



# Evaluation of Community Management of Acute Malnutrition in Ethiopia

Federal Ministry of Health  
Government of Ethiopia/UNICEF Country Programme 2007-2011

May 2013



# **EVALUATION OF COMMUNITY MANAGEMENT OF ACUTE MALNUTRITION IN ETHIOPIA**

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## **Evaluation of Community Management of Acute Malnutrition in Ethiopia**

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United Nations Children's Fund

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This evaluation was commissioned by the Government of Ethiopia programme in Ethiopia supported by UNICEF and managed by a steering committee chaired by the Ministry of Health and involving several civil society organisations that have been working with Ministry of Health in building CMAM capacities in Ethiopia. The commissioning of this evaluation coincided with a global level evaluation of UNICEF's support for CMAM coordinated by the UNICEF Evaluation Office which was based on field work in five countries hence the evaluation in UNICEF also constitutes part of the global evaluation. The Ethiopia evaluation committee thus contracted a team of consultants from Ethiopia to answer the evaluation questions based on methods agreed by the steering committee and this team worked closely with a team of international consultants contracted by the UNICEF headquarters evaluation office who worked across all five countries. The international consultants were Sheila Reed and Camille Eric Kouam. The Ethiopian consultants were from Breakthrough International Consulting PLC, Abebe Alebachew, Habtamu Fekadu, and Meselech Roro.

The steering committee for the evaluation was chaired by Dr. Ferew Lemma, seconded by the UN to MoH as senior nutrition adviser. The Ministry of Finance and Economic Development seconded Gebre Egzehabher Gebre. Facilitation of the evaluation was the responsibility of Roger Pearson and Martha Kibur from the UNICEF Ethiopia Research, Evaluation, Policy and Monitoring. Technical input was coordinated by the Sylvie Chamois, Tewoldeberhan Daniel and Joan Matji from the UNICEF Nutrition and Food Security Section who also coordinated the development of the management response to the evaluation. The technical input of civil society organisations active in supporting CMAM was provided by Abdul Aziz Ali (FANTA), Pankaj Kumar and Suzanne Fuhrman (CONCERN), Emily Mates (ENN). A number of international partners who have provided funding for the CMAM service also took part as members of the steering committee, Daniele Nyirandutiye (OFDA), Takele Geresu (Irish Aid). Gloria Kusemererwa (WFP) was also a member with a particular interest in the interaction between CMAM and supplementary feeding. Krishna Belbase, from the UNICEF HQ Evaluation Office was also a member ensuring that the evaluation in Ethiopia was compatible to the extent possible with the other four countries together with Ilka Esquivel and Erin Boyd from the UNICEF HQ Nutrition Section, Programme Division.

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# PREFACE

Ethiopia has made remarkable progress over the last decade in realising its development targets including steady economic growth; expansion of school, health and water facilities; the establishment of the health extension programme (HEP) which goes some way towards addressing people's basic health and nutrition rights; and the rolling out of CMAM within the HEP in the four largest regions. These achievements have had an impact on reducing under-five mortality; the EDHS 2005 recorded an under-five mortality rate of 123 deaths per 1,000 live births for the five year period 2000 to 2005 declining to 88 deaths per 1,000 live births for the period 2007 to 2011.

A small pilot for CMAM was first conducted in Southern Ethiopia in 2000. A crisis due to drought developed across many parts of Ethiopia during 2003 to 2004. This crisis was the catalyst for many civil society organisations supporting the health sector to adopt CMAM for treating the majority of malnourished children as outpatients, through establishing Therapeutic Feeding Centres (TFCs). From 2004 to 2005, the MoH (supported by several partners including UNICEF), commenced the scale-up of SAM treatment services; developing guidelines and establishing more inpatient and outpatient services across the country. In 2007, following international endorsement of the CMAM approach,<sup>1</sup> the national protocol for SAM treatment was revised to include detailed guidance for the Outpatient Therapeutic Programme (OTP) and community mobilisation activities.

In 2008, a dramatic and rapid increase of SAM cases was seen across Oromia and Southern Nations, Nationalities and People's (SNNP) regions once again as a result of drought. Responding to this emergency by maximising access and coverage of these life-saving services, the FMOH reviewed the evidence of CMAM effectiveness when implemented at health centre level and made the decision to decentralise CMAM services to health post level with OTP managed by the HEWs.

The CMAM evaluation aims to strengthen the delivery of CMAM by generating and disseminating evidence on CMAM. An Evaluation Steering Group (ESG) was established under the leadership of the Federal Ministry of Health to guide and steer this evaluation. The ESG included the following members: Ferew Lemma (UN adviser on Nutrition seconded to FMOH), Mesfin Gose (FMOH), Gebre Egzeabher Gebre (MoFED), Abdul Aziz Ali (FANTA), Krishna Belbase (UNICEF HQ), Israel Hailu (FMOH), Roger Pearson (UNICEF Ethiopia), Pankaj Kumar (CONCERN), Sylvie Chamois (UNICEF Ethiopia), Suzanne Fuhrman (CONCERN), Emily Mates (ENN), Daniele Nyirandutiye (OFDA), Gloria Kusemererwa (WFP), Tewoldeberhan Daniel (UNICEF Ethiopia), Takele Geresu (Irish Aid).

The terms of reference for the evaluation were written by members of the ESG and endorsed with revisions by the ESG followed by selection of national consultants to team up with the international evaluators to implement the evaluation and deliver the results to the ESG.

The evaluation steering group previewed the findings and interacted with the evaluators until they were satisfied with the final report. It paid particular attention to the sustainability aspect of CMAM integrated with the public health delivery system in Ethiopia. As a result, the evaluation TOR was revised to ensure in-depth costing exercise of CMAM including analysis of the likely cost if Ethiopia changes the CMAM admission criteria to align with the 2006 WHO Growth Standard was carried out. The ESG has convened over six meetings to oversee the progress of the evaluation planning and implementation.

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<sup>1</sup>WHO/WFP/UNSCN/UNICEF. Community-Based Management of Severe Acute Malnutrition. A Joint Statement by the World Health Organization, the World Food Programme, the United Nations System Standing Committee on Nutrition and the United Nations Children's Fund, 2007. [http://www.who.int/nutrition/topics/statement\\_commbased\\_malnutrition/en/](http://www.who.int/nutrition/topics/statement_commbased_malnutrition/en/)

The Ministry of Health and UNICEF Country Office acknowledge the evaluators for their work in answering the evaluation questions to the satisfaction of the ESG.

The ESG then went on to prepare an action plan based on the findings and the progress with the implementation of this plan in the months after the acceptance of the report is recorded herein.

*Ferew Lemma, UN adviser on nutrition to the FMOH and chair of the steering committee for the evaluation*

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## ACRONYMS

ADLI	Agricultural Development-Led Industrialization
CBN	Community Based Nutrition
CHD	Community Health Days
CMAM	Community Management of Acute Malnutrition
CSB	Corn Soya Blend
CTC	Community-Based Therapeutic Care
DFID	Department for International Development (UK)
DHS	Demographic and Health Survey
DRM	Disaster Risk Management
DRMFSS	Disaster Risk Management and Food Security Sector
EFY	Ethiopian Fiscal Year
EHNRI	Ethiopian Health and Nutrition Research Institute
ENCU	Emergency Nutrition Coordination Unit
EOS	Enhanced Outreach Strategy
FBP	Food-By-Prescription
FGDs	Focus Group Discussions
FMHACA	Food, Medicine and Health Care Administration and Control Authority
FMOH	Federal Ministry of Health
GHIs	Global Health Initiatives
GMP	Growth Monitoring Programme
GOE	Government of Ethiopia
GTP	Growth and Transformation Plan
HC	Health Centre
HCs	Health Centres
HDA	Health Development Army
HEP	Health Extension Programme
HEWs	Health Extension Workers
HICIES	Household Income Consumption and Expenditure Survey
HMIS	Health Management Information System
HP	Health Post
HPs	Health Posts
HRF	Humanitarian Response Fund
HSDP	Health Sector Development Programme
ICCM	Integrated Community Case Management
IMNCI	Integrated management of neonatal & childhood illnesses
INGO	International Non-Governmental Organizations
IP	Implementing Partners
IPLS	Integrated Pharmaceutical Logistics System
IRT	Integrated refresher training
IYCF	Infant & Young Child Feeding
JCCC	Joint Core Coordinating Committee
JCF	Joint Consultative Forum
LIU	Livelihoods Integration Unit
MAM	Moderate Acute Malnutrition
MANTF	Multi-Agency Nutrition Task Force
MDG PF	Millennium Development Goal Performance Fund



M&E	Monitoring and Evaluation
MOFED	Ministry of Finance and Economic Development
NNS	National Nutrition Strategy
NNP	National Nutrition Plan/Programme
OFDA	Office of Foreign Development Assistance
OTP	Outpatient Therapeutic Programme
PFSA	Pharmaceutical Fund and Supply Agency
PSI	Population Service International
PSNP	Productive Safety Net Programme
RHB	Regional Health Bureau
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SC	Stabilization Centre
SSA	Sub-Saharan Africa
TFP	Therapeutic Feeding Programme
TFUs	Therapeutic Feeding Units
TSF	Targeted Supplementary Food
UNICEF	United Nations Children's Fund
VCHWs	Volunteer Community Health Workers
WFP	World Food Programme
WHO	World Health Organization
WOHO	Woreda Health Office

# SUMMARY

The Government of Ethiopia (GOE) through the Federal Ministry of Health (FMOH) has promoted community management of acute malnutrition (CMAM) since 2003 and the programme has been rapidly scaled up countrywide since 2008. The CMAM programme has evolved into being among the top priorities of the FMOH as stipulated in the Health Sector Development Programme (HSDP) IV. It is implemented in collaboration with UNICEF, WHO and WFP and implementing partners (IPs). Other child nutrition programmes include Infant and Young Child Feeding (IYCF) and prevention and control of micronutrient deficiencies.

Severe acute malnutrition (SAM) is a major childhood health challenge in Ethiopia, especially during emergencies. Wasting, a measure of acute malnutrition, was estimated at 10.5% in 2000 and 10.0% in 2011. The FMOH and UNICEF undertook this evaluation to assess programme performance and to document key successes, good practices, gaps and constraints in scaling up CMAM in Ethiopia. The evaluation will contribute to a global synthesis report. Three CMAM components were evaluated: 1) Community outreach; 2) Outpatient treatment (OTP) for SAM cases without medical complications; and 3) Inpatient treatment in therapeutic feeding units (TFU). The evaluation of the fourth component, management of moderate acute malnutrition (MAM), is planned by FMOH as a separate exercise, however, linkages among the components are discussed.

The CMAM evaluation aims to strengthen on-going and future CMAM programmes by generating and disseminating evidence on CMAM experiences. The findings from the evaluation will also be used to promote good practices in collaboration with UNICEF Headquarters.

The criteria of relevance, effectiveness, efficiency, and sustainability and scaling up, were applied to CMAM components and to cross cutting issues. Data were obtained from secondary sources, health system databases, observations during visits to sample CMAM sites and interviews with stakeholders. Quantitative data were analysed to determine whether programme targets were met and qualitative data supported the analysis. Data collection took place at the federal level and in five regions, 15 woredas and 45 health facilities.

## Key Findings and Conclusions

### *Relevance and Appropriateness*

The CMAM approach has been effective in treating admitted SAM cases in Ethiopia; the decentralization, scale-up and integration of CMAM were facilitated by strong collaboration among government and implementing and development partners. The process of moving from a largely emergency response mode to a longer term programmatic mindset is ongoing and lacks continuous funding support. The CMAM approach is relevant to community needs and demands for nutrition services, however, continuing evolution is warranted to adapt to new community structures, such as the Health Development Army, and to better serve pastoralist populations.

Proactive GOE leadership at all levels of implementation has been instrumental to CMAM's success and GOE provision of health facilities services is a significant contribution, however, the GOE has not yet made direct funding allocations to CMAM. This would reflect strategic intent to avoid reliance on short-term emergency funding.

**Global Guidance and National Needs.** There is no national framework for integration of CMAM with other programmes such as IYCF. As per the context in Ethiopia, a separate set of guidelines applies for MAM management and thus there is no comprehensive guideline that encompasses the four components of CMAM.

**Technical and Organizational Support.** Effective technical oversight for CMAM is provided by the FMOH and IPs; IPs have substantially strengthened their roles in supporting national health services. Important roles in oversight are played by Emergency Nutrition Coordination Unit (ENCU) in resource mobilisation and information management, and the Multi-Agency Nutrition Task Force (MANTF) at the federal level and by region-based task forces. Through annual work plans, UNICEF and its sector offices have ensured regular supportive supervision. Greater advocacy through global funding channels is critical, and stronger collaboration is needed for planning particularly at woreda level to improve government capacity to implement CMAM.

### ***Effectiveness, Coverage and Quality of Services***

The decentralization of CMAM significantly improved access and coverage; the number of SAM cases treated annually has increased since 2002 from 18,000 to 230,000—more than 12 fold. Geographic coverage of OTPs has improved dramatically, overall health facility coverage is 59% and coverage for hot spot (most vulnerable to emergencies) priorities 1 and 2 woredas is more than 80%. CMAM has been less effectively decentralized in the pastoralist regions (Somali and Afar) due to weaknesses in the pastoralist Health Extension Programme (HEP) which is under government review. Treatment coverage surveys for CMAM are needed to identify groups and areas without access to services; a method of assessing coverage for a wide geographic area like Ethiopia is currently under development.

**Programme performance** country-wide meets Sphere standards; from January to August 2011, the Therapeutic Feeding Programme (OTP and TFU) achieved an average recovery rate of 83%, a mortality rate of 0.6% and a defaulter rate of 5%. Frequent supervision and strong tracking of programme data by the woreda health offices (WOHO) and IPs contributed to success.

**Quality ratings** indicated that 70% of CMAM services were working well and only 10% required substantial support. Variations by region are highly correlated with health system capacity. Joint monitoring activities have contributed to this performance. Health facilities generally lacked adequate space and a regular supply of routine medicines. Routine drugs have been subject to charges due to health care financing reforms in most regions and continuation of this trend may negatively affect both access and quality of services.

**Community Outreach.** Successful case finding was attributed to volunteer community health workers' (VCHW) role in this process and combining health initiatives; from July to August 2011 through the Enhanced Outreach Strategy/Community Health Days 93.6% of children under five years of age were screened countrywide. Screening coverage could be strengthened through better integration with other community based programmes.

**Outpatient Treatment Programme (OTP).** Mobile health teams mainly managed by INGOs have unsustainably high operational costs. Referrals and linkages are not adequate between the Health Posts (HPs) treating uncomplicated cases and the TFUs.

**Therapeutic Feeding Units (TFU).** Key challenges affecting quality include weak adherence to protocols, high turnover of staff and inadequate training on CMAM, weak administrative support and lack of food service for caretakers.

**Linkages with MAM management.** MAM is addressed through targeted supplementary feeding (TSF) and individual and community counselling; challenges which limit CMAM outcomes include reduction in woredas operating TSF programmes, inconsistent distributions, false enrolment (inclusion errors), weak follow-up, and insufficient linkages to counselling.

## ***Cross Cutting Issues***

**Monitoring and Evaluation.** There is a strong CMAM M&E system operated by the ENCU. While trends are regularly analysed and there is a high demand for information, ensuring quality data is a key challenge. National targets and progress toward them are not clear for all component activities such as screening and admissions.

**Supply and Logistics.** The supply management system used for CMAM, operated by UNICEF and IPs, has not served to appreciably strengthen the national distribution system due to short term funding and planning. Yet a strong national system, particularly from woreda to health facilities, is needed to promote a reliable supply of Ready to Use Therapeutic Food (RUTF) and routine drugs. Similarly drugs and therapeutic products need to be registered in the national system to avoid supply issues due to import regulations; therapeutic feeding items should be included in the essential drug/commodity list.

**Integration into the National Health System.** CMAM is fully integrated into the national health system in terms of service delivery and demand generation. It is partially integrated in planning but it is not integrated in terms of governance, financing, M&E and commodity management, functions carried out by implementing and development partners. The INGOs' shift in focus from creating parallel services to building capacity of the national system has contributed to integration, but, due to dependency on emergency funding, CMAM is not fully integrated into mainstream health sector planning.

**Equity and Gender Equality.** Some vulnerable children are not accessing CMAM services due to prioritisation of hot spots, distance, and health system capacity issues; expansion of the programme could help to cover these children. National programmes for social cohesion promote participation, decision making and access to services but perceptions of gender equality in CMAM services need to be substantiated with more programme data collection and analysis on gender.

**Capacity Development.** Capacity building efforts were successful in training of health professionals, development and rolling out of relevant guidelines and manuals, and strengthening the CMAM Monitoring and Evaluation (M&E) system. Systematic on-the-job and pre-service training supported by UNICEF and IPs increased the pace of institutionalisation of CMAM. Over 50% of health extension workers have been trained and training has been effectively integrated with other programmes. Training outcomes are affected by staff rotation out of TFP services, lack of standardised training material for the TFU, and need for more and better trained supervisors.

## ***Efficiency, Sustainability and Scaling Up***

To promote equity and coverage, expansion of CMAM is required to other geographic sites and non-hot spot woredas. The main issues affecting scaling up are the increasing costs and capacity requirements relative to the currently unpredictable emergency funding sources, reduction of parallel systems for information and supply, and the availability and efficiency of usage of RUTF. The CMAM programme depends largely on short term humanitarian emergency funding sources that negatively affects its integration into overall planning and financing as well as its transformation into a development programme.

The cost per treated SAM case, excluding routine drugs, is estimated to be US \$110. If fixed health service costs are removed, the cost per child is around \$73. The cost associated with the RUTF comprises about 50% of the cost per child and 33% goes to clinical services. If Ethiopia changes from the current SAM admission cut off point of <11 cm MUAC to the 2006 global standard of <11.5 cm (weight for height <3 SD of WHO standards) to reach more children, the cost per child will decrease but cost per woreda will increase significantly by as much as 100%.

The efficiency of usage of RUTF has improved partly through community education to curtail inappropriate sharing, but a stronger system of accountability and monitoring may be needed. Procurement of RUTF poses a considerable constraint for scaling-up given lack of government funding and shortages of working capital to back local production as well as need for reliable market information.

## **Key Recommendations**

The key recommendations are linked to the findings and conclusions above. The lead organisation(s) to be responsible for each recommendation is indicated in parentheses.

### **Relevance – Policy, Integration, Guidelines**

1. Enhance government ownership and commitment to scaling up for a permanent integrated CMAM through allocation of resources directly to the programme, including through the Millennium Development Goal Pool Fund (MDG PF).
2. Integrate CMAM with the woreda-based plan including CMAM indicators in the annual targets, annual review meetings and supportive supervision. The Implementing Partners should ensure that their interventions and resources are incorporated into the annual planning process and assist government in its effort to make CMAM part of the woreda-based plan. (GOE, Implementing Partners, Woredas)
3. Strengthen the capacity of the FMOH and Disaster Risk Management and Food Security Sector (DRMFSS) to manage the Emergency Nutrition Coordination Unit's data with minimal technical support. Support either the integration of nutrition related indicators into the HMIS or the development of a nutrition information system that interfaces with HMIS and with a responsible programme section to handle the data at federal and regional level. (GOE, UNICEF)

### **Effectiveness – Coverage and Quality of Services**

4. Use opportunities for screening through the monthly Growth Monitoring Programme (GMP) contact point of Community Based Nutrition (CBN) (GOE)
5. Scale up CMAM to other geographic sites and non-hot spot woredas to reach all children who need the service. The TFU inpatient care for SAM with medical complications should be scaled up at least to one per woreda to improve access and quality of care. Because of the scaling up process is now being facilitated through the Integrated Community Case Management (ICCM) in non-hot spot woredas, the expansion of these referral units is required. (GOE, All Partners)

### **Cross Cutting Issues**

6. Extend training opportunities to all who directly deal with CMAM including health workers and as well as district managers. Particularly for inpatient care, the new standardized training material for CMAM should to be rolled out. Out-patient training should be integrated with ICCM and IMNCI. Training should be integrated with the woreda and regional review meetings. (GOE, All Partners)
7. Strengthen the use of performance and quality data at the district and facility level to allow them to make their own analyses and to promote decision making. Include gender disaggregation of data and analysis on gender equality in programming. Adapt the standardised Therapeutic Feeding Programme (TFP) quality monitoring system and the integrated woreda supervision checklist. (GOE)

### **Efficiency, Sustainability and Scaling Up**

8. Develop a transitional plan to strengthen the national logistics system to handle the CMAM supplies through Pharmaceutical Fund and Supply Agency. (GOE, UNICEF)
9. Consider the inclusion of therapeutic feeding items (through the Food, Medicine, Health Care Administration and Control Authority - FMHACA) in Ethiopia's essential drug/commodity list to

facilitate the oversight of the production and importation. (GOE, UNICEF)

10. Explore options on how to finance the cost of routine drugs that are necessary for CMAM. This needs to be budgeted by the Government, or listed as an exempt service or paid by a development partners (All Partners).
11. Further explore the benefits and costs of changing from the current SAM admission cut off point of < 11 cm MUAC to the 2006 global standard. (All Partners)
12. Include CMAM as part of donor country development strategies and support it from development funds. Advocate for CMAM funding and make sure it is given priority in SUN, REACH and other child survival programmes. (GOE, UNICEF, Donors)
13. Encourage and support the private sector to produce RUTF locally by providing tax exemption privileges, bank loans, and land for investment and through public-private partnership funds such as PepsiCo, Helina, and Valsek. (GOE, Donors)

# MANAGEMENT RESPONSE

DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY	STATUS AS OF MAY 2013
<i>Relevance – Policy, Integration, Standards, Guidelines</i>		
<p>1. <b>Enhance Government ownership of CMAM and commitment to scale up and integration, through allocation of resources directly to the programme.</b> The FMOH should allocate a budget, including through the Millennium Development Goal Pool Fund (MDG PF) to finance, for example, CMAM supplies and/or the costs of training and routine drugs since investing in CMAM services will likely contribute to the reduction of the child mortality rates to meet the Millennium Development Goals by 2015.</p>	<p><i>The GOE (FMOH and Ministry of Finance) should take the lead with technical support from donors and partners.</i></p>	<p>The Ministry of Health has agreed to consider purchasing RUTF from a pool fund based upon donor approval and availability of funding.</p>
<p>2. <b>Develop a transitional plan to handle CMAM supplies through the national logistics system</b> called the Integrated Pharmaceutical Logistics System (IPLS) of Pharmaceutical Fund and Supply Agency.</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing partners</i></p>	<p>UNICEF is currently supporting the Ministry of Health developing a transition plan for PFSA to gradually take over the management of the CMAM supply. To guide this process, a nutrition supply bottleneck analysis and RUTF leakage assessment are being undertaken.</p>
<p>3. <b>Consider inclusion of the therapeutic feeding items in Ethiopia's essential drug/commodity list</b>, in order to facilitate the oversight of the production and importation and to include them as essential drugs for health centres and health posts rather than food. If registered as food, the items are difficult to distribute through the health system.</p>	<p><i>The GoE should take the lead in coordination with the Food, Medicine, Health Care Administration and Control Authority (FMHACA) with technical support from UNICEF</i></p>	<p>FMHACA has just written a new directive on food supplements, which has been endorsed and will be released soon. RUTF and RUSF (same as infant-formula) are food products that must be registered. As registered food products all manufacturing, import, export, distribution and sales is subject to obtaining a permit and should be done according to established national and international quality standards. In other words, production and importation is already subject to appropriate oversight.</p> <p>Classification of RUTF as a medicine is definitely not advisable because that would make all manufacturers of RUTF subject to the same strict requirements for registration (comply with WHO-GMP).</p> <p>It would be beneficial to include RUTF on the essential medicines and health commodities list, to ensure it gets the priority it needs for planning and budgeting purposes by the MOH and donors.</p>

DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY	STATUS AS OF MAY 2013
<p>4. <b>Integrate CMAM with the woreda-based plan including CMAM indicators in the annual targets, annual review meetings and supportive supervision.</b> Promote stronger coordination and sustainability for CMAM at the woreda level by ensuring that interventions and resources contributed by Implementing Partners are incorporated into the annual planning process.</p>	<p><i>The GoE through the FMOH should lead in coordination with woredas and with support from UNICEF and implementing partners</i></p>	<p>CMAM is now integrated in the woreda-based plans.</p>
<p>5. <b>Strengthen the capacity of the FMOH and Disaster Risk Management and Food Security Sector (DRMFSS) to manage the Emergency Nutrition Coordination Unit's data with minimal technical support.</b> Support either the <b>integration of nutrition related indicators</b> into the HMIS or the development of a nutrition information system that interfaces with HMIS and with a responsible programme section to handle the data at federal and regional level.</p>	<p><i>The FMOH and DRMFSS should take the lead in coordination with the ENCU and with technical support from UNICEF.</i></p>	<p>The revised HMIS is including CMAM indicators. HMIS is currently being rolled-out but the reporting frequency/ timeline is preventing using it as a nutrition surveillance source of information. Monitoring of the monthly CMAM admission trends by the ENCU is one of the key elements of the emergency nutrition surveillance in Ethiopia.</p>
<p>6. <b>Create a comprehensive and integrated set of guidelines for MAM management, SAM treatment and infant and young child feeding (IYCF) to strengthen monitoring linkages and community based approaches.</b> CMAM is meant to be integrated and include MAM. Include the following updates and extended guidance:</p> <ul style="list-style-type: none"> <li>• Include guidance on equity, gender equality and integration into the health system and with other programmes</li> <li>• Health Extension Workers (HEWs) should be given responsibility for following MAM cases</li> <li>• Frequency of MAM supply distribution should be at least monthly.</li> </ul>	<p><i>The FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>WHO and UNICEF supported the development of a comprehensive training package for the management of Severe Acute Malnutrition.</p> <p>Training material on IYCF is also under revision, with the development of a training video.</p> <p>The MAM guidelines has been developed and launched by the ENCU.</p> <p>In 14 woredas of Amhara, Oromia, SNNPR and Tigray, WFP is piloting monthly Targeted Supplementary Feeding (TSF). HEWs are routinely screening and admitting moderately malnourished children and PLW. Once a month and at health post level, HEWs monitor the patients' progress (weight gain) and refer them to FDAs, at kebele level, to receive 1 month ration of CSB and oil. Patients are also discharged when they have recovered or defaulted or died.</p>



DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY	STATUS AS OF MAY 2013
<i>Effectiveness – Coverage and Quality of Services</i>		
<p>7. <b>Use the monthly Growth Monitoring Programme (GMP) contact point of Community Based Nutrition (CBN) to a greater degree to screen children</b>, in order to promote early detection of SAM and to increase access to treatment With the changing landscape in the system due to the introduction of the HDAs, which moves GMP one step up from CHW level to HEW level, close follow up and monitoring is required as it is not yet clear how it will play out in reality on the ground specially in the short term.</p>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>HEWs are screening children for Severe Acute Malnutrition on routine basis at the health post, during outreach and household visits. Uncomplicated cases are admitted in the health post OTP and complicated cases are referred to the nearest Stabilisation Centre.</p>
<p>8. CMAM should be <b>scaled up as a joint action by all partners</b> to other geographic sites and non-hot spot woredas to reach all children who need the service. The inpatient care for SAM with medical complications should be scaled up at least to one per woreda to improve access and quality of care. Because of the scaling up process is now being facilitated through the Integrated Community Case Management (ICCM) in non-hot spot woredas, the expansion of these referral units is required.</p>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>UNICEF and IPs continue to support the MOH and RHBs expanding CMAM to all woredas (through I-CCM). As of today, 62% and 57 % of health posts and health centres are running OTPs and 27% and 95% of health centres and hospitals are running SCs.</p>

DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY	STATUS AS OF MAY 2013
<b><i>Cross Cutting Issues</i></b>		
<p>9. <b>Continue support to monitoring of quality of CMAM services</b> as this has contributed to improving it over time while at the same time ensuring more responsibility to the FMOH at all levels.</p> <ul style="list-style-type: none"> <li>• Strengthen the use of performance and quality data at the district and facility level to make their own analyses and to promote decision making on patient care.</li> <li>• Include gender disaggregation of data and analysis on gender equality in programming.</li> <li>• Adapt the standardized Therapeutic Feeding Programme (TFP) quality monitoring system and the integrated woreda supervision checklist.</li> <li>• Ensure that quality appraisal of the mobile units are included to help identify problems and address them.</li> <li>• Ensure that TFU services are well covered so that improvements will be made.</li> </ul>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>Support to quality monitoring of CMAM services (OTP , SC and mobile units) is on-going with full involvement of the Woreda Health Offices and HEP' supervisors.</p> <p>Supervision of CMAM activities has been included in the integrated woreda supervision checklist.</p>
<p>10. <b>Extend training to reach all who directly deal with CMAM including health workers and as well as district managers.</b> Particularly for inpatient care, the new standardized training material for CMAM should to be rolled out. Out-patient training should be integrated with ICCM and IMNCI. Training should be integrated with the woreda and regional review meetings.</p>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>Under-going with support from WHO, UNICEF and IPs.</p>
<b><i>Efficiency, Sustainability and Scaling Up</i></b>		
<p>11. <b>Further improve efficiency of use of RUTF</b> through continuing community education to curtail inappropriate sharing, and investigating feasibility of putting into place a stronger system of accountability and monitoring such as an auditing mechanism in use by some woredas.</p>	<p><i>The GOE should take the lead through woredas and with technical support from UNICEF and implementing partners.</i></p>	<p>Findings from the UNICEF-supported RUTF leakage assessment will be the basis to review and refine the RUTF regulation together with the MOH, FMHACA and PFSA</p>

DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY	STATUS AS OF MAY 2013
<p>12. <b>Continue the partnership among the GOE and development partners but with a longer term development rather than emergency perspective, which could increase the development funding for CMAM to ensure the sustainability of the programme.</b></p> <ul style="list-style-type: none"> <li>• Development partners such as UNICEF should include CMAM as part of their country development strategies and support it from their development funds</li> <li>• Donors should ensure that all child survival or development nutrition programme proposals have a CMAM component.</li> <li>• Donors need to be flexible enough to allow the use of MDG PF support for CMAM activities when it is included in the government's plans. These will ensure sustainable and long-term funding for CMAM rather than the current short-term (six months to one year) emergency funding.</li> <li>• At the global level, UNICEF should advocate for CMAM funding and make sure it is given priority in SUN, REACH and other child survival programmes</li> </ul>	<p><i>The GOE through the FMOH should lead with support from UNICEF, and other development partners and donors.</i></p>	<p>CIDA and DFID are now contributing to CMAM multi-year funding.</p> <p>The Ministry of Health has agreed to consider purchasing RUTF from a pool fund based upon donor approval and availability of funding.</p> <p>ECHO and EC are teaming-up to address acute and chronic malnutrition in the same geographical areas.</p> <p>Advocacy is still needed to increase the number of donors and amount of contribution in order to meet the needs.</p>
<p>13. <b>Consider the impact of increases in costs for services if revision of the CMAM admission criteria for SAM from &lt;11 cm (Ethiopia standard) to &lt;11.5 cm MUAC (WHO/UNICEF, 2006).</b> This change will result positively in higher coverage and more equity in the programme but must be studied in view of the funding challenges. As demonstrated in the costing exercise, the revision of the admissions cut-off point will increase any human and material resource needs.</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>Change of cut-off for MUAC admission in OTP is not yet effected. Analysis of 84 nutrition surveys conducted in Ethiopia (source: ENCU) showed a total of 519 children with MUAC &lt; 11cm (0.7%) and 1,397 with MUAC &lt; 11.5cm (2%). Cost implications has not yet been estimated.</p>

DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY	STATUS AS OF MAY 2013
<p>14. <b>Define what the ‘minimum’ support entails and what the exit strategies should be so that all IPs operate in similar fashion.</b> Implementing Partners (IPs) should continue with minimal support especially on supportive supervision, review meetings and off site and onsite training at regional and district level. The IPs should work with the respective government bodies and UNICEF on strengthening quality of CMAM services through and within the government structures and mechanisms rather than assigning their staff to do the routine work.</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>IPs are increasingly supporting the capacities of the Government to implement CMAM. The ENCU reviews funding proposals to ensure harmonisation of approach.</p>
<p>15. <b>Diversify IP woredas of operation</b> by scale up to new woredas where their support is critically needed. This will accelerate scale up and allow their regular woreda partners to develop the confidence to manage CMAM without IPs support</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing partners.</i></p>	<p>Number of woredas supported by IPs has increased in the past few years. However, most of the IPs are still working with short-term humanitarian funding.</p>
<p>16. <b>Encourage the private sector to produce RUTF locally</b> by providing tax exemption privileges, bank loans, and land for investment. It should also encourage the production of cheap alternatives through supporting operational research. Donors should enhance their support to the local production of RUTF especially toward cheaper and locally acceptable alternatives through their public-private partnership funds such as PepsiCo, Helina, and Valsek (Government,</p>	<p><i>The GOE should lead with support from UNICEF, and other development partners and donors.</i></p>	<p>Hilina is currently the only producer of RUTF in Ethiopia. Valsek is hoping to start very soon. PepsiCo is working with WFP and Hilina on the production and testing of chickpea-based RUSF for the treatment of the moderately malnourished children.</p>
<p>17. As a matter of priority until the GOE is able to totally fund the <b>routine drugs</b> that are necessary for CMAM options should be explored for funding them through budgeting by the Government or development partners or listing them as an exempt service</p>	<p><i>The GOE should lead with support from UNICEF, and other development partners and donors.</i></p>	<p>Routine drugs for the treatment of SAM cases are exempt.</p>

# 1. INTRODUCTION

## 1.1 Background on the Treatment of Severe Acute Malnutrition

Severe Acute Malnutrition (SAM) is defined globally as a very low weight for height (below -3z scores of the median World Health Organization (WHO) growth standards, or below 70% of the median of National Centre for Health Statistics standard)<sup>2</sup> and by the presence of nutritional oedema. In children 6–59 months of age, a middle upper arm circumference (MUAC) less than 11.5 cm is also indicative of SAM. Moderate Acute Malnutrition (MAM) is defined as weight for height  $\geq -3z$  and  $< -2z$  score or for children 6 months-59 months, MUAC  $\geq 11.5$  cm and  $< 12.5$  cm. At present, Ethiopia defines SAM and MAM using MUAC as  $< 11$  cm and  $\geq 11$  cm and  $< 12$  cm respectively, which were earlier global standards.

