



Emergency Operations and Rehabilitation Division

GEORGIA



“Emergency supply of animal feed to conflict-affected small-scale farming households and support to the agriculture sector and Food Security Cluster coordination”

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FINAL REPORT

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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ABBREVIATIONS and ACRONYMS

CARE	CARE International in the Caucasus
CNFA	Citizens Network for Foreign Affairs
ERCU	Emergency Rehabilitation and Coordination Unit
FAO	Food and Agriculture Organization of the United Nations
ICRC	International Committee of Red Cross
IOCC	International Orthodox Christian Charities
IPM	Institute of Polling and Marketing
MoA	Ministry of Agriculture
NGO	Non-governmental organization
OSCE	Organization for Security and Cooperation in Europe
SC	Save the Children
UN	United Nations
UNIFEM	United Nations Development Fund for Women
USAID	United States Agency for International Development
WFP	World Food Programme
WV	World Vision International

EXECUTIVE SUMMARY

The majority of families affected by the armed conflict in Georgia in August 2008 depended on agriculture for their livelihoods. Farming households suffered significant losses resulting from displacement, looting and destruction. This period coincided with the summer harvest, which led to many farming families having lost nearly all of their summer crops. The conflict also caused a severe reduction in the availability and quality of livestock feed when animals were at their peak of production and heavily dependent on grazing and pasture. Because of their debilitated state, livestock became at heightened risk of animal diseases.

In response, the Government of the United States of America contributed USD 5.5 million to the Food and Agriculture Organization of the United Nations (FAO) through the United States Agency for International Development. The funds enabled the implementation of FAO project OSRO/GEO/802/USA, entitled “Emergency supply of animal feed to conflict-affected small-scale farming households and support to the agriculture sector and Food Security Cluster coordination”.

The project’s overall objectives were to protect the livelihoods of vulnerable conflict-affected livestock holders and to provide technical assistance and coordination support to ensure that affected populations receive the maximum possible benefit from interventions related to rural household food security. The project was carried out from 15 October 2008 to 15 January 2010, following the approval of a three-month, no-cost extension. This extended timeframe enabled FAO to use the project’s cost-savings to provide additional support to affected families for the 2009/10 winter.

The project provided 4 240 tonnes of concentrate animal feed and two rounds of anti-parasitic treatment for cattle belonging to 18 244 families in 127 villages in Shida Kartli Region. Thanks to the cost-savings achieved during the project and the Donor’s approval of a no-cost extension, an additional 299.4 tonnes of concentrate animal feed was provided for the cattle of 2 994 households in 14 villages (average of 2-3 cattle per household). A further round of anti-parasitic treatment was conducted for 32 047 heads of cattle in 80 villages. Beneficiaries received training on the improved use of concentrate animal feed and available feed resources, as well as on prophylaxis and treatment of endoparasites. The project provided direct support to a total of 21 238 families (77 percent more than originally planned).

Livestock holders also benefited from the construction of 53 water troughs and the rehabilitation of two damaged ones, which significantly improved access to and the availability of water for cattle. Moreover, two chopper machines were distributed to two agricultural associations in Gori District and are being used to provide services to farmers in surrounding villages. Training courses and related material on silage-making and the preparation of homemade animal feed concentrates was provided to 1 975 farmers. The sessions were completed during the peak of the silage production season, providing the opportunity for farmers to replicate the production for the upcoming winter.

The project’s support to the establishment of FAO’s Emergency Rehabilitation and Coordination Unit in Georgia contributed greatly to the outputs and effectiveness of the Food Security Cluster, and ultimately to the assistance provided to farming households most in need. The Cluster meetings provided an open forum to share information and coordinate operations, as well as a mechanism for operational and strategic planning. This forum allowed for technical issues to be raised and resolved.

The information material produced and widely disseminated through the project included maps on project activities, spotlight stories, FAO fact sheets, newsletters, agriculture sector bulletins and a training video on silage-making. A database on ‘who is doing what and where’ was produced covering the agricultural interventions carried out in Georgia. These resources can be accessed at the following link: [ftp://ext-ftp.fao.org/TC/Data/TCE/TCER/Annexes OSRO%20GEO%20802%20USA/](ftp://ext-ftp.fao.org/TC/Data/TCE/TCER/Annexes_OSRO%20GEO%20802%20USA/); as well as in the CD Rom provided with the hard copy of this document.

1. INTRODUCTION

1.1 Project background

Some 53 percent of Georgia's population depends on agriculture-related activities for its livelihood and, for many, as a primary means by which to feed their families. In August 2008, armed conflict between Russian and Georgian forces displaced 127 499 people in Georgia. The majority of affected families relied on the agriculture sector for their livelihoods and suffered significant losses resulting from displacement, looting and destruction. The outbreak of the conflict coincided with the summer harvest, which resulted in many farming families losing almost their entire summer crop as they fled to safety. When compounded with their high debt levels, farmers were without sufficient resources to resume agricultural activities.

Furthermore, the agriculture sector has been suffering chronically from various natural and man-made factors (e.g. frost, trade sanctions, floods, water logging, drought, shortages of agricultural inputs and low prices) and the conflict compounded the existing situation.

Small-scale farmers, who were unable to harvest during summer, were unlikely to succeed in planting their winter crops owing to the time restraints and insecurity caused by the threat of unexploded ordnance. Furthermore, farmers who had managed to harvest part of their crops were unable to sell their produce because of poor quality due to the lack of timely inputs and market disruption. Vital water supply channels originating in South Ossetia had been cut off, disrupting irrigation water supplies and thereby causing losses to the wheat and maize harvests and damage to fruit and vegetable production.

One of the first consequences of the conflict was a reduction in the quality and quantity of livestock feed available when animals were at their peak of production and heavily dependent on grazing and pasture. This directly affected animal productivity, including reduced milk yields and compromised animal growth, with severe impacts on households' food security and income generation. The conflict also resulted in a shortage of alfalfa and grass pasture, as well as a lack of hay and crop residue as a result of disruption to irrigation. In addition, the harvest of hay and cereal residues (including wheat, barley and maize) for winter feed did not take place.

