

Milk Matters: An Effective Approach for Integrating Food Security, Nutrition and Resilience among Pastoralist Communities in Somalia

Policy Brief

This policy brief presents key findings on the Milk Matters approach, which aims to boost nutrition among children through improved milk availability and consumption during dry seasons. It collates and analyses evidence from an impact evaluation conducted in Ethiopia, and a feasibility study conducted jointly by Save the Children and UNICEF in Somalia.

Highlights

- The Milk Matters approach has demonstrated a stabilising impact on malnutrition rates in intervention communities in Ethiopia. This is highly significant given that the project period coincided with the East African famine of 2010/11.
- Importantly, the cost of the intervention was recorded to be 45 to 75 per cent lower than standard CMAM therapeutic programmes.
- The approach also provides potentially strong indirect benefits, e.g. decreased likelihood of morbidity among children, and improvement in care practices (through reducing the time women spend in search of pasture for animals).
- In Somalia, the Milk Matters Feasibility Study noted that milk production and consumption declines sharply during dry seasons (as much as 50% among households with livestock). In addition to low availability of milk at the household level, seasonal scarcity increases the price of milk, which leads to a greater incentive to sell milk among poor households.
- There is high feasibility of replicating and expanding the Milk Matters approach in Somalia.
- In addition to the support for fodder and veterinary services for animals that stay close to women and children, it is recommended that the project in Somalia should undertake low-cost but strategic investments in water. Further, it should focus on mobilisation of women and community members to maximise impact and sustainability of the intervention.
- Milk Matters provides an efficient and effective solution to address nutrition needs in both humanitarian and development contexts, as demonstrated by the strong results from Ethiopia. By preventing asset stripping during times of shock, it can also help to enhance resilience among vulnerable households.
- Milk Matters can potentially foster a concrete link between food security and nutrition interventions, thereby enhancing the possibility of developing integrated solutions. In addition to project-level implementation, it is recommended that the approach should be integrated into existing programmes. This implies that existing food security interventions should focus on year-round availability of fodder and monitoring nutrition outcomes; at the same time, nutrition interventions should adopt recommended activities to strengthen efforts aimed at prevention of malnutrition.

Background

The Milk Matters approach was developed by the Feinstein International Centre at Tufts University and Save the Children. The approach aims to boost milk production in animals that stay close to women and children during dry seasons – when males migrate in search of pasture with larger herds. The approach has been implemented in Ogaden region of Ethiopia and Karamoja region of Uganda. In Somalia, Save the Children and UNICEF have entered into a partnership to conduct a feasibility study and, subsequently, a pilot project in the Hiran region. Based on initial results from Somalia and the Horn of Africa, it is anticipated that the Milk Matters approach can address long standing issues of deterioration of food security and nutrition among pastoralist and agro-pastoralist communities during dry seasons, and at times of environmental stress and shock.

I. Methodology

This policy brief reviews evidence from an impact evaluation on Milk Matters conducted in Ethiopia in 2012 by Feinstein International Centre and Save the Children. It also reviews evidence from a Feasibility Study conducted in Hiran region of Somalia in 2016 by Save the Children with support from UNICEF.

The Impact Evaluation in Ethiopia utilised a multi-stage, mixed-methods design. It relied on cohort studies during implementation to collect data on anthropometry, milk consumption, infection status, and delivery of services. During the impact evaluation, a participatory impact assessment and focus group discussions were held. The sample size for the baseline was 987 children aged six months to five years across the study communities, which minimal variation (from 852 children to 1001) over each month during the 11-month study (from August 2010 to June 2011). The study covered six communities (four belonging to the intervention group, and two to the control).

The Feasibility Study in Somalia similarly relied on a mixed-methods design, which included a household survey (with questions for the senior-most males and females in the

household), focus group discussions, and in-depth interviews. Accordingly, quantitative data was collected from 1534 randomly selected individuals belonging to 767 households, as well as 41 milk traders. In addition, qualitative data was collected from 28 key informant interviews and 16 focus group discussions at the community level.

This policy brief combines findings from both studies in order to establish the efficiency and effectiveness of the Milk Matters approach in preventing malnutrition and enhancing resilience, as well as the feasibility of its replication among pastoralist and other communities across Somalia.

