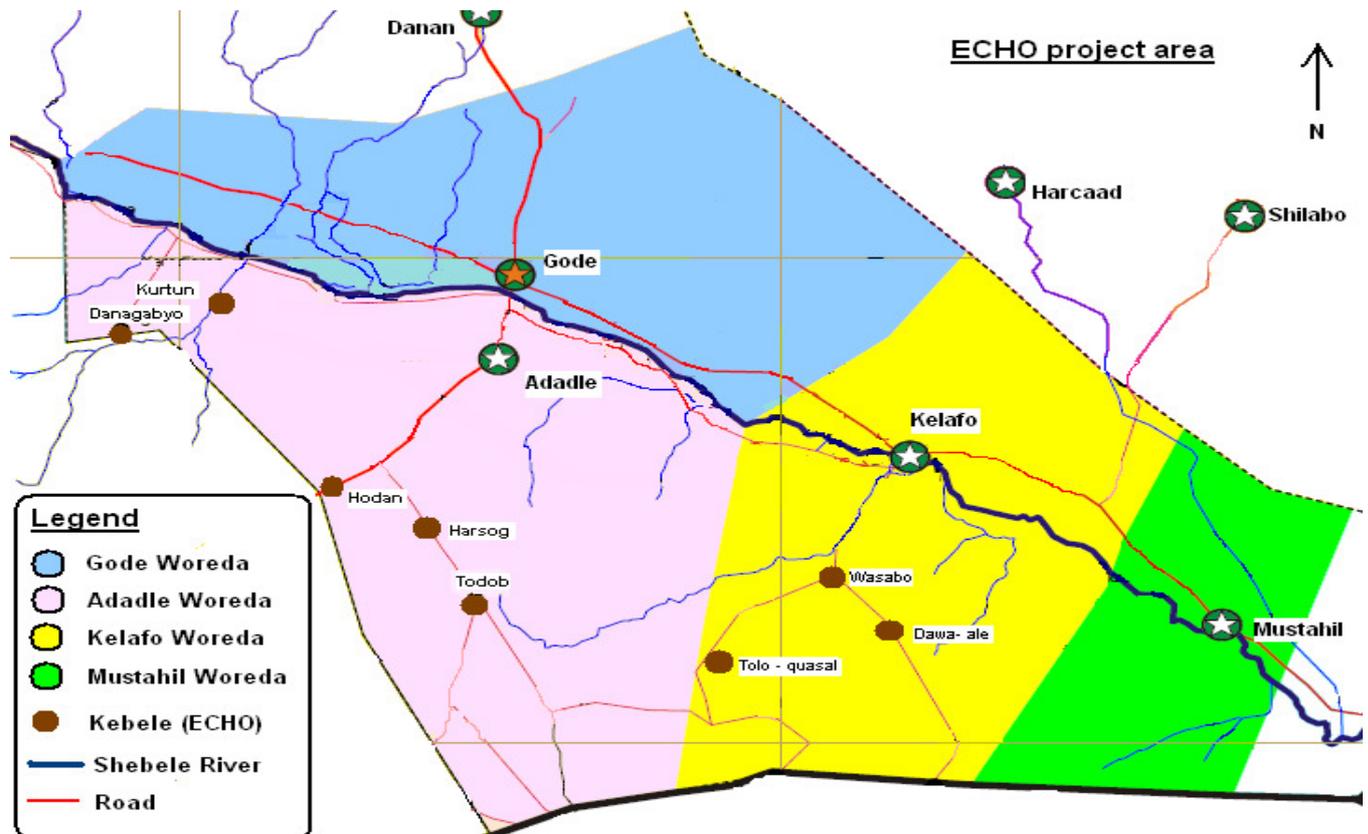




Final Project Evaluation

Emergency Drought Response Project in Gode, Adadle, Kelafo and Mustahil Woredas of Gode Zone, Somali Region



Participatory Research and Evaluation Consultancy (PRE)

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Abbreviations

CAHW	Community Animal Health Worker
CMDRR	Community Managed Disaster Risk Reduction
DPPB	Disaster Prevention and Preparedness Bureau
ECHO	European Commission for Humanitarian Aid
ETB	Ethiopian Birr
FAO UN	Food and Agricultural Organisation United Nation
FENCUC	Federal Emergency Nutrition Coordination Unit
HH	Household
HRD	Humanitarian Requirement Document
NGO	Non Governmental Organisation
PRE	Participatory Research and Evaluation
SAM	Severe Acute Malnutrition
SC UK	Save the Children United Kingdom
WASH	Water, Sanitation and Hygiene

Summary

Drought has become a very common phenomenon in pastoral areas. In recognition of this, Non-Governmental Organizations (NGOs) continue to advocate to donors to fund emergency livestock interventions and consider such interventions as essential humanitarian assistance to drought-affected pastoral communities. Advocacy is driven by a belief that humanitarian assistances should seek to reduce chronic vulnerability of pastoralists and build their capacity of managing threats.

This report describes the livelihood, public health and social impacts of different WASH and livelihood-based interventions as well as emergency nutrition survey program of ECHO Gode Emergency Drought Response Project implemented in drought affected Woredas of Gode zone in Somali Region. The report is based on a participatory final project evaluation designed to assess and evaluate the achievements of this project of drought response.

The Emergency Drought Response project has been carried out in Adadle, Gode, Kelafo and Mustahil woredas of Gode zone in Somali Region, and is based upon a 'relief to development' model designed to assist poor vulnerable households to cope with, and recover from the impacts of 2011 drought. The principal objective of the project was to save the lives of 'children and their families' and to alleviate suffering caused by the drought. Furthermore, the specific objective of the project was 'to improve food security and access to clean water for vulnerable households'. The project had three sectors namely Water Sanitation and Hygiene Promotion (WASH), Food Security and Livelihoods (FSL), and Nutrition. The total budget for the emergency response project is EURO 1,000,000 for a 12 month period, from June, 2011 to May, 2012.

The WASH and livelihood-based emergency response in aimed to improve the humanitarian situation and the coping capacities of population vulnerable to recurrent droughts in the Greater Horn of Africa. More specifically, the project aimed to assist communities surviving and coping with drought shocks. Although most of the WASH and livelihood-based interventions were designed for a total of 36,080 people, the nutrition survey and, hygiene and sanitation project components did consider a total of 232,000 indirect beneficiary people under the four woredas where the intervention took place.

The final project evaluation aims to assess if these WASH and livelihood-based interventions would contributed to SC UK's objective of protecting the life and key assets of pastoralists and assisting the post-drought recovery. Critical comment on the design and implementation of the campaign was found important to inform future planning for drought emergency-based WASH and livelihood interventions. The evaluation involved a desk review and field assessment carried out in Addis Ababa and field areas. The field assessment component was conducted between 7th and 17th of June 2012. Some specific outcomes of the emergency response project are as follows:

Hygiene and sanitation promotion: In Adadle area, many participant households that started applying their knowledge from trainings and awareness campaign conducted on hygiene and sanitation no longer need the training and awareness campaign on hygiene and sanitation in future emergency situations due to a good base understanding

Water source rehabilitation and construction: In many parts of the Adadle woreda, the problem of floods contaminating drinking water used from birkas and open shallow wells during the rainy months is, and has always been as important as that of water critical shortage during the dry season. The most apparent public health impact of the water source development

component relates to the drainage system and flood diversion facilities developed that helped to reduce health risk due to wastewater used to re-infiltrate into the water supply systems.

Livelihood interventions: The most important long-term impact of the livelihood-based interventions relates to fodder production initiated in the four-project intervention woredas by 116 cooperatives. The cooperatives consist of 10 persons/households each. Data from assessments show that the average family size is 7 persons who have mixed herd consisting of 7 cattle and 8 small ruminants. The total population food and feed secured is estimated at around 8,120 people and, 8,120 cattle and 9,280 small ruminant heads¹ respectively. The most important impact of the livelihood interventions also relates to booster training and stock directed to CAHW that revitalized the CAHW system.

Implications of the project achievements: Collectively, the project helped the beneficiary communities to cope with drought shocks in line with the priorities of Hyogo Framework for Action 2005-2015 and the Africa Regional Strategy for Disaster Risk reduction 2006-2015. For example, support provided to the fodder producers cooperatives that also cultivate maize is expected to improve household feed and food security status. The hygiene and sanitation program undertaken through trained volunteers and the training and material supports provided to water management committees are also typical of the CMDRR program approach. The rehabilitation of existed birkas and shallow wells through community participation is all about supporting the community to effectively utilize its own water sources.

Efficiency and effectiveness: The budget redirected from slaughter de-stocking to the fodder production is a good indication that the project was enough efficient in responding to realities on the ground. The authors strongly recommend that donors need to understand the fact that drought response programs should seek to apply reasonable degree of flexibility.

Sustainability: In many emergency response programs, issues related to sustainability may be due to insufficient time spent on planning as well as a short implementation timeframe and the consequent lack of an exit strategy. However, until minimum standards for both planning and exit strategy are met, the priority should be to provide adequate and timely access to emergency assistance on time even if it is of short term rather than to provide insufficient and delayed assistances that last-long. In the Gode WASH and livelihood emergency project, many of the achievements are expected to be long lasting as interventions were embedded through community structures and communities were provided with capacity building support. For instance, the Water Management Committees have been trained and equipped with the necessary tools in all areas where the project developed water sources. The use of community volunteers to promote hygiene and sanitation is the best way of ensuring sustainability of the knowledge transfer between community members. In Gode woreda, government institutions are already using Sudan grass seed from the irrigation-based fodder production program initiated by the project, and this trend promises increases in both local fodder production practice and feed secure households.

The overall findings of the evaluation were that the WASH and livelihood emergency response project enabled the beneficiary communities to cope with and recover from the drought in 2011.

¹ The herd size is based on the average number of animals vaccinated under the 31 cattle and 23 small ruminant herds.

1. Introduction

This final evaluation aims to measure the achievements of Emergency Drought Response project implemented by Save the Children-UK (SCUK) in Gode zone, Somali Region. The evaluated project was designed mainly in response to the low performance of the 2010 deyr and complete failure of 2011 gu seasons rains mid April to end of May, and beginning of October to end of November respectively. Specifically, the rapid drought situation assessments conducted in November 2011 by the multi-agency team (led by Region DPPB) and the subsequent assessment revealed critical water shortage problem in many parts of the Gode zone and low terms of trade. They also pointed to water shortages which forced many students to drop school and herds migrate to where better pasture was available. This in turn has compromised the nutritional status of the households, particularly children and pregnant or lactating mothers.

1.1 Context of the project intervention area

Since the 1999/2000 devastating drought in Ogaden areas of Ethiopia, the southern zones of the Somali Region have faced recurrent emergency crises caused by natural and man made disasters such as drought, flood and human and animal diseases outbreak and conflict. In Gode zone, these shocks combined with mobility constraints; community resources erosion; increased frequency of rainfall failures; insecurity; cross border trade restriction; global food crisis and food price inflation resulting from climate change, have all increased the vulnerability of pastoralist community while eroding their coping capacity. In many parts of the Gode zone, a normal dry season can easily turn to critical drought with a complete or even partial failure of a single rainfall.

In a normal year, the 'Gu' and 'Deyr' rains are from mid April and early October through to late June and late December respectively. In 2011, the drought was said to have started with the nearly total failure of the 'Gu' season rains. This was further exacerbated by the much below normal 'Deyr' season rains in 2010.

In general, humanitarian emergencies associated with recurrent drought and at times complicated by insecurity, have become regular events since late 1990s in Somali Region. Increasingly, those worst affected are communities hosting the remotest zones of the region such as Gode, this is also an area affected by insecurity. In many parts of the Gode zone, drought-induced shortage of water has repeatedly been causing high levels of livestock deaths and uncommon movements of human and livestock populations across districts which have at times triggered internal conflicts over access to water and other resources.

