Fill the Nutrient Gap Analysis
Cambodia: Rationale and Key findings
Meeting Objectives

• Share main findings of the analysis.
• Discuss findings implications in terms of multi-sector interventions within the food system.
• Jointly identify national-level recommendations for programmatic decision-making:
  • Prioritization of interventions
  • Policy recommendations.
MALNUTRITION

Inadequate dietary intake

Disease

Inadequate access to food

Inadequate care for children and women

Insufficient health services and unhealthy environment
Primary Goals of the Analysis

• Strengthen nutrition situation analysis, focussed on barriers of dietary intake, linked to decision-making.
• Establish consensus on cost-effective policy and programmatic strategies to improve nutrition of key target groups adapted to the context.
2 Components of the Analysis

- Reviewing secondary data and sources of information
- Linear programming on the Cost of the Diet

Life-cycle approach with a focus on:
- Children <2 years
- Pregnant and lactating women
- Adolescent girls.
IDENTIFICATION
Define focus of analysis (target groups, geographies)

POLICY ANALYSIS
Analyse enabling environment

ANALYSIS
Analyse food & nutrient availability, access, intake, and local practices & affordability of nutritious diets

FRAMEWORK

IDENTIFICATION

ANALYSIS

DECISION

DECISION DISCUSSION
Identify effective context-specific intervention & policy options to fill the nutrient gap
The Fill the Nutrient Gap process in Cambodia

1: DEFINE FOCUS
Multi-stakeholder inception meeting
Consensus on key target groups and level of analysis

2 & 3: ANALYSIS
Cost of the Diet market price data collection (MAFF/WFP)
Secondary data compilation & analysis
Cost of the Diet analysis and modelling

4: RECOMMENDATIONS
National multi-stakeholder workshop to present key findings
Joint identification of potential strategies to fill nutrient gaps across multiple sectors

March 2017 - August 2017
Multiple stakeholders engaged throughout the process

**Cambodia Team**

**National Government**

**WFP**

**Other UN Agencies**

**Other Partners**

**CARD, MAFF, MoEYS, MoP, NMCHC**

**Cambodia Country Office, Head Quarters Nutrition, Regional Bureau Bangkok**

**UNICEF, FAO, WHO**

**Save the Children, HKI, Plan International, WorldFish, IFReDI, RACHA, GIZ, ACF, SMV**
Secondary data and information

Sourced data / grey literature / peer reviewed articles / reports

120+ reviewed
## Key secondary data sources (120+ reviewed)

<table>
<thead>
<tr>
<th>Data Category</th>
<th>Key data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local practices</td>
<td>UNICEF and HKI IYCF journey for urban and rural areas 2016; FAO MALIS project review 2015; HKI and FAO complementary feeding review</td>
</tr>
<tr>
<td>Optimisation &amp; Cost of Diet</td>
<td>El Niño resilience expenditure data (FAO and WFP, 2016)</td>
</tr>
</tbody>
</table>
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Cost of the Diet analysis

Market survey data

19 regions as defined by the CDHS

95 markets (5 per region)

Estimate Staple Adjusted Nutritious diet (SNUT)
Optimized Diet using the Cost of the Diet tool

Locally available food items

Possible diets meeting all nutrient requirements of the household

Least expensive nutritious diet adjusted to include the main staples (SNUT)
SNUT – NUTRITIOUS DIET

WHAT IT IS...
• Based on what is available in markets.
• Based on lowest cost.
• Adjusted to reflect basic local preferences.

WHAT IT IS NOT...
• Not necessarily what are actually eating.
• Not designed to provide recommendations of what people should eat.
Standardized household size and composition for all regions using a lifecycle approach

5 person household:
1. Child aged 12-23 months
2. Child aged 6-7 years
3. Female aged 14-15 years
4. Lactating woman
5. Man.
Secondary data and information

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Cost of the Diet analysis

Market survey data

19 regions as defined by the DHS

95 markets (5 per region)

Estimate SNUT

Affordability of SNUT using expenditure data (19 regions)

How to address affordability issues

Intervention modelling in 4 regions
4 regions selected to represent ecological zone diversity
Cost of the Diet intervention modelling: How to improve the affordability of nutritious diets?

