

Cost of Nutritious Diet

Experiences from Gaibandha District of Bangladesh

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“Which foods to get all the nutrients for my family? And how much would it cost for one week?”



Agenda

What is the Minimum Cost of a Nutritious Diet?

Access to Food and Nutrition

Can Social Safety nets increase the accessibility to nutritious diet?

Can supplementary feeding & food fortification reduce the cost of nutritious diet?

Discussion

How does the CoD Calculation work?

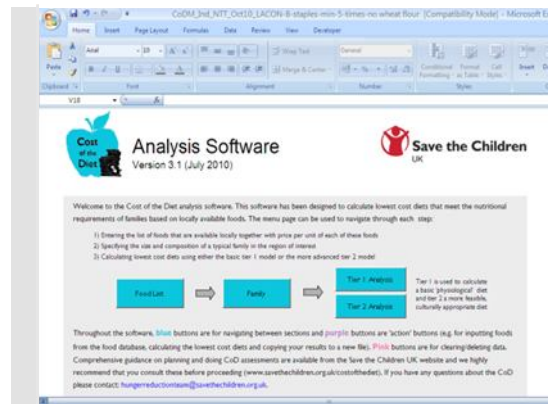
The tool calculates minimum cost of a nutritionally adequate diet for an **individual child** as well as a whole **household** based on region specific data on food availability and cost.

Inputs



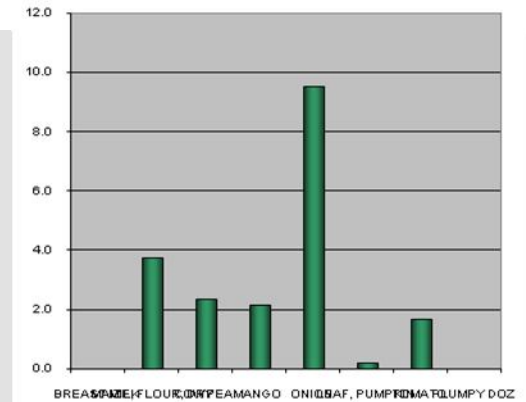
- List of available foods on markets and prices by 100 grams
- Model household composition
- Food consumption constraints

Excel Tool



- Excel solver
- Food Composition Database
- Nutritional requirements

Outputs



- Minimum Cost Nutritious Diet of a Family
- Minimum Cost Nutritious Diet of a Child 12-23 m
- Basis for modelling

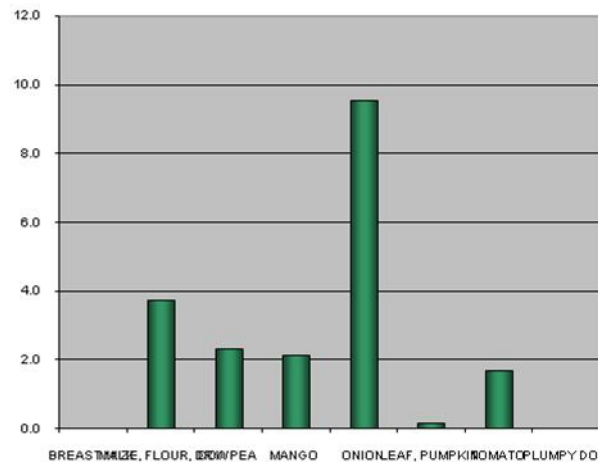
Potential Use of CoD Tool

“Complementary tool for food security analysis”

“Food and nutrition as part of Social Safety Nets?”

“Programming information for voucher interventions”

Cost of the Diet Analysis



“Cost-Effectiveness of locally produced specialized foods”

“Fortification Advocacy”

“Importance of supplementary feeding for infants and the 1000 days”

One possible tool to engage with the nutrition stakeholders and build a space for food based nutrition interventions

Analysis on Gaibandha district of Bangladesh: Prevalence of poverty and undernutrition are high in Gaibandha

High prevalence of poverty ¹	53%
High prevalence of extreme poverty ¹	36%
Households with poor or borderline food consumption scores higher than national score ²	31%
Stunting rate higher than WHO threshold ³	47%
Wasting rate higher than WHO threshold ³	19%
Anaemia in U 5 children ³	73%
Anaemia in Women ³	74%
Low birth weight very high ⁴	54%

Source: 1) Poverty map 2005, WB,WFP, BBS; 2) HFSNA 2008, WFP, UNICEF, IPHN; 3) WFP CP impact evaluation, control group results in Gaibandha , 2011; 4)JiVita, JHU Study

Methods of Data collection: Market survey and Focus Group Discussion



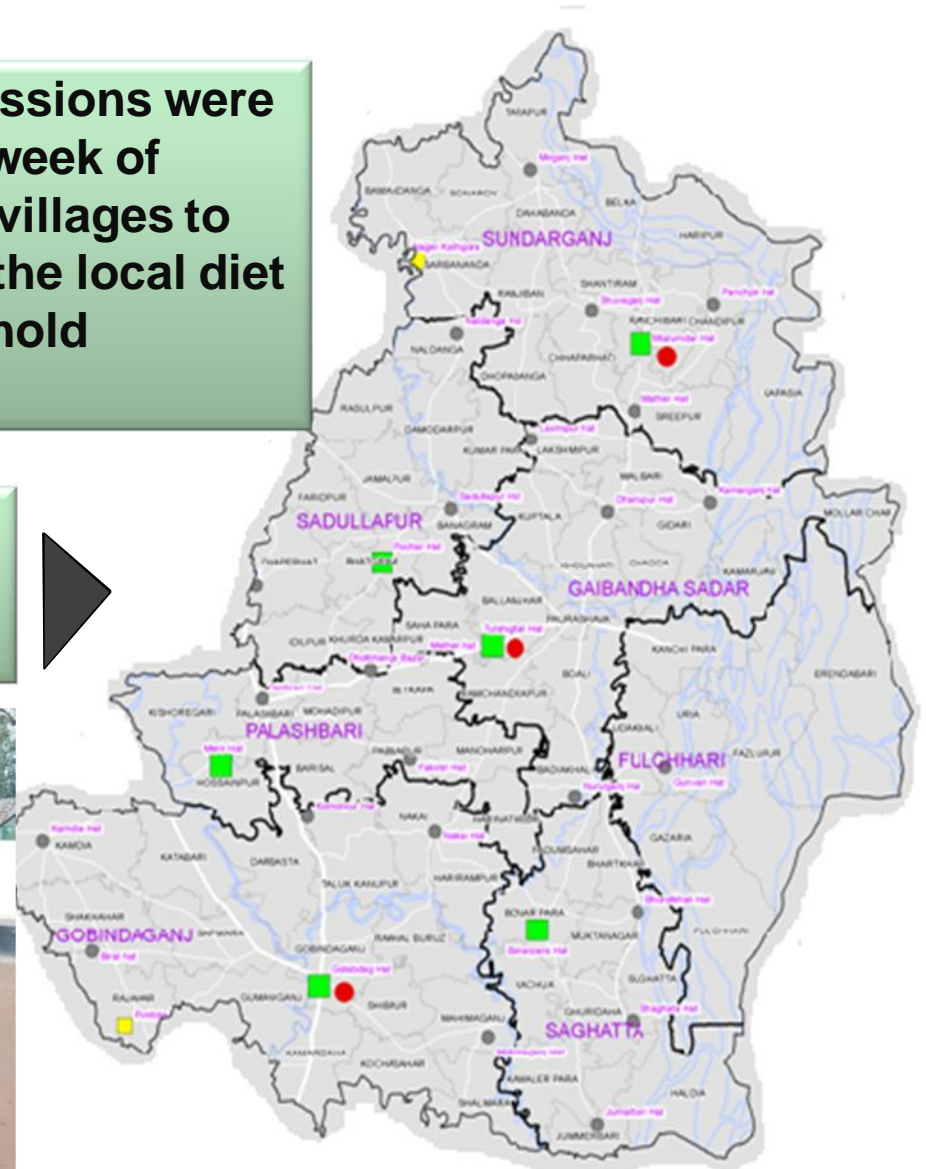
Focus group discussions were conducted in first week of January 2012 in 3 villages to better understand the local diet pattern and household composition .