It is estimated that nearly 20 million children worldwide are severely acutely malnourished. Most of them live in South Asia and Sub-Saharan Africa.<sup>3</sup> According to WHO, children suffering from SAM have a 5–20 times greater risk of death than well-nourished children. SAM can directly cause death or indirectly increase the fatality rate in children suffering from diarrhoea and pneumonia. Current estimates suggest that about 1 million children die every year from severe acute malnutrition.<sup>4</sup>

Formerly in many countries, treatment of SAM had been restricted to facility-based approaches, greatly limiting its coverage and impact. However, evidence from emergency programmes suggested that large numbers of SAM cases could be treated in their communities without being admitted to a health facility or a therapeutic feeding unit. This community based management of SAM was referred to as Community-Based Therapeutic Care (CTC) generally run by NGOs during emergencies. During 2000 to 2003, community management was piloted and expanded by NGOs in Ethiopia, Malawi and Sudan, demonstrating the approach to be highly effective and to exceed Sphere minimum standards for nutrition in humanitarian emergencies. The programme was initiated in Ethiopia in 2003 using the CTC model, which depended upon significant external resources and expertise and was implemented parallel to the national health system rather than integrated.

Because the prevalence of severe malnutrition is high in most developing countries, capacity for treating children with SAM is required at all times whether in the emergency, recovery or development contexts. When treatment and management is integrated into the health system and with community preparedness, response to a sudden increase in severe acute malnutrition is more effective. The community management of acute malnutrition (CMAM) has gained widespread acceptance in the humanitarian sector following the joint UNICEF WHO statement in June 2007<sup>5</sup> and is now the preferred model for SAM treatment in emergency and non-emergency contexts. The community-based approach involves timely detection and treatment of severe acute malnutrition through case finding in the community and, for those without medical complications, ready-to-use therapeutic foods (RUTF) administered at home. If properly combined with a facility-based treatment of malnourished children with medical complications and implemented on a large scale, CMAM could prevent the deaths of hundreds of thousands of children.

With increased frequency and intensity of natural disasters as well as economic uncertainties, it is likely that the numbers of children affected by SAM will increase. UNICEF has made significant investments in more than 55 countries to scale up treatment of severe acute malnourished children through CMAM initiatives. To consolidate the achievements made and to further enhance, scale-up and expand CMAM services, an independent evaluation was undertaken to generate concrete evidence on how well the global and country level strategies have worked including their acceptance and ownership in

<sup>2</sup> Center for Disease Control and Prevention (CDC)

<sup>3</sup>World Health Organization (WHO), World Food Programme (WFP), the United Nations Standing Committee on Nutrition (UN/SCN) and the United Nations Children's Fund (UNICEF). Joint Statement. Community-based management of severe acute malnutrition, June 2007.

<sup>4</sup> Collins S, Sadler K, Dent N, Khara T, Guerrero S, Myatt M, Saboya M, Walsh A. Key issues in the success of community-based management of severe malnutrition. Food Nutr Bull 2006;27(suppl):S49–82.

<sup>5</sup>World Health Organization (WHO), World Food Programme (WFP), the United Nations Standing Committee on Nutrition (UN/SCN) and the United Nations Children's Fund (UNICEF). Joint Statement. Community-based management of severe acute malnutrition, June 2007

various contexts, and appropriateness of investments, for example, in capacity development and supply components. The global evaluation has conducted comprehensive assessments of CMAM in five countries (Chad, Ethiopia, Kenya, Nepal, and Pakistan) and drawn lessons for use by national governments, UN agencies, NGOs and other stakeholders.

The Federal Ministry of Health (FMOH) in Ethiopia and the UNICEF Ethiopia Country Office undertook this evaluation of CMAM in Ethiopia to synthesize lessons and recommendations. The evaluation will assist in advocating for resources for strengthening existing programmes and expanding treatment for SAM. (The evaluation of MAM will be undertaken as a separate exercise.) This Ethiopia case study will also be part of the global consolidated CMAM evaluation report, which is expected to enhance the global CMAM knowledge and evidence base for sharing with other countries, as well as serve as input for advocacy and policy decisions on its future directions.

This report is divided into seven chapters.

1. Introduction; Country Background and the Context of CMAM Implementation
2. Overview of Ethiopia's CMAM Related Policies, Strategies and Programmes
3. Evaluation Methodology
4. Achievements by CMAM Components
5. Cross Cutting Issues
6. Cost of the Programme, Sustainability and Scale Up
7. Conclusions and Recommendations; Good Practices and Lessons Learnt

## 1.2 Country Context and CMAM Implementation

Ethiopia has an estimated population of about 80 million, including 11.1<sup>6</sup> million children of 6-59 months of age (2010-11). Ethiopia has 11 regions divided into 68 zones; smaller administrative units are woredas, which are composed of kebeles. Eighty three percent of Ethiopians live in rural areas<sup>7</sup> and in diverse agro-ecological zones with extreme variations in altitude and rainfall.<sup>8</sup> Ethiopia's economic growth has averaged 11% for the last seven years. As a result, the poverty index declined from 45.5% in 1995-96 to 29.2% in 2009-10.<sup>9</sup> Despite this improvement, Ethiopia remains one of the poorest countries in the world. Moreover, the economic progress has not significantly decreased the proportion of malnourished children. The Ethiopia National Nutrition Strategy (2008) identifies low dietary intake and recurrent infection as the immediate causes of high levels of malnutrition, and food insecurity, lack of appropriate care and unavailability of basic health service delivery as underlying causes.

According to the 2005 Household Income Consumption and Expenditure Survey (HICES), daily average caloric intake per day had increased from 1953 kcal in 1995-96 to 2746 kcal in 2004-05, and an average of 2100 kcal per capita per day was available in all regions. These averages, however, mask differences in actual consumption between the better off and the poor across and within regions. About 20% of the population consumes less than 1600 kcal/capita/day, which is far below the minimum requirement for health and normal activity. It is important to note that malnutrition is widespread even when the country is not affected by food-related emergencies. Per capita availability of food was higher in urban than in rural areas in 1995-96, but in 2004-05 more progress was made in increasing access to food in rural areas than in urban areas. According to a recent survey by the Ethiopian Health and Nutrition Research Institute (EHNRI) to establish the National Nutrition Programme (NNP) baseline in 2008, 35% of Ethiopian households experience some degree of food insecurity.<sup>10</sup> Consequently, Ethiopian children suffer from different forms of malnutrition, a trend that has failed to decline significantly (Table 1.1).

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<sup>6</sup> FMOH, 2011, HSDP IV, EFY 2004 Woreda Based Health Sector Core plan

<sup>7</sup> CSA, 2007, Population Census.

<sup>8</sup> The Disaster Risk Management and Food Security Sector (DRMFSS) Livelihoods Integration Unit (LIU) has identified 175 livelihood zones grouped by cropping, agro-pastoral and pastoral characteristics.

<sup>9</sup> CSA, 2005 and MOFED 2010, Table 6.2.

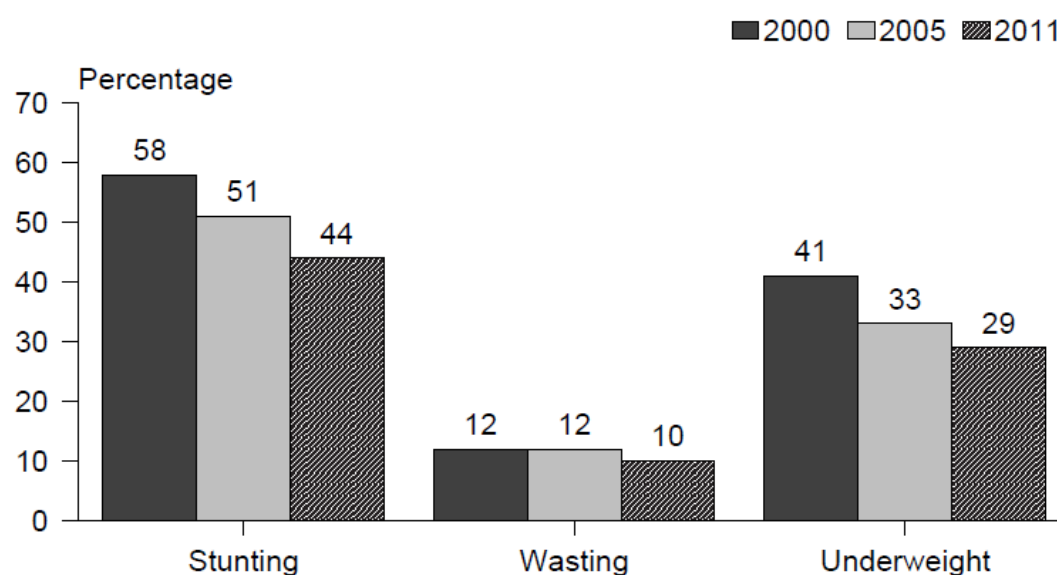
<sup>10</sup> The draft report of the NNP Baseline Survey states that this analysis '... is derived from a series of questions about a household's food situation. Responses are tallied for occurrence and frequency-of-occurrence which produces a score for each household. This score is classified into one of four categories: food secure, mild food insecurity, moderate food insecurity and severe food insecurity.' No further details of methodology are provided, so comparability of this analysis with estimates from other sources is uncertain.

**Table 1.1: Trends in key child anthropometric indicators in Ethiopia, SSA and Least Developed Countries**

	Ethiopia 2000	Ethiopia 2005	Ethiopia 2010	Average for SSA 2000- 2006	Average for Least Developed Countries 2000-2006
<b>Underweight</b>	47.2%	38.4%	27%	28%	35%
<b>Stunting</b>	51.5%	46.5%	44%	38%	42%
<b>Wasting</b>	10.5%	10.5%	10%	9%	10%

Sources: CSA and MACRO ORC 2000, CSA and MACRO ORC 2005, UNICEF 2008.

Ethiopia registered significant gains in many of its child health interventions, including the reduction of the under-five mortality rate from 123/1000 to 88/1000, which is on track for achievement of the MDG goals. However, progress in reducing MAM<sup>11</sup> (defined by a weight-for-height indicator between -3 and -2 z-scores international standard) and SAM has been slow and the prevalence has not been significantly reduced during the past three decades (Figure 1.1, Figure 1.2). The 2011 Ethiopian Demographic Health Survey (DHS 2011) reported 10% of children 6-59 months of age (equivalent to 1.5 million children) are wasted (weight for height <-2 SD). It has been estimated that approximately 2% of these children (~310,000) have severe acute malnutrition (weight for height <-3 SD). Differences are observed by gender and urban-rural residence; wasting affects more boys (11.1 percent) compared with girls (8.2 percent) and more children in rural areas (10.2 percent) compared with 5.7 percent in urban areas. A higher percentage of children suffer from wasting in the Somali region (22.2 percent) than in any other region<sup>12</sup>. Approximately 35% to 57% of the deaths in children under five in Ethiopia are attributable to malnutrition (35% translates to about 30,000 child deaths).<sup>13</sup>

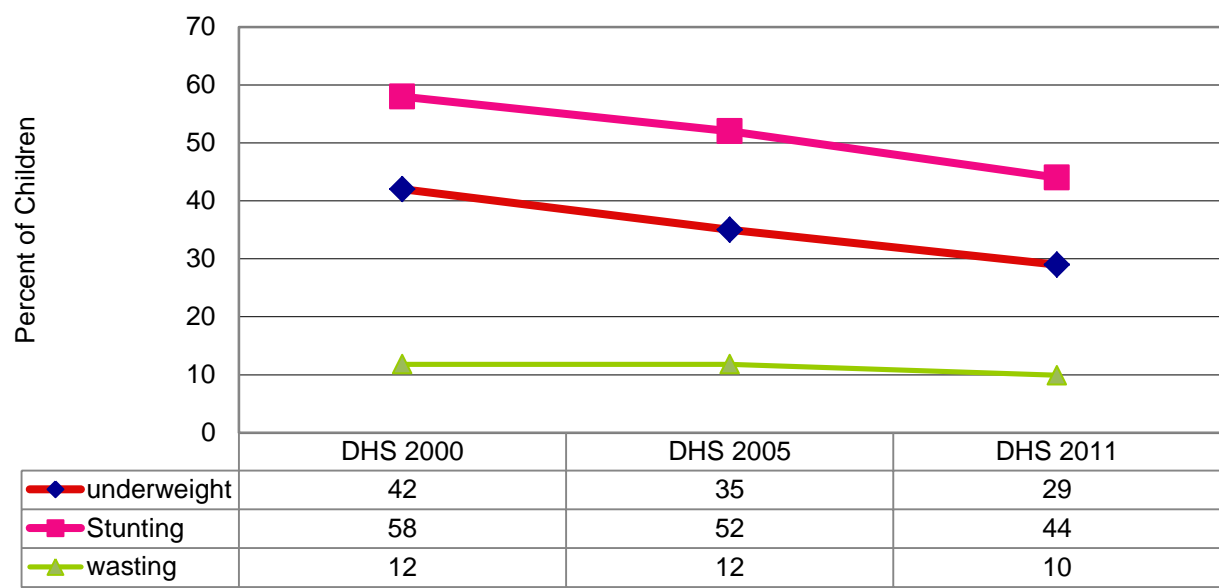


**Figure 1.1. Stunting, wasting, and underweight status from 2000 to 2011.**

<sup>11</sup>MAM is defined by a weight-for-height indicator between -3 and -2 z-scores (standard deviations) of the international standard or by a mid-upper arm circumference (MUAC) between 11 cm and 12.5 cm.

<sup>12</sup> Ethiopia Central Statistics Agency (CSA). Demographic Health Survey: Preliminary report. DHS 2011

<sup>13</sup> **Error! Hyperlink reference not valid.**



Source: CSA, DHS Results. Please note earlier DHS results were converted into the new WHO standards to ensure that they are directly comparable.

Figure 1.2. Trend of children's nutritional status.



## 2. OVERVIEW OF ETHIOPIA'S CMAM RELATED POLICIES, STRATEGIES, AND PROGRAMMES

Through the emphasis on Agricultural Development-Led Industrialization (ADLI), the GOE views agriculture as the engine of the country's overall development. The Poverty Reduction Strategy, called the Growth and Transformation Plan (GTP), has as its major objective the achievement of MDGs through expanding access and quality of services. The programme is targeted to maintain agriculture as a major source of growth. The GTP is an umbrella development plan out of which all the sectoral development plans emanate, including the health and agriculture plans.

### Agriculture, Rural Development and Food Security

The GOE agricultural development programmes are based on diversifying income, markets and livelihoods in the three broad agro-ecological zones. They do not specifically focus on the most poor who have a higher risk of malnutrition compared to wealthier groups. On the other hand, the GTP has priority goals related to food security that aim to reduce the number of people living below the poverty line to 22.2% and the number of people living below food poverty line to 21.2%.<sup>14</sup> In the GTP, a safety net programme will be implemented jointly with the household asset programme to help address land degradation. Plans are in place to strengthen the early warning systems promoting timely response to disaster, which will be part of agricultural and economic development strategies and programmes. Plans are also in place to increase food and non-food reserves. Ethiopia has drafted a Disaster Risk Management (DRM) strategy and framework that is currently in the process of endorsement.

### Overall health policy and systems strengthening

The policy environment in Ethiopia is becoming more conducive to supporting the goals of CMAM. CMAM is included in the Health Sector Development Plan (HSDP) IV and it is a main component of the National Nutrition Strategy (NNS) and its National Nutrition Plan/Programme of Action (NNP). The HSDP, which is now entering its fourth five-year cycle, guides the investment in the health sector. Its objectives and priorities are well elaborated in Table 2.1.

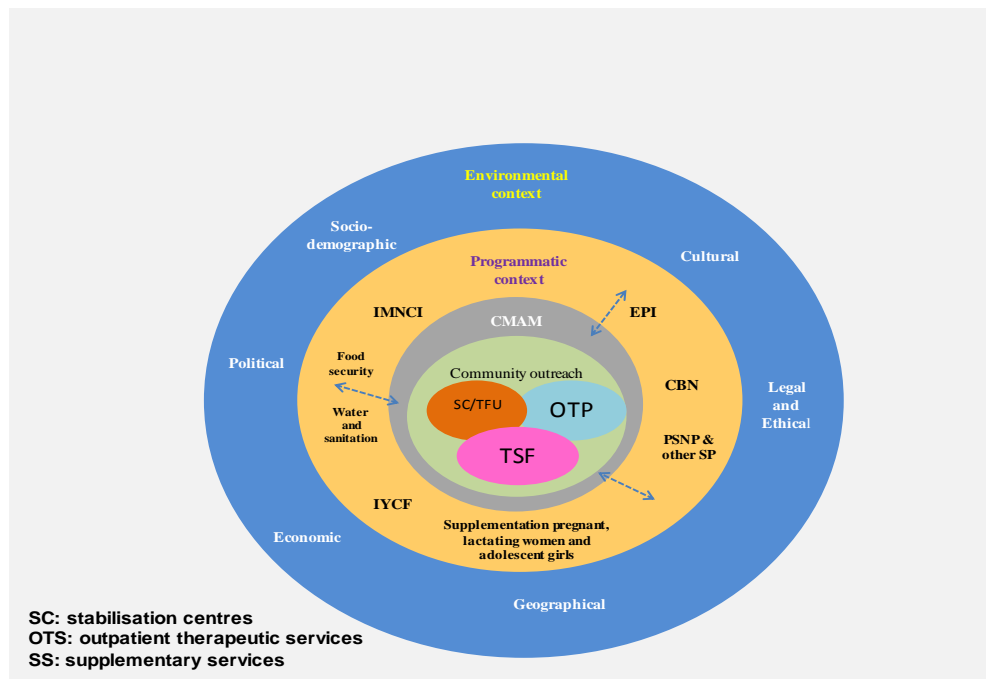
**Table 2.1: HSDP IV Summary Priorities and Targets**

Source: FMOH, HSDP IV 2010/11-2014/15, page 52.

Priority Areas	Impact Objectives	Outcome Objectives	Health infrastructure per population numbers	Implementation Components
<b>Maternal &amp; Newborn Health</b>	MMR 267/100,000	CPR= 66% Deliveries attended by skilled birth attendants= 62%	HPs 1:5,000 Health Centre 1:25,000	Health Extension Programme Health Development Army Supply chain management
<b>Child Health</b>	U5MR 68/1000 IMR 31/1000	Fully Immunized= 90% Pneumonia treatment 81%	Primary Hospital 1: 100,000 General Hospital 1:1,000,000	Regulatory system Harmonization & Alignment
<b>HIV/AIDS</b>	HIV incidence 0.14	ART =484,966 PMTCT= 77%		Health Care Financing
<b>TB</b>	Mortality from all forms of TB = 20/100,000	TB case detection 75%	Specialized Hospital <sup>1</sup> : 1:5,000,000	Human Resource Development
<b>Malaria</b>	Lab confirmed malaria incidence <5 per 1000	LLITN=39 million IRS=77% of targeted households		Health Information System
<b>Nutrition</b>	Stunting prevalence 30%			Continuous quality improvement programme Referral system

<sup>14</sup> MOFED, November 2010, Growth and Transformation Plan (2010/11-2014/15), page 36.

As part of the GTP, the health sector aims at expanding and ensuring quality health services with a view to achieve the MDGs.<sup>15</sup> HSDP IV aims at improving the quality of health services and strengthening the health system through fulfilling the required health system inputs such as human resources, logistics, information system and financing. A stronger focus is also given to scaling up of a new community based approach known as the 'Health Development Army'.



**Figure 2.1: Linkages between CMAM and the context.**

### **National Nutrition Strategy (NNS) and Programme (NNP)**

Ethiopia's first NNS and NNP were approved in 2008. Central to the NNS are the principles of ensuring community participation; establishing and strengthening community based nutrition; effective coordination; priority for vulnerable groups; and improving nutrition knowledge and skills. The five-year NNP has the following targets for the year 2013:

- reduce the prevalence of underweight (WFA <-2) from 38% to 30%;
- reduce the prevalence of stunting (HFA <-2) from 46% to 40%;
- reduce the prevalence of wasting (WFH <-2) from 11% to 5% ; and
- reduce the prevalence of low birth weight (<2.5 kg) from 13.5% to 10%.

## **2.1 CMAM Evolution in Ethiopia**

Since 2002, the evolution of treatment of acute malnutrition in Ethiopia can be characterized by three major milestones with respect to different driving forces of the programme, integration into the health system, treatment components, and geographical scale up.<sup>16</sup>

The first milestone was the establishment of structured SAM treatment programmes scaled up in response to an emergency. This occurred in 2002/2003 during a period of drought and food shortage, which caused an increase in SAM. There were no standard protocols or adequate capacity to manage SAM in the HCs, hospitals, and in the community. SAM treatment was managed in HCs and hospitals by INGOs through TFUs as part of an emergency response with no

<sup>15</sup> According to the Ethiopia: 2010 MDGs Report (MoFED), MDG 4 - Reduction of child mortality is likely to be achieved if current levels of effort are continued.

<sup>16</sup> Response to Severe Acute Malnutrition in Ethiopia: Community-Based Management of Acute Malnutrition (CMAM)-Draft

plans for continuation in a development context. The coverage was very low, with only 44 TFUs (in-patient sites mostly managed by INGOs) in SNNPR, Oromia, Amhara and Somali and the maximum number of admissions was 24,600.<sup>17</sup>

The second milestone occurred between 2004 and 2008. This period was characterized by major changes in the approach to SAM treatment, including use of a community-based system, which dispensed ready-to-use therapeutic foods (RUTF). The treatment was managed through OTPs and was further decentralized to HCs to increase coverage and access to SAM cases. The coverage increased because of the expansion of both in-patient and the OTP to more HCs and hospitals.

By 2008, the in-patient facilities and the OTPs had been scaled up to 165 hospitals and HCs.<sup>18</sup> Management was shared between FMOH, UNICEF, and INGOs, however, UNICEF and FMOH both advocated for transferring responsibility for SAM treatment to the FMOH and its decentralized health system. The role of the INGOs would be to provide technical assistance to Woreda and health facilities. At that time, there was a risk that decentralizing CMAM to health posts and through the Health Extension Programme (HEP) might compromise quality and the reach of the preventive services that the HEP was originally established for. However, UNICEF and partners continued to advocate for the decentralization of OTP to HPs, and this was further pushed by the 2008 drought crisis and lessons gained during the international conference on the integration of CMAM.<sup>19</sup>

The third milestone occurred from 2008 to the present. Importantly during this phase, the FMOH established itself as the leader and owner of the programme. In 2008, drought and high food prices again caused dramatic increases of SAM cases. The FMOH decided to rapidly scale up CMAM by decentralizing OTP to HPs and made concerted efforts to integrate the TFP into the health system. This was facilitated by the changing mindset of the IPs and their willingness to provide technical assistance within the FMOH health system rather than establish their own TFUs.

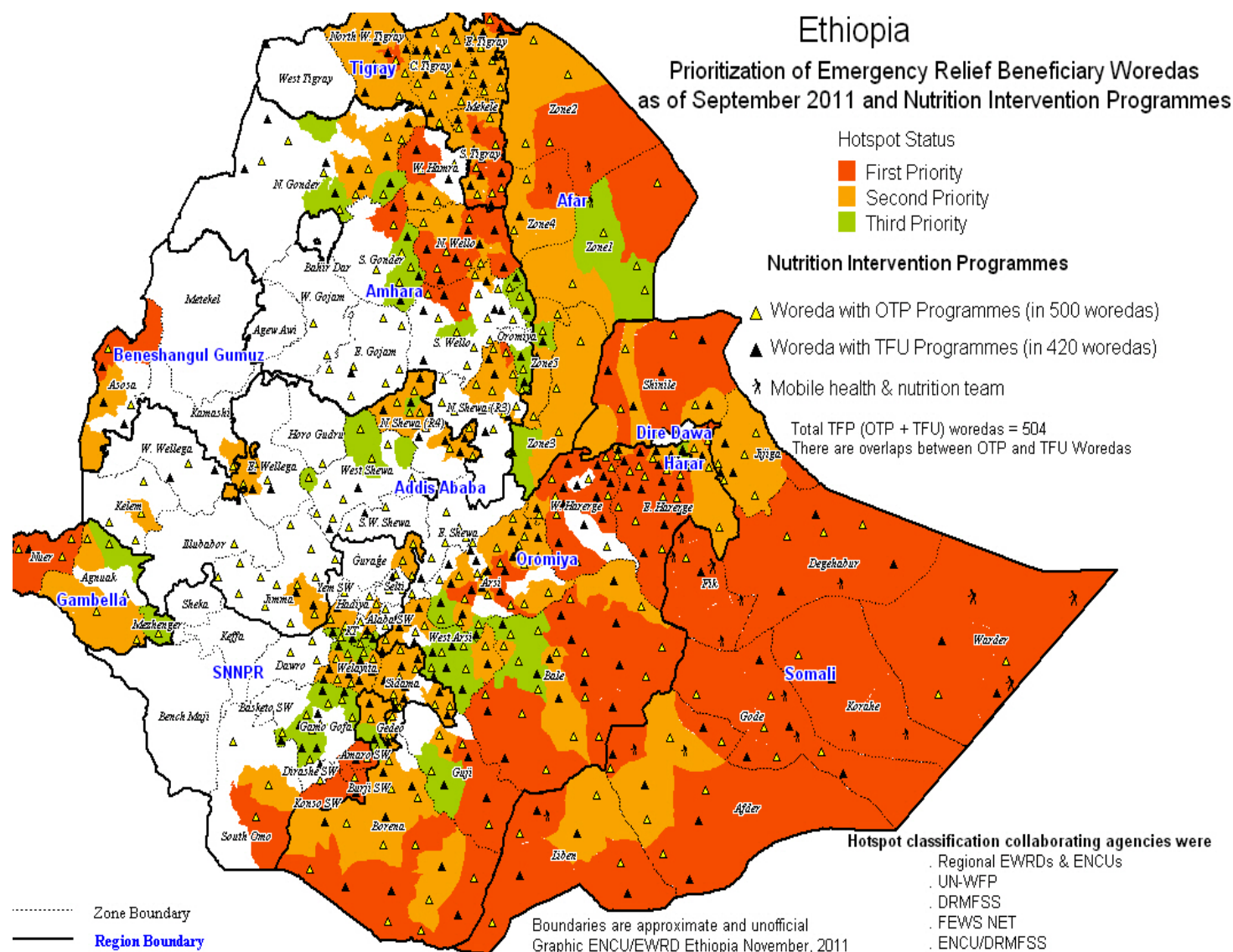
During this phase, stakeholders agreed that the CMAM approach needed to be developed within the health service delivery system and to function on a permanent basis. The children with SAM could then be treated quickly close to the community, which would take some pressure off of the overloaded HCs. The FMOH requested funding and technical support from UNICEF and partners to scale up OTPs to 100 districts and 1,239 HPs and build the capacity of 2,478 health extension workers. As of May 2011, CMAM services were extended to 622 woredas; there are 8100 health facilities (HPs and HCs) providing OTP services and 473 HCs and hospitals providing in-patient care in TFUs.

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17 Sylvie Chamois: Decentralization & scale up of outpatient management of SAM in Ethiopia. Field exchange, Feb 2011, special issue.

18 The health service delivery in Ethiopia is comprised of a tier system organized in to three levels of health care delivery system. The three tier system consists of a first level of a Woreda/District health system comprising a primary hospital, health centres and their satellite Health Posts which form a Primary health care unit (PHCU). The second level in the tier is a General Hospital with population; and the third a Specialized Hospital (see Figure 2.1 for the average number of people to be served in each tier).

19 International Workshop on Integration of Community Management of Acute Malnutrition, Washington Dc, April 28-30, 2008



**Figure 2.2: Woredas with OTP and TFU programmes in September 2011.**

## 2.2 CMAM Programme Objectives

The objective of CMAM, through institutionalizing and integrating CMAM within the regular health services, is to prevent childhood deaths due to acute malnutrition by increasing access to early detection and quality treatment. Regular access to CMAM contributes to reduction of child mortality and achieving MDG 4.<sup>20</sup> The programme also aims to decentralize the outpatient therapeutic feeding services, creating capacity during the non-emergency or normal times. Another aim is to build capacity for rapidly scaling up services during crises. The CMAM has evolved into being one of the priorities of the FMOH as stipulated in the HSDP IV.

<sup>20</sup> Food and Nutrition Bulletin, vol. 27, no. 3 (supplement) © 2006, The United Nations University.

## 2.3 Programme Strategies

In Ethiopia, CMAM is currently being implemented in a development context and it has three main components (Community outreach/mobilization, OTP and TFU or Inpatient care) and in some cases another optional component (MAM management) depending on resource availability. CMAM components are not implemented as a project rather they are part of the national CMAM programme supported by different partners except for the MAM component.

In 2007, the FMOH published the “Protocol for the Management of Severe Acute Malnutrition”, which explains implementation modalities in detail for inpatients, outpatients and infants based on international guidelines and protocols. Because, there was an already established community mobilization strategy for EOS/TSF, only a very brief section is devoted to community mobilization, including sensitization, case-finding and follow-up. The publication also addresses HIV/AIDS and malnutrition. Some of the terminology and operational realities have changed in recent years. Job aids for health workers were produced. A non-standardized training package was also produced.

### 2.3.1 Community Outreach and Mobilization

Community Outreach through CMAM typically consists of four activities: screening or active case finding, referral, admission and home follow-up. Health Extension Workers (HEWs) and Volunteer Community Health Workers (VCHWs) (one per 50 households) conduct community screening with the MUAC for early case finding using three contact points: house to house visit, Community Health Days/EOS and at HP when children come for basic curative and preventive services. The VCHWs also refer the SAM cases for admission to the programme, give basic nutritional advice to mothers, and provide home follow up for defaulters encouraging them to return to the programme.

The HSDP IV will shift responsibility for health and nutrition activities from the VCHWs to the Health Development Army (HDA). The HDA is the key strategy to scale up best practices by organizing and mobilizing families with a network between five households and one model family to influence one another in practicing a healthy life style. This network of families will be provided technical support and training by HEW's to implement the packages of the HEP. The HDA is expected to expand the successful HEP deeper in to communities and families, improve community ownership. They will be engaged in the promotion and prevention activities at household and community level, including the regular coordination of structured Community Dialogue Sessions, with the guidance of the HEWs.

### 2.3.2 Outpatient Therapeutic Programme (OTP)

Outpatient care is intended for children presenting with SAM with good appetite and without medical complications, and for children who are transferred from inpatient care after they recover. The OTP is provided at the HPs and HCs. The service is provided daily for new cases and one OTP day in a week is scheduled for follow up of enrolled cases. The children undergo an appetite test, and receive RUTF and routine medicines for administration at home. They return weekly to the outpatient care site until they are discharged. As of May 2011, there are 8,100 health facilities with OTP services (of these, 7,137 are HPs and 963 are HCs) countrywide.

### 2.3.3 Therapeutic Feeding Unit (TFU) or Inpatient Treatment

Acutely malnourished children with a poor appetite or medical complications or if they are infants less than 6 months are treated in an inpatient care facility until they are well enough to continue nutritional rehabilitation in OTPs. The TFU service is provided at the HCs and hospitals. The FMOH and UNICEF have initiated a scale up plan for TFU whereby there will be one TFU per woreda (approximately 805). As of May 2011, there are 473 HCs and hospitals with TFUs in the country.

### 2.3.4 Management of Moderate Acute Malnutrition

In woredas where the Targeted Supplementary Food (TSF) programme is available, children and pregnant and lactating women with MAM identified by the HEWs through Community Health Day(ChD) or EOS receive dry take-home rations (TSF ration) for three months and a second refill given after three months. Despite the rapid scale up of the three components of CMAM, TSF woredas decreased from 365 woredas to 168 woredas since 2006 because donors reduced their funding for TSF because of high food prices and concerns about TSF effectiveness mainly related to reported high inclusion errors. Guidelines for MAM management are in the process of being revised through a wide consultative process.

### 2.3.5 Partnership in CMAM

The FMOH and the ENCU with the Multi-agency Nutrition Task Force (MANTF) under the Disaster Risk Management and Food Security Sector (DRMFSS) is responsible for creating an enabling environment, and the overall coordination and implementation of CMAM services. The FMOH health care providers manage outpatient and inpatient care as part of their routine services and collaborate with VCHWs to conduct community screening during CHDs/EOS and house-to-house visits. They also report CMAM data to the next level of the health system. The Zonal and Woreda health offices in collaboration with UNICEF and sometimes with INGOs support CMAM services by providing CMAM supplies, and building the capacity of HEWs through training and supportive supervision as part of existing routine health services. The FMOH also provided routine medication (antibiotics and malaria prophylaxis) free to children with SAM until recent policy changes in some regions, which now charge for medications.

