Narrative Project Description

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

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1. Partners

This proposal has been prepared for consideration by the Canadian International Development Agency (CIDA) Innovation Fund. It is being submitted by Africa Inland Mission International Canada (AIM), in partnership with Butoke, a Congolese NGO. This is a proposal for an innovative multisectoral initiative closely aligned with the priority needs expressed by the beneficiary population in two of CIDA's priority sectors: 1. private sector development (agriculture) and 2. health and nutrition. The project aims to help some of the poorest segments of the population of Western Kasai province of the Democratic Republic of Congo to achieve improved food security, sustainable livelihoods and better nutrition.

1.1. Africa Inland Mission International Canada (AIM)

Africa Inland Mission has been involved in relief and development projects in Africa for most of its 109 years. For the past 3 decades, AIM Canada has focused on a variety of responses to the many needs in the 15 countries where AIM has developed a ministry focus. Democratic Republic of Congo (DRC) is one of the countries of AIM involvement, and has included work in the areas of food security and nutrition, although, to date, not in Western Kasai province. This project will allow AIM to extend its activities into a new part of DRC, where needs are great, and where the current situation has stabilized enough to allow a rebirth of economic and development activity.

By partnering with Butoke, AIM hopes to benefit from Butoke's experience and expertise at the field level, while bringing to the project not only the funding that Butoke needs to operate, but also the lessons of experience from AIM's work elsewhere in Congo and beyond. AIM will undertake a major fundraising effort in Canada, with two mail outs of 7,000 each over the next two years, and the Director plans to visit Butoke once a year. AIM would also like to send one or two missionaries to work with Butoke under mutually satisfactory terms of reference.

1.2. Butoke

Butoke was formed in March 2005, and recognized by the Governor of Western Kasai province in the Democratic Republic of Congo. Its headquarters are in Kananga, the capital city of that province. Butoke is firmly ecumenical and apolitical. It enjoys the support of local religious groups, of traditional chiefs and of civil authorities. Its members include 57 civil and religious leaders, with representation from all areas of civil society. Butoke's overall purpose as described in its statutes is "to contribute to integrated rural development and to human development." Its objective with regard to food security and nutrition is expressed as follows:

> "Butoke will contribute to food security and income generation, using a participatory approach, by giving support to the planning and execution of village-based projects that are based on felt needs, and by proposing scientific methods of efficient agro-forestry and income generation, while encouraging transparent local planning and management. These interventions will be evaluated for their contribution towards food security, the improvement of nutritional status and the improvement in capacity to manage locally collective initiatives."

For more information on Butoke, please refer to the full version of its **statutes and rules of internal order** on our website (**http://www.butoke.org/**). Butoke has organized itself into seven technical cells, to create dialogue among all concerned parties on a variety of human development issues:

- Legal Status and Human Rights
- Development Management
- Information, Education and Communication
- Rural Integrated Development and Agriculture
- Health
- Education
- Holistic health and pastoral care.

A function of these cells is to help deepen Butoke's understanding of development problems and priorities in each area. This function is reflected in Butoke's name, which means "light" – in this case, the light of understanding. Butoke's statutes permit it to act as an implementing agency, to provide support for other NGOs and civil society organizations or to engage in remunerated consulting work.

1.3. Coordination With Other Efforts

To date, two Canadian NGOs have been supporting Butoke's activities. The Adventist Development and Relief Agency (ADRA) has supported Butoke since the summer of 2005, and was joined in the fall of 2005 by Help the Aged. AIM intends to work closely with ADRA and Help the Aged in supporting Butoke. Indeed, the Directors of both Help the Aged and AIM are planning to visit Butoke in the Spring of 2006, and the intention is to coordinate these efforts, and to share field-level information with ADRA.

In Congo, there are other food security efforts in the region with which Butoke will collaborate. These are sponsored by the Bureau Central de Cooperation, the European Union, Belgian Technical Cooperation, and FAO. Some international NGOs (principally Caritas) finance some local NGOs to work with farmers' associations. Butoke will make every effort to share experiences with those involved in these projects and to avoid duplication of efforts.

2. Context

2.1. General Information and Political Context

Butoke works in Western Kasai province of the Democratic Republic of Congo, and within that, primarily in the centre of that province. Western Kasai has a total population estimated officially about at seven million people. Its capital, Kananga, has a population estimated at about 900.000. Western Kasai, especially the forested area around the territories of Mueka and Luiza, is traditionally the breadbasket for both Kasais and Katanga. People from these two provinces still come and buy maize and manioc in Western Kasai.

However, the civil unrest that has characterized the Democratic Republic of Congo in the last 45 years has had calamitous effects on the province's agriculture, disrupting landholding patterns and livelihood options for the population. A large part of the population consists of refugees displaced either internally or from other areas, including from Katanga and from Angola. It is estimated that one third of the population are refugees or displaced persons.

The biggest forced migration took place in 1992, following a movement to expulse from Katanga of all people originally from Kasai. This was accompanied by massive deaths before, during and after the migration – a true genocide. This left most returnees in the Kasai with incomplete families and no resources for a new start. Some refugees from Katanga have now been integrated

in the province, but several tens of thousands skilled manual workers are still in settlements in and around Kananga.

In 1996, began the war of “liberation” with Laurent Kabila and the Rwanda and Uganda armies. These armies invaded and created insecurity in the villages. This was followed in 1998 with a second war and a rebellion among Kabila’s allies. In Western Kasai, Mutoto, Dembelenge, Benaleka and Kakenge were directly affected, and there was a large migration, leading to further neglect of agricultural fields. For example, in and around Mutoto, people have only started coming back since 2003-2004 and one third of the people have there for less than a year. They have no or little agricultural tools left, no seeds, and little energy to work the land. Given that the official army also goes unpaid, ravaging fields has become a frequent event, even recently.

In 2004, there was a genocide against Congolese living in Angola. People again fled for their lives. Many people died, and those that survived arrived with nothing and are in unofficial settlements on the periphery of Kananga. Many lost their children or parents, don’t know their extended family, and are totally unsettled yet. Similarly, people fleeing the ongoing war in the East usually arrive in Kananga without any ties to the local population.

As the Kasai is in the hinterland of main events, outside support to these waves of refugees has been minimal and often non-existent. The current crisis has lasted 10-15 years in most of the villages, and in many, it has become progressively worse. Villagers have adopted a range of coping mechanisms, but many of these are desperate measures that add to the problems of survival over the long term.

For instance, young men tend to leave the village abruptly before, or even after, marriage, and migrate to the areas of Tshikapa and Mbuji Mayi to participate in freelance diamond mining. Life in these areas is hard, full of thefts and violent crimes, alcohol, hashish and sexual promiscuity. In general, the men who leave come back dead, or ill, or totally disappointed. However, the few exceptions to this rule send a signal to villagers that it can be otherwise, and feed villagers’ hope that their sons with strike it rich and be able to help them.

Unattached or separated women as young as 13 years of age, and as old as in their 50s, may be willing to provide sexual services for a meal or less, and most handicapped women become prostitutes out of necessity. Even some married women with husbands that are not contributing display the same behaviour.

Democratic Republic of Congo is still not at peace, but the zones chosen for this project seem secure and at very little risk of armed conflict. Political instability is in the air as people want a new and elected government, but any disturbances are likely to be concentrated in the centre of larger towns.

2.2. Nutritional Status of the Population

Following this long period of instability and civil unrest, the food situation in Western Kasai is dramatic, approximating famine conditions. Even “middle class” people obtain only about 60% of the calories they need. The most vulnerable groups are children, the elderly, and people who have migrated recently. Over 70% of population are absolute poor caught in a vicious circle of lack of food production causing lack of access to seeds and lack of energy and strength for productive work.