Six market surveys were carried out to collect food price data.



The CoD Team



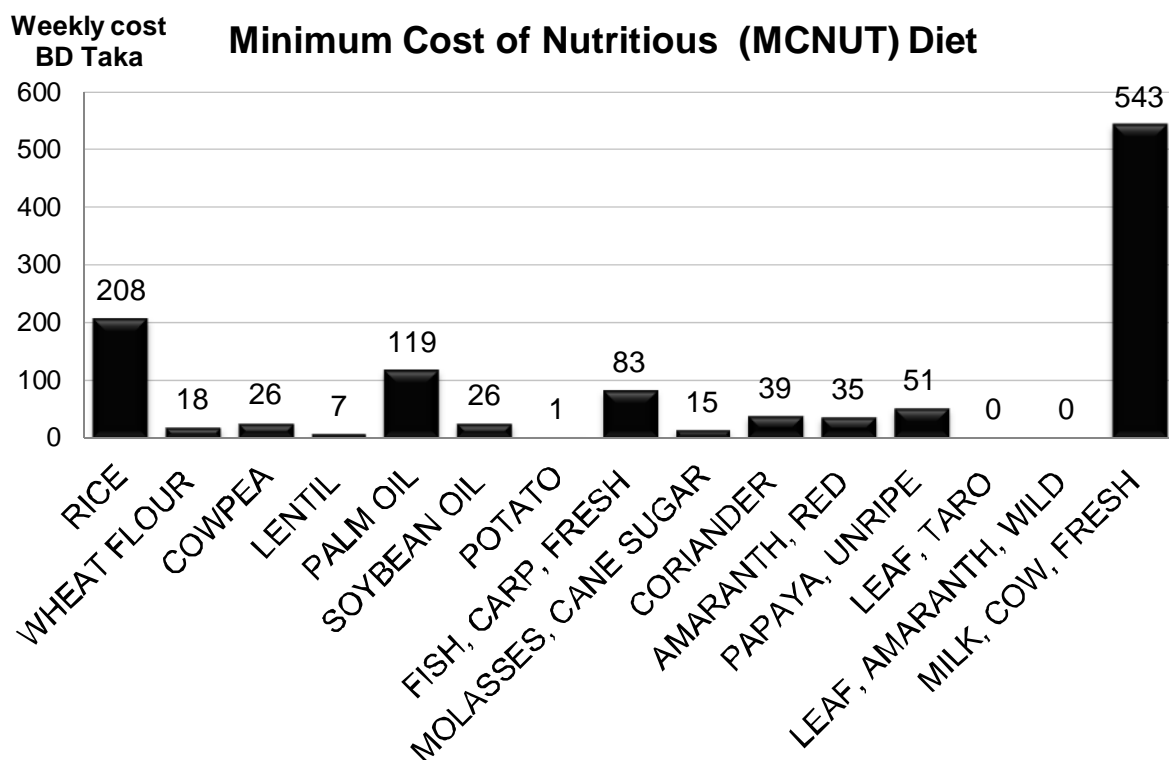
For Gaibandha, we assumed the following HH composition based on HFSNA 2009 and FGD

Children under 2 years	Number
Baby (either sex) 12-23 months	1
All other Members	
Child (either sex) 5-6 years	1
Woman, >60y, 45 kg, light activity	1
Woman, 18-29y, 55 kg, moderately active	1
Man, 30-59y, 60 kg, moderately active	1
Pregnant or Lactating Women	Number
Pregnant Woman (2-3 trimester)	0
Lactating Woman	1

“Min. Cost Diet” is the cheapest nutritionally adequate diet – any other adequately nutritious diet is more expensive

Example of minimum cost diet for a family of 5 in Gaibandha

What is the “Minimum Cost Nutritious (MCNUT) Diet”?



A *theoretical* diet, fulfilling all nutritional needs of a specific age group at the lowest possible cost, based on local foods. This diet is theoretically possible to eat.

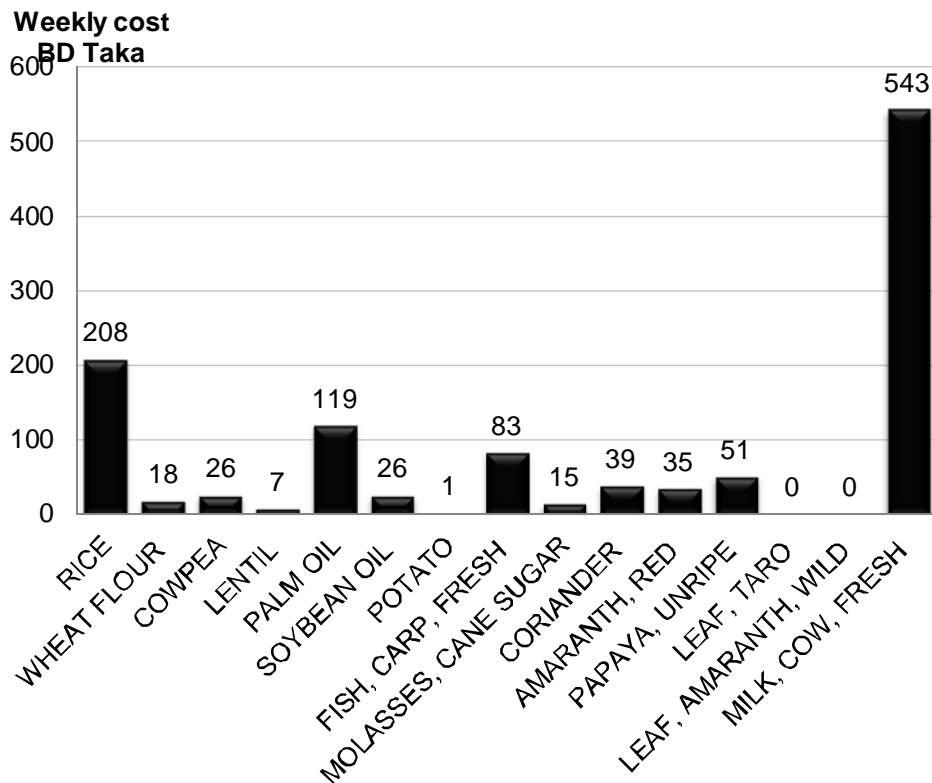
NOT what people are actually eating, NOR what they are supposed to eat

Calculations are based on *linear optimization* done by the Excel solver function

Monthly cost BDTaka 5088 (USD 62.5) for a family of 5 (including child 12-23 m) without preferences...