In this zone, many pastoralist households have lost their livelihoods and social networks and they need support to start rebuilding their livelihoods and 'build back better' their livelihoods. On the one hand, the social support of the communities for destitute households to cope with and recover from drought factored crisis has been undermined

by fundamental changes in climatic conditions. This has caused household asset depletion and rising commodity prices-complicated by transformation of rangelands, land fragmentation, poor infrastructure and minimal and scant proper investment in pastoral areas. This in turn has led to increasing levels of poverty and further erosion of disaster coping capacities over years.

The disaster-affected pastoralist households return to self-resilience and economic growth in these areas is both possible and necessary. However, emergency response programs are commonly blamed of not considering the long-term impact of disasters on the livelihoods of the affected communities. As a consequence, the SC UK Emergency Drought Response Project is an appropriate response for addressing both the immediate needs and supporting livelihoods recovery of communities affected by the drought crisis.

Having established a wide range networks and partnerships with governmental, Non-governmental organisations, civil societies and local communities over a long period, Save the Children UK has been known for its strong capacity and experience in addressing a complex emergency situation in Somali region through implementing emergency and non-emergency projects that included nutrition, food security and livelihoods, health, child protection and education and WASH.

In 2011, Save the Children UK's Emergency Drought Response project in Gode zone of the Somali region was a response to the worst of drought that has affected Somalia, Kenya and Ethiopia in decades. SC UK's WASH, livelihoods and nutrition survey responses were in line with Ethiopian Government's efforts to curb the situation that led-to a Humanitarian Requirement Documents (HRD) that identified relief food, Health and Nutrition, WASH, Agriculture and Livestock and education as priority sectors in the appeal document.

1.2 Background to SC UK's Emergency Drought Response

Drought is and has always been the major natural disaster in pastoral areas, the most immediate consequence of drought is a fall in milk production. This is due to inadequate pasture and water resources. Livestock sales act as a buffer in times of hardship, pastoralists disposing these assets to buy food. The main long-term impact of drought on the pastoral livelihoods is that the number of livestock owned by the affected pastoralists falls with drought-induced death and distress sales of breeding stock. In terms of the livelihoods-based livestock emergency approaches, the objectives of emergency interventions for WASH and Livelihoods are to ensure households are in food secure and have access to drinking water for their living. Protecting the key breeding stocks and promote post-drought recovery is a specific objective of livestock based intervention Whereas as ensuring clean drinking water with good hygiene and sanitation practice is a specific objective of WASH response.

In response to the critical drought situation encountered in 2011, ECHO provided a 1 million Euro grant to SC UK with a view to improving WASH provision, in turn reducing drought induced household economic loss by through salvaging likely dying herd element by way of slaughter destocking while injecting cash that would be used for purchasing essential inputs (feed) for majority of the drought-affected herds and family members (food) into the household, as well as supplying meat food to owners.

As discussed, the emergency drought response project in Gode was a response to rain failures led-to problems of reduced access to water, lowered milk production, increased deaths in young animals and reduced household income from the livestock and livestock products' sale in Gode zone of Somali Region. For instance, in November 2010, water shortage reached critical level and pasture condition deteriorated to nil to have forced school children to pull out and livestock population to move making many schools and villages deserted respectively. During this month, livestock were subjected to increased movements and long trekking in search of water and pasture that livestock were poor conditioned and their prices declined much below their prices in the wet seasons.

In 2011, there was also livestock influx from Kenya and Somalia to Gode zone, especially at the onset of the generalized drought situation, resulting in further competition for the scarce pasture and water resources. This suggests that an un intended and further positive impact of the project was to help reduce potential conflict that would have happened between incomer and host pastoralist communities over the scarce resources.

The project has two main components: WASH and livelihood-based emergency interventions for livestock. The livestock intervention component of the project focused on reducing drought-factored mortality and accelerating herd recovery and milking animals return to milk production in the post drought period.

The following were implemented under the livelihood-based livestock emergency project component:

1. Livestock treatment and vaccination
2. Support to CAHW system
3. Slaughter destocking
4. Promote fodder production

The WASH component aimed to improve access and quality of drinking water for the community during and post-drought time.

The main interventions implemented under the WASH component included:

2. Constructing and Rehabilitation of water sources
3. Provision of water purification items at household level

4. Supply of water containers
5. Hygiene and Sanitation promotion

The two components of the project were designed to complement each other by linking the specific objectives of the project. As such, the project strategy aimed to demonstrate how a relief to development approach can be applied and could enhance the effectiveness of humanitarian assistance interventions.

2. The Final Evaluation

2.1 Scope of the Evaluation

As per the Evaluation terms of reference, this evaluation aimed to measure project achievements and draw lessons to inform future interventions. The purpose of this evaluation were twofold; “firstly to generate evidence of project impact to inform decision making around humanitarian policy and programming. Secondly, to provide advice and practical recommendations based on the findings, ultimately improving organizational learning, effectiveness and accountability at all levels.” The overall objectives of the evaluation were to:

- Assess key achievements and impacts of the WASH and livelihood-based emergency response project
- Assess the effectiveness of the program in achieving WASH and livelihood-based emergency response project objectives
- Identify lessons and recommendations for:
 - WASH interventions
 - Livelihood-based emergency responses and community services delivery strategy in each location
 - Livelihood and social impacts of the humanitarian and livelihood-based interventions combined together
- Encourage key stakeholders to constructively reflect on and learn from the WASH and livelihood-based emergency response project

2.2 Methodology

2.2.1 Overall approach

Conceptually, monitoring and evaluation is defined as: a 3 stage framework for defining learning agendas, learning to be efficient, effective and expand activities, a learning method that combines rapid appraisal and process documentation and data collection with the use of inter-organizational working groups, problem solving workshops,

organization and policy assessment and reporting methods that are used to facilitate development objectives/programs.

Accordingly, this final evaluation was based on desk review and consultations with wider group of stakeholders. The desk review component collected and summarized project information. The evaluation also benefited useful inputs of senior management and technical staff of the SC UK who participated in the feedback meeting organized in Addis Ababa at SC UK meeting hall on 29th of June 2012.

The desk review considered the project proposal, early warning and need identifications reports, action plans and progress reports, a presentation prepared for the stakeholders meeting and mid term monitoring reports among others. The field assessment component, which was conducted in samples of geographic interventions, consulted the entire key project stakeholders; such as beneficiary community, professional working with SC UK and partner organizations who participated in the design and implementation of the evaluation project. The desk review included the development of an evaluation matrix incorporating key questions for different types of interventions.

The evaluation assessed the performance of the project based on certain indicators such as relevance, appropriateness, efficiency, effectiveness, impact and sustainability of the project and the added value of the emergency response project through interviews mainly with beneficiaries and experts working with the government partner offices.

2.2.2 Desk review

The initial desk review provided descriptions of the key intervention components including quantitative information used for measuring project performances from the project logical frame and progress reports in addition to deriving key research questions for the field assessment evaluation component. During the write-up, the desk review provided part of the evidences required both for accurately estimating the overall project achievements and their impacts that were used along with the findings obtained from sample population. The project information also helped describing factors for the changes perceived by the community to have resulted since project interventions.

2.2.3 Field assessment

As discussed, the project under the evaluation had WASH and livelihood components that were designed to improve WASH services and availability of adequate quality water, milk production and improving animal health, household income from sale of livestock and their products and conducting nutrition surveys. In these components, many of the project interventions such as rehabilitation of water sources, provision of training and technical supports to water management and school WASH committees and Community animal health system were designed to enable the drought-affected populations coping with the prevailing and future drought situations.

The field evaluation component was designed to collect evidence from through the project cycle; from need assessment to design and from launching to implementation and monitoring, interventions while clearly depicting project achievements under each component including challenges and opportunities encountered, so far.

Information used in this report was collected through Focus Group Discussion (FGD) and individual and household interviews. The list of individual respondents included key informants and sample households; Key informants were individuals who provided further details on specific information obtained from communities.

Key informants included experts and officials working with SC UK and partner organizations and institutions that were identified in consultation with project field staff and focus group discussion participants. These are officials and experts working with the government at zone, woreda and kebele government administrative divisions, as well as the FAO UN and CHF an international NGO sub offices in Gode town. In both FGD and individual interview, data were collected using a standard checklist and a mix of standardized participatory assessment methods.

Focus group discussion (FGD)

Table 1 provides the characteristics of FGDs conducted during the field evaluation. This sub component was designed to collect mostly qualitative contextual data on the characteristics of project interventions, achievements and the intervention environment. It also collected qualitative information on the communities' perceptions of project interventions and changes resulted due to project interventions.

The FGD applied a number of participatory methods and tools to characterize and systematically investigate the impact of the drought that triggered project responses and interventions. These included participatory mapping and timeline exercises carried out during each focus group discussion to contextualize the interventions geographical and temporal boundaries (when and where the intervention will take place). Participatory ranking and proportional piling and matrix scoring exercises were conducted to prioritize and quantify assessment variables.

A rapid sustainability analysis session was facilitated together with the FGD participants with view of assessing the opportunities and challenges existing to the sustainability of project achievements along with suggestions. In each FGD, the participatory proportional piling, timeline, mapping and rapid sustainability analysis exercises were completed within a maximum of 2 hours. The FGD involved 10-15 persons (men and women) and participation was voluntary.

Table 1: Characteristics of focus group discussions

Geographic distribution of focus group discussion events			Participant	
Woreda	Kebele	Intervention	Male	Female
Adadle	Bholhagarle	WASH	9	6

	Harsog	WASH	12	5
	Bholhagarle	Animal health care	9	6
	Harsog	Animal health care	12	5
	Haroos and Harsog	CAHWs support	2	
Kelafo	Hargudud	Animal feed supply	12	5
	Teriqo	WASH	7	6
	Afdub and Kelafo	Animal health care	12	7
	Afdub and Kelafo	Fodder production	12	7
	Alowegadhsi	Slaughter de-stocking	13	
	Bahlaweys, Qodahley and Dhurdhere	CAHWs	5	

Household interviews (HHI)

This sub component of the project evaluation collected mostly quantitative data using a conventional questionnaire format, and using standardized participatory assessment methods and checklist that were standardized following field pre-test. The individual respondents of interviews conducted in Adadle and Kelafo intervention woredas were interviewed as encountered, and they were not identified through random sampling method. Table 2 illustrates the number of households covered under each intervention.

Table 2: Distribution of individual interviews across interventions

Intervention	Total	Male	Female	Remark
WASH	55	8	47	Adadle and Kelafo
Animal health care	34	11	23	Adadle and Kelafo
Feed supply	5	5		Kelafo
Fodder production	8	7	1	Kelafo

Key Informant Interview and Case Studies (KKI & CS)

The KII provided details on qualitative and quantitative project achievements perceived by the participants in the FGD and HHI. They also collected government and NGO partner organizations perception of the project approach such as collaboration between their organizations and the SC UK during the project implementation process. The KII involved project field staff, government and NGO/UN organizations and knowledgeable individuals such as community-leaders, CbAHWs, members of different committees including that of kebele government structure who participated either in the design or implementation of the assessment project interventions, see Table 3.

Accordingly, the staff of government partner offices described a whole project cycle, from the need assessment to beneficiary selection and from implementation to consolidation. These informants were asked to explain:

- The type of partnership existed between their organizations and SC UK when implementing the project and the extent to which their organizations have been participating in each project cycle.
- Specific supports received and provided from and to the assessment project.

- Government capacity building related multiplier impacts of project supports and lessons learned from practices on, such as training given to experts working with the WASH and livelihood units of sector offices.
- Comment on the design and implementation of the project and suggestions for better option.
- Internal and external factors that might have affected the impacts of the past and present drought emergency response programs implemented in their area.
- Opportunities and challenges existing to the sustainability of project achievements.

At the end, the SC UK management and technical staff who participated in the debriefing meeting were asked to comment on information obtained from their government partner offices. In addition, each project officer that participated in the meeting held with SC UK staff viz. WASH and livelihood coordinators and the project manager have explained the following points:

- Specific activities undertaken under the emergency response project.
- Activity planning and implementation methods applied.
- Achievements recorded against the initial plan and method of measuring the achievements.
- Challenges encountered with the implementation of each activity and actions taken against by outcomes.
- Suggest better activity planning and implementation approach.