The survival of tens of thousands of heads of cattle over the following winter was threatened due to limited access to water and animal feed. Without substantial support to feed these animals over the winter, mass slaughtering was likely to occur. This would generate additional food or cash for affected populations in the short term, but seriously reduce one of the key rural assets that many families rely on for their food security and small-scale income generation. Once destocking passes a critical level, it takes many years and elevated costs to increase stocks to a reasonable level. This produces far reaching consequences for households over time. Feed concentrates are prohibitively expensive and inaccessible to many families.

Due to abandonment during the conflict, the health of a large number of livestock deteriorated, exposing animals to the risk of disease. Various transboundary animal diseases have had a direct impact on the livelihoods and food security of small-scale farmers. Foot-and-mouth disease and brucellosis continue to be a risk to Georgia. They could be easily reintroduced to the country through the movement and transportation of animals, especially in conflict-affected regions with compromised animal health.

Livestock farmers were in urgent need of external support in the form of appropriate feedstuff and veterinary assistance in order to sustain their animals during the winter.

1.2 Financial contribution of the Donor

In response to the Revised United Nations (UN) Flash Appeal for Georgia launched in October 2008¹, the Government of the United States of America contributed USD 5.5 million, through the United States Agency for International Development (USAID), to the Food and Agriculture Organization of the United Nations (FAO). These funds enabled the implementation of FAO project OSRO/GEO/802/USA, entitled “Emergency supply of animal feed to conflict-affected small-scale farming households and support to the agriculture sector and Food Security Cluster coordination”.

The project was carried out from 15 October 2008 to 15 January 2010, following the Donor’s approval on 18 August 2009 of a three-month, no-cost extension. The lengthened timeframe enabled FAO to use the project’s budgetary savings (approximately USD 450 000) towards providing additional support to vulnerable households for the 2009/10 winter. Thus, the project further contributed to enhancing livestock survival through the provision of additional concentrate feed, training in sustainable methods of producing silage and concentrated animal feed and a final round of anti-parasite drug distribution.

1.3 Project objectives

The overall objective of the project was to protect the livelihoods of vulnerable conflict-affected livestock holders and to provide technical assistance and coordination support to ensure that affected populations accrue greater benefits from interventions related to rural household food security.

The immediate objectives of the project comprised two main components:

- i. To ensure the survival of up to 12 000 heads of livestock by distributing concentrate animal feed to the most vulnerable small-scale farmers affected by the conflict. This would complement existing limited resources in order to prevent the further destocking of cattle, to re-establish livestock’s productive capacity and to enhance livestock reproduction in the spring. To achieve this, the project focused on the large-scale distribution of concentrate animal feed to the most vulnerable households.
- ii. To ensure that a coherent and technically sound agricultural assistance programme for the region was implemented through the coordination of non-governmental organizations (NGOs) and UN agencies involved in emergency agricultural relief operations in Georgia. To achieve this objective, the project would establish an FAO Emergency Rehabilitation and Coordination Unit (ERCU), which would strengthen the Food Security Cluster by engaging relevant stakeholders (UN, World Bank, NGOs and community-based organizations) and technical line ministries (at central and district levels) in agriculture and food security matters. The ERCU would encourage humanitarian partners involved in agricultural relief operations to implement coherent, relevant and effective programmes to ensure consistent beneficiary coverage, avoid gaps and overlap, and provide technical advice when requested.

¹ The Revised United Nations Flash Appeal for Georgia can be accessed at the following link: [http://ochadms.unog.ch/quickplace/cap/main.nsf/h_Index/Revision_2008_Georgia_FA/\\$FILE/Revision_2008_Georgia_FA_SCREEN.pdf?OpenElement](http://ochadms.unog.ch/quickplace/cap/main.nsf/h_Index/Revision_2008_Georgia_FA/$FILE/Revision_2008_Georgia_FA_SCREEN.pdf?OpenElement).

FAO’s component of the Revised Appeal is available at: http://www.fao.org/fileadmin/templates/tc/tce/pdf/appeal_revgeorgia_2008.pdf.

1.4 Planned beneficiaries and activities

(i) Emergency provision of livestock feed and related supplies

The project's livestock component aimed to provide emergency animal feed, related inputs and training to approximately 12 000 conflict-affected small-scale farming households in Shida Kartli Region, specifically covering the districts of Gori, Kareli, Kaspi and Khashuri.

The concentrate feed would meet the nutritional requirements of the cattle during two key timeframes, the 'dry period' and the subsequent 'calving period' (detailed below in **Table 1**), substituting the need for energy and protein supplements.

Table 1: Timeframes of the concentrate feed distribution

Period	Months covered	Description
Period I: Dry period	December-January	Corresponding to the two last months of pregnancy.
Period II: Calving period	February-March	After calving, the cow will progressively attain peak milk production. The young calf relies almost exclusively on milk feeding. This period is also critical as yearly production is directly correlated with the success of the two first months of milk production for calves.

Each family was to receive one 350-kg supply of animal feed (sufficient for 115 days for one head of cattle) and a complete dosing against endoparasites (deworming) in order to improve the efficacy of the feed provided and the general health of animals. Further details are provided below in **Table 2**.

Table 2: Planned quantity of animal feed to be distributed per household (kg of fresh matter per cow)

Input type	Period I			Period II			Total
	Kg/day	No. days	Sub-total (kg)	Kg/day	No. days	Sub-total (kg)	Grand total (kg)
Concentrate feed	2.0	55	110	4.0	60	240	350

The provision of complementary feed was estimated considering: (i) the needs in dry matter (energy) and protein (total digestible nitrogen) of a cow of average weight (400 kg) and milk production (1 500 litres of milk per year); and (ii) two feeding periods, totaling 115 days.

To ensure sufficient water access and availability for cattle, the project also planned to carry out small-scale 'quick fix' emergency interventions in 17 villages, such as the repair or renewal of cattle water troughs, pumps, pipes and similar equipment that had been damaged, removed or destroyed as a result of the conflict.

(ii) Training

Training workshops were to be organized and training material prepared for distribution to all project beneficiaries to increase farmers' awareness on good animal husbandry practices as well as to ensure the best use of the inputs provided. The project also planned to organize training sessions/material for staff of the Ministry of Agriculture (MoA) and implementing partners in specific technical areas, according to need.

