NARRATIVE PROJECT REPORT

Food Security and Nutrition Project
Western Kasai

Submitted by NGO partners:

Africa Inland Mission Canada
and
Butoke

Scarborough, Ontario and
Kananga, Democratic Republic of Congo

March 2007 – February 2008
Final Project Report

Introduction

Food Security and Malnutrition

Food security is Butoke's first intervention area. Malnutrition is widespread, since 2003 most people eat only one meal a day, and the food is often low in essential nutrients. Malnutrition primarily affects children, widows, pregnant mothers, the handicapped and older women. Dr. De Sweemer estimates that close to 50,000 people in Western Kasai die yearly from malnutrition. Enquête Demographique et de Santé (EDS) 2007 shows 44% chronic malnutrition and 16% acute malnutrition among children under 5 years in Western Kasai province.

Given the poor functioning of transportation (roads are not maintained and are subject to erosion and trucks are rare and in poor condition) and the non existence of an organized inter-province or international food market, food security depends largely on local production and conservation. However, local production is limited, given the level of poverty and the scarcity and cost of agricultural inputs.

This desperate situation was recently described in the May 29, 2006 cover story of Time Magazine, entitled "The Deadliest War in the World." Even though the Western Kasai is not on the firing line it is, with Kasai Oriental, the most malnourished region of DR Congo (EDS 2007)

Other areas of need

In the project area, the death rate among men is high due to war, alcohol and drug abuse, violent disputes and AIDS. The United Nations now recognizes the DRC as one of the countries most affected by AIDS and the disease is rapidly propagated by cross-border population movement and, until recently, by the presence of foreign troops.

As a result, 30% of adult women are widows, and over the age of 50 more than 90% of women are widows. These widows are often regarded as "witches". They are blamed for the death of their husbands and are therefore disinherited. To help their children survive, many become prostitutes. Butoke's food and nutrition program seeks to help these women secure a sustainable way of feeding themselves and their families.

Financial Goal & Core Elements.

In the fall of 2005 Dr. De Sweemer contacted AIM Canada and asked the mission to assist Butoke. In March, 2006, AIM Canada began its partnership in the Project with a commitment to raise CA $300,000 to enable it to accomplish its goals. The core

elements of the Project involve establishing local farming associations, agricultural training, growing seed plots, the purchase and distribution of basic farming implements, and nutrition education. The ultimate goal of these activities is to provide a means for people to develop hope and become artisans of peace and development.

This report primarily covers the final 14 months of the Project, from March 2007 to February 2008, but is also the final project report. Below is an outline of the approach taken in this Project, along with the activities, outputs, and outcomes associated with that approach. The report then outlines the activities and results in the area of food security, followed by activities and results in the area of nutrition, both for the 14-month reporting period. Third is a comparison of expected and actual activities, outputs, outcomes and impacts for the whole project. Finally there is a discussion of major challenges, achievements and lessons learned.

Goals/Expected Outcomes and Indicators

Goals/Expected Outcomes	Indicators
A. Improved food security in selected food deficient villages:	
• Increasing local production of major food crops, maize, beans, peanuts, soybeans	Indicators will be based on records of harvests maintained by the associations and controlled by Butoke and the village chiefs.
• Increasing the conservation of seeds in associative stocks and encouraging families to keep the largest share of harvest as familial reserves for consumption.	Indicators will include the availability of seeds next season and food prices after harvest (lower than last year in USD value) and after 3 months (some stabilization of prices is expected).
• Improve quantity and quality of seeds available to the associations, close to the villages	Indicators will include the availability of seeds from Butoke's own seed farms (see below), and the input/output yields of seeds used to output both on our own farms and on the crop fields.
B. Improved nutritional status of the general population:	
• Improved nutrition of mothers and	Indicators will include the overall sentinel

children under 10 years old, in all participating villages	indicator, Body Mass Index (BMI), of mothers and children that participate, and of others, taken seasonally over two years. This will be achieved by anthropometric surveys measuring weight and height. December, March and June are months of climate change and of varied availability of food, where body weights vary tremendously. We will carry out the anthropometric surveys three times a year, during these critical months.
• In Tshikaji even more pronounced improvement of the weaning age, up to five years old	Anthropometric surveys as above
• Increased frequency of meals to at least two or three per day for children under six years of age.	This will be monitored in focus groups at three-month intervals in Tshikaji and a village reached by mass media and associations.
• Rehabilitation of people suffering from mild to moderate nutritional deficiency as well as severe malnutrition and synergistic infections and parasites in Tshikaji area	Number of people treated and maintaining satisfactory nutritional status at Butoke's nutrition centre.
• Increased levels of social solidarity with the elderly and the handicapped, widows, orphans and abandoned children.	Interviews and focus groups.

