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# Appendix J
# Community Development Action Plan (CDAP)

**BUJAGALI ENERGY LIMITED**

**BUJAGALI HYDROPOWER PROJECT**

# COMMUNITY DEVELOPMENT ACTION PLAN

Prepared for:
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## Acronyms

| | |
|---|---|
| AESNP | AES Nile Power |
| AIDS | Acquired Immunodeficiency Syndrome |
| BEL | Bujagali Energy Limited |
| BIU | Bujagali Implementation Unit |
| CDAP | Community Development Action Plan |
| DWD | Department of Water Development |
| EIA | Environmental Impact Assessment |
| GoU | Government of Uganda |
| HIV | Human Immunodeficiency Virus |
| HPP | HydroPower Project |
| IFC | International Finance Corporation |
| IFI | International Financial Institutions |
| IP | Interconnection Project |
| LC | Local Council |
| MW | MegaWatt |
| NEMA | National Environmental Management Authority |
| PS | Performance Standard |
| RAP | Resettlement Action Plan |
| RCDAP | Resettlement and Community Development Action Plan |
| SEA | Social and Environmental Assessment |
| TOR | Terms of Reference |
| UETCL | Uganda Electricity Transmission Company Limited |
| UGX | Uganda Shilling |
| USD | United States Dollar |
| WBG | World Bank Group |
| WWR | White-Water Rafting |

Exchange Rate considered in this document: USD 1 = UGX 1,800

# 1 INTRODUCTION

## 1.1 PROJECT GENERAL BACKGROUND

The Bujagali Hydropower Project (hereinafter "Project" or "HPP") is a proposed 250 MW hydropower facility on the Victoria Nile in the Republic of Uganda. It is located at Dumbbell Island, approximately 8 km downstream (i.e. north) of the Town of Jinja (see Figure 1). Bujagali Energy Limited ("BEL") is the proponent of this project.

Development of the HPP was first initiated by AES Nile Power Ltd., ("AESNP") in the late 1990's. Among other things, AESNP prepared Environmental Impact Statement documentation for the Project that was approved by the Government of Uganda's National Environmental Management Authority ("NEMA") in 1999/2001, and by the World Bank, IFC and African Development Bank Boards in December 2001.

In 2003 AESNP withdrew from the Project. Subsequent to AESNP pullout, the Government of Uganda ("GoU") initiated an international bidding process for the development of the project. BEL, a project-specific partnership of Sithe Global Power (USA) and IPS Limited (Kenya), won that bid.

The lenders' Board approvals and the permits issued by NEMA for AESNP's, are no longer valid. Thus, BEL was required to prepare and submit for approvals new Social and Environmental Assessment (SEA) documentation. This report (Community Development Plan) is part of that SEA Documentation.

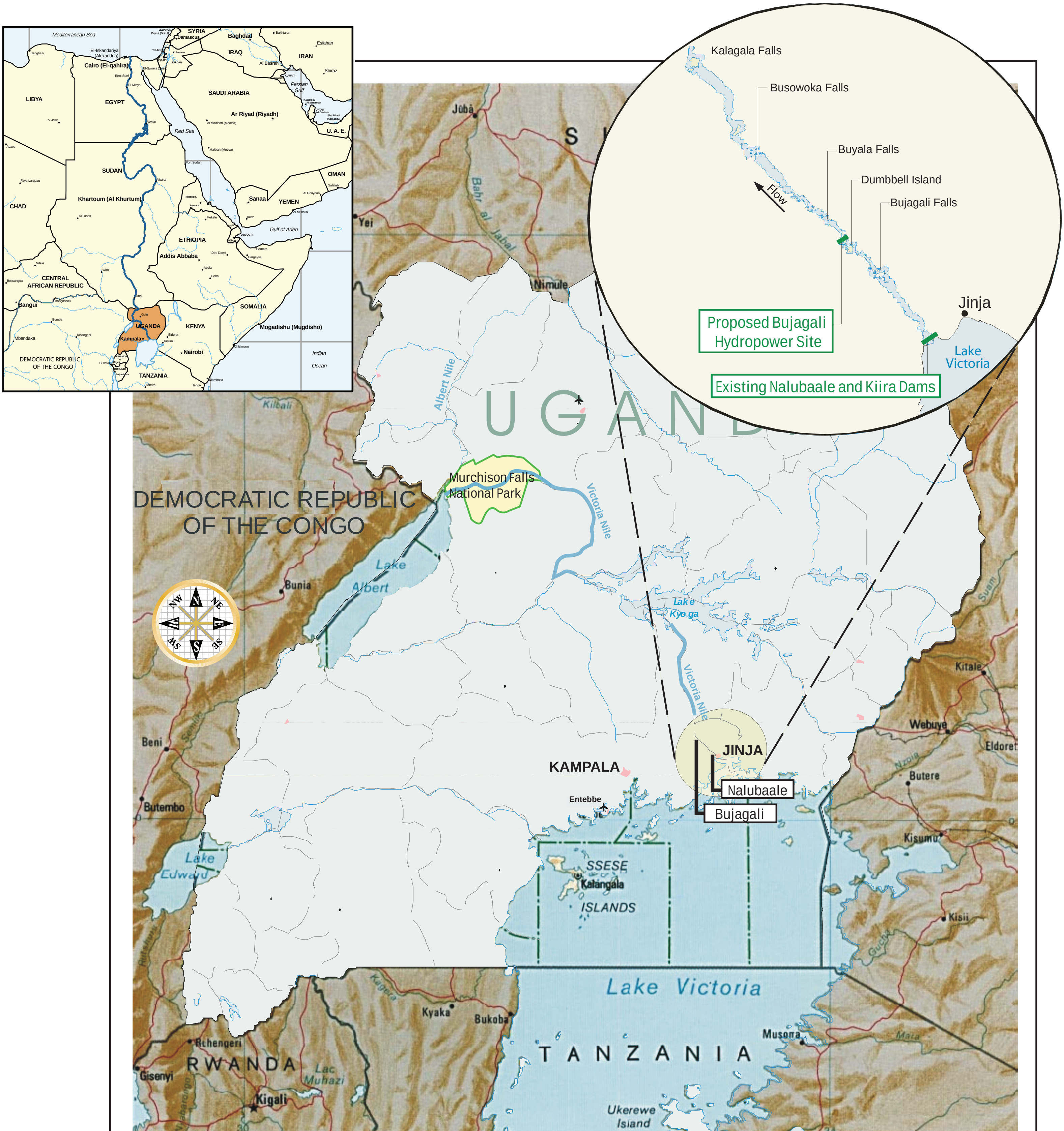
For this SEA assignment, BEL has appointed a consulting team led by R.J. Burnside International Limited of Canada to conduct and oversee the SEA tasks, manage the SEA process on behalf of BEL, and author the SEA documentation to comply with GoU and international lender requirements. Within the general SEA exercise, this specific report has been prepared by Frederic Giovannetti, a sub-consultant to R.J. Burnside International Ltd. SEA work started in January 2006.

## 1.2 BRIEF PROJECT DESCRIPTION

The hydropower facility will consist of a power station housing five 50-megawatt turbines with an associated 28 m high earth-filled dam and spillway works. The project will require about 125 ha of permanent land take (45 ha for the project facilities themselves and 80 ha of newly inundated area adjacent to the Victoria Nile River) and about 113 ha of temporary land take for the project's ancillary facilities (concrete batching plant, roads, cofferdams, rock quarries and stockpile areas).

The dam will impound a reservoir extending back to the tailrace area of the Nalubaale (Owen Falls) and Kiira (Owen Falls Extension) facilities, inundating Bujagali Falls amongst others (see inset of Figure 1). The reservoir waters will be contained within the steeply incised banks of the Victoria Nile between Dumbbell Island and Owen Falls, thereby minimizing the amount of newly inundated land.

In order to interconnect the HPP with the National Grid, the Uganda Electrical Transmission Company Limited ("UECTL") is developing the Bujagali Interconnection project ("IP"). The IP will be constructed, owned, and operated by the UECTL. The IP constitutes an "associated facility" for the Bujagali HPP according to the IFC's definition of "Area of Influence" (IFC Performance Standard 1, 2006). UETCL has contracted BEL to assist with the development of the IP, including the SEA documentation. The "Integrated SEA Summary for the Bujagali Hydropower Project and the Bujagali Interconnection Project" that accompanies the SEA integrates the findings of the HPP SEA and the IP SEA in one place. A specific CDAP is prepared and submitted for the Interconnection Project as part of the Resettlement and Community Development Action Plan.




50km

| Project Name: BUJAGALI HYDROPOWER PROJECT CDAP | Date: December, 2006 | 10045-CDAP-1 | Figure 1 |
|---|---|---|---|
| Prepared for: BUJAGALI ENERGY LIMITED | LOCATION OF THE BUJAGALI PROJECT | | |

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## 1.3 PROJECT SCHEDULE

BEL was awarded the HPP in 2005 following an international tendering process. In overview, BEL expects to complete financing and start construction by mid-2007. Construction would be completed in early 2011.

## 1.4 SCOPE OF THIS DOCUMENT

### 1.4.1 Social Documentation submitted within the SEA

The contents of the general SEA report are designed to meet requirements of the GoU as well as the policies and guidelines of the various International Financial Institutions (IFIs) that are expected to finance the project.

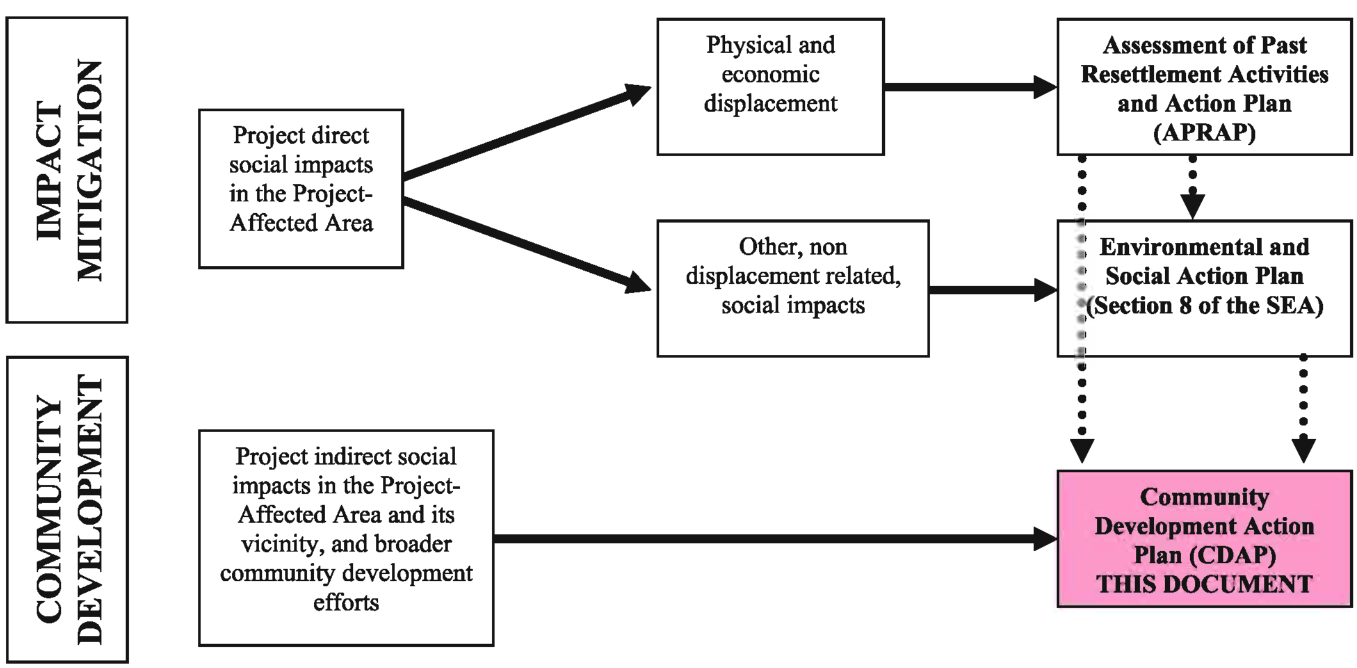
As far as documents presenting social mitigations and action plans are concerned, the following documents are prepared:

- Bujagali Hydropower Project:
  - Assessment of Past Resettlement Activities and Action Plan,
  - Community Development Action Plan (this document),
  - Environmental and Social Action Plan (Section 8 of the general SEA report),
- Bujagali Interconnection Project:
  - Assessment of Past Resettlement Activities and Action Plan,
  - Resettlement and Community Development Action Plan.

### 1.4.2 Scope of this Document

BEL with consultants has prepared this Community Development Action Plan to address proposed efforts to participate in the promotion of long term local economic and social development. These efforts will supplement mitigation measures committed upon by BEL as part of the Social and Environmental Assessment (SEA) and contained in the Environmental and Social Action Plan and in the Assessment of Past Resettlement Activities and Action Plan. Measures described in the two above-mentioned documents (SEA and APRAP) focus on mitigating identified Project impacts. The CDAP addresses support the Project will provide to communities beyond compliance, as well as in some cases to help local communities deal with more indirect impacts (such as indirect impacts on water supply) and to enhance socio-economic development. The following sketch summarizes the scope of these three different documents (but see also Section 3.4, below, re: linkages):

**Figure 2: Linkages Between the Different Social Documents Presented within the SEA**



# 2 OVERVIEW OF THE SOCIO-ECONOMIC CONDITIONS IN THE CDAP AREA

## 2.1 ADMINISTRATIVE AND POLITICAL ORGANIZATION

Uganda has a decentralized form of Government, with a large level of devolution to Districts. Districts are further divided into counties, sub-counties, parishes and villages. At each level the area is run by elected local councils (LC5 at District level to LC1 at village level). Districts (LC5), sub-counties (LC3) and villages (LC1) generally play the most important role in local government.

In the project area, the River Nile forms the boundary between Jinja District on the east bank and Mukono District on the west bank. Within Jinja District, the area directly affected by the project lies within Budondo Sub-county (LC3) within which lie the villages (LC1) of Kyabirwa, Ivunamba, Bujagali and Namizi. Within Mukono District the area directly affected lies in Wakisi sub-county within which lie the villages of Naminya, Buloba, Malindi and Kikubamutwe. Administrative areas are shown on Figure 2.

The Nile River also forms the limit between the traditional kingdoms of Buganda to the West and Busoga to the East.

## 2.2 HISTORY

In the pre-colonial period both river banks were settled but the east bank was particularly densely populated being the heart of Busoga land. In the second half of the 19th century, however, the population decreased due to a sleeping sickness epidemic. The west bank was less severely affected.

During the colonial period, the east bank was repopulated and there was extensive settlement and clearing of forest. On the west bank, extensive areas of forest were cleared following the eradication of the mbwa fly (the sleeping sickness vector) in 1952. Settlers came from all parts of Uganda, particularly the south-eastern part of the country, as well as from other East African countries. As a result both banks have a very heterogeneous population. The best land was cleared first and cash crops were planted, particularly cotton. Bush vegetation was left in swampy areas and on the dry hills. Later, coffee was planted and cassava, sweet potatoes and groundnuts introduced as subsistence food crops. Jinja town grew rapidly in the 1950s in the wake of the construction of the Owen Falls dam (now renamed Nalubaale).

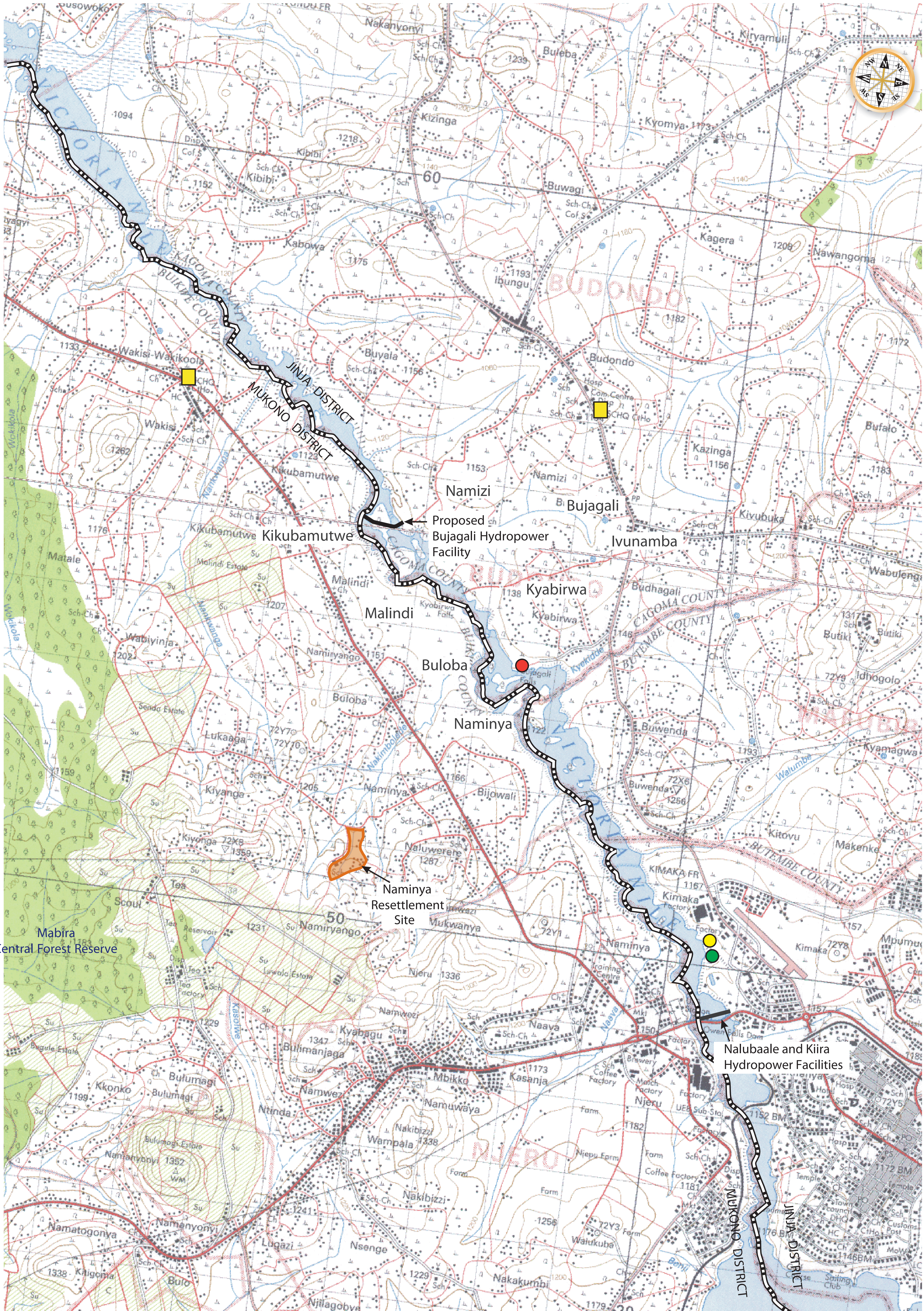
After Independence, coffee was developed as the main cash crop. Jinja continued to expand and became a marketing centre and industrial base. The area was relatively prosperous.

However, with the onset of political instability there was economic collapse. Jinja town was adversely affected. People were afraid of accumulating wealth and reverted to subsistence agriculture.

Since the return of political stability in 1985, population pressure in the area has increased, and the subdivision of land has intensified. Plots were divided into long strips stretching from the roads to the hills or swamps to include both fertile and poorer quality land. Virtually the entire area is now cultivated and very little forest remains.

## 2.3 DEMOGRAPHIC CONDITIONS

Demographic data at the district level was obtained from the 2002 census (GoU, 2002). The total populations of Jinja and Mukono Districts in 2002 were 387,573 and 785,393, respectively, with population in Mukono District presumably having dropped from 824,606 in the 1991 census as a result of the creation of Wakiso District. The growth rates of the population in the two districts were 2.5 percent and 2.6 percent per annum respectively between 1991 and 2002, which was below the national average of 3.3 percent per annum.




| | |
|---|---|
| Resettlement Land | Nile High Club |
| District boundary | Bujagali Speke Camp and Picnic Site |
| Road | Jinja Nile Resort |
| Buloba Project-affected Village | Sub-county Office LC3 |

SCALE 1:50,000

0 500 1000 M

Source: Forest Department 1999, WS Atkins 1999b.

| | | | |
|---|---|---|---|
| Project Name: BUJAGALI HYDROPOWER PROJECT CDAP | Date: December, 2006 | 10045-CDAP-3 | Figure 3 |
| Prepared for: BUJAGALI ENERGY LIMITED | ADMINISTRATIVE BOUNDARIES AND THE PROJECT AREA | | |

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The population of both districts was 49 percent male and 51 percent female for Jinja District; 50 percent male and 50 percent female for Mukono District. In Mukono District 49 percent of the population was under the age of 15 while in Jinja District the proportion was 46 percent. In Mukono District 82.8 percent of the population lived in rural areas whilst in Jinja District the proportion is only 77.9 percent due to the presence of the Jinja urban area, Uganda's second largest urban centre.

Sixty-seven percent (73.4%) of the population over 10 years of age is literate in Jinja District whilst in Mukono it is 79 percent. In both districts it is higher than the national average (68 percent). The proportion of the population over the age of six who have never attended school is 13.2 percent in Jinja District and 13 percent in Mukono compared to a national average of 32 percent. Overall literacy rate was 68 percent for persons aged 10 years and above, with 76 percent male and 61 percent female. In conclusion, standards of education in the study area are generally higher than at the national level, particularly in Jinja District.

The proportion of economically active population (defined as between 10 and 64 years) is higher in Jinja District (53 percent) than in Mukono (29 percent), and both are lower than the national average (60.5 percent). These trends relate closely to the trends in educational enrolment described above. The proportion of economically active population engaged in agriculture is 43 percent in Jinja District compared to 53 percent in Mukono and 71 percent nationally. In Jinja, the proportion of the population in the sales and service sector is 0.9 percent, whereas in Mukono, it is 18.7 percent. Within the project-affected area, 46 percent of affected people are primarily involved in agriculture, while 16 percent are involved in business, 15 percent are students, 4 percent are fishermen and 4 percent are bicycle or taxi drivers (AESNP RCDAP, 2001).

## 2.4 SETTLEMENT PATTERNS

The town of Jinja is the second largest town in Uganda and the administrative centre for Jinja District. Located on the East Bank, it forms an urban agglomeration with the smaller town of Njeru on the West Bank. Together, these two towns are an industrial center with paper, textile, beer, plastics, flour milling, food processing, leather and other industries. Jinja has a substantial commercial center providing hotel, business and social services. It also functions as a tourist base for visitors to the source of the Nile and the Bujagali Falls and as a marketing centre for agricultural produce from the surrounding area. The town has a strategic location on the main route from Kampala to Mombasa in Kenya, which also gives it a significant trading function.

Outside of Jinja on the east bank, settlement is concentrated along the main road from Jinja to Kamuli, and along tracks between this road and the Nile River. It is more dispersed and evenly distributed than on the west bank. The villages of Kyabirwa, Namizi and Buyala are clearly defined by pronounced valleys. Ivunamba is a sizeable trading centre with grocery shops, butchers, tailors, workshops, restaurants and market stalls.

On the west bank, settlement is concentrated along the main Jinja -Kayunga road. There is almost continual linear development along this road through the project area. Between the main road and the river a number of minor roads and tracks give access to clusters of homesteads within the villages of Nkokonjeru, Naminya, Buloba, Malindi and Kikubamutwe. Settlement is generally on higher land.

Figure 2 above gives an overview of settlement patterns.

## 2.5 HOUSING AND PUBLIC INFRASTRUCTURE

Housing in the rural areas is constructed mainly in family compounds. Buildings are either ‘temporary’ (built with traditional materials), ‘semi-permanent’ (with traditional walls and corrugated iron roofs) or ‘permanent’ (with brick or concrete walls). The majority of housing is owner-occupied. Water is obtained from the river and from boreholes, wells and springs. Sanitation is normally via traditionally-built pit latrines.

Charcoal is generally used for cooking and kerosene for lighting. Electricity is in theory available from a low voltage line running along the roads on both banks, but in fact it is cut off at least 50% of the time as a result load-shedding.

There are six primary schools in the project area. Several organizations, including AESNP, have participated in refurbishing primary schools in the recent past. Secondary schooling is provided in Jinja town. There are no significant recreation facilities for local people in the area, other than the Bujagali picnic site. There are no fixed line telecommunication in the rural areas but cellular phone services are available everywhere.

## 2.6 PUBLIC HEALTH

### 2.6.1 Availability of Health Services in the Project Area

Health centers in Uganda are categorized according to the level of services they are able to provide, from 1 (village level health posts) to 5 (district and regional hospitals). Two local health centers serve the population of the project area, as follows:

- On the west bank of the Nile (Mukono District), approximately 20 km from Jinja, is the Wakisi health center level 3; this center supports lower level health facilities, such as the Kalagala (north to Wakisi) and Naminya (in the Project-Affected Area) health centers (both level 2);
- On the east bank of the project area, approximately 15 km north of Jinja, is Budondo Health Centre level 4, which amongst others supports the Ivunamba level 2 health centre.

These rural health units refer difficult cases and emergencies to Jinja Hospital, which is a general hospital with complete medical, surgical, laboratory, radiological and other diagnostic and treatment services.

### 2.6.2 Health Baseline Situation

Table 1 hereunder gives basic health statistics for Jinja and Mukono Districts in comparison to Uganda national figures. Jinja District ranks better than Mukono District, and both districts rank higher than the national averages.

**Table 1: Health Indicators for Jinja and Mukono Districts as Compared with Uganda**

| Health Category | Jinja District | Mukono District | Uganda |
|---|---|---|---|
| Population (2002) Census | 387,573 | 795,393 | 24,442,084 |
| Population (per km$^2$) | 587 | 256 | 124 |
| Fertility and mortality rates | | | |
| Total Fertility rate | 6.2 | 7 | 6.9 |
| Infant Mortality Rate/1000 | 77 | 80 | 83 |
| Child Mortality Rate /1000 | 115 | 152 | n/a |
| Health facilities and inpatients Beds | | | |
| Hospitals | 3 | 4 | 104 |
| Health Units | 65 | 47 | 2971 |
| Total Beds | 859 | 950 | 25,628 |
| Population within 5 km radius of health facility (%) | 94.1 | 44.3 | 49.0 |
| Deployment of Trained Health personnel | 712 | 681 | 16,866 |
| Source: Statistics Abstract, 2002, Republic of Uganda & District Planning Offices (Jinja and Mukono) | | | |

Morbidity data for 2005-2006 were obtained from recorded outpatient diagnoses in the health institutions of the project area. Disease incidence patterns were similar at all health facilities. Specific data for the Wakisi and Budondo health centers are presented in Tables 2 and 3.

**Table 2: Outpatients Diagnoses for Wakisi Health Centre - June 2006**

| Diagnoses | Under five years old | | Five years and above | | All ages | |
|---|---|---|---|---|---|---|
| | Number | % of all | Number | % of all | Number | % of all |
| Malaria | 2054 | 43 | 2700 | 57 | 4754 | 62.0 |
| ARI-Not Pneumonia | 387 | 26 | 1082 | 74 | 1469 | 19.2 |
| Diarrhoea | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Intestinal Worms | 35 | 22 | 119 | 77 | 154 | 2.0 |
| ARI- Pneumonia | 67 | 40 | 101 | 60 | 168 | 2.2 |
| Skin Diseases | 212 | 40 | 316 | 60 | 528 | 6.9 |
| Anaemia | 26 | 81 | 6 | 19 | 32 | 0.4 |
| Eye Diseases | 21 | 21 | 178 | 79 | 199 | 1.3 |
| Trauma (Injuries and Wounds) | 49 | 16 | 61 | 84 | 110 | 4.0 |
| Ear Diseases | 30 | 19 | 124 | 81 | 154 | 2.0 |
| Schistosomiasis | 1 | 33 | 2 | 67 | 3 | 0.0 |
| Source: Directorate of Health Mukono District (Annual report) | | | | | | |

**Table 3: Outpatients diagnoses for Budondo Health Centre - 2005-2006**

| Diagnoses | Under five years old | | Five years and above | | All ages | |
|---|---|---|---|---|---|---|
| | Number | % of all | Number | % of all | Number | % of all |
| Malaria | 1,380 | 37.4 | 2,688 | 32 | 4,068 | 33.7 |
| ARI-Not Pneumonia | 540 | 14.6 | 1,476 | 17.6 | 2,016 | 16.7 |
| Diarrhoea | 182 | 4.9 | 552 | 6.6 | 734 | 6.1 |
| Intestinal Worms | 192 | 5.2 | 588 | 7.0 | 780 | 6.5 |
| ARI- Pneumonia | 301 | 8.2 | 144 | 1.7 | 445 | 3.7 |
| Skin Diseases | 132 | 3.6 | 204 | 2.4 | 336 | 2.8 |
| Eye Diseases | 120 | 3.3 | 143 | 1.7 | 263 | 2.2 |
| Trauma (Injuries and Wounds) | 216 | 5.9 | 84 | 1.0 | 300 | 2.5 |
| Ear Diseases | 22 | 0.6 | 93 | 1.1 | 115 | 1.0 |
| Gastro intestinal disease | 281 | 7.6 | 96 | 1.1 | 377 | 3.1 |
| **Totals** | **3,366** | **91.3** | **6,068** | **72.2** | **9,434** | **78.3** |
| Source: Directorate of Health Jinja District | | | | | | |

### 2.6.3 HIV/AIDS

In an estimated total population of 24 million, 1,050,555 million people living in Uganda are estimated to have HIV/AIDS, of which about 120,000 have developed AIDS. Nearly 80 percent of those infected with HIV are between the ages of 15-45 years, a most economically productive age group and often fenders of families. Adolescent girls between 15-19 years are 4-6 times more vulnerable than their male age mates. Children have felt a gruesome impact. About 2 million children of less than 18 years are orphans with one or both parents dead. They experience orphanhood at an age when parental guidance and socialization is most desirable. The quality of care, education, nutrition and socialization among these children is often poor.

Three major AIDS Service Organisations exist within the project area:
- The AIDS Service Organisation (TASO),
- AIDS Information Centre (AIC) and
- St Francis Health Care.

These all network with the existing health units of Budondo on the east bank and Wakisi on the west bank. Some HIV/AIDS statistics for the project area are summarized in table 4, with further details in Section 3.6.3. of the SEA report:

**Table 4: Cumulative HIV/AIDS cases per year**

| YEAR | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|
| Jinja Hospital | 97 | 141 | 128 | 180 | 212 | 372 |
| Budondo Health Centre | 17 | 26 | 24 | 31 | 29 | 37 |
| Source: Directorate of Health Services Jinja District | | | | | | |

### 2.6.4 Other Diseases

Schistosomiasis is a serious public health issue in the Project area. Intestinal infection due to *Schistosoma mansoni* is the only form infecting man found in the general area of the project. Surveys carried out using Lot Quality Assurance Sampling (LQAS) techniques (Brooker *et al.*, 2005) indicate infection rates of around 50 percent of population within the project-affected area, and in communities downstream of the project site. This was confirmed by other investigations (NAFIRRI, 2006).

Under the National Bilharzia and Worm Control programme, infections are treated with *praziquantel*, which is also effective against intestinal worms. Schools and communities are treated in sub-counties where prevalence is >50 percent. Where prevalence is between 20 and 50 percent, treatment concentrates on school-aged children only. In areas where prevalence is below 20 percent drugs are provided to the local health facilities for the treatment of any presentable cases. Schools and communities in the Jinja District area of the project have been subjected to *praziquantel* treatment. The fact that prevalence remains at around 50 percent of the population indicates that there are high rates of re-infection following this treatment.

As shown by Tables 2 and 3 above, malaria is the main reason why outpatients consult in local health centers. In the country as a whole, malaria is responsible for about 30 percent of all hospital attendances and is listed first in the top ten causes of mortality in all age groups under 16 years, and second only to HIV/AIDS as a cause of death in those over 16 (Ministry of Health, 1994).

Because malaria is hyperendemic among the local population, the level of immunity is correspondingly high. The principal risk of serious consequences of infection therefore lies with expatriates and any workers coming from non-malaria areas.

Due to financial constraints, residual insecticides for house spraying are in short supply. Boarding schools are treated routinely with permethrin. Ideally the schools should take responsibility but are unable to do so for financial reasons. People are willing to use bed nets which can be treated with permethrin to control mosquitoes but at UGX 8-10,000 each, the nets are not affordable for the majority of the population. In addition nets require re-treatment after about six months. General advice includes screening houses against mosquitoes and closing windows before dark.

No incidences of onchocerciasis (river blindness) have been recorded by the two District Health Directorates of Jinja and Mukono in recent years.

In former times there were a number of serious outbreaks of human trypanosomiasis in the Busoga region. The principal vector is the tsetse fly *Glossina fuscipes.* Flies were found to breed extensively around villages and in areas where the plant *Lantana camara* is prolific. An active control programme was instituted in the early 1990s, which involved active case finding and passive surveillance, combined with fly control, by spraying along the Nile and use of treated traps.

Infections were reduced by 96 percent over four years and by 2000 the point was reached where only nine or ten new cases of sleeping sickness occurred in a year in a population of about 300,000, and tsetse flies were no longer a problem. Traps are still used, essentially to monitor the occurrence of flies (including other related blood-sucking species).

Animal trypanosomiasis occurs in the area (Acting District Veterinary Officer, Jinja).

Further details on the above diseases can be found in Section 3.6.3. of the SEA report.

## 2.7 ECONOMIC ACTIVITIES

### 2.7.1 Overview

46% of households are primarily peasant farmers. While the vast majority of people in the area undertake some farming, a significant number of people are involved in other occupations. These include business / trade, fishing, and bicycle taxi driving.

According to 2001 agricultural statistics from the Jinja District Agricultural Office, the average sustainable land holding in the District is 0.8 ha per compound/household, with a net annual income of UGX 3.7 million or USD 2,055 per compound/household. Based on an average of 8.4 persons per household in the project area (WSAtkins, 1998), the average annual agricultural income per individual is USD 245.

The average annual household income from fishing, according to the AESNP baseline survey is UGX 527,400 (USD 293). As with agricultural income derived from AESNP surveys, the reported income from fishing may have been exaggerated in anticipation of possible compensation for loss of income.

Average income per household from business activities or formal sector employment, according to the baseline survey, is UGX 3.481 M (USD 1,950). Other sources of income include rents and social benefits. The total average annual income per household in the project area is estimated at approximately UGX 8 M or USD 4,440. However, income is not distributed evenly among households in the project area.

The important categories of expenditure are education, food/household essentials, health care, farming, taxes, transport, credit and home building. The costs that are considered to impose hardships on a family are, in general order of importance:

- education,
- acquiring land and health services;
- marriage, death and transport requirements;
- starting a household and having a first born child; and,
- paying taxes and hosting visitors.

People are able to save during the productive seasons of May to July and September to December. However savings are inadequate to address needs during the lean months of January to March when incomes are low and expenditures high.

Any savings are normally used to cover anticipated costs. If more unexpected financial burdens, e.g., a death, occur during a period when income is high, the expense may be manageable but if it occurs during a low income period these costs may have a very negative impact on the household. In such cases, routine needs such as school fees or even money for food may be sacrificed.

Affordable and reliable opportunities for saving and obtaining credit are limited. About 10% of households have a bank account. Micro-Finance institutions are currently not playing an important role in the area. About a third of all households are in debt with the average debt being UGX 850,000 (US$565). Borrowing mainly takes place from friends and relatives rather than financial institutions.

### 2.7.2 Agriculture

Agriculture is practised as a labour intensive, intercropping system with both cash crops and subsistence crops. The main cash crops grown today are coffee and some sugar cane whilst there has recently been extensive planting of vanilla. The main subsistence food crops grown are bananas, cassava, sweet potatoes, maize, beans, groundnuts, cocoyam, millet, sorghum, peas, sesame, and yams. A range of horticultural crops is grown throughout the year including tomatoes, onions, cabbages, pepper, eggplants and carrots.

Trees are planted for a wide range of reasons including: to demarcate plots; provide shade and windbreaks; to provide a source of fuel and building materials; to produce fruit for sale and household consumption; to provide fodder; and, to improve soil moisture and fertility. The main fruit trees are jackfruit, avocado, mango, oranges and pawpaw.

Few livestock are kept due primarily to a shortage of grazing land although wealthier families on larger plots tend to keep livestock. A few cattle are kept for milk although yields are low. Goats, turkeys and poultry are the main livestock kept, along with some pigs.

There is a clear subdivision of responsibilities between men and women with regard to farming. Women are responsible for food supply including planting, weeding, harvesting, collection of firewood and the preparation of meals as well as childcare, fetching water and household tasks. They generally do more work than men who are responsible for cash income including cash crops, trading and providing income from other activities. They clear the land and are responsible for building houses and looking after trees and animals. Despite the hard work, women generally do not own family land but merely have access to it. This has inhibited women's economic advancement by blocking avenues to credit schemes.

Land is being subdivided and production is being intensified. The number of plots into which a holding was traditionally subdivided was usually proportional to the size of the holding because the largest families tended to have the largest holdings.

In his study of Budondo sub-county, Anderson (1994) considers the smaller holdings to be not only poorer but also less environmentally sustainable. He considers a holding of less than 0.5 ha to be below the threshold to support an average family.

Other problems and constraints to production include:

- Steep slopes and erosion;
- Low capital base and high costs of inputs;
- Pests and plant diseases, especially in coffee and bananas;
- Mechanization not possible due to topography;
- Lack of business planning and management skills;
- Low prices for crops;
- High transport costs and poor roads that become impassable during the rainy season; and,
- Lack of a co-operative approach, which could assist in bulk purchase of inputs, value added to crops and/or access to more lucrative markets.

### 2.7.3 Fisheries

Four quarterly surveys carried out by FIRRI during 2000 indicate that the most important commercial fish species in the Upper Victoria Nile are the introduced Nile perch and Nile tilapia.

Fishing effort in terms of active fishing canoes showed no major change in 2006 from the April 2000 counts (50 fishing canoes in 2000 vs 51 fishing canoes in 2006) for all the four transects sampled. However, in terms of type of canoes used, there was a 57 percent increase in the more robust Ssese type of craft and a 39 percent decrease in the active dugout type of fishing canoe. The April 2006 survey also revealed an increase in the number of fishers from 89 during 2000 to 128 during 2006. Similarly, there was an increase in the number of fish traders from 12 to 47 (a 74 percent increase) by the April 2006 survey. Further details can be found in the SEA report, Section 3.6.4.4.

The total monthly yield from the four transects was much higher in April 2006 (16,816 kg valued at UGX 12M) compared to April 2000 (7,969 kg valued at UGX 4M) in 2000. However the 2006 figure is heavily influenced by the report from one owner, who may have overstated his catches. If this latter is omitted from the analysis, the overall fish catch in 2006 is similar to that in 2000.

The commercial fishing gears were the same as in 2000, i.e. multifilament gill nets, hooks, cast nets and mosquito nets.

It should be noted that the Uganda Fisheries Master Plan Study (Ministry of Agriculture, Animal Industry and Fisheries) states that average income for full-time fishermen in Uganda is *circa* USD 280 per annum, which accords well with the estimate for the Bujagali area of USD 350 per annum.

### 2.7.4 Tourism

The site of the Bujagali hydropower facility is approximately 8 km downstream of the “source of the Nile” (i.e. where Lake Victoria empties into the Victoria Nile). Due to the history and scenic topography of the area, it is attractive to tourists, especially to white water rafters who come to take advantage of the sequence of rapids on the upper reaches of the Victoria Nile.

Four companies currently operate one- or two-day WWR excursions near Bujagali: Adrift, Nile River Explorers (NRE), Equator Rafting and Nalubaale Rafting.

Many white water rafters are primarily adventure and overland tourists. In such cases, Jinja represents a convenient stopping point for tours, where WWR is available as an optional activity.

Research carried out in 2006 as part of this SEA indicates that total rafter numbers are approximately 10,000 per year, with Adrift and NRE each carrying 4,000-5,000 per year, and 800 to 1,000 per year being carried by Equator and Nalubaale combined.

Further details on tourism can be found in the SEA main report, Section 3.6.

# 3 CDAP STRATEGY AND KEY AREAS OF INTERVENTION

## 3.1 AESNP'S COMMUNITY DEVELOPMENT ACTION PLAN

### 3.1.1 Planning

AESNP had prepared in 2000 and 2001 a Community Development Action Plan[1], which was disclosed to the public together with the Environmental Impact Statement in February 2001.

The AESNP Community Development Action Plan (CDAP) was planned to take place in two successive phases:

- Phase I: up to commencement of commercial operations of the Bujagali Hydropower facility (about 5 years);
- Phase II: during the operations phase (30 years), termed "Social Responsibility" program by AESNP in consistency with their overall corporate policies.

For Phase I, AES had committed per the disclosed CDAP to a disbursement of USD 1.8M prior to commercial operations of the facility, excluding compensation and mitigations.

For Phase II, during the operational term, a "Social Responsibility" fund was to be established, whereby monies would have been allocated from the Operational and Maintenance budget to sustain implemented projects and to help develop future projects. In Phase II, the area concerned by the project could have been expanded to include a regional and national viewpoint.

The CDAP prepared by AESNP included the following components:

- Vocational training to enhance employability of local residents, including Project-Affected People (was to be budgeted by the EPC Contractor),
- Development of a commercial area next to the Project's main construction site, to make it possible for local women to sell food and other goods to Project workers (USD 40,000),
- Water supply to 8 communities in the Project-Affected Area (USD 154,000),
- Extensions to the electricity low tension network into village trade centers in the Project-Affected Area from an existing line (USD 300,000),
- Construction of new landing sites for fishermen, technical assistance and provision of fishing gear (USD 280,000),
- Business creation training and technical assistance, and micro-credit (USD 110,000),
- Upgrades to 5 existing primary, secondary and vocational schools (USD 420,000),
- Tourism (construction of a visitor center at the dam and construction of a cultural centre – budget: USD 150,000),
- Upgrades to existing community health centers at Budondo and Naminya (USD 300,000),
- Community resource centers established in existing buildings, intended to provide services such as small business support, libraries, training and meeting rooms, etc… (USD 50,000).

### 3.1.2 Implementation

Before withdrawing from the Project in 2003, AESNP had undertaken some of the community development activities committed upon in the publicly-disclosed RCDAP, mainly the following:

- Upgrades and/or expansions of some primary schools, particularly the one in Kyabirwa (East Bank),
- Drilling of 8 boreholes fitted with "Orbit" handpumps in the Project-Affected Communities (plus one in the Naminya resettlement site),
- Limited upgrades at the existing Budondo health centre and establishment of the Naminya health centre in the "model house" at the Naminya resettlement site.

However, other activities anticipated under the RCDAP were not implemented, particularly the following:

[1] *AESNP / ESG / WS Atkins / F.Giovannetti : Bujagali Hydropower Project, Resettlement and Community Development Action Plan, 2001*

- Construction of an additional classroom block at the Naminya R/C primary school,
- Electricity supply, although detailed design was indeed undertaken,
- Support to the development of tourism activities,
- Support to fisheries,
- Micro-credit,
- "Community resource centres".

The current situation of drinking water supply in affected communities is a matter of specific concern. While the initial CDAP made provision for equipment of the wells with India Mark II pumps, a proven model, AESNP with support from DWD equipped wells with "Orbit" handpumps from South Africa, previously unknown in Uganda. No maintenance system (trained artisans and spare parts) was in place for these pumps, and as a result all are now out of order except one (in the resettlement site). These pumps therefore need to be changed to a more common model such as India Mark II. In addition, a maintenance system needs to be established.

## 3.2 BEL'S COMMUNITY DEVELOPMENT STRATEGY

### 3.2.1 Socio-Economic Background for the BEL CDAP

Extensive socio-economic surveys have been carried out in the Project-Affected Area, by WS Atkins as part of the EIA in 1998, and by AESNP in 2000 prior to the RAP implementation. Focus is put here on those relevant to the CDAP strategy, which are the following:

- There is a overwhelming expectation in communities that the Project sponsor develop basic infrastructure such as power, water, and education and health facilities;
- Land is scarce and agricultural land is not easily accessible to all; younger people and women may have difficulties in this regard;
- Cash crops tend to be men's crops and women find it difficult to get monetary incomes from agricultural activities, since they are mainly in charge of subsistence crops;
- The extreme subdivision of land, intercropping and the topography together with the limited investment capacity at household level, make it impossible to achieve significant increases in crop productivity through mechanization; improvements in farming incomes may result mainly from better marketing;
- The income analysis has shown that there are contrasting categories of PAPs, with the full range of intermediary incomes in between:
    - About 10% of affected household heads are already involved in business, whether in connection with agriculture or in other fields; they are accustomed to financial services and may use a bank account or borrow money from various institutions in order to invest into small enterprises; usually, these people have sufficient land in the area or elsewhere and own other assets such as buildings or livestock;
    - At the other end of the social scale, some people have obvious difficulties during the lean season, have to borrow to meet the family's basic needs at these periods; usually, they own little or no land;

Overall, the implications for the BEL CDAP of this analysis are the following:

- ***Quick-impact activities in the social infrastructure field*** are critical to manage community expectations, particularly as there is some frustration with activities left incomplete by AESNP;
- As land is scarce and agricultural potential remains limited, ***new opportunities in non-agricultural fields must be developed***, especially to women and the younger generation;
- But not all in the area will be able to take these opportunities; as in many other areas in Africa, ***agriculture will be the safety net*** that will allow those who are not able to capture new business opportunities to maintain their livelihoods; opportunities in agriculture must also be developed, particularly to the benefit of more vulnerable women.

### 3.2.2 Key Principles of the BEL CDAP

Key principles underlying the proposed BEL CDAP strategy are the following:

- Build on the existing CDAP framework prepared by AESNP, and complete activities started but left incomplete by AESNP when they left Uganda,
- Avoid taking over or competing with responsibilities that belong to the different levels of the Government, particularly the LC5, LC3 and LC1;
- Avoid an *ad-hoc*, charity-type approach, whereby BEL would meet supposedly urgent community needs without a long term sustainability perspective;
- Ensure consistency with broader regional development planning objectives as put forward by the Government of Uganda, as well as other planned development projects conducted with bilateral or multilateral agencies;
- Provide a multiplier effect to impact mitigation measures committed upon by BEL, specifically through training and capacity building to ensure long-term sustainability of re-established livelihoods, community infrastructure and services;
- Put a specific focus on activities beneficial to females, both in the business development and agriculture enhancement components;
- Develop some "quick-impact" activities that will help build or restore confidence within the community;
- Anticipate from the very beginning of activities the eventual disengagement of BEL from their funding and management, particularly in areas where BEL may participate in infrastructure upgrades.

### 3.2.3 Strategic Orientation of the BEL CDAP

The general strategy which underlies the proposed Community Development Action Plan is the following:

- Focus the CDAP on the following areas:
  1. Improve local social infrastructure as part of quick-impact activities to enhance community support and confidence and fix projects left incomplete by AESNP:
     - improve water supply;
     - improve education and health facilities;
  2. Support sustainable economic development:
     - Enhance direct and indirect employment opportunities:
       - the construction of the dam will provide direct sources of employment; the job opportunities will be directed to the affected communities to the extent possible and employability must be improved;
       - measures will be taken to enhance indirect employment;
     - Enhance agricultural productivity and farm produce marketing;
     - Develop non agricultural sources of livelihood;

- Schedule the CDAP in <u>two successive phases</u>:
  - <u>Pre-construction</u>: Quick-Impact activities before commencement of construction (from June 2006 to June 2007);
  - <u>Construction</u>: CDAP activities during the construction phase (from July 2007 to 1st quarter 2011).

Further to these two phases, BEL will monitor implemented projects and will be able to intervene to fix observed problems. Some limited community development initiatives might be initiated and implemented during this phase, depending on communities' requests.

### 3.3 PROJECT AREA FOR THE BEL CDAP

The area that will benefit from the Community Development Action Plan comprises of the 8 affected villages (LC1s), as follows:

- West Bank (Mukono District): Naminya, Buloba, Malindi, Kikubamutwe;
- East Bank (Jinja District): Bujagali, Ivunamba, Kyabirwa, Namizi.

In addition, the two LC3 headquarter localities of Wakisi (West Bank) and Budondo (East Bank) could be considered for activities in the areas of health and education.

### 3.4 LINKAGES WITH MITIGATION PLANS

The SEA includes mitigation measures that are expected to provide community benefits well beyond their mitigation purpose. Amongst others, these include the following:

- BEL's hiring policies will give priority to local residents for Project-related employment, at both construction and operation phases; these policies apply not only to BEL but also to its construction and operation contractors.
- BEL develops a procurement/outsourcing policy that will give priority to local and regional small and medium businesses wherever these can provide services.
- Following the assessment of past resettlement activities carried out in the framework of this SEA, BEL will promote activities aimed at enhancing livelihood restoration of Project-displaced people, including:
  - Agricultural improvement activities, with a focus on market gardening,
  - Promotion of small-scale animal husbandry,
  - Support to small businesses through awareness, promotion and training, micro-credit, technical assistance and marketing assistance.

Mitigation measures are commitments the Company makes to abate environmental, economic and social impacts of its project, whereas the CDAP is a supplemental BEL initiative aiming to provide long term benefits to the community, above and beyond impact mitigation. However, there are many areas of linkages between the CDAP and mitigation measures, particularly those anticipated under the APRAP. As it would be ineffective to have two separate initiatives aiming, for example, at agricultural improvement, these will be implemented jointly. Budgets are nonetheless presented separately, to provide a clear distinction between funds earmarked for livelihood improvement activities resulting from the APRAP and those resulting from the CDAP.

# 4 PRE-CONSTRUCTION ACTIVITIES

## 4.1 WATER SUPPLY

Water is clearly mentioned as the 1st priority by communities in the Project area. Only one of the 9 water wells installed by AESNP as mitigations to hindered access to the Nile River in the affected communities is currently operational, the one installed at the Naminya resettlement site. The 9 AESNP water wells are drilled boreholes with PVC casing and a concrete pad, and were fitted with one "Orbit" handpump each. No spare parts appear to be available for these handpumps, and no maintenance system had been put in place when they were installed (no trained artisans for maintenance, no spare part retail system). Although these water supply enhancement measures could be regarded as mitigations, they are addressed in this CDAP as they clearly include a community development component, particularly in terms of community empowerment in view of management and maintenance.

BEL has decided to change the Orbit handpumps for a more reliable and more common model, the India Mark 2 handpump. This model is widely distributed in East Africa, spare parts are available, and artisans have been trained to take care of them.

Another 8 boreholes were drilled by AESNP but were not fitted with a handpump at the time. These 8 boreholes will also be equipped with a new India Mark 2 handpump, subject to well productivity testing.

In terms of equipment of the communities, the final situation after installation of new handpumps on all 17 boreholes will be as follows:

- West Bank:
  - Kikubamutwe: 2 wells,
  - Malindi: 2 wells,
  - Buloba: 2 wells,
  - Naminya: 2 wells,
  - Naminya resettlement site: 1 well[2],
- East Bank:
  - Kyabirwa: 2 wells,
  - Bujagali: 2 wells,
  - Ivunamba: 2 wells,
  - Namizi: 2 wells.

BEL is entering into a turnkey contract with a trustworthy Ugandan contractor, with the following scope:

- dismantle existing pads and pumps,
- clean-up wells (airlift),
- test wells (pump or airlift),
- re-install well pad,
- install new India Mark 2 handpump,
- supply initial batch of wear parts,
- train village caretakers,
- supply initial artisan equipment.

The cost of these services is estimated at about UGX 80M (about USD 45,000). The works should take about 2 months to complete, and kick-off is expected in August 2006.

[2] *In addition to the AESNP « Orbit » pump at the resettlement site, which is still operational, there is another drilled well with an India Mark 2 handpump at the other end of the resettlement site, that was drilled by DWD before AESNP was involved there, and a spring with improved catchment, that was built by AESNP. In spite of resettlers' complaints about the water situation, it is in fact much better than in the vast majority of Ugandan rural communities with 3 different water points for a population of about 300 individuals (including people living in the neighborhood), while the usual standard of service is one water point for 300 people.*

### 4.2 EDUCATION

In this pre-construction phase of the CDAP, BEL will dedicate a total budget of USD 15,000 to urgent works in education facilities in the 8 affected communities. A detailed program is being established by BEL in cooperation with the BIU and the Education authorities of both districts. This may include:

- Provision of furniture,
- Construction of additional latrines,
- Repairs of roofs, water supply or other works.

### 4.3 HEALTH FACILITIES

BEL has consulted with health authorities in both Mukono and Jinka Districts, and with communities in the 8 affected villages. This consultation has revealed that one of the most urgent issues was that the personnel posted by the Mukono Health District in the Naminya level 2 health center did not have accommodation at the site, and had to commute everyday from Jinja. BEL will focus on this issue for the pre-construction phase of the health component of the CDAP, with the following activities:

- Allocation of three vacant houses in the Naminya resettlement site to the Mukono Health District
  - one – the former model house, already used as a health center – for the clinic itself,
  - two for staff accommodation;
- Transfer of the title for the clinic itself to the Mukono District Administration (currently the title is in the name of ULC – Uganda Lands Commission), whereas the ownership for the houses intended for staff accommodation would remain with ULC;
- Limited upgrades to the existing clinic as per agreement with the Mukono District Directorate of Health.

This will be beneficial both to the resettled community and to the village of Naminya at large.

# 5 CONSTRUCTION PHASE ACTIVITIES

## 5.1 PARTNERSHIP WITH UETCL

BEL's remit from UETCL for project management includes implementation of the Construction phase CDAP. However, UETCL will own and operate the interconnection system associated with the Bujagali HPP. UETCL would co-steer the Construction phase of the CDAP with BEL, and participate in its funding.

## 5.2 ENHANCEMENT OF PUBLIC SERVICES

### 5.2.1 Water Supply

In the second phase of the CDAP, BEL will work with communities to improve their water supply further, as there is overwhelming demand for improved water supply. AESNP-led consultation, confirmed by consultation carried out by the BEL SEA consultant, indicates however that several communities expect BEL to install piped schemes, drawing water from either Jinja (East Bank) or Njeru (West Bank). Such a solution is nevertheless not advisable at the present time for the following reasons:

- Piped systems will require electricity to operate (booster pumps); as a result of the current load-shedding situation, these would operate only intermittently,
- Communities need to demonstrate the capacity to manage smaller systems, such as handpumps, as a step towards development of a more sophisticated system.

In the second phase of the BEL CDAP, the technology for enhancing community water supply will therefore be the same: drilled wells equipped with handpumps. Subject to further consultation with affected communities, it is tentatively envisaged to add one well in each of the eight affected communities, i.e. 8 wells in total at a cost of about USD 80,000.

### 5.2.2 Education Facilities

The AESNP CDAP established a detailed program in the educational sector, which included significant works and additional buildings for 5 schools, as follows:

- East Bank:
  - Kyabirwa Primary School: administration block; 2 new classrooms blocks consisting of 14 classrooms; new furniture;
  - Budondo Primary School: renovation of 12 classrooms; construction of new classroom block to accommodate 10 classrooms; furniture; provision of 6 new sanitation facilities.
  - Budondo St Stephens Secondary School: completion of the construction of the laboratory blocks; provision of equipment and furniture.
- West Bank:
  - Naminya Primary School: new classroom block for 10 classes; 12 stance pit latrines; underground water tank; new headmaster office and furniture for the above. This school was intended to accommodate resettlers' children;
  - Nile Vocational School in Njeru, which was intended as a potential pre-employment training center for the EPC Contractor.

Only Kyabirwa and Budondo primary schools were fully implemented by the time AESNP left.

The situation has considerably changed since 2002, and this component needs to be revisited, in consultation with interested communities on both banks:

- The Nile Vocational School now receives significant funding from the DED, one of the technical cooperation organizations of the German government,
- The NGO "Soft Power", based in Jinja, has funded upgrades in several schools on the East Bank, and is preparing to launch a similar program on the West Bank.

In addition, adequate balance must be achieved between both banks and between communities on each bank. This component will therefore need comprehensive consultation with:

- The education authorities of both Mukono and Jinja districts, which has started in July 2006;

- The local councils at LC5, LC3 and LC1 levels;
- The communities themselves.

The upgrade of the Naminya R/C primary was a commitment made by AESNP, which had two goals:

- Mitigate the additional number of pupils resulting from the resettlement of 34 households at Naminya resettlement site,
- Enhance educational facilities for the community of Naminya as a whole.

Consultation with both the resettled community and the host community indicates that these works are indeed a priority. The school will be upgraded as part of the CDAP, as follows:

- Construction of one 10-classroom block,
- Provision of furniture in respect of the above and upgrade of existing furniture,
- Construction of a headmaster office,
- Construction of a 12-stance pit latrine

The cost of works at the Naminya R/C primary school had been estimated at USD 100,000 in 2001. This cost is re-evaluated at USD 120,000.

### 5.2.3 Health Facilities

In the Construction Phase CDAP, BEL will consider participating in the upgrade of the following health centers:

- East bank:
  - Budondo (level 4),
  - Ivunamba (level 2),
- West Bank:
  - Wakisi (level 3),
  - Kalagala (level 2).

According to health authorities at District level, all four above-mentioned centers are in need of significant upgrades, interesting structures, staff accommodation, power and water supply, sanitation, security (fences), inadequacy of transport equipment and of medical equipment. A detailed assessment of the condition and needs for each of these 4 health facilities remains to be done, in cooperation with both District Health Directorates and relevant staff at center level.

## 5.3 ECONOMIC DEVELOPMENT

### 5.3.1 Commercial Area Near the Construction Site

BEL with its EPC Contractor will build a commercial area in the vicinity of the contractor's main base in Kikubamutwe, Dumbbell Island. This market will mainly aim at selling food and basic goods to construction workers. The area will be served with drinking water, latrines, proper run-off water sanitation, and will be made accessible to matatu mini-buses. The necessary surface of the platform is in the order of 5,000 $m^2$, with 4 public taps and 4 latrines. One 400 $m^2$ roofed structure will be erected, with small concrete stalls underneath.

The daily management of the area will be under the responsibility of a society to be created by the shopkeepers, with assistance from BEL and a local NGO if required.

It is estimated that about 50 jobs could be created, mainly for women. Marketing of local food crops will also indirectly benefit farmers. So that both banks can actually benefit from this opportunity, a boat service or a temporary bridge will be created for women from the East Bank to come and work on this area. The contractor could also utilize this transport/ crossing to transport staff from the East Bank.

The general design and implementation details, together with eligibility criteria, will be discussed with local communities and the EPC contractor.
Before construction of the commercial area is initiated, consultation will take place with the following groups from both Banks:

- currently active shopkeepers of the area;
- women currently marketing processed food in the area;
- women's community-based organizations of the area;
- local leaders (LC1s and LC3s).

The total cost of earthmoving required to create the platform, water supply, latrines and roof work is estimated at USD 50,000.

This area could be further developed into a proper catering facility for the construction phase and beyond, based on a model that has successfully been implemented by several contractors at construction sites on the Chad-Cameroon pipeline: local women with experience in preparing and vending dishes are brought in to prepare and sell cooked dishes to workers. The contractor provides clean drinking water and can provide sanitary control of food and food handling techniques by Project medical staff, as well as training in these areas. Rather than taking their lunches at the construction site mess, non-resident local workers are given a time allowance of say 40 minutes at lunch time and a basket allowance that covers the cost of the meal purchased from a local vendor. This has many advantages:

- Local workers are served the food they like in the quantity they want, while experience indicates that it is not always easy to get catering companies to prepare proper African dishes, as cooks are trained to prepare so-called "continental" food rather, with construction workers also complaining about small quantities of food;
- It avoids congestion of the messes;
- It can boost local businesses and support women willing to start a small catering business.

The introduction of bottled gas, rather than firewood, should also be promoted at this site, as an environmental protection measure.

### 5.3.2 Small Business Support and Micro-Credit

#### *5.3.2.1 Overview*

Subject to consultation with interested stakeholders, BEL will implement a small business support and micro-credit program in the Construction phase of the CDAP.

This program will include the following three components:

- Establishment of a basic business support center on each of the banks, with the following services:
  - Training in business planning and business management, with focus on fisheries, petty trade and agricultural businesses;
  - Support services (assistance in setting up businesses, telecommunication and secretarial services);
- Micro-credit;
- Linkage with BEL and EPC contractor supply chain departments, and support to local businesses being outsourced construction or operation services by BEL or its contractors.

#### *5.3.2.2 Business Support Center*

Training services: A set of basic training modules will be developed by an external Ugandan SMME training specialist using existing material and experience. Training modules will need to be simple, practical and follow a building-block approach, involving role-plays and simulation games. It should be assumed that some participants will be illiterate and/or innumerate. Modules will include a basic introduction to the local business environment, identification of products and services and the market for these, understanding budgets and cash flow, sourcing finance for a business, understanding and managing credit, paying taxes, and so forth. Training would be available to any member of the community subject to payment of a small fee (UGX 5,000 for instance). As a linkage with the perspective of end of construction, this training could also be delivered to construction staff about to be retrenched (then at Contractors' expenses).

Support services: The business support center will be open to potential businesspersons seeking advice in the following matters:

- Legal and paperwork support for those willing to establish a formal business,

- Tax advice,
- Business planning, economic and financial advice,
- Assistance in preparing loan applications, and in contacting external parties (banks, government institutions, NGOs),
- Translation support from local languages to English and vice versa,
- Typing, photocopying (at a modest charge),
- Tele-communication (phone and fax when available, at a modest charge)

#### *5.3.2.3 Micro-Credit*

A revolving credit line will be funded by BEL, and will be managed by an existing Micro-Finance Institution. A credit committee will be set up with the selected Micro-Finance Institution and BEL. This committee will define criteria of eligibility and criteria of priority, together with procedures for appraisal of the sustainability of the credit project.

Loans could be in the order of USD 200 to 1,000 with a repayment period of 3 to 6 months. The retained MFI will be instructed to develop a specific micro-loan package for farmers, whereby the repayment period could be slightly longer to accommodate agricultural calendars and seasonality factors.

#### *5.3.2.4 Linkage with Contractors' and BEL Procurement*

Experience indicates that on major construction projects like the Bujagali HPP, seldom is there significant benefit to small businesses because it is difficult to establish the proper linkages between procurement/outsourcing departments in the construction and operations companies on the one hand, and community development initiatives aiming at developing small business on the other. Reasons for this situation are usually:

- Inability of local small businesses to organize themselves together to be able to deliver large quantities (of food for example);
- Hygiene and quality criteria derived from industrial world standards, that local produces are unable to meet immediately;
- Companies' preference for managing few contracts with large suppliers rather than multiple contracts with smaller suppliers.

Building on this lesson from other projects, it is proposed to assign a dedicated task manager to activities aimed at enhancing local small businesses through outsourcing by BEL and contractors, at both construction and operations phase, for a period of one year. Areas of focus for outsourcing supplies and services to local small and medium businesses will be the following:

- Security and patrolling services,
- Laundry, cleaning and catering services,
- Market gardening and provision of fresh produce in general, such as poultry, meat, vegetables, eggs, fish,
- Restoration, revegetation and lanscaping of temporarily occupied areas such as borrow and staging areas,
- Construction works.

#### *5.3.2.5 Budget*

The following table shows the budget for the business support and micro-credit sub-project:

**Table 5: Budget for the Business Support Sub-Project**

| # | Item | USD |
|---|---|---|
| 1 | Establishment of two business support centers | 50,000 |
| 2 | Training sessions for 500 people, including trainers and logistics | 50,000 |
| 3 | Credit line | 100,000 |
| 4 | Administration and management of the credit line | 30,000 |
| 5 | Linkage with procurement – Ugandan task manager for 12 months | 30,000 |
| 6 | Contingencies 10% | 26,000 |
| | **TOTAL** | **286,000** |

### 5.3.3 Fisheries

#### *5.3.3.1 Overview*

As a result of studies and consultations carried out by AESNP, the following Community Development activities were then proposed to the local community in the field of fishery development:

- training and contribution to a better organization and equipment by fishermen of catches, stock management, and marketing;
- financial services to fishermen who may be willing to acquire appropriate equipment;
- buying of this equipment on their behalf to get better prices and better quality.

Also, the access to the reservoir may be more difficult to fishermen after inundation due to the operational drawdown of water within the reservoir, which may leave a muddy margin on the bank. It is proposed to build landing site structures (metallic, rock, concrete or wood), at appropriate places. This is actually an impact mitigation measure, but as detailed hereunder, it will provide the opportunity for more developments in terms of facilities, equipment and training.

BEL will consult again with communities, and will develop an updated fisheries program in collaboration with NAFIRRI, the Uganda national fisheries research institute based in Jinja.

#### *5.3.3.2 Landing Sites and Related Facilities*

Consultations with the fishermen associations regarding potential development location of landing sites concluded with 4 new locations being proposed. Three locations were identified on the West Bank, two slightly upstream of Dumbbell Island and one further upstream. The East Bank proposed a single location at Namizi upstream of Dumbbell Island. One additional site could be located along the east bank in the Kyabirwa vicinity.

Three potential landing site structures were investigated and consulted upon; the Associations (due to high maintenance costs) disregarded a floating jetty; gabions were also discounted due of the severe topography of the riverbank and erosion concerns. The Associations' preferred structure is a stepped bench with concrete flooring. This has the advantage of low maintenance and a stable platform suitable for a large number of boats to use.

With improved access and landing facilities, AESNP had proposed to develop a market area at each of these locations consisting of a small trading center with stalls and sanitation. The objective of these developments would be to provide a dedicated local fish market within the parishes of the affected area where villagers and fish mongers from Jinja could purchase fresh produce.

The Associations' management committees (now called "Beach Management Committees" under the Fish Act) will take the administrative responsibility of these facilities. Land rights necessary for these facilities have been acquired during the resettlement process. Temporary land required for construction purposes when freed up will be developed and land title will be transferred to the respective management committees.

#### *5.3.3.3 Boats and fishing equipment*

BEL could also consider the provision of fishing equipment to each Management Committee in the form of boats, lifejackets, paddles, nets of various sizes, hooks, mooring ropes and other miscellaneous fishing tackle. Mobile phones can be useful to allow fishermen to access markets more easily.

#### *5.3.3.4 Training*

Due to the inundation the river's characteristics will change. AESNP had proposed that a training scheme be implemented to prepare the Associations members for this change. A training proposal and program had been developed by NAFFIRI, which has local knowledge of the area, river, ecological conditions and current local fishing methods employed. This proposal will need to be updated. The program was designed to provide fishermen with sufficient knowledge and build up their skill base to allow them to safely fish in the deeper, slower flowing waters of the Nile after inundation. The training program will be conducted in the affected villages on both the eastern and western banks.

It will involve practical demonstrations of the different equipment and fishing methods to be employed, and incorporate discussions regarding safety on water, boating techniques and limitations, maintenance and use of new equipment and advice regarding marketing and the fishing industry in general, with a specific focus on empowering fishermen in their relationship with middlemen.

#### *5.3.3.5 Budget and implementation schedule*

This program will be phased in consistency with the construction and impoundment planning. Table 6 below presents the provisional budget for the fisheries sub-project.

**Table 6: Budget for the Fisheries Sub-Project**

| # | Item | USD |
|---|---|---|
| 1 | Consultation with Fishermen Management Committees | 10,000 |
| 2 | Provision of equipment | 25,000 |
| 3 | Training | 10,000 |
| 4 | Construction of landing facilities and market areas, technical studies | 120,000 |
| 5 | Contingencies 10% | 17,000 |
| | **TOTAL** | **182,000** |

### 5.3.4 Agriculture

Considering the scarcity of land, support to agriculture should focus on intensification and high-value added crops. Linkage with construction catering needs will be sought, but as this is clearly not sustainable in the long term, better marketing in general should be supported.

Areas of intervention will include the following:

- Organization of producers in groups to support extension services and to better structure marketing of local produce in Jinja and Kampala;
- Agricultural extension services:
  - Provision of technical advice and assistance for new crops, new varieties, fertilization, soil preparation, agro-forestry and erosion control[3], intensification and market gardening;

[3] *As a mitigation to the potential increase in local erosion, which is likely to increase around reservoir margins, it is proposed to plant trees along these banks. Farmers, however, have an obvious role to play in the reservoir protection, as well as in the protection and potentially the management of these plantations.*

  - Subsidized provision of improved seeds and fertilizers to groups;
  - Promotion of intensive modes of cultivation (mushrooms, tree nurseries);
  - Integration agriculture / livestock (use of organic matter);
- Animal husbandry extension services:
  - Promotion of new animal species (grasscutters) and breeds (higher productivity pigs and poultry for instance);
  - Integration agriculture / livestock (use of agricultural by-products);
  - Better methods for animal nutrition;
  - Improved slaughtering and hygiene management;
- Management support ("farming as a business").

Agricultural extension requires time to produce results. The agriculture program is therefore scheduled to last for five years, slightly beyond the Construction phase. An evaluation at the end of this five-year period will consider the possibility to expand this program beyond the initial five years, in case it appears a longer support period is needed.

Table 7 below shows the budget for this component.

**Table 7: Budget for the Agriculture Sub-Project (5 years)**

| # | Item | USD |
|---|---|---|
| 1 | Extension services (5 x 100,000) | 500,000 |
| 2 | Demonstration projects and subsidies to pilot groups in agriculture | 150,000 |
| 3 | Demonstration projects and subsidies to pilot groups in animal husbandry | 150,000 |
| 4 | Training sessions | 50,000 |
| 5 | Contingencies 10% | 85,000 |
| | **TOTAL** | **935,000** |

# 6 IMPLEMENTATION

## 6.1 ORGANIZATIONAL ARRANGEMENTS

The CDAP will be directly implemented by BEL in both Pre-Construction and Construction phases, with participation from recognized NGOs, consultants and contractors for certain components. UETCL is expected to participate in the funding of the Construction phase. The Bujagali Implementation Unit will also participate in consultation activities, bringing in its knowledge of the communities and of the Project history.

For the implementation of the CDAP, as well as for other purposes related with social and economic monitoring of affected people (see APRAP), BEL will put in place a Social Unit, which will include the following personnel:

- One head of unit, specifically responsible for the implementation of the CDAP,
- One officer in charge of monitoring affected people,
- One database officer,
- One agricultural officer,
- One social worker, specifically in charge of monitoring vulnerable people.

This Social Unit will be in place by financial close. Ugandan and international consultants will support the Social Unit as the need arises.

## 6.2 OVERALL CDAP BUDGET

### 6.2.1 Pre-Construction and Construction Phases

The total funding needed for identified activities is presented in Table 8 below.

**Table 8: Overall CDAP Budget**

| # | Item | Amount (USD) |
|---|---|---|
| **I** | **PRE-CONSTRUCTION PHASE** | |
| I-a | Water supply | 45,000 |
| I-b | Education | 15,000 |
| I-c | Health | 5,000 |
| | **Sub-Total Pre-Construction Phase** | **65,000** |
| **II** | **CONSTRUCTION PHASE** | |
| II-a | Water supply | 80,000 |
| II-b | Education | 170,000 |
| II-c | Health | 50,000 |
| II-d | Commercial area | 50,000 |
| II-e | Fisheries | 182,000 |
| II-f | Small business support | 286,000 |
| II-g | Agriculture | 935,000 |
| | **Sub-Total Construction Phase** | **1,753,000** |
| **III** | **IMPLEMENTATION** | |
| III-a | Social Unit – Five years of operation | 361,000 |
| | **Sub-Total Implementation** | **361,000** |
| | **CONTINGENCIES – 10%** | **220,000** |
| | **GRAND TOTAL** | **2,399,000** |

#### 6.2.2 Further Activities

During Operations, BEL will focus on completing and monitoring activities launched during the Pre-Construction and Construction phases. In addition, a Social Fund will be established to finance community development initiatives in the same area. Lessons learnt from the initial phases will be used to improve the implementation of these further activities.

### 6.3 IMPLEMENTATION SCHEDULE

Figure 4 below shows the implementation schedule of the CDAP.

## Figure 4: CDAP Implementation Schedule