Strategies modelled at a household and individual level:
1. Improving access to locally available nutritious foods.
2. Staple food fortification.
3. Improving access to Specialised Nutritious Foods for specific target groups.
4. Micronutrient supplementation.
5. Cash transfers (conditional) – to improve purchasing power.
Cost of the Diet intervention modelling: How to improve the affordability of nutritious diets?

Assumptions:
1. Social Behaviour Change Communication required to improve demand creation for nutritious foods and improved dietary practices.
2. Programming costs are not included in the modelling (Next step).

Strategies included based on:
✓ Ongoing interventions in Cambodia
✓ Potential new interventions (discuss feasibility)
✓ Evidence-based interventions.
Key Findings from the Secondary Data Review and Cost of the Diet Analysis
MESSAGE 1

Undernutrition varies geographically and is impacted by:

• Socioeconomic factors
• Mother’s nutritional status
• Shocks (natural and economic)
High infant and young child (0-59 months) undernutrition despite decreases over the past 20 years

Stunting reduction: 18 percentage points in 14 years

Stunting is high throughout the country particularly in the Plateau/Mountain areas...
Wasting prevalence is high

- Prevalence:
  10% (6.5 – 15.1)
- Burden of Severe Acute Malnutrition:
  92 807 children under 5
- High variance across provinces
- High variance within provinces
- Need more data on provincial wasting.

Sources: MOH 2016
Anaemia in women and children under 5 is a severe public health problem

Source: DHS, 2014
• The cause of anaemia in WOMEN is unknown.

• Over 40% anaemia in CHILDREN is not caused by nutritional factors.

Low iron deficiency in children suggests other factors play a role:
• Genetic disorders (hemoglobinopathies)
• Inflammation
• Hookworm infection
• Zinc and folic acid deficiency.

Source: DHS, 2014; Perigno et al., 2016; Wieringa et al., 2016
Non-anemic and Anemic children

- No deficiency: 58.3% (non-anemic), 40.8% (anemic)
- Hemoglobinopathy: 68.2% (non-anemic), 80.9% (anemic)
- Folic acid deficiency: 6.5% (non-anemic), 7.9% (anemic)
- Vitamin B12 deficiency: 2.0% (non-anemic), 2.5% (anemic)
- Zinc deficiency: 24.8% (non-anemic), 39.6% (anemic)
- Vitamin A deficiency: 7.6% (non-anemic), 11.2% (anemic)
- Iron deficiency: 8.5% (non-anemic), 10.5% (anemic)

Source: Wieringa et al., 2016
Only the wealthiest households are slightly protected from undernutrition

Source: DHS, 2014

Source: DHS, 2014
Household Income Distribution...
Child undernutrition is strongly linked to mother’s nutritional status

Source: DHS, 2014
National progress on undernutrition is susceptible to shocks

Small reduction in stunting and increase in wasting: Due to financial crisis and flooding

Source: DHS 2000; 2005; 2010; 2014
MESSAGE 2
The double burden of malnutrition is rising

Risk factors:
• Rapid urbanisation
• Excessive consumption of rice
• Snack food consumption in children
Although the double burden in Cambodia is lower than in other South East Asian countries...

Source: Haddad, Cameron and Barnett, 2015
...Overweight and obesity are rising particularly in women of reproductive age

Overweight in women 15-49 years from 2000-2014

Source: DHS, 2014
Cambodia is rapidly urbanising—5th highest GDP growth of 68 developing countries (1992-2012)

Rice has major cultural significance in Cambodian diets

‘There is not a dish in Cambodia that does not start with rice’

Consumption of other foods are considered to be ‘side dishes’ to accompany the rice, with better off households consuming more side dishes.

In the lean season only rice with chili salt is consumed by many households in Ratanakiri.

Source: Anthrologica & WFP, 2017
When current rice consumption was modelled in the nutritious diet nutrient requirements could not be met.

Energy requirements would need to be exceeded to meet these requirements.