Activities and Expected Outputs

Activities and Expected Outputs	***Indicators***
Preparations for agricultural production	

• Total four sessions of planning, follow-up and training of team of Agronomists (two days each on the following topics: preparation of fields, sowing, weeding and harvesting). • Total two meetings with associations per season. • One field visit to each association and its fields every two weeks for supervision and monitoring by field agronomists. • The supervisor visits in the field with each agronomist at least once every two weeks or more frequently when indicated. • There is a team meeting with mutual reporting once every two weeks under the leadership of the coordinator.	Records and reports. Bi-weekly visits to each association will be documented by written reports signed by both parties. The coordinator will analyse and comment all reports and make field visits to trouble spots.
Seed and Tools Distribution	
• Seeds and tools will be distributed in time for each planting season to the associations, according to need, and with due regard to reducing dependency on Butoke support over time, according to agreed upon plans.	Records of quantities of seeds and tools distributed. Reduced needs for support, over time.
Seed Production	
100 hectares will be cropped each season as seed farms. Total production of the seed fields in the first crop season (June-Dec. 2006) is expected to reach 23,160 kg (soybeans, 7,200; peanuts, 8,400; beans, 6,300; and corn, 1,260). Production of bean seeds in the second crop season is expected to reach 21,000 kg. 80% of this will be retained for use as seeds. The rest will be used to help feed workers on the seed farms in the subsequent crop season, or by the nutrition centre. Productivity of the seed fields is expected to increase somewhat in the second year, as the quality of seeds improves, but we are unable to provide an estimate of how much this might be.	Production records. Improvements in productivity will be monitored from season to season.

The contribution agreement furthermore stated:

Butoke has adopted a holistic approach that includes:

- The provision of seeds, simple tools and extension services for the local production of major food crops such as maize, beans, peanuts, soybeans and cassava
- Emphasis on high protein crops such as beans, soybeans, and peanuts that do not require fertilizer
- Production of Butoke's own seeds, to progressively improve the quality of seed stocks and agricultural yields over time
- Provision of support to village associations that existed in the past, but that need to be revitalized
- Provision of support also to individual households, where this is considered preferable
- Contractual arrangements to conserve a part of the crop as seeds for the next crop year
- Nutritional education, targeted in particular at mothers and children under 10 years old
- Special attention to people suffering from malnutrition
- Encouragement of associations and other church or temple-related groups to promote solidarity with the elderly and the handicapped, widows, orphans and abandoned children.

The project was planned to benefit 26,000 people directly, and 100,000 indirectly. Possible impacts province-wide over time are foreseen through expansion and emulation of activities and improved practices.

Activities in Food Security

In the period March 2007 to February 2008, Butoke has held firm to the principles that had helped it to sustain major expansion during the main season of 2006 to 672 associations with 19,000 farmers cultivating almost 750 ha in six territories of the province of Western Kasai. Assuming 6 members per household, this implies that the direct beneficiaries reached prior to March 2007 would have already been more than 100,000.

Minor Season February 2007 to July 2007

- Of the major food crops Butoke has been promoting, it is only wise to plant beans and soy during the secondary season, as the rains are shorter and less plentiful and other crops do not succeed. Butoke provided seeds and simple tools to local associations in six satellites. In the last report we stated that 26.75 ha were planted in the minor season, in six satellites. We left out one satellite, where 7.5 ha were planted, bringing the total to 34.25 ha.

- This year both beans and soy themselves were harmed by heavy rains during the blooming and both had a misharvest (Table 1).

Table 1 – Production of the minor season 2007

Zone	Surface In ha	Input seeds Soy	Input seeds beans	Output soy	Output beans	Soy Returned To Butoke	Beans returned to Butoke
Ntambue	3.00	32.5 kg	0.0 kg	16.0 kg	0	16 kg	0
Tshikaji	3.75	45.0 kg	10.0 kg	85.0 kg	9.0	30 kg	9.0 kg
Tshikula I	9.50	25.0 kg	25.0 kg	67.5 kg	0	13.5 kg	0
Lutempa	5.50	73.0 kg	65.0 kg	70.0 kg	47.5kg	36 kg	23.5 kg
Tshikele	1.00	20.0 kg	0.0 kg	52.5 kg	0	26.25 kg	0
Muamba Muambuyi	4.00	52.0 kg	0.0 kg	0	0	0	0
Bunkonde	7.50	37.5 kg	0.0 kg	30.0 kg	0	15 kg	0
Total	34.25	285.0 kg	100 kg	321 kg	56.5kg	136.75 kg	32.5 kg

- The insignificant yields for soy and beans meant that Butoke could not conserve beans and soy as seed for the main season of 2007. In addition to our own poor harvest, low production throughout the province dramatically increased the demand on our nutrition program, so that what we did produce had to be used for food. This necessitated a difficult search for soy seeds for the main season of 2007, as virtually all producers had misharvests and there are few soy fields to begin with. In 2007 even for beans there was little or no offer on the market at the end of the minor season.

- Even so, Butoke's support of village associations had invigorated an extensive network of development activists and significantly contributed to donor interests. It has led to a surge in Butoke's credibility with other local and international NGOs as well as UN organizations.

- This meant Butoke received the mandate to execute a sizable project with FAO in Luiza and Luambo for 850 households to combat the food security crisis in those territories. This crisis followed the combination of influx of displaced Congolese driven from Angola and an epidemic of mosaic virus destroying the cassava crops in the territories of Luiza and Luambo and other neighboring territories such as Masuika and Kasumba.

- Similarly it has led to a partnership with UNICEF to protect 86 springs, so as to provide potable water and construct 5,000 family latrines and 212 blocks of public latrines in Luiza and Luambo. This addresses the needs of not only the displaced but also the local population, which itself has had deplorable conditions of access to potable water and hygienic disposal of excrements.