A 2003 UNICEF study found that more than 60% of children under the age of five were malnourished. Acute malnutrition is worst among toddlers, with many cases of kwashiorkor and marasmus, but chronic malnutrition is manifested in stunting of many children under ten years old. Fully 60% of village women and youngsters exhibit a very low Body Mass Index (BMI). The more remote the village, the worse the nutritional status of the population.

Corn and cassava are the local staple foods in the region. Those who can afford it mostly consume these foods as a blended paste called bidia paste. Poor people mostly consume paste from cassava flour. The paste is preferentially consumed with a fish relish (small dried fish or salted fish) that is often combined with some leafy vegetables. In the last 10-15 years, food shortages have created the habit of eating only one bulky evening meal. Before that, people ate two or three meals a day. Women prepare food at home, usually after dark. The mother dishes out the food individually as people arrive or as children are awakened. Children tend to be given a little bidia paste with some sauce and little titbits of fish or vegetables.

During the hungry months (especially October, November, and December), people restrict physical activity to save calories and blame supposed sorcerers for the many deaths that take place. However, these are also the months when fieldwork should be done to prepare for the secondary crop season.

2.3. Food Production

For much of the population, there is no tradition of food cropping for consumption, so even basic farming skills are limited. Although food production today is one of the few livelihood options open to the population, the extreme poverty in which people find themselves makes it difficult to make a start, since there is no money for tools, seeds and other inputs, and hunger robs them of energy for engaging in fieldwork.

Village land around Kananga consists primarily of savannah or deforested areas with sandy soils. Agricultural yields are often meagre, especially for crops such as corn that require relatively fertile soils. All fields are rain dependent, and erosion is a serious problem, especially in the sandy savannah area. Furthermore, the unselected seeds available on the market are of uncertain quality. As a result, germination rates and yields are unreliable.

Family plots in most villages in and around Kananga, Mutoto, Lubondaie and Bukonde, range from 1/16 to 1/8 of a hectare, on which staple agricultural products are grown. However, these products are sold cheaply at harvest time to pay for consumer goods, or to cover school fees and taxes. The same produce then has to be bought by the villagers at higher prices later in the year.

These village plots are manually worked, according to a traditional division of labour: clearing is mostly done by men using machetes, hatchets, and spades; the ploughing is mostly done by women, using traditional hoes with short handles of 30 cm or less; weeding is done by all available family members, including children; and harvesting is usually done by the women.

Women and children carry the harvest to the village or to the market on their heads. This is partly due to the lack of carts or bicycles, but it is partly dictated as well by the disrepair even of major access roads between villages and markets. Roads are in such a bad state that the only feasible means of mechanical transport is often to hand-push a bicycle. This is a major obstacle to marketing that further discourages production.

Corn is mostly produced in a green belt around Mueka (300 km from Kananga). But even the major food producing areas around Mueka are affected by lack of inputs, limited access to markets, and lack of transport. Most marketed produce is sold outside the province, to people from neighbouring Kasai Oriental and Katanga, who are better off and can pay higher prices.

There are two cropping seasons: the main season, which extends from August to December; and a secondary season, extending from February to June. Hungry seasons are the periods just before harvest, when stocks from previous harvests are at their lowest point.

2.4. Access Issues

Butoke works in villages that are among the most severely affected by problems of food insecurity. This insecurity results first and foremost from poverty, but also from deficient transport and marketing structures, absence of granaries, and the collapse of social structures. Food is scarce, unevenly distributed, and difficult to access.

As transport and marketing is very deficient, prices within the province vary greatly. They are lowest in Mueka and in the town of Kananga, which are joined by a direct train link and inversely proportionate with the distance to town as the transport to the far off villages is done on bicycle and foot, and prices double roughly every 30 km. Food prices in Kananga are 100% to 200% higher than in the major producing areas, due to the high cost of transport, combined with shortages due to the irregularity of rail transport from Mueka to Kananga.

Food is expensive, because supply is low, and much of that supply is exported to the neighboring provinces of East Kasai and Katanga. The provinces of East Kasai and Katanga have a much higher economic level than Western Kasai, so people can pay higher prices. This has the effect of deepening the shortage of supply in the Western Kasai. The worst hunger is in the remote rural areas.

Women traders do buy food in small quantities in Kananga and bring it on foot to their villages, sometimes as far as 200 km away, but food prices in villages removed from the major producing areas are 50% to 200% higher than in Kananga town, and are extremely sensitive to speculation and shortages.

Access to food is most problematic in many of the rural areas and for biologically vulnerable groups, namely children under 10 years old, mothers, and people over 50 years old. To this group can be added the socially vulnerable, notably widows and the handicapped, who are disadvantaged by their very low social status.

Most houses have no granaries or proper storage spaces, and this situation is mirrored at the community level, where the only common storage spaces are those left from previous food security programs. Preservation of seeds for the next season, and even of reserves for consumption, has become exceptional.

Prolonged social and economic crisis has destroyed the multigenerational extended family groups that existed in the past. Families today consist of parents, children, and often one younger sister of the wife, assisting her. This means that elderly parents, especially widows, are not systematically provided for. Most are abandoned, and even labelled as sorcerers or witches, as their demands are felt as undue burdens on the family unit. Relatively often, grandmothers and some or all of their grandchildren form alternative nuclear families bereft of outside support.

2.5. Social and Cultural Practices

Any serious program in food security and nutrition in the region needs to pay serious attention to social and cultural practices. These include unhealthy food habits and inadequate attention to the food needs of the biologically vulnerable and of certain social groups such as pregnant mothers, small children, orphans, widows, the elderly, and the handicapped.

The most harmful food habits affecting the whole of the population are eating only one meal a day, consisting of a bulky late evening meal of cassava and/or maize paste; and very limited consumption of vegetables, which are considered famine food. Adults rarely eat fruit. These habits are especially damaging for children of weaning age but they affect everyone negatively, handicapping people in defending themselves against infections, and in their ability to be physically and mentally productive.

3. Butoke's Strategy

3.1. Project Rationale

Butoke's analysis suggests that the most pressing priority in Western Kasai is for simple investments in food and nutrition. Alternative sources of employment are rare, and other investments – for example in health and education – will not yield sustainable results if people do not have enough to eat. Yet, the potential exists for improving this situation, thanks to the availability of land and labour and the return of relatively peaceful conditions to the region.

Intervention by Butoke can help people to get re-established in agriculture or to enter such activities for the first time, and to promote the introduction of more nutritious crops and nutritional practices. This is where Butoke has decided to concentrate the bulk of its efforts and resources.

3.2. Work to Date

Butoke began its work on food security in 2004, even before its establishment as an independent NGO. The Butoke team undertook to promote the cultivation of collective fields of maize, peanuts, soybeans and pistachio nuts in four pilot localities. Farm groups were provided seeds and basic tools (hoes, machetes) and were encouraged to adopt economical and locally adapted approaches to ploughing, sowing, and weeding. Butoke contractually arranged for them to keep part of their crop as seeds for the next season. Support was provided to 95 associations of about 2,600 small farmers and to about 1,700 individual farmers. In the summer of 2005, Butoke secured some funding to pursue this work for the main planting season, which begins in mid August. As a result, Butoke was able to support 208 associations of small farmers and approximately 700 farmers working individual family plots.

The demand to participate in Butoke's food security activities following the success of our work in 2004 greatly exceeded expectations, and the rapid spread of Butoke's involvement with a large number of associations is an indication of Butoke's growing reputation. Indeed, these actions have become part of the local lore, as the grand chief has declared they were the realisation of a prophecy by his grandfather that prosperity would be brought to the province with the help of foreigners.

Churches of seven denominations held a common ecumenical service in June 2005 giving glory to God for what was accomplished and prayed that God might continue to bless Butoke's work.

The experience of the last two years shows that people are clearly ready to make a great effort to restart their lives. For Butoke's team, the experience has been fraught with difficulties but reassures us that the team has the courage and hardiness it takes to support this many associations.