Rice 390g per capita per day

Fat
Vitamin B1
Vitamin B2
Vitamin B6

Source: Cost of the Diet Analysis
Unhealthy snack food consumption is high among children

Children 6-11 months: 43% ate potato chips (Skau et al., 2014)

Children 9-11 months: Ate a savoury snack every day (Skau et al., 2014)

Children 6-23 months: 55% ate sugary/savoury snacks (Pries et al., 2016)

Children 6-23 months: 75% given snacks; 44% given sweet biscuits (Plan International, 2016)

Children 6-23 months: 43% ate a sugary snack and 31% ate a packaged snack food (SCI, 2016)
Unhealthy snack food consumption* could increase the cost of the diet for a child under 2 on average by 38%

*1 portion/week of biscuit/cracker, cake, candy, potato crisps and fruit juice

Source: Cost of the Diet Analysis
MESSAGE 3

Despite economic development, household access to sufficient and nutritious food remains a challenge, particularly for poor rural households engaged in agriculture.
Most households produce own rice but purchase micronutrient rich foods at the market.

Source: National Agriculture Census, 2013
...or forage for micronutrient rich foods (especially during periods of food insecurity)

- Root crops, fruit, vegetables: 85%
- Herbs: 8%
- Wild animals and birds: 4%
- Honey, Palm juice: 1% and 2%

Nationally, 67% of households gather natural products (both food and non-foods)

Source: Cambodia Socio-Economic Survey, 2014
However nationally market access is fairly good

Source: National Agriculture Census, 2013
A CHANGE IN THESE FACTORS MAY LEAVE HOUSEHOLDS VULNERABLE:

INCOME

• Households that experienced >25% income loss from El Niño more likely to have poor dietary diversity and experience hunger.

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FOOD PRICES
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FOOD PRICES
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FOREST COVERAGE
• National forest cover is decreasing (from 61% in 2002 to 53% in 2016)
  ▪ Ratanakiri: used to be an economy of self sufficiency. Now access to land and forest has decreased and many feel more food insecure.

MESSAGE 4
The quality and diversity of households’ diet is a concern

Due to:
• Limited crop diversification
• Dietary preferences
• Economic access
Food availability is not a barrier to households consuming a nutritious diet:
Average of 270 food items found in the markets

Source: Cost of the Diet Analysis
National productivity figures may be masking household disparities in diet sufficiency.

Based on production figures it is estimated that the food deficit is 97 kcal/per capita/day (one slice of bread).

<table>
<thead>
<tr>
<th>Year</th>
<th>Food Balance Sheet</th>
<th>Cambodia Socio-Economic Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>21</td>
<td>37</td>
</tr>
<tr>
<td>2009</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>2014</td>
<td>14</td>
<td>31 Estimated</td>
</tr>
</tbody>
</table>

Source: WFP, 2016; FAO, 2017
Rice dominates national production...

- Cereals (Rice): 72%
- Fruits and nuts: 11%
- Vegetables: 5%
- Tubers and legumes: 6%
- Industrial temporary crops: 4%
- Industrial permanent crops: 2%

Source: Cambodia Socio-Economic Survey, 2014
...and consumption

- Fish: 173g
- Vegetables: 114g
- Miscellaneous: 126g
- Fruits: 50g
- Meat: 47g

- Cereals (Rice): 386g
- Fats & oils: 5g-12g
- Starch, roots & tubers: 40%
- Beans, nuts & seeds: 13%
- Milk: 12%
- Poultry & eggs: 5%
- Sugars & syrups: 5%

Source: Inland Fisheries Research and Development Institute, 2012
Households with inadequate dietary diversity have declined significantly...

**Items least frequently consumed by households**

- Dairy products consumed **less than one** day per week.
- Pulses/legumes/dried nuts and edible seeds consumed **1-2** days per week.
- Eggs consumed **1-2** days per week.
- Fruit consumed **2-3** days per week.
...but disparities remain

Inadequate dietary diversity is highest among poorest households and higher in rural vs urban.

Source: CSES data, 2014
MESSAGE 5
The relationship between malnutrition indicators and economic access to a nutritious diet vary

Stunting prevalence is high in areas of low AND high non-affordability
On average 21% of households cannot afford a nutritious diet – worst in Plateau/Mountain

Source: Cost of the Diet Analysis
Mountain and Plateau regions have high stunting and expensive cost of the diet and high non-affordability...