- As in the past, the support of individual farmers has been used to bolster some of the most marginalized that had not wanted or had not been able to integrate into one of the associations. In 2006 we started by targeting widows, handicapped and chronically ill. We added for the main season 2006 ex-combatants. In 2007 in the minor season and in the preparation of the major season we added displaced Congolese driven from Angola. These displaced people are still mostly concentrated in territories with common borders with Angola (Tshikapa, Masuika, Luambo), even if many were originally from other territories in the province or even other provinces of Congo. Butoke serves them particularly in Luiza sector and Luambo sector. A nominative list of these displaced valid for these two sectors had been shared by Caritas early 2007 and in September 2007 it has been completed and updated by Butoke with assistance from the migration office.

- Our emphasis on the most marginalized is clearly becoming a strong voice at local, provincial and national level for the recognition of their rights and it is building a network of people committed to development with equity

Main Season July to December 2007

PREPARATION OF THE MAIN SEASON 2007

- The provision of seeds, simple tools and extension services for the local production of major food crops such as maize, beans, peanuts, soybeans and cassava has again been our major approach, with emphasis on high protein crops that do not necessitate fertilizer

- In 2007 our new emphasis has been on the enforcement of the contractual arrangement of return of the same amount of seeds to Butoke. However, with the misharvest in the minor season, the recovery rate in the minor season had been disappointing. The little that was harvested and returned in the minor season was used as food for the malnourished.

- In addition, though the 2007 main season peanut harvest had been good, many of the associations had not taken care in avoiding moisture of the peanuts immediately after harvest and many had begun to sprout while in storage. We had planned to conserve 70% of Butoke's portion of the harvest for seed. However, in order not to lose all the peanuts to spoilage, we ended up using them as food at the nutrition centre and as food for work. Given the poor harvests province-wide, and the resulting increase in hunger, we needed this extra food anyway.

- This meant that the beans, soy and peanuts seeds needed for planting in the main season 2007 had to be purchased entirely.

- The main season in 2006 had yielded about 2 tons of corn seeds, which we used in the main season of 2007.

- Cassava, watermelon and pistachio had to be entirely purchased. For cassava, we had quite a search, because much of the local cassava has been infected with mosaic virus.

- We were all set for a major expansion by hiring more resident agronomists, as we hoped for acceptance of our new project with CIDA with Help The Aged in the lead and collaboration of AIM, CHF, CODE, ADRA, Oxfam (Quebec), and

Terre sans Frontieres. Unfortunately we had still no indication whether it was to be accepted or rejected when the time for sowing had come. The major expansion of the Food Security Program in 2006 used up more than 4/5 of the total funds available. So in the main season of 2007 we were working hard to make the best of the funds that were remaining in the current project and generous individual contributions. We therefore provided fewer tools to each association and asked the agronomists who had received tools the previous year to make do with their old tools. Moreover, for the territory of Luiza we received 1.5 tons of seeds through FAO for 850 families, as this is where the Congolese displaced from Angola are landing.

- Given the resource limitations we were not to be able to satisfy all requests from interested associations. We served older associations first and next special needs groups. We cleaned out those that had not returned seeds even though they had normal harvests and we continued to acquire some new associations. In total for the main season of 2007 we worked with 972 associations, composed of 22,096 farmers.

- The composition of associations is in evolution. More men are joining and showing interest in agriculture. In the main season 2007 men made up 44% of membership rather than 30% when the project started (Table 2). We consider this as a favorable change, largely due to our sensitization.

- In addition, we have continued to increase the proportion of widows in the associations, reaching 14.5% in the main season of 2007, up from 12.6% the previous year.

- Seed farms – We prepared 100 ha in seed farms – 30 ha beans, 30 ha peanuts, 30 ha soy, and 10 ha corn.

- The initial Food For Work model planned for the seed farms was to give the associations who worked the farms none of the harvest, but a variety of other food as payment. Butoke would then conserve 80% of the harvest as seed and 20% as food. However, this model was not working very well. We are not the only ones who have had problems with it; FAO has also had struggled. The workers feel underpaid, not getting the whole harvest, so don't work hard. They also don't understand the reason for keeping seed farms - to create a steady supply of seeds for everyone, and for progressively improving seed quality. They see it as a way of Butoke taking part of their harvest. On some of the farms, low yields had resulted in previous seasons. Part of this was due to climate, but part may have been under-reporting, because associations wanted

to keep more of the harvest for themselves. So culturally, the model doesn't seem to fit well. The model placed smaller fields spread between the zones, rather than centralizing one large field, to create a local supply of seeds. But this has made constant supervision impossible, so that the fields were not maintained.

- We tried to maintain the Food For Work model for the main season of 2007, to avoid confusing the whole plan. We tried to intensify supervision, but were unable to solve the problem.

