Conception of a replicable and operational methodology for NUTRITION CAUSAL ANALYSIS

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Objectives of a Nutrition Causal Analysis (NCA)

1. Identify factors associated with child undernutrition
2. Distinguish causal ‘pathways’ and groups of factors associated with undernutrition
3. Prioritize pathways explaining undernutrition
4. Identify pathways that are most modifiable by stakeholders

Partners:

- ACF
- Tufts University
- IRD
- WFP
- ODI
Frameworks
NCA methodology

Combines quantitative and qualitative data collection methods and analysis:

1) **Define your case** (secondary data, workshops and interviews on national and community levels)
2) **Develop and prioritise hypothesis** (secondary data, interviews)
3) **Test the hypothesis** (qualitative focus groups, hh questionnaire)
4) **Data analysis and results**
List of hypothesis (Bangladesh)

- H1: Limited food availability at hh level
- H2: Poor access to food
- H3: Unequal intra-hh food distribution
- H4: Poor diet diversity of the child
- H6: Limited social services available
- H8: Complementary feeding practices
- H9: Exclusive breastfeeding practices
- H10: Low birth weight
- H11: High prevalence of diarrhoea due to poor hygiene
- H12: Immunization coverage
- H13: High prevalence of pneumonia
- H14: Micronutrient deficiencies
- H15: Poor health seeking behaviour
### Winter

<table>
<thead>
<tr>
<th>Priority Causes</th>
<th>H-8: Complementary feeding practices</th>
<th>H-11: High prevalence of diarrhoea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H-9: Breastfeeding practices</td>
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<td></td>
<td>H-10: Low birth Weight (LBW)</td>
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<td>H-11: High prevalence of diarrhoea</td>
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<td></td>
<td>H-13: Pneumonia</td>
<td>H-2: « poor access to food »</td>
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<tr>
<td></td>
<td>H-15: Poor health seeking behaviours</td>
<td>H-4: « poor diet diversity »</td>
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</tbody>
</table>

### Flooding

<table>
<thead>
<tr>
<th>Important Causes</th>
<th>H-6: « limited social services available »</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Priority causes</td>
<td>H-2: « poor access to food »</td>
</tr>
<tr>
<td></td>
<td>H-13: Pneumonia</td>
</tr>
</tbody>
</table>
1. The structure of pathway done in the first phase of the methodology through qualitative work.
How to build Pathways (2)

2. The thickness of the line done after qualitative work on what we believe is the relative importance of each factor.
How to build Pathways (3)

- Poor Child diet diversity
- IntraHoh Food distribution
- Age of Child
- Poor Diet Diversity hoh
- Limited livestock diversity
- Food habits and taboos
- Nutritious food is particularly expensive
- Limited food Purchasing power
- Limited crop diversity

- Stars shows a significant association between indicators in the quantitative analysis
- White stripes = tested but no significant direct association
- Poor financial access to nutritious food

- level of education of men
- level of education of women

- level of education of women
- level of education of men

No star = link not possible to test

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PATH ANALYSIS gives relative importance of each factor.

- Poor financial access to nutritious food
- Nutritious food is particularly expensive
- Limited food
- Purchasing power
- Limited food diversity
- Limited crop diversity
- Limited livestock diversity
- Food habits and taboos
- Level of education of men
- Level of education of women
- Poor Child diet diversity
- IntraHoh Food distribution
- Age of Child

How to build Pathways (4)

PATH ANALYSIS gives relative importance of each factor.
Reduced Model only with significant associations based on quantitative data.

How to build Pathways (5)

Child diet diversity

IntraHoh Food distribution

Age of Child

Diet Diversity hoh

-0.31**

financial access to nutritious food

0.21**

livestock diversity

0.14**

Food habits and taboos

Food level of education of women

0.17**

0.76**

0.64**

0.10**
Challenges...

- Undernutrition remains complex and dynamic (e.g. temporal dimension only qualitative)
- Quality of analysis only as good as your hypothesis and the model you build → first step is crucial
- Multi-disciplinary
- Marriage of quantitative and qualitative methods - Will they live happily ever after?
- Work in progress

... and future plans

- Draft guidelines to be tested in Chad and Bangladesh
- Guidelines version 1 in October
- Scientific article