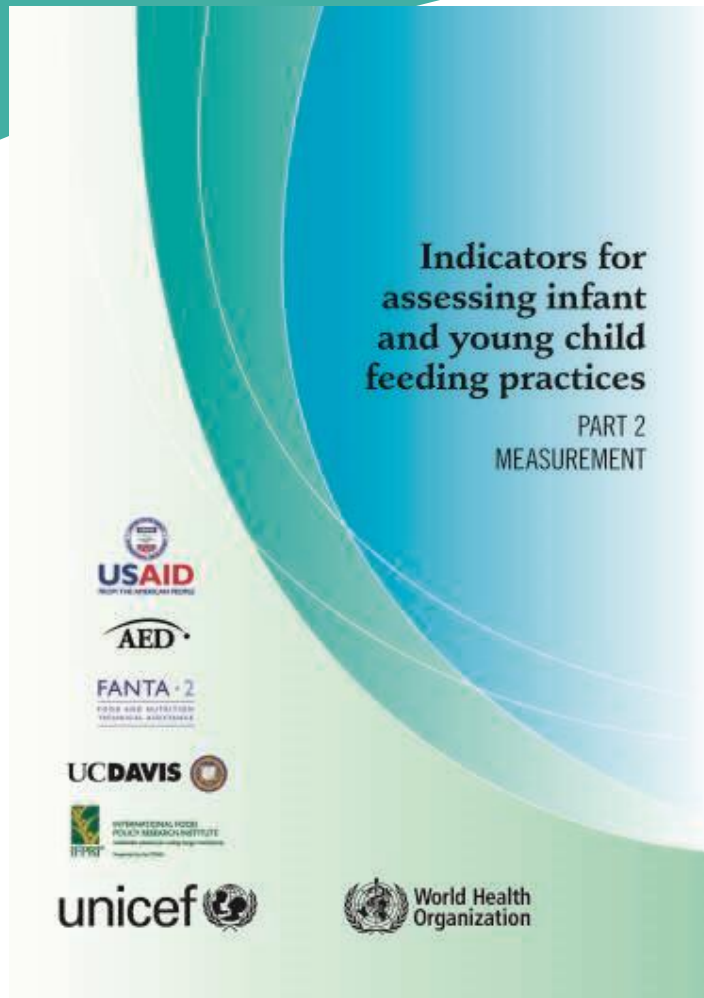
### IYCF: breastfeeding & Complementary feeding

- Target: **children under 2 years**
- Exclusive **breastfeeding** until 6 months and continued breastfeeding until 2 years
- Complementary feeding: **Minimum acceptable diet**
  - Age of introduction of complementary foods
  - Frequency of feeding
  - Dietary diversity



## WHO IYCF indicators: Child DD

## FAO guidelines: Adult (and HH) DD





## Definition of the Indicators (Household access to food)

### Food Consumption Score (FCS)

- The **frequency weighted diet diversity score** is a score calculated using the frequency of consumption of different **food groups consumed by a household during the 7 days** before the survey.
- An acceptable **proxy indicator** to measure **caloric intake** and **diet quality at household level**, giving an indication of food security status of the household if combined with other household access indicators.
- It is a **composite score** based on **dietary diversity**, **food frequency**, and **relative nutritional** importance of different food groups.
- used primarily by the World Food Programme

### Household Dietary Diversity Scale (HDDS)

- Dietary diversity represents the **number of different foods or food groups consumed** over a given reference period
- similar to the FCS, **but usually with a 24-hour recall** period without frequency information or weighted categorical cut-offs
- It is a proxy measure for **HH food access to diverse foods**
- Number of **food groups examined: 12**
- Target: **household** (HDDS)
- Designed for **simplicity of use**
- Widely promoted by the UN FAO and USAID (FANTA).



# Food groups and weights in FCS

Food Group	Food Items belonging to group	Food groups	Weight for FCS
1. Cereals and grain:	Rice, pasta, bread / cake and / or donuts, sorghum, millet, maize,	1.Cereals and Tubers	2
2. Roots and tubers:	potato, yam, cassava, sweet potato, taro and / or other tubers		
3. Legumes/nut:	beans, cowpeas, peanuts, lentils, nut, soy, pigeon pea and / or other nuts	2. Pulses	3
4. Orange vegetables (vegetables rich in Vitamin A):	carrot, red pepper, pumpkin, orange sweet potatoes,	3. Vegetables	1
5. Green leafy vegetables;	spinach, broccoli, amaranth and / or other dark green leaves, cassava leaves		
6. Other vegetables:	onion, tomatoes, cucumber, radishes, green beans, peas, lettuce, etc.		
7. Orange fruits (Fruits rich in Vitamin A):	mango, papaya, apricot, peach	4. Fruit	1
8. Other Fruits:	banana, apple, lemon, tangerine		
9. Meat:	goat, beef, chicken, pork (meat in large quantities and not as a condiment)	5. Meat and fish	4
10. Liver, kidney, heart and / or other organ meats			
11. Fish / Shellfish:	fish, including canned tuna, escargot, and / or other seafood (fish in large quantities and not as a condiment)		
12. Eggs			
13. Milk and other dairy products:	fresh milk / sour, yogurt, cheese, other dairy products (Exclude margarine / butter or small amounts of milk for tea / coffee)	6. Milk	4
14. Oil / fat / butter:	vegetable oil, palm oil, shea butter, margarine, other fats / oil	7. Oil	0.5
15. Sugar, or sweet:	sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweet (sugary drinks)	8. Sugar	0.5
16. Condiments / Spices:	tea, coffee / cocoa, salt, garlic, spices, yeast / baking powder, lanwin, tomato / sauce, meat or fish as a condiment, condiments including small amount of milk / tea coffee.	Condiments	0
		CSB	2.5