Table 2 – Associations for the main season 2007

Zone	Number of Associations	Total # of farmers	Number of Men	Number of Women	Number of widows
Ntambue	60	702	302	400	102
Tshikaji	71	1,389	500	889	126
Tshikula I	64	1,238	482	756	209
Lutempa	80	2,200	950	1,250	500
Tshikele	57	1,400	650	750	100
Muamba MB	80	1,645	784	861	258
Kabue	24	719	297	422	100
Luiza *	60	836 (plus 850 with FAO funds)	436	400	255
Dimbelenge	64	1,602	809	793	240
Mueka	49	1,217	577	640	191
Mbuanya	60	1,277	712	565	52
Tshikula ii	75	2,288	1,003	1,285	223
Bunkonde	70	1,424	670	754	187
Kananga**	74	2,756	945	1,811	422
Dibanda	32	269	148	121	38
Kapinga K	25	668	319	349	163
Matamba	27	466	200	266	43
Total	972	22,096	9,784	12,312	3,209
%			44.3	55.7	14.5

- Luiza was to be entirely served from FAO resources. In Luiza the associations are mixed local and displaced persons
- **The Kananga zone very recently was also joined by a special association of the Army camp, with 500 male military working 12 ha, of which 5 ha are corn, 5 ha beans,1 ha peanuts, 1 ha soy

Table 3 – Surface Area for Each Crop (Association Fields)

Zones	Surface areas Associations sowed with particular seeds in hectares							
	Peanuts	Corn	Beans	Cassava	Soy	Watermelon	Pistachio	Total
Ntambue	64	10	9	2	10	2	10	107
Tshikaji	53.1	7.5	13	1.5	20	1	5.5	101.6
Tshikula I	58.5	10.5	18	3	12	1	6	109
Lutempa	85	24	42	2	14	4	27	198
Tshikele	60	11	0	2	10	1	5	89
Muamba MB	51	8	6.2	2	8	1	4.25	80.45
Kabue	22	6	4	2	12	1	5	52
Luiza	64	10	8	2	17	2	10	113
Dimbelenge	65	20	20	2	25	2	5	139
Mueka	49	30	10	2	10	2	7	110
Mbuanya	60	10	16	2	16	2	5	111
Tshikula ii	47	2	17	1	20	2	11	100
Bunkonde	79	8	18	1	6.7	1	5	118.7
Kananga	96	46	49	2	23	2	5	223
Dibanda	36	10	10	1	28	1	5	91
Kapinga K	14.1	10	11	1	20	1	5	62.1
Matamba	18	10	8	1	10	1	5	53
Total	921.7	233	259.2	29.5	261.7	27	125.75	1,857.85
%	*49.61*	*12.54*	*13.95*	*1.59*	*14.09*	*1.45*	*6.77*	*100*

ACTIVITIES and RESULTS of the Main Season 2007

- One of the new associations we took on in the main season 2007 was from the military camp close to Tshikaji. Early in 2007 the camp was getting cleaned up, provided with electricity and refurbished, as the Belgian army is providing support to prepare to reopen the military university there. The first task for the engineering brigade from Belgium was to train Congolese military technicians in rehabilitation, construction and maintenance of the campus. The second important task was to raise awareness among the military that they are there to serve the people and to stimulate development. The Rector of the future University is General Kibongi, who had decided to transform the campus in large agricultural fields so as to feed the students and faculty. He had worked 12 ha and Butoke was asked to provide corn, beans and peanut seeds for the main season, on the understanding that seeds would be preserved for the next round and the rest would be used as food for the future officers. We accepted and we also assisted to locate and buy appropriate fertilizer. We encouraged this initiative as it could assure the soldiers' future officers would be fed and crops of civilians around the campus would be safe. We hoped it might even change the mentality of the army.

- As events were to show this became a noble but vain dream. Soldiers refused to weed the field, so we tried to save the harvest by hiring village women who bravely finished the task. When the general had declared the harvest for December 10, 2007, army thieves arranged to harvest the full 12 ha during one Saturday night.

- What had we achieved? Not what we aimed for, but at least army families had a good quantity of beans for the kids and adults. Also, General Kibongi had found a new resolve to do agriculture on an even grander scale far away from the camp.

- Unfortunately the harvest of the main season was again not very good, this time due to prolonged dry spells during the rainy season from July to December 15.

- The following tables (Table 4) show output for each crop planted during the main season, 2007. As a rule of thumb, a yield of 1 ton/ha is considered optimal for most crops, though we predicted much more conservative estimates in our original proposal. While the harvest in the main season of 2006 had been good relative to other years, it was still below average. The harvest for the main season of 2007 poor for all crops.

- Seed farms – These fields demanded less seeds than we had anticipated, because we were able to purchase better seeds that were sufficient at a ratio of 30 kg per hectare . But the average yield was less than predicted. Again, the climate conditions and the malfunctioning of the Food For Work model resulted in yields of only 40-50% what they had hoped for on the seed farms. Because we have been unable to adapt the model effectively, the seed farms will not be continued. (See Table 5)

- The misharvest was generalized in the whole province, as the climatic change was also general not just in the province but in the whole of Africa. This has contributed to a major food crisis starting in May/June 2008.

- Despite the poor harvest, most of the associations did return what Butoke had given them in seed. This is a step forward from previous seasons. The harvest returned to Butoke was partly conserved for seeds and partly consumed in the nutrition centre. Peanuts were all consumed, because they had been harvested during rain, so again they were too damp to store until the next season. Beans were mostly kept for seed. Soy was all consumed, because it also has a tendency to sprout and is more difficult than others to store. Watermelon and pistachio harvest were consumed. The cassava tubors harvested were eaten, but the clippings were used for multiplication.

- We had planted our cassava fields far from other cassava fields to protect from mosaic virus; but then had problems with theft of tubors, particularly in Ntambue, where monitoring of the fields at a distance was more difficult.