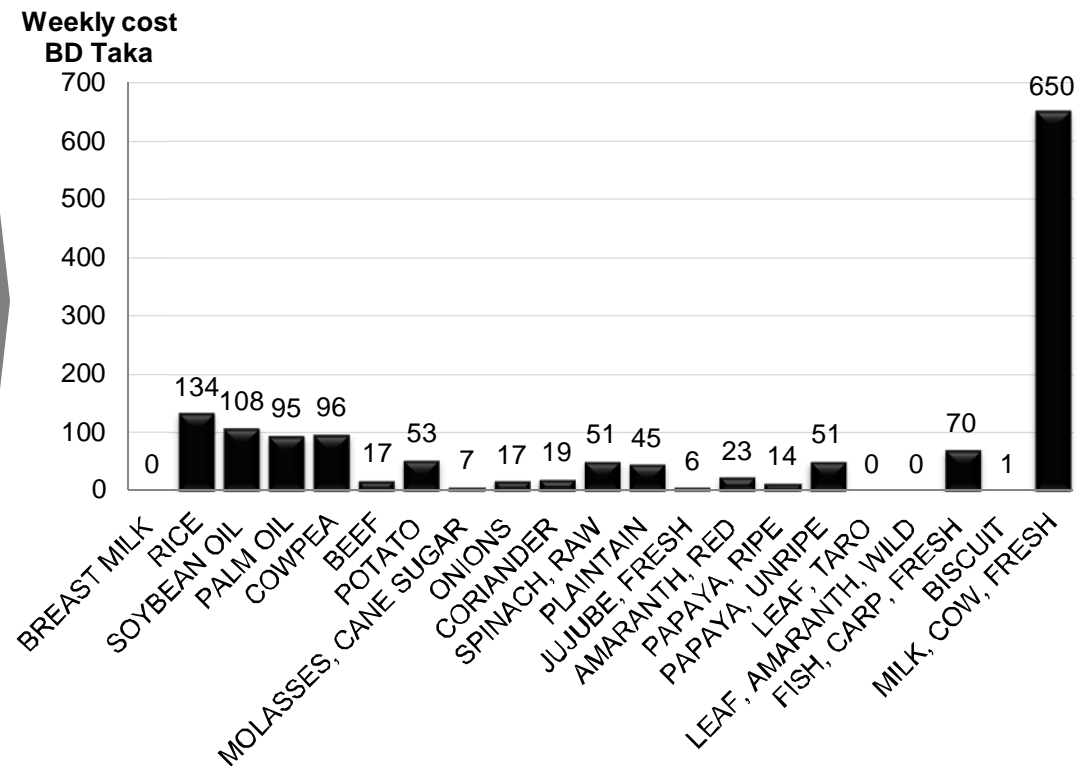
Based on Focus Group Discussions, we added certain food consumption preferences to the diet – 24.6% price increase

Minimum Cost Diet: Cheapest possible combination of foods



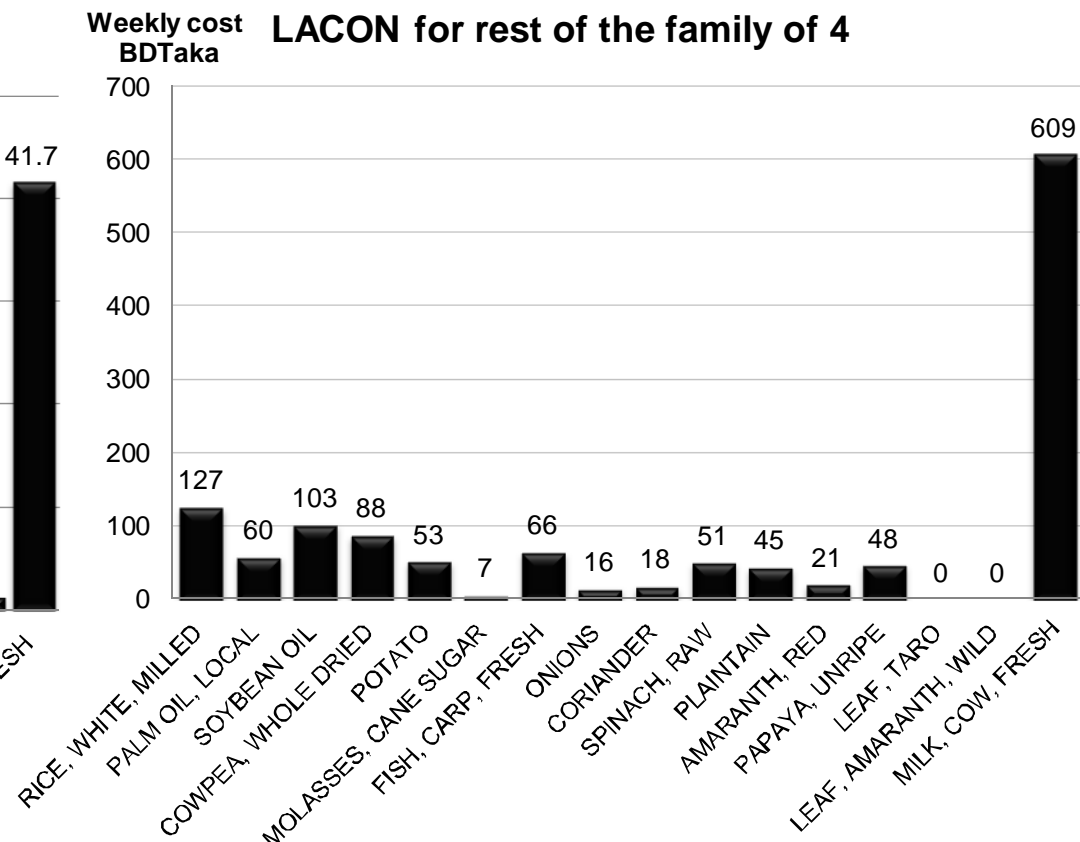
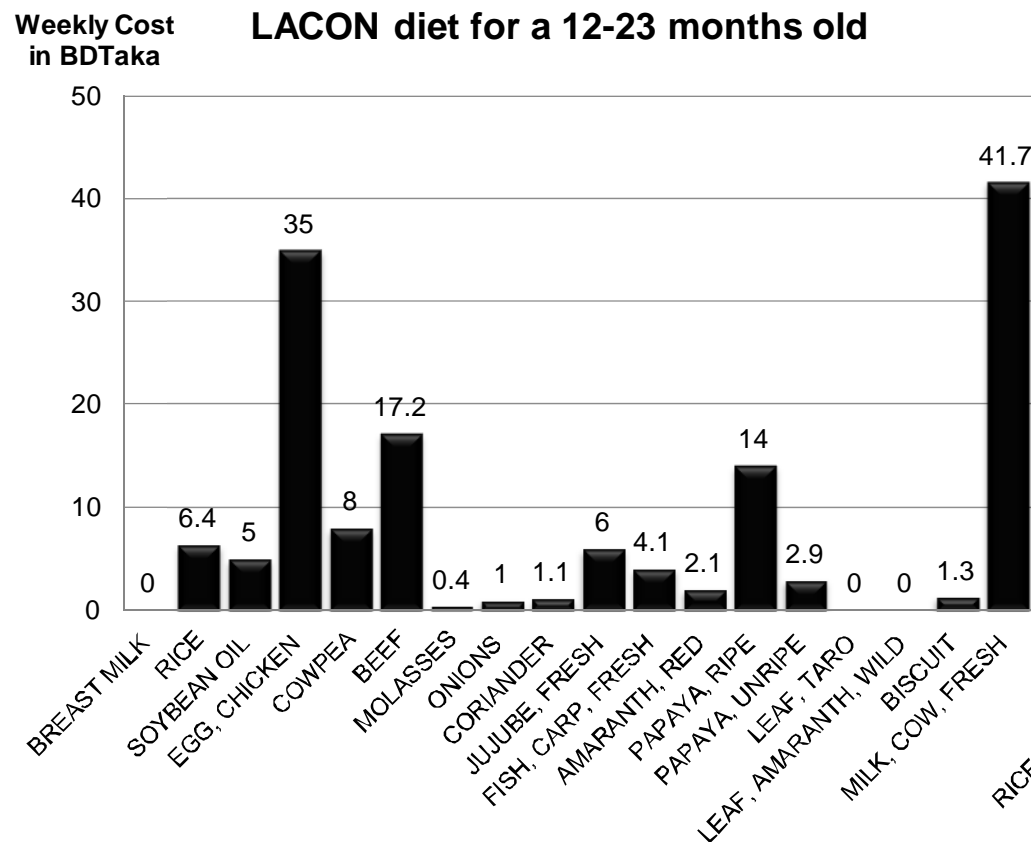
Monthly cost BDTaka 5088 (USD 62.5) for a family of 5 (including child 12-23 m) without preferences.