3.3. Butoke's Approach

Butoke's approach is different from that of other agencies in two fundamental respects. First, we make maximum use of a bottom up approach; and secondly, we use locally available tools and seeds, relying heavily on local knowledge about seeds that are best adapted to the ecology and able to resist locally prevalent diseases.

Butoke's experience to date has taught us the following major lessons:

- The proverbial reluctance of the population to engage in agriculture in these food deficient villages can in fact be overcome by providing inputs such as food aid, tools and seeds and, where indicated, fertiliser, along with follow-up encouragement and moral support.
- To be successful, work on nutrition has to be combined with work on food production. Nutrition education has been done for 30 or more years in some of our villages and has not led to improvement, because there has been little attention to food security as a precondition and even less attention to the workload of women.
- Nutrition education currently is still hard because adults have difficulty appreciating the need for balanced and varied meals. However, for small children, malnutrition and its cure are easily demonstrated and this can serve as a powerful incentive.

Butoke has applied these and other lessons of experience in designing its intervention strategy. The current proposal includes a range of activities that combine in an innovative and synergistic way to help re-establish the agricultural cycle and to directly address some of the most severe nutrition problems. In the area of food security, we will continue to work in selected communities through village associations. In some cases, we will also provide support directly to individual households. We will also develop a number of seed farms in support of our work with these communities.

The elements of Butoke's strategy include the following:

- 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 our own seeds, in order 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.

Butoke has operated either in response to requests by pre-existing village associations or by stimulating local groups to organize themselves. We also encourage them to establish clear structures and work teams, and to specify the rights and duties of members and leadership, including those of traditional chiefs. Membership of these associations is voluntary, and is not based on clan or tribe. Some associations are based in parishes or temples, but Butoke and its leadership are ecumenical, and virtually all religious denominations are represented among the associations supported.

The leaders of each association are invited to produce action plans, in collaboration with Butoke's agronomists, and these are discussed with the members. Butoke encourages the associations to adopt the highest level of transparency, and at harvest time, the crop is shared openly, with everyone present. Each association is contractually obligated to set seeds aside so that the association can repeat its productive activities the next season and free up resources for Butoke to be able to extend its support to new groups.

3.4. Geographical Focus and Choice of Crops

Butoke has worked with a total of 208 village associations to date. These are located in 55 villages in four territories (Kananga, Dibaya, Demba, and Kasumbu). All are in Lulua district, where the dominant ecology is savannah, and food deficiency is most severe. As shown in the attached map (not available at time of submission due to Internet transmission problems in Kananga), these territories are located in the centre and towards the southeastern part of the province.

Butoke has received requests to extend its involvement geographically. However, under this proposal we will stay with the associations we have worked with in 2004 and 2005, with the intention of bringing them closer to sustainable food security over the next two years. Annex 2 provides details on the location of these associations, which are currently working 201 ha in total. We expect to expand this coverage to 300 ha for the main crop season of June – December 2007.

We have grouped the communities with which we will be working according to their accessibility by road into three major zones:

- Zone A with headquarters in Ntambue
- Zone B with headquarters in Tshikaji
- Zone C with headquarters in Tshikula.

Supervisory agronomists are assigned zones grouped according to their access routes. Transport of supplies for the associations will have to be done by bicycle, as well as motorized transport where possible. Given the disrepair of the roads, motorized transport is extremely expensive and hazardous.

Butoke will experiment with a range of crops. In the principal crop season extending from June to December 2006, we will be providing seeds for pistachio nuts, soybeans, peanuts, beans and watermelon, over a total surface of 200 ha as elaborated in section I-4 of Annex 1. Our support in the second principal crop season will focus on soybeans, peanuts, beans and corn. Our aim is to encourage some crop diversification, while concentrating Butoke support on the most nutritious crops. In the secondary season that extends from December to June, climatic conditions are most favourable to beans, and we intend to focus all of our efforts on this crop.

3.5. Seed Farms

A relatively new activity for Butoke, being included in this proposal, is the establishment of seed farms in each of the three zones. This will permit us to progressively select better performing seeds, while ensuring close proximity to the associations in each of the three zones covered by the project (see section 4.1.1). This activity will also provide a secondary source of food in the form of produce unfit for use as seeds to feed malnourished children, elderly people, and prisoners who otherwise would have no ready source of food. These seed farms will fill an important gap for good quality seeds, which cannot readily be purchased on the market. Current yields for seeds purchased on the market are very low, with high rates of spoilage and many seeds that do not sprout.

We established a first seed farm in the fall of 2005, on two ha for local niebe beans. For the principal crop season, we plan to expand seed farming of niebe beans to at least 30 ha (10 ha in each zone, organized in plots of two ha each, so that they are close to the associations), and to add seed farms of the same size and number also for soybeans and peanuts (i.e. five farms of two ha each per zone, per crop). We will also cultivate 10 ha for corn seed in one or two of the zones. Our seed farms will thus total 100 ha, consisting of 50 small farms of two ha each. During the secondary season, these 100 ha will be cropped entirely for the production of bean seeds.

Although corn is a staple food in the region, corn production in the savannah is dependent on the availability of fertilizer. With limited budgets to invest in agricultural inputs, Butoke thus finds it much more difficult to include corn among the crops we support. However, we would like to initiate some work with this crop to prepare people to improve corn cropping where fertile fields are available. We think that dependency on fertiliser can be managed by making use of crop rotation, mixed cropping and corridor cropping.

Seeds produced and selected for quality from the first cycle of seed production will be used as inputs for subsequent crop cycles, both on the seed farms themselves, and on land cropped by the associations. As seed quality improves, it should be possible to crop increasingly large surfaces with the same amount of seed.

3.6. Granaries

Granary space will be required for the storage of both seeds and harvests. However, we have not included investment in granary space as part of this proposal, due to the ceiling on available funding. Butoke already has a central granary at Tshikaji that will be able to serve its principal granary at the time of the harvest. Other granaries will be partly improvised in unused spaces of missions and parishes, or financed from alternative sources of funding. As a last resort, Butoke will draw upon the monthly pension of Dr. Cecile de Sweemer, as it has in the past.

3.7. Nutrition Education

Our work on nutrition under this proposal will involve a number of actions in three areas:

- Nutrition education through the mass media and through our nutrition centre in Tshikaji
- Growth surveillance
- Nutrition rehabilitation for people suffering from second and third degree malnutrition.

Butoke's efforts in these areas are perforce limited, given Butoke's modest resources compared to the scale of the problem. At this stage, we will combine efforts at public education through the mass media, and work through our recently opened nutrition centre in Tshikaji.

Our plan for nutrition education through the mass media includes the production of one broadcast of 30 minutes a week on three channels: the national radio and two private radios. This will be done using sketches, dialogue and case studies. The case studies will be real cases involving live interviews whenever possible.

We also have plans to train 110 village-based nutrition promoters (two per Butoke village), each of whom would be responsible for nutritional education in his or her village, but we could not integrate this into the budget of the present project due to CIDA's ceiling on the size of the budget for Innovation Fund projects. We intend to raise funds independently for this initiative.

3.8. Tshikaji Nutrition Centre

Harmful food habits lead many children particularly during weaning age and beyond into progressively deepening malnutrition especially up to six years of age, sometimes well beyond. Butoke will try to stem this evolution through nutrition education. However, our past experience suggests that mothers are most sensitive to the practical demonstration of the importance of frequency of meals, balanced food and calorie enrichment, that are part of any good rehabilitation program.