- During each season, Butoke has been called upon, along with local chiefs, to arbitrate rivalries and arbitrary sharing of the harvest. For the most part, we have managed to resolve these issues peacefully. However, during the main season of 2007, the family of one woman who belonged to an association made claims to part of the harvest. A dispute broke out and a member of her husband's family severely injured her with a machete. Butoke was contacted at that point and came to take her to the hospital, where she died. Following her death, Dr. De Sweemer spent a full day with in the village to discuss the situation and help avoid further violence.

Table 4: Harvest of the main season December 2007 from associations

1. CORN

Zone	Surface in ha	Input	Output	Returned to Butoke and reserved as seed
Ntambue	10	250	2,000	500
Tshikaji	7.5	187.5	1,500	250
Tshikula I	10.5	262.5	2,100	550
Lutempa	24	600	4,800	1,400
Tshikele	11	275	2,200	520
Muamba Mb.	8	200	1,600	250
Kabue	6	150	1,200	120
Luiza	10	250	2,000	500
Dimbelenge	20	500	4,000	1,000
Mueka	30	750	6,000	1,500
Mbuanya	10	250	2,000	500
Tshikulla II	2	50	400	0
Bunkonde	8	200	1,600	250
Kananga	46	1,150	9,000	2,100
Dibanda	10	250	2,000	500
Kapinga K	10	250	2,000	500
Matamba	10	250	2,000	500
Total	**233**	**5,825**	**46,400**	**10,940**
%		**12.55**	**100%**	**23.57**

2. BEANS

Zone	Surface in ha	Input	Output	Returned to Butoke and reserved as seed
Ntambue	9	180	1,440	360
Tshikaji	13	260	2,080	520
Tshikula I	18	360	2,880	720
Lutempa	42	840	6,720	1,680
Tshikele	0	0	0	0
Muamba Mb.	6.2	124	992	248
Kabue	4	80	640	160
Luiza	8	220	1,760	440
Dimbelenge	20	400	3,200	800
Mueka	10	200	1,600	400
Mbuanya	16	320	2,560	640
Tshikulla II	17	340	2,720	680
Bunkonde	18	360	2,880	720
Kananga	49	980	7,840	1,960
Dibanda	10	200	1,600	400
Kapinga K	11	220	1,760	440
Matamba	8	160	1,280	320
Total	**259.2**	**5,244**	**41,952**	**10,488**
%		**12.5**	**100%**	**25**

3. PEANUTS

Zone	Surface in ha	Input	Output	Returned to Butoke and reserved as seed
Ntambue	64	2,560	20,480	5,120
Tshikaji	53.1	2,124	16,992	4,248
Tshikula I	58.5	2,340	18,720	480
Lutempa	85	3,400	27,200	6,800
Tshikele	60	2,400	19,200	4,800
Muamba Mb.	51	2,040	16,320	4,080
Kabue	22	880	7,040	1,760
Luiza	65	2,600	20,800	5,200
Dimbelenge	64	2,560	20,480	5,120
Mueka	49	1,960	15,680	3,920
Mbuanya	60	2,400	19,200	4,800
Tshikulla II	47	1,800	14,400	3,600
Bunkonde	79	3,160	25,280	6,320
Kananga	96	3,840	30,720	7,680
Dibanda	36	1,440	11,520	2,880
Kapinga K	14.1	564	4,512	1,128
Matamba	18	720	5,760	1,440
Total	**921.7**	**36,788**	**294,304**	**69,376**
%		**12.50**	**100%**	**23.57**

4. SOY PRINCIPALLY IN SEED FARMS

Zone	Surface in ha	Input	Output	Returned to Butoke and reserved as seed
Ntambue	10	250	2,000	500
Tshikaji	20	500	4,000	1,000
Tshikula I	12	300	2,400	600
Lutempa	14	350	2,800	700
Tshikele	10	250	2,000	500
Muamba Mb.	8	200	1,600	400
Kabue	12	300	2,400	600
Luiza	17	425	3,400	850
Dimbelenge	25	625	5,000	1,250
Mueka	10	250	2,000	500
Mbuanya	16	400	3,200	800
Tshikulla II	20	500	4,000	1,000
Bunkonde	6.7	167.3	1,338.4	334.6
Kananga	23	575	4,600	1,150
Dibanda	8	200	1,600	400
Kapinga K	20	500	4,000	1,000
Matamba	10	250	2,000	500
Total	**261.7**	**6042.3**	**48,338.4**	**10,086.6**
%		**12.50**	**100%**	**20.87**