On 29th of June 2012, a feedback presentation was delivered by the lead consultant to the SC UK senior staff at meeting hall in Addis Ababa. During the discussion session, the SC UK side explained the over achievements on some activities presented in the first draft report that shows the project had reached more than its initial plan for the livelihood-based interventions.

Table 3: List of key informants

Organization	Specific person
Gode zone DPPB	Acting head
Gode zone administration office	Acting head
SC UK Gode sub-office	Manger, WASH and LH coordinators
FAO Gode office	Representative
CHF Gode office	Project manager
SC UK woreda units	Officers assigned to Adadale and Kelafo woredas
Woreda administration, water, education and livestock and agriculture offices	Acting heads and experts working with each office in the Adadle, Kelafo and Gode woredas
Kebele leaders	Chairmen of assessment kebeles under Adadale and Kelafo woredas
WASH committee members	Adadale and Kelafo woredas
School director	Adadale woreda
Fodder producers' cooperative member	Gode and Kelafo woredas

2.2.4 Data collection and analysis

The evaluation applied a mix of quantitative and qualitative participatory research instruments for collecting data required from communities. The systematic application of standardized participatory methods was also used to generate numerically representative results (see Chambers, R., 2007 and Catley et al, 2008). Many of the methods and tools applied in this evaluation were applied with Somali communities by the current consultants.

The initial evaluation plan proposed by the consultants was finalized following comments received from the SC UK in Addis Ababa. The checklist for the field assessment evaluation component was defined and redefined together with informants, including SC UK project manager, WASH and livelihood intervention coordinators and field officers that directly involved into the project implementation. Semi-structured interviews and pair-wise ranking and proportional piling participatory techniques were applied with informants to identify and compare the relative importance of different assessment parameters, including knowledge, attitude and practice (KAP) of the communities on specific issues. A standardized questioner was also applied with households. Therefore, using different data collection methods the data collected were triangulated. The data analysis task involved processing raw data and information, which included coding, editing, verifying, transcribing, data transforming, data tabulation, and exploring data analysis. The PASW Statics 18 was used for generating figures and examining the relative importance of problems, services and benefits from scoring results at 95% CI.

3. Evaluation findings

3.1 Relevance of WASH interventions

Addressing the water availability and quality problems with physical and chemical means has been part of the WASH component of the drought emergency response project implemented in Gode zone. Accordingly, significant efforts have been done in the areas of improving water availability and quality by SC UK. The specific activities included birka and shallow wells construction and rehabilitation, provision of Bishangari water treatment chemical and water containers, training of school WASH and water management committees, training of water care takers and provision of tools. Prior to the project interventions, the communities encounter critical water shortage problem for both people and livestock. Therefore, the WASH interventions implemented in these districts were timely and appropriate in addressing the WASH pressing needs of communities.

3.1.1 Rehabilitation of existing water sources

The rehabilitation of birkas and shallow wells was done in Adadle woreda where two birkas were rehabilitated with a view to capturing the runoff water from the 'Deyr'

season rains expected in October 2011. In many parts of this woreda, the problem of flood contaminating drinking water used from birkas and open shallow wells during the rainy months is, and has always been as important as that of critical water shortage during the dry season.

The evaluation confirms that the timing of the birka rehabilitation activity in August and September 2011 was very appropriate in helping the community to collect runoff water from the 'Deyr' season rains. Prior to the rehabilitation work, Birkas were lacking drainage system, and the water leakage was so high that they used to dry up in a two-month period following the end of the rains. Whereas the birkas are now expected to serve water for around three months, the one month increment in water use period is both due to efficient water use method devised and water leakages avoided following the project intervention according to water management committee members and birka water users consulted during this evaluation.



Internal view of birka before



Birka after rehabilitation

Harsog Birka Rehabilitated by SC-UK and filled by Rain water

Similarly, the rehabilitation work done on the shallow wells was said to have improved the quality of water while decreasing time and labor spent on deriving water out of the well.



before rehabilitation



after rehabilitation

Adadle shallow well

3.1.2 Construction of new water sources

This intervention was targeted to kebeles with chronic water shortage problem both in Adadle and Kelafo woredas. Specific sites for new birkas and shallow wells development were selected based on population density in general and that of drought affected destitute households who do not own camel and donkey for collecting water, distance travelled by women and children to collect water, drink water, queuing time at the existing water point and relative prevalence of conflicts resulting over water sources between user households and communities.

As a consequence, the construction of new water sources has an additional multiplier impact of reducing hostility between neighboring households and communities to reducing workload from collecting drink water mostly on women and children. Interestingly, the drought-affected communities did not have problem with job of digging and excavating soil.

3.1.3 Distribution of water treatment chemical and hygiene kits

The water treatment chemical and hygiene promotion kits consisted of bishangari water purification chemical, soap and nail clipper, as well as sealed Jeri-cans with tap outlets meant for separately reserving drink water were targeted to areas with history of comparatively high prevalence of acute watery diarrhea and other water related health problems. Communities in these kebeles and settlement sites considered for birkas and shallow wells rehabilitation works in both Adadle and Kelafo intervention woredas were using water from unprotected sources such as temporary ponds and seasonal and perennial rivers during the 2011 drought.

During the hygiene kits distribution, priority was given to poor families with under 5 year old children, and households that lost their livestock such as donkey used for collecting water from distant located sources to drought. Within the family, particular attention was directed to disabled and chronically sick people, pregnant women and breast-feeding mothers.

In this evaluation, the team assured that the water treatment chemical and hygiene kits was never a replacement for awareness raised during campaign that many participants said to have started boiling drink water particularly for young children since the hygiene promotion program. Furthermore, around 40% of the total households covered by the individual interviews carried out under this evaluation owned private toilet facility that also said to have developed as a result of strong sensitization and mobilization activities carried out by the project.

3.2 Relevance of livelihood-based interventions

3.2.1 Animal health care

The project implemented a package composed of strategic vaccination and treatment of clinically sick cases that covered all the three major livestock species of the area: cattle, small ruminants and camels. Treatment and vaccination were conducted twice, in September 2011 and May 2012. The livestock vaccination and treatment conducted in the post-drought period is a practice worth pursuing vigorously in the future given its multiple impacts such as of reducing risk of disease outbreaks and enhancing the reproduction of the livestock.

3.2.2 Feed supplementation

The feed supplements were provided to cattle and small ruminants for 12 days until the onset of the deyr season rains in September 2011. The initial plan was to feed milking

and pregnant cows with Teff-straw. As the teff-straw was not available in the local market, the project used Sudan grass that was purchased from a local cooperative. It was purchased at much higher unit price which forced the implementing team to reduce the feeding period by 48 days, from 60 days to 12 days.

The 12 days feeding period is based on an original plan of feeding the 18,000 bundles of Sudan grass distributed to owners for takeaway was fed to the 4,500 milking and pregnant cows targeted, a total of 4 bundles per head or 0.33 kilogram per day per head. However, the FGD and household interview findings indicated that owners fed both to cattle and small ruminants the Sudan grass.



Livestock feed supplementation in Kelafo woreda, Hargudud

It has long been recognized that starvation-induced livestock mortality increases with the onset of post-drought rains. Similarly, findings obtained from household interviews indicated that the short-lived project intervention has helped them increasing the survival of most vulnerable animals fed with the project feed².

3.2.3 Slaughter de-stocking

The impact of the slaughter de-stocking intervention includes income derived from sale of livestock to slaughter de-stocking project. This helped participant households to purchase feed for the majority of their herds and meet their families basic demand while avoiding distress sale of livestock to make income and meet food needs of the families. The income obtained from sale of the slaughtered livestock is considered as the most important immediate livelihood impact of the slaughter de-stocking intervention by the beneficiaries. This is well in line with the government and SC UK drought impact indicators that livestock body condition critically deteriorated and their prices declined to nil. The drought-affected cattle and small ruminants were sold to the slaughter de-stocking project at ETB 1,200 and ETB 300 per head respectively.

² Although the initial plan was to purchase the animal feed around Addis Ababa, the budget estimation made based on the preliminary assessment in this area did not work as the feed price escalated with increased demand that led-to supply shortage. Therefore, SC UK was forced to purchase the feed locally at higher price to have reduced feeding duration.



Sheep and cattle slaughtered at Afdub and Allow igarsi

3.2.4 Fodder production

The provision of 46,400 liters of fuel and 9 kilogram of Sudan grass seeds per cooperative to a total of 116 fodder producers' cooperatives helped the project promoting local fodder production. One of the key findings from the evaluation is the Sudan grass seed produced mainly for sale of seeds to government at ETB 80 per kilogram for further fodder production promotion. Not only is the income from sale of grass seed considered as most profitable business by the cooperatives, the seed distributed to many more cooperatives and households by government represents another important multiplier impact of the fodder production intervention component.



Fodder production initiatives in Kelafo and Gode woredas

3.2.5 Supporting CAHW system

SC UK has also boosted the skill and veterinary kits of active CAHWs operating in the project intervention woredas. Already trained by other agencies, the supported CAHWs participated in the design and implementation of animal health care intervened by the SC UK. The participation of CAHWs in vaccination and treatment campaigns enabled the project saving time and money mainly through reducing campaign period and running cost. The evaluation looked at the impact of the supports provided to the CAHWs; see section 4.3.4 and table 9. Training was also conducted for government animal health staff that participated in the campaign implementation process.

3.3 Collaboration with partner organizations and accountability

During the field evaluation all government partner bureaus and offices in the Gode zone and Adadle, Gode and Kelafo woredas, an international NGO and a UN organization took part in the consultation. Accordingly, the government partners confirmed that they participated in the whole project cycle; from design to launching workshop, from implementation to monitoring and mid-term evaluation. Equally, the SC UK field office recognized the role of material and technical supports received from government livestock and crop development offices and bureau. Similarly, CHF and FAO representatives' outlook toward the project was very positive.

The establishment of an accountable and transparent information sharing mechanism, including training organized on problem identification and reporting related issue for community representatives from Adadle and Kalafo woredas, including school children could be the first of its kind in the area.

The participation of the woreda administration and line offices in both intervention site and beneficiary selection process and the implementation of project activities were found to be very meaningful. Not only the government line offices, but also the beneficiaries have actively been participating throughout the project cycle. The woreda water, agriculture and DPPO offices confirmed to have accessed project activity plans and monthly activity reports on time. Government staff that participated in the project implementation process received all the necessary trainings and logistic support from the project.

In all interventions, community dialogues took place when selecting sites and beneficiaries. These were facilitated by project WASH and Livelihoods coordinators, officers and government line offices mainly Woreda Water and Agriculture offices in collaboration with the clan and religious leaders and women groups. The evaluation also confirmed that the woreda water and agriculture offices were the main bodies responsible for implementation oversight and receiving progress reports of WASH and livelihood-based interventions components on time. In Adadle, the government conducted monitoring and mid-term evaluation in 4 randomly selected kebeles: Wardid, Harsog, Hodan and Danagab. The mid-term evaluation report provided quantitative evidences while concluding that project achievements were so positive. This evaluation confirmed that all interventions were implemented with due participation of government line offices mainly Woreda Water and Agriculture offices, kebele management system, as well as clan and religious leaders including women groups and men's cooperatives.

4. Achievement and effectiveness of the SC UK project

This section intends to briefly discuss issues related to the timing and outcomes of the project interventions delivered and achievements obtained under the WASH and livelihood components.