(iii) Support to the agriculture sector and Food Security Cluster coordination

The project's coordination component aimed to establish effective coordination mechanisms to restore the household food security of internally displaced persons, returnees and other conflict-affected households, in close collaboration with government line departments, other UN agencies, as well as international and local NGOs.

The establishment of the FAO ERCU would contribute significantly to in-country humanitarian coordination agreements, specifically the Food Security Cluster, co-chaired by FAO and the World Food Programme (WFP)². The ERCU would encourage humanitarian partners involved in agricultural relief operations to implement coherent, relevant and effective programmes, to ensure consistent beneficiary coverage and to avoid gaps and overlap, and would provide technical advice when requested. The ultimate beneficiaries of these efforts would be vulnerable families most in need that accrue greater benefits from food security interventions.

2. PROJECT IMPLEMENTATION

2.1 Implementation arrangements

FAO implemented the project in close collaboration with MoA, local government authorities in Shida Kartli Region and selected implementing partners. The criteria employed for the selection of villages and beneficiaries to receive the project's assistance were identified in close collaboration with local government authorities.

Operating through its ERCU, FAO was responsible for the overall development and coordination of project activities, such as the planning of operations, conducting assessments, the procurement of project inputs, designing and conducting trainings, monitoring operations and carrying out follow-up evaluations.

FAO's Emergency Operations Service, based at headquarters, Rome, provided technical assistance, operational guidance and backstopping. The technical specifications for the inputs procured through the project were approved by FAO's Agricultural and Food Engineering Technologies Service and Animal Production and Health Division.

Letters of agreement were signed between FAO and implementing partners to carry out the following activities: (i) beneficiary identification, in close collaboration with local authorities and FAO for all target areas, and the cross-checking of all household lists; (ii) distribution of animal feed according to agreed plans; (iii) anti-parasitic treatment of cattle belonging to the most vulnerable farmer households; (iv) emergency water trough construction to secure adequate water supply for livestock; and (v) beneficiary results assessment surveys.

The project's implementing partners included CARE International in the Caucasus (CARE), International Orthodox Christian Charities (IOCC), Save the Children (SC), World Vision International (WV), Institute of Polling and Marketing (IPM) and ACT Research Ltd. Further details on the responsibilities of the project's implementing partners are provided below in **Table 3**.

² The list of Food Security Cluster members is available in Annex 1.

Table 3: Responsibilities of implementing partners

Implementing partners	Responsibilities
WV	Beneficiary selection and distribution of animal feed, anti-parasitic treatment of cattle and training to small-scale livestock holders on how to make silage.
CARE	Beneficiary selection and distribution of animal feed, anti-parasitic treatment of cattle, installation of water troughs and providing free veterinary 'hotline' services and consultations.
IOCC	Selection of beneficiaries and distribution of animal feed and anti-parasitic treatment of cattle.
SC	Selection of beneficiaries and distribution of animal feed and anti-parasitic treatment of cattle.
IPM and ACT Research Ltd.	Animal feed post-distribution survey, and output and outcome results surveys.

2.2 Main project activities

2.2.1 Procurement of inputs

The inputs procured to support vulnerable livestock holders in Shida Kartli Region included concentrate animal feed, endoparasitic pills and vaccine, water troughs and chopper machines. A three-month, no-cost extension was granted by the Donor, revising the project's end date to 15 January 2010. This much needed extension permitted FAO to use savings to provide additional assistance to farming households for the 2009/10 winter.

The project procured 4 240 tonnes of concentrate animal feed in January 2008. During the project's extension period, an additional 299.4 tonnes were procured in October 2009 to assist additional farming families in Shida Kartli Region that had lost access to pastureland and arable land and had not benefited from the prior animal feed distribution.

To improve the health status and nutritional intake of cattle, endoparasitic pills (43 915 Albendazole and Fenbendazole pills, administered in two rounds of treatment) were procured by FAO in January 2009. These inputs covered treatment for only a portion of the cattle owned by the targeted households, while the remaining necessary inputs were procured by the implementing partners WV, CARE and IOCC. Thanks to the budgetary savings achieved during the project, an additional round of vaccination was undertaken in October 2009, for which FAO purchased 150 000 ml of Ivermectin vaccine and over 32 000 syringes.

The project purchased the necessary inputs to install 53 new water troughs and repair two existing ones, amounting to 20 more than planned. The additional troughs were set up in ten newly identified villages where cattle had poor or no access to water.

In order to complement the above-mentioned activities and to make silage production a sustainable practice for beneficiaries, the FAO ERCU procured two choppers with its budgetary savings, to be handed over to two agricultural associations/cooperatives with the condition of using them to provide services to the project's beneficiaries.

Further details related to the source, quantity and quality of the procured inputs are provided below in **Table 4**.

Table 4: Planned and actual quantities of inputs provided through the project

Input type	Quantities planned	Quantities purchased	Quality control	Origin
Concentrate animal feed (January 2008)	4 240 tonnes	4 240 tonnes	<i>Société Générale de Surveillance</i> loading and unloading	– Georgia (Dogan Ltd.): 1 500 tonnes – Georgia (Begi Company): 2 240 tonnes – Belgium (Frarimpex): 500 tonnes
Concentrate animal feed (October 2009)	255 tonnes	299.4 tonnes	Local lab testing	– Georgia (Chemi Mamuli Ltd.)
Endoparasitic pills (January 2009)	24 000 (remaining quantities to be purchased by IPs)	43 915 pills	– FAO: field assessment – WV: faecal examination, survey	– Georgia (Biotecsi Ltd.)
Endoparasitic vaccine (October 2009)	25 000 doses	1 500 000 ml (32 047 doses)	FAO: field assessment	– Georgia (Biotecsi Ltd.)
Syringes (October 2009)	25 000	32 047	FAO: field assessment	– Georgia (Aversi Pharma Ltd.)
Water troughs (November 2009)	35	53 installed + 2 repaired		– Georgia
Chopper machines (January 2010)	2	2	Agricultural Engineering Technologies Service	– Georgia (Chemi Mamuli Ltd.)