Under 5 Stunting prevalence

Cost of the SNUT diet

Non-Affordability of the SNUT diet

Source: DHS, 2014 and Cost of the Diet Analysis
On the average cost of the staples (price per 100g):
- **Tonle Sap** - lowest prices
- **Plateau/Mountain** - highest prices

<table>
<thead>
<tr>
<th></th>
<th>Cambodian Riel</th>
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<tbody>
<tr>
<td>Pursat</td>
<td>267</td>
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<tr>
<td>Banteay Meanchey</td>
<td>284</td>
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<tr>
<td>Kampong Chhnang</td>
<td>284</td>
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<tr>
<td>Siem Reap</td>
<td>289</td>
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<tr>
<td>Prey Veng</td>
<td>297</td>
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<tr>
<td>Svay Rieng</td>
<td>302</td>
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<tr>
<td>Takeo</td>
<td>302</td>
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<tr>
<td>Battambang/Palin</td>
<td>312</td>
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<tr>
<td>Kampong Speu</td>
<td>324</td>
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<tr>
<td>Kampong Cham/Tong Khmum</td>
<td>325</td>
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<td>Kampong Thom</td>
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<td>Kandal</td>
<td>328</td>
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<tr>
<td>Ordar Meanchey</td>
<td>344</td>
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<tr>
<td>Kampot/Kep</td>
<td>369</td>
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<tr>
<td>Koh Kong/Preah Sihanouk</td>
<td>377</td>
</tr>
<tr>
<td>Phnom Penh</td>
<td>394</td>
</tr>
<tr>
<td>Preah Vihear/Stung Treng</td>
<td>414</td>
</tr>
<tr>
<td>Ratanak Kiri/Mondul Kiri</td>
<td>452</td>
</tr>
<tr>
<td>Kratie</td>
<td>453</td>
</tr>
</tbody>
</table>

**Legend:**
- **Tonle Sap**
- **Plain**
- **Tonle Sap**
- **Plateau**
- **Plain**
- **Tonle Sap**
- **Plateau**
- **Coastal**
- **Urban**
- **Plateau**
...but median expenditure is fairly similar across each zone thus non-affordability in plateau/mountain is driven by prices

<table>
<thead>
<tr>
<th>Plateau/Mountain</th>
<th>Coastal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1: 89,000 KHR</td>
<td>Quintile 1: 106,000</td>
</tr>
<tr>
<td>Median: 123,000 KHR</td>
<td>Median: 147,00 KHR</td>
</tr>
<tr>
<td>Quintile 3: 143,000 KHR</td>
<td>Quintile 3: 225,000 KHR</td>
</tr>
</tbody>
</table>

Source: FAO and WFP, 2016
...but these regions also have the lowest population density
Other regions have high stunting despite a cheaper cost of diet and low non-affordability.

Source: DHS, 2014 and Cost of the Diet Analysis
**Other factors** are therefore contributing to the high stunting prevalence:

- Culture, beliefs, knowledge around nutritious foods, IYCF practices and diet of mothers during pregnancy and lactation
- Health practices
- Worms
- Sanitation.
MESSAGE 6

Women’s diets (particularly during pregnancy and breastfeeding) are poor and contribute to malnutrition in their children

DUE TO:

• Knowledge and beliefs
• Time
In the cost of the modelled household diet, the **adolescent girl** and **lactating woman** are the most expensive.