4.1 Timeliness

Table 4 summarizes key events related to the drought emergency situation and some responses. From the table, the SC drought response in Gode zone is characterized as:

- A drought emergency response strategy that demonstrates how a relief to development approaches can be applied and can enhance the effectiveness of humanitarian assistance interventions given the humanitarian and livelihood-based interventions implemented during the drought emergency and recovery phases respectively.
- A drought impact-based emergency response that might be planned with the worst scenario of the subsequent seasons rains performing poor in mind. Scenario planning assumed the very late onset of some humanitarian response delivery process particularly livestock feed supplementation and slaughter de-stocking interventions meant to avert the impact of the prevailing drought situation on the life and livelihoods of the affected populations, as well as timing of supports provided to feed producers cooperatives and that of project exit coincided with Gu rain of 2012. However, the consideration of the worst-case scenario could not be a replacement for the long interval between submission of emergency appeal and fund release that mostly delays drought responses.

In general, the timing of the WASH and livelihood interventions was appropriate.

Table 4: Chronology of emergency situations and responses

Woreda/ period	Type of intervention
Oct – Nov 2010	<ul style="list-style-type: none"> • Deyr season rains performed very poor to have aggravated the drought situation started earlier with consecutive rainfall failure of 2010 Gu and Karan rains
Nov- Dec 2010	<ul style="list-style-type: none"> • Critical shortage of water and animal feed <ul style="list-style-type: none"> ➢ Deterioration of livestock body condition and market prices ➢ High school dropout ➢ Migration to areas where relatively better resource was perceived ➢ Some animal disease outbreaks
Apr 2011	<ul style="list-style-type: none"> • Extremely low terms of trade between grain and livestock prices • Multi-agency drought situation assessment conducted • Gode Agricultural Research Center distributed feed and fodder seed • WFP distributed food items focusing on most vulnerable people • OWDA distributed food items and trucked water
Apr – May 2011	<ul style="list-style-type: none"> • Gu season rains failed • Livestock migrated far beyond woreda boundaries • Distress livestock sales off-take
Jun 2011	<ul style="list-style-type: none"> • People started moving to the near by stations to do labor job • SC UK launched WASH and livelihood-based drought response

Aug – Sep 2011	<ul style="list-style-type: none"> • Shallow wells and birka rehabilitation • Provision of water treatment chemicals, Jerri-cane and hygiene kits • First round livestock vaccination and treatment campaign
Oct – Dec 2011	<ul style="list-style-type: none"> • Onset of deyr season rains • Construction of new birkas • Sensitization and mobilization of WASH participant households and provision of IEC material • School WASH clubs, HEWs, volunteers, government staff and WC on hygiene and sanitation promotion training • Joint monitoring of project interventions carried out
Mar – May 2012	<ul style="list-style-type: none"> • Water management committee training • Fodder seed and fuel supply for fodder producers • Government animal health professional training • Refresher training and booster veterinary stock for CAHWs • Slaughter slab/tarpaulin construction and supply of tools & accessories • Cattle and small ruminant slaughter destocking • Second round livestock vaccination and treatment campaign • Cattle supplementary feeding with Sudan grass • Project closed on May 31st and evaluated June 7th -17th 2012

4.2 Comparison of planned and accomplished activities

This section describes the quantitative achievements and effectiveness of activities undertaken under the WASH and livelihood-based emergency response project. Table 7 compares the project achievements with the initial plan for the four intervention woredas. In the table, the achievements are measured against the specific intervention 'outcomes' defined under the WASH and livelihood-based project components.

The evaluation findings show:

- On average, the overall achievement obtained under the livelihood-based emergency response component was higher than the initial plan. The highest and least achievement percentages of 750%³ and 27% calculated for the livestock treatment and slaughter de-stocking activities respectively⁴.
- The higher achievement recorded for animal health care intervention was partly due to considerable amount of animal vaccines used from the government for free, as well as budget left behind the slaughter de-stocking redirected to this and the fodder production promotion for which a 116% achievement was recorded.

³ Majority of the animals are expected to have benefited both from the first and second round vaccination and treatment campaigns.

⁴ The 27% achievement for the slaughter de-stocking was calculated based on the 1200 ETB and 300 ETB compensated for the 360 cattle and 44 sheep slaughtered per head respectively, applied for converting the small ruminant into cattle both for plan and achievement.

- The high achievement percentage might be due to quite large number of animals sprayed for external parasites and wound with acaricides and wound spray respectively.
- The project transferred a total of 445,200 ETB in cash to 404 households. This contributed to the 360 cattle and 44 small ruminants for slaughtering destocking. i.e. 1,102 ETB per household on average. The meat was distributed to a total of 7,332 households from which each household received around 2.6 Kg of meat on average. The hides and skins were given to women's groups.
- The project injected a total of 46,400 liters of fuel and 1,140 kilograms of Sudan grass seed into 116 cooperatives in two rounds in September 2011 and January 2012, each fodder producer's cooperative is consisted of 10 members.

In conclusion, the project succeeded to deliver all-important interventions as per the initial plan.

Table 5: Summary project achievements vs. modified plan

Specific activity	Plan	Achievement
New birka construction	3	100%
Existed birka rehabilitation	2	100%
Shallow well rehabilitation	3	100%
Hygiene kit distribution	2,000	100%
Two trainings on hygiene and sanitation for volunteers	120	100%
Hygiene promotion message (leaflet)	2,610	100%
Water container and purification chemicals distribution	1,800	111%
Distribution of water treatment chemical for 2 months	4,000	100%
Trainings for 49 school WASH and water users committees	7	100%
Training and tools for water care takers	7	100%
Training on community led total sanitation	3	100%
Cattle slaughter de-stocking	500	72%
Small ruminant slaughter de-stocking	2,000	2.2%
Livestock vaccination	150,000	321%
Livestock treatment	54,000	750%
Supplementary feeding of 4,500 livestock	60 days	12 days
Support fodder producers cooperatives	100	116%
Conduct nutrition surveys and share with the stakeholders	7	85.7%
Refresher training of active CAHWs and government AHTs		Done as planned

Note for Table 5:

- Budget constraint was the key reason for replacing a new birka construction plan with two existed birkas rehabilitation.
- 24 government staff, 120 community representatives, 26 school WASH clubs and monitors and 30 health extension workers attended the trainings on community led total sanitation in Adadle, Kelafo and Mustahil, one per woreda.

- The water treatment chemical (Bishangari) was distributed twice at monthly intervals and each household collected 60 sachets each round respectively.

5. Significance of project achievements

The project anticipated four main results. R1: 24,000 people have access to clean and adequate water for Human and livestock consumption, R2: 24,000 people will have Improved Hygiene and Sanitation practices through sensitization and promotion activities, R3: 30,000 people are able to protect food consumption and productive assets through targeted livestock interventions and R4: a total of 7 nutrition survey will provide reliable information to the SC UK and other stakeholders consumption. Therefore, the direct beneficiary populations targeted under the three results (R1, R2 and R3) shows a total of 78,000 people. The actual populations benefited from the livelihood and WASH interventions directed to households respectively are estimated at 44,322 people and 74,472 people.

5.1 Nutrition survey

The nutrition survey planned in consultation with the Regional and Federal Emergency Nutrition Coordination Unit (ENCU) was carried out in 6 priority number one hot spot woredas in Southern and Northern parts of Somali region. The 6 surveys were conducted between 4th November and 17th December 2011 in Harshin, Dollo Ado, Hudet, Aysha and Shinile woredas, see below.

Seasonal prevalence of Malnutrition in 2011					
Zone	Woreda	Date of survey	SAM Z-scores (95% CI)	Mortality (10,000 per day)	
				CMR (95% CI)	U5MR (95% CI)
Liben	Dollo Ado	4-11/6/11	3.2% (2.1%-4.8%)	0.3 (0.15-0.57)	0.55 (0.23-1.30)
Liben	Hudet	15-21/6/11	1.1% (0.6 – 2.0)	0.27 (14.0 – 0.52)	0.71 (0.29 – 1.75)
Jijiga	Harshin	19-25/11/11	0.0% (0.0 – 0.0)	0.17 (0.06-0.55)	0.46 (0.15-1.42)
Shinile	Aysha	1-7/12/11	1.0% (0.4 - 2.6)	0.18 (0.08-0.40)	1.08 (0.50-2.32)
Shinile	Shinile	11-17/12/12	0.8% (0.3 - 1.8)	0.06 (0.01-0.49)	0.16 (0.02-1.26)
Jijiga	Harshin	30/3/-6/4/12	0.4 % (0.1 - 1.3)	0.55 (0.33-0.92)	2.16 (1.25-3.71)

FENCU endorsed the survey results, as well as officially released to concerned organizations including SC US and SC UK with a view of deriving their response to the recommendations of the survey. The survey results were utilized by SC US and SC UK to develop emergency health and nutrition response proposals for Dolo Ado, Aysha and Harshin Woredas. The surveys also provided surveillance information to the HRD (Humanitarian Requirement Document) process while updating the national list of the priority hot-spot woredas in the Somali region at that time. In general, the survey

played a crucial role of informing the wider humanitarian community about the emergency situation and advocating targeted early response.

The nutrition situation in Dollo ado was defined as “Critical” following the national guideline on Nutrition Assessments in Ethiopia (Interim version, 2008). This is due to the high level of point prevalence of the malnutrition status in the community. Coupled with other aggravating factors on the ground such as inadequate household level food availability, severe scarcity of water, depleted pasture with progressing drought in the area and poor vaccination coverage, the situation called for an immediate emergency response action with integrated responses in Health, Nutrition, Wash and Livelihoods interventions.

5.2 Livelihood interventions

The Total Number of People Directly Benefited from Livelihood Component = {(average number of households benefited from animal vaccination and treatment campaign + members of CAHWs received training and booster veterinary stock + slaughter de-stocking beneficiary households + animal feed supplementation beneficiary households + fodder producer households that received fuel and grass seed) x (average family size)} = {(5,707 + 35 + 404 + 1,125 + 116 = 7,387 households) x (6 persons)}. This formula calculates a total of 44,322 persons. The animal health care and fodder development elements were uniform across the four intervention woredas. The slaughter de-stocking and feed supplementation was limited to the Kelafo intervention woreda. The animal health care sub component was intervened in two rounds at the onset of the deyr and gu seasons rains in September 2011 and May 2011 respectively. From disease control point of views, these directly relates to strategic vaccination and treatment practices.

Table 6: Quantitative achievements of livelihood interventions

Type and amount of achievement	Location/number				
	Kelafo	Gode	Adadle	Mustahil	Total
Fodder producers’ cooperatives supported	40	30	26	20	116
Fuel supplied per cooperative in liter	400	400	400	400	46,400
Sudan grass seed supplied per coop in Kg	9	9	9	9	1,044
Cooperatives trained on fodder conservation and pump maintenance	80	36	34	40	190
Members trained per cooperative	80	36	34	40	190
CAHW trained	10	10	10	5	35
CAHW received booster veterinary stock	10	10	10	5	35
Cattle slaughter de-stocking in Afdub and Allow igarsi kebeles	360				360
Sheep slaughter de-stocking in same kebeles	44				44
Cash collected by 404 households in ETB	445,200				445,200
Meat food distributed	7,332				7,332
Herds fed with project feed in 5 kebeles	1,125				1,125

Animals fed at a rate of 4 cattle per herd	4,500				4,500
Herds and flocks vaccinated	1,657	1,882	1,045	657	5,241
Small ruminants vaccinated	38,204	73,751	111,432	32,077	255,464
Cattle vaccinated	85,053	53,506	68,552	4,617	211,728
Camels vaccinated	0	9,545	0	14,898	38,221
Herds and flocks treated	1,572	2,069	1,698	834	6,173
Small ruminants treated	24,187	91,016	204,751	26,572	346,526
Cattle treated	12,648	31,268	22,472	7,909	74,297
Camels treated	1,194	12,200	20,196	282	42,546
Donkey treated		76	23	149	259

5.2.1 Slaughter de-stocking

The slaughter de-stocking, which is often considered as the last option, has been interrupted due to the following reasons:

- The progress of the drought emergency situation at time of the slaughter destocking intervention was not as critical as was assumed that pastoralists were still exercising their internal coping mechanism to protect the most vulnerable herd elements intended to be slaughtered.
- There also appears that this intervention, some how, overlapped with the onset of the 'Deyr' season rains in 2011 that pastoralists were not ready to dispose their precious asset.
- Furthermore, the Federal Agricultural Task Force issued a guideline that discourages slaughter de-stocking activities in the middle of the 'Dyer' rain while livestock experts from Livestock, Crop and Rural Development Bureau who visited the intervention area in Kelafo district advised the project team to abort this activity.