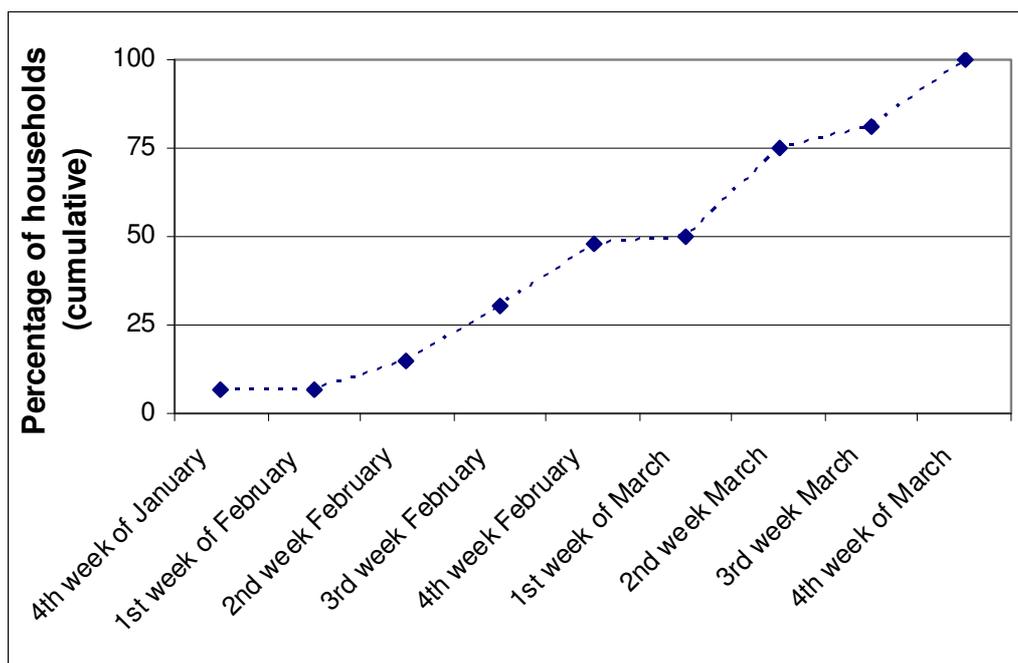
2.2.2 Distribution of inputs

(i) *Concentrate animal feed*

Field operations were launched on 26 January 2009 with the first delivery of concentrate animal feed from the local supplier and its distribution on the same day. With way stations in Gori and Tbilisi and logistics support from WFP (under a Service Level Agreement negotiated in December 2008), the delivery plan allowed for the smooth distribution of inputs to the project's beneficiaries. The distribution combined a voucher system and the signing of beneficiary lists, to ensure that the project's beneficiaries received the inputs.

By the end of March 2009, 4 240 tonnes of concentrate animal feed had reached 18 244 families (150-250 kg per household, with an average of 2-3 heads of cattle per household) in 127 villages of Gori and Kareli Districts. This represents an increase of 52 percent on the originally proposed number of beneficiaries to receive assistance (12 000 households). The distribution timeline is provided in **Figure 1** below.

Figure 1: Timeline of the first animal feed distribution (January-March 2009)



The quantity of feed delivered (150-250 kg per household) was established taking into account the time of delivery and the needs of cattle in accordance with the stages of pregnancy and calving (see **Tables 1 and 2**).

In December 2009, an additional 299.4 tonnes of concentrate animal feed were distributed amongst 2 994 vulnerable farming households in 14 villages that had not benefited from the prior feed distribution. These beneficiaries were farming families returning to their villages in the border area that had lost access to part of their pastures and plots due to the proximity to the border³.

(ii) Endoparasitic treatment of cattle

The anti-parasitic treatment of cattle was carried out in close cooperation with the Veterinary Services of MoA and the project's implementing partners. A first round of treatment took place in April 2009 and benefited the 18 244 households provided with concentrate animal feed between January and March 2009. The number of animals that received treatment (38 312 heads of cattle) represents 78 percent of cattle in Shida Kartli Region. A second round of anti-parasitic treatment of the same cattle was carried out in May 2009 to ensure that livestock reintroduced to common grazing areas and pastureland were not re-infected, as well as to protect them against cattle grub.

The Georgian State Veterinary Service officially requested FAO to facilitate an autumn round of anti-parasitic treatment for an additional 25 000 heads of cattle in 50 villages. With the agreement of the Donor on the use of the project's savings under a no-cost extension, 32 047 heads of cattle were treated with Ivermectin (active component) in 80 villages of Shida Kartli Region. The treatment began on 26 October 2009 to address specific parasitic infestations characteristic during that time of the year, as well as to maximize the use of the animal feed

³ It was estimated that the returnees to villages in the border area were able to produce 70 percent of their normal yield of fodder and have access to 70 percent of their pastures, during 2009. As a compensation mechanism, the project provided the remaining 30 percent of animal feed for normal winterization 2009/10.

provided to the same beneficiaries and the feed they had produced themselves. This was the third and final round of anti-parasitic treatment provided through the project.

(iii) Installation of water troughs for cattle

The FAO ERCU procured and delivered all necessary materials to CARE for the installation of 53 water troughs (18 more than initially planned) and the rehabilitation of two damaged troughs in a total of 27 villages. The first 35 troughs were installed in May 2009 in 17 villages of Gori and Kareli Districts of Shida Kartli Region. The further 18 were set up and two damaged ones were repaired in ten newly identified villages in the same districts, in areas where cattle had poor or no access to water. Activities were completed by November 2009.

(iv) Choppers

In January 2010, the project delivered two chopper machines for silage-making to Gori District for the benefit of surrounding villages, located within a 30-km radius. The machines were transferred to the Cooperative Society “Liakhvi” in Nikozi village and to the Non-Commercial Legal Entity “Mamuli” in Shindisi village.