The ENCU/MANTF at the federal and Health and Nutrition Task forces at the regional level play a critical role in coordinating the CMAM rollout. They were established to coordinate emergency response but it has been used for CMAM too. They are attended by UN agencies, INGOs, donors and relevant government counterparts. These forums are used to coordinate response and scale up, avoid duplication, identify and address gaps and challenges jointly, maximize resource utilisation for scale up and utilise TFP data for decision making.

Partners currently supporting the integration and scale-up of CMAM in Ethiopia are UNICEF, WHO, INGOs and WFP for the TSF. UNICEF coordinates the overall scale up of CMAM, mobilizes resources by developing an emergency nutrition response plan, and procures and distributes CMAM supplies to Zonal health office and in some cases to Woreda level. UNICEF also provides technical assistance to FMOH and its decentralized system on standardizing protocols, training, quality improvement, supportive supervision and performance review, and monitoring, reporting, and evaluation.

INGOs provide technical assistance which includes: capacity building training, establishing an OTP or TFU, monitoring, reporting and preparing quality improvement tools, supporting the review and in some areas transporting CMAM supplies especially RUTF to HPs. Save the Children operates Food by Prescription, which supplies RUTF to people living with HIV/AIDS in some woredas. Donors provide funds to support the role out of CMAM. The Humanitarian Response Fund (HRF), OFDA, Japan Government, ECHO, DFID,CIDA, Spanish MDG-Fund, and others have provided funding, sourced from emergency funds in almost all cases.

## 2.4 Programme Targets

Although CMAM in Ethiopia targets all children and adults affected by SAM, there is a perception that CMAM is mainly for children under five with SAM especially in the developmental context. The HSDP IV articulates goals for CMAM for achieving high quality service and meeting the Sphere standards by 2014/15. These are to:

- Increase the proportion of severely malnourished under-5 children that are adequately managed from 23% to 91%;
- Achieve a malnutrition cure rate of > 75%, defaulter rate <15% and mortality rate < 5% in TFPs (inpatient & OTP).<sup>21</sup>

However, there is a significant resource gap to achieve these targets set as shown in Table 2.2.

**Table 2.2: Development Nutrition Resource Gap during HSDP IV**

	Total budget estimate (in million USD)		Projected resources committed (in Million USD)	Funding gap 2010/11-2014/15 (in million USD)	
	Base-case scenario	Best case Scenario		Base-case Scenario	Best case Scenario
<b>Nutrition</b>	<b>108.27</b>	<b>124.22</b>	<b>14.31</b>	<b>93.96</b>	<b>109.91</b>

Source: FMOH, HSDP IV, page 75.

<sup>21</sup> FMOH, HSDP IV, 2010.



## 3. EVALUATION SCOPE AND METHODOLOGY

### 3.1 Evaluation Scope

This independent evaluation of CMAM in Ethiopia is one of five country case studies that are part of the global CMAM evaluation commissioned by UNICEF. It is coordinated and guided by UNICEF Headquarters and the UNICEF Ethiopia Country Office in partnership with the Ethiopia Federal Ministry of Health (FMOH) through the Evaluation Steering Group established for this purpose. The overall objective of the Ethiopia CMAM evaluation is to generate and disseminate evidence on experience in Ethiopia. The specific objectives are to:

- a) Undertake qualitative and quantitative assessment of the progress made in implementing CMAM to date, clearly documenting key successes and good practices as well as gaps and constraints to be addressed
- b) Assess the programme relevance and appropriateness, efficiency and quality of services
- c) Assess the effectiveness, results and sustainability of the programme
- d) Assess how well cross cutting issues like coordination, governance, and management, gender and equity, capacity development, advocacy and policy development, and information/ data management facilitated the scale-up process
- e) Generate evidence based lessons and recommendations to strengthen the expansion of CMAM coverage.

The evaluation addressed questions posed in the country TOR, which closely followed the global TOR for evaluation of CMAM. The evaluation examined processes and results related to the three key components of CMAM in Ethiopia: 1) Community outreach; 2) Outpatient care for children with SAM without medical complications at decentralized health facilities and at home; and 3) Inpatient care for children with SAM with medical complications. Although the global model for CMAM clearly includes MAM management, this evaluation was limited to assessing the linkages and interdependence among management of MAM and the other three components when they operate together because a detailed evaluation of MAM management is being planned and supported by other agencies (Figure 3.1.) Furthermore, WHO's six health system building blocks are relevant and part of the CMAM inputs and processes.

The evaluation was carried out by a team of national and global (synthesis team) consultants. The Evaluation Steering Committee (ESC) which is chaired by the FMOH and includes representatives from the FMOH, UNICEF, USAID, WHO, WFP, Concern Worldwide, and other partners contributed to the data collection design, and reviewed the inception and this final report. The research design relied on baseline and routine monitoring data and in-depth interviews and focus groups discussions.

### 3.2 Methodology

The evaluation of CMAM in Ethiopia assessed CMAM as depicted in the CMAM logic model (Figure 3.1) and CMAM in the context among other programmes (Figure 2.1.) The logic model links programme investments (inputs) to products (outputs, including activities, services or materials) and to anticipated change or immediate results gained by beneficiaries, and models may extend to anticipated change in the impact in terms of reducing mortality rates.

#### **Data Collection**

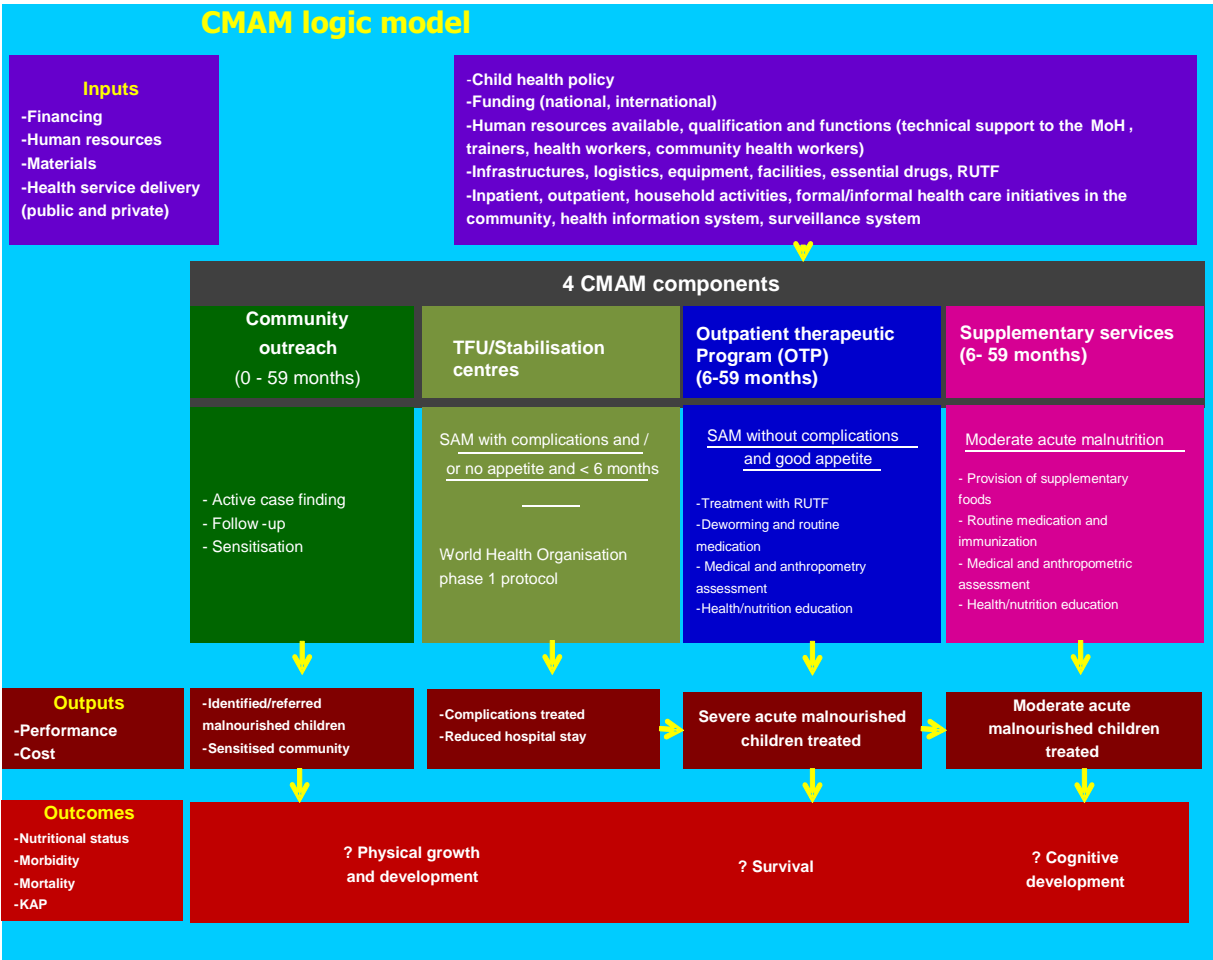
The evaluation relied on both qualitative and quantitative data from four sources: a document review of secondary data and programme documents, interviews with key informants, focus group discussions (FGDs) and visits to CMAM sites.

**Quantitative Data.** The FMOH-ENCU database provided CMAM performance indicators at the regional and federal level and data collected from the sampled health facilities and woreda which were analysed.

**Qualitative Data.** The qualitative data obtained from the key-informant interviews, FGDs and observations were organized under evaluation thematic issues: Access to CMAM Services, quality of CMAM Services, linkage with MAM and other

programmes, integration with government systems, efficiency, sustainability and equity. Under each issue, the achievements, best practices and success factors, challenges and constraints for scaling up were organised.

**Triangulation.** The data from different sources was summarised and triangulated, using at least three different sources, to verify the findings and their programmatic implications. This data included both qualitative and quantitative secondary data from the baseline survey reports, CMAM policy and programme documents and previous reports, as well as primary data collected through interviews and observation.



**Figure 3.1: Input to outcome linkage logic of the CMAM evaluation model.**

**Document Review.** Documents including government health and nutritional policies and strategies as well as national and global CMAM guidance were reviewed. CMAM related assessments, programme strategies and guidelines were also reviewed. Programme implementation reports, CMAM quality monitoring tools, and reports were reviewed to provide evidence on possible gaps and issues. The regional and national FMOH-ENCU database was used for the quantitative data to generate evidence on the identified results of the programme. The facility and woreda CMAM monthly and quarterly reports and client cards such as OTP and Multi-charts were reviewed to understand programme quality and reporting gaps and challenges.



**In-depth Interview.** Interviews, using semi-structured questionnaires, were conducted with key policymakers, development and implementing partners, federal, regional and woreda administrators, health workers and health extension workers (HEWs) to explore their perception on the relevance, effectiveness, efficiency and sustainability of the CMAM programme and to understand the success and the challenges of implementing CMAM and the rapid scale up. (Please see the annexes for persons consulted and interview tools.)

**Health Facility Observation.** A health facility checklist (OTP and Inpatient; Annex 4) and direct observation of health workers evaluating SAM children were used to assess quality of CMAM services in hospitals, HCs and HPs. The assessment was carried out, as much as possible, in the facilities within the referral chain (Annex 5) to examine the extent to which CMAM case referrals are properly carried out. The assessment reviewed the availability of the necessary human resources, equipment and supplies to carry out quality CMAM services as per the national and global guidelines. This method also helped evaluators to understand how far the health workers are capacitated or trained to undertake the activities as per the guidelines.

Level	Targets
Health facilities (Zonal/rural hospital, HC and HPs)	One HP per woreda One HC per woreda One hospital per woreda (if available)

**Figure 3.2: Input to Outcome Linkage Logic of the CMAM Evaluation Model**

**FGDs in Communities.** FGDs were used to identify the perception of the beneficiaries, community leaders, influential people, community health workers, and volunteers (the Health Development Army in areas where it operates) on the performance, relevance and effectiveness to meet their needs and expectations. It was used to generate ideas on what should be done to make the CMAM programme formulation and implementation more responsive. (See annexes for the focus group interview guide and listing of communities visited.)

**Data Analysis and Consolidation.** The rich information collected was the basis for the analysis for the evaluation process. Data was compared and analysed from all sources (in-depth interview, focus groups, observation, and document review). The first step in this process was preparing and transcribing the raw data through regional reports. To ensure the scientific rigor of the data (credibility, dependability, and transferability) various verification processes such as negative case analysis and triangulation by data sources were used.

**Sampling Framework.** Due to the large number of CMAM sites (over 8,000) data collection was limited to five regions and 15 woredas and 45 health facilities<sup>22</sup> which were purposively sampled (see matrix below) based on criteria discussed below as well as time and logistical means available to the team.

**Region, Zone and Woreda Selection.** Five regions were selected for site visits including four of the largest regions (Tigray, Amhara, Oromia, and SNNP) and one (Somali) from the Developing Regions (regions with sparse populations lagging behind in economic development and access to health and nutrition services). The five regions were selected to represent agrarian, pastoralist, hotspots (areas vulnerable to humanitarian emergencies), urban settings, and modality of CMAM implementation (health facilities vs. mobile team).

<sup>22</sup>In Ethiopia, CMAM sites are not stand alone sites, rather they are health centres and health posts run by the government; supported by INGOs in woredas with emergency levels of malnutrition.

The following criteria were used to select the woredas: 1) The presence of some or all CMAM services, such as community outreach, Outpatient Therapeutic Programme (OTP), Therapeutic Feeding Unit (TFU), or Targeted Supplementary Food (TSF); 2) hot spots statuses (1, 2 or 3);<sup>23</sup> and 3) CMAM services provided for at least one year. An ENCU map indicated the presence of 162 number one hotspot woredas, 146 number two hotspot woredas, and 34 number three hotspot woredas. There are only 6 non-hotspot woredas included in the data set. The strong overlap between hotspot woredas and TSF services facilitated assessment of linkages between CMAM and MAM management.

Table 3.1 shows the woredas visited by the team. The following reasoning further underpinned the woreda selection:

- a) Outpatient Therapeutic Programme (OTP), TFU and TSF are jointly provided in 169 woredas, however, woredas with OTP service were excluded from the sampling as they were very few.
- b) Two woredas were selected from each region from those implementing the three services (OTP, TFU and TSF) including one run by government, and one run by government with a partner.
- c) A third woreda was selected from those implementing two CMAM programme components (OTP and TFU), some implemented by government alone and some with implementing partners but in different regions.
- d) Woredas with programmes run by different partners were selected to assess variations regarding their support, including a comparative assessment of the effectiveness and quality of services from the two programme implementation modalities (routine health system versus mobile teams).
- e) Finally, the existence of other programmes (Productive Safety Net Programme, Community Based Nutrition) was also considered to assess the levels of integration and synergy.

**Health Facilities Selection.** Forty-five health facilities were selected. First, one Health Post (HP) was selected randomly and secondly, its corresponding cluster Health Centre and referral rural or zonal hospitals were selected for logistical efficiency. The health facilities list is presented in Annex 4.

**Key Informant Selection.** Four health workers (two from HC having both SC and OTP services from these woredas and two from regional or zonal hospitals) per region were selected purposively for key informant interviews. Six health extension workers per woreda who have been implementing CMAM for at least one year were selected randomly for key informant interviews.

**Focus Group Discussions (FDGs) Participant Selection.** Focus groups were assembled in each kebele where a HP was visited. Two FDGs were conducted for two groups of targets per kebele. The first FGD was held with mothers, fathers, and community leaders and the other FDG was held with kebele leaders, Volunteer Community Health Workers (VCHWs), members of the Health Development Army, and Food Distribution Agents. There were 5-7 participants per FGD.

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<sup>23</sup> "Hot Spots" have been mapped countrywide to indicate areas of humanitarian concern: 1) critical, 2) medium humanitarian concern, and 3) areas that require close monitoring based on indicators which change periodically. Typical indicators include: water storage/WASH, food insecurity, high malnutrition, refugees and border conflict

Table 3.1: Sampled Woredas by Region and Zone

Region	Oromia			Amhara			SNNPR			Tigray			Somali			Addis Ababa <sup>24</sup>	
Selection Criteria	W. Arsi	E. Hararge	N. Shoa	S. Wollo	S. Gondar	N. Shoa	Gedeo	Wolayta	Sidama	N. western	Central	Eastern	Jijiga	Shinile	*Erer		
	Shala	Grawa	Kimbibit	Woreba bo	Ebenat	Menz Geza	Dilla Zuria	Boloso Sore	Bensa	T/Adiya bo	Adwa	Erob	Jijiga	Shinele	Aware	Yekatiti Hospital	Keche e HC
OTP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TFU	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TSF	✓	✓	No	✓	✓	✓	✓	✓	No	No	✓	✓		✓	✓	No	No
CBN	✓	✓	✓	No	✓	No	No	No	✓	✓	✓	No	No	No	No	No	No
PSNP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	No	No
Hotspot	1	1	1	2	2	3	2	2	2	1	1	1	2	2	1	No	No
Urban							✓				✓		✓			✓	✓
Rural	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓		
Mobile team														✓	✓		
Government only managed	✓		✓	✓			✓		✓	✓	✓	✓	✓				
Gov+Concern		✓			✓												
Gov+IMC								✓									
Gov+Care																	✓
Gov+Save US																✓	
Gov+Save UK														✓			
Gov+Mercy Corps															✓		
Gov +WV						✓											

\* Degahabur was replaced by Erer because of security problem to access during data collection.

24 This is included outside the sampling framework to address the issues raised about the urban context

### 3.3 Methodology of the Costing Model

The objective of the cost analysis (see Chapter 5) is to provide forward-looking cost data that can provide insights for policymakers and programme managers about the structure, operations, and resource requirements related to CMAM implementation. Accordingly, a mixed costing approach—that combines resources going down from the centre to woredas (top down) and resources incurred at the facility level (bottom up) has been used. The selected base year for the cost analysis is the year 2010. Woredas have been used as the main unit of costing as this approach facilitates comparison between regions.

For estimation and analysis of costs, the various activities under CMAM were grouped under major categories. For each cost centre, relevant cost items for CMAM was identified, valued and measured.

Following review of several costing models, the “USAID-FANTA costing model” was adopted for this analysis as it is comprehensive and allows adequate disaggregation of the results. Key country-specific data gathered from document review and field assessment has been used to populate the model. For the SAM and other medical conditions management, built-in algorithms and some universal assumptions fixed by the tool have been used.

### 3.4 Quality Assurance and Limitations

The evaluation report, as with the evaluative process, was assessed on the basis of the UNICEF Evaluation Report Standards (2004) and the Active Learning Network for Accountability and Performance (ALNAP) Pro Forma standards (2001). Both draw on good practice in evaluation of development and humanitarian action, incorporating both recognised evaluation standards and OECD-DAC evaluation criteria with other cross-cutting issues.

Three main limitations of the study have been identified and the means of addressing them are described below.

- Given the vast number of CMAM sites (over 8,000) and time constraints related to data collection, the sampling, was limited. Although four of the main agrarian regions and one pastoral region were included in the sample, the number of woredas in each region was limited to three. Although the sampling has been strategically planned to address various criteria to address different contexts, the findings presented in this report cannot fully represent the entire country.
- Another limitation is assessing the potential reach (child denominator) of the programme. This study was not able to generate primary quantitative data. The data on the number of children requiring CMAM intervention (denominator or targeted children) was difficult to find in sources that are available. Thus, the team depended on collecting evidence from analysis of documentation on programme implementation and previous reviews as well as qualitative data.
- One of the global priorities is generating equity of access to services but very little secondary data is available on equity issues. Thus, the team used qualitative data, extrapolations from the newest DHS results and recent nutrition surveys. The equity impact aspect of the evaluation was, thus, limited.

## 4. ACHIEVEMENTS BY CMAM COMPONENT

This chapter covers the effectiveness of implementation of CMAM by component: community outreach, Outpatient Therapeutic Programme (OTP) and Therapeutic Feeding Units (TFUs) for inpatient treatment for children with no appetite and/or medical complications. Performance is examined for screening, admissions, and against Sphere standards for recovery, default and deaths<sup>25</sup>, and challenges to programme quality are discussed, including linkages to MAM management. The capacity development efforts and monitoring and evaluation activities are also analysed.

### 4.1 Community Outreach

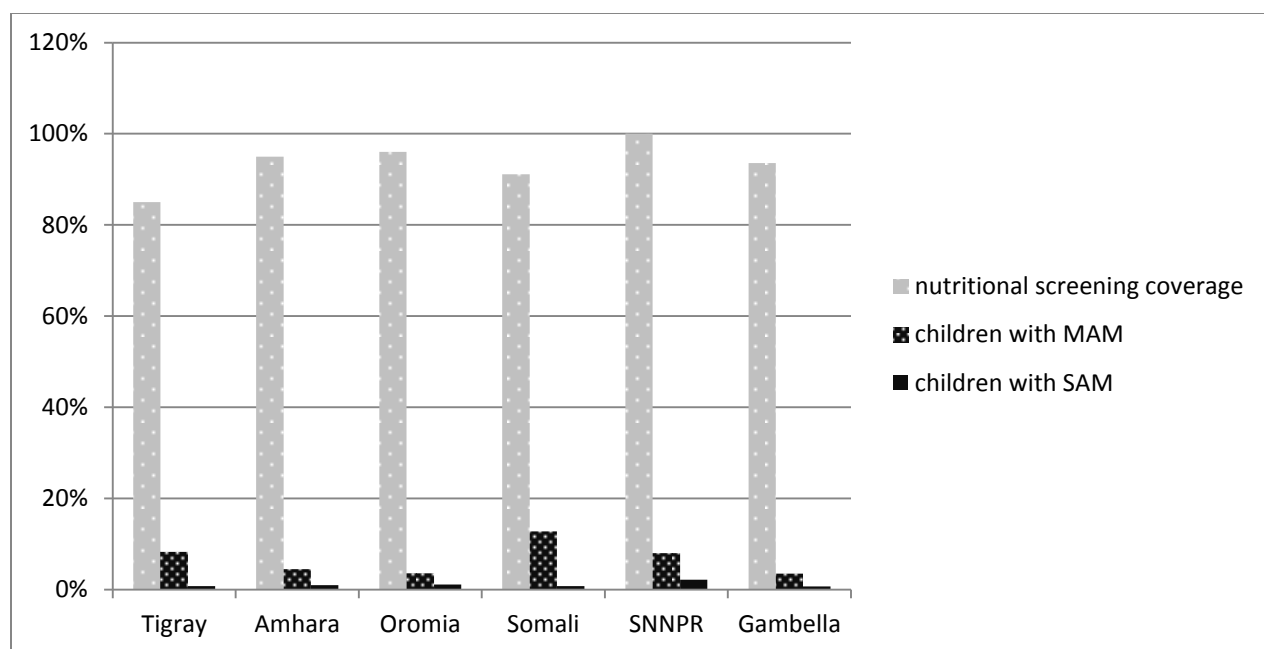
As per the 2007 “Protocol for the Management of Severe Acute Malnutrition”, community outreach or mobilization is defined as the range of activities that help implementers understand the affected communities, build relationships with them and foster their participation in programme activities.<sup>26</sup> The planning phase is described as assessing community capacities and the implementation phases as community sensitization, case finding, follow up and ongoing sensitization. There are IEC materials and job aids for community mobilization, screening, vitamin A and de-worming. Additionally, global guidelines generally cover referrals and admissions in the community outreach component.

Interviewees confirmed that one of the successes of the scale up process has been active case finding by the community. Community volunteers’ (VCHW) role in this process is widely acknowledged. With the exception of few woredas, there is active community involvement and regular SAM case finding. Screenings are carried out with other health initiatives during immunization days, community health days (CHDs) and house-to-house visits, not as a vertical activity. From July to August 2011 through the Enhanced Outreach Strategy (EOS/CHD), 93.6 % of children under five years of age were screened for malnutrition, out of which, 5.7 % and 1.4 % were found to be MAM and SAM respectively. Figure 4.1 shows the regional coverage for nutritional screening. The children with SAM were referred to OTP and MAM cases were referred to the Targeted Supplementary Food (TSF) programme managed by the DRMFS and WFP.

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<sup>25</sup> The Sphere Project Sphere Handbook, “Humanitarian Charter and Minimum Standards in Humanitarian Response”, 2011, page 169

<sup>26</sup> Federal Ministry of Health, “Protocol for the Management of Severe Acute Malnutrition”, March 2007, pages



**Figure 4.1: Regional distribution of nutritional screening coverage for children 6-59 months, July and August 2011. (Source: UNICEF).**

It was difficult to determine **treatment coverage** of children with SAM. No coverage surveys specifically for CMAM have been undertaken.<sup>27</sup> However, interviews of HEWs and focus group discussions indicated that the majority of SAM cases were enrolled into the OTP. Screening data was not disaggregated by gender.

The MOH has recently transferred the VCHW role in community outreach to the Health Development Army. The initial assessment of HDA effectiveness is mixed. In Tigray region, for example, in Adwa woreda, there is a strong linkage between the women's development army, the community volunteers and kebele leaders. In Erob woreda, on the other hand, there were gaps in transition from VCHWs to HDA, to the extent that some VCHWs were not willing to handover equipment such as the Salter scales. When shifting the community mobilization strategy to the HDA mode, care should be taken not to lose the momentum created and the effectiveness of active case detection by the community. The HDA role is still evolving and it is currently premature to judge its impact on the effectiveness of the CMAM programme.

## 4.2 Outpatient Therapeutic Programmes and Therapeutic Feeding Unit Services: Access and Quality

### 4.2.1 Outpatient Therapeutic Programmes (OTP)

The "Protocol for the Management of Severe Acute Malnutrition" (2007) identifies activities in the OTP to be confirmation of the MUAC screening, identification of children with medical complications and their referral to an inpatient service, and administering an appetite test, all following specific criteria.

<sup>27</sup> Coverage surveys were undertaken for "Post Community Health Days Coverage Survey" in Oromia, SNNPR and Tigray regions in 2010.

The OTP services geographic coverage has improved significantly. The overall expansion of services in Ethiopia is guided through a national population standard (one health centre for 25,000 people and one health post for 5,000). Geographic coverage goals are based on assessment of relative vulnerability. The government collects early warning indicators to identify hotspot woredas which are classified as priority 1, 2 and 3 based on a combination of factors including high food insecurity, moderate to high levels of malnutrition rates, admission trends in therapeutic feeding programmes and other vulnerabilities. A priority 1 woreda is the most severely affected, needing urgent humanitarian intervention whilst priority 2 and 3 woredas, though needing assistance, do not require the scale of response needed in a priority 1 woreda.

The FMOH planned to scale up OTPs from 455 HPs and 100 woredas in 2008 to additional 784 HPs and to a total of 622 woredas, with no specific goal in terms of time.<sup>28,29</sup> As of August 2011, 7,137 HPs were providing OTP services and the total number of woredas with OTP services increased to 691. The overall coverage of OTP services for the 622 woredas was 59%. The coverage for hot spot priorities 1 and 2 woredas was more than 80%, which is a substantial achievement. (Table 4.1)

**Table 4.1: Geographic Coverage of Outpatient Therapeutic Programmes**

Hot spot priority	No. of woreda	Total no. of HPs	No of HP existing OTP	% of HP running OTP	Total no. of Health Centres (HC)	No. of HC with existing OTP	% of HC running OTP	Total no. of HPs and HC	Total no. of OTPs	% coverage of OTPs
1	175	3,094	2,730	88.20%	541	376	69.50%	3,635	3,106	<b>85.45%</b>
2	138	2,830	2,358	83.30%	497	319	64.20%	3,327	2,677	<b>80.46%</b>
3	40	955	606	63.50%	159	49	30.80%	1,114	655	<b>58.80%</b>
4	269	4,907	1,443	29.40%	653	219	33.50%	5,560	1,662	<b>29.89%</b>
	<b>622</b>	<b>11,786</b>	<b>7,137</b>	<b>60.60%</b>	<b>1,850</b>	<b>963</b>	<b>52.10%</b>	<b>13,636</b>	<b>8,100</b>	<b>59.40%</b>

Source: UNICEF, ENCU Database (September, 2011) .

The OTP staff identified challenges and gaps including lack of OTP cards in some facilities and the OTP cards were not utilized optimally in others; RUTF supply interruption due to lack of transportation from woreda to HP; and, lack of some routine drugs such as amoxicillin and folic acid.

#### **4.2.2 Therapeutic Feeding Units (TFU) for Inpatient Care**

The “Protocol for the Management of Severe Acute Malnutrition” (2007) stipulates that SAM cases with complications admitted to inpatient care require separate wards<sup>30</sup> with staff specially trained on SAM treatment, a three phased approach for treatment (Phase 1= administration of F75; Transition phase = introduction of F100 or RUTF, and Phase 2 = treatment with F100 or RUTF) and daily progress measured on multi-charts. The three phased approach is a critical concept in the guidelines as Phase 1 promotes recovery of electrolyte balance and metabolic function rather than weight gain. The transition phase permits gradual weight gain.

28 Sylvie Chamois: Decentralization & scale up of outpatient management of SAM in Ethiopia. Field exchange, Feb 2011, special issue

29Response to Severe Acute Malnutrition in Ethiopia: Community-Based Management of Acute Malnutrition (CMAM)-Draft

30 The idea of having a separate inpatient ward especially at health centre level makes the implementation of these guidelines difficult as the infrastructure does not allow for such wards to exist in many facilities.

The TFU geographic services coverage also has improved significantly. (Table 4.2) There was no national roll-out plan and target set for in-patient care/TFU, however, the FMOH and UNICEF planned to establish one TFU per woreda in 2010 or 805 TFUs. The overall coverage of TFU compared to estimated need (the total number eligible facilities) is currently 24.6%. A total of 473 sites (HCs and hospitals) are providing TFU services in the 622 woredas, which means there are now 0.7 TFU per woreda. The majority of hospitals (93%) and only 22% of HCs provide TFU services. The coverage for hot spot priority 1 & 2 is better than 3 & 4. These data clearly shows that more effort is required to reach the recommended level of one in-patient unit per woreda. A barrier to reaching the TFU goals as per the guidelines is that infrastructure does not exist in many health facilities to allow establishment of a separate inpatient ward.

**Table 4.2: TFU Geographic Coverage**

Hotspot priority no	No of woreda	Total no of Health Centres	No of HC running TFU	% of HC running TFU	Total no of Hospital	No of Hospital running TFU	% of hospital running TFU	Total no of HC and HP	No of HP and HC running TFU	% of HC & HP running TFU
1	175	541	178	32.90%	16	14	87.50%	557	192	34.47%
2	138	497	131	26.40%	17	16	94.10%	514	147	28.60%
3	40	159	28	17.60%	4	4	100.00%	163	32	19.63%
4	269	653	69	10.60%	35	33	94.30%	688	102	14.83%
<b>Total</b>	<b>622</b>	<b>1,850</b>	<b>406</b>	<b>21.90%</b>	<b>72</b>	<b>67</b>	<b>93.10%</b>	<b>1922</b>	<b>473</b>	<b>24.61%</b>

Source: UNICEF, ENCU Database.

The following challenges and gaps were identified for the TFU:

- **Few health facilities especially HCs adhered to the protocols.** There were gaps and treatment errors in the services. Children were not given routine drugs such as Amoxicillin. Children who should be treated in phase two (using RUTF) were treated in phase one, while some who can be treated in OTP were being treated in TFU.
- There was **high staff turnover and rotation** and most medical doctors and paediatricians serving the TFU had not been trained on CMAM. This is due to the “tasks shifting” strategy which aims at transferring CMAM inpatient day to day management to health officers and nurses.
- Some indications of **weak capacity** included inappropriate admissions of children, delayed transfer of cases from phase to phase and to discharge, and poor record keeping.
- The **space allocated to the TFU was often too limited.** This is because the health facility design did not take into account this service; so it is an add-on to other child health services. It may be important to explore the design of the primary hospitals to ensure the infrastructure does take into account CMAM services, as this is the government priority in the next few years.
- **Lack of food services for caretakers** at TFUs often has adverse effect on TFU performance. It is reported that caretakers are forced to take their children from TFUs at HC levels because of this challenge. This can only be solved when the envisaged primary hospitals are in place.

