CBM UK Project Evidence Brief #10

An inclusive, data-informed, resilience-building model to address child malnutrition

Reducing Child Malnutrition in Tharaka Nithi County Project, Kenya

Photo: A caregiver and her son, both project participants, with bags of corn-soy blend ©CBM UK/Plateau Media

Project partners: Diocese of Meru Service for the Poor in Adaptive Rehabilitation Kinship (DOM SPARK), CBM Global

Funding partner: Nous Cims

Overview

Child (aged 0-5) malnutrition is experienced at high rates in Tharaka Nithi County, Kenya. Poverty, unemployment, and climate change exacerbate this situation, and children with disabilities are at particular risk.

This project aimed to address each of these three factors, and reduce child malnutrition, by providing supplementation for affected children, improving livelihoods, nutritional awareness and climate resilience for caregivers, as well as ensuring the inclusion of children with disabilities.

The multi-faceted approach proved essential; supplementation alone was insufficient to sustain a reduction in child malnutrition, but strengthening caregiver resilience helped improve nutritional outcomes and enhanced wellbeing for caregivers and the community in the process.

Title: Reducing Child Malnutrition in Tharaka Nithi County
Location: Tharaka North and South sub-counties, Tharaka Nithi County, Kenya
Timeframe: January 2022 to January 2025
Partnership between: DOM SPARK, CBM Global

This three year project evolved from the humanitarian response to prolonged drought in Tharaka Nithi county, a region affected by climate change.

Amidst persistent climate related challenges and a food shortage across the county, the project aimed to improve child health and nutrition outcomes.

The project successfully:

- Identified, monitored, and provided food supplementation to 462 malnourished children, including 52 children with disabilities
- Provided tailored support to children with disabilities, including assistive devices and physiotherapy
- Provided training and support in the form of 18 Mother to Mother Support Groups for 345 carers (mostly mothers). Training covered nutrition best practice, establishing kitchen gardens, and advocacy skills
- Established a Savings and Internal Lending Community (SILC) in each of the Mother to Mother groups
- Distributed 345 water tanks (250 litre capacity) to families enrolled in the project, due to caregivers' advocacy
- Developed a child malnutrition database (CMD) to enable project staff to monitor fluctuating trends in nutritional status over time

Introduction

Tharaka North and South, two sub-counties in Tharaka Nithi County, are characterised by high rates of unemployment, susceptibility to the effects of climate change (insufficient and unreliable rainfall), high rates of child malnutrition and stunting, and high levels of poverty.[1]

Only 53% of the (majority youth) population across the sub-counties was employed as of 2019. Classified as Arid and Semi-Arid Lands (ASAL), both sub-counties typically receive less than 500mm of rain annually and in January 2022, at the start of this project, had experienced almost 4 years of low rainfall. This resulted in failed crops, lack of access to water for domestic and agricultural use, and household food

[1] Tharaka Nithi County had a child poverty rate of 57%, much higher than neighbouring counties Meru (37%) and Nairobi (7%) (Kenyan National Bureau of Statistics and UNICEF, 2017).

insecurity. These are root causes of malnutrition and typically experienced in ASAL counties.

Findings from a survey conducted across the two sub-counties prior to project inception showed that more than 80% of children aged 6-23 months did not receive the minimum acceptable diet needed to survive, grow and develop. At a county level, Tharaka Nithi is recorded as having high levels of malnourished children, with the stunting rate sitting at 22.9% according to a 2018 survey conducted by the county government.

Malnourishment and disability are closely interconnected,[2] reinforcing one another in a cycle of vulnerability, stigma, and exclusion from timely services, and exacerbated in climate-affected regions. Research has clearly established that acute malnutrition leads to wasting and chronic malnutrition resulting in stunting. Children with disabilities are at heightened risk of malnutrition, and in turn, malnutrition can contribute to delays in reaching key developmental milestones, such as sitting and standing.

This project aimed to address child malnutrition using a multi-faceted approach, with tailored support to children with disabilities. Alongside providing supplementation to affected children, it increased the nutritional, financial, and climate knowledge and resilience of their caregivers and directly targeted children with disabilities. Further details about the project can be found in the red box above.

Methodology

This project evidence brief draws from an independent project evaluation conducted by Enhance Interconsult Limited. The evaluation employed a mixed method evaluation design and measured both objective and subjective indicators of effectiveness – for example, malnutrition rates and the lived experience of project participants and stakeholders. The key tools employed in data collection included desk review, household questionnaires, key informant interviews, focus group discussions, and case studies. In all, the evaluation reached 239 caregivers (mostly mothers) with questionnaires, conducted six focus group discussions with caregivers, and engaged thirteen key informants.

What the evidence tells us

1. Supplementation alone was insufficient to sustain reduced malnutrition

While food supplementation played a critical role in improving child nutrition, it was not sufficient on its own to *sustain* improvements over time. After the final round of supplementation (the eighth, conducted in September 2024, in most areas), 77.2% of children were no longer malnourished, leaving 22.8% of children still malnourished. For children with disabilities, the proportion no longer malnourished was lower (69.8%), leaving 30.2% still malnourished at the end of the project. Project staff noted that children with disabilities appeared more vulnerable to malnutrition, and often faced additional barriers to sustained recovery, leading to chronic malnutrition.

