



**Two years on: addressing the causes of malnutrition in  
Dessie Zuria**

**A project integrating Infant and Young Child Feeding and the  
Productive Safety Net Programme in Ethiopia**

## Introduction

Two years ago, Concern Worldwide documented the poor nutritional situation in Dessie Zuria Woreda and the multiple obstacles hampering previous efforts to improve it<sup>1</sup>. It concluded that a multi-sectoral approach to improve infant and young child feeding (IYCF) practices and to increase access to food were among the responses needed. In 2010, the IYCF – Productive Safety Net Programme (PSNP) project was launched as a pilot multi-sectoral approach aimed at reducing malnutrition in Dessie Zuria. It targets poor households enrolled in the existing PSNP as well as the general population and addresses both the direct and root causes of malnutrition. The project aimed to develop an effective, sustainable and scalable model to improve IYCF practices in the most vulnerable households. The final results have been impressive, with large improvements in IYCF practices and a positive response from the communities and stakeholders involved in the project.

## Background

Dessie Zuria Woreda (district) is situated in South Wollo Zone, Amhara Region. It is comprised of 31 kebeles (clusters of villages), half of which are largely dependent on the belg, the typically unreliable short rainy season. Dessie Zuria has been listed as chronically food insecure for the past 11 years, and almost 40% of its population are eligible to participate in the Government's PSNP. The woreda has been classified as a priority 1 hotspot by the Ethiopian Government's Disaster Risk Management and Food Security Sector because of continuously high rates of global acute malnutrition (GAM), or wasting.

Over half of all children in Dessie Zuria (54%) are chronically malnourished, or stunted, compared to 44% nationally<sup>2</sup>. In addition, the woreda suffers from persistently high rates of acute malnutrition. Annual nutrition surveys show that between 2000 and 2011 global acute malnutrition rates have only once, in 2004, dropped below 10%<sup>3</sup>. Malnutrition has a range of negative effects including increased risk of mortality, reduced cognitive and educational performance, increased susceptibility to illness, and reduced physical capacity<sup>4</sup>.

Concern Worldwide has supported the Ethiopian Ministry of Health to provide nutrition services for children since 2000, through Community-based Management of Acute Malnutrition. However, the persistently high rates of acute and chronic malnutrition showed a need to go beyond management of malnutrition, to prevention of malnutrition as well.

Early assessments identified food insecurity, high rates of illness, and poor infant and young child feeding practices as contributing factors leading to high rates of malnutrition. A baseline survey conducted in 2010<sup>5</sup> found low rates of exclusive breastfeeding (31%) and poor complementary feeding practice. Only 13.3% of children received meals with the

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<sup>1</sup> Style, S., *History of nutritional status and Concern's response in Dessie Zuria Woreda*, Ethiopia, Field Exchange, Feb 2011, Issue 40.

<sup>2</sup> EDHS, 2011.

<sup>3</sup> GAM based on z-scores of NCHS 1977 reference as per Ethiopian National Guidelines.

<sup>4</sup> Martorell R, Ramakrishnan U, Schroeder DG, Melgar P, Neufeld L. *Intrauterine growth retardation, body size, body composition and physical performance*, 1998.

<sup>5</sup> Tefera, A., *Infant and Young Child Feeding Practices in Dessie Zuria Woreda*, Baseline survey report, Concern Worldwide, 2011.

recommended dietary diversity, and very few children ate foods rich in iron (4%) and Vitamin A (13.7%).

The project was planned on the basis of this analysis and an initial study<sup>6</sup> researching opportunities for linkages between the PSNP and nutrition.

#### **What is the PSNP?**

For the past decade, the Government of Ethiopia has been implementing a federal Food Security Programme (FSP) which aims to ensure food security for five million chronically food insecure people and for 10 million more who are negatively affected by food shortages during drought years. Started in 2005, one of the three pillars of the FSP is the Productive Safety Net Programme (PSNP) whose objectives are to reduce household vulnerability, improve household and community resilience to shocks and break the cycle of dependency on food aid.

It operates through payment for labour intensive public works and direct support through cash or food transfers for those unable to participate in public works. Beneficiary households are intended to acquire sufficient assets to graduate from the PSNP, at which point they receive assistance for one further year.