2. Key Findings

A review of different documents developed under Milk Matters, as well as the wider literature, confirms that pastoralist communities in East Africa face significant decline in milk production during dry seasons. This leads to multiple effects related to low milk production. Most significantly, low milk production leads to a decline in household income, as well as the milk available for consumption among children.

The impact on child nutrition under Milk Matters can be attributed to the following causal chain: support for fodder and veterinary services during the dry seasons leads to significantly improved milk production among animals that stay close to women and children. Given the traditional awareness among pastoralist families of the benefits of milk for children, this translates to increased milk consumption by children and, consequently, to improved nutrition outcomes.

The sections below review changes in each element of the causal chain in further detail. Moreover, they review the feasibility of implementing the approach in Somalia based on seasonal variations in milk production, price and consumption.

2.1 Effect on Milk Production

Support to intervention communities in terms of fodder and veterinary services significantly improved milk production. Among the four intervention communities, in Washaqabar, there was an increase of 280 per cent in milk production in early lactation, which increased to 1050 per cent in middle lactation, and 4775 per cent in late lactation. While a significant increase in milk production was noted in other communities as well, the lowest increase was observed in Ayiliso, where milk production increased by 163 per cent, 196 per cent and 215 per cent in early, middle and late lactation, respectively.

Importantly, during detailed qualitative discussions, the participants in the project attributed this change to the Milk Matters intervention.

2.2 Milk Consumption

Given traditional awareness of the value of milk for child nutrition among pastoralist communities, the significant and sustained increase in milk production noted above led

to increased milk consumption among children.

Overall, the project led to increased milk consumption among young children in intervention communities. Those children who received any milk in the intervention communities consumed, on average, more milk than the control group. The highest change was noted in Washaqabar community, where total average milk production was 1566 mL per household per day, of which 1043 mL was consumed by children per day. Overall, a total of 89 per cent of children received milk in the community. The milk consumption noted in Washaqabar contrasted sharply with the comparable control group of Makinajab:

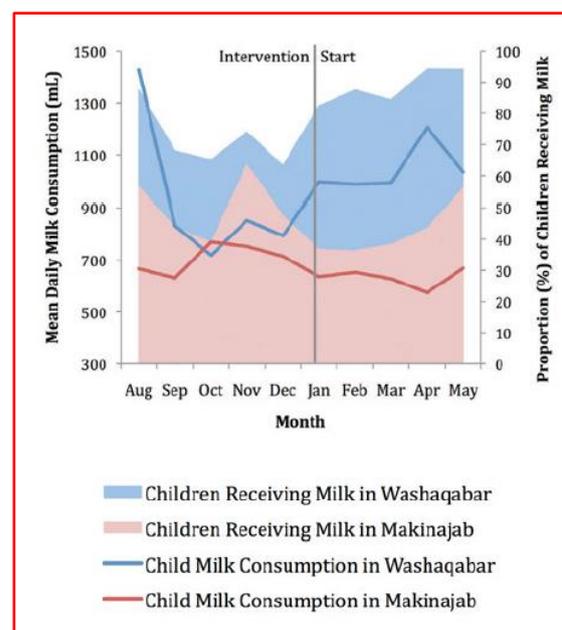


Figure 1: Milk Availability in Washaqabar (intervention) versus Makinajab (control)

2.3 Effect on Nutrition

The intervention led to stabilisation in malnutrition rates among children in intervention communities, compared to a steep decline in nutrition status in the control group. This trend is especially remarkable given that the project period coincided with the East African famine of 2010/11. Moreover, within intervention sites, children who received some milk continued to demonstrate

better nutritional status throughout the study period.