- **Adolescent girl**: 14-15 years, 27%
- **Lactating woman**: 30-59 years, 45kg, Moderately active, Breastfeeding, 28%
- **Child** (either sex): 6-7 years, 13%
- **Child** (either sex): 12-23 months, 8%
- **Man**: 30-59 years, 50kg, Moderately active, 24%

Source: Cost of the Diet Analysis
No national data on women’s diets – Provincial studies suggest dietary diversity is poor

5+ food groups are recommended for Minimum Dietary Diversity for women

Source: Amry & Weingartner, 2016; Plan International, 2016
Despite higher requirements...
Data suggests that women’s diets do not change during pregnancy or breastfeeding

WHY?
POOR DIETARY HABITS COULD BE DUE TO:

Knowledge and beliefs
• Women generally not prioritised at meal times.
• Not aware of specific nutritional needs and poor/lack of nutrition counselling during anti-natal care.
• Prioritizing rice (low awareness on need for dietary diversity).
• Desire for easy delivery:
  • Eating less
  • Food taboos (eggs, coconuts, eel).
• Need to heat body post partum to prevent complications/death:
  • Reduce food consumption to very limited diet
  • Drink wine with herbs.

Time
• Garment factory workers have limited time for lunch so snack on sugary desserts or packaged food.

Meeting the needs of adolescent girls is already expensive - pregnancy/lactation increases diet costs and vulnerability.

Diet cost increases by:
- Pregnancy 10%
- Lactation 15%

Source: DHS, 2014; Cost of the Diet Analysis
MESSAGE 7

Breastfeeding practices are almost universal. Sustaining the gains will be challenging. Specific attention is needed in urban areas.
From 2000-2010 Cambodia made great strides to improving breastfeeding indicators...

Breastfed within one hour of birth

Exclusively breastfed at 4-5 months

... the result of a Nationwide exclusive breastfeeding campaign (2004)

Mass media:
TV and radio spots; breastfeeding song, 24-episode TV soap opera.

Interpersonal communication:
Health staff trainings; NGO campaigns; community groups and volunteers.

Key messages:
Early initiation; exclusive breastfeeding; “not even water”.

Source: Ministry of Health Cambodia, 2015
However sustaining these improvements will be challenging...

<table>
<thead>
<tr>
<th>Year</th>
<th>Breastfed within one hour of birth</th>
<th>Exclusively breastfed at 4-5 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>2005</td>
<td>35</td>
<td>46</td>
</tr>
<tr>
<td>2010</td>
<td>66</td>
<td>60</td>
</tr>
<tr>
<td>2014</td>
<td>63</td>
<td>51</td>
</tr>
</tbody>
</table>

Breastfeeding challenges...

- Mother’s need to return to work
- Extensive promotion of Breastmilk Substitutes
- Behaviours and beliefs that limit breastfeeding.
Rapid urbanisation could exacerbate problems associated with urban breastfeeding practices.
Cost of the Diet analysis emphasises the economic benefits of breastfeeding.

Source: Cost of the Diet Analysis
MESSAGE 8

Complementary feeding practices are suboptimal and an important barrier to nutrient intake in children aged 6-23 months

DUE TO:

• Economic challenges
• Mothers/Caregivers time
• Knowledge and beliefs
Trends in stunting and anaemia suggest inadequate nutrient intake 6-12 months

Source: DHS, 2014
Only 30% of children 6-23 months are fed a Minimum Acceptable Diet.

74% achieved Minimum Meal Frequency
40% achieved Minimum Dietary Diversity

Source: DHS, 2014
COULD BE DUE TO:

Economic challenges:
• Too expensive to buy ingredients for enriched borbor.

Time
• Takes too long to prepare separate meals for child.
• Mothers/caregivers buy borbor from vendors to save time (likely to be watery and unenriched).

Knowledge and beliefs:
• Rice is nutritious enough.
• Certain fruits (guava, mango, papaya), meat, fish can cause a child to become sick (fish may give worms).
• Children 12+ months too old for borbor so are fed family foods.
• Not within the local culture to mix food groups or mash foods.

The costs of local complementary food options is an important factor to be considered.

Source: Cost of the Diet Analysis
MESSAGE 9
Context specific integrated packages of interventions have the greatest potential to improve affordability of a nutritious diet.
TO THINK ABOUT:

Should areas with high non-affordability, high stunting rates and high population density be prioritised for food based interventions?

Should Social Behaviour Change Communication and health interventions be prioritised in areas with high stunting and low non-affordability?

Who should bear the costs of the interventions?