Evidence suggests that programmes aiming to improve the income or food production of households often do not result in improved nutritional outcomes for children. Not surprisingly, levels of malnutrition remain unchanged since the introduction of the PSNP. However, the PSNP presented an entry point to help families improve their IYCF practices, as it targets the poorest households, who are more likely to have undernourished children. The PSNP also provides many potential contact points to deliver BCC messages.

## **Project Description**

Concern Ethiopia started the two-year project in October 2010 with funding from Alive & Thrive, a Gates Foundation initiative. The project aimed to:

- Improve IYCF practices among the most vulnerable households in Dessie Zuria Woreda in order to reduce malnutrition, and
- Test the effectiveness of this model for scaling up and replicating elsewhere.

At the start of the project, a baseline assessment and formative research were carried out to inform the project design. The project used a Trials of Improved Practices (TIPs) approach to identify key barriers to improving IYCF practices, as well as to identify and pre-test a set of simple, realistic actions that mothers could take to improve their child's nutrition.

The project was implemented through a range of strategies:

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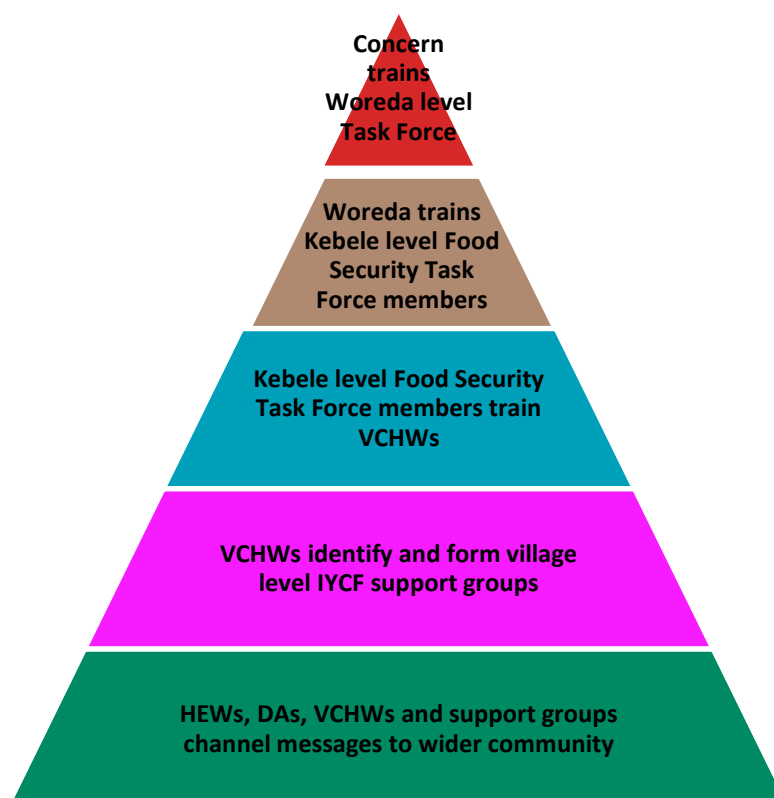
<sup>6</sup> Fracassi, P and Berhanu, L, *Linkages Report*, 2010.

## **1. Building the capacity of multi-sectoral actors at woreda, kebele and community level to deliver effective IYCF messages and encourage behaviour change.**

Concern used a cascading approach to train key decision-makers and community members on malnutrition, PSNP, optimal IYCF practices and methods for promoting behaviour change.

At the woreda level, a task force of key officials from across different sectors was formed and trained. The woreda officials then trained the kebele-level Food Security Task Force members, who included Health Extension Workers (HEWs), Development Agents (DAs), kebele administration staff, school directors, girls' clubs in schools, Women's Affairs members and religious leaders.