[2] See: https://gh.bmj.com/content/5/10/e002613, https://pubmed.ncbi.nlm.nih.gov/30151939/, https://nutrition.bmj.com/content/early/2024/01/10/bmjnph-2023-000779, https://pmc.ncbi.nlm.nih.gov/articles/PMC4232244/, https://assets.publishing.service.gov.uk/media/5d2f2526ed915d2fe47af3d1/query-6-disability-and-nutrition.pdf.

Earlier rounds also showed that gains made immediately following supplementation often regressed. These retrogressions were linked to 'hunger gaps' between failed harvests due to droughts and floods. During these periods, it was common for supplements intended for a single child to be shared across the household, reducing their intended impact.

84.7% of children were not stunted after the final supplementation, corresponding to a stunting rate of 15.3% (compared to a pre-project rate of 22.9% across Tharaka Nithi). For children with disabilities, 80.8% were not stunted, a stunting rate of 19.2% at the end of the project. While improvement is modest, data suggests supplementation may have helped prevent further deterioration.

Despite limited *sustained* progress in child malnutrition or stunting indicators, overall trends show improvements in both Tharaka North and South. Caregivers also reported overwhelmingly positive perceptions of their children's health by the end of the project. 99.5% observed improvements in their children's health and physical growth since the project began: 5.4% reported slight improvement, 10% moderate improvement, and 84.1% significant improvement.

2. Resilience-building activities contributed to improved livelihoods, nutrition awareness, and local climate adaptation

A range of resilience-building activities were provided for caregivers, including education on good nutrition and healthy cooking, participation in Savings and Internal Lending Communities (SILCs),[3] provision of 345 water tanks (250 litre capacity), and training on the use of drought-tolerant seeds and the establishment of kitchen gardens near the home.

"Earlier I just cooked food for the sake. I didn't put thought into the nutritional content. But now, I make good and nutritious meals for me and my family," Caregiver, Chiakariga Ward

Nutrition and healthy cooking education improved caregivers' awareness, which in turn positively influenced child nutrition. The independent evaluation revealed that in addition to 90% of families consuming staple foods in the past week, 63% had also consumed Vitamin A-rich fruits and vegetables, 70% had consumed other fruits and vegetables, and 56% had eaten pulses, nuts, and seeds. Furthermore, 92% of respondents reported that their knowledge of infant and young child feeding practices had 'improved significantly' and 97% agreed that the project had positively influenced how they met their children's nutritional needs. A significant, albeit low, positive relationship was found between non-malnourishment and both participation in general awareness raising about nutrition and specific training for caregivers on good nutrition.

Participation in SILCs contributed to improved livelihoods and acted as a form of community support for caregivers. Among caregivers, 86.2% reported an increased average monthly income, with 33.5% noting a slight increase and 52.7% a significant one. The highest amount shared with an individual SILC member in 2024 was 12 times higher than in 2023. SILC members reported using their income to start small businesses (including egg production, goat rearing, basket weaving, kiosk sales, and running tearooms), purchase food and water during shortages, pay school fees, and improve their homes.

[3] SILCs were created in each of the 18 Mother-to-Mother groups, and a total of 3 share-outs occurred, most recently in March 2025.

Climate resilience was strengthened through provision of water tanks, drought-tolerant seeds, and kitchen gardens.[4] Kitchen gardens using vertical grow bags provided caregivers with fresh green produce close to their home, supporting daily meal preparations. These gardens took up minimal space, were water efficient and saved caregivers' money as they reduced the need to buy market vegetables and enabled some growers to sell surplus produce. The steady supply of vegetables, even during dry seasons, together with drought-tolerant seeds, helped to protect households against the harsh impacts of climate change in Tharaka Nithi. Water tanks similarly supported resilience by ensuring access to water, close to the home, even during periods of extreme heat.[5]

Photo: Miriam used income from her egg production and goat rearing activities to buy a tin roof for her house ©CBM UK/Plateau Media

However, the success of these interventions was influenced by contextual factors. In Tharaka North, which is drier than Tharka South, less water availability affected growth outcomes. For kitchen gardens and drought-tolerant seeds, individual skill and consistency in tending to the gardens proved critical role in determining their effectiveness.

Photo: A kitchen garden not long after project inception

Photo: Dorcas in her kitchen garden near project end ©CBM UK/Plateau Media

[4] Nutritional education and SILCs also had this impact, although more indirectly. Nutritional awareness increased understanding of nutritional alternatives during drought. Increased income allowed money to be spent buying food when crops failed.

[5] Note that water stored was not always rainwater, due to the dryness of the area – water was also purchased in bulk from a tanker that came close to the home.

