INTRODUCTION

- In sub-Saharan Africa with Kenya inclusive, the number of people who do not have enough food to eat is said to be increasing, particularly, in Turkana where 62% of the population live in abject poverty.
- This results in insufficient access to a nutritious diet by infants and young children, as about only 10% of all children in Turkana get adequate micro-nutrients like zinc. Women also become malnourished with the likelihood of transit into pregnancy and lactation periods.
- This study therefore sought to determine the minimum cost of a nutritious diet for children 6-8 months, 9-11 months and 12-23 months and women (15-49years): non pregnant – regular eating, pregnant, and lactating by modelling locally available foods in different scenarios (with or without wild plant foods and with or without supplements).

METHODOLgy

- Six villages were randomly selected from a list of three pastoralists and three agro-pastoralists communities and market surveys were conducted for plenty and lean seasons in September/October, 2016.
- Focus Group Discussions (FGD) were held with ten women in each village to determine the culturally accepted dietary habits (minimum and maximum constraints of foods) and these constraints were verified against the 20th and 70th percentiles of actual dietary intake from a 24-h recall tool applied to 182 households.
- Results from an FGD on agrobiodiversity were used to select three wild vegetables and 3 wild fruits (Figure 3) for modelling. Micronutrient Powder (MNP) introduced by "Save the Children" as food supplements for children 6-23 months was considered in the modelling aim.
- All these data were entered in the Cost of Diet software developed by Save the Children-UK to model a locally Adapted Cost Optimised Nutritious (LACON) diet.
- A Household Economic Approach (HEA) conducted in 2012 by Save the Children and the Kenya Integrated Household Budget Survey 2012/13 from the Kenya National Bureau of Statistics were used to determine the affordability level of households for LACON.

RESULTS 1: EFFECTS OF WILD PLANTS FOODS AND OUR MICRONUTRITION POWDER

- The daily cost of a LACON diet in the plenty season is at a lower level compared with the lean season as shown in table 1, which maybe due to abundance of food on the market or the local agro-food system during the plenty season.
- Diet modelled with all wild vegetables to a large extent significantly reduce the daily diet cost of all groups in both seasons. All modelled interventions, except MNP, reduce significantly the cost for children 12-23 months throughout the year. Gender analysis also, show more positive reduction effect in women’s diet cost, notably, pregnant women in both seasons by 67%.
- The impact of MNP on the cost of diet for children 6-11months is zero, and as soon below, very minimal for 12-23 months. MNP modelled together with wild foods, therefore, is insignificant from diet modelled with all wild foods only.

<table>
<thead>
<tr>
<th>Table 1: Daily diet cost and percentage reduction based on wild plant foods and MNP in plenty and lean season</th>
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<tbody>
<tr>
<td>Group</td>
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<tr>
<td>6-8 mo</td>
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<td>6-8 mo</td>
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<td>12-23 mo</td>
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<td>Woman</td>
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<td>Boy</td>
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<td>Learning</td>
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RESULTS 2: NUTRITION PROFILE

- In both seasons, iron deficiency was found in the LACON diet without wild food and/or MNP for 6-23 months, women and pregnant women. Zinc was also found to be deficient in the diet of 6-11 months (Figure 2).
- Modelled diets with all wild vegetables or all wild foods were able to make up fully for these nutrient deficiencies for the said groups.
- The contribution of MNP alone in modelled diet was very little or insignificant relative to the wild foods. When combined with wild foods in modelling, the result is no different compared with all wild foods alone.

RESULTS 3: AFFORDABILITY

- The cheapest LACON diet potentially costs about 187,000 - 332,000 KES ($USD 1,000 - 1,548) annually for households depending on the wealth group. Households here, are assumed to be headed by women. Meanwhile, the average annual income depending on the wealth group is 42,000 - 160,000 KES ($USD 410 - 1,548) of which an average of 55% is estimated to be used for food expenditure.
- All wealth groups are unable to afford the cheapest LACON diet even if they commit all their income to food expenditure (Figure 3), hence, it is difficult for households to access a nutritious diet in Turkana.

CONCLUSIONS

- The effect of wild plant foods on the reduction of cost diet as well as making up for nutrient shortfall is positive, although, the extent of effect is traced to a specific wild food(s) plus the group of people under study.
- Micronutrient Powder has potentially a little impact on reduction of cost diet and nutrient addition for children 6-23 months relative to wild plant foods.
- Diet modelled with all wild vegetables provides the least average cost of LACON diet per person annually, but households are unable to afford consumption of three times a week.

REFERENCES