HEWs then trained Voluntary Community Health Workers (VCHWs) to work directly with mothers' support groups, which included one VCHW and six female members of the community. Through the mother's groups, the VCHW promoted key IYCF messages to the community



## **2. Supporting the promotion of effective IYCF messages at key contact points, including those linked to the PSNP.**

Behaviour Change Communication was a central aspect of the IYCF – PSNP project. Findings from formative research were used to help design programme activities and messages, and the project utilized many different contact points for disseminating messages. HEWs and VCHWs carried out information and education sessions at PSNP pay days, public work days, child health days, screenings for growth promotion, and targeted supplementary feeding programme sites. Local radio and drama was also used to convey messages to the community.

Concern made use of existing resources as much as possible. One key tool was the Child Nutrition Card developed by the Alive & Thrive project, which lists '7 Excellent Actions'. This tool emphasised seven simple actions that mothers and fathers could carry out to improve their child's nutrition. Families were given the poster-sized card, which lists the seven

actions with a tick box next to each one for the mothers to complete. Mothers are encouraged to place them on their walls and show them off proudly to their neighbours. The messages in the nutrition card were reinforced through mother's groups, school clubs, and community outreach. Once mothers completed the seven actions, they attained the title of "Model Mother" and graduation ceremonies were held to celebrate their success. Peter Gottert, of Alive & Thrive, stresses the importance of setting time bound goals for communities and rewarding hard work, saying: *"Lots of health programmes that let good work go unrecognised are missing an opportunity."*

Another aspect of behaviour change communication focused on equipping community members with practical skills to improve child feeding practices. HEWs, VCHWs and mothers' support group members conducted house visits to provide one to one counselling on best breastfeeding practices and preparation of complementary foods. Cooking demonstrations conducted at health facilities and community events, such as public work days and pay days, allowed people to learn through observation and participation. Recipes were developed by Concern, based on food availability in the area and vegetables promoted through seed distribution. According to Astes Shumeye, a Model Mother in Tebasit Kebele, *"People were very surprised to see the porridge preparation because they had never seen it before. It was different to emergency food, which was famix and oil, and came from abroad. The items for the porridge are all available in the home."*



### 3. Enabling communities to improve their IYCF practices.

Given the high levels of food insecurity in the woreda, the project found it was necessary to support families and communities with practical tools and resources to enable them to carry out the recommended IYCF practices.

To improve food production, Development Agents disseminated seeds and tools to the poorest households, provided advice and support on how to diversify their crops, and promoted home gardens as well as IYCF messages.

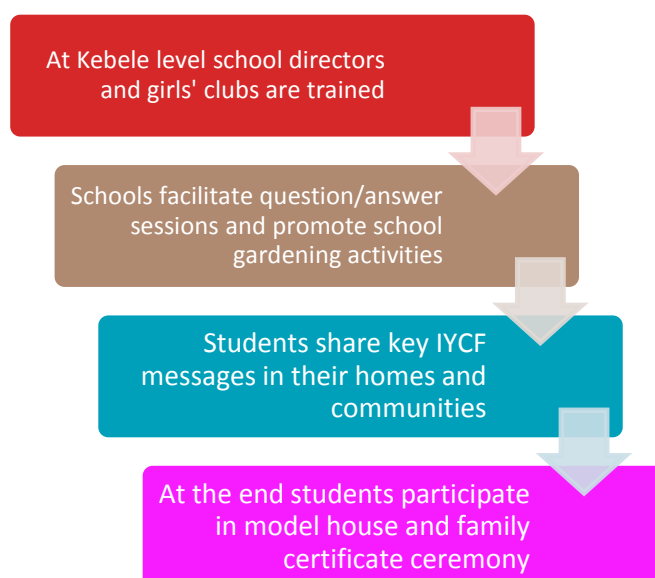
To improve the health of women and children, VCHWs referred pregnant mothers to health institutions to encourage iron supplementation during pregnancy as well as vitamin A during the postnatal period. Protected springs were also constructed by Concern to improve water, hygiene and sanitation practices.



#### 4. Engaging the entire community to foster social change

The IYCF – PSNP programme looked beyond the traditional target population of mothers and young children, harnessing the power of a broad range of influential groups to change overall social norms around infant and young child feeding. For example, behaviour change communication targeted fathers to encourage them to provide healthy foods for their children's meals. Religious leaders were trained on key IYCF messages and were involved in local task forces.