Although interrupted due to technical reason, the slaughter de-stocking intervention initiated in the Kelafo project woreda injected a total of 445,200 ETB and around 14,664 kilograms of meat into the community in Alow-egadhsi and Afdub kebeles. The project planned to slaughter a total of 2,000 small ruminants and 500 cattle to be purchased from 5,000 households of which 44 and 360 animals belonged to 404 households were purchased for 300 ETB and 1,200 ETB per head respectively. The meat food was distributed to a total of 7,332 people and each person received around 2 kilograms of meat on average. Concerning the prices paid for the drought-affected cattle and small ruminant, we do argue for higher prices being paid for emergency slaughtered animals as follows:

- It helps pastoralists to protect the majority against starvation-induced mortality through investing on animal feed.
- The cash also helps them to cover some non-food household expenditures such as family clothing, health care and child education; therefore, it is another form of provisioning cash aid.

- It is a practical way of accelerating livestock off-take that is, has always been part of the strategies suggested for reducing burden on pasture resource in theory.
- These points of argument do characterize slaughter de-stocking as a typical humanitarian intervention.

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Concerning the prices paid for the drought-affected cattle and small ruminant, we do argue for higher prices being paid for emergency slaughtered animals as follows:

- It helps pastoralists to protect the majority against starvation-induced mortality through investing on animal feed.
- The cash also helps them to cover some non-food household expenditures such as family clothing, health care and child education; therefore, it is another form of provisioning cash aid.
- It is a practical way of accelerating livestock off-take that is, has always been part of the strategies suggested for reducing burden on pasture resource in theory.
- These points of argument do characterize slaughter de-stocking as a typical humanitarian intervention.

5.2.2 Animal health care

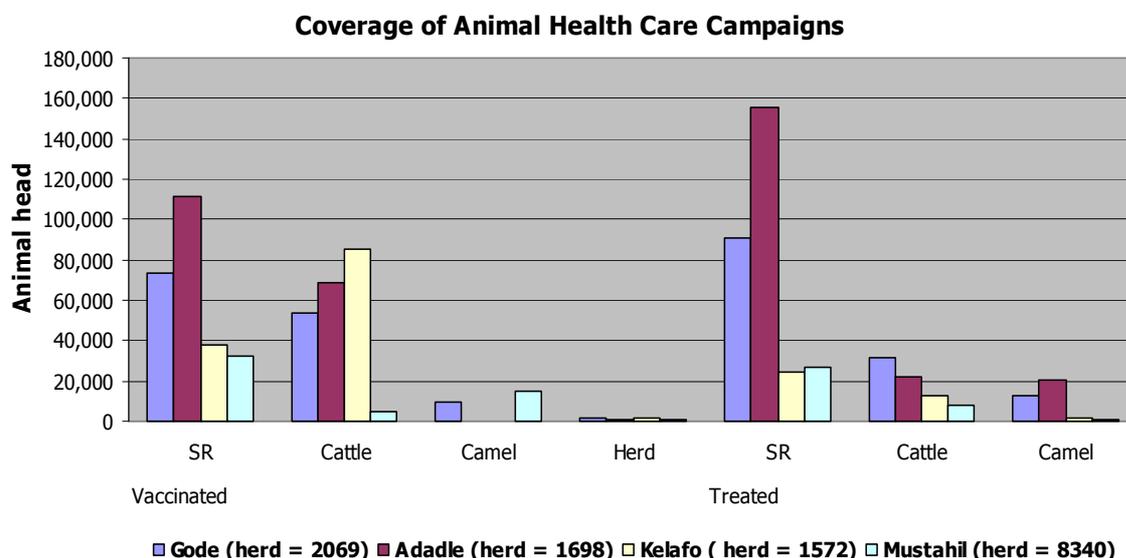
Table 7 and Figure 1 provide original budget plan for vaccine and treatment intervention and population covered by the animal health care campaigns conducted in two rounds. From the table, on average, there were 12 and 33 animals vaccinated and treated with one Euro or 23 ETB, i.e. around 2 ETB and 1.60 ETB per animal respectively.

Table 7: Unit cost of livestock vaccination and treatment interventions

Species	Total budget in Eui		Total number of animals		Animals handled with 1 Euro		Cost per head in ETB	
	Vaccine	Treatment	Vaccinated	Treated	Vaccine	Treatment	Vaccine	Treatment
Cattle	120,00	10,500	211,728	88,209	18	7	1.3	3.25

Camel	7,500	10,200	38,221	42,546	3	3	7.1	6.9
SR	18,000	9,000	255,464	346,526	12	33	1.6	0.7
Average					14	15	2	1.6

Figure 1: Livestock vaccination and treatment achievements



5.2.3 Fodder production

The project distributed Sudan grass seed and fuel used for water pumps in two rounds in September 2011 and January 2012 with a view to helping the cooperatives to produce feed required for the drought emergency intervention with the assumption that the 2011 deyr season rains and that of gu 2012 rains may perform poor. In almost all drought emergency feed supplementation programs intervened in pastoral areas so far, the feed input was from transported from highland areas.

Given the supply shortage problem encountered by the project during the 2011 supplementary feeding intervention in Kelafo and the fact starvation is, and has always been the main cause of massive livestock mortality in any drought situation. Therefore, supporting local feed production system is the best appropriate option to ensure feed security of such remote located and drought-prone areas. In this regard, the evaluation finding that 80,000 ETB derived by one of the cooperatives operating in the Gode woreda from Sudan grass seed sold to the west Gode project shows a very promising trend. The project injected a total of 64,000 liters of fuel⁵ and 1,040 kilograms of Sudan grass seed into 116 cooperatives involved into animal feed production income generating activity in the four project woredas.

⁵ Assuming a fuel consumption rate of 30 litres/ha (minimum), and that maize for fodder and grass require three irrigations per cropping period this would be enough to irrigate around 710 hectares.

As discussed, the project supported a total of 116 cooperatives with a total of 4,640 liters of fuel and 1,044 kilograms of Sudan grass seed received from the project. On average, each cooperative is consisted of 10 persons and the total population directly benefited from the fuel and Sudan grass seed adds to around 1,160 households. Using the data obtained from this assessment that showed average family size of 7 persons and that of mixed herd consisted of 7 cattle and 8 small ruminants, the total population food and feed secured is estimated at around 8,120 people and, 8,120 cattle and 9,280 small ruminant heads⁶ respectively.

5.2.4 Feed supplementation

The feed supplement provided for a total of 4,500 cattle for 12 days until the onset of the deyr season rains. Though the original plan was to 45,000 cattle for 60 days it was latter revised to 12 days. As per the modification request by SC UK to ECHO this was due to change the type of feed from 'Tuf' straw to Sudan grass which had substantial budget implication on the project as Sudan grass was much expensive than the 'Tuf' straw. However, though this shows planning problem during proposal development, using Sudan grass was much more technically appropriate than 'Tuf' straw. Sudan grass has high nutrient content that would give animals to recover from the impact of the drought within a short time. Therefore, changing the type of the feed was relevant to the local context but the project not feeding the animals for long period might have compromised the objective of the project to safe the livelihoods asset of the community.

5.3 WASH interventions

The Total Number of People Directly Benefited from WASH Component = {(number of households benefited from rehabilitated birkas + average number of households benefited from rehabilitated shallow wells + households collected water treatment chemicals + households collected water container + households directly covered by Hygiene and Sanitation promotion program)} = {(550 + 850 + 4,000 + 2,000 + 4,000 = 11,400 households) x (6 persons)}. This formula calculates a total of 68,400 persons and this figure will increase to a total of 74,466 persons with the 6,066 people expected to benefit from the 3 newly constructed birkas, which is calculated as follow:

The Number of People that can Use the New Birkas = {(average number of households applied for the two existed birkas of 400 meter cube capacity (i.e. 225 household per birka) + average number of households that can potentially use the extra 200 meter cube water from the new birka at the same rate (i.e. 112 household per birka) x (number of new birkas) x (average family size of 6 persons)} = {(225 + 112) x (3 new birkas) x (6 persons) = 6,066 persons}.

⁶ The herd size is based on the average number of animals vaccinated under the 31 cattle and 23 small ruminant herds.

Table 8: Quantitative achievements of WASH interventions

Achievement	Quantity	Household	Remark
New birka construction	3	1,012	Adadle and Kelafo, 337 hh/birka
Existed birka rehabilitation	2	550	Todob and Harsog, 225 hh/birka
Shallow wells rehabilitation	3	850	Adadle, 283 hh/shallow well
Water treatment chemicals provision	4,000	24,000	Average family of 6 persons
Water container supply	2,000	12,000	Average family of 6 persons
Hygiene and sanitation promotion	4,000	24,000	Average family of 6 persons
Estimate number of people benefited			68,400
Total human population expected to benefit once the 3 newly constructed birkas start serving water		6,066	
Total beneficiaries			74,472

Source: project power point presentation to stakeholders in Gode, March 2012

5.3.1 Water source development

During the project, Save the Children UK constructed 2 new Birkas and rehabilitated 3 shallow wells and 2 birkas in Adadle woreda. It also constructed a new birka in Kelafo woreda. The communities contributed labor required for constructing the new birkas and rehabilitating the existing birkas. The birka rehabilitation work has helped the community collecting and conserving runoff water from the 2011 Deyr season rains.

Birka: – the capacity of the existing birka was also said to have increased with the rehabilitation work carried out by the project. On average, the capacity of the rehabilitated and newly constructed birkas is estimated at around 400 meter cube and 600-meter cube respectively. With the extra 200-meter cubes, either the water use period or soil re-excavation interval is expected to increase by 50% of existed birkas. In Adadle, the total populations that can possible use water from the 2 rehabilitated and 2 newly constructed birkas for 3-month period after the rains ended at a rate of 15 liters per person per day is roughly estimated at 17,778 and 26,667 persons respectively. The total population of the Adadle woreda is estimated at 89,000 persons (CSA, 2006). Therefore, the four Birkas are expected to serve source of water for around 49.9% of the population of the woreda.

Shallow well: – the benefit of the rehabilitation work relates more to improved water quality and the reduced queuing time and labor required for driving water out of the wells given the community’s information that the shallow well water is, and has always been used a year round. The public health impact of the shallow wells rehabilitation achievement relates to drainage system that help reducing risk of malaria disease outbreak particularly due to the vector mosquito denied favorable condition. It might also reduce common cold and other hygiene and sanitation problem.

The household data also indicated that on average:

- Around 72.5% of the study households were able to collect water from the shallow wells within 18 minutes in a single trip and the remaining 27.5% of the study households said to have spent slightly more than 20 minutes.

- The daily household water use varied among respondents with around 40%, 33% and 27% of the 52 total respondents using the shallow well water at a rate of 8.5 liters, 10.1 liters and 15.5 liters per day per person respectively.
- Almost all respondents (50 out of 52) confirmed that the shallow wells are very reliable in serving as source of water during both long and short dry seasons.
- In around 84.6% (44/52) of the respondents, the shallow well water is used for livestock, too.

Based on the amount of water collected per day per family by the 52 households (8 men and 44 women) participated in this assessment that have been using water from the two shallow wells rehabilitated at the Adadle woreda town has been used at a rate of 83 liter per household per day on average. From the family data collected from the same respondents, the amount of water utilized per person per day was calculated at 11 liters on average.

Although the shallow well water is used for free, the 11 liters average current water consumption rate is less than the estimate average water use for drinking, cooking and personal hygiene in any household which is estimated at a minimum of 15 liters per person per day, and this implies that the community has been utilizing this scarce resource efficiently. The 4 liters overall water use shortfall above indicated is consistent with the Somali people's habit of effectively utilizing this resource, for example, five liters of water is very sufficient for an adult person to take shower at a time. The project installed livestock water trough the most needed facility, but missing before the rehabilitation, see photos below.