Locally Adapted Cost Optimized Nutritious (LACON) Diets – including habits



Monthly cost BDTaka 6342 (USD 77.8) for a family of 5 (including child 12-23 m) with preferences.

With local preferences added LACON diet increased for 12-23 month old child by 30%; for rest of the family by 17%



Monthly cost BDTaka 636/month (USD 7.8) for child 12-23 m with preferences.

Monthly cost BDTaka 5705/month (USD 70) for a family of 4 (excluding child 12-23 m) with preferences.

Agenda

What is the Minimum Cost of a Nutritious Diet?

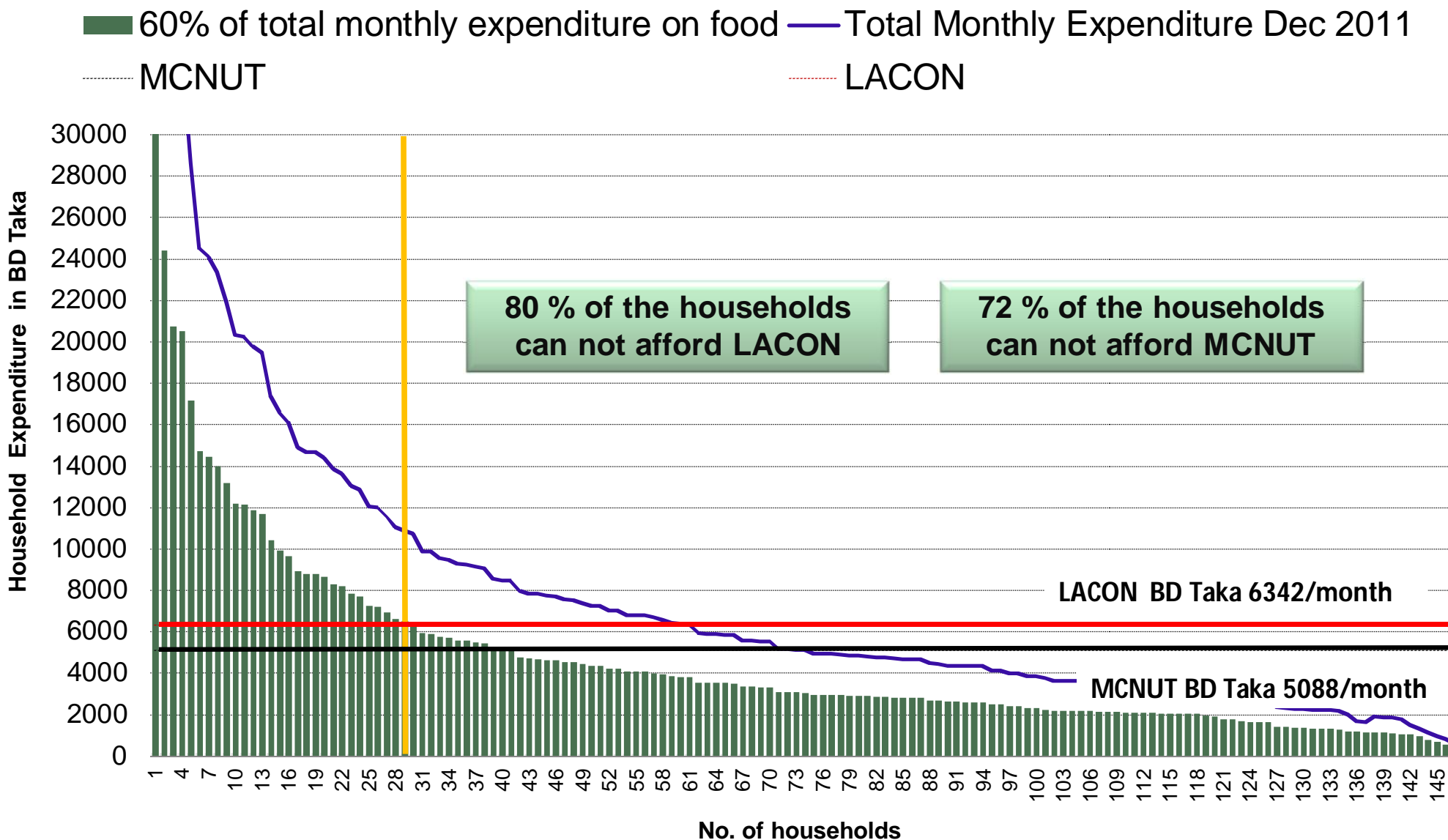
Access to Food and Nutrition

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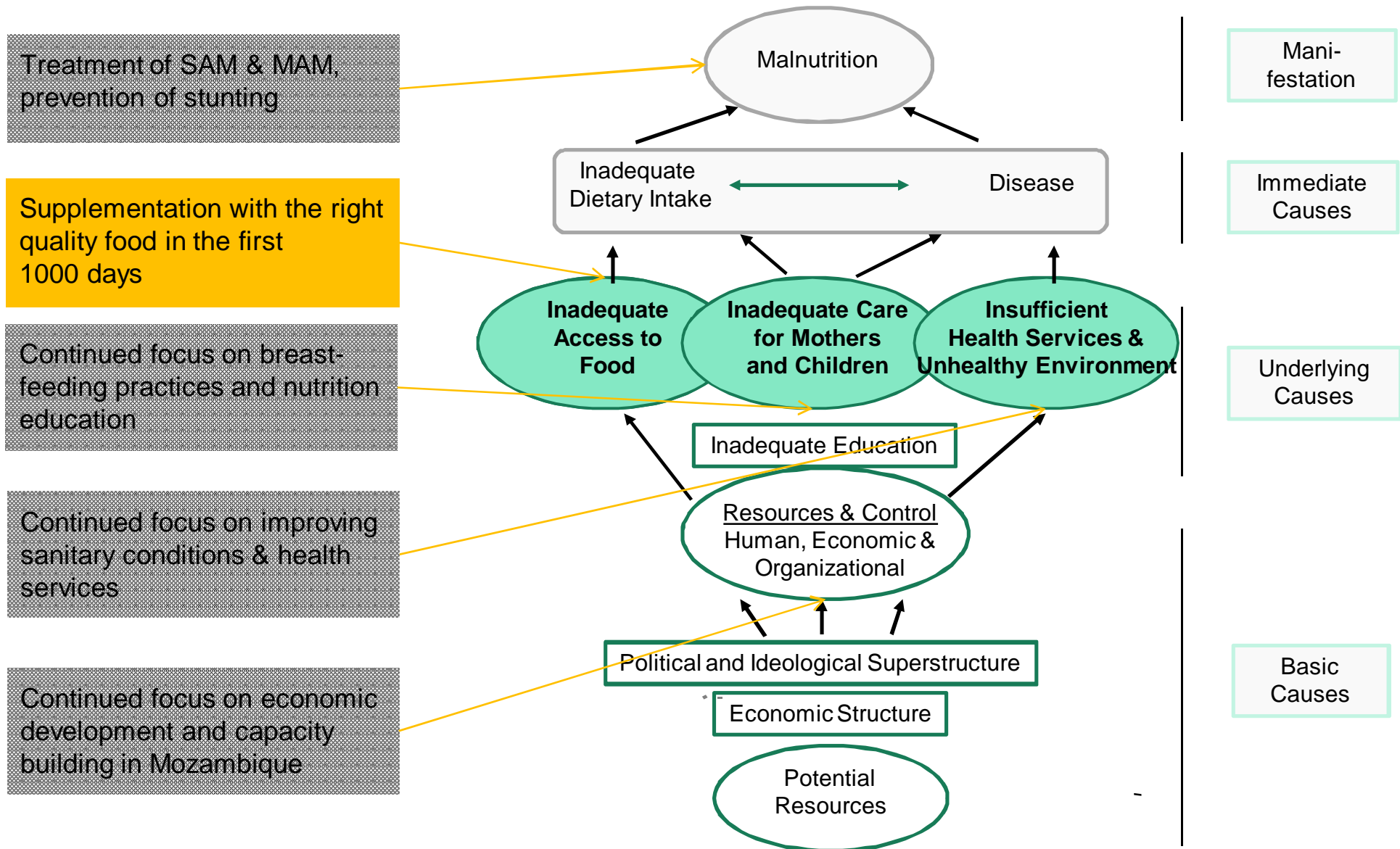
Can food supplementation & fortification reduce the cost of nutritious diet?