Learning from experience

1. A multi-faceted approach is needed to address child malnutrition

Child nutrition cannot be improved through supplementation alone. A multi-faceted approach that combines nutrition education, income-generating activities, climate-smart farming, and kitchen gardening is vital. Recognising the complex drivers of malnutrition, the project went beyond regular supplementation to build caregiver and community resilience. This strategy was likely a key factor in the improved child health outcomes observed by the project's end.

2. Caregivers are essential to success

Caregivers were the linchpin of the project's multi-faceted approach. They engaged in peer-to-peer learning, provided each other with psychosocial support, benefitted from resilience-building activities, and transferred these benefits to their children.

To support caregivers, the project established 18 peer support groups (345 members: 339 female and 6 male), with 13 in Tharaka South and 5 in Tharaka North. These support groups provided a safe space for caregivers to engage in resilience-building activities, share successes and challenges, and learn from one another – ultimately strengthening strategies to support child health outcomes.

Photo: One of the 18 peer support groups
©CBM UK/Plateau Media

Peer support groups evolved to play a vital community role in building resilience, learning, and advocacy. From these groups, champions were selected, trained and mentored to advocate for children's rights to good nutrition, health, and water. They gained practical skills but also the confidence to mobilize collective action - a critical catalyst for sustainable change. They learned to write letters to county officials and represent their interests at local meetings. These efforts delivered tangible results: neighbours replicated their resilience activities, and county officials were successfully lobbied to initiate water projects, school feeding programs, and group gardens. The distribution of water tanks was a direct outcome of caregivers' advocacy within the project, demonstrating how empowered champions can turn individual efforts into systemic improvements.

3. Data collection facilitates effective evaluation

A child malnutrition database (CMD) was instrumental in evaluating the effectiveness of supplementation. It revealed supplementation's limited effectiveness to *sustain* reduced malnutrition by enabling the tracking of a child's progress over time. The CMD captured key data - name, gender, birth date, age, disability status, supplementation date, weight, height, and z-score (a malnutrition indicator). While data entry was time-consuming and vulnerable to transfer errors from paper forms, the dedicated

Project Nutrition Officer role was vital. Her trusted relationships cultivated with project participants and their families facilitated access for this important data collection.

4. **Disability inclusion must be intentional from the start**

Of the 462 children supported, 52 children (11.3%) were children with disabilities. Support included assistive devices for 29 children with disabilities (17 girls, 12 boys) and physiotherapy training for caregivers, enabling caregivers to better support their children during mealtimes and children with cerebral palsy (CP), for example, to consume the provided supplements.

These outcomes were possible because project staff actively sought out children with disabilities and responded immediately to their needs. Some needed assistive devices, while others needed replacements for ones they had outgrown. Devices were sourced, notably CP chairs, wheelchairs and walking frames, with government involvement to ensure continuity beyond the project's lifespan.

"My child couldn't walk at the beginning of the project, the child's weight was 2kg, but now, 10kg. The child was given a wheelchair to help with movement," Caregiver, Chiakariga Ward

While the project effectively identified and supported children with disabilities, future programmes could further benefit from partnering with Organisations of Persons with Disabilities (OPDs). Their lived expertise would strengthen early identification, community awareness, advocacy, and disability-responsive service delivery.

Recommendations

- **For project teams**
    - **Adopt a multi-faceted approach** to nutrition programming that combines supplementation with caregiver nutrition education, livelihood support, and climate resilience strategies, such as kitchen gardening and drought-tolerant crops.
    - **Address food sharing** by providing supplements to entire households, not just the target member.
    - **Use a digital malnutrition database** in nutrition projects, to streamline data collection, track unique child progress and reduce errors. A digital collection tool could input data straight into the database and accurately calculate Z-scores, reducing risk of human error.
    - **Prioritise disability inclusion from the outset** by actively identifying, referring and supporting children with disabilities and their caregivers, as well as involving and partnering with local OPDs.
    - **Involvement the government throughout the project cycle** to ensure project sustainability.
- **For national policy makers**
    - **Ensure nutrition programmes reach children with disabilities**.

- **Facilitate the formal registration of caregiver peer support groups** as self-help groups or community-based organisations, strengthening their authority and enabling sustained community engagement and resource mobilisation.

- **For international donors**
  - **Fund integrated projects** that recognise the importance of linking nutrition and disability interventions and the impact of climate change as a driver of malnutrition.

Conclusion

The Reducing Child Malnutrition in Tharaka Nithi County project in Kenya demonstrates that reducing malnutrition among children aged 0-5 requires more than supplementation – it demands a multi-faceted, inclusive approach. By directly engaging caregivers through nutrition education, livelihood support and climate resilience activities, the project started along the path to strengthened household capacity to respond to food insecurity and improve child health. Crucially, it identified and supported children with disabilities from the outset to ensure they were not excluded from activities due to physical or social barriers.

The project reinforced global understanding that malnutrition and disability are interlinked and highlighted the central role that caregivers play in breaking this cycle. It demonstrated how community voices, especially caregivers and persons with disabilities, can influence county systems, and offers a compelling model for future programming: inclusive, data-informed, and rooted in local resilience. Strengthening the connections between communities, OPDs, and government is key to sustaining gains in nutrition and disability inclusion beyond projects.

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