## Food groups in HDDS

### Food groups used

### Food groups used for HDDS

Cereals and grain

Roots and tubers

Legumes / nuts

Orange vegetables (vegetables rich in Vitamin A)

Green leafy vegetables

Other vegetables

Orange fruits (Fruits rich in Vitamin A)

Other Fruits

Meat

Liver, kidney, heart and / or other organ meats

Fish / Shellfish

Eggs

Milk and other dairy products

Oil / fat / butter

*Sugar, or sweet*

*Condiments / Spices*

1. Cereals, roots, and tubers

2. Pulses and legumes

3. Vegetables

4. Fruits

5. Meats, fish and seafood, and eggs

6. Dairy products

7. Oils and fats

*Not considered*

*Not considered*

### CALCULATION

1. Regroup the 16 food groups used for FCS in the 7 food groups as per the table , by simply adding frequencies;
2. For each food group create a new binominal variable that has two possible values:
  - **1 – yes:** the household / individual consumed that specific food group
  - **0 – no:** they did not consume that food.
1. Sum all the binominal variables in order to create a HDDS;
2. The new variable will have a range from 0 through the maximum number of food groups collected (7).



## Definition of the Indicators (Consumption-related behaviours)

### Coping Strategies Index (CSI/rCSI)

- The CSI **measures behaviour**: the things that people do when they cannot access enough food.
- Measures the adjustments HH make in consumption and livelihoods.
- Coping can be **consumption changes; expenditure reduction; income expansion;**
- adopted by WFP/VAM (World Food Programme/Vulnerability Analysis Mapping unit), FAO/FSNAU (UN Food and Agriculture Organization/Food Security and Nutrition Analysis Unit for Somalia), and the Global IPC (Integrated Phase Classification) team, among others.
- rCSI tend to measure the **less-severe coping behaviours**
- rCSI Uses the five most common strategies with standardized weights

### Household Food Insecurity and Access Scale (HFIAS)

- The HFIAS was designed to capture household **behaviours signifying insufficient quality and quantity**, as well as **anxiety** and uncertainty over household insecure access or food supply.
- Insufficient quality (includes variety and preferences of the type of food):
- Insufficient food intake and its physical consequences:



## Definition of the Indicators (Consumption-related behaviors)

### The Household Hunger Scale (HHS)

- essentially a **behavioural measure**.
- It tends to capture **more-severe behaviours**; e.g.
  - Was there ever no food to eat of any kind in your house because of lack of resources to get food?
  - Did you or any household member go to sleep at night hungry because there was not enough food?
  - Did you or any household member go a whole day and night without eating anything because there was not enough food?

### Self-assessed measure of food security (SAFS).

- These include self-assessments of current food security status in a recent recall period and the change in livelihood status over a longer period of time
- highly subjective in nature and perhaps too easy to manipulate in programmatic contexts



## Definition of the Indicators (Consumption-related indicators)

### Spending on food

- Estimating the **proportion of expenditure on food** of the total household income
- Considers the propensity of people closer to the edge of poverty, spend a greater and greater proportion of their income on food
- Can also look at the **proportion spent on different food groups**



# Impact pathways

- Integrating food security and nutrition → comes together in the M&E framework
- There are different pathways through which an intervention can address the causes of malnutrition.
- Your M&E system should help you monitor and evaluate these pathways throughout project implementation.
- Important to measure the *possible* negative impacts/ unexpected outcomes and external factors of our intervention on nutrition (Do no harm)



# M&E indicators

- Stunting is a good impact indicator of multi-sectoral programmes
- Acute malnutrition / wasting – subject to many variations
- For food security interventions, important to measuring impact at least on household food consumption, if possible individual
- Nutrition is about individuals → looking at the individual is the only way to understand maternal and child nutrition
- Dietary diversity measurement should be complemented with KAP survey
- Capturing “nutrition” in indicators: e.g. “increased food production” → “increased production of micronutrient rich foods”
- Choice of indicators depends on intervention + what is feasible



# M&E process

- What a program measures will depend on the program aims
- There are different designs for impact evaluations, which provide different levels of certainty about attribution of impact to the program itself
- A process evaluation is used to understand which elements of a program are working and which are not
- Monitoring is a vital management tool which should be undertaken in any program
- For impact evaluation: call an expert



# GROUP WORK





# Two exercises

- 1) Monitoring the nutritional impact of a food security-related intervention
  - Agro-pastoralists(LH2)
  - Smallholders and landless farmers (LH5)
  
- 1) Creating a common food security and nutrition M&E framework
  - Urban/peri-urban (LH1)
  - Sedentarizing pastoralists (LH3)

Pastoralists with small herds LH4 → goes to other groups



# Nutritional impact of food security intervention

- Take the intervention you discussed yesterday
- Clarify the impact pathway from the intervention to nutritional status
- Identify any potential negative impacts along this impact pathway
- Identify indicators to measure:
  - each step of the impact pathway
  - Negative impacts



# Common M&E framework

- Starting from the bottom, identify indicators for the impact, outcomes and all solutions
- Go as far up as you go in the tree