(Left) traditional water trough, (right) project installed water trough, both in Adadle

5.3.2 Water treatment, hygiene and sanitation promotion

The project distributed bishangari both to the birka and shallow well water user groups. Accordingly, around 94.2% (49/52) of total participants in the household interview confirmed to have collected the chemical twice at monthly interval. Reportedly, around 59.2% of the 49 respondents that collected the bishangari distributed by SC UK last in October 2011 had this water purification chemical at time of this evaluation in June 2012.

Concerning the overall hygiene and sanitation practices, the household interview results showed that on average:

- 98% (51/52) of the study households confirmed that the whole family members have been using soap for hand washing after using toilet facility and before eating food.
- 31% (16/52) of them owned private toilet facility said to have established since the project hygiene promotion program.
- With regard to disposal of solid waste materials respectively, 23.1%, 63.5% and 21.2% of the 52 study households said to have buried, burned and thrown into open field.
- 75%, 27% of the respondents' mentioned volunteers and, project campaign and training as source of knowledge on hygiene and sanitation practices respectively.

These findings show significant positive correlation between use of volunteers as sources of knowledge, and KAP on hygiene and sanitation practices.

5.3.3 Sustainability of WASH interventions

The project has been working together both with existed and newly established water management committees that include caretakers. In all locations where water sources were either rehabilitated or newly constructed, project support to the water management committees included training on water source management, water hygiene and sanitation methods. The trained water caretakers were also equipped with the necessary tools. The water management committees are responsible for supervising the water points and maintaining hygiene.

In Harsog, the project supported an existing birka water management committee composed of 2 women and 5 men including the caretaker. Members of the birka water management committee are and have always been responsible for selling water upon schedule mostly early in the morning and late in the afternoon. The committee members work on a shift basis. The birka water is sold at a rate of 50 cents per 20 liters throughout. The Harsog birka water management committee has raised 10,000 ETB saved to bank account in Gode from sale of water until the first week of June 2012.

The Harsog birka water management committee's achievement has been to keep the vicinity very clean, as well as serving their community in selling water and properly saving the income was considered as its strength by the FGD participants. The weakness of the committee members was explained in terms of its failure to properly supervise the birka and take action against miss-users in addition to the practice of selling extra water indicated earlier. However, it was clearly underlined by the FGD participants that the crack maintained by SC UK was too large for the community to finance the repair. The quality of the initial birka construction work was said too poor.

In Adadle woreda town, the project facilitated the establishment of shallow wells water management committee consisted of 3 women and 4 men including caretakers. As the shallow wells water is free for all user groups including incomer pastoralists, the role of the water management committee is limited to ensuring the safety of the water points

and maintaining hygiene and sanitation of the environment. Although acknowledged the committee members role of maintaining hygiene and sanitation of the water points, focus group discussion participants also blamed them of not regularly supervising the system and taking action against some irresponsible community members who miss-use the shallow wells.

As the ultimate responsibility for management of the water point lies with all members of the beneficiary population, all users should work to ensuring that the water points are operational. This can be achieved more through promotional activities, mass education and facilitation of behavioral change than transfer of the whole management responsibility to the water supply committees, which may overburden them.

In the Adadale woreda town where the community refused roofing and controlling the shallow wells and paying for the water, it is essential that the woreda government saves sufficient resources required for rehabilitating the water points as required to ensure sustainable use of the precious resource. Concerning the high risk of the shallow well water being contaminated, the SC UK Gode office needs to mobilize the woreda administration and water offices and the water management committee both to fence the site and keep adequate and appropriate containers to be used for deriving water out of the shallow wells permanently in place.

No bulk spilling of water is observed to re-infiltrate in the vicinity of the water points visited by evaluation team. The discharge water is carried away by means of drainage canal towards a reservoir. However, the evaluation team perceived that high risk of shallow wells water being contaminated due to two reasons: individual user's practice of directly throwing own container into the water well without being washed and the fact the shallow wells lack fence. Concerning the shallow well users, aqua tab could be the more appropriate chemical particularly due to its stronger germicidal effects compared to that of bishangari.

The evaluation confirms that the community did not have problem with using the beshangari chemical. As bishangari is more popular for its effect of removing turbidity than killing germs, perhaps it could be due to the relatively clean water used from shallow wells by some evaluation participants that said not to have fully utilized beshangari chemical distributed to them during the 2011 drought.

Overall, the beneficiaries were very satisfied with the birka and shallow wells rehabilitation work done by the SC UK. The work is said to help reduce the workload on women collecting water for domestic ; reduced queuing time, and also helps to bulk spilling of water that used to re-infiltrate in the vicinity of the water sources.

The only complaint reported from the field evaluation was the extra water to the agreed on household daily quota said to have sold to some customers by the birka water management committee members. This community's complaint shows that the 4 liters

average shortfalls per person per day water consumption noted for the shallow wells is not a priority concern as of now. The authors highly appreciated the communities' effort of conserving this scarce resource through cutting their daily water consumption below the minimum standard. We do also believe that water for livestock especially suckling animals is more important concern than the 4 liters shortfalls indicated earlier, as long as water is insufficient both for people and their animals.

Finally, it is very essential that the woreda administration and water offices should take the whole responsibility of managing the shallow wells rehabilitated by the SC UK, and also, constructing additional water points depending on the water demand of the woreda town population. We suggest that the project investment on water sources belonging to woreda towns should consider the availability of the water facility to pastoralists too. In another word, the municipalities and the woreda administration should take the responsibility of rehabilitating water points located in urban areas that are not accessible to the community.

5.4 Benefits derived from livelihood interventions

5.4.1 Preference to emergency interventions for livestock

Whereas SC UK implemented five interventions viz. slaughter de-stocking, livestock feed supplementation and fuel and seed for fodder production in Gode zone in response to the 2011 drought, Table 9 summarizes the pair-wise ranking results. The community's preference to different intervention was based on a pair-wise ranking exercise facilitated with 31 individuals that compared the five livestock emergency interventions introduced to them by the facilitator.

Overall, the livestock treatment and vaccination that coincided with the onset both of the 2011 'Deyr' and 2012 'Gu' season rains stood first and second respectively, being followed by fuel and seed for feed production. Livestock feed supplementation and slaughter de-stocking took the 4th and 5th positions. However, the preference ranking result does not necessarily reflect the relative importance of the actual benefits derived from the SC UK livestock intervention implemented in response to the 2011 drought, rather the potential impact of those interventions.

It is not surprising that the livestock feed supplementation which is the most needed input at times of drought situation ranked 4th, given the fact that fodder production requires irrigable land while the feed supplementation is limited to few animals per herd. Concerning the slaughter de-stocking that stood last, it has long been recognized that pastoralists are, have always been unable to decide livestock de-stocking on time means they want to stick to their animals. Accordingly, only six votes were directed to the slaughter de-stocking emergency response particularly against vaccination and fuel and seed supply (FSFP), three against each.

Table 9: Livestock emergency interventions preference pair-wise ranking result

Variable	Vaccination	Treatment	SD	FS	FSFP	Total score	Rank
Treatment	17	=	31	19	18	85	1 st
Vaccination	=	14	28	21	16	79	2 nd
FSFP	15	12	28	20	=	75	3 rd
FS	10	12	31	=	11	64	4 th
SD	3	0	=	0	3	6	5 th

SD: slaughter de-stocking, LFS: Feed supplementation, FSF: fuel and seed for fodder production

5.4.2 Role of veterinary campaigns

The role of the SC UK livestock treatment intervention was based on proportional piling scorings conducted by 39 individual informants, and using disease-affected animals' recovery period and survival rate, milk and meat production particularly due to disease factor, and also, investment on animal drugs that would have been purchased by owners of disease-affected animals.

In this evaluation, livestock mortality, milk production, body weight and animal health care limited expenditure that would have been resulted from animal disease problem in the absence of the SC UK veterinary campaign was represented by 10 objects for each indicator. Taking each indicator in turn, the individual informants were asked to estimate loss prevented due to the treatment intervention by considering animals treated for disease problem through reducing the 10 objects assigned to each of the indicators by certain number.

Table 10 represents the proportion of losses prevented as a result of the SC UK treatment campaign. The number of animals treated per herd under the 31 cattle herds and 23 small ruminants flocks belonged to the 39 study participant households was calculated at 5 cattle and 7 small ruminants on average.

The overall impacts of the SC UK treatment intervention included reduced mortality, reduced case recovery period, increased milk production, improved body condition and reduced household livestock treatment limited expenditure was calculated at around 62% on average (see Table 10). As only one household reported to have used the SC UK treatment service for 4 camels, the impact of veterinary intervention described here in discussion refers mainly to cattle and small ruminants.

In the calculations the reduced mortality and production losses including household expenditures on animal drugs were derived from a comparison of disease impact on animals benefited from the SC UK treatment intervention and animals not covered by the treatment campaign in which the overall economic loss due to animal disease problem was represented by 50 objects (5 indicators x 10).

Table 10: Analysis of disease impact with and without treatment campaign

Group	Loss
<u>Disease-affected animals not benefited from the SC UK intervention</u>	
The overall disease impact = (5 indicators x 10 objects assigned to each indicator)	50
<u>Disease-affected animals benefited from the SC UK intervention</u>	
The overall disease impact = (5 indicators x 3.8 average number of objects assigned to each indicator)	19
Total number of objects represented the overall losses prevented with the treatment campaign = {(5 indicators × 10 objects) – (5 indicators × 3.8 objects)}	31
Proportion of overall losses prevented with the treatment campaign = {(31 objects represented losses in intervention animals ÷ 50 objects represented losses in non-intervention animals) × (100)}	62%

From table 5, the total populations vaccinated in two rounds stood at 321% of the initial plan, being a total of 467,192 cattle and small ruminant heads. Although the total livestock population vaccinated increased to 312% of the initial plan from 150,000 to 482,090 animal heads due to vaccines used from government for free, this project achievement also implies that at least the initial target was much below the minimum standard for the population that should be immunized. Given the number of vaccines administered, the authors doubted that the vaccine intervention that inoculated a total of 467,192 cattle and small ruminants in two rounds was standard particularly in terms of the population immunized against each of the contagious diseases targeted such as CBPP and pox. Depending on the objective of the immunization program, it is essential that around 80% of disease susceptible populations are inoculated. Table 11 summarizes the number of animals treated and/or vaccinated under the herds belonged to households participated in the individual interview.

Table 11: Animals benefited from veterinary campaign in herds owned by respondents

Species	Vaccinated	Treated	Outbreak-affected herds	No. of herds
Cattle	230	163	12	31
SR	181	157	4	23
Camel	2	4	0	1

5.4.3 Quality of drugs used for the veterinary campaigns

Livestock treatment service was limited to sick animals encountered by campaign implementers. Generally, treatments provided to cases diagnosed by CAHWs and government animal health technicians and assistants who have been working in the area are expected to be effective.

The quality of the drugs applied for the campaign: long acting oxytetracycline, penicilline streptomycin, ivermectin, albendazone 2500 mg and albendazole 300 mg, acaricide, veridum and wound spray was highly acknowledged. However, almost all communities covered by this evaluation said that the implementation period of campaigns targeted to settlement sites was too short that the pilot herds were addressed.



Animals on being treated

The multiplier effects of drugs, like Ivermectin and veridum, to which much of the milk production increment and body condition improved campaign achievements were credited is expected to be high. However, it is not clear why the long acting oxy-tetracycline (OxyTTC) and Penicillin-Streptomycin (penstrip) antibiotics were applied side by side. The use of long acting OXYTTC has an advantage of reducing the three consecutive injections required with the use of Penstrip to a single injection besides having much broader actions than Penstrip.