The Smart and Strong Schools Approach is another unique concept piloted by the project. Through this activity, children in girl's after-school clubs are taught about breastfeeding, complementary feeding and hygiene, and encouraged to bring home the lessons they have learned. School directors and students enthusiastically embraced the project. According to School Director Endris Mohammed, *"The girls are very motivated to share the messages with their friends and families because they understand their importance."*



Two mothers who received Smart and Strong Family certificate demonstrating how to prepare the special porridge at Atint-Mesberai primary school. Photo by Ato Mekkonen, Alive & Thrive.

## Results

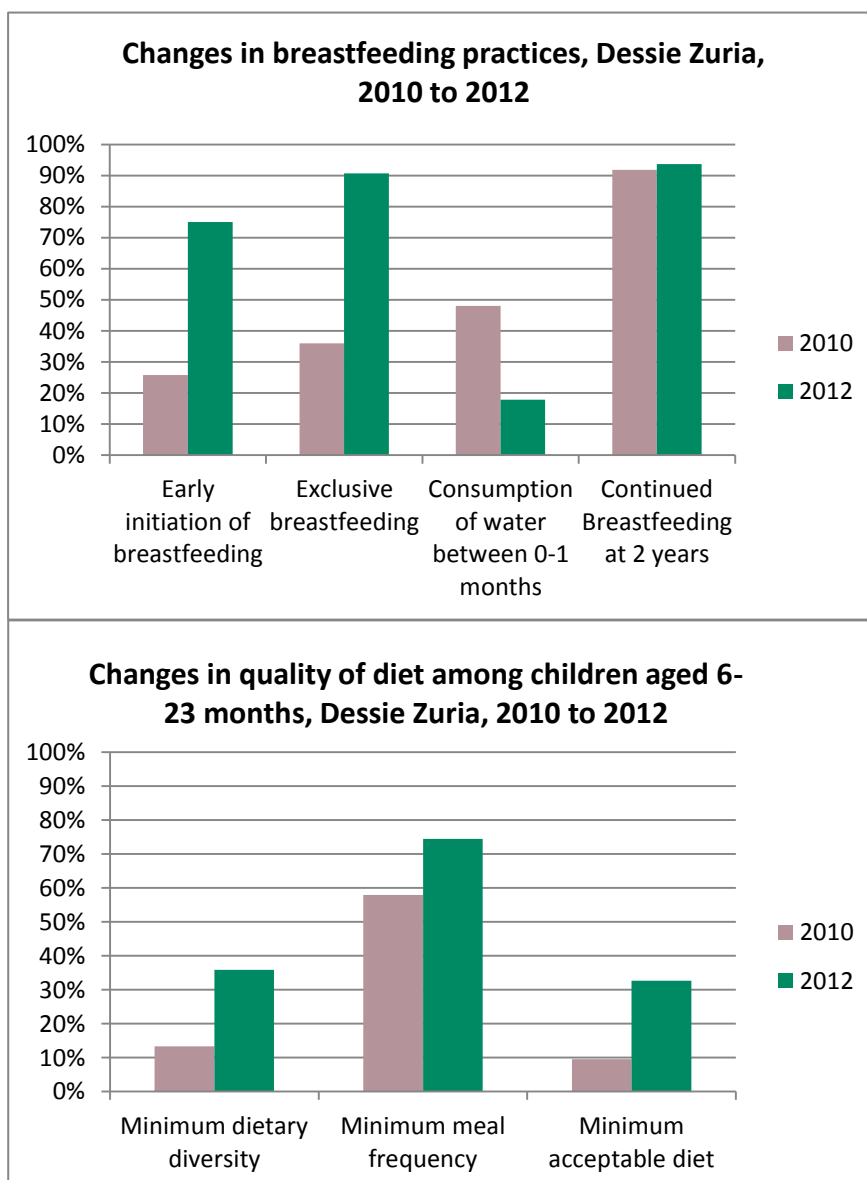
During the two year project, 978 families achieved a “model family” status. More than 850 Mother’s Support Groups were trained.