5. CASSAVA

Zone	Surface in ha	Input clipping	Output clippings	Clippings Returned to Butoke		Output Tubors	Tuborss returned to Butoke
Ntambue	2	20,000	37,000	4,000		19,000	1,900
Tshikaji	1.5	15,000	11,000	1,000		6,000	600
Tshikula I	3	30,000	35,000	3,000		21,000	2,000
Lutempa	2	20,000	20,000	1,500		11,000	1,000
Tshikele	2	20,000	17,000	1,200		9,000	900
Muamba Mb.	2	20,000	15,000	1,100		8,000	800
Kabue	2	20,000	21,000	2,000		11,500	1,100
Luiza	2	20,000	22,000	2,000		12,000	1,200
Dimbelenge	2	20,000	9,000	1,000		6,000	600
Mueka	2	20,000	10,000	1,000		7,000	700
Mbuanya	2	20,000	18,000	1,200		9,500	900
Tshikulla II	1	10,000	5,000	0		3,000	0
Bunkonde	1	10,000	5,000	0		2,800	0
Kananga	2	20,000	15,000	1,000		8,400	700
Dibanda	1	10,000	10,000	1,000		5,600	0
Kapinga K	1	10,000	7,500	0		4,200	0
Matamba	1	10,000	12,000	1,000		6,400	500
Total	**29,5**	**295,000**	**269,500**	**22,000**		**150,400**	**12,900**
%		**109.46**	**100**	**8.16**		**100**	**8.58**

6. WATER MELON

Zone	Surface in ha	Input	Output	Returned to Butoke
Ntambue	2	50	400	100
Tshikaji	1	25	189	47.25
Tshikula I	1	25	176	44
Lutempa	4	100	690	172.5
Tshikele	1	25	150	37.5
Muamba Mb.	1	25	146	36.5
Kabue	1	25	141	32.25
Luiza	2	50	300	75
Dimbelenge	2	50	311	77.7
Mueka	2	50	325	81.25
Mbuanya	2	50	288	72
Tshikulla II	2	50	301	75.25
Bunkonde	1	25	160	40
Kananga	2	50	312	78
Dibanda	1	25	172	43
Kapinga K	1	25	129	32.25
Matamba	1	25	146	36.95
Total	**27**	**675**	**4,336**	**1,081.4**
%		**15.57**	**100**	**24.94**

7. PISTACHIO

Zone	Surface in ha	Input	Output	Returned to Butoke
Ntambue	10	250	1,000	200
Tshikaji	5.5	137.5	550	100
Tshikula I	6	150	600	100
Lutempa	27	425	2,700	300
Tshikele	5	125	500	100
Muamba Mb.	4.25	106.25	425	100
Kabue	5	125	500	100
Luiza	10	250	1,000	200
Dimbelenge	5	125	500	100
Mueka	7	175	700	120
Mbuanya	5	125	500	100
Tshikulla II	11	275	1,100	250
Bunkonde	5	125	500	100
Kananga	5	125	500	100
Dibanda	5	125	500	100
Kapinga K	5	125	500	100
Matamba	5	125	500	100
Total	**125.75**	**2,893.75**	**12,575**	**2,270**
%		**23.01**	**100**	**18.05**

Table 5: Seed Farms during the Main Season 2007

Zone	Surface ha	Crop	Input Kg	Output Kg	Potential seeds
Ntambue	5	Beans	150	600	480
	5	Peanuts	150	700	560
	5	Soy	150	500	400
	1	Corn	30	60	48
Lutempa	5	Beans	150	600	480
	5	Peanuts	150	700	560
Tshikaji	5	Beans	150	450	360
	5	Peanuts	150	850	680
	5	Soy	150	495	396
	3	Corn	90	168	134
Tshikele	5	Beans	150	450	360
	5	Peanuts	150	850	680
Tshikula	5	Beans	150	700	560
	5	Peanuts	150	750	600
	3	Soy	90	345	276
	2	Corn	60	478	382
Muamba Mb.	5	Beans	150	700	560
	5	Peanuts	150	750	600
Kabue	5	Soy	150	500	400
Luiza	5	Soy	150	495	326
	2	Corn	60	112	90
Dimbelenge	3	Soy	90	345	276
	2	Corn	60	478	382
Mueka	4	Soy	120	460	368
TOTAL	***100***		***3000***	***12536***	***9958***
Beans	***30***		***900***	***3500***	***2800***
Peanuts	***30***		***900***	***4600***	***3680***
Soy	***30***		***900***	***3140***	***2442***
Corn	***10***		***300***	***1296***	***1036***

NUTRITION ACTIVITIES

Our nutrition center in Tshikaji has continued to receive regularly severe cases from up to 100 km distance, exceptionally even 500 km distance. Many of the children are referred by the agronomists and associations, while some families of malnourished children were referred by families we served before.

- From January 2007 to end February 2008 we received 252 cases in residence and 420 children with moderate malnutrition came 3 times a day from the surroundings of the center.

- Our rehabilitation rate is high for severe malnutrition, better than 95%. The treatment is based on the modified WHO protocol, starting with 12 small but balanced meals, leading to 5 meals a day and finally three full meals and 2 snacks. We have been able to further improve the speed of recovery by introducing snacks of fruits or bread, peanuts or even pilchards served three times a day. The bread contains wheat, some milk and some sugar and is baked in our own oven. It is a hit with almost all the children and is easy to serve and conserve.