This can best be achieved when operating a nutrition centre at the village level. Such a centre provides an opportunity for people in the community to see the results of improved nutrition for themselves. It can also be used to illustrate case studies to be popularised through the mass media. In this way, a good nutrition centre not only performs the immediate role of saving children's lives; it also becomes an important support for the promotion of improved nutrition practices. That said, nutrition centres to date have not had very good success in the region (see Annex 3). Butoke intends to draw lessons from past experience, by focusing the bulk of its efforts on food security and combining this in an innovative way with work on nutrition.

In 2004, the Butoke team organised meals for abandoned and orphaned children in Tshikaji, which is at the centre of Butoke's actions in the province. Even though we could only provide one meal a day, the health and growth of these children improved visibly. We continued to receive cases during 2005. We feel strongly that, through trial and error, we can develop a workable model of a nutrition centre that can be replicated in other villages.

In November 2005, the IMCK (Institut Medical Chrétien du Kasai at Tshikaji) closed its hospital based nutrition centre, and we saw an immediate necessity to fill that gap by opening a nutrition centre in Tshikaji village, within easy access of the villages of the Nkonko groupement. Because we started functioning in middle of the hunger season, we had to concentrate first on rehabilitation of 65 severe cases. Most are children under five years old, but they range from eight months to 14 years. Children in the worst condition, suffering from third-degree malnutrition, are offered four meals a day at the centre. Those suffering from second-degree malnutrition are offered two meals a day at the centre, with the mother or another family member helping out. Children in difficulty are checked for anaemia and parasitosis, and other infections and given relevant treatment. Parents are asked to continue providing the meals they offered before, so that the centre's contribution is additional to that.

Butoke's centre will do active growth surveillance of children aged four months to six years, on UNICEF growth surveillance cards, of all families living in Mutanda or Kamenga village that wish to participate. Recruitment for this surveillance will be through the associations and the parishes. Growth deceleration will be discussed with the child's family, and solutions will be sought, at the family level or in the centre, to increase number of meals and nutritional balance of meals. Malnutrition, even of the first degree, will immediately involve close follow up by a nutrition promoter and, where needed, supplementation at the centre.

We will continue to provide help for weaning age and abandoned children that are malnourished and need intensive rehabilitation. Rehabilitation has the double purpose of helping these children that are in danger and of serving as visible case studies that encourage mothers to practice what they have learned in nutrition education. The centre will be non-residential as well as residential and will try to correct the deficiencies seen in the existing centres around us, which in general succeed only in providing temporary relief (see Annex 3).

Cases of malnourished children over five years old (stunted, low weight for height, or suffering from kwashiorkor) are almost invariably social cases. These children may be orphans or cases of abandonment (mother remarried and child rejected by the new husband, or abandoned by both mother and father, or left with a grandparent, who has no means of survival). Unfortunately there are many such cases. These children need to be identified, rehabilitated, and, where possible with the help of churches and chiefs, reintegrated into family households. Churches and association participating in Butoke food security activities will be encouraged to combat the practice of social exclusion of children, which is at the root problem. There is an urgent need to find cooperative arrangements that would allow children to eat several meals a day on a regular basis.

4. Direct and Indirect Beneficiaries

For the three zones, we currently have 1,016 members in zone A, 1,554 members in zone B, and 1,084 members in zone C. This gives a total of 3,654 participant small farmers, of which 2,271 are women and 369 are widows. We are also supporting about 700 individual households. The individual farmers covered are mostly widows and other elderly indigents. Estimating that the families of these small farmers average six individuals, this suggests more than 26,000 individual beneficiaries. We foresee the associations themselves will probably grow in membership to surpass 5,000, covering a cropped surface area of 300 ha by the second principal agricultural season.

Direct beneficiaries of Butoke's nutrition actions are focused upon the very young and the aged. We make a particular effort to target mothers, children, widows and handicapped as well as the elderly, by raising awareness about their needs and situation. These groups are the focus of our action through the mass media as well as of our nutrition centre. We expect that among all association members, the increased harvests will by themselves also show a positive impact on the nutritional status of the population, although probably not as strongly as in Tshikaji where our actions are synergistic.

We hope to reach a larger population indirectly in a number of ways, thanks to the greater availability of food in the province as a whole and the effect of this on food prices and on the availability of food, through emulation of improved organizational, agricultural and nutrition practices, or through our nutrition education program in the mass media. Butoke's approach is

that it is necessary to work for, and with, everyone, because the current crisis does not spare anyone in the village, from chief to beggar.

5. Gender Analysis

Women's status in the region has evolved considerably in recent years. Women's traditional status in the villages was that of a person owned by the family of origin and acquired by the husband after marriage. Some twenty years ago, women were treated as dependents. However, since 1985, during the periods of economic upheaval and civil unrest, women have become a social and economic anchor in the community. As a result, they now often have a higher earning capacity than the men in their families. This has permitted some women to become civil and political leaders. Younger women quite often question women's traditional status; and in individual couples, there is a tendency towards more gender equality among the better educated.

Membership in the associations supported by Butoke is about 2/3 female, 369 of whom are widows. Butoke has made a conscious effort to request the inclusion of widows and unattached women in the associations. Even though these efforts seem to go against the grain of local customs and beliefs, they find some ready support, because the religious communities support the idea and the need is so evident that reasonable people cannot possibly be opposed.

At the moment of sharing the harvest, older and weaker individuals are at a disadvantage, because the sharing is based on proven effort and performance. That is why, with "Help the aged," we envisage compensatory mechanisms for associations with older membership. Such measures will primarily benefit the older widows who otherwise are trapped in a vicious circle.

Our aim is to increase the presence of widows among the membership, from 10% to 15%. Similarly, we have encouraged the associations to include women among the leadership. We will continue to insist on this and will monitor the presence of women in leadership roles in associations involving both men and women. The fact that Dr Cecile de Sweemer is an older female (69 years old) and carries considerable weight with the local populations is a positive factor for helping Butoke to overcome social biases against older women.

6. Purpose, Goals and Expected Results

6.1. Purpose and Expected Impact

The project's purpose is to make a lasting contribution to the improvement of food security in a number of food deficient villages of Western Kasai, and, in particular, to improve the nutritional status of the most disadvantaged and vulnerable groups in those villages.

Indicators will include increased food production activities among the target population, diversification of production in favour of more nutritional crops, increased food access for vulnerable populations, and development of more nutritious food consumption habits.

6.2. 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 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. 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	Number of people treated and maintaining satisfactory nutritional status at Butoke's nutrition centre.

Tshikaji area	
• Increased levels of social solidarity with the elderly and the handicapped, widows, orphans and abandoned children.	Interviews and focus groups.

6.3. 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 (see Annex on detailed budget)	
• 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 ha 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. See section I-4 of Annex 1 for details. 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.

Food for work	
Food aid will be provided to the associations in exchange for work on the seed fields.	Records of food aid provided.
Food Production and Food Security by Associations	
• 200 ha under cultivation by associations the first season, growing to 300 ha in the third season • Food produced by the associations is estimated to be 7,200 kg of soybeans, 18,200 kg peanuts, and 10,500 kg beans in the first season, for a total of 35,900 kg. This is expected to increase by 50% by the third season. • Food security activities will include efforts to promote the preservation of seeds by each team as well as teaching appropriate conservation for consumption. All planned activities are synergistic for food security and improved nutritional status. The establishment of granaries are the major contribution to sustain the action even after the project, although these are not budgeted in this project.	Records and physical inspection will serve as sources of data on surfaces under cultivation, levels of production, and food and seed management practices by associations and households. Yield levels will be monitored for improvement over time.
Nutrition Education through the mass media	
• One broadcast of 30 minutes a week on three channels, the national radio and two private radios, using sketches, dialogue and case studies. The case studies will be real cases, where possible, with live interviews.	Administrative records and the tapes of the broadcast
Nutrition centre (Tshikaji) • Surveillance of children aged four months to six years in Tshikaji • Rehabilitation of malnourished children in Tshikaji. Our target is the recovery of at least 70% of malnourished children and that after 6 months and after 1year of activity fewer second and third degree malnutrition will be detected and the growth deceleration will be detected earlier and less often lead to 1st degree malnutrition. • Efforts to secure the reintegration of abandoned children into family households, and to combat the social exclusion of children in Tshikaji, and through mass media	Percent of village children with regular growth surveillance Recovery rates, increased weight and height, reduced number of new cases In the second year, fewer rejected children coming to the nutrition centre.

7. Risks and Risk Mitigation

7.1. Security Risks

In recent years, there have been serious problems both with wanton destruction of fields, thefts of harvests still on the fields, or sometimes in transit, especially of bigger loads. However, in 2004, none of our sites were attacked. The implication of village chiefs in the associations may provide the plots a special, almost sacred, status, as they are the guardians of the community's heritage. This is no doubt reinforced by links with the religious communities. Special attention is given to Butoke's central granary in Tshikaji.

Butoke envisages supporting 10 association in an Army Camp and 10 associations with the Police. This is worth doing on its own merits, because police and army personnel have miniscule salaries (between $US 4 and $US 10 per month) and go unpaid for many months. Their families are therefore as exposed to famine conditions as the rest of the population. Particular care will be taken to include the widows of the army, which are suffering without assistance of both army and civil population. This approach is also intended to contribute to equity and civil peace. If trouble were to arise with any group of thieves we can expect protection by the army and police, as they know we assist them too.

7.2. Risk of Discouragement From Low productivity

The productivity of agriculture in the savannah is generally low. The reasons for it are manifold:

- The soil is not fertile and is subject to erosion.
- Farmers have very little experience and competence.
- Seeds sold and planted are unselected and with very variable germination rates and productivity.
- Fields are rain dependent.

Butoke is working to improve yields over time, although we are not entirely sure how much we will be able to achieve. For example, we are trying to improve fertility over time by encouraging crop rotation and control of erosion. We also support farmers technically; and with the seed farms, we hope to progressively improve the rate of seed germination and productivity. However, the greatest potential for increased productivity is probably with the farmers themselves, as they see progress taking place and become more active themselves in increasing the productivity of their fields.

7.3. Risk of Rivalries or Arbitrary Sharing

The communities we work with have a strong ethos of peer-group solidarity and equality and of rivalries among different clans. During last year, we have had to deal with some rivalries and arbitrary behaviour. Our coordinator, supervisor and agronomists all act as facilitators and try to deal with such problems tactfully by involving all concerned parties in discussions and negotiations and holding everyone to the agreed upon rules. So far, this has been sufficient to settle matters, but we can also appeal to traditional and religious leaders if necessary.

7.4. Possible Instability of Principal Staff Members

Instability of the principal staff members is always a risk for a young NGO like Butoke. The pay is low even by national standards, and the work is very intensive, both technically and

physically. Working conditions are difficult, given the prevailing socio-economic context and the limited resources available to Butoke. However, Butoke has held on to its staff for two years, under even more primitive conditions than those that apply today, and all staff members have proven hardy and committed. Butoke has established a strong culture of service and loyalty that we hope will stand the organization in good stead for years to come.

The two staff members who could most easily choose alternative employment are Dr Cecile De Sweemer and Dr Jean Lumbala Muamba. Dr Cecile De Sweemer is a Belgian national and has been given a special resident visa for three years renewable, especially to be able to work with Butoke. Her status and commitment to Butoke are very stable. Her long years in tropical areas provide solid immunity against many ills and age related problems are minimal and seem well under control.

Jean Lumbala Muamba is committed to stay with the project, and wants to gain further experience in nutrition. Although we hope he will be admitted in 2008, at the University of Laval to be able to start a masters or even a doctorate in Public health with a major in nutrition, he plans even in this context to work with data from this project to be gathered in 2006-2008, and plans to return to Butoke after his studies. We have already started to prepare for his eventual departure, and he has started to share and delegate responsibilities, so that others develop leadership in the different domains he has so far been guiding.

8. Management and Timelines

8.1. Financial management

Funds will be transferred periodically from AIM to Butoke using the Brussels bank account of a business sector partner of proven integrity. Experience with this mechanism has been excellent to date in transfers involving ADRA and Help the Aged. Funds have arrived quickly, and there are no fees. Since there is no sound banking system operating in Kananga, this has been the most cost-effective and safe mechanism available for transferring funds.

Within Butoke, a number of safety nets have been established. One is the established practice of collegial decision-making for any expense greater than $10 involving the President, the Secretary and Dr de Sweemer. These three actors have proven themselves to be strong and honest in managing Butoke’s funds. This approach is supplemented by a monthly review by the commissaires aux comptes.

Butoke is submitted to tremendous moral pressures in the face of emergency needs that regularly arise. The local culture states that "one kills a snake with the stone one has in hand". This means that immediacy overrules longer-term priorities. However, Butoke has tried to accommodate such needs based on the use of Cecile de Sweemer’s personal funds as a fall back. This avoids tapping into project funds for unbudgeted purposes, while safeguarding Butoke from appearing callous and insensitive to emergencies.

8.2. Project management

Butoke’s work on Food Security and Nutrition is coordinated by Jean Lumbala Muamba, an agronomist with ten years experience both as teacher and director of an agricultural college and as field supervisor of major agricultural extension projects. The coordinator plans and orders logistic support for the fieldwork, controls accounts and directs all program activities. He works with four field agronomists, who are all experienced in this type of work.

The team is advised by senior consultant Cecile De Sweemer, MD DrPH, who has 43 years of experience in work in developing countries on Health and Nutrition. She has been an associate professor of Johns Hopkins University, and is currently an overseas associate of that university. She has been an active resident in Kasai since February 2004.

Before each crop cycle, the group of agronomists and the Butoke coordinator and supervisor will meet for two days. Some of the agronomists will be new to the team, and we want to be sure that there is a common understanding of the technical points to stress, of the distribution of responsibilities, and of how to encourage the associations to properly manage their own teams. During fieldwork there will be fortnightly meetings of all agronomists, to report back and discuss the problems that arose and the solutions given.

The agronomists will be expected to prepare each new phase with their associations by holding a half-day to one-day meeting preparing detailed actions plans. They will also visit production sites while work is going on, to monitor the activities, and will themselves be supervised in the field. At the end of each phase, there will be detailed and quantitative reporting by the associations with the help of the agronomists on what has been accomplished and the major difficulties encountered.

8.2.1. Timelines

The major determinants of timelines for the project are the demands of fieldwork, according to the crop cycle for corn, soy and peanuts. Beans require a shorter window of rain availability than the other crops, so planting can more readily be delayed. Cassava can be planted at any time.

During the main season, the phases of fieldwork for most crops are:

- The selection and preparation of the fields, which needs to be accomplished between June 15 June and August 15
- Planting which needs to take place between August 15 and September 15
- The first weeding, from about September 30 to October 15
- The second weeding from November 15 to November 30
- Harvesting, which is generally between December 10 and 30.

Beans can be planted as late as November 15 in some of our sites. For maize, there will be need to fertilize 15 and 45 days after sowing. Cassava fields also need to be fertilized, should we include cassava fields at some point.

During the secondary season, the same principles hold, and the same fields can be worked with the same crops. The calendar is as follows:

- First preparation in mid November
- January 1-30, preparation of the fields
- February 1-28, planting
- First weeding after 15 days
- Second weeding after 30 days
- Harvest between mid May and mid June, followed by drying and storing as well as marketing.

8.2.2. Management of the seed farms

The seed farms provide a special challenge for Butoke, due to the limited resources available, and the desirability of active participation by the associations, as a way of mobilizing labour and ensuring the most widespread adoption possible of seed production techniques. For this reason, the intention is to have a large number of seed farms dispersed on two ha plots across the region where the associations operate (as opposed to larger, more geographically concentrated farms). There will be 50 such farms in the first year, and the number may grow or decline depending upon the success of the experiment.

Each of these farms will be managed by one of the associations, in collaboration with an agronomist. The agronomist responsible for each zone will accompany the process, monitoring such things as the first selection of seeds, the monitoring of germination times, growth rates, resistance to diseases, resistance to climate, and the size of plants and seeds at harvest time. Farmers are expected to participate fully, so that they can acquire the skills to sustain the efforts at improvement of the seed stocks, develop an appreciation and understanding of scientific methods of cultivation, and feel that they themselves are contributing to improve the resource base for everyone.

Butoke expects that 70-80% of the harvest will be usable as seeds (in Annex 1, we assume 80% for the principal season, but only 70% for the secondary season). The other 20-30% will be set aside and used as food for work on the seed farms in subsequent crop seasons. Approximately half of the seed harvest will be used to replenish the seed farms, and the rest will be used to support the associations, with priority for the associations providing work for the seed farms.

9. Monitoring and Evaluation plan

The project will rely heavily on follow-up and monitoring by the responsible field agronomists, supervisors and coordinator. This will be supplemented by two field visits by the Director of AIM Canada.

Monitoring of activities for quantity and quality will be ongoing throughout. Indicator results will be shared with members and discussed for corrective measures wherever possible. Most results will be judged through qualitative approaches such as participant observation and focus groups, especially on issues that involve questions of social relationships, equity and access to resources.

A yearly evaluation is planned for the month after the second season. Evaluation of Butoke's activities will rely heavily on the participation of the membership and of civil and religious leaders in the various localities served by the project. Outputs will be documented and verified by membership as well as Butoke's professionals and local community leaders.

10. Environmental Analysis

Most of the sites chosen are in the savannah. The two major dangers are erosion by runoff water following clearing, and impoverishment of soil fertility. Wind erosion is a secondary problem. Most of the deforestation that takes place in this region is not due to agriculture but due to the use of wood for making charcoal and for the baking of bricks.

To avoid water erosion, beds are profiled at a right angle to any existing incline. We plan to introduce both windbreakers and anti erosive fences, where needed. We try consistently to

improve soil fertility by a number of techniques: crop rotation, starting with two years of cultivation of leguminous such as beans and soy; mixed cropping between cassava and leguminous crops; and use of green manure for the fields. However, the best long-term solution is to do active reforestation after use of the field. Particularly useful in reforestation can be the Cassias, Leucenias and Acacias.

In 2004, we also proposed a project to plant Moringa, fruit and coffee trees both as food resources and income generation and an economically viable way of tree planting. If a funding source can be found, we are in a position to immediately present two projects, one on reforestation of sites deforested for brick making and for protection of some major public sites (among others the airport) and one on the creation of orchards in and around the Butoke villages.

11. Sustainability and Viability

Butoke as an NGO is rapidly becoming established and is strengthening its institutional base. It has strong local leadership and has already acquired a strong reputation. Given the overall context, the population will need aid for quite some time to come, but Butoke's volunteers are indigents helping indigents, bringing with them all the passion and perseverance it takes to stay the course. The food security activities, especially the seed farms, will generate valuable local resources to help sustain Butoke's activities. Although Butoke will continue to depend on international support to carry out its work, it is our hope that fundraising will become easier as Butoke's reputation is further established.

For local households, the initial support received from Butoke to restart the agricultural cycle will help them to progressively re-establish their livelihoods. Improved nutritional habits will also help the population in a sustainable way. Provided that DRC does not once again dissolve into conflict, we believe that our actions are part of a long term, but sustainable process of development in Western Kasai.

12. Market and Feasibility Studies

Current agricultural productivity in the villages is pitifully low by any standards (see section 7.2). However, there are no alternatives for the population. They must either produce their own food or submit to starvation. Over time, the project hopes to significantly improve productivity through better selection of seeds, by spreading modern methods of sowing and weeding, by using green manure and erosion fences, etc. This strategy will not suffice to solve the region's food security problems, but can go a long way.

These efforts are the start of a process of change and reconstruction that will generate hope and help to rebuild social structures, by restarting the agricultural cycle and encouraging care for society's most under privileged. In this way, the project has a long-term role to play in helping communities to become self-sufficient again.

13. Public Engagement

Canadians have provided the bulk of Butoke's funding to date, thanks to private donations channelled through ADRA and Help the Aged. These private donations have been topped up with contributions from general funds of those two organizations.

AIM plans to play a more active fundraising role than has been possible to date. Indeed, AIM will be conducting fundraising with approximately 100 Canadian foundations within a week of

CIDA's approval. This will be followed shortly thereafter with a general mailing to AIM's regular constituency. AIM will do a second Butoke mailing, 12 months later, with foundations, churches, and individuals. We expect to reach approximately 7,000 individuals and organizations each time. We also hope to send two missionaries that would accompany the project.

Public engagement with the project is also important in the Congo itself. Congolese engagement is expressed in strong moral support by His Excellency the Governor and his office, by the traditional chiefs and the parishes. The parish and village communities also collaborate very actively. Moreover we have the Butoke key members such as Jean Lumbala and Rev. Tshibuabua and the agronomist team, that provide sustained hard labour to make it all possible. Butoke activities are the talk of Kananga town, even of the whole province, and we hope to profit from this to contribute to the dialogue on the future of the province.

14. Budget

This budget refers exclusively to the cash contributions to be contributed by AIM Canada and CIDA, totalling $300,000 CDN. Not included below are expenses that will be provided for from Butoke's own resources or through complementary projects. These expenses are mentioned in Annex 1 and summarized in the last section of the Annex. They are included in the Detailed Budget form presented to CIDA.

14.1. Investment Budget (in US$)

	ITEM	1st year	2nd year	Total
I-1	Coordinating Office	4,000	0	4,000
I-2	Tools for Associations	23,300	17,250	40,550
I-3	Tools for Agronomists	1,685	385	2,070
I-4	Seeds	67,492	7,290	74,782
I-5	Nutrition Centre Building	3,000	0	3,000
I-6	Anthropometric Survey	450	0	450
I-7	Motorcycle and Used Truck	11,000	0	11,000
	Subtotal	109,927	23,925	133,852

14.2. Recurrent Budget (in US$)

	ITEM	1st year	2nd year	Total
R-1	Coordinating Office	5,520	5,520	11,040
R-2	Food for Work - Seed Farms	25,750	14,250	40,000
R-3	Transportation	5,000	5,000	10,000
R-4	Planning Meetings	1,400	1,400	2,800
R-5	Salaries of Agronomists	7,440	7,440	14,880
R7	Fertilizer for Corn Seed Farm	2000	2,000	4,000
R-8	Mass Media on Nutrition	1,800	1,800	1,800
R-9	Anthropometric Survey	2,150	2,150	4,300
R-10	Nutritional Supplements	15,513	0	15,513
	Subtotal	66,573	39,560	106,133

14.3. Grand Total and Overheads

	1st year	2nd year	Total
Total of Investment and Recurrent Costs	176,500	63,485	239,985
Overhead, Travel & Fundraising –7.5%	9,300	8,699	17,999
Grand Total	185,800	72,184	257,984
Grand Total in CAD (at .8599)	216,060	83,940	300,000

Annex 1: Budget Details

Details below follow the same order as observed in the general budget.

General Caveat

Butoke's program over the next two years covers a number of areas, and it has been difficult in this proposal to keep within the CAD 300,000 limit set by the CIDA Innovation Fund. Our approach has been to budget comprehensively for the first year, and to budget for the most crucial needs in the second year. This will give us time to seek complementary resources from other sources for the latter part of the second year, where funding gaps remain.

INVESTMENT BUDGET

I-1: Coordinating Office

For ease of communication, we need a central office with the capacity to hold team meetings and training sessions. The cost of procuring facilities such as phone, and or radio, Internet, and electricity will be about $US 3500. Furniture will be about $US 500. Total over 2 years **$4000**.

I-2: Tools for Associations

Tools for the village associations come from various sources. Hoes are made artisanally in certain villages, in particular Tshikula, located 60 km from Kananga. Machetes of good quality are imported from Europe, India and China, as are hatchets and spades. There are two major dealers for the imported tools.

Tools needed for the associations to do fieldwork (US$)

Agricultural tools	Quantity	Unit Price[1]	1st year	2nd year	Total
Machetes	1,000	5	5,000	2,500	7,500
Hoes	4,000	1,3	5,200	5,200	10,400
Hatchets	200	10	2,000	1,000	3,000
Spades	200	3	600	300	900
Rakes	200	2.5	500	250	750
Files	1,000	1	1,000	500	1,500
Plastic sheets	200	15	3,000	1,500	4,500
Bags	5,000	1	5,000	5,000	10,000
Total			**22,300**	**16,250**	**38,550**

1.These are the prices practiced in 2005 in shops.

Many tools will need to be replaced each year, as they are not very strong, we estimated a 50% replacement The **grand total** of tools for associations over two years is **$40,550**

I-3: Tools for Agronomists

Tools required for the agronomists are bicycles, boots, raincoats, measuring tapes of at least 100m, lines, and for the coordinator and supervisor also a motorcycle to cover all zones.

Tools for the Agronomist Team, given high wear and tear, will need to be renewed yearly except for the motorcycle for supervision, which will hopefully last two years or more:

Tools/ Equipment	**Quantity**		**Unit price**	**Total first year**	**Total, 2 years**
	2006	**2007**			
Boots	6	6	10	60	120
Document bag	6	6	3	18	36
Register	35	35	4	140	280
Ballpoints	60	60	0.25	15	30
Pencils	60	60	0.20	12	24
Raincoats	7	7	20	140	280
Bicycles	4	-	85	340	340
Measuring tapes (100m)	6	-	50	300	300
String (100m)	6	-	30	180	180
Jerry cans	8	-	15	120	120
Buckets	8	-	10	80	80
Watering cans	8	-	35	280	280
Total				**1,685**	**2,070**

I.4 – Seeds

Seeds to be procured locally for associations, main season, 2006

Seeds	Seed needed per ha (kg)	Surface (ha)	Total seed requirements (kg)	Provided by Butoke	Estimated unit cost/kg	**Cost**	Estimated yield (kg/ha)	**Estimated Ouptut, Total**
Pistachio Nuts	50	30	1,500	0	2.5	**3,750**	n.a.	**n.a.**
Soybeans	60	30	1,800	0	3.0	**5,400**	240	**7,200**
Peanuts	70	65	4,550	0	2.5	**11,375**	280	**18,200**
Beans	70	50	3,500	0	1.5	**5,250**	210	**10,500**
Watermelon	25	25	625	0	1.5	**938**	unknown	**unknown**
Total		200				**26,713**		**35,900**

Seeds for seed farms, main season, 2006

Seeds	Seed needed per ha (kg)	Surface (ha)	Total seed requirements (kg)	Provided by Butoke	Estimated unit cost/kg	**Cost**	Estimated yield (kg/ha)	**Estimated Ouptut, Total (kg)**	**Of which seed**	**Food**
Soybeans	86.66	30	2,600	0	3.0	**7,799**	240	**7,200**	**5,760**	**1,440**
Peanuts	86.66	30	2,600	0	2.5	**6,500**	280	**8,400**	**6,720**	**1,680**
Beans	86.66	21	1,820	0	1.5	**2,730**	210	**6,300**	**5,040**	**1,260**
Beans using Butoke seed	50	9	450	450	-	**-**	210			
Corn	60	10	600	0	2.5	**1,500**	126	**1,260**	**1,008**	**252**
Total		100				**18,529**		**23,160**	**18,528**	**4,632**

Secondary season, 2006-07 - all beans, 300 ha incl. 100 ha for seed farms.

Own seeds of 5,040 kg suffice for 100 ha at 50 kg / ha.

Seeds	Seed needed per ha (kg)	Surface (ha)	Total seed requirements (kg)	Provided by Butoke	Estimated unit cost/kg	**Cost**	Estimated yield (kg/ha	**Estimated Ouptut, Total (kg)**	**Of which seed**	**Food**
Beans, associations	70	150	10,500	0	1.5	**15,750**	210	31,500		
Beans, associations using Butoke seeds	50	50	2,500	2,520	-	**-**	210	10,500		
Beans, seed farms	86.66	50	4,333	0	1.5	**6,500**	210	10,500		
Beans, seed farms, using Butoke seeds	50	50	2,500	2,520	-	-	210	10,500	**14,700**	**6,300**
Total		300		5040		**22,250**		63000		

Seed situation for the main season, 2007 (note - no purchase of seeds needed for seed farms)

	Butoke seed stock (kg)	Needs per ha	# of ha for which seed stock suffices	Planned ha, Seed farms	Planned ha, Ass'tions	Seed gap for Ass'tions (ha)	Gross seed needs per ha	Need to purchase (kg)	**Cost**
Soybeans	5,760	50	115	30	100	15	60	888	**2,664**
Peanuts	6,720	60	112	30	100	18	70	1,260	**3,150**
Beans	14,700	50	294	30	80	0	70	0	**0**
Corn	1,008	50	20	10	20	10	60	590	**1,476**
Total				100	300	43			**7290**

Seed situation, secondary season, 2007-08 (no seed purchase required)

This scenario leaves a stock of bean seeds sufficient to cover 184 ha in the secondary season, 2007/08. Seed production from the seed farms in the main season (5040 kg) will suffice to cover another 100 ha. Total hectares in beans for the second secondary season using Butoke seed: 284 ha.

I-5: Nutrition Centre Buildings

The centre has been under construction since March, funded with private donations to Butoke, but we need to finish it. The building is 150m square and 3.5m high, and is subdivided into ten rooms. The total cost is estimated at $15,000. We need **another $3,000 to** fully finish and equip the centre.

I-6: Anthropometric Survey

An investment in equipment of **$450** is estimated for the anthropometric survey.

I-7: Motorcycle and Used Truck

We have budgeted $3,000 to purchase a cross-country motorcycle, to use for supervision when long distances are involved, and $8,000 to purchase a used truck for transporting tools, seeds and other equipment and materials. Total cost: **$11,000**

RECURRENT BUDGET

R-1: Coordinating Office

We need to hire one permanent generalist to work in the office, who can assure reception, communication and ensure follow up of movements. We need one guard for security.

The cost of rent will be about $1,200 per year, salaries about $1,200 a year, communications about $1,800 per year, electricity $1,300 per year.

Yearly, this will come to recurrent budget of $5,520 for the coordinating office. For two years, this comes to **$11,040**.

R-2: Food Support For Fieldwork on the Seed Farms

This food will consist of locally available ingredients, coffee/tea with sugar and milk and bidia (made from maize and cassava flour) eaten with cassava leaves and some fish sauce. This will be supplemented or replaced with food prepared from the output of the seed farms themselves after the first season. Drinks will offered three times a day, the food one time during lunch time.

On the basis of Butoke's experience with a pilot seed farm of two ha in 2005, we estimate that food support during fieldwork will cost $200 per hectare during the first season (2006), or $20,000, for 50 farms. In subsequent seasons, the cost will drop, because we plan to use produce from the seed farms as inputs. We estimate a cost of $10,000 for each of the two 2007 seasons, and are not budgeting anything for the 2008 secondary season, because the budget ceiling does not allow it. This will be covered from other sources. The total budgeted cost is **$40,000**.

R-3: Recurrent Costs for travel of the agronomist team (US$)

Items	Unit cost	Cost per year
For bicycles 40% of value for repairs per year		170
Insurance and documents, motorcycle	200	200
Insurance and documents, used truck	730	730
Repairs and spares motorcycle 10% of value per year		300
Repairs and spares, used truck		1,400
Fuel 2 l per day per motorcycle	1.5/l	800
Fuel for transport of seeds and other used of truck	1.5/l	1,400
Total, two years		**10,000**

R-4: Planning Meetings

1. We plan for each of the four phases of a season, a meeting of all agronomists. We see this as vital capacity building of the team and indirectly of the associations.

Each meeting will cost us about $50, so in one year this comes to $400, and over the two years, **$800.**

2. Similarly, there will be two meetings each season with the leaders of the associations of each zone. This will cost, for one year, $1,000 for 3 zones, or **$2,000** over 2 years.

Total **$2800**

R-5: Salaries of the Agronomists

The food security team consists of four agronomists attached to field sites and two supervisors, one coordinator, and one consultant. During the season, each field zone and each association will be visited at least once every two weeks by the agronomists attached to the zone. This permits close follow-up and will also ensure the best possible results in terms of facilitating group dynamics.

We propose to pay the agronomists a stipend of $75 per month, the supervisors $85 per month, and the coordinator, who will also cover nutrition activities, $150. The consultant, who also works full time on both aspects of food security and nutrition is not charging anything for her services, and lives off the returns of her pension. For the whole team, this comes to $620 per month, or **$14,880** over two years.

The stipends we offer are comparable, but slightly superior to, what local religious bodies offer their volunteers, The market rate for Dr De Sweemer is about $10,000 per month, for Dr Jean Lumbala, the market rate is about $600 per month. They could obtain, but do not want, alternative jobs. Market rates for the other professionals are also about twice what we offer as a subsidy, but for them, alternative employment is very hard, if not impossible, to find, as very few NGOs and UN-based projects are present The project thus can count on a very dedicated team consenting major contributions in kind.

R 6 Fertilizer for Corn seed farm

$ 200 per ha, for 10 ha per season gives a cost of $ 2,000 per season, for two seasons, for a total of **$ 4,000.**

R-9: Mass media on Nutrition

$150 per month, **$1800 per year.**

R-9 Anthropometric surveys

Recurrent cost in terms of paper, files etc, incentive to helpers: $750 per round, or $2,150 per year, or **$4,300** for the two years.

R-10: Nutritional supplements

For rehabilitation purposes, we will use local ingredients with calorie enrichment and balanced nutritional supply. In cases of kwashiorkor we will add milk powder and protein snacks prepared principally from peanuts and soybeans. Feeding 85 children a day costs about $50 a day, **or $15,513** a year. However, we have not budgeted anything for this purpose for year 2. Other sources of funding will be used to fill this gap.

FUNDING FROM OTHER SOURCES

- Services of Dr. Cecile de Sweemer, who works full time for Butoke, without charge. These services are valued to be worth approximately $US 100,000 per year, or $US 200,000 for the duration of the project.
- It is estimated that Lumbala's president, Jean Lumbala, works for Butoke at about 50% of what he could otherwise earn. His contribution is estimated at $US 450 per month or $US10,800 for the two year period.
- Butoke's average monthly revenues taken from Dr. de Sweemer's pension and private donations average approximately $US 4,700 per month ($4,000 from the pension plus $700 on average in occasional donations), which gives a total of $US 112,800 over the duration of the project. Use of these funds is tentatively budgeted as follows:
    - Food for work on the seed farms, fourth season: $US 10,000.
    - Transportation expenses, in addition to what has already been budgeted: $US 2,000.
    - Nutritional supplements for year two: $US 15,513
    - Other complementary and humanitarian activities, including training of nutrition promoters: $US 85,287. As explained in the text, it is important that Butoke have access to discretionary funds in order to address the ongoing humanitarian situation in the region, as this reduces pressures on funds for more long-term development efforts.
- Granaries. Butoke owns one granary already, and we will make use of existing space in missions and other buildings as required. We will build more granaries if funding can be found.
- What has been charged as "overhead" by AIM Canada is intended to cover real expenses for travel to DRC for monitoring purposes, and for fundraising. AIM's actual overhead expenditures have been estimated at $12,500 CAD and have been included as such on the Summary and Detailed budget forms presented to CIDA.

Annex 2: Localities and Associations to Be Supported by the Project

Zone A around Ntambue currently totalling 66 ha			Zone B around Tshikaji currently totalling 67 ha			Zone C around Tshikula currently totalling 68 ha					
Code	Village	# of Village Associations	Code	Village	# of Village Associations	Code	Village	# of Village Associations	Code	Village	# of Village Associations
A1	Katambayi	6	B1	Nkonko Tshiela	14	C1	Luenyi	3	C14	Kabundu	1
A2	Nkashama	10	B2	Tshimbambula	1	C2	Mukenge-Tshiamua	2	C15	Tshitala Nshakama	2
A3	Tshimbundu	14	B3	Nkandi	9	C3	Mampanya	3	C16	Tshikula	2
A4	Inga	5	B4	Mbumba	7	C4	Tshingana	5	C17	Kaditshi	1
A5	Tshisenga	3	B5	Tshikaji	24	C5	Mukengela	1	C18	Tshitenge Buloba	1
A6	Kalamba Mukoma	2	B6	Kananga	5	C6	Kumuamba	1	C19	Dijiba-Moyo	2
A7	Kanyanga	3	B7	Nganza	3	C7	Mulumba-Kabuya	5	C20	Mulumba Muteba	4
A8	Katshikale	3	B8	Tshibundu	2	C8	Tshiala-Benyi	3	C21	Tshiananga	4
A9	Mfiondo	5	B9	Kabundi	1	C9	Mpanya	1	C22	Musuila	3
A10	Kasanda	3	B10	Milambu	2	C10	Dijiba-Kankulu	1	C23	Nyemba	4
A11	Tshibaji	4	B11	Camp Militaire	10	C11	Kapombo	1	C24	Tshinyama	4
A12	Ntambue Central	2	B12	Police	10	C12	Ngombe	2	C25	Tshikele	3
						C13	Kabenga	1			
	Total	**66**		**Total**	**88**		**Total**				**60**

Annex 3: Notes On Existing Nutrition Centres

There are a few nutrition centres operating in the province, but none provides a satisfactory response, partly because their resources are so limited, but also because they operate according to invalid assumptions, including the following:

- They assume that mothers primarily lack knowledge and competence in preparing proper weaning foods. This is only true for a minority. Poverty, lack of food security, and heavy workloads seem to be the principal obstacles.
- All the centres assume that the vulnerable group consists of children under five years of age, but we see many severely undernourished children up to ten years of age, with low BMI and stunted growth, and some even die from chronic malnutrition around puberty.
- Frequency of meals and calorie enrichment are not stressed, even though they are vital (This may not have been an issue 15 years ago, but the situation has changed, and the centres have not kept up with changing conditions).
- Some, such as the Ntambue centre, offer only one meal a day to malnourished children, which is insufficient to re-establish these children's health.
- Some, such as the nutrition centre in IMCK Tshikaji, now virtually closed, were residential, and obliged the mother to stay with the child 24 hours a day, seven days a week, in the centre, for one to two months. This is rarely acceptable for the family, as it exposes all other children in the family to serious risks of neglect.
- No Nutrition center known to us in this region does early detection and correction.
- None systematically examines for anemia, malaria, parasites and chronic diarrhoea, which all are synergistic with malnutrition.
- The sole attention is on kwashiorkor. Most cases of stunting or of second degree undernutrition are ignored. Children so affected often to die from complications of malaria or diarrhoea, acute respiratory infections, or even typhoid.
- None teaches mothers of children of weaning age how to manage before the child is severely malnourished.