2.2.3 Support to the agriculture sector and Food Security Cluster coordination

A fully fledged FAO ERCU office was established in Tbilisi in January 2009, in accordance with United Nations Department of Safety and Security standards. The project’s vehicle fleet comprised two four-wheel drive vehicles (Minimum Operational Security Standard compliant), which were used for field monitoring and project implementation. The ERCU was staffed with 15 persons to support and implement emergency and rehabilitation projects, of which the following 12 positions were core personnel funded by this project:

1. Emergency Coordinator
2. Chief Technical Advisor/Livestock Expert
3. Logistics Officer
4. Communications Officer
5. Reporting and Information Officer
6. Monitoring and Evaluation Expert
7. Finance and Administration Officer
8. Food Security Officer
9. Office Assistant/Interpreter
10. Field Officer
11. Driver
12. Custodian

Together with WFP, FAO co-chaired the Food Security Cluster, which provided a coordination platform for regular meetings attended by a large number of organizations, including UN agencies, NGOs, the International Committee of Red Cross (ICRC), the Organization for Security and Cooperation in Europe (OSCE), the Citizens Network for Foreign Affairs (CNFA), donors and MoA, among others. The meetings provided an open forum to share information and coordinate operations in the areas affected by conflict. **Annex 1** provides a list of the Food Security Cluster members.

The project produced and published information products such as maps, spotlight stories, factsheets, newsletters and agriculture sector bulletin⁴. This material was distributed to ministries, embassies, donors, UN agencies, international and local NGOs and local government authorities. An intervention database, capturing ‘who is doing what and where’, was also produced.

2.3 Actual beneficiaries

The project provided concentrate animal feed to 21 238 conflict-affected families in 141 villages in Shida Kartli Region, exceeding the planned number of beneficiaries (12 000 households) by 9 238 families (an increase of 77 percent). The first distribution of feed (4 240 tonnes) reached 18 244 households between January and March 2008, with each household receiving between 150-250 kg. These families further benefited from two rounds of anti-parasitic treatment for their cattle, carried out in April and May 2009. The treatment covered 78 percent of cattle in the region (38 312 animals). Thanks to the project’s extension and the cost-savings achieved during its implementation, a further 299.4 tonnes of concentrate feed benefited 2 994 households (100 kg per household) in October 2009.

Following a request from the Georgian State Veterinary Service, an autumn round of anti-parasitic treatment was provided to 32 047 heads of cattle in 80 villages of Shida Kartli Region in October 2009. The treatment, made possible due to cost-savings achieved during the project, addressed specific parasitic infestations common during that time of year.

All livestock holders in the 27 villages where water troughs were installed and repaired will continue to benefit from improved access to and availability of water for their cattle. Further, the chopper machines distributed to two agricultural associations/cooperatives in Gori District are being used for silage-making by farmers in surrounding villages.

2.4 Training

The project carried out the following training sessions:

- “Training of beneficiaries on improved use of concentrate animal feed”: During the feed distributions, beneficiary farmers received training from implementing partners on how to use the concentrate animal feed. Training material (fliers) was prepared and printed by FAO.
- “Training of beneficiaries on improved use of available feed resources”: During the first round of feed distributions, beneficiary farmers received training from implementing partners on how to make use of available feed resources. Training material (posters) was prepared and printed by FAO.
- “Training of beneficiaries on prophylaxis and treatment of endoparasites”: During the first round of deworming treatment, beneficiary farmers received training from local veterinarians contracted by implementing partners. Training material (pamphlets) was prepared and printed by FAO.

⁴ These information products can be accessed at the following FTP link: ftp://ext-ftp.fao.org/TC/Data/TCE/TCER/Annexes_OSRO%20GEO%20802%20USA/; or in the CD Rom provided with the hard copy of this document.

- “Training-of-trainers”: During August and September 2009, FAO ERCU conducted a training-of-trainers course to prepare 14 trainers to build the capacity of beneficiary farmers in silage preparation.
- “Maize silage-making for small-scale farmers”: In September 2009, beneficiary farmers and all state veterinarians from Gori District received training on how to make silage from whole maize plants and available vegetation. Three hundred people attended 14 demonstration cases/trainings and 1 975 participants benefited from 50 classroom-based sessions.
- “Homemade animal feed concentrates for individual farmers”: Fifty classroom-based trainings were held for 1 975 participants on how to prepare homemade feed concentrates for their animals.

In October and November 2009, FAO prepared brochures for its training courses both on maize silage-making and on the preparation of homemade animal feed concentrates. A total of 10 000 brochures for both courses were printed and disseminated to beneficiaries. Approximately 500 brochures of each were also provided to the Tbilisi Agricultural University to interested students in November 2009.

In addition, the FAO ERCU recruited a filming crew that documented the entire silage preparation process. The training video was completed in October 2009 and aired countrywide on national television channels. DVD copies of the training in English, Georgian and Russian were disseminated⁵.

2.5 Difficulties encountered during implementation

The main challenges encountered during the project are outlined below.

Timeframe: 15 January 2009 - 14 April 2009:

- Delays were encountered at customs; however, the supplier managed to catch up with the deliveries in an efficient manner.
- One supplier had to be penalized for minor discrepancies in the technical specifications of feed.
- During the assessment, some livestock holders did not provide accurate numbers of the cows owned, speculating that they would be compensated in relation to the number of cows lost. Estimates were much lower in the initial stages of the project for this reason.

Timeframe: 15 April 2009 - 14 July 2009:

- The market search to identify the appropriate materials for water troughs that met the required specifications was more difficult than anticipated. There are few local suppliers present in Georgia and most did not meet the necessary standards. Moreover, the suppliers were unwilling to release the goods before payment and insisted for an advance in cash of 100 percent of the total value of goods. Under the given circumstances, FAO had to pay for materials in cash as none of the suppliers provided banking details. The

⁵ The training video can be accessed at the following FTP link:
ftp://ext-ftp.fao.org/TC/Data/TCE/TCER/Annexes_OSRO%20GEO%20802%20USA/.

project ultimately was able to find suppliers that met all specifications related to costs, terms, delivery, material, quality and paperwork.