How can convenience be factored in when selecting interventions?
# Modelling to improve access to nutrients

## Children 6 to 23 months

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Transfer Modality</th>
<th>Possible Entry Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num Trey (Specialised Nutritious Food)</td>
<td>Voucher/In-kind Market (500 KHR)</td>
<td>• Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Social Protection</td>
</tr>
<tr>
<td>NOURISH Fish Powder</td>
<td>Voucher/In-kind Market ($1.25)</td>
<td>• Markets</td>
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<tr>
<td></td>
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<td>(Private Sector)</td>
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</table>

## School aged children

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Transfer Modality</th>
<th>Possible Entry Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Grown School Feeding Breakfast (non-fortified and fortified rice)</td>
<td>Voucher/In-kind</td>
<td>• Education</td>
</tr>
<tr>
<td>Home Grown School Feeding Lunch (non-fortified and fortified rice)</td>
<td>Voucher/In-kind</td>
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</tbody>
</table>
## Modelling to improve access to nutrients

### Adolescent girl

<table>
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<tr>
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<tr>
<td>Iron and Folic Acid Supplement</td>
<td>In-kind</td>
<td>• Health</td>
</tr>
<tr>
<td>Fresh Food Voucher (Animal source food + Vegetables)</td>
<td>Voucher</td>
<td>• Agriculture</td>
</tr>
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<td></td>
<td></td>
<td>• Social Protection</td>
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<td></td>
<td></td>
<td>• Markets (Private Sector)</td>
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</table>

### Pregnant and Lactating Women

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<td></td>
<td></td>
<td>• Markets (Private Sector)</td>
</tr>
</tbody>
</table>
# Modelling to improve access to nutrients

<table>
<thead>
<tr>
<th>Household</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
</tr>
<tr>
<td>Fortified rice (8 micronutrients)</td>
</tr>
<tr>
<td>Fortified oil (vitamin A and D)</td>
</tr>
<tr>
<td>Fortified fish sauce (iron)</td>
</tr>
<tr>
<td>Fortified soy sauce (iron)</td>
</tr>
<tr>
<td>Fortified foods in combination</td>
</tr>
<tr>
<td>HKI vegetable gardens</td>
</tr>
<tr>
<td>HKI poultry and eggs</td>
</tr>
<tr>
<td>WorldFish and HKI fish ponds</td>
</tr>
<tr>
<td>Cash transfer ($10.80/month)</td>
</tr>
<tr>
<td>Cash transfer ($6/month)</td>
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<td></td>
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</tbody>
</table>
Child 6 to 23 months: Num Trey and NOURISH fish powder given in-kind were the most effective but might be too expensive at market price.

Source: Cost of the Diet Analysis
Num Trey is more price competitive and it is more nutritious than unhealthy packaged snack foods.

Source: Cost of the Diet Analysis
School aged child: Home grown school feeding (HGSF) lunch ration was the most effective

NOTE: Non fortified rice showed similar effectiveness

Source: Cost of the Diet Analysis
Adolescent girl: An iron/folic acid supplement and a fresh food voucher were similarly effective.
Pregnant and Lactating Woman: NOURISH fish powder in-kind was the most effective but might be expensive at market price.

NOTE: Num Trey in-kind was also effective but the portion may not be enough.
Household:
Home production interventions could reduce the cost, improve access to nutritious foods and reduce non-affordability of a nutritious diet

NOTE: These interventions were particularly effective for the adolescent girl

Source: Cost of the Diet Analysis
Household:
Fortified rice could somewhat (5%) reduce the cost of a nutritious diet

Source: Cost of the Diet Analysis
TO THINK ABOUT:

Do the proposed fortified staple foods address the micronutrient gaps?

What needs to happen (e.g. pricing and demand) in order to make market based delivery of interventions (e.g. fortified rice) a feasible strategy?

What alternative public delivery platforms could be leveraged to use fortification to increase access to nutrients at critical times?