Discussion

CoD results indicate that in Gaibandha 80% of all HHs are not able to afford a Minimum Cost of Nutritious Diet



Given the economic access problem in Bangladesh, there is a need for increased income, food supplementation, food fortification in addition to education



Agenda

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Access to food and nutrition

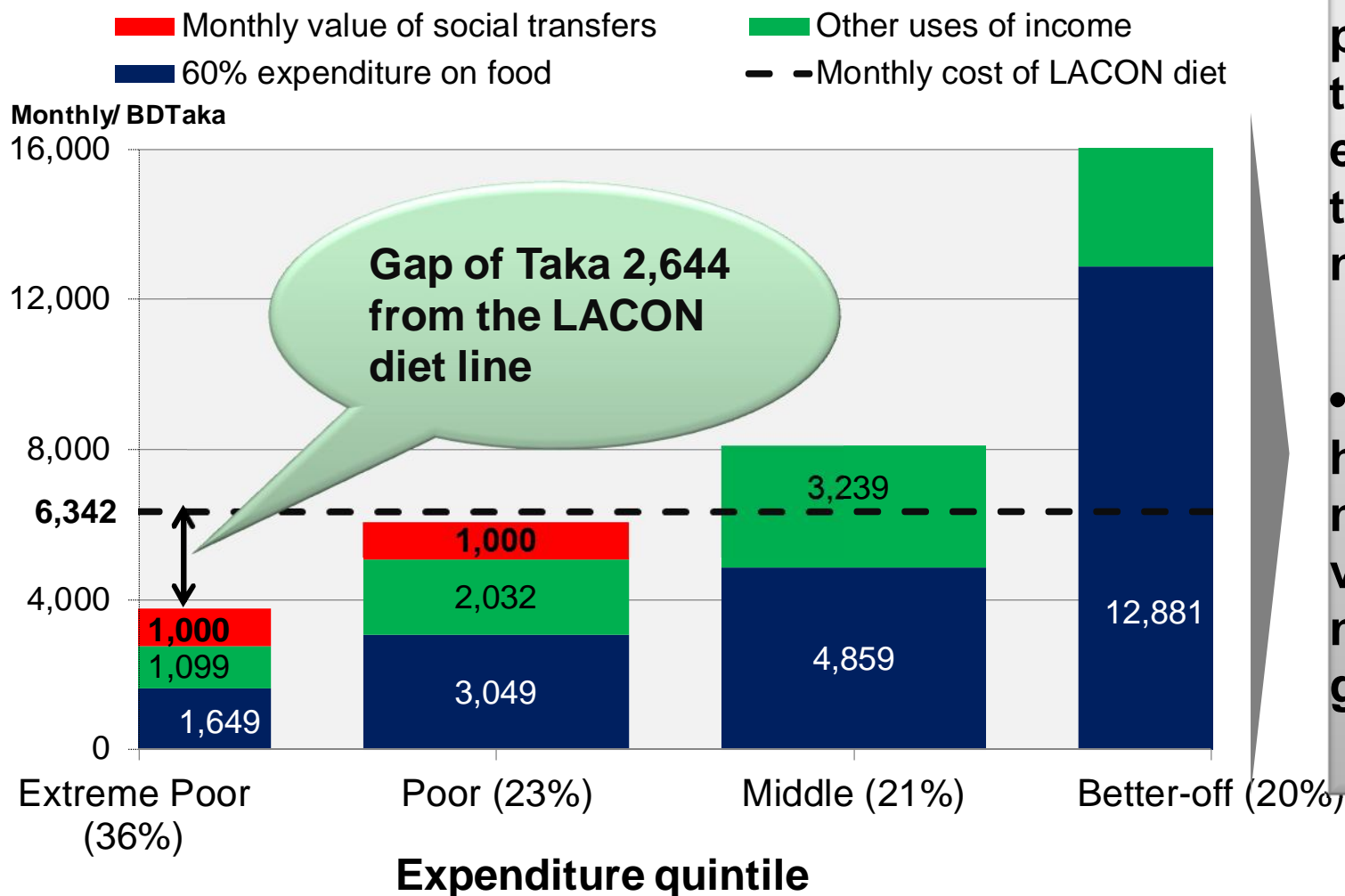
Can Social Safety nets increase the accessibility to nutritious diet?

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Cereal and cash transfers via major government social safety nets are not sufficient to meet the locally adjusted cost of nutritious diet

Average Transfer value from major SSNPs VGD, EGPP & TR is around Taka 1000/month/household



- Safety nets do not provide sufficient transfers to the extreme poor to afford the minimum cost of a nutritious diet.

- If transfers do not happen along with nutrition education or vice versa access to nutritious diet is not guaranteed.

Agenda

What is the Minimum Cost of a Nutritious Diet?