#### 4.2.3 Admission Trends for TFP (OTP and TFU)

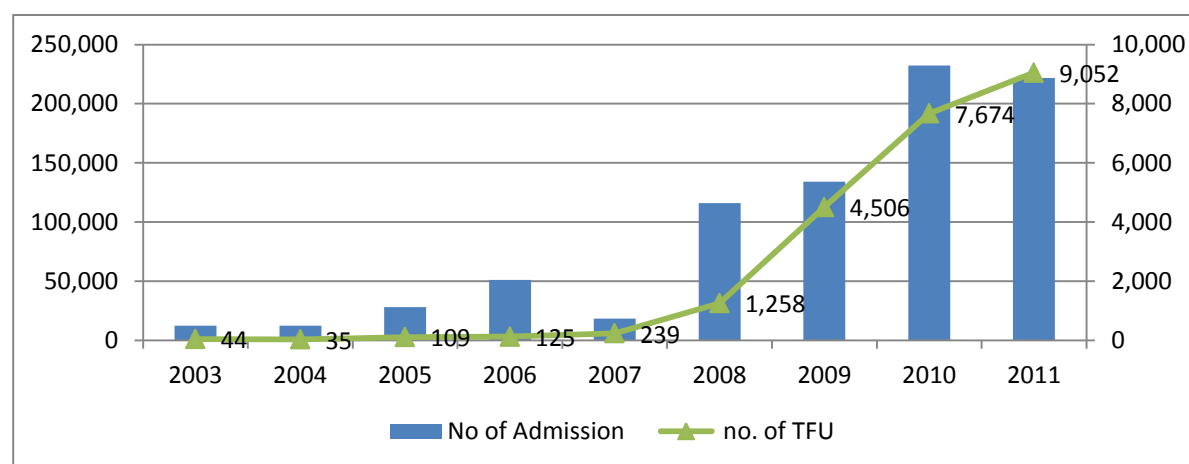
From 2008 to 2011 admitted SAM cases increased significantly from 115,000 to 221,000 (the 2011 data only includes the first nine months). While the national target for new admissions could not be



determined, these admission rates suggest that the majority of estimated SAM cases in the country are accessing service.

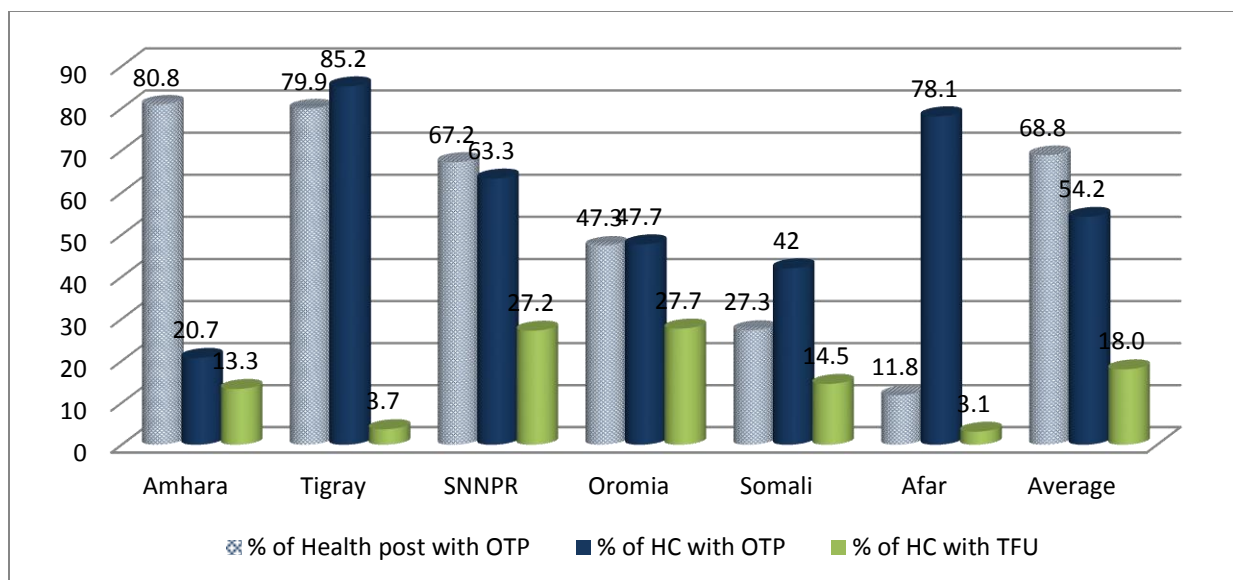
There has been significant progress in expanding geographic access for treatment of children with SAM. The number of therapeutic feeding points increased from 44 in 2003 to 239 in 2007, before the government decided to scale up the programme. Since then, expansion has been rapid and these points now number more than 9,000 (Figure 4.2). CMAM has been transformed from a small scale NGO-run activity into a nationwide public health programme, which covers more than 90 percent of health facilities in the hotspot woredas to provide either OTP or TFU services (Figure 4.3). Out of the total woredas (805) including those in the non-hotspot areas, CMAM services are provided in 77%. Approximately 61% of 12,000 HPs and 52% of 1,850 HCs now have outpatient services while 22% of HCs and 61% of hospitals have TFUs.<sup>31</sup>

This expansion and decentralization of services have significantly increased access to CMAM services in the country. During the initiation of CMAM in 2003, a mere 12,000 children were admitted to TFUs and this increased to about 18,000 before the major scaling up initiative began in 2008. Since 2008, the number of children accessing admission services increased by more than 12 fold in just four years and the programme is now able to provide service to more than 230,000 children per year (Figure 4.2). (Note: The total number of admissions is the unit of measurement for the first y-axis whereas total number of TFP (CMAM) sites is the unit for the second y-axis. Data on 2011 admissions covers January to August 2011.)



**Figure 4.2: Growth in the number of therapeutic feeding points and trend in SAM admissions.**  
(Source: ENCU TFP database.)

There are regional differences in the expansion of these services. The three agrarian regions, Amhara, Tigray, and SNNPR have high coverage of OTPs at HP levels. However, there is significant variation among these agrarian regions regarding the expansion of the OTPs and TFU at the HC levels. The coverage of the OTP and TFUs is lower in Afar and Somali as compared to the four agrarian regions because of the weaker overall health system in these regions. This is manifested by inadequate availability of functional health posts. Six of the woredas in the evaluation sample of 45 had no TFU services. In the hotspot woredas of the four large regions, less than 30% of HCs have TFUs (Figure 4.3).



**Figure 4.3: CMAM service coverage in hotspot woredas (1 to 4) by region (Source: UNICEF: ENCU TFP database.)**

The success of the decentralization of CMAM is universally acknowledged by all stakeholders interviewed, including FMOH, donors, INGOs, health workers, and HEWs. All have highlighted the significant gains made in increasing coverage of OTP and TFU services as indicated in the above figures. The evidence of the capacity of Ethiopia to effectively identify and treat SAM is further strengthened by Ethiopia's response to the 2011 East African drought. The increase in SAM cases was detected early because of an abnormal increase in the number of admissions; treatment was timely and the mortality rate was very low. Interviewees compared it with the 2008 emergency where there were many cases of SAM with medical complications and the death rate was high.

Contributing to the success is the integration of OTP and TFU into the government health service delivery instruments both in the fixed health facilities and mobile health teams for pastoralists. However, the mobile health teams have unsustainably high operational costs, mainly managed by INGOs. Their integration into the pastoralist health extension programme itself is not as effective as it is supposed to be because the system weaknesses and the FMOH and regional health bureaus have been working to review and revise the implementation strategy.

Partnerships have contributed significantly to the impact of the CMAM scale-up. Implementing agencies working through the national health delivery system in collaboration with the regional and woreda health managers have helped to actualize the re-defined role of INGOs in CMAM scaling up. However, the scaling up exercise has not been as effective in the Somali region, due to the weaknesses in the pastoralist health extension programme.<sup>32</sup> In Somali region also, some woredas had no CMAM services because of insecurity and inaccessibility.

31 UNICEF/ENCU data base

32 According to recent assessment the HEP packages specifically the model HH packages may not be relevant to pure pastoralist context;. Lower qualification entry requirement and short training period for Pastoralist health extension workers compromising quality forcing the training program to spend almost 50% of their 6 month's on basic training (Amharic, math, etc.) and not on service delivery skills inadequate number of PHEW deployed in the kebele and given the geographic spread of the Kebele, they are unable to perform the responsibly effectively. (see Jack Elden and et al, 2011, "Options for service delivery for pastoralist regions of Ethiopia: peace and development program of DFID".)

Another constraint to access and coverage is that CMAM services are no longer explicitly exempted from payment in all regions implementing health care financing reforms. Free health care for all children under five years of age with SAM, who are usually from the poorest families, was positively associated with access. Health care providers and beneficiaries reported that the payments required in some regions for routine drugs and TFU services at HC and hospital level have negatively affected access to CMAM services (e.g. some families left the TFU when asked to pay). The quality of services has also been affected, e.g. children were given the free RUTF but not given routine drugs. Some regions such as SNNPR offer the CMAM services free of charge by financing the cost of routine drugs from their own budgets.

The challenges for improving equity in access in most of the regions visited include the following.

- **Insufficient TFU services.** Although access to inpatient care has improved overtime, there is a need to devote resources to increasing the numbers of TFU services.
- **Weak coverage in pastoralist areas.** CMAM services in pastoral areas require review as to the most effective means of creating greater access for SAM children.
- **Some families cannot pay charges levied for CMAM services.** The issue of how to finance routine drugs as exempt services needs to be urgently investigated.

### 4.3 Performance and Quality of CMAM Services

The “Protocol for the Management of Severe Acute Malnutrition” (2007) is available in the majority of the HCs and hospitals; some staff use it regularly and others use it when they face problems. Health Posts and hospitals also maintain their own standard operating procedures. The CMAM quick reference guide was available in most HPs in appropriate languages. Most of the available on the job guidance for CMAM was displayed in almost all level of facilities. Contributing to the quality of service, the majority of health facilities and HP have an adequate number of trained health workers (see discussion on capacity building below).

The CMAM programme in Ethiopia made impressive achievements with regard to the Sphere Standards.<sup>33</sup> From January to August 2011, it achieved an average recovery rate of 83%; a mortality rate of 0.6% and a defaulter rate of 5% (Table 4.3).<sup>34</sup> The quality of the CMAM service was within acceptable range when compared with the Sphere standards across all HPs and HCs, although reportedly, the quality was compromised at the initial stages of the rapid scale up in 2008/2009.

Through comparisons of data, including Population Service International (PSI) scoring of quality of CMAM services, it was clear that the quality of the programme has improved over time. Most interviewees perceived that the quality of CMAM is acceptable and is highly correlated with the overall degree of quality of health services, i.e. lower performing areas in CMAM also had weaker performance in other health services. Several NGO staff and woreda focal persons were concerned that quality is compromised in areas where there is no continuous technical support because of the short funding cycle of many INGOs. Another challenge is also the weak technical support provided by the government due to lack of capacity (both technical and financial) and other commitments.

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<sup>33</sup> Sphere standards are designed to apply for emergencies and not development intervention. Its use in the development context need to be modified due to the fact that in normal times, there is more room for proper planning and resource mobilization.

<sup>34</sup> The Emergency Nutrition Coordination Unit analyzes CMAM program data for treatment of severe malnutrition by Therapeutic Feeding Program (TFP) which combines the OTP and TFU.

**Table 4.3: Performance Indicators of TFP by Regional/ MOH-ENCU Database (January 2008 to August 2011)**

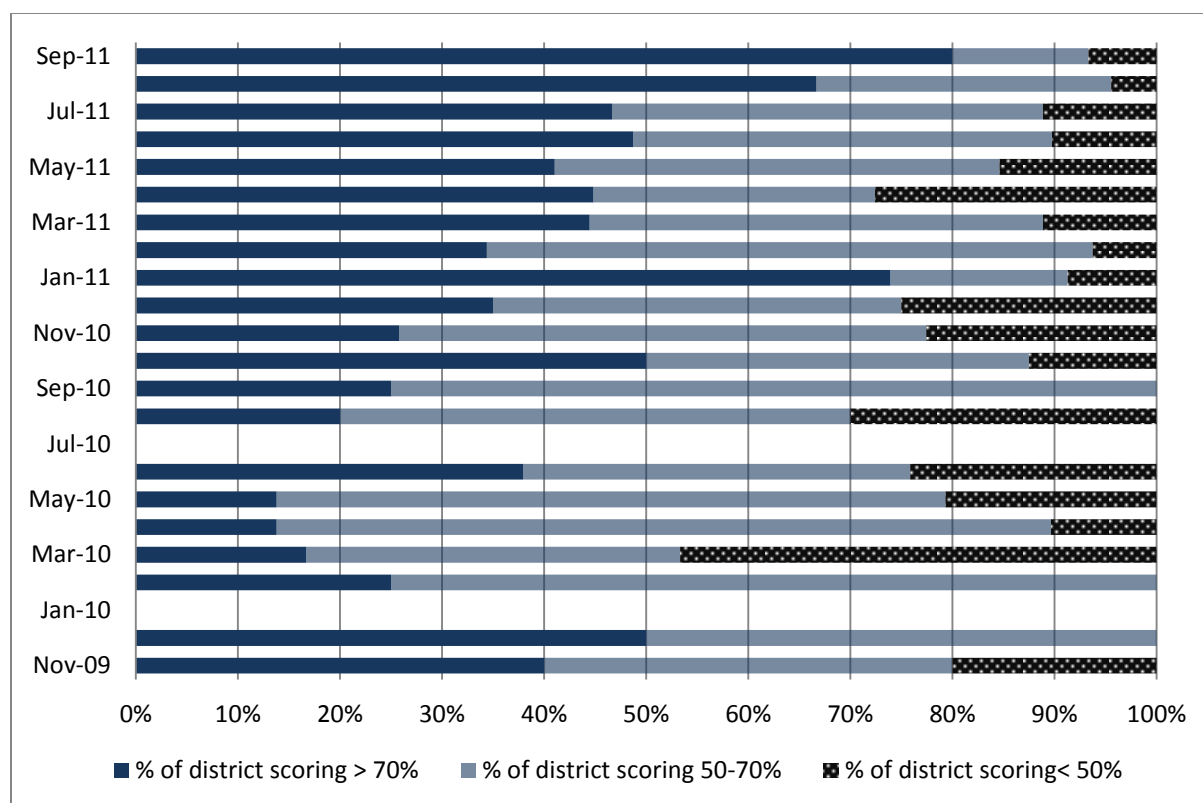
<b>REGION</b>	<b>Number admitted</b>	<b>% Report completion</b>	<b>Total Discharge</b>	<b>Recovery rate</b>	<b>Mortality rate</b>	<b>Defaulter rate</b>
<b>SNNPR</b>	275,860	78.2%	241,682	86.6%	0.6%	2.6%
<b>Oromia</b>	214,828	75.9%	191,447	81.8%	0.5%	4.4%
<b>Somali</b>	50,222	68.0%	42,187	76.2%	1.2%	9.5%
<b>Tigray</b>	39,227	79.5%	37,685	71.7	1.1%	9.1%
<b>Afar</b>	15,919	52.6%	10,992	86.3%	1.1%	4.6%
<b>Amhara</b>	103,997	64.8%	96,465	77.5%	0.8%	9.2%
<b>Ethiopia</b>	<b>703,878</b>	<b>73.4%</b>	<b>623,655</b>	<b>82.1%</b>	<b>0.7%</b>	<b>5%</b>
<b>Sphere Standard</b>				>75%	<10%	<15%

The main factors contributing to quality were a) frequent supervision by the Woreda Health Office (WOHO) and partners; b) continuous capacity building through training and on the job-support; c) monthly tracking of the CMAM data by the WOHO and regional health bureau; d) government ownership; e) the availability of quick reference and job aids; and, f) the presence of standard operating procedures.

A standardized TFP quality monitoring system was put into place by the FMOH, UNICEF and partners to score health facility performance on CMAM activities, including community mobilization, admissions and discharges, referrals and complications, recording and reporting, supplies and stocks, as well as supervision of CMAM services. This monitoring system has improved quality by identifying the service gaps in a timely manner leading to management of the problems through coaching and agreement on recommendations. The TFP monitoring checklist has sections to assess each of the OTP and TFU activities consolidated into a three tier grading system useful to identify the level of programme support needed at district level. It is graded as follows:

- Grade under 50%: working well but major support needs to refresh skills of staff and where operational systems need to be established
- Grade 50-70%: working well but with some technical and logistic support needs attention
- Grade over 70%: working very well with minor support needs only.

Over 70% of the TFPs in the majority of the districts had scores of greater than 50%, which indicates that they are working well. Over time, the proportion of woredas scoring more than 70% increased while those scoring below 50 % decreased (Figure 4.4).



**Figure 4.4: Trend of joint TFP Quality monitoring assessment result for four regions (Tigray, Amhara, Oromia, & SNNP) September 2009 to August 2011. (Source: UNICEF/ENCU data base.)**

**Table 4.4: Quality Monitoring Result of the Four Regions (September 2009 to August 2011)**

	Number of Woredas assessed with the monitoring check list	% of quality scoring for woredas		
		>70%	50-70%	<50%
Amhara	132	31.06%	31.06%	25.76%
Tigray	199	55.28%	55.28%	4.52%
Oromia	131	31.30%	31.30%	10.69%
SNNP	88	18.18%	18.18%	28.41%
<b>Total</b>	<b>550</b>	<b>37.82%</b>	<b>37.82%</b>	<b>14.91%</b>

Source: UNICEF.

Challenges that need to be addressed to improve programme quality are as follows.

- **Errors in admissions and discharges.** There were reportedly errors of either inclusion or exclusion in admissions, e.g. children who did not meet the admission requirements were admitted while others who met requirements were not admitted. Some children were not discharged in a timely manner and remained too long on the programme, which affects efficiency.

- **RUTF mis-use in the community.** In most cases, the supplies of RUTF were available at HP level. The HEWs and community leaders confirmed that RUTF is well accepted by the community. One of the concerns of CMAM effectiveness is sharing RUTF among non-SAM children, which is likely to reduce the effectiveness of the treatment. There was tendency to have a preventive attitude by providing RUTF for MAM and borderline SAM cases rather than exclusion. However, according to interviewees in woredas, in recent times, caretakers are more careful in targeting the RUTF to the SAM child, which may contribute to improved programme performance. This change of attitude has resulted from strong community education about the sharing effect on the severely malnourished child, although sharing still occurs to some degree.

In some of the sampled woredas, RUTF was being sold in the public market. Although it is a cure for SAM children, it is not considered a drug and is not provided through a pharmacy based prescription. There is no record kept about the use of RUTF at HP and HC levels. As a result, there is very little control of its use. Some woredas (e.g. Worebabo) established an auditing mechanism to ensure whether it reaches the targeted children. Government and UNICEF can learn from this experience and should consider having a system of accountability for this expensive commodity.

- **Inconsistent record keeping and use of monitoring information.** Important information on admitted children was not recorded on the Multi-chart and OTP card. The TFP register was not available in ten health facilities and when available, the TFP registration form was not used. Interviewees said that TFP data is not utilized by the woredas, health workers and HEWs for improving quality of service and decision-making. They mainly use it for reporting purposes and RUTF stock requests.
- **Constraints in logistics and supply.** The HPs in kebeles may be difficult to access particularly in those areas where there is no rural road infrastructure to transport the RUTF to HPs. There were times that some health posts ran out of RUTF due to limited storage space. The inconsistent supply of drugs especially those of Amoxicillin and Albendazole syrup type is the main weak link in the supply chain which adversely affects quality of CMAM. There is poor coordination among programmes at woreda levels, which makes it difficult to get value for money for logistics management.
- **Effects of CMAM services on other health and nutrition services.** Key informants suggest that CMAM has had a positive effect on the quality of other health and nutrition services like IMNCI and immunization. CMAM also increased acceptance of HEWs by the community due to rapid recovery of SAM children, which improved the health seeking behaviour of the community for other health services. There are promising initiatives by Concern, Save the Children, and Alive & Thrive to integrate IYCF such as through promotion of early initiation and exclusive breastfeeding and complementary feeding into CMAM programmes.
- **Linkages with MAM management.** There are two services to address MAM. First, in areas where there is TSF, clients identified through CHD or EOS at HPs are referred by the HEWs to Farmers' Development Agents to receive TSF. Second, counselling service and community conversation addresses the issues of MAM through CBN at community level and Essential Nutrition Action messages on IYCF at health service contact points of HCs and hospitals.

Since prevention of SAM may be linked to effectiveness and efficiency of MAM management, some challenges were identified by interviewees and are important to note.

- The TSF distribution was scheduled every three months but frequently it was not provided on time.
- There was a high incidence of selling and sharing of the food.
- There were errors of inclusion (false enrolment), which in some cases is reported as high as 50%.
- The coverage of TSF was limited and decreasing with time from 325 to 168 woredas because of funding constraints (concern on TSF effectiveness and high false enrolment)
- There is no frequent follow up of clients for improvement of nutrition status and there was no reporting mechanism.
- High community demand for the service was related to dependency in some cases.
- TSF was not available for MAM children identified through the routine contact of the HCs and hospitals, identification mechanisms.
- Almost, all HEWs and VCHWs were trained on counselling on IYCF and community conversation. However, linking MAM cases identified at HP to these counselling services was weak.

## 5. ANALYSIS OF CROSS-CUTTING ISSUES

This chapter covers cross cutting issues: monitoring and evaluation, supply and logistics, integration of CMAM into the national health system, equity and gender equality and capacity building.

### 5.1 Monitoring and Evaluation (M&E)

CMAM data are managed by nutrition and health focal persons at all levels. At the federal level, the data are managed mainly by Emergency Nutrition Coordination Unit (ENCU), where all experts are seconded by UNICEF. Data collected at the facilities are entered into a database at the Regional Health Bureau and Regional ENCU. Because it is still managed through emergency funding, the information flow from the regions to the federal level is through ENCU rather than health system channel. This puts the sustainability of this system in question. Dialogue is ongoing within FMOH especially with FMOH Policy and Planning Directorate to incorporate CMAM indicators into Health Management Information System.

A strong CMAM M&E system has been established to monitor programme performance to track emergency trends, to note supplies needed, and to coordinate partners for the response. A monthly monitoring report based on performance is published. CMAM service performance data are collected and reported monthly at all levels: facility, woreda, regional and federal level. During emergency periods it is collected weekly. However, as described in the previous chapter, national targets are not clear for a number of CMAM programme components, such as screening and admissions, and goals are not set for expanding the number of TFUs, thus making evaluation of progress difficult.

Checklists were developed for regular monitoring visits to CMAM sites. At federal and regional levels, regular coordination meetings were held through the MANTF to review the monthly performance report. A major concern is that this system may not be manageable when the supervision is integrated with the existing health system supervision as it is too detailed and expensive.

An achievement is the improvement of data utilization for action at Federal and Regional level. It was reported by SNNPR deputy head of RHB: *“In the current East Africa drought, we knew the increase in number of admissions earlier from the Therapeutic Feeding Programme (TFU) data and we were able to respond in a timely manner.”* Similarly, UNICEF staff stated: *“We were prepared in a timely manner, i.e. CMAM supplies were distributed to affected areas, thanks to the TFP information system that was able to detect the problem early from the increasing trend in new admission to CMAM services”*.

The success factors for improved information management on CMAM was reported to be: a) UNICEF's commitment to support and strengthen the system; b) the high demand for CMAM information by FMOH especially during peak seasons and emergencies; and, c) the concern of implementing partners, and donors on quality of CMAM with the rapid scale up.

Apart from these achievements, there were concerns on the following issues:

- **Data quality and utilisation.** In some of facilities visited, the quality of data was poor and it was collected mainly to meet requirements for reporting to higher levels rather than to monitor facility CMAM performance. Many of the HPs visited did not keep copies of the reports. Thus significant



improvements were needed in data utilization at woreda and facility level and increasing understanding of how to steer the programme based on data analysis and monitoring reports.

- **Sustainability.** The CMAM information system is parallel to the HMIS and consequently has not been tracked and utilized by FMOH as part of its sector planning and M&E processes. The data is owned mainly by ENCU. The CMAM data base at the regional and federal level is mainly managed by ENCU and UNICEF paid experts. There is major concern from all partners that the sustainability of CMAM data base is dependent on the existence of ENCU and this contributed to the limited ownership of the government for the data base at federal level, especially by the health sector. There should be a way to institutionalize the process of gathering and analysing these data with the government on the driving seat.

## 5.2 Supply and Logistics

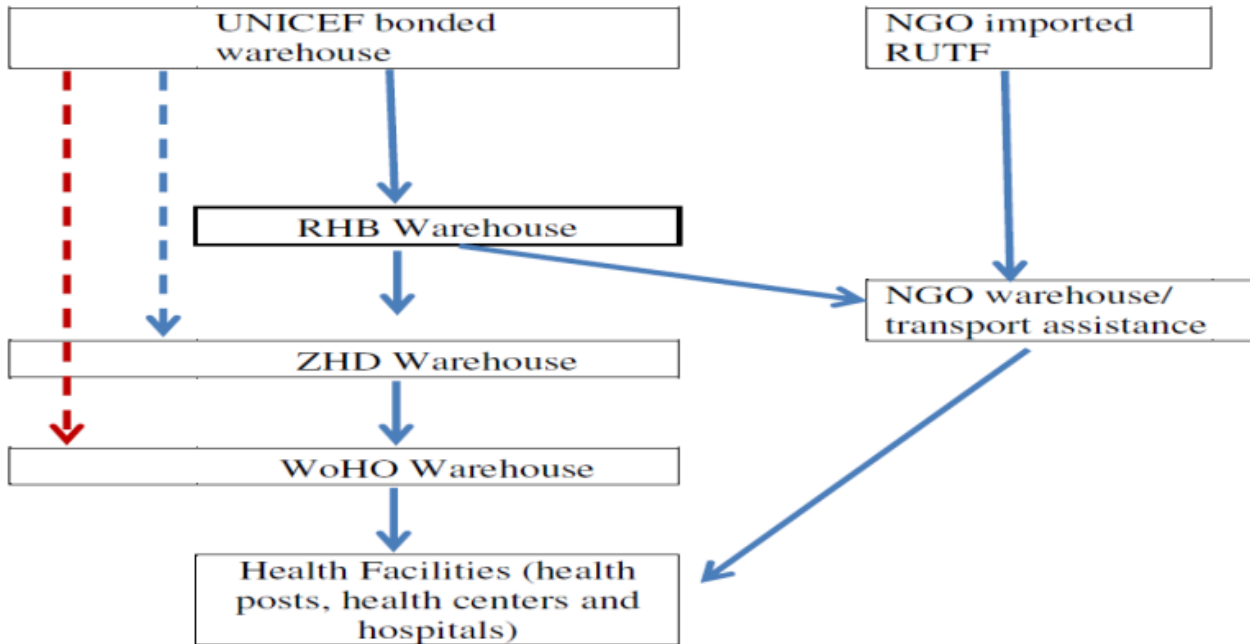
The supply management system used for CMAM is entirely vertical and is being implemented outside the government system and is operated in parallel to the national health system logistics. UNICEF procures and delivers RUTF initially to regions, then to zones and currently to the woredas. It also provides RUTF to the INGOs that do not import this commodity. Figure 5.1 shows the parallel distribution that is currently in place.

A key challenge in scaling up CMAM is ensuring the quality of services and the availability and quality of RUTF in a timely manner in the locations where it is needed. The main issues around the RUTF are expansion of demand compared with the slowly growing supply produced within the country; ensuring the safety and quality of locally produced RUTF; and high dependency of RUTF procurement on emergency funding. The short term nature of the funding (both for UNICEF and INGOs) has limited the ability of the programme to strengthen the national distribution system. The transportation cost is escalating, which has become one of the major challenges. Transporting RUTF from woredas to HCs and posts is the weak or missing link in the system. The woredas lack adequate transportation mechanisms. Some HPs and HCs do not even have access to roads. Some health facilities face great difficulties in receiving the heavy weight supplies. One positive finding is woredas working with NGO support do not have such transportation problems as NGOs assist in this task as part of their technical support.

The national supply chain management system remains weak and still has capacity challenges to supply drugs and medical supplies on a regular basis.<sup>35</sup> Currently it distributes drugs to eight hubs and through its limited transport means to woredas. If it also takes responsibility of the CMAM logistics as they are currently working, it should deliver the heavy RUTF supplies (12 kg/child), to more than 805 woredas. Unless its distribution capacity is strengthened, it may not be able to deliver these commodities effectively given the current capacity. It is also apparent that the modus operandi of a parallel system is not a solution either. If CMAM is to be sustainable, supply and logistics should be integrated into the national supply chain management system. This requires exploring the challenges and opportunities to work through the national logistics system and develop a transitional plan for strengthening this capacity while at the same time ensuring availability of RUTF at facility level through other mechanisms.

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35 Refer to 2011 Joint Review Mission and FMA reports.



**Figure 5.1: Distribution of CMAM supplies through UNICEF.**

A similar challenge associated with the CMAM supplies is the registration of drugs and food. Some of the routine drugs used in CMAM are not registered in the country and this has created problems in importing and customs clearance. The Ethiopian Regulatory Authority in principle requires that the production plant is visited for assessment of the quality of production before allowing goods to be imported. This has not been facilitated for CMAM commodities and supplies. Because of this, there are reported instances of the imported items being sent back to the country of origin. Given that the Food, Medicine and Health Care Administration and Control Authority (FMHACA) now regulates food as well, it may soon start the same process of Good Manufacturing Practice (GMP) follow up and this could also affect food imports, including RUTF. It is therefore necessary to ensure that therapeutic feeding items are included in the essential drug/commodity list.

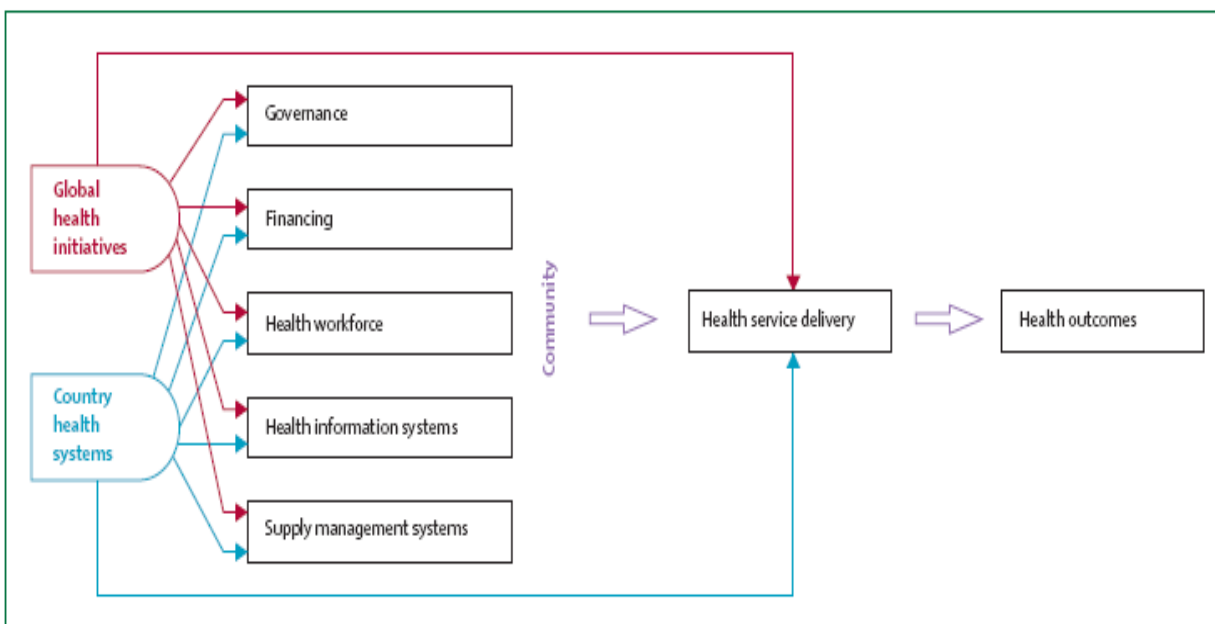
### 5.3 Integration of CMAM into the National Health System

In terms of CMAM programme services, the programme is using internally proven and cost effective methods of SAM treatment. However, efficiency can also be assessed by the manner with which the programme is delivered, such as the extent to which it operates in the national systems and its integration to the overall health system and reduced parallel system costs. Relevant questions regarding integration include: What is the extent and nature of its integration with the national health system, what factors influence the nature and extent of integration, and what are the system wide effects (positive and unintended consequences) of the CMAM programme on the overall health system.

In analysing integration efficiency, the evaluation used the conceptual framework developed by WHO for assessment of the interaction of Global Health Initiatives (GHIs) and country health systems (Figure 5.2). According to this framework,<sup>36</sup> there are five points of interaction between GHI's (in our case CMAM) and country health systems (i.e., governance, financing, health workforce, health information systems, and

<sup>36</sup> Lancet 2009, WHO's Maximizing Positive Synergies Collaborative Group

supply management systems) with each of these interlinked systems contributing towards the sixth point of interaction which is the delivery of health services.



**Figure 5.2: Conceptual Framework showing the interaction between GHI's and country health systems.**

While major health sector planning, management and monitoring decisions are carried out through the Joint Core Coordinating Committee and Joint Consultation Forum, this does not seem the case for nutrition in general and CMAM in particular. Nutrition, given its multi-sectoral nature, has a separate coordination structure at policy and technical level.

One of the factors that causes CMAM to be out of the mainstream resource allocation and coordination structures is its dependence on emergency funding. Delivery of quality, safe, equitable and easily accessible health services depends to a large extent on how external funding is provided and deployed, and on the financing arrangements with the country. CMAM is funded essentially through humanitarian aid through UNICEF fiduciary mechanisms. As it is humanitarian it is not predictable and cannot be known from the start. Most of the funding is spent on RUTF which is off-budget.<sup>37</sup> From the government perspective, unpredictable funding does not contribute either to strengthening systems or to monitoring their utilisation.