Engaging in strategic alliances with private sector.
PACKAGES TO BE CONSIDERED BASED ON THE MODELLING

- Household interventions
- Targeted interventions
- Cash transfers
A package of targeted interventions:
• Num Trey for Children 6 months – 2 years.
• NOURISH Fish powder for Pregnant and Lactating Women.
• Fresh Food Vouchers for Adolescent Girls.
  • Home Grown School Feeding for School Aged Children.

combined with household interventions:
• Home Gardening
• Fortified Rice

could reduce non-affordability by 18 - 35 percentage points
Intervention packages to improve affordability

Battambang/Pailin (Tonle Sap)
- Nutritious Diet: 20%
- Home Gardening: 12%
- Targeted Interventions: 13%
- Targeted Interventions + Home Gardens: 9%
- Fortified Rice: 2%

Ratanak Kiri/Mondul Kiri (Mountain/Plateau)
- Nutritious Diet: 66%
- Home Gardening: 55%
- Targeted Interventions: 54%
- Targeted Interventions + Home Gardens: 45%
- Targeted Interventions + Home Gardens + Fortified Rice: 31%
Household: Cash Transfers can reduce non-affordability by 6 to 8 percentage points

<table>
<thead>
<tr>
<th>Region</th>
<th>% of Households that cannot afford a Nutritious Diet</th>
<th>Cash Transfer $6</th>
<th>Cash Transfer $10.80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battambang/Pailin</td>
<td>20%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>Kampot/Kep</td>
<td>22%</td>
<td>20%</td>
<td>18%</td>
</tr>
<tr>
<td>Prey Veng</td>
<td>25%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Ratanak Kiri/Mondul Kiri</td>
<td>66%</td>
<td>63%</td>
<td>60%</td>
</tr>
</tbody>
</table>

**Assumptions:**
1. All of the cash provided is used on food
2. The cash transfer is provided to all households that cannot afford a nutritious diet
MESSAGE 10
The food system provides a range of promising entry points, across multiple sectors both public and private, to improve access to nutrients for vulnerable groups.
Potential Entry Points

- Sector Specific Platforms
- Enabling Environment
- Supply and Demand
School feeding

Agricultural diversification

Health systems

Garment Industry

**SECTOR SPECIFIC PLATFORMS**

**Social Protection:**
- Cash transfers
- Linking farmers to safety nets
- Shock preparedness & response (food banks)
ENABLING ENVIRONMENT

- Regulation of snack foods and BMS
- Endorsement for nutritious foods
- Nutrition in preparedness structures
- National vs D&D implementation
- Taxes and tariffs
- Fortification
- Compliance monitoring
- Maternity leave, breastfeeding friendly work places
Markets: Availability of affordable, safe, nutritious and convenience foods

Demand creation for healthy diets and lifestyles

Private sector messaging including segmentation

Social behaviour change communication and Nutrition education - Community health, Agricultural extension officers, Conditional cash transfers etc.
Fill the Nutrient Gap
Nutrition situation analysis framework and decision tool

Photo credit: WFP/Chu Cancun
Groupwork
Groupwork

4 GROUPS
2. Fresh Foods and Agriculture.
3. Processed Foods including Food Fortification.

Template to work from
Facilitator and Rapporteur
Groupwork

**STEPS**

1. Fill in the names of the people sitting at your table.
2. For your sector, discuss the implications from the Fill the Nutrient Gap analysis findings.
3. Decide on the 3 most important priorities.
4. For each of the 3 priorities, determine the target group (e.g. adolescent girls) and the specific entry points for interventions (e.g. school feeding).
5. Decide on a recommended intervention to address the target group through the specific entry point.
6. Define key steps to be undertaken to achieve the recommendation
TO THINK ABOUT:

Should areas with high non-affordability, high stunting rates and high population density be prioritised for food based interventions?

Should Social Behaviour Change Communication and health interventions be prioritised in areas with high stunting and low non-affordability?

Who should bear the costs of the interventions?

How can convenience be factored in when selecting interventions?
TO THINK ABOUT:

Do the proposed fortified staple foods address the micronutrient gaps?

What needs to happen (e.g. pricing and demand) in order to make market based delivery of interventions (e.g. fortified rice) a feasible strategy?

What alternative public delivery platforms could be leveraged to use fortification to increase access to nutrients at critical times?

Engaging in strategic alliances with private sector.
Under 5 Stunting prevalence

Non-Affordability of the nutritious diet

Ecological Zones