Timeframe: 15 July 2009 - 14 Oct 2009:

- The identification of appropriate providers of endoparasitic medicine for cattle registered in Georgia and in line with USAID selection criteria was more difficult than anticipated as most suppliers did not meet the procurement requirements of the Government of the United States of America and thus required a waiver. The lengthy procedures involved in obtaining the waiver meant that the original number of proposed veterinarians (service providers) for the endoparasitic medicine was no longer sufficient in view of the reduced timeframe. Consequently, the number of service providers had to be tripled in order to meet the tight deadlines of providing the treatment to cattle.
- In view of the above, the project explored alternative providers of the medicines, such as of the Commonwealth of Independent States and the United States of America. However, the lengthy administrative procedures for registering veterinary products and the inability of MoA to waive the import of registered medicines in alternative packing were limiting factors in finding alternative solutions.
- The price and demand for iron rose due to global price fluctuations. Therefore, difficulties were encountered in finding and procuring 630-mm pipes for the construction of additional water troughs. The pipes were procured at a higher price compared to those purchased in spring. However, adequate budget planning and savings allowed for procurement.

3. PROJECT IMPACT

3.1 Livestock production

An assessment of the project's impact and results at beneficiary level was carried out under the guidance and supervision of the FAO International Monitoring and Evaluation Expert. The continual monitoring of the project's activities and progress was ensured by national ERCU staff. An independent service provider, IPM, based in Tbilisi, was contracted to conduct post-distribution monitoring survey fieldwork. After the concentrate feed distribution, IPM carried out 700 interviews based on a predefined questionnaire with beneficiaries in 36 villages on a random basis.

Another independent service provider, ACT Research Ltd., based in Tbilisi, conducted an output and outcome results survey of 700 beneficiaries in 36 villages. Subsequently, IPM undertook a final survey on the use and performance of the livestock inputs distributed during the project's extension period. A sample, comprising 80 beneficiaries, was interviewed in 80 villages. The information gathered from the three surveys was entered into a database. The main findings are reported below.

(i) Concentrate animal feed

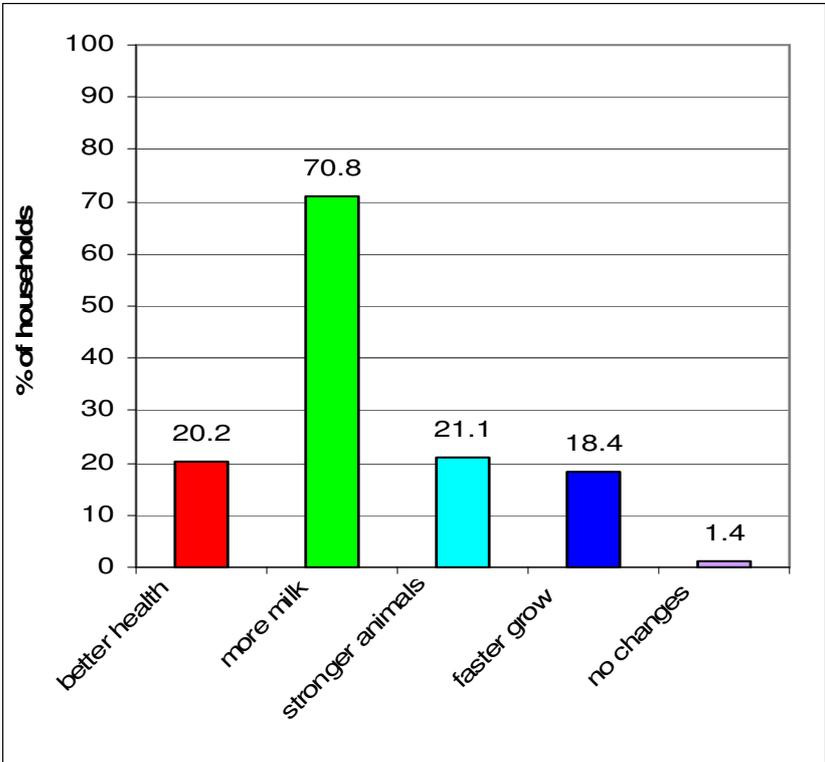
The distribution of concentrate animal feed complemented the existing but limited resources of the most vulnerable small-scale livestock holders affected by conflict in order to prevent the further destocking of cattle, ensure the survival of cattle during winter, re-establish the productive capacity of livestock and enhance the rate of livestock reproduction in spring. Further quantities of concentrate animal feed were distributed at the end of 2009 to additional

families that had lost access to pastureland and arable land, providing them with support to maintain their livestock over the 2009/10 winter.

According to the surveys undertaken during the second half of July 2009, 96 percent of the feed was used by beneficiaries. The remaining four percent was kept in stock (most probably to feed poultry or pigs) or had been sold. The primary recipients of the animal feed were milking cows and breeding cattle, and a small portion went to small animals (goats, sheep, pigs and poultry). The feed provided by the project was complemented by beneficiaries' own fodder (straw, hay, crop residues and fresh grass).

Throughout the year, positive feedback where the inputs had been distributed was reported by farmers to implementing partners. Specifically, farmers reported an increase in milk yields, animal strength and health, faster growth and shinier skin, or a combination of these factors, as illustrated in **Figure 2** below.

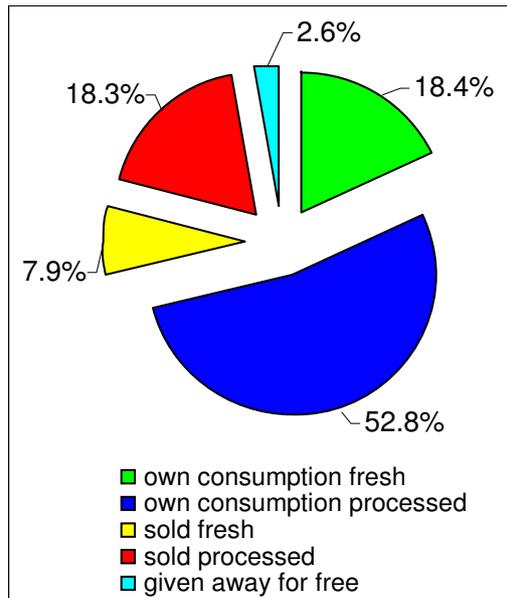
Figure 2: Beneficiaries' feedback on the first animal feed distribution (January-March 2009)



On average, milk production increased from 6.48 to 9.8 litres per day per household, equivalent to an average increase of 48 percent (ranging from 15 to 175 percent). This enabled beneficiaries to generate income or increase their self-sufficiency in milk products, thus reducing dependence on external aid. Local communities indirectly benefited from the project thanks to the milk available locally at affordable prices.