An endline survey<sup>7</sup> conducted in April 2012 has shown that in just a short period of time, infant and young child feeding practices have improved significantly. The percentage of mothers who reported that they had started breastfeeding their child within the first hour after birth rose from 26% to 75%, and the proportion of children less than 6 months old who were exclusively breastfed rose from 36% to 91% - a remarkable increase.

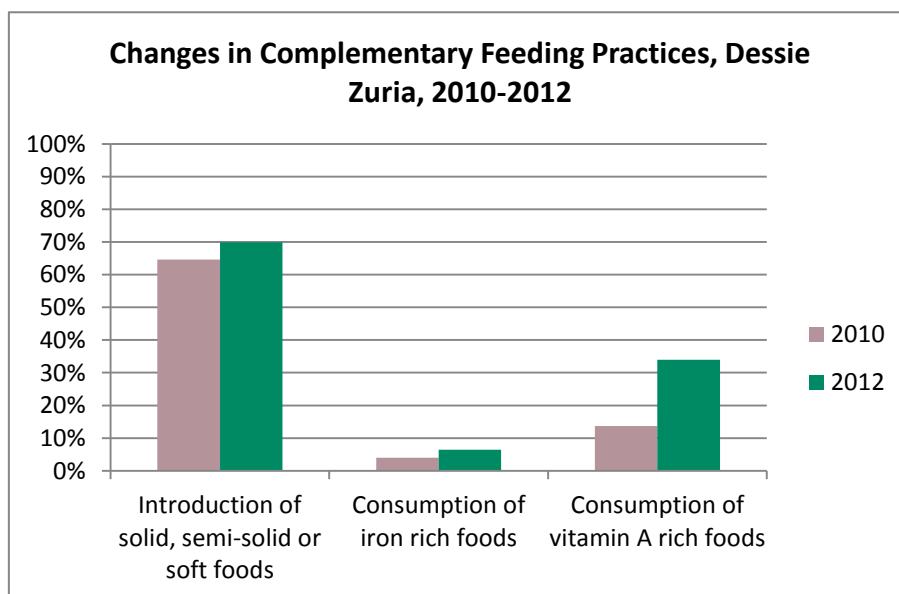
However, the exclusive breastfeeding rate is likely to be an overestimate, as it only measures whether a child received breast milk exclusively in the previous 24 hours, and includes very young infants who are more likely to be exclusively breastfed. There was a reduction in the percentage of mothers who reported giving their children water in the first month of life, from 48% to 18%, but almost one in five children are still given water at a very young age.

The end line survey also noted improvements in complementary feeding practices, although these were less dramatic. Approximately one-third of children (32.7%) aged 6-23 months consumed a minimum acceptable

diet. This increase is due to improvements in both dietary diversity and meal frequency. However, the majority of children still received foods from only 3 food groups or fewer in the previous day.



<sup>7</sup> Hailu, W., *Infant and Young Child Feeding Practices in Dessie Zuria Woreda*, End line survey report, Concern Worldwide, 2012



Several other indicators showed little change. There was a small increase in the percentage of children aged 6-8 months who had started complementary foods. The consumption of iron rich foods did not change significantly despite recipes and messages promoting the consumption of

eggs, meat, and dark leafy greens.

Interviews with programme participants found that this project has been extremely well received by the full range of stakeholders at all levels, from Woreda officials to Model Mothers, many of whom can now list the recommended actions without hesitation. The project has successfully raised awareness about IYCF and is an inexpensive and preventive intervention which builds resilience to food insecurity in vulnerable communities. Serkalem Yimer, Head of the Women, Children and Youth Office, commented: *“I have had six children but I never had this type of knowledge on how to feed my children properly.”*

*“There are big changes in the communities because almost all mothers are practising the seven essential actions using their score cards. The message is very easy to disseminate and the pictures help people who can’t read to understand”*  
- Hawa Hussein, VCHW for Gugufu Kebele

Beyu Mohammed, a PSNP beneficiary and Model Mother in Tebasit Kebele, received vegetable seeds from Concern and has grown carrots, kale, potatoes and beetroot, all of which she uses in complementary food she has learned to feed her child. She sells any vegetables that are left over and has been able to buy soap with the profit.

*“Before the IYCF project, maternity leave was not carried out properly but since the training everyone knows the impact of women’s workload on IYCF practices and it has been strengthened. We are now applying maternity leave for PSNP beneficiaries effectively”*

- Geletaw Geffa Wossen

One unexpected outcome of the project has been increased implementation of appropriate maternity leave for pregnant and lactating women. Prior to the project, these women normally participated in public work days as part of the PSNP. The project has been effective in creating an understanding of the importance of rest for mothers to give them time to recover and to correctly practice IYCF; as a result, women were excused from doing public works during pregnancy and for the first 4 months after birth, attending health and nutrition sessions instead.



## Lessons Learned

A number of factors contributed to the success of the IYCF – PSNP project. The project took a multi-sectoral approach, involving actors across a wide range of groups and sectors. It went beyond simply behaviour change communication, targeting the enabling environment as well as social norms, and involving the community at large. The project used multiple platforms and approaches to disseminate messages, and used a targeted approach to behaviour change, basing project activities and messages on formative research and emphasizing simple, do-able actions rather than health education messages.



Above left: School directors preparing special porridge with egg and vegetables, supervised by Hawla Eshetu , VCHW for Tebasit Kebele. They are wearing t-shirts with various IYCF messages. Above right: A cooking demonstration at a PSNP pay day carried out by HEWs and VCHWs. Photos by Adele Fox, Concern Worldwide.

**A multi-sectoral approach:** This project engaged actors from a range of sectors, including agriculture, education, women's affairs, and health. This aspect was described as a key strength of the project, with each sector working together towards a common purpose, leading to increased ownership and accountability. One School Director described IYCF as now being “*everyone’s responsibility.*”

This feeling of responsibility was seen at all levels. One VCHW from Tebasit Kebele said that, although delivering IYCF messages is additional work for her: “*It is our responsibility to do it effectively because we want children to be good citizens for the country.*”

A multi-sectoral approach also provides greater opportunities for engaging with communities. Cooking demonstrations, school clubs, and agricultural support were all combined to provide an overall aim of preventing malnutrition among children.

**A multi-level approach:** As well as working across sectors, the project also created strong links between woreda, kebele and community levels through a cascading style of training and through the continued provision of support and supervision.

Awareness at all levels has had many advantages, for example, Hawa Hussein, a VCHW in Gugufu Kebele explained that if she has a problem, such as a lack of knowledge on an issue, she can contact the HEW or other member of the Kebele Food Security Task Force. She added: *“By working together we can change our communities in order to care for women and children and improve their health.”*



The multi-level Gugufu Kebele team including HEWs, Zewditu Jemal and Amakel Ahmed; VCHW, Hawa Hussein; support group member, Fato Assen; and Model Mothers: Seada Mohammed and Aminat Seid, who work together to reach all households in the kebele with the essential IYCF actions. Photo by Adele Fox, Concern Worldwide.

**A social and behavioural change approach:** Early assessments showed that simply providing behaviour change communication alone was unlikely to be effective, given widespread food insecurity and other barriers to behaviour change. This project went beyond simply carrying out BCC, to influencing the community and social norms as a whole, as well as addressing barriers to practicing recommended IYCF behaviours. For example, through awareness-raising, women’s maternity leave was enforced; agricultural support addressed food insecurity, and support to water and health services aimed to prevent common illnesses.

Some women experienced challenges when convincing their mothers and husbands of the need to carry out the IYCF practices which reinforced that BCC for the wider community, especially fathers, is key to the success of any future projects.

The project worked through many different levels to affect not just knowledge, but also the skills and confidence of families to carry out the recommended actions. Cooking demonstrations were widely praised and seen as an innovative component of the project. Serkalem Ahmed, a VCHW from Tebasit Kebele said: *“Previous programmes only disseminated information to households. This is a food-based intervention – how to get diversified foods, cultivate and utilise them. The main reason it was hard to practice before was because there was no follow up, the information was disseminated and then you go home and don’t practice it. There were very few contact points. This project creates other opportunities in public works, pay days etc. so we are learning by practising.”*

## Conclusions

Concern's multi-sectoral approach has been commended as innovative, effective, and sustainable by stakeholders at every level. A review of the project by Alive & Thrive notes: *"Concern can be a role model for newly involved organisations in southern regions. It is particularly well implemented because Concern has involved all sectors, has mothers' support groups at grass roots level, does complementary feeding demonstrations comprehensively, and does follow up."*

The results of this project suggest that it is effectively fostering behaviour change, and increasing levels of awareness among woreda officials, kebele level leaders and community members alike. It has differed from previous efforts to reduce malnutrition because it has shown people how to make simple, practical changes and reinforced the messages through a multitude of actors, contact points and methods, vastly increasing the likelihood of behaviour change. It is also focused on prevention of malnutrition rather than cure.

The approach has been able to reach a large number of people who are widely dispersed over challenging terrain. Channelling activities through the PSNP creates additional contact points and ensures targeting of the poorest households; however, it is more cost-effective to extend

### Zenitu Sheperaw, Model Mother

Zenitu Sheperaw is 24 years old and has two children, one aged five years and one seven months. She received IYCF training during her second pregnancy and has since become a Model Mother in Gelsha Kebele.



However, during her first pregnancy she did not have this knowledge. *"I fed my baby with boiled sugar and water and also butter in the first few months. He cried a lot at night and his health was not so good. I often took him to the health centre, with abdominal cramping, diarrhoea and vomiting. I would lose money paying for the health centre."*

*Now with this child I can sleep well because he is not sick. I gave him colostrum immediately after birth and gave him my breast within one hour of birth. I gave him no other foods for six months and then I began complementary feeding. Even when he is sick I will feed him because now I know it is important to feed him more during this time."*

*I had been married for seven years and after I received the IYCF messages I told my husband everything and now he is very happy to help me ensure that we have diverse foods to feed the baby."*



activities to the rest of the population as well. The two year pilot also suggests that despite strong linkages with the Government and a sense of community ownership, longer term support will be necessary to address underlying factors of malnutrition such as food security, health, and hygiene, as well as to reinforce the gains made.

Possible areas for future investigation include the use of the private sector for producing ready to use complementary foods, fortified with vitamins and minerals; increased water and sanitation activities within communities; and the integration of Concern IYCF centres with community gardens to alleviate food insecurity.

Concern is currently in the process of replicating this project in Dugna Fango and Kindo Koysha Woredas, SNNP Region, and Bugna and Delanta Woredas, Amhara Region, Ethiopia.

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Beyu Mohammed, a PSNP beneficiary and Model Mother in Tebasit kebele, received vegetable seeds from Concern and has grown carrots, kale, potatoes and beetroot, all of which she uses in the complementary food she has learned to feed her child. She sells any vegetables that are left over and has been able to buy soap with the money. Photo by Adele Fox, Concern Worldwide.

## Yesin Kassa, Voluntary Community Health Worker



Yesin Kassa is 38 years old and has been a Voluntary Community Health Worker (VCHW) in Gelsha Kebele for three and a half years. Her role includes visiting households to advise on family planning, vaccinations, and weighing children to assess whether they are malnourished, in which case she refers them to the health centre for treatment.

Since Concern's project started, she now also counsels mothers during her visits. She said: *"Since I've been giving these messages mothers have been practicing the actions and the weighing statuses have improved. I have also incorporated messages about hygiene and sanitation which is a great improvement to my work. I am very happy because I have not seen any malnourished children since this project started."*

Yesin has three children aged 17, 14 and 8. She said: *"When my children were babies I did not give them colostrum and I did not breastfeed properly. None of my children were healthy, they all had parasitic diseases, and now I feel discomfort about this. I was given no advice and there were no VCHWs then. I did not even have any information on vaccines but now I have learned many details in a short period of time. Now we know the advantages of proper IYCF practices. It is clear for me now and I am very happy to be doing this role for my community."*

Her daughter, who is 14, has also received IYCF messages from the girls' club at her school, *"She is now coming home telling me about the importance of food diversity and that husbands should help their wives get complementary foods for their children. I am very hopeful that when my daughter is older she will have strong, healthy children."*