Finally, the evaluation team was concerned about the possibility of ivermectin being administered in combination with either anthelmintic bolus or acaricide sprays against internal and external parasites on same animals. If so; it was just waste of the scarce resource. Technically, ivermectin is a drug of choice due to both strong efficacy and longer prophylactic effect against internal and external parasites both compared to anthelmintic and acaricide drugs commonly available in the markets. We also doubt that cases treated with the short acting antibiotic penstrip received the three consecutive injection widely recommended on daily basis during the campaign.

With regard to the vaccine intervention, the authors recognize that the timing of the vaccination program was very appropriate. In the first round, cattle and small ruminants were vaccinated at least against CBPP and black leg, and sheep and goat pox respectively. Additional vaccines considered in the second round vaccination program included such as and anthrax for cattle and pasteurellosis/hemorrhagic septicemia both for cattle and small ruminants.

5.4.4 CAWH service

The evaluation also looked at sources of animal health care utilized by the study households during and after the project intervention period through proportional piling method, and using 30 counters. Table 12 summarizes the scoring result that showed around 33.3%, 20% and 16.7% of the service utilized during the SC UK treatment intervention period was sourced from the private veterinary drug shops, project campaign and government respectively.

In line with the additional 70% of the animal health utilized during the intervention period, around 38.7% (14/31) and 17.4% (4/23) of the total respondents that used the

SC UK treatment service for cattle and small ruminants said the diseases to have occurred in outbreak form. These findings are good indication of the high demand existed for the SC UK livestock treatment intervention. In the post-treatment campaigns, the contribution of the CAHW and government sources increased from nil and 20% to around 16.7% and 36.7% respectively, being 16.7% increment each. This finding implies that the SC UK intervention has, some how, improved the delivery of the CAHW and government animal health care. The CAHW service is attributed to booster training and kit provided to them by the SC UK.

Table 12: Local source of animal health care during and after the SC UK campaign

Source	During SC UK campaign		After SC UK campaign	
	Score	Proportion	Score	Proportion
CAHW	0	0	5	16.7
Government	6	20	11	36.7
Private drug shop	10	33.3	7	23.3
Ordinary Shop	5	16.7	2	6.7
SC UK campaign	9	30	5	16.7
Total	30	100	30	100

Note- CAHWs did not have veterinary stock prior to the booster stock supplied by SC UK.

5.4.5 Future reinforcement of veterinary intervention in drought

Table 13 describes some of the limitations of the treatment and vaccination campaign for livestock identified by stakeholders, how these limitations affected the program and suggestions for improvements or better options for future interventions, which are based on comments by the beneficiaries, CAHWs and consultant.

Table 13: Local stakeholders and consultants' review of veterinary campaign

Limitations identified/suggestions
<ul style="list-style-type: none"> The campaign was limited to settlement site and this meant that migrated populations is not a priority target despite such veterinary interventions are often justified in terms of diseases transmitting between herds from different places Technically, the purpose of intervening treatment campaign is to help the drought-affected pastoralists access free drugs, but the campaign-based approach does not cover the whole drought period The risk of diseases transmitting between animals brought for treatment is expected to increase with the campaign system In sufficient number of CAHWs and animal health technicians involved into the implementation of the treatment campaign had forced herds to long queue The veterinary stock was insufficient that some pastoralists were forced to return animals brought to campaign center without being treated or vaccinated
<p>The suggested options are as follows:</p> <ul style="list-style-type: none"> Adopt treatment voucher-based system instead of campaign as the former approach enables addressing all deserving animals regardless of their location It also maximizes the impact of emergency treatment programs through increasing the intervention period from days to months We also realize that the implementation of voucher-based approach requires use of

CAHW system linked to private or government veterinary sector depending on local conditions

- In all project woredas, there are functional private drug shops that have also been involved in the delivery of animal health care during the drought
- However, there are no reliable CAHW systems that SC UK may be need to revitalize the previously established CAHW systems through screening CAHWs with a view to considering standard veterinary kits for the best appropriate candidates and training additional ones, as required
- Keeping animal drugs with CAHWs was preferred to campaign-based approach
- Although the role of CAHWs operating in project woredas in implementing the treat campaign needs to be acknowledged and recognized, they were mainly prepared to implement campaigns to the exclusion of cost recovery-based services they were supposed to provide to their community
- The CAHWs did not have any veterinary stock prior to the stock received from SC UK, therefore, the treatment voucher approach may not work if ways are not found to screen the existing CAHWs and arrange veterinary drug kit to the deserving candidates.

6. Brief discussion and conclusion

The Emergency Drought Response project implemented by SC UK in Gode aimed to improve the humanitarian situation and the coping capacities of population vulnerable to recurrent droughts in the Greater Horn of Africa. As such, the project aimed to assist communities coping with drought shocks inline with the priorities of Hyogo Framework for Action 2005-2015 and the Africa Regional Strategy for Disaster Risk reduction 2006-2015.

The evaluation documented some apparent achievements related to the CMDRR program objectives. Achievements include the support provided to the fodder producers cooperatives who also cultivated maize that helped them producing Sudan grass both for own livestock consumption and income from sale of seed and green feed. Other achievements included the CAHW systems that revitalized the community-based animal health care and which are delivered by local people from within the community. The hygiene and sanitation program undertaken through trained volunteers and the training and material supports provided to water management committees are typical of the CMDRR program approach. The rehabilitation of existed birkas and shallow wells through community participation is all about supporting the community to effectively utilize own water sources.

In both Adadle and Kelafo woredas, sites for new birkas were selected based on distance travelled to the existed water sources by women and children for collecting water; queuing time at water point as proxy indicator for low capacity of the water source and relative prevalence of conflicts resulted over water source between neighboring communities. The number of drought destitute households hosting the settlement was also considered along with the other criteria. The rehabilitation of

shallow wells is done in areas where water wells are performing under particularly due to problems that could be solved with reasonable investment cost. The rehabilitated shallow wells did lack either drainage system or require sand excavation and/or installation of animal watering trough facility or both.

The birka rehabilitation activity targeted to kebeles with chronic water shortage problem has improved water availability in the target kebeles, if not in the whole of the Adadle woreda. The rehabilitation of the two shallow wells belonged to the Adadle woreda town improved the quality of the water mainly due to drainage systems that avoided bulk spilling of water used to re-infiltrate in the wells while simplifying the very demanding task of manually driving water out of the wells.

Although the SC UK WASH expert's concern that the birka water would not go beyond the long dry season is recognized, as is the fact that water in the shallow wells is consumed at a rate of around 11 liters per day per person. However, we do insist that these shortfalls need to be applied only for positive decisions for expanding the project interventions, and also, considering water trucking right at the onset of a drought water situation as a short term solution.

The hygiene promotion kit distribution has covered all the areas of intervention. Although the awareness creation activity is carried out in all kebeles, kits are limited to kebeles/sites where there was comparatively high prevalence of acute watery diarrhea and other water related health problem mostly where people use pond and/or river water for drink during the 2011 drought. In each area, priority is given to poor families with under 5 year old children and that lost their livestock asset to drought. Within the target family, particular attention has been directed to disabled and chronically sick people, pregnant women and mothers with breast-feeding child.

Water Jerri-cans and bishangari targeted poor families consisting of ≤ 5 year old, children, disabled and chronically sick people, pregnant women and mothers with breast-feeding child. Water treatment chemicals were distributed for two consecutive months from October 2011. Following the water treatment chemical supply interruption in early December 2011, the Harsog kebele communities have started boiling drink water used for young children since the hygiene promotion of the SC UK project. The Harsog community has been using water from the birka rehabilitated by the SC UK. These are good indication of the appropriateness of the selection criteria and the project targeting efficiency.

Overall, we found the selection criteria applied for all WASH interventions was the most appropriate for the area and suggest these criteria be maintained in future interventions. Collectively, the WASH interventions have some multiplier impacts of influencing project participants to start boiling drink water for children and constructing private toilet facility among others. Concerning livelihood-based interventions, we strongly believe that the provision of fuel and fodder seed is a very innovative approach

toward fodder production promotion. The revitalization of the CAHW system is another project achievement with long-term benefit for the community.

As clearly pointed out under the recommendation section, we do recognize that SC UK tried to create a mechanism through which project managers and coordinators received feedback on project implementation process with a view to building the beneficiaries confidence in expressing their dissatisfactions and complaints related to external assistances directed to them. This was conducted through short trainings for community representatives consisted of men, women, and children and in the presence of experts responsible for the implementation of the project. This is outside the traditional practice of aid agencies measuring the drought-affected people's level of stratification with their assistance to them mostly based on the local government bodies' opinions. We acknowledge that the SC UK organization for initiating the community-based problem reporting and monitoring practice in the area regardless of the timing and source funding used for the initiative. Furthermore, we do not see any strong reason for the evaluation project not utilizing such an innovative resource and efficiency control mechanism for the evaluation project.

Finally, the Gode Drought Emergency Response project was designed to complement each sector with the other sector by linking the two project objectives. As such, the project strategy aimed to demonstrate how a relief to development approach can be applied and can enhance the effectiveness of humanitarian assistance interventions. The overall direct beneficiaries are 55,747 households according to the project information.

Concerning the exit plan, the 'Gu' season started in mid April 2012 and the SC UK emergency drought response was closed on 31st May 2012. Although the rainfall intensity was not uniform across the Gode zone, the 'Gu' season rains helped the community solving water shortage problem in all woredas. In April 2012, majority of districts under the Gode zone have received medium to good rains over several days, except Mustahil where the rain was limited to one day. The timing of the project exit was very appropriate whether it was a coincidence or intentional.

6.1 Implications of some evaluation findings

- The use of volunteers, which appeared to be the most effective way of promoting hygiene and sanitation.
- The risk of shallow well water being contaminated is still high, and may be aqua tab is the better treatment to reduce such risk of water contamination especially post-harvest and fencing the shallow wells is necessary provided that the community and/or woreda administration and water offices are ready to cover maintenance cost given the water is free.

- The shallow wells used at a rate of 11 liters per day per person, does not tell anything less or more than the fact the community has been utilizing this scarce resource efficiently.
- The Birkas can not serve source of water for more than a maximum of 3 months period and it is less likely that they serve water during drought period, and also, drought destitute households may not afford the current water price even if the birka water last longer. Therefore, aid agencies and/or concerned government bodies may need to consider water trucking earlier at the onset of drought, and water voucher for poor household and disabled persons during the normal dry season who may not afford to pay for the birka water.
- During the rainy months/days water is used from unprotected sources to which children are expected to have free access that it is essential children are aware of health risks associated with use of such water. This requires strong awareness campaign directly targeted to children both at school and home.
- In Adadle, water shortage is always a critical problem, therefore, rehabilitating and constructing more birkas is essential to ensure water security of the community. As part of that, the water committees should be prepared to reinvest income from sale of water on the existed and new water points, instead of saving into bank account.
- Concerning external assistance, the water source construction and rehabilitation activities need to be considered as development interventions to be done at normal time.

Although the project intention of sourcing inputs from local source is highly appreciated, the teff-straw considered for milking and pregnant cows from Gode areas, some how, questions the efficiency and effectiveness of the planning process. The project was supposed to decide the type and source of feed based on the objective of the supplementary feeding intervention and availability of this input in the local market.

Generally, teff-straw is not a feed of priority choice for milking animals provided that maintaining milk production, thus; there also appears that the 4,500 animals targeted were too many for concentrate or green feeds based feed supplementation program. In Overall, as starvation-factored mortality is expected to increase with interruption of supplementary feeding program, the project was supposed to assess the capacity of the local sources and then either consider distant located sources or reduce the population, if not totally excluding the particular intervention.

As in the Sphere project, hygiene promotion is the mix between the population's knowledge, practice and resources and agency knowledge and resources, which together enable risky hygiene behaviours to be avoided. The three key factors are a mutual sharing of information and knowledge, the mobilization of communities and the provision of essential materials and facilities.

Community mobilization is especially pertinent during disasters to encourage people to take action to protect their health and make good use of facilities and services provided to them. Therefore, the use of volunteers for conducting mass education seems to be a better option to reach many more pastoralists and agro-pastoralists as well as avoiding per-diem paid to training participants.