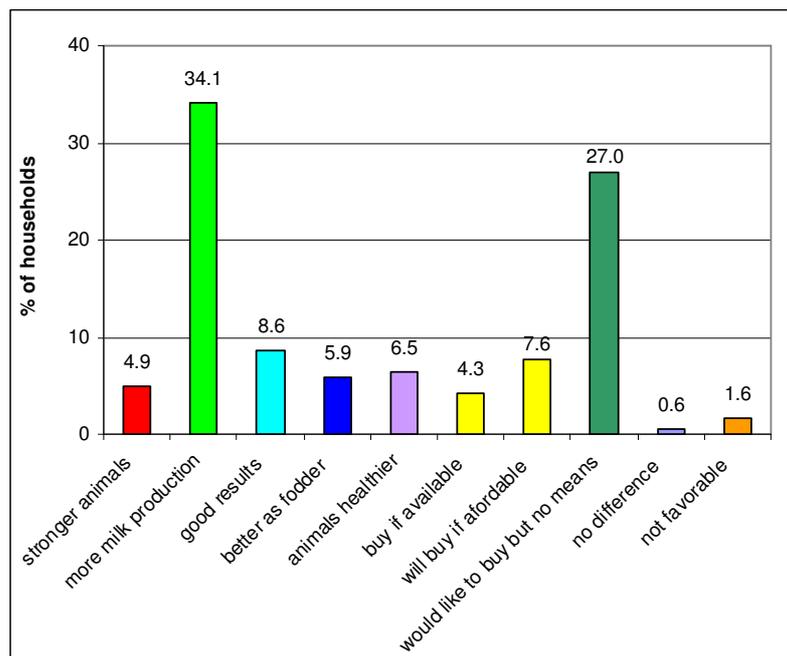
The milk produced was mostly used for families' own consumption of milk and dairy products (cheese and yoghurt). Only 21 percent was sold or given away (mainly to support poorer relatives or villagers), as illustrated in **Figure 3** below.

Figure 3: Beneficiaries' utilization of milk production



Overall, the feed support intervention was well received by the beneficiaries and raised a lot of interest as the benefits were noticeable in terms of milk yield, as shown in **Figure 4** below.

Figure 4: Beneficiaries' feedback on the utilization of concentrate animal feed



(ii) Endoparasitic treatment of cattle

The treatment provided to cattle through this project reduced the risk of the spread of disease and improved the daily nutritional intake of livestock, making the cows “healthier” as reported by their owners.

After completion of the treatment, 112 faecal samples of cattle were collected and delivered to the veterinary laboratory of MoA. The laboratory results found that helminth, helminth eggs and

larvae were not present in the samples. According to the veterinarians hired for this activity, the health status of newborn cattle significantly improved, allowing for early treatment of the animals.

(iii) Installation of water troughs for cattle

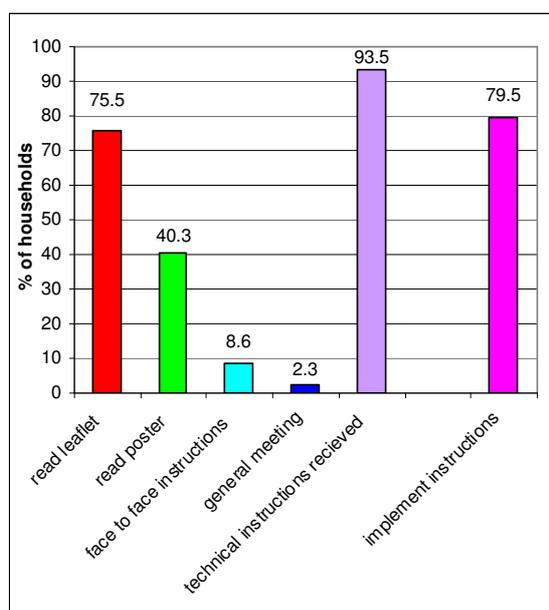
Findings at the onset of this activity revealed that most of the cattle in Shida Kartli Region were faced with dry water troughs at the height of summer because the old troughs leaked or lacked sufficient water at their source. Many animals were thus forced to drink from lakes with high saline content. The installation of the troughs ensured sufficient access to and availability of water for all targeted cattle. Out of 127 villages, the project identified only those with insufficient water supply for their cattle. This was achieved through a participatory community-based needs assessment.

(iv) Training

“Training of beneficiaries on improved use of concentrate animal feed” and “Training of beneficiaries on improved use of available feed resources”

Overall, the training sessions were well received by beneficiaries. Eighty percent noted that they had applied the instructions and recommendations received (see **Figure 5**). The interest of the beneficiaries was mostly triggered by their need for appropriate information on feeding practices.

Figure 5: Beneficiaries’ feedback on training sessions



“Maize silage-making for small-scale farmers” and “Homemade animal feed concentrates”

Training on the production of silage was completed during the peak of the silage production season, providing the opportunity for farmers to replicate the production for the upcoming winter. Before the training, only 4 percent of interviewed farmers fed their animals with silage and almost none (0.95 percent) produced it. After the training, however, more than half of those who received training were feeding silage to their animals.

3.2 Coordination

(i) Support to agriculture sector and Food Security Cluster coordination

The Cluster provided a coordination platform for a large number of organizations (see **Annex 1** for a list of Food Security Cluster members). The meetings offered an open forum to share information and coordinate operations, as well as a mechanism for operational and strategic planning.

Thematic sessions on operationally relevant topics and updates – such as briefs or presentations by gender-balance experts, demining specialists, hydrogeologists and irrigation engineers, among other guest speakers – enabled the Cluster members to be well informed and receive up-to-date information on developments of importance to their work.

The Food Security Cluster has also been used to ensure the application of standards and norms by humanitarian actors to avoid tensions among beneficiary communities. This forum also allowed for technical issues to be raised and resolved, such as building consensus on the criteria with which to select water trough locations for the most vulnerable villages without access to drinking water for their livestock.