Food access and food based nutrition

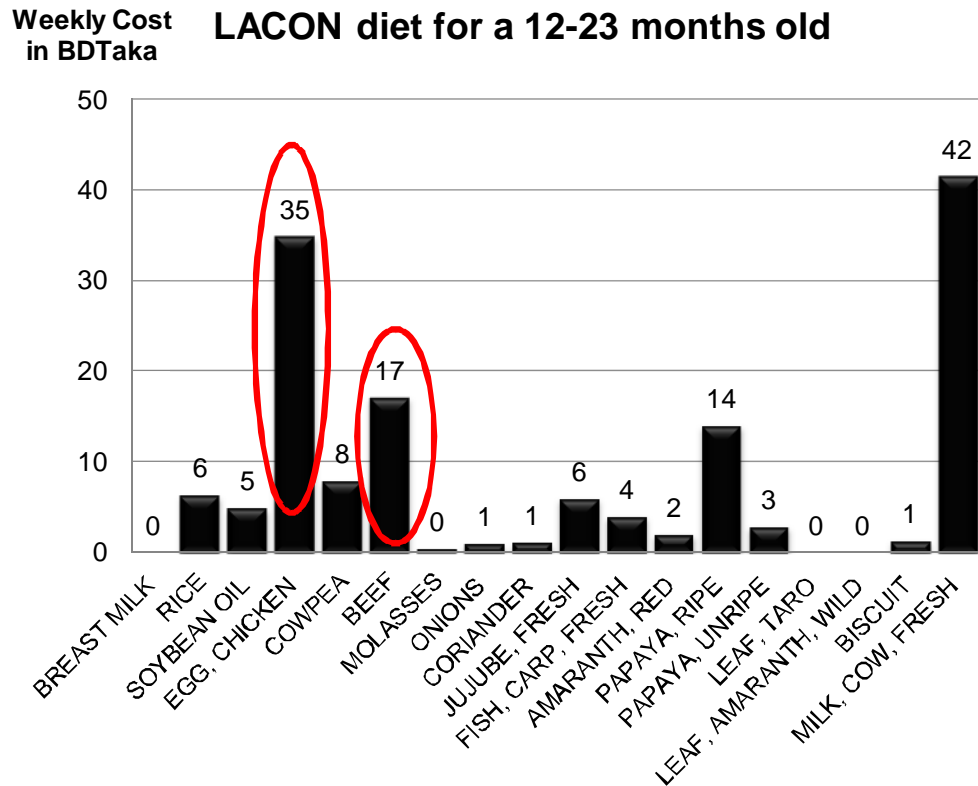
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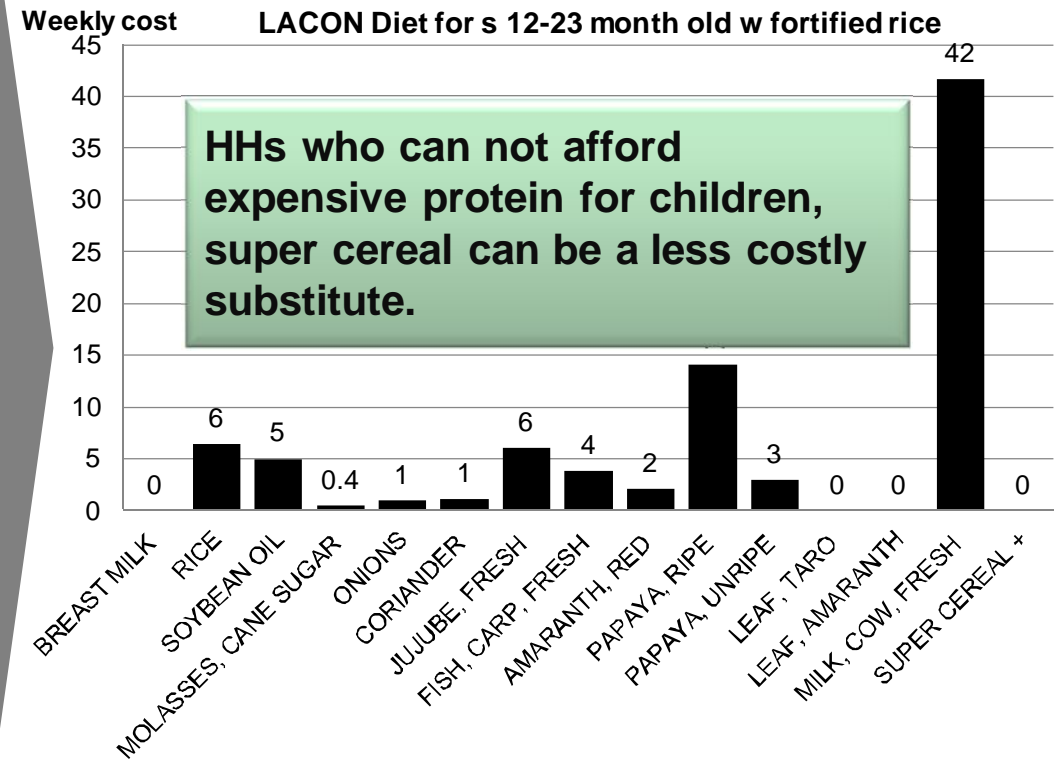
Distribution of 50 gram of Super cereal+ per day free of cost for a u 2 child can lower the LACON diet for the child by 42% and for the hh by 4%

Locally Adapted Minimum Cost of Diet for a 12-23 month old child...



From BDTaka 146/week for a child 12-23 months (1.8 USD)

...can be lowered by 42 % including 50 grams of super cereal in their diet every day



To BDTaka 85/week for a child 12-23 months (USD 1.0)

How cost-efficient is Super Cereal+ for household from programme perspective ?

Price in BDTaka (@ 50 gram Super Cereal+ per day)

Price in USD

Household “Savings” transferred via SSNP

269/child/month

3.30/child/month

Programming cost for 50 gram Super cereal :
Procurement
+ int & local transport costs