The strongest effect on nutrition was seen in Washaqabar community, which recorded the highest increase in milk production and consumption. This is contrasted with the mean weight-for-age (WAZ) score for the control community of Makinajab below:

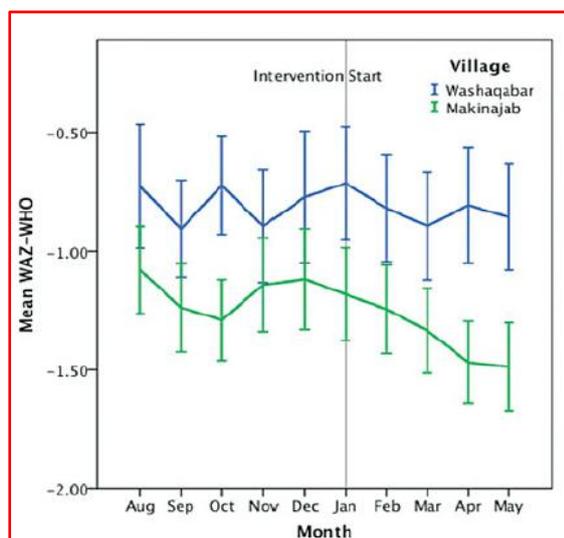


Figure 2: Nutritional status of children in Washaqabar vs Makinajab (error bars at 95% confidence interval)

It is, however, important to note that the overall effect on child nutrition varied across the different intervention communities. Further investigation revealed that this was

2.4 Cost of Intervention

As can be expected, the cost of adopting a preventive approach under Milk Matters proved to be sufficiently lower than the cost of a treatment approach under a conventional CMAM programme. In specific, the cost per child under Milk Matters was approximately 45 to 75 per cent lower than a therapeutic feeding programme (depending on a range of factors such mechanism for distribution of fodder, prevailing market prices, and cost variation in CMAM programmes). It can be reasonably argued that costs of the Milk Matters approach would be further reduced through reliance on voucher scheme where recipients are responsible for procuring fodder from existing local markets.

Importantly, the programme also provided significant indirect benefits. These include the benefits on livestock in terms of greater survival and lactation, which in turn transmit to beneficiary households through availability of greater disposable income for food and healthcare. The cost of preventing malnutrition is also significant, as even brief episodes of acute malnutrition are associated with development challenges and disabilities among children.

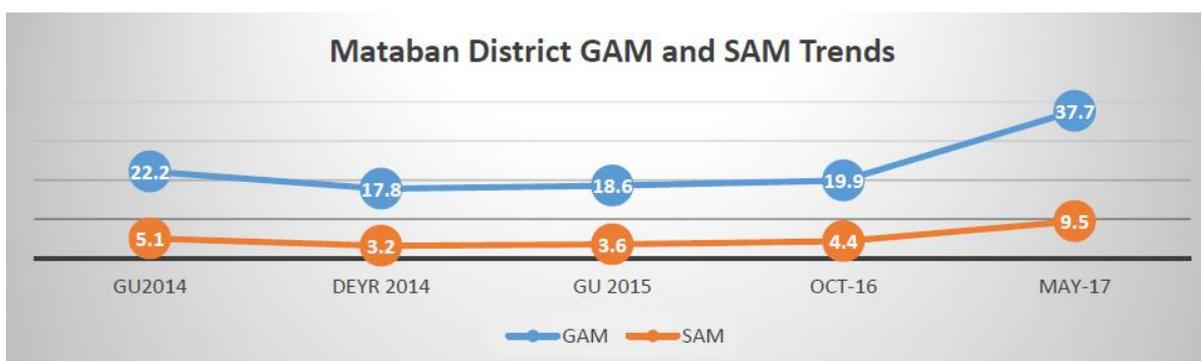
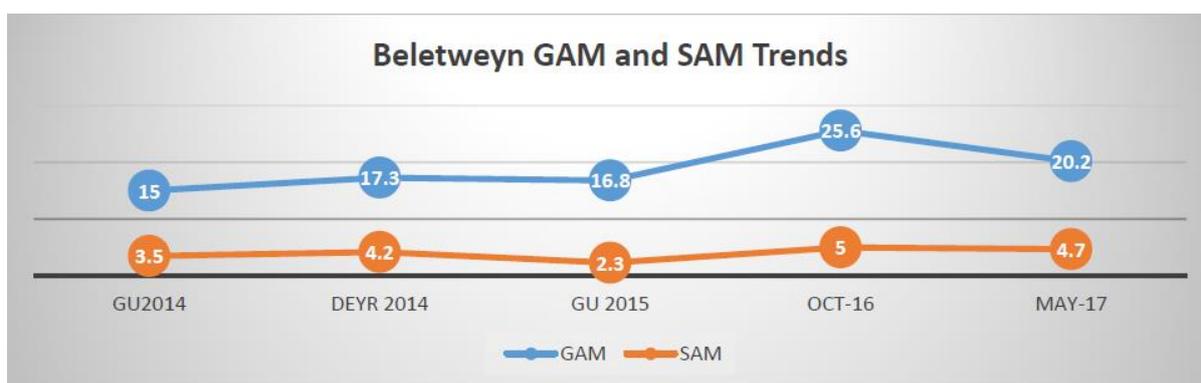
	Scenario 1	Scenario 2	Therapeutic Feeding
Direct cost (per cow per day)	2.21	0.93	N/A
Cost per cow for intervention	161.16	67.63	N/A
Cost per child for intervention	80.58	33.82	145 – 200
% difference against therapeutic feeding (assuming lower cost of USD 145)	44.43	76.68	N/A