The delivery of the CMAM services is carried out by the national health system workforce starting from the kebele to the hospital levels and to this extent CMAM is fully integrated. Most of the supervision takes

<sup>37</sup> Off budget means that the activities and resources are not in the overall health systems plans and budgets and therefore are not known to the government. Therefore the government cannot use it for improving country health systems and cannot report on how much resources are utilized.

place within government structures, and the weakness of the health system in providing supporting supervision is reflected in the CMAM supervision as well. The vertical support system is present in the form of INGO capacity building, supervision by UNICEF and other stakeholders and employment of the information officers (TFP monitors and nutrition information persons) at regional level who facilitate monthly reporting.

The major health systems functions, their detailed elements and the progress and challenges of CMAM integration are presented in Table 5.1.

**Table 5.1: Progress and Challenges of Integrating CMAM to Health Systems Functions in Ethiopia**

<b>Critical health system function</b>	<b>Elements</b>	<b>Status of CMAM integration</b>
<b>Stewardship and governance</b>	<i>Coordination Accountability function Reporting Performance management</i>	Nutrition has its own coordination structures outside the health sector coordination structures. This is justified in view of its multi-sectoral nature. The National Nutrition Task force at the federal level is not functioning as well as the stipulation in the NNS and all the rest of the structures are working well. CMAM coordination is within the nutrition mechanism. Good vertical programme coordination at all levels, especially at federal and regional levels. The implementing partners have a role in the review of the proposal submitted by other agencies when funded through HRF. There is no overlap among implementing agencies in the implementation of the CMAM programme. The only loose end is weak programme coordination at woreda level which is caused by capacity constraints.
<b>Financing</b>	<i>Pooling of funds Provider payment methods Using government systems Predictability and sustainability Government financing</i>	Financing of CMAM is dominated by the humanitarian emergency funding; all the services provided to children are mainly free of charge, although cases of caretakers are buying routine drugs were reported in the field. The financing of the programme is done either through UNICEF or other implementing partners, NGOs. As such the predictability and sustainability of the financing is very low. The Government's contribution to financing of CMAM is limited to the employment of health workers for the functioning of the health services.
<b>Planning</b>	<i>Needs assessment – Priority setting – Resource allocation</i>	The health facilities have their own plans for CMAM. Because CMAM indicators are not included in the HMIS, it is not integrated into the woreda based planning process. It uses a vertical and parallel planning mechanism. Resource allocation discussions also take place outside the normal government decision making process.
<b>Service delivery</b>	<i>Structural – Human resources – Shared infrastructure – Operational integration – Referral and counter-referral systems – Guidelines or care pathways – Procurement – Supply chain</i>	CMAM uses the health professionals already working in the facilities and by and large its services are provided through shared infrastructure. The training is integrated into the pre-service training programmes for some cadres of health professionals. The referral system follows its own referral link (OTP to SC) rather than follow the normal government referral structure as it requires a different set up. This sometimes converges.  There is a strong integration between CMAM, IMNCI, ICCM, CBN and immunization services. Community mobilization for all these services is carried out through similar modalities and systems using same community

<b>Critical health system function</b>	<b>Elements</b>	<b>Status of CMAM integration</b>
	<i>management</i>	<p>health workers.</p> <p>Forecast of the requirements and orders as well as procurement of drugs and RUTF is done through UNICEF in parallel to the government system. The distribution of these supplies also follows the same system. The capacity of the national commodity supply system is not strong enough to handle bulk distribution of RUTF.</p>
<b>Monitoring and evaluation</b>	<i>Information technology infrastructure – Data collection and analysis</i>	<p>The health information system is under development and does not capture CMAM related information. The quality, timing and timeliness of the HMIS do not fit well to the reporting requirements of emergency funding. As a result, CMAM reporting not only remained parallel but also requires additional staff at regional level to pull the information together. The weak information infrastructure also affects CMAM. The collection and analysis of CMAM information at the federal level is handled by ENCU, outside the health sector.</p> <p>The CMAM information system remains vertical and should be integrated into the routine information system although this may be difficult given the existing information system design and scaling up.</p>
<b>Demand generation</b>	<i>Financial incentives, e.g. conditional cash transfers, insurance – Population interventions, e.g. education and promotion</i>	<p>Demand creation is being implemented as part of the overall primary health care initiative whereby the VCHWs and HEWs communicate with mothers to encourage them to look for services. The mobilization exercise is fully integrated to the other services like immunization, CHDs and house-to house visits.</p>

## 5.4 Equity and Gender Equality

The overall expansion of services in Ethiopia is guided through a national population standard (health centre for 25,000 people and health post for 5,000). There has been expansion of primary health facilities across the regions. All the reviews show that the services are working well in terms of fair population based distribution. The main challenge though has been the applicability of standards to sparsely populated regions where beneficiaries travel a long distance to access care. Since the public health facilities are the CMAM sites in Ethiopia, fairness in access to this service heavily depends on two factors. First, since CMAM has to work within the existing health system, the CMAM distribution is as fair as the overall distribution of health facilities. Second, given that the SAM prevalence heavily varies between the four categories of hot spot woreda, the service distribution favours, logically, the most vulnerable areas.

Most of the CMAM facilities are being established in the four major agrarian regions. Although the level of malnutrition in the agrarian areas may not be as severe as the Developing Regional States (DRS: Somali, Afar, Benshangul-Gumuz, and Gambella), the scaling of CMAM proportionately favours the agrarian regions as compared to the DRS. This may be a challenge when viewed from an equity perspective, but

it is pragmatic in terms of promoting effectiveness. The equity issue also arises in terms of geographical coverage of the entire eligible population within the regions and woredas where the programme is operating. Within woredas, there are kebeles and population groups in the hard to reach areas where neither screening nor services has reached.

Among interviewees at the woreda and facility levels, there is a general consensus that there is no preference for gender in the provision of CMAM services and the data did not provide evidence of gender discrimination. Nutrition surveys report that wasting in boys is higher than in girls (Chapter 1); however, little analysis is available on whether more boys are treated through CMAM. Screening data is not disaggregated thus screening coverage by gender throughout the country cannot be determined. The Post Community Health Days Survey of Oromia, SNNPR and Tigray (2009-2010), supported by UNICEF, did not find significant gender differences for deworming treatment, Vitamin A supplementation, identification of SAM, and receipt of supplementary feeding cards.<sup>38</sup>

One of the strengths of CMAM is its focus on addressing the needs of the most vulnerable groups. In addition to children 6-59 months of age, it also includes HIV positive cases through USAID/Food-By-Prescription (FBP) which is part of the national CMAM. The FBP is being implemented in 200 HCs and hospitals providing ART services and will scale up to another 200 facilities in 2011/2012. Targeted FBP services are provided for eligible candidates that meet the admission criteria.

The concept of social protection in Ethiopia is upheld in national efforts to promote community cohesion for development. An assessment of community cohesion in a tabia (agricultural division) of Tigray region, indicates good progress on inter-sectoral development goals including water and hygiene, agriculture, food security, education and health as well as identification and protection of the most vulnerable children.<sup>39</sup> Nutrition, however, is not addressed in the assessment. Progress had been made in reducing the numbers of early marriages among girls. The government of Ethiopia is considering including CMAM services as one of the priorities that the social protection policy should address in the coming years. Together with the inclusion of CMAM services within ICCM, these are expected to enhance the equity and gender equality aspects of service expansion. In doing so, stakeholders should promote more data collection and analysis on issues of equity and gender equality as they relate to CMAM and nutritional well-being.

## 5.5 Capacity Building

The OTP training materials, including videos produced for training, have standardized the in-service training. However, there was no standardized training material for TFU until the recent production of an integrated training package for CMAM. During this evaluation period, no training was conducted using this material. The other main achievement is the integration of CMAM training with FMOH ICCM, modular IRT training materials and HC and hospitals IMNCI training materials. This will ensure standardization and sustainability of capacity building for CMAM.

The human resource capacity building for OTP was extensive as evidenced by all HP's having some trained HEWs. The data from four regions indicated that more than half of the HEWs are trained on CMAM, which means at least one HEW is trained per HP. This data includes those trained by UNICEF and some partners. The actual number and coverage is expected to be higher than shown in Table 5.2. There are also at least two health workers trained per HCs providing TFU services. The regular staff rotation of health facilities forced the trained health staff to work at other departments leaving the

<sup>38</sup> Post Community Health Days Survey of Oromia, SNNPR and Tigray (Oct. to Dec 2009; CHD Rounds)

<sup>39</sup> An Assessment of Community Cohesion for Development in Adebai Tabia, Tigray Region, Western Zone, UN Report, 2011.

untrained health workers to provide TFP services. This affected the quality of services delivered in some facilities.

**Table 5.2: Percentage of HEW Workers and Supervisors Trained on CMAM**

	HEWs	HEWs trained	% of HEWs trained	HEW supervisor trained
<b>Amhara</b>	5835	3758	64.4	321
<b>Oromia</b>	12584	6214	49.4	6214
<b>Tigray</b>	1261	1032	81.8	152
<b>Somali</b>	1946	667	34.3	52
<b>SNNP</b>	7360	4842	65.8	444
<b>Afar</b>	659	94	14.3	7
<b>Gambella</b>	460	340	73.9	41
<b>Total</b>	30105	16947	56.3	7231

*Source: UNICEF/ENCU Date.*

UNICEF and the FMOH also supported pre-service training for medical doctors and health officers on CMAM through partnership with training institutions; the training is expected to include nurses in the near future. This initiative should help reduce extensive on-the-job training and its associated cost. It will also ensure sustainability of services in the health facilities as there will be built in skills within the health workforce.

### **Capacity through wealth of experience**

A key finding of this evaluation is that the capacity building effort increased the pace of institutionalization of CMAM in the country's health service delivery system. Systematic on-the-job capacity building programmes were in place, which cascaded from federal to facility level health workers. There is clear evidence that Ethiopia has the capacity to implement and manage CMAM, both during normal and crisis times.

The main challenges for capacity building are the following.

- There is no standardized training material for TFU and the rapid scale up compromised the quality of the capacity building.
- The supportive supervision and on-job capacity building activities by the WOHO and HEW supervisors was not adequate and the involvement of international NGOs in the WOHO and HEW supervisors was limited.
- Most of the capacity building activities were not sustainable and dependent on implementation by UNICEF and international NGOs.

HEW supervisors need to be trained in CMAM to ensure that they provide accessible technical support during their supportive supervision to ensure that strengthening the development programmes (e.g. infant and young child feeding) will reduce the cost of the emergencies in the future.

## **5.6 Technical and Organizational Support**

The role of UNICEF along with WHO and WFP as mentioned in the joint statement on CMAM is to mobilize resources, facilitate local production of RUTF, support nutrition protocols, work with the government, private sector and NGOS, conduct operations research to refine protocols and jointly



implement CMAM in emergency and non-emergency situations. The role of UNICEF and its implementing partners (IPs) who are mainly international NGOs is further defined in the MOUs with government. As IPs in CMAM, the INGOs vary in their scale of support to woredas, and in the numbers of staff they deploy. They also have different exit strategies<sup>40</sup>, which affect the sustainability of the programme when they depart. Woredas are generally not informed about INGO's exit strategies.

Effective technical oversight is provided by a number of organizations such as the FMOH, ENCU/MANTF at the federal level and Health and Nutrition Task forces, UN agencies, INGOs, donors and relevant government counterparts. UNICEF played a significant role in advocacy and coordination by engaging all parties through nutrition cluster meetings, through regular meeting of UN agencies, NGOs and donors, and by communicating issues with government. UNICEF successfully mobilized resources to finance most of the costs of the scaling up process, and provided effective capacity support for developing tools, guidelines and training resources.

UNICEF with the FMOH managed a well thought out pragmatic scaling up strategy that adopted the international protocol into national guidelines, translating it to practical doable action that the HEWs can understand and perform. UNICEF has been a major force in supporting the government decisions and has invested a lot to ensure that national protocols, guides and job aids for the HEWs are developed and distributed; intensive training is provided for HEWs and health workers, and guides and tools are translated into service provision.

Technical and organizational support can be strengthened as follows.

- At the global level, UNICEF should advocate for CMAM funding and make sure it is given priority in SUN, REACH and other child survival programmes.
- At the global and national levels UNICEF needs to advocate with WFP and WHO to strengthen the MAM management outcomes and support the development of more TFUs.
- All partners should work on integrating SAM and MAM in a consolidated set of guidelines and unify them with other nutrition programmes
- IPs should inform woredas of their resources, capacity development objectives and their plans for turning over the programme to the national health system. The experiences of GOAL and Concern Worldwide provide good examples for planning more support at the initial stage and transferring responsibility to government over a short period of time, using criteria for judging integration.
- All partners should develop plans for strengthening national systems for information management and supply and logistics
- All partners with private sector actors should advocate for the investigation of issues with local production of RUTF so that the production and supply of the products will be more cost efficient.

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<sup>40</sup> Some NGOs do not have exit strategy at all. Those that have also differ on the time span and degree of scaling down operation and on their assessment of the capacity that they have put in place.



## 6. COSTING AND FINANCIAL SUSTAINABILITY

### 6.1 Approach, Assumptions and Limitations of the Costing Method

Severe Acute Malnutrition (SAM) imposes a staggering cost worldwide, both in human and economic terms. Individuals lose more than 10 percent of their lifetime earnings, and many countries lose at least 2–3 percent of their GDP due to malnutrition.<sup>41</sup> Cost effectiveness of Community Management of Acute Malnutrition (CMAM) has been established in many studies.<sup>42,43</sup> This section undertakes a cost analysis of CMAM in Ethiopia with the aim of estimating the existing cost of providing the service and resource requirement for scale up. Preliminary cost analysis has also been done on the implication of the new 2006 World Health Organization (WHO) standards for classification of SAM.

**Key Design Considerations:** The objective of this cost analysis is to avail more forward-looking cost data that can provide insights for policymakers and programme managers about the structure, operations, and resource requirement related to CMAM implementation. Accordingly, a mixed costing approach—that combines bottom up and top down costing has been used. The selected base year for the cost analysis was 2010. Woredas have been taken as the main unit of costing as it allows ease of comparability of results between regions.

**Cost Centres and Data Sources:** For estimation and analysis of CMAM costs, the various activities under CMAM were grouped under major categories that are mutually exclusive and comprehensive. For each cost centre, relevant cost items for CMAM were identified, valued and measured. In addition to secondary documents reviewed by the team, the team conducted field assessments and key informant interviews to gain insight into actual practice on the ground with regard to sets of activities and resources (materials, equipment and staff-time) in the implementation of CMAM. This helped to capture more detailed data, and provided a better understanding of the level of variation in the structures, staffing and ways in which the programme is implemented among regions and districts. A total of 15 woredas drawn from five regions were included in the field assessment. See the methodology section for details of the woreda selected and justification used.

#### **COSTING MODEL AND MAJOR ASSUMPTIONS:**

The detailed assumptions used in the costing exercise can be found in Annex 7 but the major ones are the following.

**Training:** The field assessment showed that training and supportive supervision is a vital element in CMAM implementation in most of the districts; although the type and number involved vary among districts. The following training has been identified included in the cost analysis: SAM management training for facility staff and training on community assessment, mobilization, and screening for community volunteers.

**Staff Time:** The field assessment has estimated type of staff and level of effort spent in CMAM related activities including assessing and monitoring (weighing and medical assessment), registering, providing therapeutic food and medicines, testing appetite, giving health and nutrition education to caregivers, and

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41 Horton, S et al (2010) Scaling up Nutrition what will it Cost?, The International Bank for Reconstruction and Development-The World Bank Washington

42 Wilford R et al (2011) Cost effectiveness of community based management of acute malnutrition Health Policy and Planning 2011: 1-11

43 Bachmann MO. 2009. Cost effectiveness of community-based therapeutic care for children with severe acute malnutrition in Zambia: decision tree model. Cost Effectiveness and Resource Allocation 7: 2.

recording and analysing data. The salaries of public servants is nationally standardized and mid-point salary for each category has been used to estimate personnel related costs.

**Transportation:** Both off-shore transportation and in-country transportation up to the final service delivery point was estimated. Financial data on offshore transportation was provided by UNICEF. With regard to in-country transportation, due to involvement of various actors and regional variation, an average cost for delivering these items from the centre to the service delivery point was estimated by using the shortest transportation route based on the cost per kilometre. In many regions, UNICEF is the major financier of such expenses up to the zonal level; while the government and other NGOs (wherever they are implementing partners) engage in transportation from zonal to facilities' level.

**RUTF and Medical Supplies:** The facilities surveyed by and large follow the national protocol for management of SAM and can be used for estimating the cost. Based on the SAM treatment guideline, prevalence of SAM and expected coverage; the required quantity of RUTF as well as other drugs and supplies related to treatment of other conditions was estimated. Prices related to procurement of these supplies were collected from UNICEF which largely supported these costs.

**Capital Costs:** Capital costs are expenditure types whose benefits accrue over one year and cost more than US\$ 100. Major capital costs related to CMAM include medical equipment, space (for treatment and storage) as well as training of trainers and training material development. With the exception of costs related to space, which has been excluded for practical reasons, all other capital items have been included and annualized taking into account the life of the capital goods considered. Protocol development and various surveys are not included in the cost analysis as they are one-time costs and will not be major component of CMAM in the scale up process.

**Limitations:** Due to unavailability of data and practical reasons, the following elements are not captured in the cost analysis.

- The costs related to RUTF, training and supervision, and cost of personnel who are directly involved in the provision of CMAM service both at an OTP and in-patient level are included. Any other financial contribution of NGOs is not captured in the analysis, such as the NGO staff salaries.
- Government spending on capital items such as space for treatment rooms, office space and storage and furniture and equipment (except those specific to CMAM) are not captured for two reasons. First, the proportion of cost accruing to CMAM specific activities is quite small. Second, these are one time costs already covered by the government for the wider health service delivery hence it assumed to continue to be subsidized by the government.

## 6.2 Average Cost Estimates

The average cost per child treated through CMAM is based on costs incurred by both government and partners. The average overall cost per child for established sites is estimated to be \$110 ranging from \$90 to \$152.<sup>44</sup> The cost per child is sensitive to many factors, such as number of SAM cases, programme maturity and the accessibility of the sites. However, these factors account for only a small proportion of the cost as the major share of cost is related to RUTF; where its cost is relatively similar among districts as they follow the established standard. However, from a programme perspective marginal cost is more

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<sup>44</sup> This estimates excluded the cost of routine drugs which are not often available at the facility levels.

relevant than the average cost as some of the cost of component such as clinical service, technical assistance and fixed supplies remain the same regardless of the CMAM provision. Thus, marginal cost by including only costs elements that vary by the level of output is found to be \$73; ranging from \$61-\$85.

Using the marginal cost per child, expected SAM cases (percentage of weight for height z score below -3 SD) and 50% coverage (minimum level of coverage recommended by Sphere), the total cost by region was estimated for the 10 regions (Table 6.1).

**Table 6.1: Estimates of Total CMAM Cost by Region**

	<b>Rural Population (Million)</b>	<b>Under Five Population (Million) [1]</b>	<b>Percentage Below -3 SD[2]</b>	<b>Expected SAM Cases (50% coverage)</b>	<b>Cost (Million USD)</b>
<b>Tigray</b>	3.47	0.53	3.00%	15,779.16	1.15
<b>Afar</b>	1.22	0.12	6.20%	7,487.74	0.55
<b>Amhara</b>	15.1	2.14	3.10%	66,232.59	4.83
<b>Oromiya</b>	23.79	4.1	2.80%	114,673.83	8.37
<b>Somali</b>	3.82	0.39	8.50%	33,319.58	2.43
<b>Benishangul</b>	0.57	0.1	2.50%	2,404.93	0.18
<b>SNNPR</b>	13.5	2.18	1.90%	41,392.75	3.02
<b>Gambella</b>	0.23	0.03	3.20%	1,011.55	0.07
<b>Harari</b>	0.08	0.01	1.60%	239.04	0.02
<b>Diredawa</b>	0.11	0.02	1.20%	242.18	0.02
<b>Total</b>				<b>282,783.35</b>	<b>20.64</b>

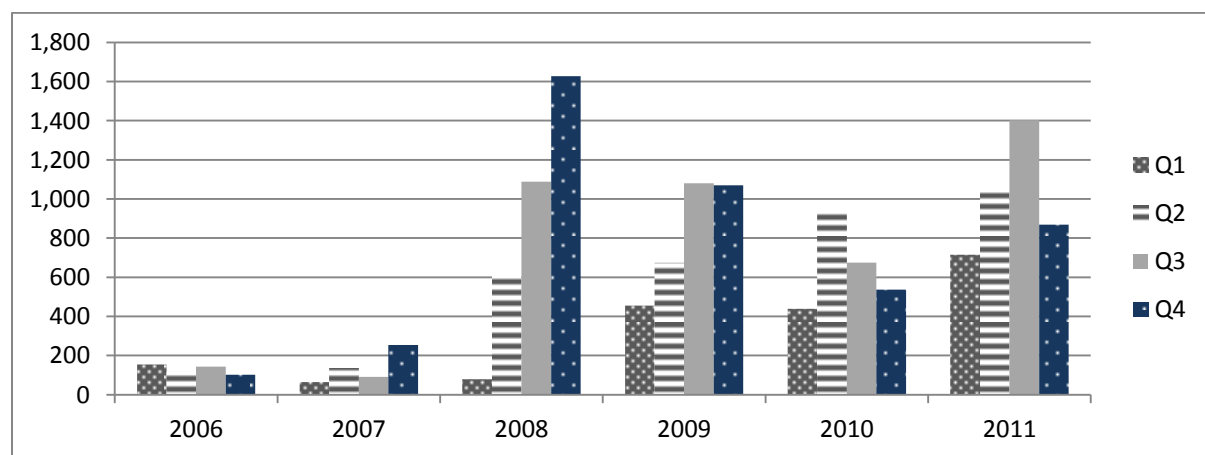
The estimated annual average cost per woreda is estimated to be \$56,974, ranging from \$34,760.1 to \$84,664.95. The main variation among the woredas is related to number of under-five children, number of SAM cases as well as remoteness of the district, which are the main cost drivers in this estimation (Table 6.2).

**Table 6.2: Distribution of CMAM Costs by Programme Component and District**

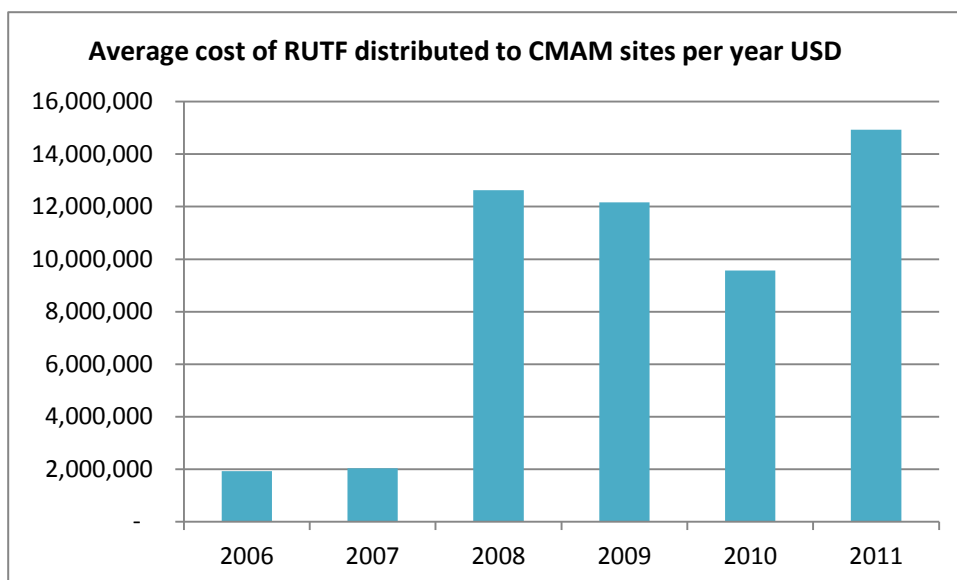
Woreda	RUTF	Service Delivery TA	& Logistics	Other Supplies & Equipment	Total
T/Adiabo	\$32,318	\$36,440	\$7,913	\$7,993	\$84,665
Adwa	\$26,460	\$13,889	\$6,573	\$3,231	\$50,153
Erob	\$24,860	\$9,907	\$5,594	\$1,559	\$41,920
Ebnet	\$36,753	\$28,415	\$8,127	\$4,440	\$77,735
Werebabu	\$20,298	\$17,399	\$4,931	\$4,068	\$46,696
MenZgeza	\$26,219	\$17,568	\$6,446	\$3,966	\$54,199
Shinele	\$27,445	\$20,528	\$7,190	\$1,638	\$56,800
Jijiga	\$20,249	\$9,338	\$5,323	\$954	\$35,864
Erer Gota	\$23,083	\$17,809	\$2,150	\$1,992	\$45,034
Dilla Zuria	\$17,226	\$21,892	\$4,696	\$5,414	\$49,228
Boloso Sore	\$34,873	\$15,143	\$7,809	\$2,934	\$60,760
Bensa	\$44,534	\$13,361	\$11,703	\$5,145	\$74,742
Shalla	\$39,854	\$29,464	\$9,224	\$2,569	\$81,110
Grawa	\$26,183	\$25,749	\$6,381	\$2,638	\$60,950
Kimbibit	\$17,773	\$11,857	\$4,025	\$1,105	\$34,760

### 6.3 Importing Versus Local Production of RUTF

As indicated above, the major cost element with regard to CMAM cost components is the cost related to RUTF. According to the UNICEF database, the distribution of the RUTF has been increasing with the scale of expansion presented in the previous chapter. Figure 6.1 and 6.2 shows the annual countrywide RUTF distribution by UNICEF and the unit cost of RUTF per site.



**Figure 6.1: Metric Tons of RUTF distributed by quarter. (Source: UNICEF Database.)**



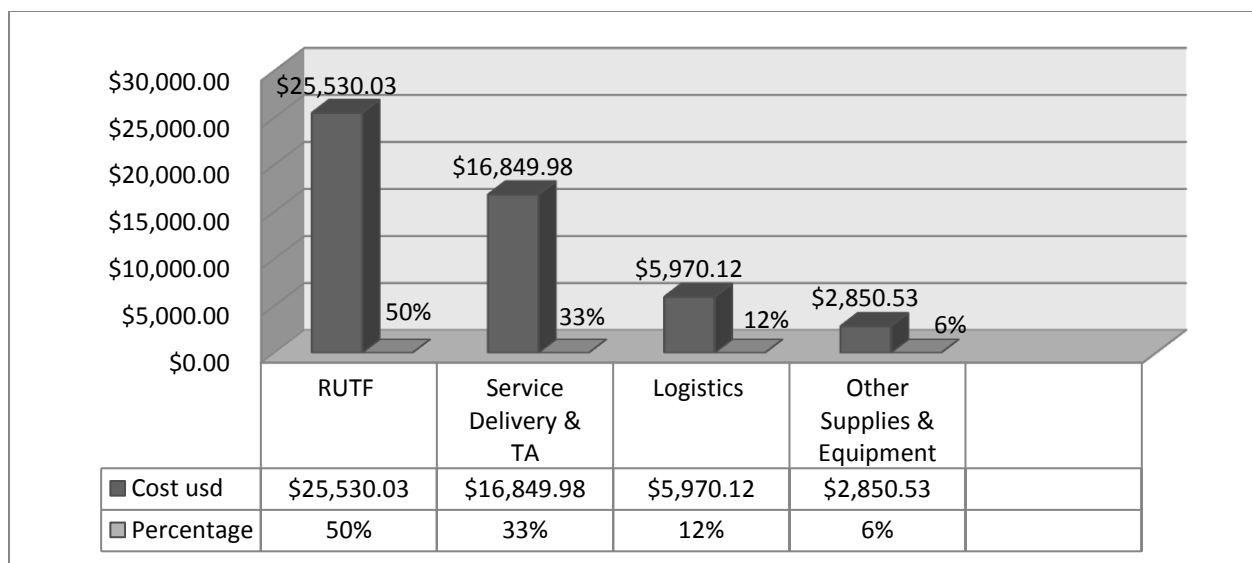
**Figure 6.2: Average Cost of RUTF distributed to CMAM sites per year (USD). (Source UNICEF Database.)**

Among other interventions, local production of RUTF has been promoted by many partners to increase access and availability of RUTF through reducing costs. The assessment showed that the proportion of procurement between the locally produced and imported amount as being 35% and 65% respectively for the selected base year. As the cost saving from local production is related to the scales of production, we have estimated the cost saving (excluding the indirect benefit of increased economic activity from local production) under different scales of production.

The assessment showed that on average increasing local RUTF market share from 35% to 50%, will have a cost saving of US \$1,103 per woreda; while increasing the proportion to 75% will have cost saving of \$2,940 per woreda. Assuming that the cost saving from all districts is similar, it is evident that the cost saving at national level would be significant. However, it is essential to explore the feasibility of local production as previous reports indicate that RUTF production in Ethiopia has been challenged with the availability of ingredients particularly dry skimmed milk and the mineral vitamin mix.

#### 6.4 Cost Estimates by Main Programme Activities

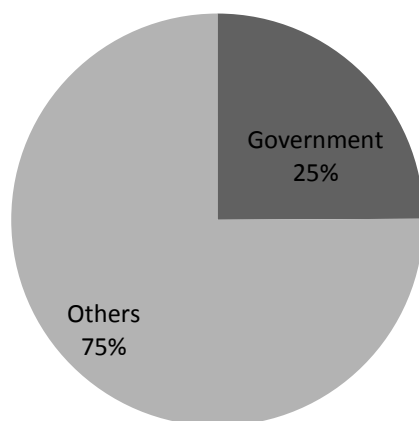
As shown Figure 6.3, RUTF was the most expensive component (50% of total cost) followed by service delivery (staff time and medical supplies for treatment of associated conditions). Service delivery including training and supportive supervision accounted for 34% of the costs. Other expenses, including logistics and fixed supplies and equipment accounted for 12 % and 6% of the cost, respectively. The average costs related to the various components are displayed in Figure 6.3.



**Figure 6.3: Percentage Share of Total Cost Among CMAM Components per Woreda.**

### 6.5 Cost Estimates by Sources of Funding

Breakdowns of the estimated total cost between government and UNICEF/other partners showed that percentage share of UNICEF/other partners is significantly higher than that of the government; due to the heavy investment and large cost related to RUTF. The average cost per district is \$56,974; out of this nearly 75% was covered by development partners. However, as noted in the limitation certain cost elements such as operational cost of NGOs are not included in the analysis. Government costs for CMAM include proportion of staff time at various levels of the public health system who are involved in the implementation of CMAM as well as clinical supplies for the management of associated conditions.



**Figure 6.4: Percentage distribution of the cost per district between the Government and partners.**

## 6.6 Long Term Financial Implications and Options for Sustainable Financing

Scaling up and ensuring the sustainability of CMAM will require measures to improve cost effectiveness, promote sustainability and ensure funding. On the positive side, the staff members are using the national treatment protocol for identification, treatment and follow up of cases. In addition, at policy level, the government has re-affirmed its commitment to CMAM through including health facility nutrition services as major strategic initiatives in HSDP IV. However, there is a total financing gap of \$175.9 million for nutrition (for all components) under the base case scenario.<sup>45</sup>

In order to improve efficiency and reduce costs, the following concerns are noted.

- a. **Measurement errors.** Various reports on EOS/CHD implementation have highlighted inconsistencies in the use of the recommended techniques for MUAC measurement leading to inclusion or exclusion errors. This has cost implications as the measurements determine eligibility to these programmes and measurement errors may lead to over or underestimation of the cost.
- b. **High attrition of health workers.** Evidence shows that there is a high attrition of health workers including HEW, who play key roles in the screening process. In order to address these gaps and irregularities, the existing capacity building and supportive supervision activities need to be strengthened. UNICEF and other development partners should support RHB and district health offices towards institutionalisation of the supervision process through the capacity building of HEW supervisors; as this will not only reduce cost but also contribute towards ensuring the ownership and sustainability of the programme.
- c. **The high costs of the imported RUTF.** The cost of the CMAM programme is largely devoted to RUTF as 65% of the ready to use products are imported.<sup>46</sup> Even when locally produced, a large proportion of ingredients such as powdered milk and soya bean oil have to be imported. Furthermore, the freight cost is substantial, as much as \$2.63/KG while the production cost is estimated at \$3.46/KG<sup>24</sup>. Local production is estimated to meet only 12% of RUTF and 8% of CSB national requirements.<sup>24</sup>

Sustainability requires capacities, systems and financing to take the CMAM implementation forward without partners support. There is clear evidence that woreda staff are committed and to some degree there are trained staff at all levels to provide services. There is also a strong sense of ownership by health professionals as well as managers at all levels. The programme is in line with HSDP IV. The capacities of woredas to plan and implement the programme has improved and there is good ownership and understanding on the programme by the administration staff; the sensitisation of woreda cabinet as well as the presence of HEWs and VCHWs is contributing positively to service take up. These all have created a foundation for future sustainability, yet it is premature to speculate that CMAM can be sustained as the financing of the programme is entirely donor driven. The major issues with regard to sustainability and scaling up CMAM include the following:

- **Implementation gaps and duplications.** The current management system is not sustainable due to the implementation of separate supply chain management and information management systems for CMAM and lack of administrative support to the hospital TFU sites.
- **Lack of government financial support for RUTF.** The government has not yet allocated any resources for the procurement of RUTF, which takes up the lion's share of the cost of CMAM (see the previous section). Given the high cost of RUTF, it is doubtful that the government will finance its procurement in the event that the current emergency aid dries up. Interviews at federal level clearly raised the need for exploring the production of alternative products to RUTF for future sustainability.