With regard to livelihood intervention, the most important long-term impact of the livelihood-based interventions relates to fodder production initiated in the four-project intervention woredas by 116 cooperatives consisted of 10 persons/households each. The long-term impact of the livelihood component also relates to booster training and stock directed to CAHW that revitalized the CAHW system.

6.2 Cross cutting issues

- All vulnerable groups – the need to prioritize women, children, older people, and persons with disabilities or people living with HIV with emergency assistances such as water was given particular attention in the project trainings and awareness campaigns.
- Children – interestingly, children participants said to have suggested that children have participated in the whole project cycle, from planning to monitoring and evaluation. They also asked the project to see the possibility of constructing latrine and Birkas at schools, as well as assisting orphan school children with books and pens. The participation of children in the training attended by a total of 193 persons (100 children and 93 adults) selected from 4 and 3 intervention kebeles under the Adadle and Kelafo woredas makes it particular.
- Gender and wealth – like in any emergency programs designed for drought-affected communities, women and men are expected to equally benefit from the WASH and livelihood emergency response project of SC UK. The design and implementation of the project are based on due knowledge of the culture, vulnerabilities and drought-coping activities managed by Somali women and men. For instance, within a given kebele sites for water source development was selected based on population density of the area in general and that of drought affected destitute households who do not own camel and donkey for collecting water and distance travelled by women and children to water points, as well as prevalence of conflicts resulting over water sources between user households and communities. In terms of empowerment, on average, women accounted for around 36% of the water management committees in the birkas and shallow wells covered by this evaluation.
- Livelihood system – The authors believe that targeting women with irrigation activities, which is new to pastoralist communities, may increase job burden on them and the project did not do so.

- Villagisation and Environmental issues – Gode zone is one of the pastoralist areas where pump-based irrigated crop farming is on being promoted by the regional and federal governments of Ethiopia as well some NGO and UN organizations. Whereas many of the pump-based irrigation system initiated in pastoral area were not successful, combined together with the government settlement programs they are, some how, increasing pastoralists’ vulnerability to both flood and drought problems through reducing the effectiveness of the traditional coping mechanisms. In this regard, the WASH interventions are expected to help the already settled communities reducing risk of malaria and other diseases associated to poor water hygiene and sanitation problems. Similarly, the fodder seeds used from the project supported cooperatives by the government for pastoralists forced to irrigation-based crop farming may help the pastoralists retaining their animals with the feed they will produce, as long as they remain in the new livelihood system.
- Do no Harm (DNH) - Overall, the project did not do any harm to the traditional livelihood of culture the communities, their natural resources and social relationships.

6.3 Challenges

6.3.1 Climatic

There has been a succession of poor or failed rain seasons in the Gode zone since 2008. During the 2011, there has been almost complete failure of the gu season rains. The poor performance of the rain is expected to increase vulnerability of the communities and to, some how, reduce the long-term impact of both WASH and livelihood-based interventions implemented by SC UK. Poor households with low capacity to construct private toilet facility partly due to the rocky nature of the soil of Adadle area, as well as their limited financial capacity to purchase water treatment chemicals are also expected to, some how, undermine changes resulted in the area of project participants KAP.

6.3.2 Ecological

Water shortage during drought, wild animals, pests and rodents competing for the fodder and maize, and high price of fuel and water pump spare parts are some of the factors to be considered as threat existing to profitability of fodder production-based income generating schemes. The remoteness of the Gode zone and absence of inputs required for emergency responses locally, as well as the security problem often restricting free movements will remain key challenge in emergency programs in both increasing costs and reducing efficiency. From the color of the floodwater, soil erosion and sedimentation is the most serious threat existing for the sustainability of the birkas and this concern suggests feasibility study of watershed conservation strategies and management to reduce the rate of sedimentation.

6.3.3 Funding conditions

Funding challenges may prevent the project from being both innovative and responsive to changing conditions especially in the area of development oriented interventions. Symptomatic of this was the budget constraints forced the evaluation project reducing the number of new water source construction plan by two birkas. This project being the major Emergency Drought Response project focusing on livelihoods and WASH implemented in the area could not cover all needs.

6.3.4 Poor Communication facilities

The communication facilities in Gode are very poor. No Internet connection and effective telephone service that has always been having great effect on smooth communication between the field office and JigJiga and Addis-Ababa Offices.

6.3.5 Low capacity of government animal health service

There has been shortage of animal health professionals required for implementing the veterinary campaign especially veterinarians and animal health assistants. This problem is more apparent in the Mustahil, Kelafo and Adadle woredas than in Gode.

6.4 Opportunity

The government has already started promoting fodder production and supporting fodder producers cooperative such as with the supply of heavily subsidized water pumps and this will enable the SC UK to further expand fodder production as part of income generating schemes. CAHW systems and birkas established by other agencies that already helped reducing intervention costs are also an asset to the community and the SC UK's future intervention.

Other opportunities include the Perennial River passes through the Gode and Kelafo, as well as Adadle districts that allow to have irrigated fodder production. The existence of Research institute and Gode ATV College that can provide technical support to project participants such as fodder producer cooperatives is an additional asset.

The trained fodder producing cooperatives and CAHWs can be contracted to supply feed and implement veterinary treatment vouchers in future droughts with technical support of the government experts who were also trained. The suggested contracts do require SC UK to link the CAHWs to private input suppliers, and also, introducing the fodder producers to other aid agencies involved in livestock emergency programs in the area with a view of informing them to plan on this local resource while promoting such initiatives.

Concerning the capacity and role of local fodder producers in supplying feed input required for emergency supplementary feeding programs, aid agencies can sensitize cooperatives and individuals including individual with irrigable plots to start producing feed and a period of around 45-50 days is enough to grow Maize Stover and Sudan

Grass. Agencies can further meditative the SC UK supported and other cooperatives through signing feed supply agreement with them.

7. Recommendations for similar future programs

The report on the government monitoring, conducted in Adadle woreda in November 2011, recommended that the project should support the Harsog community rehabilitating the remaining 3 birkas, continue distributing water treatment chemicals and supporting cooperatives involved into fodder production. It also emphasized the need for constructing new water points, in order to improve the chronic water shortage problem existing in the Adadle woreda. While endorsing these recommendation points, this evaluation advice the SC UK for future similar response to:

- Consider a pilot water-voucher program for poor households and disabled persons.
- Continue promoting local fodder production schemes and supporting CAHW systems.
- Promote the practice of involving school children into emergency and development programs planning and monitoring process especially in the area of school WASH programs and other hygiene and sanitation promotion practices.
- During the rainy months/days, water is used from unprotected sources to which children are expected to have free access. Therefore, it is essential that children are fully aware of health risks associated with use of such water and changed their behaviours.
- Identify and support reliable sources of water treatment chemicals in each intervention woreda while promoting the more cost effective practices such as boiling drink water.
- Encourage the water management committees reinvesting income generated from sale of birka water on the existed and new birkas.
- In principle, the responsibility of managing the shallow wells is of the kebele structure that is supposed to raise revenue from this resource like in any other urban areas. Therefore, any response on water sector should support local structures to have sufficient capacity to manage these resources.
- Given that the shallow wells water is free of charge, the woreda water and administration offices and the Adadle kebele should be allocating budget for subsequent rehabilitation of the water point and installation of fence, as well as the necessary water treatment chemicals.
- Rehabilitating and constructing more birkas is essential to ensure water security of areas like Adadle and the committees should reinvest income to be generated from sale of water on the existed and new water points.
- Generally, the water source construction and rehabilitation activities need to be considered as development interventions to be conducted at normal time, too.
- Fencing the water points is essential to ensure the safe use of the water points through avoiding risk of contamination. Concerning the shallow wells, the wells

- lack of roofing further increases risk of the water being contaminated by wild animals including birds may be dying into it in addition to potential risk of children falling into the wells.
- Concerning livelihood-based interventions, SC UK should determine a program design for a subsequent phase, which is strategic with respect to livelihood initiative based upon the experience of the current project. Priority intervention and implementation approach should be developed through consultation with the primary beneficiaries at the community levels.
 - Promote joint planning approach with government and non-government organization to avoid procurement of inputs available in the local market.
 - Flexible resources allocation is an important factor of addressing the needs of the community. Continue redirecting scarce resources to where they can have maximum impacts according to the realities on the ground.
 - Consider slaughter de-stocking at the early stage of the drought through paying good prices to be fixed depending on local market prices for the animals to be slaughtered so that the income would be invested on the family and majority of the herd elements, and this assume that supports provided to feed producers' cooperative will improve pastoralists' access to trade feeds.
 - Working and coordinating with other stakeholders and actors can increase the effectiveness of the response and achievement. The SC UK must also recognize, complement and join forces with other organizations initiatives focusing on drought vulnerability reduction and livelihoods issues affecting pastoralist and agro-pastoralist populations in the area. For example, the very capable private veterinary pharmacy operating in Gode town needs to be highly recognized.

Finally, the existence of strong CAHW system is key to ensure a sustainable impact of emergency animal health drought response. In this evaluation, keeping animal drugs with CAHWs was preferred to campaign-based approach by the communities. We understand that SC UK has long standing experience in implementing treatment voucher-based livestock treatment program and suggest that SC needs to promote the voucher system instead of campaign as the former approach enables addressing all deserving animals regardless of their location. This also maximizes the impact of emergency treatment programs through increasing the intervention period from days to months. We also realize that the implementation of voucher-based approach requires use of functional CAHW system that is linked to private or government veterinary services depending on local conditions. Although the role of CAHWs operating in project woredas in implementing the treatment campaign needs to be acknowledged and recognized, they were mainly prepared to implement SC UK campaigns to the exclusion of cost recovery-based services they were supposed to provide to their community prior to the project intervention. Finally, the pox vaccine-induced small ruminant mortality reported by some evaluation participants in the Adadle area needs further investigation.

Overall, the project succeeded in delivering all-important interventions as per the initial plan and the impacts are very apparent. SC UK and its donor's practice of redirecting

resources meant for slaughter de-stocking to animal health care following the onset of post-drought rains is a promising trend which needs to be further promoted.

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Annex: Budget items and amount

Budget item	Budget amount (EURO)		Total utilized (EURO)			Variance (EURO)
	Original	Revised	01/6/ 11 - 31/1/12	01/2/12 - 31/5/12	01/6/ 11 - 31/5/12	
Personnel Cost (International)	44,700	44,700	34,185	9,081	43,266	1,434 (96.8%)
Personnel Cost (National)	214,099	212,601	105,096	123,528	228,624	-16,023 (107.5%)
Training	11,087	30,587	4,132	25,618	29,750	836.49 (97.3%)
Transport, Flight and Storage cost	186,875	186,875	76,921	103,808	180,729	6,146 (96.7%)
Direct costs*	371,849	353,849	277,500	59,543	337,043	16,806 (95.3%)
Monitoring and evaluation cost	37,010	37,010	24,346	16,205	40,551	- 3,540 (109.6%)
Visibility cost	2,000	2,000	2,109	0	2,109	-109 (105.5%)
Support service	46,770	46,770	32,941	14,398	47,339	-568 (101.2%)
Equipment	20,189	20,187	20,053	-1,034	19,019	1,168 (94.2%)
<i>Sub total direct costs**</i>	<i>934,579</i>	<i>934,579</i>	<i>577,283</i>	<i>351,147</i>	<i>928,430</i>	<i>6,150 (99.3%)</i>
Indirect costs (max.7%)	65,421	65,421	40,410	24,580	64,990	430 (99.3%)
Grand total	1,000,000	1,000,000	617,693	375,727	993,420	6,580 (99.3%)

*Direct cost of Activities, supplies and equipment deliveries

** Subtotal direct eligible = Sum of total amount for all results (820,073) + other costs (108,305) = 928,379 Subtotal direct eligible = Sum of total amount for all results (820,073) + other costs (108,305) = 928,379.