100/child/month

1.23 /child/month

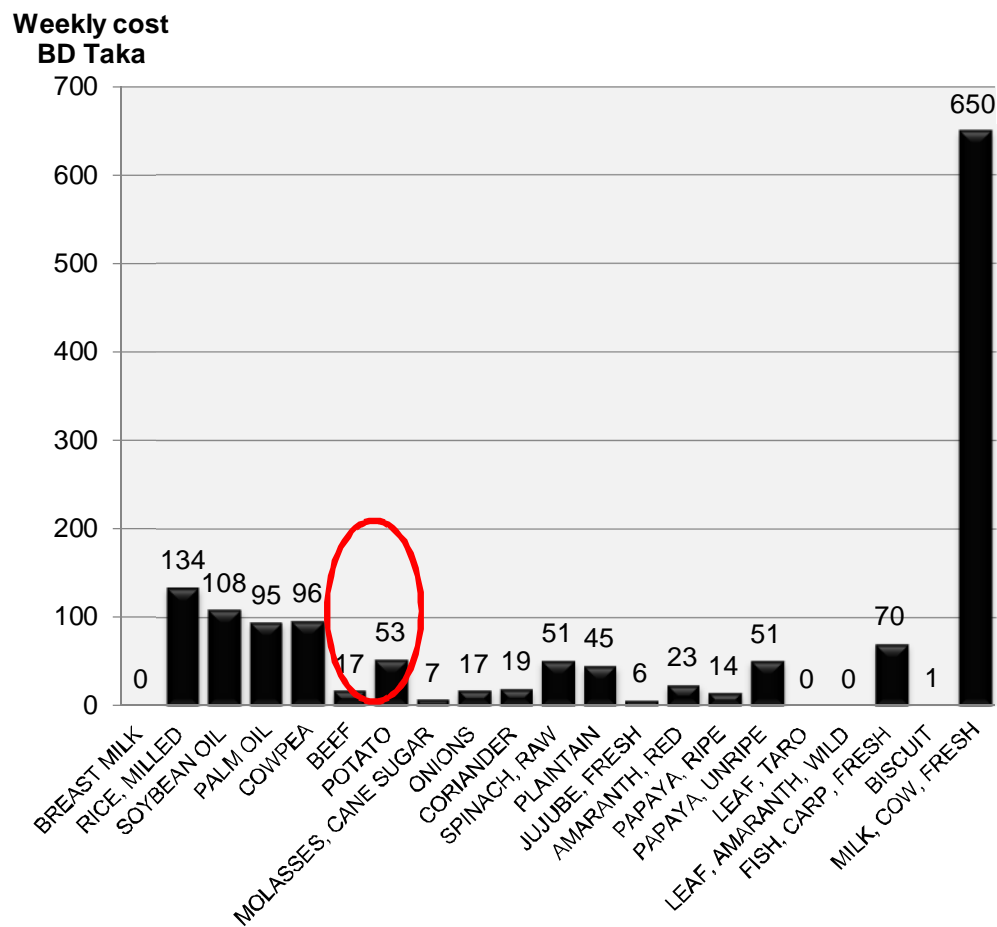
Savings is 63%

Higher than programming cost

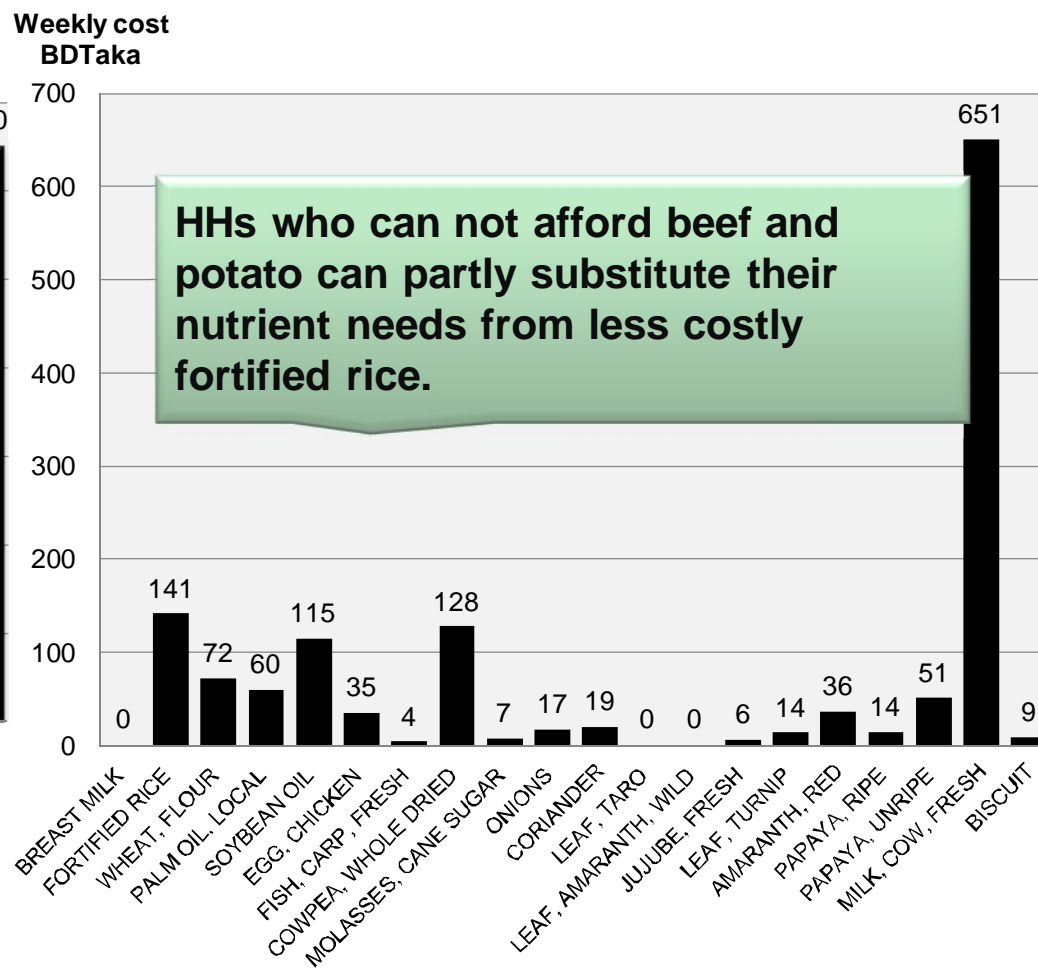
Savings accrued per month/household due to inclusion of Super Cereal for U-2 children in the LACON diet is 63% percent higher than the total programming cost of the Super Cereal . From programming perspective, giving super cereal is cost-effective.

Fortified rice if purchased locally reduces the LACON diet by 5.5 %; with free distribution of fortified rice the cost reduces by 22 %

LACON Diet w normal rice for a 5 member family



LACON Diet w fortified rice for a 5 member family (purchased)



From SSNP perspective fortified rice is more cost effective than normal rice

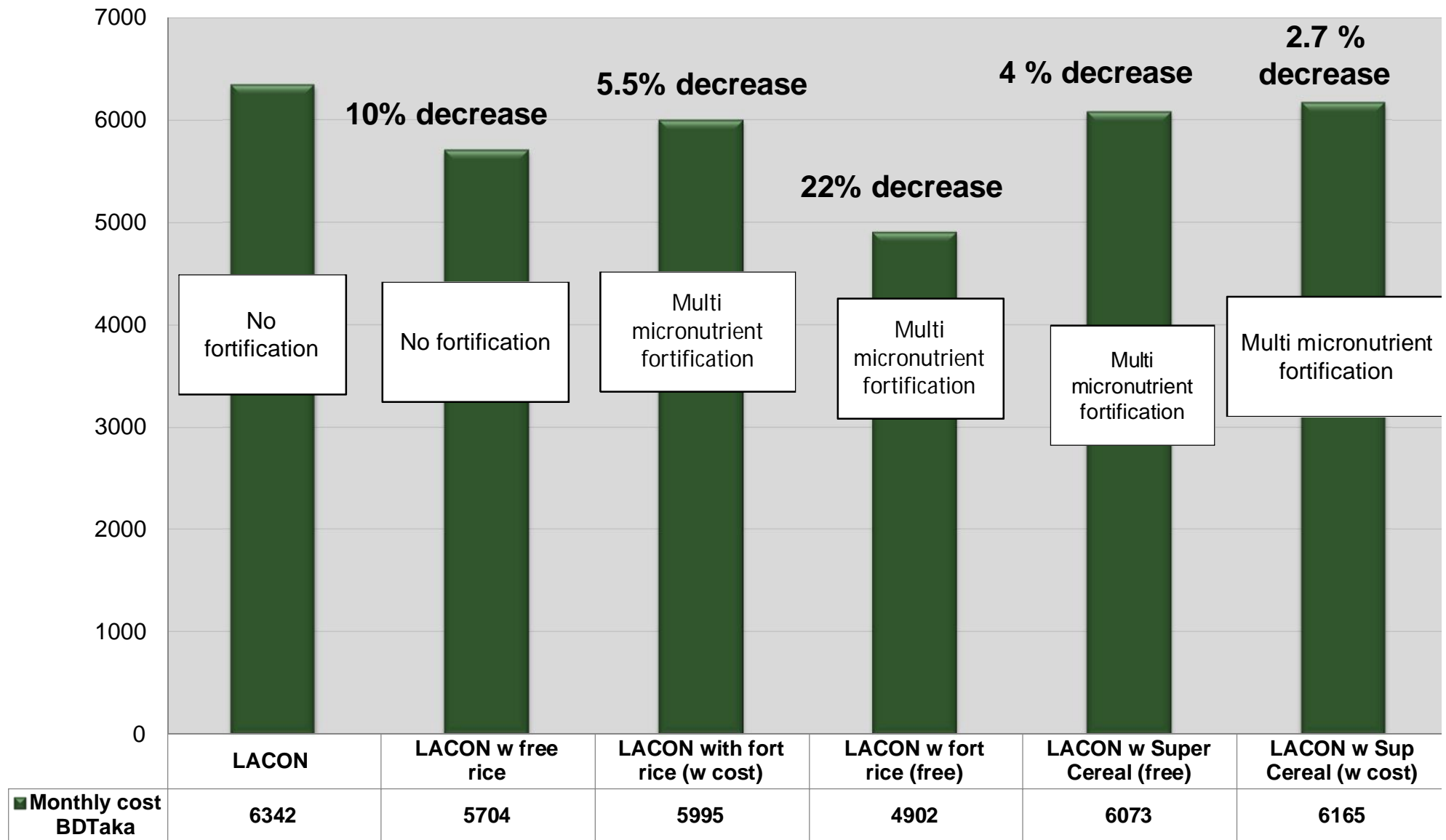
**With fortified rice
Price BDTaka (@ 20
kg/hh/month)**