- Nutrition education as such has been provided through the mass media, including five broadcasts of half an hour on two radio stations, one in Kananga and one in Luiza. (Note: These five broadcasts, were, in fact re-broadcasted several times.) We felt we needed to reinforce the teaching on nutrition being done at the nutrition centre, particularly the link to child spacing and the right to life. The nutrition broadcasts were relatively straightforward, in the form of lectures given by Dr. Jean Lumbala, including examples we have seen in our work. We have since become a little more sophisticated, using more of a panel approach. Dr. Jean systematically covered the following topics

    - importance of breast-feeding
    - child spacing – closely linked to nutrition
    - complementary feeding as of six months
    - frequency of meals for children – very hard to get across here, as people think one meal per day is fine
    - importance of balanced feeding
    - importance of fruit and vegetables - considered famine food

- symptoms of marasmus and kwashiorkor

- We have no sense of how many listeners were reached, because no one collects that data. Radios are rare, because they are relatively expensive ($10), but each radio is listened to by many people. Therefore, the broadcasts likely reached a largely middle class audience. This group needs the lessons as much as the poorer population, as they have no concept of nutrition, still tying it to witchcraft. They are also the group with the means to act on the principles presented.

- In our nutrition center, nutrition education has had to be transformed into more comprehensive child care education, especially for the severely malnourished. All care is to be provided by the mothers or guardians under the supervision of our personnel, and few if any of these mothers and guardians have healthy child raising practices. Our instruction addresses the following issues:

  - As malnourished children die often from hypothermia and hypoglycemia, keeping the kids warm and avoiding long gaps between meals are the two first concerns we try to get across.

  - Next come the daily bath and washing hands before meals, and chlorinating water to drink.

  - Third, we encourage responding to child cries and tears, willingness to try to satisfy child demands of particular foods, need to caress and play with child even if the child seems almost indifferent or cranky.

  - Last but not least, we discuss child spacing as the lack of proper child spacing is one of the major causes of malnutrition in the province, as is irresponsible sexuality.

- Anthropometric Survey – We completed three surveys in February 2007 and June 2007 and December 2007. These were completed in Tshikaji, and they confirmed the fluctuation over the course of the year in nutritional status of the population. December is the worst month; February is slightly better; June is the best. After June, it seems to stay somewhat stable to September/October, after which it declines until December.

Goals/Expected Outcomes and Indicators and Actual Outcomes

Goals/Expected Outcomes	Indicators	Actual Outcomes
A. Improved food security in selected food deficient villages:		
• Increasing local production of major food crops, maize, beans, peanuts, soybeans	Indicators will be based on records of harvests maintained by the associations and controlled by Butoke and the village chiefs.	Greater surfaces worked by associations, but harvests mediocre due to climatic conditions. Outside associations, production activity has increased, especially visible in Tshikaji. People are catching on to the survival value of farming.
• Increasing the conservation of seeds in associative stocks and encouraging families to keep the largest share of harvest as familial reserves for consumption.	Indicators will include the availability of seeds next season and food prices after harvest (lower than last year in USD value) and after 3 months (some stabilization of prices is expected).	Availability of seeds only slightly improved Food shortage as off May 2008 Price of food reached record highs in August 2008
• Improve quantity and quality of seeds available to the associations, close to the villages	Indicators will include the availability of seeds from Butoke's own seed farms (see below), and the input/output yields of seeds used to output both on our own farms and on the crop fields.	Failed to achieve due to poor harvests for associations and general population, and also because of poor care of the seeds that were conserved.
B. Improved nutritional status of the general population:		
• Improved nutrition of mothers and children under 10 years old, in all participating villages	Indicators will include the overall sentinel indicator, Body Mass Index (BMI), of mothers and children that participate, and of others, taken seasonally over two years.	Improvement among participants. Sadly deterioration among others
• In Tshikaji even more pronounced improvement of the weaning age, up to five years old	Anthropometric surveys as above	Only 4 children developed severe malnutrition, parents detect and recognize moderate malnutrition and bring them for care

• Increased frequency of meals to at least two or three per day for children under six years of age.	This will be monitored in focus groups at three-month intervals in Tshikaji and a village reached by mass media and associations.	Partially achieved given the food shortage
• Rehabilitation of people suffering from mild to moderate nutritional deficiency as well as severe malnutrition and synergistic infections and parasites in Tshikaji area	Number of people treated and maintaining satisfactory nutritional status at Butoke's nutrition centre.	Out of 672 treated only 6 didn't maintain a satisfactory status
• Increased levels of social solidarity with the elderly and the handicapped, widows, orphans and abandoned children.	Interviews and focus groups.	Achieved with the associations. Increased inclusion of elderly (over 50) to about 15%. Associations regularly refer orphans and malnourished to Butoke for support.

Activities, Expected Outputs and Actual Outputs

Activities and Expected Outputs	Indicators	Actual Outputs
Preparations for agricultural production		
• Total four sessions of planning, follow-up and training of team of Agronomists (two days each on the following topics: preparation of fields, sowing, weeding and harvesting). • Total two meetings with associations per season. • One field visit to each association and its fields every two weeks for supervision and monitoring by field agronomists. • The supervisor visits in the field with each agronomist at least once every two weeks or more frequently when indicate • There is a team meeting with mutual reporting once every two weeks under the leadership of the coordinator.	Records and reports. Bi-weekly visits to each association will be documented by written reports signed by both parties. The coordinator will analyse and comment all reports and make field visits to trouble spots.	Done