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<sup>45</sup> FMOH-HSDP IV

<sup>46</sup> Yuki, Isogai, 'Value chain approach to increasing production of RUTF/CSB' Field Exchange, Issue 40, 2011, page 78.

- **Issues in promoting local production of RUTF.** A local producer, Helina, can cover 100% of the need but is not able to produce this amount because of the shortage of working capital. According to a World Bank nutrition teams' assessment, local suppliers are not investing in RUTF due to lack of access to market information, low access to financing and a weak value chain. While scaling up the proportion of procurement from the local market has significant cost saving potential at national level, the feasibility to increase the scale of production needs to be carefully assessed as previous reports highlighted some gaps in this regard.

### Financial projection using 2006 WHO growth standards

The last point that needs emphasis and further analysis is the programme implication of the new WHO cut-off point. The introduction of the WHO child growth standards and the revision of the MUAC cut-off to identify SAM children will definitely increase the caseload for TFP; although there is an expected decrease in the duration of treatment due to early detection and treatment of cases. Our preliminary analysis showed that the new growth standard will increase resource requirement for CMAM and will put pressure on the limited resources available for the programme. However, considering the highly elevated risk of death among children with MUAC less than 115 mm<sup>47</sup> compared to those who are above,<sup>48</sup> it is very critical to revisit the existing admission criteria to TFP. The shift to the new admission criteria, however, needs to be preceded by further analysis and estimation of the resource requirement as well as strong advocacy and resource mobilization; to ensure that the additional cost and human resource requirement will not place undue pressure and erode the existing coverage and achievement.

In 2006, the WHO released a new child growth standard<sup>49</sup> for the identification and management of SAM; based on data from children from several countries, and organizations have been encouraged to use this new growth standard replacing the previous 1977 National Centre for Health Statistics (NCHS)/WHO nutrition reference standard—used since the late 1970s. Studies have shown that switching to the WHO standards will have little effect on the overall prevalence of MAM but will result in an increase in the prevalence of SAM when using z-scores.<sup>50</sup> Based on the new standard it is recommended to increase the cut-off point from 110 to 115 mm to define SAM with Mid Upper Arm Circumference (MUAC); which will be similar to weight-for height of below -3SD of the WHO standard. These new standards have been endorsed by international bodies such as the United Nations Standing Committee on Nutrition, and International Pediatric Association and adopted in more than 90 countries. Research elsewhere indicates that the numbers of children with SAM, and the resulting programme costs, are estimated to increase considerably as programmes begin to use the new standard. For instance, studies supported by the Global Nutrition Cluster found that numbers of children with SAM will rise by a factor between 1.5 and 4.2 with the new reference standard (WFH below -3SD or MUAC <115mm).

Overall, the available evidence shows that the introduction of the 2006 WHO child growth standards to identify children with SAM will increase the caseload for therapeutic feeding programmes. However, it has also the advantage of decreasing the duration of treatment since more children will be detected earlier and in a less severe state. This report has assessed the cost implication of the new reference point; in a

<sup>47</sup>Myatt M, Khara T, Collins S. A review of methods to detect cases of severely malnourished children in the community for their admission into community-based therapeutic care programs. *Food Nutr Bull*, 2006, 27(3 Suppl):S7–23.

<sup>48</sup> Patel MP, Sandige HL, Ndekha MJ, Briend A, Ashorn P, Manary MJ. Supplemental feeding with ready-to-use therapeutic food in Malawian children at risk of malnutrition. *J Health Popul Nutr*, 2005, 23:351–7.

<sup>50</sup> de Onis M & al (2006) Comparison of the World Health Organization (WHO) Child Growth Standards and the National Center for Health Statistics/WHO international growth reference: implications for child health programmes. *Public Health Nutrition* 9: 942-947



district with a population of 125,000 and SAM prevalence of 3% under the NCHS/WHO cut-off point. It is assumed that the new cut-off point will raise the number of children with SAM by a factor of two while reducing the average duration of treatment by one-third.<sup>51</sup> Under this assumption, although the new child growth reference standard decreased the cost per child; the cost per district has increased by nearly 37% due to an overall increase in the number of cases. Comparison of the RUTF requirement, cost per child and cost per district under the two cut-off points is summarized in the Table 6.3.

**Table 6.3: Comparison of NCHS/WHO Standards and 2006 WHO Growth Standard with Regard to Number of Cases and Resource Requirements**

	Unit	NCHS /WHO Standards	2006 WHO Reference
<b>Prevalence of SAM</b>	%	<b>0.3</b>	<b>0.6</b>
<b>SAM cases Treated (50% coverage)</b>	<b>Cases</b>	<b>600</b>	<b>1,200</b>
<b>RUTF (Outpatient Care and Inpatient Care sites)</b>	<b>Kg</b>	<b>3,626.49</b>	<b>7,252.97</b>
<b>F75 (Inpatient Care sites)</b>	<b>Kg</b>	<b>141</b>	<b>282</b>
<b>F100 (Inpatient Care sites)</b>	<b>Kg</b>	<b>42</b>	<b>85</b>
<b>Cost Per child</b>	<b>USD</b>	<b>\$119</b>	<b>\$94</b>
<b>Cost per District</b>	<b>USD</b>	<b>\$71,274.74</b>	<b>\$112,774</b>

## 7. CONCLUSIONS, RECOMMENDATIONS AND LESSONS

This chapter draws conclusions and proposes recommendations. The conclusions address the global/national TOR questions organized under OECD/DAC criteria. (Please see the TOR in Annex One.) The main conclusions are in italics and the corresponding recommendation(s) mentioned in parentheses and described in the matrix below. Lessons and good practices gained from the CMAM experience in Ethiopia are presented following the recommendations.

### 7.1 Key Findings and Conclusions

#### **Relevance and appropriateness**

1. How well has the CMAM programme strategy evolved and to what extent did specific strategies/interventions respond to the local/national context, needs and priorities?

***The CMAM approach has been effective in treating admitted SAM cases in Ethiopia; the CMAM programme strategy was strengthened based on lessons learned in crises over the last decade and has ultimately achieved geographic coverage of most of the country. The process of moving from a largely emergency response mode to a longer term programmatic mindset is ongoing and still lacks continuous support from stakeholders.*** The Government of Ethiopia (GOE) through the Federal Ministry of Health (FMOH) has promoted community management of acute malnutrition (CMAM) since 2003. Rapid programme scale-up with decentralization to the community health posts took place in the last four years in order to address widespread malnutrition and to prevent recurring emergencies. This has resulted in institutionalizing and integrating CMAM within the regular health services, however, more strategic planning is needed to overcome the funding gaps to ensure continuous long term support. (Recommendation #12)

***Government commitment to achieving the objectives of CMAM is strong and well backed by policy and strategy; development of institutional capacity within the health system is ongoing but not yet sufficient.*** The CMAM programme has evolved into being among the priorities of the FMOH as stipulated in the Health Sector Development Programme (HSDP) IV and the National Nutrition Plan, where CMAM is well ensconced in the multi-sectoral approach and is part of the M&E plan. Training has prepared some health professionals well to treat SAM but not enough health workers have been trained. (Recommendation # 10)

***The decentralization, scale-up and integration of CMAM were facilitated by collaboration among government, UNICEF and implementing and development partners, although the nutrition analysis and several other aspects of management remain to be integrated.*** Proactive government leadership together with partners' support promoted a successful decentralization process. The INGOs' shift in focus from creating parallel services to building capacity of the national system has contributed to integration. CMAM is fully integrated into the national health system in terms of service delivery and demand generation. It is partially integrated in planning but it is not integrated in terms of governance, financing, M&E (the NIS) and commodity management. These non-integrated functions are carried out by implementing and development partners. (Recommendations #2,5)

***The CMAM approach is relevant to community needs and demands for nutrition services, however, continuing evolution is warranted to adapt to new community structures and to better serve pastoralist populations.*** Communities and the Health Extension Workers (HEWs) understand the importance of the programme for early childhood development and acceptance of the programme is very

high. The role of community outreach will be taken over by the Health Development Army (HDA), currently being formed countrywide, and care should be taken not to lose the momentum created and the effectiveness of active case detection. The decentralization of CMAM successfully improved access and coverage by bringing the OTP and TFU services much closer to the communities. Overall, CMAM has been less effectively decentralized in the pastoralist regions (Somali and Afar). (Recommendations #2,4)

***Demand for CMAM services may be negatively affected by charges for routine drugs in some regions.*** Free health care for all SAM children under five years of age has improved access to and quality of CMAM services. Recently, however, routine drugs have been subject to charges due to health care financing reforms, except in SNNPR and Somali. Families are reported to have left TFU services when asked to pay, and children were given the free RUTF but not the routine drugs required as per CMAM protocols. Continuation or expansion of this trend will negatively affect both access and quality of services. (Recommendation #17)

2. How appropriate/adequate is the global guidance on CMAM for local/national needs including various aspects related to needs assessment, programme planning/design, management /quality assurance, monitoring and evaluation?

***The current Ethiopia admission criteria for SAM (<11 cm MUAC) compared to the 2006 recommended global standard of <11.5 cm excludes some children from treatment in OTPs and TFUs.*** (Recommendation #13)

***Ethiopia's "Protocol for the Management of Severe Acute Malnutrition", is based on global guidance and as such requires updating and expansion.*** Both global and national guidance is sparse or lacking for integration of CMAM into the national health system and highlighting equity and gender equality aspects. (Recommendation #6)

***The separation of SAM and MAM in approach and strategy is not feasible if acute malnutrition is to be effectively prevented and addressed.*** The global model for CMAM includes MAM management as one of its integral components. FMOH is developing new guidelines for MAM management but clearly the unification of SAM and MAM guidelines is essential and their integration with IYCF. Global assistance organizations need to work with the GOE to develop an integrated and comprehensive strategy for CMAM. (Recommendation #6)

3. How adequate is the technical and organisational support that has been provided for planning and implementing CMAM?

***Effective technical oversight is provided by a number of organizations such as the ENCU/MANTF at the federal level and Health and Nutrition Task forces, UN agencies, INGOs, donors and relevant government counterparts.*** IPs have substantially strengthened their roles in supporting national health services; stronger collaboration is needed for planning at woreda level to improve government capacity to implement CMAM. (Recommendation # 4)

***UNICEF's role in advocacy, coordination, and resource mobilization at the national level has been effectively carried out but further coordination is needed at both global and national level to tackle the gaps in funding and guidance.*** UNICEF played a significant role in advocacy and coordination by engaging all parties through nutrition cluster meetings, through regular meeting of UN agencies, NGOs and donors, and by communicating issues with government. UNICEF successfully mobilized resources to finance most of the costs of the scaling up process, and provided effective capacity support for developing tools, guidelines and training resources. (Recommendations #6, 12)

### **Effectiveness and coverage**

4. To what extent have the expected outputs and outcomes been realised through the CMAM programme? If there are shortfalls, what are the contributing factors?

**The CMAM programme's effectiveness is evidenced by its ability to treat 230,000 SAM children per year, from estimated cases of 250,000 during normal times, to cover 622 hotspot woredas.** The number of children with SAM treated annually has increased since 2003 from 18,000 to 230,000—more than 12 fold. Therefore scale up to reach all previously unreached children is practical and warranted. (Recommendation #8)

**Programme performance country-wide meets Sphere standard but there is variation by region correlated with health system capacity.** From January to August 2011, the Therapeutic Feeding Programme (OTP and TFU) achieved an average recovery rate of 83%, a mortality rate of 0.6% and a defaulter rate of 5%. Frequent supervision and strong tracking of programme data by the woreda health offices (WOHO) and IPs contributed to success. Variations by region are highly correlated with health system capacity; quality is not as strong in the pastoralist regions (Somali and Afar) due to weaknesses in the Health Extension Programme (HEP) which is under government review. (Recommendation #8 )

**The CMAM programme in the urban and agrarian contexts is well integrated and is working well, however, the mobile health teams do not perform efficiently to address needs of pastoralist children.** The mobile health teams serving pastoralists have unsustainably high operational costs, mainly managed by INGOs. Their integration into the pastoralist health extension programme itself is not as effective as it is supposed to be because the system weaknesses and the FMOH and regional health bureaus have been working to review and revise the implementation strategy. (Recommendation #9)

**The major issues of effectiveness of the programme are: (i) the sharing RUTF among non-SAM children, which is likely to reduce the effectiveness of the treatment which has significantly declined recently; (ii) irregular availability of routine drugs which compromises programme quality; and (iii) there are also weaknesses in the TFU referral and support services as 80% of health centres are not yet TFUs.** (Recommendations #11,17)

5. What is the estimated coverage of CMAM services against the national level need?

**The geographic expansion and growing health facility coverage (to about 90% of hotspot health posts) is taken as proxy indicator of good coverage or access to services, however, both geographic and treatment coverage can be improved particularly in reaching children who are in remote or logistically difficult-to access areas.** The number of health facilities providing the services increased from 239 in 2007 to more than 9,000 in 2011, enabling coverage of more than 90% of the facilities in the hotspot woredas (those most vulnerable to crises). The overall coverage of OTP services for the 622 woredas was 59%. The coverage for hot spot priorities 1&2 woredas is more than 80%. TFU coverage was insufficient at 24.6%. These are substantial achievements. Despite this progress, enhanced efforts are required to reach the yet unreached woredas. A barrier to TFU expansion is inadequate infrastructure. There may be less value placed on developing the TFUs in the woredas than in scaling up the OTP services and consequently, children have to be referred to TFUs in distant areas. (Recommendations #8)

**Treatment coverage surveys for CMAM are needed to identify groups and areas without access to services.** (Recommendation #8)

6. How developed and successful are the specific CMAM strategies (community outreach and mobilization, screening/enrolment, feeding, treatment, information management, follow up) and the interventions (as per the programme logic model) in realizing overall programme objectives?

***The health systems outreach mechanisms (e.g. house-to house visits, child health days) have integrated CMAM and are effectively used for screening or active case finding by health extension workers supported by community volunteers.*** With the exception of a few woredas (e.g., Jijiga), there is active community involvement and regular SAM case findings. Screenings are carried out during immunization days, CHDs and house-to-house visits, all as part of the integrated system and not as a vertical programme. Successful case finding was attributed to volunteer community health workers' (VCHW) role in this process and combining health initiatives; from July to August 2011 through the Enhanced Outreach Strategy (EOS/CHD) 93.6% of children under five years of age were screened countrywide. Screening coverage could be strengthened through better integration with other community based programmes. (Recommendation #7)

***Quality ratings indicated that 70% of CMAM services were working well and only 10% required substantial support.*** Health facilities generally lacked adequate space and a regular supply of routine medicines. (Recommendation # 9)

***Referrals and linkages are not adequate between the health posts (HPs) treating uncomplicated cases and the TFUs.*** (Recommendation #9 )

***Key challenges affecting quality in the TFUs include weak adherence to protocols, high turnover of staff and inadequate training on CMAM, weak administrative support and lack of food service for caretakers.*** (Recommendations # 9, 10)

***Challenges in MAM management which limit CMAM outcomes include reduction in woredas operating TSF programmes, inconsistent distributions, false enrolment (inclusion errors), weak follow-up, and insufficient linkages to counselling.*** (Recommendation # 6)

***Although efforts are being made to look into strengthening the CMAM information system and integrating it, its current form has high transaction costs and may not be sustainable.*** The CMAM information system is mainly supported by emergency funding. There is progress to make it web based. (Recommendation #5)

***National targets and progress toward them are not clear for screening and admissions.*** (Recommendation #4)

7. What is the contribution of the programme to national capacity-building among nutrition and health professionals and community workers, to policy and system/institutional development and to the engagement of the private sector and other key stakeholders? What conclusions can be drawn regarding the effectiveness of capacity building efforts?

***Systematic on-the-job and pre-service training supported by UNICEF and IPs increased the pace of institutionalization of CMAM.*** Capacity building efforts were successful in training of health professionals, development and rolling out of relevant guidelines and manuals, and strengthening the CMAM Monitoring and Evaluation (M&E) system. The zonal and woreda health offices have the capacity to conduct supportive supervision and quarterly monitoring of outputs without significant external support. CMAM training is needed to cover all health workers, and more attention is required to build the capacities of health workers in TFUs. (Recommendation #10)

***Ethiopia's capacity has been significantly strengthened to predict deterioration of the nutrition situation, mobilize resources and prevent a crisis as evidenced in the 2011 East African food crisis.*** The CMAM information system detected an increase in SAM admissions and timely treatment was provided. The continuous operation of CMAM in the hotspot woredas sets the community and health system response into motion without losing time in waiting for nutrition surveys or external responses. (Recommendation #5)

8. What are the key successes in generating new knowledge by the programme? Are these well documented and disseminated within the country and outside? What are the knowledge gaps which still prevent expansion of services through larger investments in CMAM?

***The support for the ENCU has promoted data collection and analysis on SAM which is widely shared; Ethiopia hosted the global CMAM conference in 2011; more knowledge of marketing is needed for overcoming constraints in local RUTF production and how to bridge the funding gaps.***

(Recommendation #5)

9. Are there any noteworthy good practices and lessons regarding overall programme effectiveness or the effectiveness of specific strategies, management modalities used?

**Key lessons and good practices are mentioned below following the recommendations.**

### ***Efficiency and quality of services***

10. How has the management aspect of CMAM evolved over time? How well understood and implemented are the current management mechanism including the roles and responsibilities of various staff and stakeholders?

(See Background in Chapter 2, Question #1 and also integration below.)

11. How systematically have the funds been allocated/utilised across programme strategies/activities to realise programme objectives? If there are delays/deviations in fund utilisation, how were these justified and what are the implications for attaining programme objectives?

***The majority of funds goes to treatment and clinical services, greater efforts were needed for capacity development which was difficult in the rapid scale up.*** (Recommendation #10)

12. What are per unit costs of CMAM in various contexts? Can any conclusions be drawn regarding cost-effectiveness / efficiency for treatment according to the CMAM programme in particular country contexts?

***The overall cost per treated SAM child, excluding the cost of routine drugs, is estimated to be US\$ 110 for established sites ranging from \$90 to \$152.*** However, if fixed health service costs are removed, the marginal cost per child is around \$73. The cost associated with the Ready to Use Therapeutic Food (RUTF) comprises about 50% of the cost per child and 33% goes to clinical services. (Recommendation #16)

***Approximately 75% of the total cost of CMAM is mobilized by UNICEF while the government's imputed contribution is 25%. The contribution of the implementing partners could not be estimated.*** The estimated average cost per district per year is estimated to be \$56,974, ranging from \$34,760 to \$84,665. The main variation among the woreda is related to number of under-five children, number of SAM cases (the fewer children in the woreda, the higher the unit cost), as well as remoteness of the woreda (the more remote the woreda, again the higher the unit cost). (Recommendation #1)

13. How operational and effective are the coordination mechanisms at the country level (i.e. coordination by the Government, including different ministries and other implementing partners, stakeholders (other UN agencies, NGOs, donors, etc.)? If noticeable gaps are evident, how can they be addressed?

***Coordination through the Multi-Agency Nutrition Task Force (MANTFM) to avoid duplication and identify woredas that need CMAM services contributed to the rapid scale up and increasing access to services mechanisms at national level.*** (Recommendation #6)

14. How timely and effective was UNICEF RO's and HQ's guidance and support in achieving overall goals and objectives of the programme? How successful was the coordination between NYHQ, RO and COs within UNICEF?

**UNICEF's global support needs strengthening for funding and unification of guidance among UN agencies and other development partners.** At the global level, UNICEF should advocate for CMAM funding and make sure it is given priority in SUN, REACH and other child survival programmes. (Recommendations #6, 12)

15. To what extent does the service delivery meet expected quality standards? What factors have contributed to meeting quality standards? Where quality standards are not met, what are the key bottlenecks/constraints that need to be addressed in order to meet quality standards?

(See also Question #6.)

**The quality of the CMAM services has improved significantly from its status of 2008 and 2009; Approximately 10% of health facilities receive less than a 50% quality rating indicating that efforts are required to improve services.** The average programme performance country-wide is within the acceptable ranges of the Sphere standards. The national protocol for treatment of severe acute malnutrition, standard operating procedures and other relevant guidelines are in use in health facilities. Services were generally not adequate in terms of space in health facilities and availability of medicines, but in most at least half of the personnel have had CMAM training. The main factors contributing to quality were a) frequent supervision by the Woreda Health Office (WOHO) and partners; b) continuous capacity building through training and on the job-support; c) tracking of the CMAM data by the WOHO and regional health bureau monthly; d) government ownership; e) the availability of quick reference and job aids; and, f) the presence of standard operating procedures. (Recommendation #9)

#### **Programme sustainability and scaling up (country-level)**

16. What level of progress has been achieved to build CMAM programme's ownership by the Government and its integration in the national service health delivery system? What is the evidence regarding national and sub-national engagement and ownership of the CMAM? To what extent has national ownership of CMAM programme increased? What are the success factors and lessons learned? Where this has not occurred fully, what are the constraints and consequent lessons for the future? Is there any evidence of increased budgetary allocations at the national level?

(See Question #1)

17. How feasible are the current interventions in terms of the ability to be sustained without direct technical/financial support by UNICEF and other agencies? What factors have supported or inhibited expansion and scale up of CMAM interventions?

**The CMAM programme depends largely on unpredictable, short term humanitarian emergency funding sources.** (Recommendation #12)

**The RUTF, mainly imported, remains the main cost driver of the programme. Unless alternative production is explored, sustaining the programme in its current state or expanding to more areas do not seem feasible without development partners' support.** (Recommendations #11,16)

18. What are the issues and options related to the feasibility (administrative, institutional, technical, financial) for replication and expansion? What are the risks related to sustainability that are related to discontinuation of external support? What plans/strategies/mechanism exist for programme phase out/closure?

**Revision of the CMAM admission criteria for SAM from <11 cm (Ethiopia standard) to <11.5 cm MUAC (WHO/UNICEF, 2006) will result in higher coverage, and higher costs per woreda but lower costs per child.** Ethiopia follows the earlier global cut-off point for admission of SAM children which has an exclusionary effect.<sup>52</sup> Shifting to the new cut-off point which is strongly promoted by some stakeholders, may not be possible given the large gaps in funding coverage for nutrition. As demonstrated in the costing exercise, the revision of the admissions cut-off point will increase any human and material resource needs. (Recommendation #13)

**As partners in CMAM, the INGOs vary in their scale of support to woredas, such as in the numbers of staff they deploy. They also have different exit strategies<sup>53</sup>, which have affected the sustainability of the programme after they have departed.** The experiences of GOAL and Concern Worldwide provide good examples for planning more support at the initial stage and transferring responsibility to government over a short period of time, using criteria for judging integration. Woredas are generally not informed about INGOs exit strategies. (Recommendation #14)

### **Programme impact (outcomes/potential impact)**

19. Based on longitudinal data and other type of information, what conclusions can be drawn regarding the extent to which the programme contributes to a long-term improvement in the quality of life of the children treated through CMAM?

**The evaluation did not draw evidence for impact but important outcomes are noted.** During the current East Africa drought (2011-12), the FMOH and its partners detected the rising SAM cases well before it became a crisis and developed an intervention plan to scale up the programme in affected regions. The programme has successfully averted childhood deaths, and according to the TFP performance data on mortality is at acceptable level of (5%) or below; death related to SAM markedly decreased after the introduction of CMAM. The 2011 Ethiopian preliminary DHS report indicates that the under-five mortality declined from 123 in 2005 to 88 per 1000 live births in 2011. The CMAM programme is expected to contribute to this decline although the specific impact of the programme has not been assessed. (Recommendation #1)

20. How significantly has the programme contributed to either revitalise or place nutrition high on the national policy and developmental agenda?

**Contributions to the national development agenda are significant but have not resulted in government budgets for CMAM or nutrition as a whole.** At policy level, the government has re-affirmed its commitment to CMAM through including health facility nutrition services as major strategic initiatives in HSDP IV. However, there is a total financing gap of \$175.9 million for nutrition (for all components) under the base case scenario (Recommendation #1)

### **Cross-cutting issues**

21. How effective is the vertical and horizontal coordination (involvement of various sectors) in planning and implementing CMAM? How strong is the national /sub-national engagement and ownership of CMAM programming (including national budget allocations)?

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<sup>52</sup> According to the joint statement by WHO and UNICEF, using the new WHO standards in developing country situations results in a 2–4 times increase in the number of infants and children falling below -3 SD compared to using the former NCHS reference. The statement also noted there is a difference between these two estimates that are not well explained. It also notes that the implications of these differences in terms of associated risk and response to treatment deserves further investigation and in the meantime both should continue to be used as independent criteria for admission.

<sup>53</sup> Some NGOs do not have exit strategy at all. Those that have also differ on the time span and degree of scaling down operation and on their assessment of the capacity that they have put in place.



***In general, there is not enough integration between community outreach, OTP and TFU with other services and programmes.*** Linkages between these components of CMAM and management of Moderate Acute Malnutrition (MAM) and Infant and Young Child Feeding (IYCF) could be considerably strengthened to create synergy for addressing malnutrition. (Recommendation #6)

22. How adequate is the progress achieved in implementing a national policy on CMAM or in integrating CMAM components into existing policies? What more needs to be done? What lessons can be drawn?

(See Question #1.)

23. How systematically has institutional capacity development been pursued at all levels for long term sustainability of the programme? What more needs to be done?

24. (See Question #7)

***The supply management system used for CMAM, operated by UNICEF and IPs, has not served to appreciably strengthen the national distribution system due to short term funding and planning.*** Yet a strong national system, particularly from woreda to health facilities, is needed to promote a reliable supply of Ready to Use Therapeutic Food (RUTF) and routine drugs. Similarly drugs and therapeutic products need to be registered in the national system to avoid supply issues due to import regulations; therapeutic feeding items should be included in the essential drug/commodity list. (Recommendations #2, 3)

25. How adequate are the guidelines on various aspects of CMAM programming?

(Please see Question # 2)

26. To what extent the technical support provided by various agencies is well-coordinated and responds adequately/coherently to various programmatic needs?

(Please see Question #3)

27. To what extent did gender equality exist in CMAM programmes in participation, decision making and access to CMAM services? Are there any issues related to gender, geographic or other form of equity in CMAM service delivery and access that are evident? What measures could be proposed to improve programme targeting?

***Some vulnerable children are not accessing CMAM services due to prioritization, distance and health system capacity issues; expansion of the programme could help to cover these children.*** CMAM services are working well in terms of fair population based distribution including targeting some of the HIV/AIDs cases. However, even within the covered woredas, there are kebeles and population groups in the hard to reach areas where neither screening nor services have reached. The main challenge is the applicability of standards to sparsely populated regions where beneficiaries travel a long distance in accessing care. In some areas, mobile teams need to be more effective as described above. (Recommendation # 8)

***The perception among stakeholders that there is gender equality in CMAM services needs to be substantiated with more programme data collection and analysis on gender.*** National programmes promoting social cohesion help to promote participation, decision making and access to services. The GOE will include CMAM services within Integrated Community Case Management (ICCM) and is considering including CMAM as one of the priorities in its social protection policy. Through these initiatives, stakeholders should promote more data collection and analysis on issues of equity and gender equality as they relate to CMAM and nutritional well-being. Not all programme data is disaggregated such as screening data. (Recommendation #9).

## 7.2 Recommendations

The evaluation has determined that CMAM is a relevant and effective approach in Ethiopia for treating severe acute malnutrition and puts forth the following priority recommendations to be addressed by the Government of Ethiopia, the Federal Ministry of Health, UNICEF, and other partners and stakeholders in order to better serve acutely malnourished children.

DETAILED RECOMMENDATIONS	MANAGEMENT RESPONSIBILITY
<i>Relevance – Policy, Integration, Standards, Guidelines</i>	
<p>18. <b>Enhance Government ownership of CMAM and commitment to scale up and integration, through allocation of resources directly to the programme.</b> The FMOH should allocate a budget, including through the Millennium Development Goal Pool Fund (MDG PF) to finance, for example, CMAM supplies and/or the costs of training and routine drugs since investing in CMAM services will likely contribute to the reduction of the child mortality rates to meet the Millennium Development Goals by 2015.</p>	<p><i>The GOE (FMOH and Ministry of Finance) should take the lead with technical support from donors and partners.</i></p>
<p>19. <b>Develop a transitional plan to handle CMAM supplies through the national logistics system</b> called the Integrated Pharmaceutical Logistics System (IPLS) of Pharmaceutical Fund and Supply Agency.</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing partners</i></p>
<p>20. <b>Consider inclusion of the therapeutic feeding items in Ethiopia's essential drug/commodity list</b>, in order to facilitate the oversight of the production and importation and to include them as essential drugs for health centres and health posts rather than food. If registered as food, the items are difficult to distribute through the health system.</p>	<p><i>The GoE should take the lead in coordination with the Food, Medicine, Health Care Administration and Control Authority (FMHACA) with technical support from UNICEF</i></p>
<p>21. <b>Integrate CMAM with the woreda-based plan including CMAM indicators in the annual targets, annual review meetings and supportive supervision.</b> Promote stronger coordination and sustainability for CMAM at the woreda level by ensuring that interventions and resources contributed by Implementing Partners are incorporated into the annual planning process.</p>	<p><i>The GoE through the FMOH should lead in coordination with woredas and with support from UNICEF and implementing partners</i></p>
<p>22. <b>Strengthen the capacity of the FMOH and Disaster Risk Management and Food Security Sector (DRMFSS) to manage the Emergency Nutrition Coordination Unit's data with minimal technical support.</b> Support either the <b>integration of nutrition related indicators</b> into the HMIS or the development of a nutrition information system that interfaces with HMIS and with a responsible programme section to handle the data at federal and regional level.</p>	<p><i>The FMOH and DRMFSS should take the lead in coordination with the ENCU and with technical support from UNICEF.</i></p>

<p>23. <b>Create a comprehensive and integrated set of guidelines for MAM management, SAM treatment and infant and young child feeding (IYCF) to strengthen monitoring linkages and community based approaches.</b> CMAM is meant to be integrated and include MAM. Include the following updates and extended guidance:</p> <ul style="list-style-type: none"> <li>• Include guidance on equity, gender equality and integration into the health system and with other programmes</li> <li>• Health Extension Workers (HEWs) should be given responsibility for following MAM cases</li> <li>• Frequency of MAM supply distribution should be at least monthly.</li> </ul>	<p><i>The FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>
<p><b>Effectiveness – Coverage and Quality of Services</b></p>	
<p>24. <b>Use the monthly Growth Monitoring Programme (GMP) contact point of Community Based Nutrition (CBN) to a greater degree to screen children,</b> in order to promote early detection of SAM and to increase access to treatment With the changing landscape in the system due to the introduction of the HDAs, which moves GMP one step up from CHW level to HEW level, close follow up and monitoring is required as it is not yet clear how it will play out in reality on the ground specially in the short term.</p>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>
<p>25. CMAM should be <b>scaled up as a joint action by all partners</b> to other geographic sites and non-hot spot woredas to reach all children who need the service. The inpatient care for SAM with medical complications should be scaled up at least to one per woreda to improve access and quality of care. Because of the scaling up process is now being facilitated through the Integrated Community Case Management (ICCM) in non-hot spot woredas, the expansion of these referral units is required.</p>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>
<p><b>Cross Cutting Issues</b></p>	
<p>26. <b>Continue support to monitoring of quality of CMAM services</b> as this has contributed to improving it over time while at the same time ensuring more responsibility to the FMOH at all levels.</p> <ul style="list-style-type: none"> <li>• Strengthen the use of performance and quality data at the district and facility level to make their own analyses and to promote decision making on patient care.</li> <li>• Include gender disaggregation of data and analysis on gender equality in programming.</li> <li>• Adapt the standardized Therapeutic Feeding Programme (TFP) quality monitoring system and the integrated woreda supervision checklist.</li> <li>• Ensure that quality appraisal of the mobile units are included to help identify problems and address them.</li> </ul>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>

<ul style="list-style-type: none"> <li>• Ensure that TFU services are well covered so that improvements will be made.</li> </ul>	
<p><b>27. Extend training to reach all who directly deal with CMAM including health workers and as well as district managers.</b> Particularly for inpatient care, the new standardized training material for CMAM should to be rolled out. Out-patient training should be integrated with ICCM and IMNCl. Training should be integrated with the woreda and regional review meetings.</p>	<p><i>The GOE/FMOH should take the lead with technical support from UNICEF and implementing partners.</i></p>
<p><b>Efficiency, Sustainability and Scaling Up</b></p>	
<p><b>28. Further improve efficiency of use of RUTF</b> through continuing community education to curtail inappropriate sharing, and investigating feasibility of putting into place a stronger system of accountability and monitoring such as an auditing mechanism in use by some woredas.</p>	<p><i>The GOE should take the lead through woredas and with technical support from UNICEF and implementing partners.</i></p>
<p><b>29. Continue the partnership among the GOE and development partners but with a longer term development rather than emergency perspective, which could increase the development funding for CMAM to ensure the sustainability of the programme.</b></p> <ul style="list-style-type: none"> <li>• Development partners such as UNICEF should include CMAM as part of their country development strategies and support it from their development funds</li> <li>• Donors should ensure that all child survival or development nutrition programme proposals have a CMAM component.</li> <li>• Donors need to be flexible enough to allow the use of MDG PF support for CMAM activities when it is included in the government's plans. These will ensure sustainable and long-term funding for CMAM rather than the current short-term (six months to one year) emergency funding.</li> <li>• At the global level, UNICEF should advocate for CMAM funding and make sure it is given priority in SUN, REACH and other child survival programmes</li> </ul>	<p><i>The GOE through the FMOH should lead with support from UNICEF, and other development partners and donors.</i></p>
<p><b>30. Consider the impact of increases in costs for services if revision of the CMAM admission criteria for SAM from &lt;11 cm (Ethiopia standard) to &lt;11.5 cm MUAC (WHO/UNICEF, 2006).</b> This change will result positively in higher coverage and more equity in the programme but must be studied in view of the funding challenges. As demonstrated in the costing exercise, the revision of the admissions cut-off point will increase any human and material resource needs.</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing partners.</i></p>
<p><b>31. Define what the 'minimum' support entails and what the exit strategies should be so that all IPs operate in similar fashion.</b> Implementing Partners (IPs) should continue with minimal support especially on supportive supervision, review meetings and off site</p>	<p><i>The GOE should take the lead with technical support from UNICEF and implementing</i></p>

and onsite training at regional and district level. The IPs should work with the respective government bodies and UNICEF on strengthening quality of CMAM services through and within the government structures and mechanisms rather than assigning their staff to do the routine work.	<i>partners.</i>
32. <b>Diversify IP woredas of operation</b> by scale up to new woredas where their support is critically needed. This will accelerate scale up and allow their regular woreda partners to develop the confidence to manage CMAM without IPs support	<i>The GOE should take the lead with technical support from UNICEF and implementing partners.</i>
33. <b>Encourage the private sector to produce RUTF locally</b> by providing tax exemption privileges, bank loans, and land for investment. It should also encourage the production of cheap alternatives through supporting operational research. Donors should enhance their support to the local production of RUTF especially toward cheaper and locally acceptable alternatives through their public-private partnership funds such as PepsiCo, Helina, and Valsek (Government,	<i>The GOE should lead with support from UNICEF, and other development partners and donors.</i>
34. As a matter of priority until the GOE is able to totally fund the <b>routine drugs</b> that are necessary for CMAM options should be explored for funding them through budgeting by the Government or development partners or listing them as an exempt service	<i>The GOE should lead with support from UNICEF, and other development partners and donors.</i>

### 7.3 Best Practices and Lessons Learnt from the CMAM Scaling Up in Ethiopia

In Ethiopia, scaling up of CMAM has been rapid compared with other health programmes in the country and the extent of coverage, and integration into national health services has not been matched by any other country where CMAM is implemented. It is therefore critical to document the good practices and lessons to share with other countries. This chapter discusses the good practices and the lessons learnt in the scaling up process.

#### 7.3.1 Good Practices

**Good Practices** are well documented and assessed programming practices that provide evidence of success in achieving results and which are valuable for replication, scaling up and further study. They are generally based on similar experiences from different countries and contexts.

- 1. Rapid decentralization of CMAM services is promoted by strong government commitment and ownership at all levels of CMAM implementation.** In response to the 2008 crises in SNNP and Oromia regions, the GOE decided to decentralize CMAM services to HPs level. Once scaling up was initiated, ownership and leadership by government staff at federal, regional and woreda levels have been exemplary and contributed to CMAM success. It included the service as one of the programmes that should be implemented as part of the Health Extension Programme, which is the government's flagship on increasing primary health care in the country. HEWs in hotspot woredas were trained and assigned to carry out the service provision as part of their routine responsibilities. Although the GOE has not paid any of the direct costs for CMAM so far, it contributes substantially to core salary cost of health services providers. The GOE commitment to facilitate CMAM implementation through the

government health system, with NGOs providing technical assistance, is instrumental to the achievements produced.

2. **Task shifting among health workers and giving more responsibility to community health workers to ensure an available cadre to provide services at CMAM sites has contributed to coverage and to reaching the previously unreached SAM children.** Although WHO's recommendation on CMAM scaling up advised against the treatment of malnourished children by community health extension workers, the GOE proceeded to implement the scaling up. Furthermore, the GOE overrode the restriction it imposed on the Health Extension Programme (HEP) that did not allow the Health Extension Workers (HEWs) to engage in curative care services and allowed them to provide treatment for SAM children. The thinking that only doctors should treat SAM was revolutionized by task shifting from doctors to nurses and then to HEWs at outpatient level. The pivotal role of the community health workers in case finding is widely acknowledged.
3. **The implementation of CMAM services can create a vehicle in CMAM sites that can potentially carry other nutrition programmes like stunting reduction without creating any parallel system and integration of CMAM with management of pneumonia, malaria and diarrhoea can save many lives.** The GoE recently initiated Integrated Community Case Management (ICCM) to treat pneumonia, malaria and diarrhoea at the community level. The GoE decided to include CMAM services as one of the ICCM components, which will be the driver of increasing CMAM programme coverage in the coming years. This is expected to save many children who suffer from the lack of these services in their communities. Currently this initiative is supported by four INGOs in the four agrarian regions.
4. **Integration of in-service and on the job training with refresher training assures that all training for health service personnel will include CMAM related skills and that training programme will be sustainable.** The in-service training programme for health extension workers is now included in the Integrated Refresher Programme (IRT) and Integrated Management of Neonatal and Childhood Illnesses (IMNCI) module for health workers. This ensures that all refresher trainings conducted for the HEWs will also include CMAM related skills. Another enabling factor is the integration of CMAM in the pre-service trainings. All new HEWs and all general practitioners will now graduate with CMAM skills. The effort to get it integrated for pre-service training for nurses is ongoing. This will ensure the sustainable availability of trained personnel at all levels of the health system in the coming years.
5. **Acceleration of the access to overall primary health care services to address weaknesses in the national health system was the means by which this well functioning scaled up CMAM programme was anchored.** Scaling up and integration of services happens when there is a functioning health system to work with. The efforts made over the last few years have created a health system that is being powered by 38,000 health extension workers, 15,000 health posts and more than 2100 health centres. The scaling up of CMAM wouldn't have been achieved had it not been for the concerted effort made over the last five years to expand primary health care service providers in the country. It is noted, however, that many weaknesses of the CMAM programme are also a reflection of the problems in the health systems that need to be addressed. This includes lack of adequate storage in the health posts, lack of inpatient care at the health centres level, weak supply management and health information system, and weak supportive supervision as well as weak quality of care in some woredas.
6. **The change of mind set by the International NGOs, who provide valuable management and technical assistance for implementing CMAM, from controlling to handing over service**

**provision responsibility to the decentralized health system contributes significantly to the results achieved.** The INGOs managed and implemented the OTP and TFU components when CMAM was initiated. With the decision to decentralize CMAM into HPs, many of INGOs have shifted from management to supporting capacity building. Although there were initial challenges, this technical support brought a significant improvement in quality of CMAM programme given the scale of the expansion that is taking place.

- 7. UNICEF's sustained commitment and comprehensive support to government and CMAM in advocacy, capacity development, and coordination is critical to promote coverage and efficiency.** UNICEF engages all parties including implementing partners through nutrition cluster meetings, through regular meeting of UN agencies, NGOs and donors, and communications between government and UNICEF. The coordination of government and partners through MANTF to avoid duplication and identify woredas that needs CMAM services contributed to the rapid scale up and increasing access to services. Some of the woredas viewed the contribution of INGOs in capacity building is very high but most maintain that it is mainly UNICEF that provides comprehensive support in CMAM implementation. UNICEF with the FMOH managed a well thought out pragmatic scaling up strategy that adopted the international protocol into national guidelines, translating it to practical doable action that the HEWs can understand and perform. UNICEF has been a major force in supporting the government decision and has invested a lot to ensure that national protocols, guides and job aids for the HEWs are developed and distributed; intensive training is provided for HEWs and health workers, and that these guides and tools are translated into service provision.

### **7.3.2 Lessons Learnt**

***Lessons learned** are more detailed reflections on a particular programme or operation and extraction of lessons learned through its implementation. These lessons may be positive (successes) or negative (failures). Lessons learned have undergone a wider review than innovations and have often been implemented over a longer time frame.*

- 1. Where the supply and logistics system for CMAM is operated in parallel to the national health system logistics, sustainability outcomes require that an investment is made to strengthen the national system, including harmonization of any importation requirements for RUTF, and integrate CMAM supply and logistics as soon as possible (see following chapter)..**
- 2. The planning and budgeting for CMAM should be reflective of and integrated into the planning systems in the country, including at the planning level closest to the community, to promote efficiency and sustainability; having separate planning processes at federal and local levels does not strengthen the local processes which are strategic to promoting funding, coverage and effectiveness.** The planning process for CMAM starts at HPs levels. All the HPs, HCs and hospitals visited have plans for CMAM that are included in their annual plan. This will then be consolidated at woreda and regional levels, as a CMAM plan. This forms the basis for CMAM programme plan that is implemented by UNICEF and INGOs. However, this planning process is not as part of the woreda based planning process. Thus CMAM is, reflected in the plans of the lower levels, but it is not included in nationally monitored targets of the national woreda based planning process. This is caused mainly due to the fact that CMAM indicators are not included as core planning indicator in the woreda based planning process. Consequently, CMAM activities are not on-plan and hence the programme has not benefitted from the un-earmarked nationally allocated MDG Performance Fund. Furthermore, the achievements and challenges of the programme are not reported in the national annual review processes. While the HSDP

IV targets includes CMAM targets, its annual core plan is yet to develop mechanisms that translates this into action regarding follow up in the planning, budgeting and reporting process. It is necessary to ensure that the core indicators followed up at national level reflect the HSDP IV priorities. It is, therefore, recommended to revise the planning format and ensure inclusion of the newly added HSDP IV output indicators, including CMAM.

**3. To support Monitoring and Evaluation (M&E) activities (recording, reporting, support supervision), two major issues need to be addressed: weak monitoring of the programme itself and integration of M&E with the health management system.** First, implementing and scaling up CMAM requires strong supportive supervision at all levels. As discussed in chapter four, the existence of ENCU and its database has significantly helped to track the progress of CMAM. However, the finding from the woreda and health facilities is that there is imbalance between expansion of CMAM and the amount and frequency of supportive supervision provided. Not having adequate follow up and continuous supportive supervision to the lower level is common theme that have been observed in all woredas, including inadequate support in terms of provision of admission cards, registration books, reporting formats. It is reported in many regions that CMAM monitoring is especially weak at the regional level. The recently revised Joint Supportive Supervision checklist has only a very small CMAM component within it.

Second, CMAM information system is not integrated through the health information system.<sup>54</sup> There are two major issues in this regard. First, CMAM indicators are not part of these HMIS defined indicators.<sup>55</sup> Although the HSDP IV document has a target on SAM services at facility level, the mechanism by which these targets are monitored are not yet articulated. The 2003 EFY (2010/11) health sector performance report (first year of HSDP IV) has not reported any progress regarding these targets. Second, there is a mismatch of reporting time between CMAM and HMIS. CMAM related data is required to be reported on monthly basis to meet funding requirements while HMIS is reported to the federal level every quarter. Because most of the funding for CMAM comes from emergency funding, it needs to meet Sphere standards and be reported on monthly basis. At facility level, the ICCM and CMAM reporting is reported to have created a work burden on professionals.

In terms of integration, all CMAM related information is being collected, recorded and reported within government system from health facilities to regions. This is facilitated by the employment of full time reporting officers seconded by UNICEF to ENCU for CMAM at regional levels. This is not only parallel to the health management information system, but the coordination of information collection and reporting is being handled by different personnel at regional level, outside the HMIS. When it comes to federal level, the information goes to ENCU which currently resides outside the health sector. This shows that the information required for CMAM programming is being collected at higher transaction cost and its sustainability is questionable. The FMOH is currently developing a nutrition information system concept note to bring all development nutrition information under the FMOH. How far this will resolve the vertical information system is not yet known.

It is now understood that HMIS may not be able to handle all the detailed information system requirement of the health sector, specifically from programme perspectives. The regions have reported that they are being requested by the FMOH programme directors to report over programme implementation outside the

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<sup>54</sup> FMOH has been scaling up the new HMIS in the country. This system has now covered 69 % of HCs and 75% of hospitals. This information system has defined indicators that need to be reported from the regions every quarter

<sup>55</sup> The HMIS indicators that are currently being scaled up were defined in 2007 before the CMAM scaling up was decided by the government. CMAM indicators come after the fact. There are ongoing discussions to revise the HMIS indicators, one of the missing elements being nutrition indicators. This is not a CMAM issue alone. There are other programmatic areas that also requesting inclusion as the HMIS is designed to collect nationally monitorable core priorities (linked with MDGs) to reduce the transaction cost at lower levels.



HMIS system, including CMAM reporting. The proposal for using smart SMS for information exchange on nutrition especially on CMAM from lower levels has not been implemented due to the desire of the government to make it usable to all programmes. The government should consider thinking outside the box and consider strengthening different databases including HMIS but create interfaces among them for better analysis and information sharing.

**4. When there is functioning CMAM programme, emergencies can be contained through development intervention; however, the paradox needs to be addressed that funding development interventions through emergency humanitarian resources will not be sustainable.** One of the immense challenges of sustaining CMAM intervention in Ethiopia and other countries is developing a mechanism to ensure the programme is funded through development aid and government allocation. The contribution of government for CMAM is critical as it ensures that there is availability of staff at the facility and community levels. All funds for training, procurement and distribution of drugs and supplies and monitoring and quality control are being solicited from international funding sources. Again, most of these funding is being mobilized from humanitarian donors through UNICEF. Given that INGOs are also supported through emergency funding, there are challenges in terms of interrupting capacity building support in areas where partners phased out/ hand over the programme (e.g. Tenta Woreda where WVE phased out and Sekota after GOAL and SC-UK phased out. The experience of Ethiopia in 2011 East African food shortages clearly documented that there are a number of options to consider for this:

- Link the CMAM programme with other prevention focused development nutrition programmes (CBN, Essential Nutrition Action, Livelihood programmes, etc.)
- Being one of the components of Integrated Childhood Case Management (ICCM), ensure that CMAM funding (including procurement and distribution of RUTF) is also included in the request for scaling up of ICCM. One of the challenges foreseen in this connection is to include CMAM supplies in the quantification of ICCM supplies (carried half yearly).

## **Annex 1: Terms of Reference for CMAM Evaluation in Ethiopia**

### **Background**

Severe acute malnutrition (SAM) threatens the survival of children under five years of age both in emergency and non-emergency settings. Recent estimates covering both emergency and non-emergency settings suggest that SAM affects about 20 million children under 5 years of age globally and contributes to nearly 1 million child deaths each year. With increased frequency and intensity of natural disasters and economic uncertainties around the globe, it is likely that a larger number of children will remain affected by SAM in the foreseeable future. Using the 2.2% severe wasting rate from DHS Ethiopia 2005, it is estimated that over 250,000 children have severe acute malnutrition at any time.

Management of severe acute malnutrition (SAM) has evolved as a major programme intervention over several decades but it had limited reach, as it was tied to lengthy inpatient treatment in health facilities. Scaling up of programmes that addressed SAM was made possible just a few years ago when the advent of a ready to use therapeutic (RUTF) food and an innovative community-based approach made it possible to treat the majority of children in their homes. Large scale implementation of community management of severe acute malnutrition (CMAM) started recently after UN endorsement of the community-based approach in 2005.

CMAM strategy is comprehensive and covers both demand and supply aspects. The enabling environment component encompasses the policies, commitment of funds, coordination and technical support available to MOH and programme implementers. Access to services is meant to address both inpatient and outpatient components for treatment and suggests linkages with formal and informal healthcare and community based organizations or systems. Access to CMAM supplies is identified as critical and includes both essential drugs and RUTFs, usually requiring long-term donor commitment if beyond the capacity of governments. Service quality includes establishment of adequate guidelines, support and supervision for staff and monitoring and evaluation components. The competencies component is meant to address issues of training and support, as well as on-site monitoring and communication outlets through which practitioners can share experience.

Ethiopia was the first country to pilot the new approach early in 2000. Since 2003, outpatient management of SAM continued to grow from very small scale interventions directly implemented by NGOs, to large scale programmes implemented in public health facilities throughout the country. Nutrition emergencies over the years prompted continued expansion and integration of CMAM into the public health interventions.

In 2008, Ethiopia underwent one of the largest humanitarian responses to severe malnutrition ever undertaken in its history. In January and February 2008, nutrition surveys revealed findings averaging Global Acute Malnutrition (GAM) of 10% and Severe Acute Malnutrition (SAM) below 1%. Two months later (April surveys) the GAM had risen to 12.8% and SAM 3.1%. In May 2008, dramatic and rapid increases of SAM levels were reported in Oromia and SNNP regions. An estimated 510,332 and 84,200 under five years old children were affected by moderate and severe acute malnutrition respectively. The sharp rise in the number of severely malnourished children could not be managed by the health centres with operational feeding centres. As a result the ministry of health decided to rollout out-patient management of SAM to health post level in 100 drought-affected districts of Oromia and SNNP regions, shifting the task from health centre/ nurse level to health post/ health extension worker level. The health extension workers were central to this rollout of the management of SAM which has continued ever since, enabling the Ethiopian CMAM services to be uniquely close to the community through the public health infrastructure.

Ready-to-Use Therapeutic Food (RUTF) remains the essential commodity for SAM service provision, with demand for it increasing as treatment capacity expanded in Ethiopia. While the bulk of RUTF has been imported, local production was initiated in 2007 taking a progressive share of the market. Ensuring safety

and quality of the locally produced RUTF affected the scale-up of production meaning that continued importation was required to cover the annual RUTF needs in Ethiopia.

The production and availability of RUTF is contingent on the availability of sources of funding. Management of SAM is mostly considered as an emergency response. While some emergency donors wait for the emergency thresholds to be surpassed, others are relatively flexible in providing resources to prevent deteriorating situations in Ethiopia. This relatively short-lived emergency funding however, provides insufficient time and emphasis for capacity building. Hence it is not uncommon that an NGO requests a donor for repeated extension of a project, or phase between donors while remaining in an area for years. Additionally, there has not been any consistent funding sources to cover RUTF costs from the development departments of donors in non-emergency times. While the public sector covers all of the structural costs including the construction of the facilities and the staff cost, as yet there is no allocation of funding from the public sector for procurement of RUTF.

In pastoralist settings, the sparse population and the seasonal movements require that the CMAM approach is adapted to the local context. CMAM services were therefore integrated with other basic health service packages provided by mobile teams. These mobile health and nutrition teams prioritized areas with relatively higher population and without access to functional static health facility. Major child killer diseases including diarrhoea, malaria, measles, pneumonia and malnutrition are managed by these teams. In addition, the teams provide health education and water purification chemicals, as needed. There are twenty mobile health and nutrition teams managed by the Somali regional health bureau while there are four mobile health and nutrition teams in Afar regional state.

Since late 2010, the ministry of health has launched an Integrated Community Case Management of common childhood illnesses, a decentralized case management enabling health extension workers to treat pneumonia, diarrhoea, malaria and malnutrition. The case management algorithm is largely built on the lessons of IMNCI, adapted to the health post level. This has created yet another opportunity for scaling up of OTP capacity to all health posts in Ethiopia in an integrated and sustainable manner.

#### Justification

To consolidate the achievements made and to further enhance and expand CMAM services, there is a need to generate concrete evidence on how well the strategies have worked including: how CMAM fits in the national health and nutrition policy environment; appropriateness of the past and future investments in capacity development; effectiveness and appropriateness of the logistics and supplies delivery system, the information system; and service quality, coverage and the level of supportive supervision. Moreover, there is a need for assessing the elasticity of the integrated CMAM to absorb shocks, during times when emergency situations are developing.

The government of Ethiopia has taken full ownership and leadership in the process of integrating CMAM into the routine health care delivery system. This proposed evaluation aims to undertake a comprehensive assessment of CMAM and draw synthesized lessons and findings, for use by the government, UN agencies, NGOs and other stakeholders.

#### Scope and objectives

The proposed evaluation aims to strengthen of on-going and future CMAM programmes by generating and disseminating evidence on CMAM experiences. This will be achieved through the collection and analysis of both qualitative and quantitative information related to processes, outputs, outcomes (including adherence to global standards and quality of services), coverage and scaling up options. The lessons and recommendations from the evaluation will be used by the MOH and partners for strengthening existing programmes as well as for advocating for the leveraging of resources for effective CMAM strategies and interventions to areas in need. The Ethiopia report constitute a part of the global evaluation of CMAM programme led by UNICEF Headquarters and the findings and lessons from Ethiopia will be used to promote good practices in other needy countries.

The specific objectives of the evaluation are as follows:

- a) To undertake a qualitative assessment of the progress achieved in implementing CMAM to date; to identify key successes, good practices, and gaps / constraints that need to be addressed.
- b) To examine CMAM programme performance using standard OECD / DAC criteria of programme relevance/appropriateness, efficiency and quality of services, effectiveness, impact (potential) and sustainability.
- c) To examine the effectiveness of related cross-cutting issues such as coordination and management; gender and other forms of equity; capacity development; advocacy and policy development; and information/data management.
- d) To document good practices and generate evidence-based lessons and recommendations to strengthen on-going efforts towards expansion of CMAM coverage; and to promote best practices globally.

The timing of the evaluation is scheduled to inform MOH planning processes, to share good practices globally, and to undertake corrective measures and programmatic shifts in various contexts. At the country level, the country specific recommendations will be used in designing, planning and implementing the most equitable and effective emergency and longer-term nutrition programmes at the national level. At the global level, the findings and recommendations will be used for developing new/revised nutrition in emergencies / CMAM policy, technical guidance and for further advocacy and fundraising efforts.

The primary focus of the evaluation is to examine overall CMAM programme results and processes and to generate forward looking lessons and recommendations, to strengthen and expand the planning and implementation of CMAM in needy areas. UNICEF Head Quarters is collaborating with two other countries where CMAM programming has sufficiently matured to generate lessons that can be applied widely. It will examine processes and results related to three key components of CMAM namely a) community outreach; b) outpatient care for children with SAM without medical complications at decentralised health facilities and at home; c) inpatient care for children with SAM with medical complications or no appetite.

The evaluation will generate evidence on “what works well” and “what does not work” on all key steps of the CMAM programme cycle. This will cover community mobilization/awareness creation, case detection/screening/enrolment, treatment/feeding modality, and follow up mechanisms. The evaluation will examine policy and programmatic aspects as well as management modalities and will make recommendations to strengthen both aspects. More specifically, the evaluation will provide evidence-based analysis to answer the following questions:

#### Programme relevance /appropriateness

- How well has the overall CMAM programme strategy evolved since 2008 and to what extent specific strategies/ interventions have responded to the local/national context, needs and priorities?
- How appropriate/adequate is the global guidance on CMAM for local/national needs, including various aspects related to needs assessment, programme planning/design, management /quality assurance, monitoring and evaluation?
- How adequate is the technical and organisational support that has been provided for planning and implementing CMAM?
- How adequate is the linkage between CMAM and other nutrition interventions?

#### Programme effectiveness and coverage

- To what extent have the expected outputs and outcomes been realised through the CMAM programme? If there are shortfalls, what are the contributing factors? What is the estimated coverage of CMAM services against the estimated national level needs?

- What were the bottlenecks for successful implementation of the specific CMAM strategies (community outreach and mobilisation, screening/enrolment, feeding, treatment, information management, follow up) in realising overall programme objectives? (Separate analysis for in-patient and out-patient services)
- What is the contribution of the programme to national capacity-building among nutrition and health professionals and community workers, to policy and system/institutional development and to the engagement of the private sector and other key stakeholders? What conclusions can be drawn regarding the effectiveness of capacity building efforts?
- What are the key successes in generating new knowledge by the programme? Are these well documented and disseminated within the country and outside? What are the knowledge gaps which still prevent expansion of services through larger investments in CMAM?
- Are there any noteworthy good practices and lessons regarding overall programme effectiveness or the effectiveness of specific strategies and management modalities used?

#### Programme efficiency and quality of services

- How has the management aspect of CMAM evolved over time? How well understood and implemented are the current management mechanisms including the roles and responsibilities of various staff and stakeholders?
- How have the funds been allocated/ utilised across programme strategies/activities to realise programme objectives? If there are delays/ deviations in fund utilisation, how were these justified and what are the implications for attaining programme objectives? What lessons and recommendations can be drawn for the future?
- How operational and effective are the coordination mechanisms at the country level?
- To what extent does the service delivery meet expected quality standards? What factors have contributed to meeting quality standards? Where quality standards are not met, what are the key bottlenecks/constraints that need to be addressed in order to meet quality standards? (separate analysis for in-patient and out-patient)

#### Programme sustainability and scaling (country level)

The evaluation will examine administrative, institutional, technical and financial sustainability and explore possible opportunities for expansion of effective CMAM interventions (drawing in addition from the other evaluation questions):

- What level of progress has been achieved to build CMAM programme's ownership by the regional and woreda health offices?
- To what extent can the HMIS and Logistics Master Plan of Ethiopia cover the programme needs to undertake CMAM integrated in the existing health system?
- What proportion of the Health Extension Worker's time is taken up by CMAM activities? How does her work load vary with seasonal changes of CMAM caseload? What is the opportunity cost?
- How feasible are the current interventions in terms of the ability to be sustained without direct technical/financial support by UNICEF and other agencies? What factors have supported or inhibited expansion and scale up of CMAM interventions?
- What are the issues and options related to the feasibility (administrative, institutional, technical, and financial) for replication and expansion? What are the risks related to sustainability that are related to discontinuation of external support? What plans/strategies/mechanisms exist for programme phase out/closure?

### Programme impact (outcomes / potential impact)

- What is the evidence regarding national and sub-national engagement and ownership of the CMAM? To what extent has national ownership of CMAM programme increased? What are the success factors and lessons learned? Where this has not occurred fully, what are the constraints and consequent lessons for the future? Is there any evidence of increased budgetary allocations at the national level?
- How significantly has the programme contributed to either revitalize or place nutrition high on the national policy and developmental agenda?

### Cross-cutting issues

- How effective is the vertical and horizontal coordination (involvement of various sectors) in planning and implementing CMAM? How strong is the national /sub-national engagement and ownership of CMAM programming (including national budget allocations)?
- How adequate is the progress achieved in implementing a national policy on CMAM or in integrating CMAM components into existing policies? What more needs to be done? What lessons can be drawn?
- How systematically has institutional capacity development been pursued at all levels for long term sustainability of the programme? What more needs to be done?
- How adequate are the guidelines on various aspects of CMAM programming? To what extent the technical support provided by various agencies is well-coordinated and responds adequately/coherently to various programmatic needs?
- To what extent has gender equality existed in CMAM programmes in participation, decision making and access to CMAM services? Are there any issues related to gender, geographic or other forms of equity in CMAM service delivery and access that are evident? What measures could be proposed to improve programme targeting?

### Methodology

Given the multi-dimensional focus of the evaluation, a variety of methods will be used for information generation, combining documentary review, interviews and field observation visits as follows:

- a) Review of secondary data and documents: A list of relevant documents together with electronic copies of key documents will be shared with the evaluation team. In addition, programme managers will provide data that is readily available from various sources. The data will be reviewed and analysed to determine the need for additional information.
- b) Interviews with key informants: Interviews will be conducted at several levels and in phases. A few key staff from MOH and partners will be interviewed. At least six health extension workers and four health workers will take part in in-depth interview from each of the regions. The selection of health workers will ensure representation of the hospital and health centre level services. At least three mobile health teams will be visited in Somali and Afar regions where a minimum of two interviews will take place with each team. The woreda level assessment will be undertaken in fifteen woredas, three from each of the above five regions. To the extent possible urban and rural representation as well as different agro-ecology representation will be ensured. Woreda health officials will be interviewed in addition to the health care providers. Additional interviews will be conducted with policy makers and programme coordinators, including federal and regional level staff, heads of partner agencies, nutrition programme managers and advisors at various levels.
- c) Field observation and focus group discussions with nutrition and health staff, participants/beneficiaries in the programme (CMAM service providers, CMAM decision/ policy makers/ NGOs, caretakers). When organising field visits and interviews, attention will be given to ensure gender balance, geographic distribution, representation of all population groups and representation of the

stakeholders/ duty bearers at all levels (policy/ service providers/ caretakers/ community). The assessment will strive to undertake at least one focus group discussion with caretakers of children currently enrolled in CMAM, in each of the regions.

- d) Baseline information on malnutrition and the CMAM programme evolution in Ethiopia will be sought, based on secondary data and information that is readily available.
- e) There is no field level quantitative survey envisaged unless the initial data collected indicate that a survey is essential for the evaluation.

#### Evaluation management / Stakeholder participation

The evaluation will be managed by the Ministry of Health in collaboration with UNICEF. The Ministry of Health has organized and is chairing an Evaluation Steering Committee (ESC).

## Annex 2: Key Informant Interview Guide

### Interview Guide for Policy Makers

**Brief:** We are an independent team evaluating the CMAM programme for acutely malnourished children. FMOH and UNICEF wishes to know about the progress thus far and extract lessons and good practices for the future of the programme. We would like to learn your opinions on the programme, what worked and what did not work, and we assure you of our confidentiality

1. **Name of interviewee**
2. **Organization** \_\_\_\_\_
3. **Position in the organization?** \_\_\_\_\_
4. **How long have you participated in the programme?** \_\_\_\_\_

(For the evaluator – Please read relevant documents before the interview and customize the questions.) What was their role supposed to be? Were they involved in planning and how? Were they involved in the implementation and monitoring? Then include the questions on the list below as possible.

#### **Example:**

**2. What are the policy context and place of nutrition in general and CMAM in particular In Ethiopia? Please describe the commitment of the government in leading and managing the CMAM scaling up? Please support evidence for this in terms of:**

- CMAM and HSDP IV and National Nutrition programme
- Adopting policies and strategies
- Linking CMAM with other intervention
- Allocating resources (human resources, budget)
- Taking leadership and coordinating of partners
- Inter-sectoral coordination (agriculture and WASH)
- Integrating CMAM in the overall government systems and procedures
- Putting strategies for future sustainability

**3. What are the major accomplishments of the programme? What worked well?**

- Social mobilization and behavioural change
- Screening and case finding
- Access to care
- Quality of care
- Integration with other programmes and overall health systems management
- Planning, management and M&E including HMIS
- How did it work? What factors played a role? What are the good practices?
- Enabling environments (commitment, organization and management, resource mobilization, etc.)

(For the evaluator: Probe more deeply according to the information offered by the interviewee: What was the evidence of success? Why was it a success? What contributed to the success? Who was instrumental in promoting success? Who else should we interview regarding the successes?)

**• What are the major problems? What did not work well, what needs improvement? What lessons would you like to share?**

- Quality of care in the face of rapid scaling up
- Sustainability
- Government resource allocation
- Community involvement and ownership/gaps in community social protection mechanisms

(For the evaluator: Probe more deeply according to the information offered by the interviewee: What was the evidence of things not working properly? What were the constraints that caused the problem? What



standards and agreements were not followed? What exactly prevented them from being followed? Who else should we interview regarding these issues?)

**4. What are your recommendations for improvement of the programme? What are your recommendations for scale up and expansion of the programme to include other areas and children?**

- On the relevant issues raised under 2 and 3  
(For the evaluator: Get as much detail as possible on the recommendations and their rationale.)

**Do you have any documents that are useful for this evaluation?** \_\_\_\_\_

**Specific Questions to bring up to probe more deeply:**

**Relevance**

- Did the programme **planning** and implementation meet the **needs** in the district/community?
- Were the planned and implemented technical and organization support activities relevant to the planning, implementation and management of CMAM?
- How relevant are the CMAM service delivery models for the rural, urban and pastoralist contexts in Ethiopia? What are major challenges of reaching the most vulnerable groups in these different contexts?

**Effectiveness:**

- Were the outcome and output targets planned in CMAM programming achieved (national or regional coverage)? What are the lessons learnt from the rapid scaling up of CMAM-balance between access and quality?
  - Did the programme receive the technical/organizational assistance planned? How adequate was the quality and quantity?
  - How was the quality of the services (meeting the guidelines) for each of the three components (have the model on hand to remind them of the components)? Were CMAM standards respected? How well the programme achieves the standards? What needs to be done to improve the quality of CMAM?
  - Do you think that there are enough trained health workers at the different levels (national, regional, woreda, and community) to implement CMAM? What should be done to strengthen the capacity in the country? What support does your agency provide to build the national capacity for CMAM?
  - How well is the referral link functioning? What is the link between MAM and CMAM intervention? What are the challenges and what can be done to strengthen the linkage and synergy between these two programmes?
  - What factors contributed to the achievement (successes or lack of success) desired and planned outcomes? What issues constrained the achievement of outcomes; were they addressed satisfactorily did the programme confront any management issues? What improvements were made over time and how did they affect results? Did all involved know their roles?
  - What is the overall of impact of CMAM in strengthening government health service delivery mechanisms? How much are your plans and programme implementation is:
    - using government systems (planning, fund management, monitoring and evaluation)
    - Delivering through public health facilities ( hospitals, HCs and HPs)
    - Using human resources, infrastructure, referral pathways, procurement and logistics management system?
- What are the sources of funding for CMAM activities? To what extent are the resource mobilized to support to an effective CMAM implementation? What do think level of funding by the government? What is the contribution of your agency? How adequately have the funds been distributed among activities? How well were they used? Do you feel there is adequate funding to scale up CMAM in the country? Are there any specific plans or ideas for increasing funding?

**Access to financial and technical support**

- Who are the major financiers of the CMAM programme for its three components in terms of:
  - RUTF and other supplies procurement and distribution (get the quantitative data)

- Equipment
  - Training and capacity building (get the quantitative data)
- What is the extent to which you have access to responsive, quality and adequate technical assistance? Who are the major providers? What is your comment on the overall effectiveness?

### **Efficiency**

- Where do you think cost efficiency could be improved? How could funds be saved with the same result?
- Coordination: what were the development and implementation partners support mechanisms at national and regional levels, and what effects have they had in the scaling up process? What do you perceive as the major strengths of the current system/mechanism for coordinating CMAM in the country? And how could they be done better? Was coordination worth doing given its associated transaction cost? What are the opportunities to link CMAM with other health and agricultural programmes?
- How much is the planning, resource allocation, management and supervision of CMAM integrated in the overall government systems and process?
- CMAM and supply systems: Please describe the role by PFSA in supply and distribution of CMAM supplies and commodities? How far the CMAM supplies are procured through the use of PFSA as a procurement agent? What are the type of CMAM supplies (capital equipments, drugs, RUTF) that are being procured through the use PFSA procurement processes and procedures? What are the major supplies that are being procured outside the procurement procedure of PFSA? What are the main reasons for doing so? Has CMAM scaling up contributed in any way for strengthening the procurement and distribution process at country level? If not, what do you think are the major reasons? What do you think CMAM partners shall do to work with and strengthen the country's procurement and distribution system If yes, what is its contribution in terms of
  - Strengthening procurement and distribution systems
  - Availability of health commodities
  - Quality of drugs
  - Strengthening accountability and transparency
- What are the major achievements in CMAM information system and reporting? Has it been integrated into the routine health information systems? What needs to be done to improve the CMAM information system or its integration?
- How do you see the priority and balance between investment in curative and preventive care in CMAM?

### **Sustainability**

- How has scale-up been planned and implemented? What do you perceive as the major success factor and barriers for scaling-up CMAM? What needs to be done to improve the scale up with quality? What do you think the ownership of CMAM by the government at different levels?
  - Integration with overall government wide management process including resource allocation
  - Integration with government service delivery mechanisms
  - Capacity building in the public sector for planning, and managing implementation
- What is the trend of government and DP allocation to CMAM? Is the government and community increasingly taking care more of the financing of CMAM? If not what do you think should be done by government, development partners and communities to ensure that they (government and communities) take more of the responsibility of financing the CMAM in general and RUTF in particular?

### **Equity and cross cutting issues:**

- Have gender concerns been adequately integrated and addressed in CMAM programme planning and implementation? If yes, please provide examples? If not what are the major challenges and what do you think should be done?
- Targeting – What are the issues with screening of the beneficiaries? Are there any biases hat are the issues with selection of geographical and individual beneficiaries?

## 1.2 Interview Guide for Development and Implementing Partners

**Brief:** We are an independent team evaluating the CMAM programme for acutely malnourished children. FMOH and UNICEF wishes to know about the progress thus far and extract lessons and good practices for the future of the programme. We would like to learn your opinions on the programme, what worked and what did not work, and we assure you of our confidentiality

**Name of interviewee** \_\_\_\_\_

**Organization** \_\_\_\_\_

**Position in the organization?** \_\_\_\_\_

**How long have you participated in the programme?** \_\_\_\_\_

*(For the evaluator – Please read relevant documents before the interview and customize the questions.) What was their role supposed to be? Were they involved in planning and how? Were they involved in the implementation and monitoring? Then include the questions on the list below as possible.*

**Example:**

### 2. What are the major accomplishments of the programme? What worked well?

- Social mobilization and behavioural change
  - Screening and case finding
  - Access to care
  - Quality of care
  - Integration with other programmes and overall health systems management
  - Planning, management and M&E including HMIS
  - **How did it work? What factors played a role? What are the good practices?**
  - Enabling environments (commitment, organization and management, resource mobilization, etc.)
- *(For the evaluator: Probe more deeply according to the information offered by the interviewee: What was the evidence of success? Why was it a success? What contributed to the success? Who was instrumental in promoting success? Who else should we interview regarding the successes?)*

### 3. What are the major problems? What did not work well, what needs improvement? What lessons would you like to share?

- Quality of care in the face of rapid scaling up
- Sustainability
- Government resource allocation
- Community involvement and ownership/gaps in community social **protection mechanisms**

*(For the evaluator: Probe more deeply according to the information offered by the interviewee: What was the evidence of things not working properly? What were the constraints that caused the problem? What standards and agreements were not followed? What exactly prevented them from being followed? Who else should we interview regarding these issues?)*

### 4. What are your recommendations for improvement of the programme? What are your recommendations for scale up and expansion of the programme to include other areas and children?

On the relevant issues raised under 2 and 3

*(For the evaluator: Get as much detail as possible on the recommendations and their rationale.)*

**Do you have any documents that are useful for this evaluation?** \_\_\_\_\_

**Questions to bring up as appropriate and to probe more deeply.**

**Relevance**

- *Did the programme planning meet the needs in the district/community?*
- *Were the planned and implemented technical and organization support activities relevant to the planning, implementation and management of CMAM?*

**Effectiveness:**

- *Were the outcome and output targets planned in CMAM programming achieved (national or regional coverage)? What are the lessons learnt from the rapid scaling up of CMAM-balance between access and quality?*
- *Did the programme receive the technical/organizational assistance planned? How adequate was the quality and quantity?*
- *How was the quality of the services (meeting the guidelines) for each of the three components (have the model on hand to remind them of the components)? Were CMAM standards respected? How well the programme achieve the standards? What needs to be done to improve the quality of CMAM?*
- *Do you think that there are enough trained health workers at the different levels (national, regional, woreda, and community) to implement CMAM? What should be done to strengthen the capacity in the country? What support does your agency provide to build the national capacity for CMAM?*
- *How well is the referral link functioning? What is the link between MAM and CMAM intervention? What are the challenges and what can be done to strengthen the linkage and synergy between these two programmes*
- *What factors contributed to the achievement (successes or lack of success) desired and planned outcomes? What issues constrained the achievement of outcomes; were they addressed satisfactorily did the programme confront any management issues? What improvements were made over time and how did they affect results? Did all involved know their roles?*
- *What is the overall of impact of CMAM in strengthening government health service delivery mechanisms? How much are your plans and programme implementation is:*
  - *using government systems (planning, fund management, monitoring and evaluation)*
  - *Delivering through public health facilities ( hospitals, HCs and HPs)*
  - *Using human resources, infrastructure, referral pathways, procurement and logistics management system?*
- *What are the sources of funding for CMAM activities? To what extent are the resource mobilized to support to an effective CMAM implementation? What do think level of funding by the government? What is the contribution of your agency? How adequately have the funds been distributed among activities? How well were they used? Do you feel there is adequate funding to scale up CMAM in the country? Are there any specific plans or ideas for increasing funding?*

**Provision financial and technical support**

- *What type of financial support do you provide for CMAM programme and its three components in terms of:*
  - *RUTF and other supplies procurement and distribution (get the quantitative data)*
  - *Equipment (get Quantitative data)*
  - *Training and capacity building (get the quantitative data)*
- *Do you provide technical assistance to the CMAM programme implementation? How do you value your support in terms of its relevance, quality and adequacy? What do you comment on the technical support provided by UNICEF?*

**Efficiency**

- *Where do you think cost efficiency could be improved? How could funds be saved with the same result?*
- *Coordination: What do you perceive as the major strengths of the current system/mechanism for coordinating CMAM in the country? What do you perceive as the major aspects of the coordination of CMAM that should be improved?*
- *How much is the planning, resource allocation, management and supervision of CMAM is integrated in the overall government systems?*

- *What are the major achievements in CMAM information system and reporting? Has it been integrated into the routine health information systems? What needs to be done to improve the CMAM information system or its integration?*
- *How do you see the priority and balance between investment in curative and preventive care in CMAM?*

### **Sustainability**

- *How has scale-up been planned and implemented? What do you perceive as the major barriers for scaling-up CMAM? What needs to be done to improve the scale up with quality? What do you think the ownership of CMAM by the government at different levels?*
  - *Integration with overall government wide management process including resource allocation*
  - *Integration with government service delivery mechanisms*
  - *Capacity building in the public sector for planning, and managing implementation*
- *What is the trend of government and DP allocation to CMAM? Is the government and community increasingly taking care more of the financing of CMAM? If not what do you think should be done by government, development partners and communities to ensure that they (government and communities) take more of the responsibility of financing the CMAM in general and RUTF in particular?*

### **Equity and cross cutting issues:**

- *Have gender concerns been adequately integrated and addressed in CMAM programme planning and implementation? If yes, please provide examples? If not what are the major challenges and what do you think should be done?*
- *Targeting – What are the issues with screening of the beneficiaries? Are there any biases hat are the issues with selection of geographical and individual beneficiaries?*

## **Annex 3: List of Key Informants in Interviews**

### **FEDERAL**

Ted Chabian, UNICEF, Country Representative  
Roger Pearson, UNICEF, Senior Social Policy Specialist  
Joan Matji, UNICEF, Head, Nutrition  
Sylvie Schamios, UNICEF, Nutrition Specialist  
Teweldbirhan Daniel, UNICEF, Nutrition Specialist  
Sebsibe Teshome, Goal-Ethiopia, Nutrition programme  
Dinkneh, Goal-Ethiopia, Humanitarian Response Manager  
Mr Peter, SC-UK, Head, Hunger Reduction  
Anteneh, SC-UK, Nutrition  
Kiros, SC-UK, Nutrition  
Dr Ferew Lemma, FMOH, Senior Advisor to the State Minister  
Gideon Kohn, SC-USACOP, Food by Prescription  
Pankaj Kumar, Director of Programmes, Concern  
Israel Hailu, Concern  
Getahun Tekla, WHO, Nutrition Officer  
Belete Beyene, Helina Factory, Managing Director  
Tareke Aga, DRMFS, Disaster Risk Assessment Expert (nutrition coordinator)  
Alemayhew Seminigus, EU Programme manager, Rural Development& FS Expert  
Issack, ENCU, Head of ENCU  
Dr. Beshir, ACF, Health and Nutrition Advisor  
Angelica Lin, ACF, Deputy country director

### **TIGRAY REGION**

GoitomTadesse, Concern WW- Ethiopia, Mekele Sub-office, Regional Programme Manager  
MehariGebre, UNICEF, Tigrat Sub-office, Nutrition Programme Officer  
ErmiyasAmare, Regional ENCU/ DPPC, Regional ENCU focal  
Aster Kalayu, Tigray RHB, HPDP Officer  
BahruTekla, TahtayAdeabo WoHO, Head  
Yeabyo Beyene, TahtayAdeaboWoHO, Woreda MCH expert  
MeashFisehaAdehageray health centre, TahtayAdeabo woreda, Head  
HalefomHagos, Adehageray health centre, TahtayAdeabo woreda, OTP Supervisor  
Rahel Mesele Zagre Health post, TahtayAdeabo woreda  
Dr. Biruk Dametachew, Shire, Suhul Hospital, Medical director  
Sr. Alemtsehay Shire, Suhul Hospital, TFU focal person  
Abraha Hadush, Erob woreda health office, Head  
Hadush Desta, Erob woreda health office, Woreda MCH expert  
Mebratu G/her, Dewhane health centre, Erob woreda, OTP focal  
Rahwa Mesele, Engale health post, Erob woreda, HEW  
Girum Desta, Engale health post, Erob woreda, Head  
AdhanetHagos Engale health post, Erob woreda, HEW  
Sr. KibraYosef, Adigrat Hospital, TFU Nurse  
Teshale Mesfin, Adwa WoHO, Head  
Zemoy G/Medhin, Adwa WoHO, Woreda nutrition focal  
BerihunGebrezgi, Rahya health centre, Adwa woreda, OTP focal  
Jemila Ahmed TahtayLogomti health post, Adwa woreda Head of the health post  
Sr. Lemlem Mesfin, Adwa Hospital, TFU Nurse

### **AMHARA REGION**

Molla Daniel, Save the Children, Amhara region, Regional FHP Advisor  
Abdu Ibrahim, Concern Ethiopia, Ebinat Emergency Project, Project Manager  
Sr. Zebider Zewde, Amhara regional health bureau, Deputy head  
GezahignTeamir, Amhara regional health bureau Regional, Nutrition focal

Woinishet Melese, Amhara regional ENCU, Regional ENCU focal  
 Musie Asfaw, UNICEF Amahasub office, Nutrition officer  
 FisehaWalle, Ebinat WoHO, Deputy head  
 Gashaw Getu, Ebinat WoHO, Woreda MCH expert  
 Getachew Debebe, Ebinat health centre, Ebinat woreda, Delegate head of the health centre  
 Dessie Kassa, Ebinat health centre, Ebinat woreda, Working at TFU  
 Genet Mebrat, Zeha health post, Ebinat woreda, Head  
 EndeshashAdgo, Zeha health post, Ebinat woreda, HEW  
 Dr MulunehAtnafu, Felegehiwot referral hospital, Medical director  
 SrFatumaMohammad Felegehiwot referral hospital Nutrition focal  
 Haile Kebede, Menzgera WoHO, Head  
 MatikeShishaw, Menzgera WoHO, Woreda child and nutrition officer  
 Masresha Mamo, Mehalmeda Hospital, Menzgera, OTP and TFU focal person  
 Sindeneshe Kebede, Giragn Health Post, Menzgera woreda, Head  
 Sindu Tase, Giragn Health Post, Menzgera woreda, Health extension worker  
 Anteneh Zelalem, Worebabo WoHO, Head  
 Abdulmelik Mekonen, Worebabo WoHO, Woreda nutrition and child health officer  
 TigistSemaw, Bistima health centre, Worebabo woreda, Delegate head of health centre  
 Sr. Fatuma Hassen, Bistima health centre, Worebabo woreda Delegat, OTP focal person  
 Selamawit Ahmed, Bulbulo health post, Worebabo woreda, Head, Bulbulo health post  
 Meseret Negash, Bulbulo health post, Worebabo woreda, Health extension worker  
 Dr. Aschalew Asefa, Dessie Referral Hospital, Medical director  
 Mekonen Belay Dessie Referral Hospital Nutrition focal

## **SOMALI REGION**

Abdulahi Jama, Health Office Representative, Shinili  
 Haile Toffic, Programme Officer, Shinili  
 Musterfa, Nutrition Officer, Shinili  
 Fetiha Mussie Nurse, Shinili  
 Ahmednur Abdulahi, HEW, Shinili  
 Mahdi, Shinili  
 Sulleman Osman, Shinili  
 Layla Mahdi, Shinili  
 Abdi Bille, Shinili  
 Farah Igal, Shinili  
 Adosh Farah, Shinili  
 Ali Osman, Shinili  
 Momina Barah, Shinili  
 Hasan Ibrahim, Jijiga  
 Oumer Salah, Jijiga  
 Hassan Awole, Jijiga  
 Oxeled Abdi, Jijiga  
 Farah Ali, Jijiga  
 Hawa Shengni, Jijiga  
 Dereje Sengi, Malaria Expert, Jijiga  
 Mustefa Hassen, Health Service Expert, Jijiga  
 Beshif Abdi, Drugist, Jijiga  
 S/r Mitshet Tariku, Nurse, Jijiga  
 Dr. Abdulahi Gire, Early Warning Coordinator, Jijiga  
 Abdurhaman Obedi, Nutrition Focal Person, Jijiga  
 Wondmneh Tesfaye, Erer  
 Haya Mohamed, HW, Erer  
 Amisa Abdurahman, HEW, Erer  
 Abdulaziz Alihisak, Nurse, Erer  
 Abdulahi Obsye, Erer  
 Nadifo Ahmenur, Erer

Rijana Jema, Erer  
Mohamed Irrir, Erer  
Abdi Ahmed, Erer  
Khadja Abdella, Erer

#### **SNNP REGION**

Israel Alemayhew, Goal, SNNP, Regional Manager  
Nega Teyke, Sidama Zone, Health office, Nutrition Focal Person  
Aschenaki, Sidama Zone, Health office, Deputy Head, Delegate  
Ato Gizachew, SNNP, Regional Health Bureau, Deputy Head, HPDP Core Process Owner  
Dr. Mulugeta, SNNP, RHB, HPDP officer, Nutrition focal person  
Ezra, UNICEF/ENCU, SNNP, Nutrition officer  
Nenke Sorsa, Gideo Zone, Nutrition Focal Person  
Nurses, Dila Hospital, TFU Nurses  
Tariku Wako, Dial Zuria Woreda office, Focal Person for CMAM&CBN  
Haileyesus Tiba, Dila HC, TFP focal person

#### **OROMIA REGION**

Abera Seifu, Health Promotion and Disease prevention, Kimbibit  
Taye, Nutrition focal person, Kimbibit  
Alemu Addisu, Woreda MCH head, Kimbibit  
Tola Abera, Woreda HEP coordinator, Kimbibit  
Tibebu Taye, Woreda MCH expert, Kimbibit  
Gos Deribesa, Health centre Head, Kimbibit  
Abebe Reta, <5 clinic MCH, Kimbibit  
Yetimwork Gulilat, <5 clinic MCH Nutrition focal person, Kimbibit  
Fantu Mengistu, HEW, Kimbibit  
Milkeso Balako, Wereda Health Office Head, Shala  
Negusse Assefa, MCH expert (Ex-Nutrition focal person), Shala  
Bushera Mohammed, Nutrition focal person, Shala  
Abidissa Mekonnen, Shala  
Dr. Belaynhe Leta, Ward Physician, Shala  
Lenssa Nigatu, TFU focal person, Shala  
Radia Bati, HEW, Shala  
Marshet, Deputy wereda Health Office Head, Girawa  
Tsegaye Nutrition focal person, Girawa  
Fantu, Girawa



## Annex 4: Facility Checklist

Region \_\_\_\_\_ Woreda \_\_\_\_\_  
 Kebele \_\_\_\_\_  
 Name of facility \_\_\_\_\_ Health post \_\_\_\_\_ Health Centre \_\_\_\_\_  
 Hospital \_\_\_\_\_  
 Inpatient (SC) \_\_\_\_\_ OTP \_\_\_\_\_ TSF \_\_\_\_\_  
 SFP \_\_\_\_\_  
 Respondent: \_\_\_\_\_ Profession \_\_\_\_\_ Responsibility \_\_\_\_\_ in  
 CMAM \_\_\_\_\_

### A. Quantitative Data (This information is collected for the last 6 months )

		Remark
Number households covered by the health post or health centre		
Number of children 6-59 months		
Number of children with SAM		
Total Number of Children Admitted to CMAM		
Total Number of children admitted to SC		
Total Number of children admitted to OTP		
	OTP	Inpatient
Recovery/Cure rate		
Defaulter rate		
Death rate		
Transfer out		
Transfer in		
Non-Responder		
Average length of Stay		

### B. Qualitative data

#### B.1. Organization of TFP site

Process	Quality 1– Yes 2– Yes, but need improvement 3– No 4 – Non applicable	Remark
Site is well organized		
For inpatient, check if children in same phases are in the same room		
For OTP, It the service provided every day or in selected days		
Drinking water availability		
Waste collection system for empty RUTF sachets and medical waste		
Cleaned latrines with water access		
Hand washing facilities		
Job description for all workers		

### B.1. Availability of CMAM materials/job Aids

Material	Availability		Remark
SAM Protocol	Y	N	
OTP quick reference ( is it in the appropriate local language?)	Y	N	
SAM classification Algorithm	Y	N	
MUAC classification table	Y	N	
ICCM protocol	Y	N	
IMNCI protocol	Y	N	
MUAC tape	Y	N	
Functioning Weighing Salter with basin or pants	Y	N	
Functioning electronic scale	Y	N	
Length board	Y	N	
Stadiometer	Y	N	
Wt for ht Reference card	Y	N	
F-75 reference card	Y	N	
F-100 reference card	Y	N	
RUTF ration reference card	Y	N	
OTP card	Y	N	
TFP Multi-chart (for in-patient or SC)	Y	N	
TFP Registration book	Y	N	
TFP Monthly Statistics Report form	Y	N	
Referral form	Y	N	

### B.2. Availability of CMAM supplies

Material	Availability		Remark(e.g., type, dosage, insufficient quantity, expiry date, adequately and appropriately stored/kept or maintained)	Please provide the number of days the facility was in stock out in the previous six months if there has been any
RUTF	Y	N		
RUTF stored appropriately	Y	N		
F-75 (for in-patient)	Y	N		
F-100 (for in-patient)	Y	N		
F-75 or F-100 stored appropriately	Y	N		
Vitamin A capsule	Y	N		
Amoxicillin tablets	Y	N		
Amoxicillin syrup (125 mg/5 ml)	Y	N		
Folic Acid tablets	Y	N		
Mebendazole or Albendazole	Y	N		
Iron-sulfate tablets (for in-patient)	Y	N		
Gentamicin ampoule (for in-patient)	Y	N		
ReSoMal	Y	N		
Standard ORS	Y	N		
Soap for hand-washing	Y	N		
Safe drinking water( at least one Jerry can)	Y	N		

### B.3. Observe the Performance of the CMAM<sup>56</sup>

1. Number of Health workers trained on CMAM or TFP/OTP \_\_\_\_\_
2. Number of trained health workers working at OTP or TFU? \_\_\_\_\_

Process	Quality 1– Yes 2– Yes, but need improvement 3– No 4 – Non applicable	Remark
All under five children assessed for their nutritional status		
bilateral pitting oedema measured accurately		
Mid-upper arm circumference (MUAC) measured accurately		
Weight measured accurately		
Height measured accurately		
Child classified correctly		
Admission is according to correct		
Medical complication checked		
History and Physical examination recorded accurately on the OTP or Multi-chart		
Child's appetite tested correctly upon admission and during OTP follow-on sessions		
Routine medication given according to protocol and recorded accurately		
Amount of RUTF needed is correctly calculated and recorded accurately		
RUTF dispensed by the pharmacy		
RUTF dispensed by the health workers working at OTP		
Amount of F-75 or F-100 is correctly calculated and recorded accurately		
Appropriate education given to mothers/ caregivers		
Priorities for follow-up home visits discussed with VCHW		
Correct number of absentees/defaults identified for follow-up home visits		
Beneficiaries discharged according to protocol		
TFP registration book completed		
TFP monthly statistical report prepared correctly		
TFP monthly reported to the next level		

<sup>56</sup> Please review at least 10 OTP cards and 10 Multi-chart for in-patient recorded in the last 3 months to assess the quality besides the observation when the health workers are providing the service.

#### B4. Community Outreach component

1. How do you do community active case finding and referral? Do you think most of the children with SAM identified? If not why? What are the challenges? How did you address the challenges?
2. How do you do community Mobilization? Who is doing it? What are the challenges? How did you address the challenges?
3. How do you do home follow up of SAM children at home? Who is doing it? What are the challenges?

**If you get the chance to see community outreach or mobilization, use the following checklist to assess the quality of the community outreach**

Community Outreach Component	Quality 1– Done correctly 2– Done, but need improvement 3– Not done 4 – Non applicable	Comments
<b>Active screening and referral</b>		
MUAC measured and registered accurately		
Oedema measured accurately		
Malnourished child referred to the health post		
<b>Household follow up</b>		
All absentees/defaulters from previous week followed up		
Caregiver referred for additional care or services if appropriate		
Outreach follow up form filled in correctly		
<b>Community Sensitization</b>		
Community sensitization is done properly		
Appropriate education (according to agreed messages) given to mothers at home		
VCHW or HDA have a helpful, positive attitude with caregivers		
VCHW or HDA returns follow-up visit checklists or observations to health post		
HEWs provide to VCHW or HDA		

#### B.5. Interview the health worker

1. What are the major achievements of the programme? What worked well? What factors played a role? What are the good practices?
2. What are the major challenges? What did not work well?
3. What needs improvement? Possible recommendations to improve

## Annex 5: List of Health Facilities Visited

Region	Woreda	Name of Visited facilities by type		
		Hospital	Health Centre	Health Post
SNNPR	Aiwa	√ Aiwa		
	Dilla			Gola
				√ Bensa Ware
			√ Bensa Ware	
		√ Bona		
			√ Dilla	
		√ Dilla		
Tigray	Tahtai Adeabo	Adigrat	Adehageray	Zagar
	Erob	Sihul	Dewhane	Engala
	Adwa		Rahya	
	Adwa	√Adwa		
	Adwa			Logomit
Amhara	Menzgera	Mehal meda		Girang √
	Werebabo	Desse	Bistima	Bulbulo
	Ibnat	Feleghiwot	Ibnat	Zaha
Somali	Shinili			√Kalabaydh
	Jijiga	Karamara		
	Erer			√ Gotta

## Annex 6: FGD Guide

### 1. For Community leaders and care givers, and social protection groups

*Please describe the situation of malnutrition in your community?*

*How do you traditionally provide care for children less than five years with SAM in the community?*

*What is the major difference that the establishment of OTP and TFU made in your community?*

*Behavioural change*

*Access*

*Quality*

*Who does the screening of children? How often are these screening done? What are the interventions you are advised to do? Do you get adequate supplies when you go to the TFU and TSF sites?*

*How acceptable is RUTF to your community? Do you share the supplies with other children or provide it to the targeted child? What needs to be done to reduce sharing?*

*What do you want to see improved in the management of SAM in your community?*

*What is the role of the community volunteer/development army in the community mobilization? How effective are they? Do you think all children with SAM in community identified timely?*

*Do you have traditional or new social protection mechanisms to address severe acute malnutrition in your community?*

*What do you suggest to improve your solidarity and tackle the problem within the community?*

### 2. Health Extension Worker

*How do you plan CMAM in your kebele? Is part of the overall annual planning process?*

*Does the CMAM programme meet the cover needs in the village? Are there areas and population groups that have not accesses this service? If yes, what are the barriers (socio- cultural, financial, geographic or otherwise)?*

*Has CMAM being implemented as planned? If not what are the challenges, you face in community mobilization, active case finding and treatment?*

*Have you been trained on CMAM guidelines and protocols? Are they implementable at your level? What are the challenges of implementing the protocol?*

*Do you receive technical assistance you needed for your work from partners working with you or woreda and health centre supervisors on time? if not, what are the major issues?*

*Do you receive CMAM equipment, supplies and recording and reporting formats from woredas? if not what is the stock out? What do you think the effect on the quality of the services? How do you address the stock-out of RUTF?*

*How is the monitoring and supportive supervision done? Are there regular supervision from the health centres and the woreda? Do you get feedbacks to you reports?*

### 3. Community volunteers /Development army or VCHW

*What is your role in community mobilization and active case finding of CMAM cases? Do you think all children with SAM in community identified timely? What are you successes and challenges in this regard?*

*Are you trained on community mobilization and case finding?*

*What are your challenges of working as the volunteer in the health sector? what do you think should be changed to make your more effective?*

## Annex 7: Detailed Assumptions Used in the Costing Exercise

**Scale:** Scale was assessed by the following three parameters and the data source and assumption with this regard is as follows:

- The number of Outpatient Care sites offering CMAM- collected from field assessment in the selected districts
- Number of In-patient care sites offering CMAM- collected from field assessment in the selected districts
- The number of children with SAM expected to enrol in each Woreda: Each child with severe acute malnutrition (SAM) who enrolls in CMAM generates a relatively predictable cost burden. However we could not find this information so we have estimated this from other data by combining the following information.
  - Under Five population
  - The incidence rate of children with SAM in the community over a period of 1 year. However, SAM incidence rate in the community (the number of new cases of SAM arising in a year) is difficult to measure directly because it requires identifying cases as they emerge and collecting data over a period of time. Thus, the *point prevalence* of SAM is used and converted to a rough estimate of incidence using assumptions about the length of time it takes for children to become severely malnourished and how long they remain in that state (i.e., average duration of SAM), which is approximately 4–6 months. Thus the prevalence is multiplied by two
  - The uptake of CMAM services/programmes by children with SAM-50% coverage based on minimum sphere standard was used

**RUTF and medical supplies:** The field assessment showed that the facilities surveyed follow the national protocol for management of SAM. Based on the SAM treatment guideline, prevalence of SAM (The percentage of children below -3 SD weight for- height derived from nutrition surveys is commonly used to estimate the potential caseload of therapeutic feeding programmes) and expected coverage; the required quantity of RUTF as well as other drugs and supplies related to treatment of other conditions was estimated. Price related to procurement of these supplies is collected from UNICEF; as provision of RUTF, from the centre down to the facilities implementing the programme, has been largely undertaken by UNICEF.

- Twelve kg of RUTF is given to all children with SAM who do not require Inpatient Care. (The treatment protocol mentions that on average severely malnourished child treated as an outpatient should be given 150–220 kcal/kg bodyweight/day of RUTF, corresponding to approximately 30–40 g/kg bodyweight/day for 45–60 days.)
- Children with SAM with poor appetite and/or medical complications who are referred to Inpatient Care receive 2 kg of F-75 in their initial stabilization phase.
- Children with SAM with medical complications will receive 1 kg RUTF while in Inpatient Care and 11 kg of RUTF in Outpatient Care later
- Ninety-five percent of children requiring Inpatient Care are then given 12 kg of RUTF (1 kg while in Inpatient Care and 11 kg in Outpatient Care). Five percent of these children will not be able to eat RUTF and will remain in Inpatient Care until full recovery, receiving 12 kg of F-100 instead.
- All infants under 6 months with SAM and 15% of children 6–59 months with SAM (the estimated percentage of children with SAM with poor appetite and/or medical complications) require Inpatient Care.
- Five percent of the purchased RUTF, F-100, and F-75 is lost before distribution to the child
- **Amoxicillin** is the routine presumptive treatment of underlying infection given to all children with SAM, independent of their age, nutrition, or health status, in a dose of 60mg/kg/day. The Tool assumes an average of 5 days of treatment
- **Albendazole** for all children with SAM over 1 year of age: A single dose of 200 mg for children 12–23 months and 400 mg for children over 2 years.
- Of those children referred for Inpatient Care, 20% are dehydrated and need **ReSoMal** (a specially modified oral rehydration solution for children with SAM), 10% require intravenous (IV) feeding and an **IV kit**, and 25% require **nasogastric tubes**.

**Training:** The field assessment showed that training and supportive supervision is a vital element in CMAM implementation in most of the districts; although the type and number involved vary among the districts. The following training has been identified included in the cost analysis: SAM management training for facility staff and training on community assessment, mobilization, and screening for community volunteers. Based on the field assessment the following trainings have been included; although in some places these trainings were not conducted in the elected base year:

- SAM Case management training 2 per OTP site and 4 per Inpatient treatment site
- Community Sensitization Training for community volunteer

**Staff Time:** The field assessment has estimated type of staff and level of effort spent in CMAM related activities including assessing and monitoring (weighing and medical assessment), registering, providing therapeutic food and medicines, testing appetite, giving health and nutrition education to caregivers, recording and analysing data. Salaries of public servants with similar grades is nationally standardized and mid-point salary for each category has been used to estimate personnel related cost

**Transportation:** Both off-shore transportation and in-country transportation up to the final service delivery point was estimated. Financial data with regard to offshore transportation is provided by UNICEF. With regard to in-country transportation, due to involvement of various actors and regional variation in that bears the transportation cost; an average cost for delivering these items from the centre to the service delivery point was estimated by using the shortest transportation route based on the cost per kilometre transportation cost. In many regions, UNICEF is the major financier of such expenses up to the zonal level; while the government and other NGOs (wherever they are implementing partners) engage in transportation from zonal to facilities' level while for the in-country transportation.

- The estimated amount used in the analysis
- Deliveries for RUTF are done separately to each site.
- The cost of transport and storage of other supplies (except RUTF) is relatively small and can be accommodated through existing routine deliveries of other health supplies

### **Capital Costs**

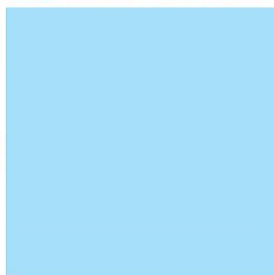
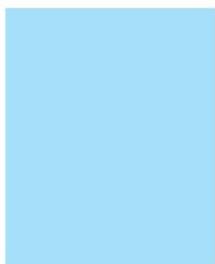
Capital costs are expenditure types whose benefits accrue over one year and costs more than 100 USD. Major capital costs related to CMAM include medical equipments, space (for treatment and storage) as well as TOT and training material development. With the exception of costs related to space, which has been excluded for practical reasons, all other capital items have been included and annualized taking into account the life of the capital goods considered. Protocol development and various surveys although they are important, they are not included in the cost analysis as they will not be major component of CMAM in the scale up process. Other fixed Supplies and Equipment specific to CMAM are estimated assuming that minimum set of equipments are available at each site.



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This evaluation on community management of acute malnutrition (CMAM) in Ethiopia was commissioned by the Government of Ethiopia with the support of UNICEF. The evaluation was managed by a steering committee chaired by the Ministry of Health and involving several civil society organisations that have been working with Ministry of Health in building CMAM capacities in Ethiopia. The commissioning of this evaluation coincided with a global level evaluation of UNICEF's support for CMAM coordinated by the UNICEF Evaluation Office which was based on field work in five countries hence the evaluation in UNICEF also constitutes part of the global evaluation. The evaluation aims to strengthen the delivery of CMAM by generating and disseminating evidence on CMAM. Management response, which is a process of facilitating strategic engagement on evaluation recommendations and following-up actions through a formal process, developed by the evaluation steering committee to foster greater ownership over the process of change and ultimately ensuring accountability for results.

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