**With normal rice
Price BDTaka @ 20 kg/hh**

Household “Savings” if transferred via SSNP	1439/month/hh	638 /month/hh
Household “Savings” if purchased	346/month/hh	No savings
Estimated purchasing cost (if locally produced)	650/month/hh	510/month/hh
Programming cost @ 20 kg/hh : Procurement + int transport & local transport cost	770/month/hh Savings is 46% higher than the programming cost	700/month/hh Savings 12% higher than the programming cost

Note; : 1 USD = BDTaka 81.45, UN rate March 2012

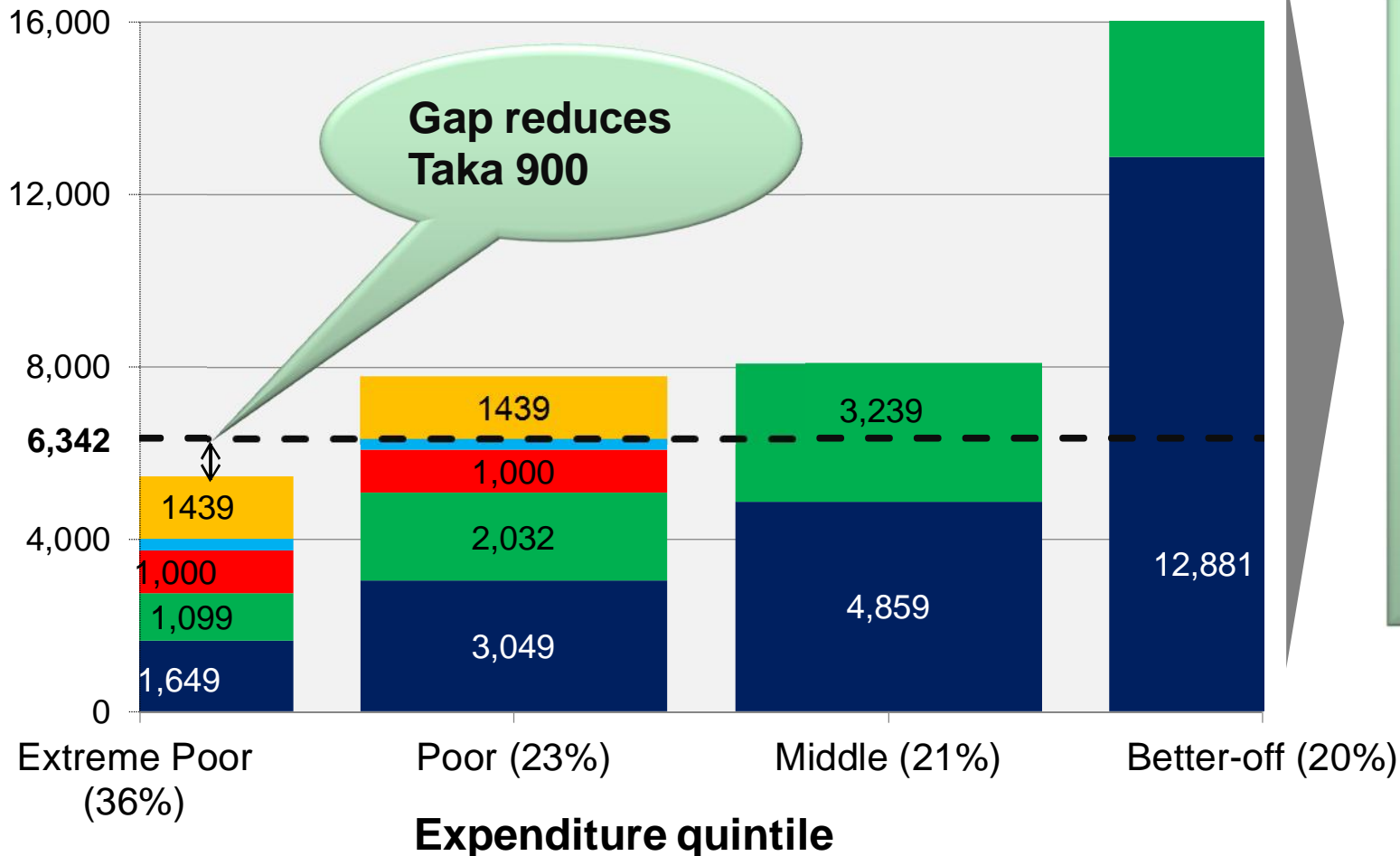
Fortification: Multi micro-nutrient fortification can lower the Minimum Cost of a Nutritious Diet for a household up to 20%...



Supplementary and fortified food along with cash transfers can increase the affordability of the poor to purchase a nutritious diet

- Savings from fortified rice
- Monthly value of social transfers
- 60% expenditure on food
- Savings from Super cereal
- Other uses of income
- Monthly cost of LACON diet

Monthly/ BDTaka



Despite supplementary feeding, fortified food and cash based transfers the gap remains for the extreme poor.

Key messages

- ❑ **Extreme poor households and poor households which are the majority in the community are unable to afford the minimum cost of a nutritious diet.**
- ❑ **Safety nets become more cost effective when micronutrient enriched food are provided instead of non fortified food or instead of only cash.**
- ❑ **Inclusion of fortified rice in social safety nets returns highest savings for the household compared to other micronutrient enriched food commodities so far available in the country.**
- ❑ **Cereal and cash transfers via major government social safety nets are not sufficient to meet the locally adjusted cost of nutritious diet. Despite the transfer a huge gap remains for the income group in the poorest expenditure quintile.**
- ❑ **Supplementary and fortified food along with cash transfers can increase the affordability of the extreme poor to purchase a nutritious diet.**
- ❑ **Given the problem of economic access to nutritious food in Bangladesh (lack of purchasing power of the extreme poor), there is a need to link food supplementation, food fortification and nutrition education with income generating or household/individual asset creation activities.**

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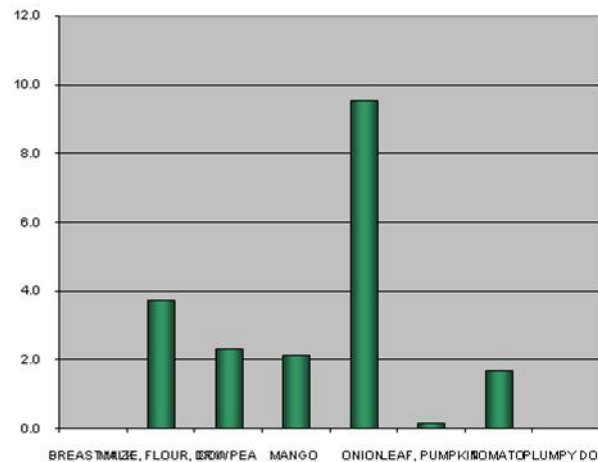
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One possible tool to engage with the nutrition stakeholders and build a space for food based nutrition interventions

Which countries are currently applying this tool?

Asia

Indonesia

- Small regional Workshop in Oct.
- Assessment under way

Philippines

- Assessment under way

Cambodia & Nepal

- First Discussions how to use the method in workshop

Africa

Zambia

- First Pilot
- Used for Advocacy

Mozambique

- Second pilot
- Used for fortification discussion

Djibouti

- Used within large vulnerability assessment
- Results used by MoH

Latin America

Colombia

- Small regional workshop in October 2011
- First Pilot November 2011

Domin. Republic

- First discussions

Ecuador

- First discussions

Thank you