Table 1: Comparative cost analysis for prevention of malnutrition under Milk Matters against conventional CMAM treatment. Scenario 1 reflects the Milk Matters experience in Ethiopia (based on procurement and distribution of fodder by partner NGOs), while Scenario 2 is indicative of costs under a cash or voucher scheme to support direct purchase of fodder. All costs are in USD.

related to the effect of the famine (which led to challenges in procuring fodder and finding water for animals). Importantly, milk consumption among children varied across the different communities, which was related to sharing of milk with elder children within the same household, as well as with other children across different households.

2.5 Feasibility in Somalia

The Milk Matters Feasibility Study in Somalia documented significant needs based on prevailing acute malnutrition levels with seasonality that correlates with milk production. In particular, a significant rise in acute malnutrition rates in Hiran region (Beletweyne and Mataban districts) was noted



Figures 3 and 4: Prevalence of severe and global acute malnutrition in Beletweyne and Mataban region in Hiran (Source: SNS Consortium and FSNAU SMART Survey results)

over the prevailing three years, which has been classified as ‘very critical’ in the wake of the severe drought in 2016/17 (see figures 3 and 4).

The variation in acute malnutrition levels has been shown to be seasonal, with higher prevalence rates witnessed during dry seasons.

Household survey data reveals that average milk production per household with livestock declines from 3.51 litres per day during the rainy season to 1.8 litres per day during the dry season. This affects milk consumption among children through two inter-related mechanisms: i) low production of milk means low availability at the household level, and ii) seasonal scarcity of milk increases market prices, which in turn leads to a greater incentive to sell milk to the detriment of consumption by children. Providing support for increased milk production during dry seasons can, therefore, improve milk production leading to greater consumption by

children, as well as potentially augment household income.

3. Conclusions and Recommendations

The preceding discussion illustrates the strong benefits afforded by the Milk Matters approach for preventing child malnutrition. However, for subsequent programme design and implementation, important gaps can also be identified based on prevailing ground realities and prior experience. The following recommendations can thus be made:

1. In addition to fodder support, the Milk Matters approach should include support for development and management of water resources in communities demonstrating need.
2. A strong Infant and Young Child Feeding (IYCF) component should also be included in the programme to enhance awareness among mothers on optimal feeding practices. This is expected to reinforce positive health benefits

related to improved milk consumption, as well as enhance nutritional awareness in household spending decisions.

3. A women - and community-focused approach should be adopted under the intervention. This will help to ensure greater impact and sustainability of results.

4. In order to prevent dilution of impact through sharing of milk (as witnessed in Ethiopia), it is recommended that the approach should cover all households with children (with an emphasis on children under five, but also including children under 12) for provision of fodder support.

5. Communities that demonstrate strong results under the approach should be connected with livelihood support programming aimed at enhanced production and value addition of milk and dairy products. Initiatives aimed at improving milk

consumption among vulnerable children, e.g. milk vouchers programmes for children living in IDP settlements, should be integrated with the intervention wherever feasible.

6. Through preserving nutrition among children, as well as enhancing health and survival among livestock, the Milk Matters approach has an inherent focus on building resilience. This feature should be widely integrated with existing resilience programming.

7. In addition to project-level implementation, it is recommended that the Milk Matters approach should be integrated with existing programming. This implies that existing food security interventions should focus on year-round availability of fodder and monitoring nutrition outcomes; at the same time, nutrition interventions should adopt recommended activities to strengthen efforts aimed at prevention of malnutrition.

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