Due to the establishment of a fully fledged ERCU, FAO was also able to mobilize, at no cost to the project, the expertise of a Gender Capacity Advisor, provided through the Inter-Agency Standing Committee and funded by the Norwegian Refugee Council. The Gender Capacity Advisor worked closely with the FAO ERCU team and the United Nations Development Fund for Women (UNIFEM) in carrying out a field survey to study gender issues affecting the agriculture sector. The advisor drafted a Concept Note addressing the *Gender Approach of Conflict-Affected Populations in Georgia*; the document is currently being revised and will be further developed under UNIFEM and the FAO Representation's supervision.

The coordination activities and outputs benefited members of the Food Security Cluster in Georgia, including UN agencies, international and local NGOs, ICRC, OSCE, CNFA, donors and MoA. Importantly, these efforts ultimately benefited the conflict-affected population in need of assistance.

(ii) Publishing and distribution of information products

The information products generated – including maps related to project activities, regular spotlight stories, FAO fact sheets, quarterly newsletters and agriculture sector bulletins – were disseminated to donors, embassies, UN agencies, international and local NGOs, MoA and local government bodies in Shida Kartli Region.

(iii) Who, what, where: Agricultural intervention database

The database provides comprehensive information on the agricultural interventions carried out in Georgia, including a list of donors and implementing partners, description of the interventions, geographic locations, resources allotted and timelines. This information is benefiting donors, embassies, UN agencies, local and international NGOs, MoA, local government bodies, and, ultimately, the affected populations.

3.3 Impact of the project on beneficiaries

The majority of families living in the conflict zone depended on agriculture for their livelihoods. The provision of concentrate animal feed enabled conflict-affected livestock holders to feed

their cattle and keep them alive during winter. The assistance also prevented the further destocking of cattle, strengthened livestock's productive capacity and enhanced livestock's reproduction chances in spring. The water troughs greatly benefited the cattle in conflict-affected villages where there was no access to water after a long day of grazing.

The endoparasitic treatment reduced the prevalence of disease among the cattle as well as improved their nutritional daily intake, making cows healthier and thus improving livestock-based income generation. Indicators showed that the project met its goals as the planned number of beneficiary households increased by 77 percent.

The changes observed and recorded by farmers included increased milk production, improved health, stronger offspring with faster growth and shinier skin, or a combination of these characteristics. On average, milk production increased by 48 percent. The milk produced by the beneficiaries is mainly used for home consumption, in either fresh or processed form. The majority of households also share their milk with people in need, friends or relatives in the village. Some households reported that they are selling the surplus milk produced in the form of cheese in order to generate additional income.

The trainings provided were widely welcomed by the farmers. The project initially aimed to provide training to 1 750 farmers on "Maize silage-making for small-scale farmers" and on "Homemade animal feed concentrates for individual farmers". However, because of the high interest expressed by villagers in the proposed topics, the project extended the training to an additional 225 people. Of the 1 975 participants, 501 were women. The number of female participants is significant considering that men are traditionally responsible for the preparation of animal feed while women generally take care of and milk the cows. The women who participated in the trainings were always actively involved in the discussions and expressed interest by asking questions and engaging in group conversations with the trainers.

The lack of appropriate silage equipment is the largest bottleneck for the preparation of silage and improved use of feed resources in the targeted areas. The chopper machines provided by the project will ensure the sustainability of the practices covered during the training sessions in the longer term.

The project also improved cooperation and coordination among animal health services personnel (private and public veterinarians in the targeted areas who worked with FAO) and provided support to the national service at local level in taking stock of the situation of disease within the targeted areas.

4. RECOMMENDATIONS AND CONCLUSIONS

One of the main lessons learned is the importance of timely endoparasitic treatment prior to the actual distribution of animal feed, including a second follow-up round of treatment after distribution to ensure that the cattle are free of parasites during feeding. This ensures good nutritional intake during the feeding period and reduces the chance of re-infection upon return to pasturelands and mixing with other cattle. By increasing the number of cattle treated in the region, the risk of re-infection was significantly decreased, as shown by the laboratory results undertaken by partner organizations.

According to the feedback received from farmers and implementing partners, there appears to be recognition that the return on investment in improving feed and water access to cows truly pays

off. Increased milk yields lead to more dairy products for consumption and for sale. However, this knowledge and attitude needs to become widespread practice and will therefore require close follow-up and further training to change the way farmers manage their livestock and feeding practices.

Based on the farmers' interest in the trainings and the numerous questions raised, continuing the provision of extension services to farmers is strongly recommended. The communities expressed interest in trainings on numerous veterinary issues – such as improved use of feed resources, artificial insemination of livestock, anti-parasitic treatments, parasite management in pastures, prophylaxis for transboundary animal diseases and zoonoses –, which should be addressed in future projects.

The knowledge and experience of this intervention is also being harnessed by FAO's Emergency Centre for Transboundary Animal Disease Operations programme in Georgia. The project benefited from collaboration and synergies on the ground during its implementation (such as the use of joint specialized resources).

Annex 1: Food Security Cluster Members

ACDI/VOCA	ACDI/VOCA
ABCO	Association of Business Consulting Groups
ACF	Action Contre le Faim
ADG	Agriculture Development Group
AgVANTAGE	AgVANTAGE
APLR	Association for Protection of Landowners' Rights
CARE	CARE International
CHF International	Community Habitat Finance International
CNFA	Citizens Network for Foreign Affairs
Constanta	Constanta
EC	European Commission
Elkana	Elkana
EPER - Swiss	EPER - Swiss
FAO	Food and Agriculture Organization of the United Nations
GCAD	The Georgian Center for Art Development
GFPA	Georgian Farm Products Production and Promotion
GIPA	Georgian Institute of Public Affairs
GRM Int.	GRM International
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HTSPE	Hunting Technical Services and P-E International
IRD	International Relief and Development
JSC	Joint Stock Company
LC	Lazika Capital NGO
MC	Mercy Corps
MCG	Millennium Challenge Georgia
MoA	Ministry of Agriculture
MoHLSP	Ministry of Health, Labor and Social Protection
OXFAM	OXFAM
SDC	Swiss Agency for Development and Cooperation
SIDA	Swedish International Development Cooperation Agency
UMCOR	United Methodist Committee on Relief
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WB	The World Bank