Seed and Tools Distribution		
• Seeds and tools will be distributed in time for each planting season to the associations, according to need, and with due regard to reducing dependency on Butoke support over time, according to agreed upon plans.	Records of quantities of seeds and tools distributed. Reduced needs for support, over time.	Done In terms of support needed, the associations now have the technical knowledge they need, and require less follow-up in that regard. However, given the poor harvests and the influx of refugees from Angola, provision of tools and seeds has still been necessary.
Seed Production		
100 hectares will be cropped each season as seed farms. Total production of the seed fields in the first crop season (June-Dec. 2006) is expected to reach 23,160 kg (soybeans, 7,200; peanuts, 8,400; beans, 6,300; and corn, 1,260). Production of bean seeds in the second crop season is expected to reach 21,000 kg. 80% of this will be retained for use as seeds. The rest will be used to help feed workers on the seed farms in the subsequent crop season, or by the nutrition centre. Productivity of the seed fields is expected to increase somewhat in the second year, as the quality of seeds improves, but we are unable to provide an estimate of how much this might be.	Production records. Improvements in productivity will be monitored from season to season.	Efforts for productivity done Production in main season 2006 was better than expected, except for soy (soybeans, 900 kg; peanuts, 25,200 kg; beans, 15,500 kg; and corn, 10,000 kg). No seed fields planted in the secondary season of 2007. In addition to spoiling of conserved peanut seeds, this left no seeds for the main season 2007. In the main season, production of seed fields (100 ha) was even lower than association fields, due to climate and failed FFW model (Beans 2800 kg; peanuts 3680 kg; soy 2442 kg; and corn 1036 kg).

Expected Impacts and Actual Impacts

Expected Impacts	Indicators	Actual Impacts
• Improved food security in a number of food deficient villages of Western Kasai	• Increased food production activities among the target population	We have seen increased food production activities, both among our associations and in their villages. However, food security in these villages has not been improved, due to declining food security province-wide. But relative to other areas, the areas where we work have fared better in the last two years.
• Improved nutritional status of the most disadvantaged and vulnerable groups in those villages	• Diversification of production in favour of more nutritional crops • Increased food access for vulnerable populations • Development of more nutritious food consumption habits	We have seen some improvement, but not as much as we wanted. Both in villages and associations, more nutritional crops are being taken up, particularly beans and peanuts, though not yet soy We have seen more nutritious consumption habits with kids (e.g. more rice and beans). More than before, mothers who come to the nutrition centre will complain that they have not been able to follow nutritious feeding habits, showing a recognition of what has been taught. We have not yet seen adults changing their habits, and there is not yet recognition of the need for more nutritious food for the elderly.

Challenges, Achievements and Lessons Learned

- In 2007, the police were put on a weekly clean-up action where they themselves sweep the streets. Not bad at all. But so far no sign that all understand they should serve the people too; rough language and inconsiderate law enforcement against informal traders (mostly orphans and widows) even manhandling in public and destroying food in front of hungry traders and potential consumers seems still the vogue, even though it seems the MONUC is actively questioning the authorities on this and we have spoken out against it on the streets. Memories of the dictatorship still intrude and silence even the best in the face of actions that symbolically defy efforts at food security.

- As shown by the theft of the harvest on the military camp, we also found working with the military to be a challenge. One of our goals in working with the military was to protect the fields of the surrounding community. Perhaps since the military had its own field to rob, we did in fact succeed in protecting some other fields.

- As we have seen with the spoiling of the peanuts that were to be conserved as seeds, if we want to conserve seeds from one harvest for planting in the next, we need to do more work on seed storage. We often find that harvesting has to be done in the rain, which then makes storage difficult, particularly for peanuts and soy. In the future, we will try to work on this issue, but it is not easy, because it demands the creation of granaries. We are unsure whether we should encourage individual granaries or collective granaries.

- We have improved over the course of the project at enforcing the contractual agreements with associations to return the seeds given by Butoke. However, with the poor harvests experienced throughout the province, this has been a big challenge for the associations, who feel they do not have enough then for their own seeds and food. We have therefore re-evaluated this model for later seasons, asking only that associations agree to conserve seed for their own fields.

- While we envisioned developing seed farms to produce good quality seeds locally, we were unable to maintain these fields on the Food For Work model we had laid out, and have decided to try a different model on a smaller scale.

- The climatic change that is affecting all of Africa has been a major challenge to the success of this project. Because of repeatedly unpredictable and unreliable rainy seasons, the food security situation in the province as a whole has

continued to decline during the course of the project. Having said that, those who are participating in our associations and to a lesser extent those close to them who have observed and emulated their activity are better off than the general population. So in that sense, our work has been a success.

- The two years of this project have provided a good opportunity for Butoke to gain credibility as an important player in the development of Western Kasai. We are now actively collaborating with UNICEF, WHO, FAO, and others in pursuing an integrated development strategy for the province. Though this was not a goal of the project, we consider it a major achievement.

- We maintained the nutrition centre and thus formed a basis for major expansion of nutritional work in the province, now being considered by UNICEF, in partnership with the government and IMCK Tshikaji (local Presbyterian hospital).

Conclusion

The project aimed at increased food security and improved nutritional status and achieved only some stability in food security for participants and definite improvement in recognition of the importance of local production to food security as well as improved recognition of moderate degrees of malnutrition by the population and therefore timely treatment. The children treated for moderate and severe malnutrition recovered and maintained their status in 94% of cases.

The project was a frank success in terms of popularizing a participative mode of development and gave high visibility both to the CIDA/AIM support and Butoke as a local NGO.

ERROR: undefined
OFFENDING COMMAND:

STACK: