

**EXAMPLE No.1**

**ENVIRONMENTAL SCREENING/REPORT FORM  
FOR PARTNER ACTIVITIES & GRANT PROPOSALS**

**PARTNER: Private sector partners and Uganda Coffee Development Authority (UCDA)**

**Other Implementing Partner(s)[if Appropriate] : N/A**

**Activity Name: UCDA/SPEED Coffee Program.**

**Duration (proposed start and completion dates): 1 May 2002 - 1 December 2003.**

**Geographic Location: Arua, Masaka, Mukono, Mubende and Bushenyi Districts.**

**Activity Description (paragraph(s) describing purpose/outputs and potential environmental impacts):**

**(Project description attached)**

**Determine the Nature of the Activity**

- a. **Environmental Review Report Needed.** Does the activity include funds to support any physical natural resource management activities (e.g., land clearing, irrigation), or any community and rural development services (e.g., agro-forestry, tree-planting), infrastructure (e.g., dams or water catchments), public facilities (e.g., water and sanitation systems), road construction or rehabilitation? Does it involve development of income-generating or resource management systems? It will likely require an Environmental Review of the kind described in Step 4 of this form. Determine which Category the activity falls under, to establish the need for the Environmental Review.
- b. **No Further Environmental Review Required.** Does the activity exclusively provide technical assistance, training, institutional strengthening, or research, education, studies or other information analysis, awareness-building or dissemination activities *with no foreseeable negative impact on the biophysical environment*? This probably qualifies as a Category 1 activity - no further environmental review or action may be necessary. Complete form to establish this circumstance.
- c. **Multiple Categories.** Many activities will have components in more than one category. Simply mark all that apply. The form will guide you to the appropriate next steps.

**Step 1. Determine Category of Activity.**

- **Africa Bureau Category 1 -- no further environmental review needed:**

- **Does the activity involve (mark yes, if applicable):**

\_\_\_ Provision of education, technical assistance, or training. Does *not* qualify for "Category 1" if such programs include activities directly affecting the environment.

\_\_\_ Community awareness initiatives.

- \_\_\_ Controlled experimentation exclusively for the purpose of research and field evaluation confined to small areas (normally under 4 ha., i.e., 10 acres) and carefully monitored (when no protected or other sensitive environmental areas could be affected).
- \_\_\_ Technical studies and analyses and other information generation activities not involving intrusive sampling of endangered species or critical habitats.
- \_\_\_ Document or information transfers.
- \_\_\_ Nutrition, health care or family planning. Such programs do *not* qualify for "Category 1" if (a) some included activities could directly affect the environment (construction, water supply systems, etc.) or (b) biohazardous (esp. HIV/AIDS) waste is handled or blood is tested.
- \_\_\_ Rehabilitation of water points for domestic household use, shallow, hand-dug wells or small water storage devices (when no protected or other sensitive environmental areas could be affected). *Note that USAID guidance on potable water requires water quality testing for arsenic, coliform, nitrates and nitrites.*
- \_\_\_ Construction or repair of facilities if total surface area to be disturbed is under 10,000 sq. ft. (approx. 1,000 sq. m.) (*and* when *no* protected or other sensitive environmental areas could be affected).
- \_\_\_ Support for intermediate credit arrangements (when *no* significant biophysical environmental impact can reasonably be expected).
- \_\_\_ Programs of maternal and child feeding conducted under Title II of Public Law 480.
- \_\_\_ Food for development programs under Title III of P.L. 480, when *no* on-the-ground biophysical interventions are likely.
- \_\_\_ Studies or programs intended to develop the capability of recipients to engage in development planning. Do *not* mark "yes" if these involve activities directly affecting the environment.

- **Africa Bureau Category 2 -- Negative environmental impacts possible, environmental review required (specific conditions, including monitoring, may be applied):**

*Note:* The Environmental Review (Step 4 below) must address why there will be no potential adverse impacts on protected areas, endangered or threatened species or their critical habitat; or relatively undegraded forest, i.e., justify your conclusion that the proposed Category 2 activities do not belong in Category 3 or 4. Even for activities designed to protect or restore natural resources, the potential for environmental harm exists (e.g., re-introduction of species, controlled burning, fencing, wildlife water points, spontaneous human population shifts in response to activities undertaken, etc.). *If you do not find an exact match listed here for the activity you are undertaking, and it is not in Category 1, 3 or 4, then use the last item in Category 2 to describe the activity and treat it as Category 2 for purposes of environmental review.*

- ***Does the activity involve (mark yes, if applicable):***

- \_\_\_ Small-scale activities in agriculture, NRM, sanitation, etc. (*list and scale to be defined mutually among the appropriate partners -- NGO, donor, host country agencies, REDSO, etc.*).
- \_\_\_ Controlled experimentation exclusively for the purpose of research and field evaluation (*areas of 4 ha. or more, i.e., 10 acres*) and carefully monitored, when neither protected or other sensitive environmental areas could be adversely affected nor threatened and endangered species and their habitat jeopardized.
- XX** Small-scale construction or rehabilitation of facilities or structures in which the surface area to be disturbed exceeds 10,000 sq. ft and funding level is not in excess of \$200,000 and where no protected or other sensitive environmental areas could be affected.
- \_\_\_ Minor construction or rehabilitation of rural roads less than ca. 10 km (with no change in alignment or right of way), with ecologically sensitive areas at least 100 m away from the road and not affected

by construction or changes in drainage; likewise, no protected areas or relatively undegraded forest should be within 5 km of the road.

\_\_\_ Nutrition, health care or family planning, *if* (a) some included activities could directly affect the environment (construction, water supply systems, etc.) or (b) biohazardous (esp. HIV/AIDS) *waste is handled or blood is tested*.

**XX** Construction or rehabilitation of small-scale water points or water storage devices for domestic or **non-domestic** use, not covered in Category 1, when neither protected or other sensitive environmental areas could be adversely affected nor endangered and threatened species jeopardized. *Note that USAID guidance on potable water requires water quality testing for arsenic, coliform, nitrates and nitrites.*

\_\_\_ Quantity imports of commodities such as fertilizers.

\_\_\_ Food for Development programs under Title II or III, involving known biophysical interventions with potential to cause environmental harm (e.g., roads, bore holes).

\_\_\_ Support for intermediate credit institutions when indirect environmental harm conceivably could result .

\_\_\_ Institutional support subgrants to NGOs/PVOs when the activities of the organizations are known and raise the likelihood of some environmental impact.

\_\_\_ Technical studies and analyses and other information generation activities that could involve intrusive sampling, including aerial surveys, of endangered species or critical habitats.

\_\_\_ Small-scale use of USEPA-registered least-toxic *general-use pesticides*, limited to NGO-supervised use by farmers, demonstration, training and education, or emergency assistance. Environmental review must be carried out consistent with USAID Pesticide Procedures as required in Reg. 16 [22 CFR 216.3(b)(1)].

\_\_\_ Other activities not in Category 1 and not in Category 3 or 4.

Specify: \_\_\_\_\_

- ***Were the following used by the partner in designing the above Category 2 activities (mark yes, if applicable)?***

\_\_\_ USAID/AFR's Environmental Guidelines for Small-scale Activities in Africa

\_\_\_ Any applicable Programmatic Environmental Assessments: \_\_\_\_\_

\_\_\_ Other(s): \_\_\_\_\_

- **Africa Bureau Category 3 - Significant environmental impacts likely. Environmental review required, and Environmental Assessment likely to be required:**

- ***Does the activity involve (mark yes, if applicable):***

\_\_\_ River basin or new lands development

\_\_\_ Planned resettlement of human populations

\_\_\_ Penetration road building, or rehabilitation of roads (primary, secondary, some tertiary) over 10 km length, and any roads which may pass through or near relatively undegraded forest lands or other sensitive ecological areas

\_\_\_ Substantial piped water supply and sewerage construction

\_\_\_ Major bore hole or water point construction

\_\_\_ Large-scale irrigation

\_\_\_ Water management structures such as dams and impoundments

\_\_\_ Drainage of wetlands or other permanently flooded areas

\_\_\_ Large-scale agricultural mechanization

- Agricultural land leveling
- Procurement or use of restricted use pesticides, or wide-area application in non-emergency conditions under non-supervised conditions
- Light industrial plant production or processing (sawmill operation, agro-industrial processing of forestry products)
- Potential to significantly degrade protected areas, such as introduction of exotic plants or animals
- Potential to jeopardize threatened & endangered species or adversely modify their habitat (esp. wetlands, tropical forests)

The above Category 3 activities are consistent with USAID criteria for activities that normally require a USAID-specific document with a defined format and procedure, called the Environmental Assessment (EA). It is recognized that some of these categories are ambiguous. Mark "yes" if they apply, and show in the Environmental Review (Step 4) the extent and magnitude of activities and their impacts, so that USAID and its partners can determine if an EA is necessary or not.

• **Africa Bureau *Category 4* - Activities not fundable or fundable only when specifically defined findings to avoid or mitigate the impacts are made, based on an Environmental Assessment:**

• ***Does the activity involve (yes, no, N/A):***

- Actions determined likely to significantly degrade protected areas, such as introduction of exotic plants or animals
- Actions determined likely to jeopardize threatened & endangered species or adversely modify their habitat (esp. wetlands, tropical forests)
- Conversion of forest lands to rearing of livestock
- Planned colonization of forest lands
- Procurement or use of timber harvesting equipment
- Commercial extraction of timber
- Construction of dams or other water control structures which flood relatively undegraded forest lands
- Construction, upgrading or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands.

**Step 2. Summarize and Itemize Activities. List activities by all categories to which *Yes* was answered.**

**Category of activities as determined below (add entries as required):**

Activity/Sub-Activity	Funding	Category
<b>Detailed in attached Project Description</b>		

**Step 3. Determine Need to Prepare Environmental Review.**

If all activities are in Category 1, sign and date the form. For any activities in Category 2 and 3, prepare an Environmental Review Report assessing all of these activities' impacts. For Category 3 activities, further documentation would be required, once USAID has confirmed the applicability of Category 3, based on the Review. If Category 4 is possible, consult USAID before proceeding with the Environmental Review to determine if activities can be funded and/or whether required EA findings could be made.

For all Category 2 and 3 activities, proceed to Step 4 to prepare Environmental Review.

**Step 4. Prepare Environmental Review.**

The following provides a suggested format for an environmental review. The Environmental Review should be about 5-10 pages long (more if required) and consist of following sections:

1. **Background, Rationale and Outputs/Results Expected** - summarize and cross-reference proposal if this review is contained therein.
2. **Activity Description** - Succinctly describe location, setting, surroundings (include a map, even a sketch map). Provide both quantitative and qualitative information about actions needed during construction, how intervention will operate and any ancillary development activities that are required to build or operate the primary activity (e.g., road to a facility, need to quarry or excavate borrow material, need to lay utility pipes to connect with energy, water source or disposal point or any other activity needed to accomplish the primary one but in a different location). If various alternatives have been considered and rejected because the proposed activity is considered more environmentally sound, explain these.
3. **Environmental Situation** - Affected environment, including essential baseline information available for all affected locations and sites, both primary and ancillary activities.
4. **Evaluation of Activities and Issues with Respect to Environmental Impact Potential** - Include impacts that could occur before construction starts, during construction and during operation, as well as any problems that might arise with restoring or reusing the site, if the facility or activity were completed or ceased to exist. Explain direct, indirect, induced and cumulative effects on various components of the environment (e.g., air, water, geology, soils, vegetation, wildlife, aquatic resources, historic, archaeological or other cultural resources, people and their communities, land use, traffic, waste disposal, water supply, energy, etc.) Indicate positive impacts and how the natural resources base will be sustainably improved.
5. **Environmental Mitigation Actions (including monitoring and evaluation)** - For example, indicate means taken to avoid, reduce or compensate for impacts, such as restoration of borrow or quarry areas, replanting of vegetation, compensation for any relocation of homes and residents. Indicate how mitigative measures will be monitored to ensure that they accomplish their intended result or what monitoring might be needed for impacts that one is uncertain about.
6. **Other Information** (as appropriate) - where possible, include photos of the site and surroundings; list the names of any reference materials or individuals consulted.

**Note:** Specific plans for monitoring of key environmental indicators and mitigation of impacts during activity implementation are especially important; these must be addressed in the review. Information on monitoring results and mitigation of impacts are to be included in all progress reports. Important information and a criterion for evaluation of environmental soundness is showing how the activity is part of or guided by an integrated, community-based resource and land use plan or planning and management framework that considers the appropriate use of multiple resources.

Drafted by: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**Clearances:** (modify as appropriate)

[...] Officer: \_\_\_\_\_ Date: \_\_\_\_\_

MEO (including recommendation that an EA be prepared, if called for) \_\_\_\_\_ Date: \_\_\_\_\_

USAID Mission Director (if responsibility not delegated to MEO): \_\_\_\_\_ Date: \_\_\_\_\_

**Attachment:** [applicable IEE or Environmental Review Report]

## UCDA/SPEED Coffee Program

### Background

Uganda is the 9<sup>th</sup> largest producer of coffee in the world, and coffee is Uganda's largest export commodity, contributing significantly to the country's GNP and engraining close to 500,000 smallholder families in coffee production. The Government of Uganda (GOU), until 1991 closely regulated coffee production and marketing. Since deregulation the quality of Ugandan coffee has steadily declined due to poor agronomic and processing methods. Increased production of coffee in other developing countries, particularly Robusta in South East Asia, has resulted in market gluts driving prices down to 40-year lows. The Ugandan coffee farmers' difficult situation has been further worsened by the spread of coffee wilt disease in the typically aging and poorly cared for Robusta plots, which make up 90% of coffee production in the country.

The major varieties of coffee are Arabica and Robusta. Arabica, the premium variety for specialty coffees, is only grown at high elevations and comprises about 10% of Uganda's coffee production. Almost all Ugandan Robusta coffee is traditional kiboko coffee that is plucked from the trees as ripe red cherry and then dried on mats, screens, or on the ground. The coffee is then usually sold to consolidators who then resell to processors/exporters. Dried coffee is run through a huller and then graded according to bean size. The resultant product is of very poor quality and is bought by roasters at the lowest prices paid for any coffee as filler for blending with premium Arabicas or washed Robustas.

There is broad consensus among private sector, government, and donor stakeholders that, because of improved quality, there are expanded market opportunities for wet mill processed coffee produced in Uganda. Washed, or even semi-washed, Robustas enjoy a premium in the market place because of superior cupping qualities due to less fermentation and larger bean size due to the removal of pulp and accelerated drying involved in the process. Presently, washed Robusta coffee enjoys a 50-75% premium over traditional kiboko coffee.

The GOU, in its effort to reestablish the competitiveness of Ugandan coffee on the world market, came up with the Strategic Intervention Program consisting of two components: 1) the replacement of old coffee trees by replanting with clonal coffee, and 2) the development of modern wet processing facilities. In line with the objectives of the second component, the GOU through Uganda Coffee Development Authority (UCDA), is purchasing a number of wet coffee processing plants to be provided to selected private sector partners who were willing and agreeable to the terms and conditions of machinery supply on a long-term lease basis and who satisfied the criteria stipulated by UCDA.

## UCDA's role

UCDA will initially purchase machinery to establish six wet coffee processing stations. Each station will consist of the following machinery:

- 2 Nos. type TUFCMX metallic storage bins;
- 2 Nos. washer and separator type LSC 10 PX with two electric motors;
- 2 Nos. coffee pulpers type DC6X with two electric motors;
- 2 Nos. mucilage removers type DFA 1X with one electric motor;
- 2 Nos. rotary dryers type SRE 150x complete with heat exchanger type FTX-04X and fan VC –054x with two electric motors;
- 1 7" bucket elevator ELSS07116X with two feed hoppers, rack and pinion type gate, brake and piping to load and unload; and
- 2 SRE 150X dryers with one electric motor

## Private sector partners (PSPs) selection

UCDA awarded two farmer associations processing equipment on a non-competitive basis. These are the West Nile Women's Farmer Association (WENWA) in the Arura/Nebbi districts, and the Kibinge Coffee Farmers Association (KCFA) in Masaka.

Four private sector individuals were selected from applicants from five designated coffee districts bringing the number of PSPs to six. Successful private sector individual applicants were characterized as having a nucleus farm with an out grower scheme among other criteria.

The selected PSPs are listed in the table below.

Private Sector Partner	Location	Coffee Type	Category
Nanga Farms	Mukono	Robusta	Nucleus Farm
Jack Bigirwa (Mountain View Farm)	Bushenyi	Robusta	Nucleus farm
Home Farmers	Masaka	Robusta	Nucleus Farm
West Nile Women's Assoc	Arua	Arabica	Association
Kibinge Coffee Farmers Assoc	Masaka	Robusta	Association
Wamala Growers	Mubende	Robusta	Co-operative



## **Eligibility requirements**

Only businesses that met the following requirements (based on current data) were eligible for selection:

- Coffee grower, processor, exporter, or otherwise contributing to the development of the coffee industry;
- Established or potential linkage with, farmers producing and willing to sell sufficient quantities of red cherry required to ensure optimum plant operation;
- Availability of at least UgSh 50 million working capital in either cash on hand or as a commitment for financing from an established financing institution for red cherry purchase and operating expenses;
- Ability to provide necessary land, power, water, and building facilities, including at least one acre of drying yard to operate the plant.
- Willingness to cost-share expenses associated with SPEED technical assistance and training.

Among other related requirements is that candidates must be able to provide adequate effluent disposal facilities satisfactory to the National Environment Management Authority (NEMA) and the ability to meet other environment protection issues.

## **Proposed SPEED Intervention**

In order to ensure the success of the venture, UCDA requested SPEED to provide technical assistance in the establishment of six wet processing plants.

SPEED participated in the selection process of the PSPs by formulating procedures and setting up a selection panel to ensure transparency. The panel recommended to UCDA the four most suitable candidates from among the private sector individual applicants, for consideration for allocation of the processing machinery in addition to the two Associations, which were given automatic qualification.

In the next phase SPEED will support the selected PSPs with supervision of site work and plant installation, training of management and plant operating personnel, establishment of logistics for movement of red cherry, and other appropriate interventions, on a cost sharing basis with the PSPs.

The project will involve a number of activities at each facility, which will include civil works for the construction of buildings and access roads, provision for water supply, construction of a hydroelectric power line, and installation of machinery, transportation, and training. On completion the factories will receive fully ripe red cherry collected from out growers, which will be processed using state-of-the-art wet processing technology.

For this project to contribute to meaningful economic development of Uganda, it must be implemented in a sustainable manner. SPEED will seek to ensure an “eco-friendly”

operation at every stage of the project and will work with the farmers, encouraging them to produce good quality internationally certifiable “eco-friendly coffee” in order to ensure long term sustainability of the activities.

An environmental assessment and compliance program will be part of SPEED’s intervention.

### **SPEED’s Financial Commitments to the PSPs**

SPEED will contribute UgSh 121,500,000 to WENWA and UgSh 116,800,000 KCFA itemized as follows:

1. The cost of materials for civil works not to exceed UgSh. 91,000,000 inclusive of VAT;
2. The cost of training of trainers and zone leaders not to exceed a total training cost of UgSh 1,6000,000 for WENWA and UgSh 1,3000 for KCFA;
3. Seven months professional fees for one Site Coordinator/Extension Services Coordinator not to exceed UgSh 875,000 per month or a total of UgSh 6,125,000 for the seven months;
4. The cost of round trip airfare to Brazil for one Factory Manager not to exceed UgSh 3,500,000;
5. The cost of one motorbike not to exceed UgSh 9,100,000 inclusive of VAT;
6. The cost of 20 (twenty) bicycles not to exceed UgSh 2,100,00 inclusive of VAT;
7. The cost of Environmental Impact Assessment not to exceed UgSh 3,675,000; and
8. For WENWA only, the cost of one computer, a printer and an external fax modem not to exceed UgSh 4,400,000 inclusive of VAT.

SPEED will provide Wamala Growers Co-operative Union UgSh 25,000,000 for the following:

1. The cost of training of trainers and zone leaders not to exceed a total training cost of UgSh 1,300,000;
2. Seven months professional fees for one Site Coordinator/Extension Services Coordinator not to exceed UgSh 875,000 per month or a total of UgSh 6,125,000 for the seven months.
3. The cost of round trip airfare to Brazil for one Factory Manager not to exceed UgSh 3,500,000;
4. The cost of one motorbike not to exceed UgSh 9,100,000 inclusive of VAT;
5. The cost of 20 (twenty) bicycles not to exceed UgSh 2,100,000 inclusive of VAT; and
6. The cost of Environmental Impact Assessment not to exceed UgSh 3,675,000.

For each of the three Nucleus Farms SPEED will provide UgSh 22,088,000 for the following:

1. 50% cost of training of trainers and zone leaders not exceeding a total training cost of UgSh 650,000;
2. 50% cost of 7 (seven) months professional fees for one Site Coordinator/Extension Services Coordinator not to exceed UgSh 437,500 per month or a total cost of UgSh 3,063,000 for the seven months.
3. The cost of round trip airfare to Brazil for one Factory Manager not to exceed UgSh 3,500,000;
4. The cost of one motorbike not to exceed UgSh 9,100,000 inclusive of VAT;
5. The cost of 20 (twenty) bicycles not to exceed UgSh 2,100,000 inclusive of VAT; and
6. The cost of Environmental Impact Assessment not to exceed UgSh 3,675,000.

## **Project benefits**

The project will initially produce, from the six facilities, 6,000 tonnes of high quality clean coffee ultimately increasing to 12,000 tonnes, which will be sold at a premium to the international Specialty Coffee market earning the country about U.S. Dollars 18 million in foreign exchange when the full production potential is realized.

In addition the project will bring on about 12,000 new out growers (2000 per station) who will be supplied with planting material, technical support and, finally, market opportunities, which will have the potential of significantly increasing farm income and alleviate poverty in the families. With an estimated 6 family members per farmer the project will provide livelihood to 72,000 people associated with the out grower scheme. In addition, the processing stations will provide direct employment to 1,200 factory workers. Considering a project life of 20 years the processing stations will provide 24,000 man-years of direct employment and another 240,000 man-years of employment to the coffee farmers.

The project has the potential for replication in other parts of the country and when this is realized there will be increased yields of quality coffee, which will lead to an increase of export and foreign exchange earnings for the country. The tax base of the country will widen allowing for investment in other social and economic programs. There are forward and backward linkages via the supply of red cherry, provision of transport, supply of packaging and the provision of forwarding and clearing services.

The PSPs will realize an improvement in the profitability of their businesses and will acquire better managerial, agronomic and processing skills and will become more competitive.

**Example No.2**

**File: IEE SO2 AWFgorillas41002**

**Environmental Screening and Review of Grant Activity Under  
USAID/Uganda Strategic Objective 2 “Blanket” IEE:**

**“Conservation of Afro-Montane Forest and Mountain Gorillas in a Landscape Context”  
African Wildlife Foundation**

**PROGRAM/ACTIVITY DATA**

**Program/Activity Number:** (617-SO02) **Country/Region:** Uganda

**Program/Activity Title:** SO2 Core Program Support/Technical Assistance

**Funding Begin:**FY02 **Funding End:** FY05 **LOP Amt.:** \$US\$ 1,999,959 **Sub-Activity Amt.:** \$ N/A

**Screening Completed by:** Greg Booth, Environmental Advisor **Current Date:** April 9, 2002

**ENVIRONMENTAL CATEGORY RECOMMENDED:** (Place X where applicable)

Category Exclusion:   X  

Negative Determination:   X  

**ADDITIONAL ELEMENTS:**

EMEMP:       

CONDITIONS:   X  

PVO/NGO:       

**SUMMARY:**

The SO2 COBS Initial Environmental Examination (SO2 “Blanket” IEE) approved 15<sup>th</sup> August 1997 established procedures for environmental screening and review of SO2 activities that are consistent with those laid out in *Environmental Guidelines for Small-Scale Activities in Africa* (Technical Paper No. 18, June 1996) and 95 State 257896 Cable. USAID/Africa Bureau developed these procedures specifically for undertakings that may encompass a variety of activities, the specific nature of which were unknown at the time of establishing the SO2 SOAG and that may be undertaken by a range of potential implementing agents. These environmental screening procedures are consistent with USAID's environmental regulations (22 CFR Part 216) and enable broader delegation of responsibility for approval of environmental documentation to USAID/Uganda.

The SO2\* “Blanket” IEE covers a range of potential “core” activities that will serve as mechanisms through which specific activities will be later be developed and implemented. These core activities include 1) technical assistance, 2) a grants program and 3) SO2 program support.

The subject activity provides technical assistance that will be screened using the environmental screening procedures. The African Wildlife Foundation (AWF) will implement the activity. The salient features of the grant activity include three implementation components as indicated below.

***Greater Virunga Landscape (GVL) managed to ensure the conservation of mountain gorillas and other priority conservation targets.***

- Landscape planning and monitoring approach applied to GVL
- Key strategies for threat abatement implemented.
- Uganda contributing to a regional framework for the management of the GVL, and gorillas as a transboundary resource
- AWF and partners contributing to national and regional policy formulation

\* The Mission is in the process of making a transition from SO2 (Critical Ecosystems Conserved to Sustain Biological Diversity and to Enhance Benefits to Society) to its new SO7 (Expanded Sustainable Economic Opportunities For Rural Sector Growth).

***Protected Areas serving as ecological and economic core areas of the landscape.***

- Priority actions of Bwindi and Mgahinga management plans implemented.
- UWA management decisions strengthened by monitoring and research.

***Expanded economic opportunities for rural communities in the GVL.***

- Opportunities for nature-based enterprises identified and developed in the GVL.
- GVL products and services effectively linked to regional/international markets.

The subject activity being implemented by AWF will be implementing activities that primarily involve technical assistance, training, studies and analyses that relate to the sustainable management of protected areas and surrounding communities. These activities will have no direct environmental impacts and **Categorical Exclusions** are recommended for these in accordance with 22 CFR 216.2(i), iii, (v) and (xiv). The subject activity is designed to encourage environmental conservation.

Some of the activities planned could potentially have environmental impacts. A **Negative Determination With Conditions** is recommended for small-scale activities in agriculture, natural resources management and small-scale construction or rehabilitation of the Mgahinga and Nkuringo eco-tourism sites (both facilities are under 10,000 square feet). The appropriate level of environmental assessment will be determined by the Mission Environmental Officer prior to the implementation of these activities. (The AWF has already completed the attached USAID Environmental Screening/Report Form for these activities.)

**APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:**

**CLEARANCE:**

Mission Director: \_\_\_\_\_ Date: \_\_\_\_\_  
Dawn Liberi

Deputy Mission Director: \_\_\_\_\_ Date: \_\_\_\_\_  
Rudolph Thomas

**CONCURRENCE:**

Mission Environmental

Officer:

\_\_\_\_\_ Date: \_\_\_\_\_  
Greg Booth

Regional Environmental

Officer

\_\_\_\_\_ Date: \_\_\_\_\_  
Walter Knausenberger

Attachments:

1. Environmental Screening Form for the AWF grant activity
2. The SO2 COBS Initial Environmental Examination (SO2 “Blanket” IEE) approved 15<sup>th</sup> August, 1997

**ENVIRONMENTAL SCREENING/REPORT FORM (ESF) FOR NGO/PVO ACTIVITIES & GRANT PROPOSALS**

**BACKGROUND**

USAID has introduced major changes in its new operations systems that encourages a focus on results and requires greater accountability and teamwork. The underlying rationale is to focus on results, while still managing inputs and monitoring outputs properly.

USAID's Africa Bureau Environmental Office, in conjunction with the Regional Environmental Offices, has been developing an initiative for environmental management capacity building. This initiative is intended to support USAID/AFR Missions, their implementing agents and collaborators. An important rationale for this initiative is that Africa Bureau environmental and legal staff anticipate providing more responsibility to implementation partners with responsibility to carry out environmental reviews. Relevant agency experience has shown that such enhanced Mission authority can greatly facilitate field-level program activity design and implementation. These NGO Environmental Guidelines are consistent with USAID's new precepts of flexibility.

The present Environmental Screening and Reporting Form (ESF) is designed to be consistent with the Initial Environmental Examination process, and to assist USAID Missions and their implementing partners design and implement activities in an environmentally sound manner in

accordance with all salient agency policies and procedures. Use of the ESF will greatly reduce the need for review and approval of NGO grant activities at the regional or Washington levels.

## **INTRODUCTION TO USE OF THIS FORM**

This form is to be used to screen activities to be performed by all applicants for grants under USAID funding, including grantees of the private voluntary organization (PVO) umbrella projects, and proposals submitted for consideration for funding under other USAID programs including grants management units. This is a *generic* form, illustrative only, and its final contents are to be refined and jointly determined among the affected partners – non-governmental organizations (NGO), USAID, host country agencies, etc. To the extent possible, the form should reflect host government environmental policies and procedures.

Typically, two broad categories of activities will be funded: (a) those designed to strengthen local institutional capacities to manage the natural resource base, and (b) those designed to support the development of appropriate infrastructure needed for sustainable natural resource management. Activities could include training, technical assistance and other institutional support, income-generating activities through the exploitation of natural resources in a self-sustaining and environmentally sound manner or development of physical infrastructure to further natural resource management at the district level. Under other components of USAID-funded programs, training, technical assistance, research, studies, and information-related activities and other types of activities can be funded.

*This form is intended to be adaptable to unique circumstances.* In using it, adjustments can be made in consultation with the Regional and Bureau Environmental Offices. It is strongly advised that the Mission Environmental Officer make on-site visits prior to finalization of the ESF, and that the ESF be rational and fully defensible and without ambiguity as to how the conclusion was reached that the activities will have no significant impact.



## ENVIRONMENTAL SCREENING/REPORT FORM

**1. Activity Name:** “Conservation of Afro-Montane Forest and Mountain Gorillas in a Landscape Context”

**2. Institutional Contractor:** African Wildlife Foundation

**3. Sub-contractor:** N/A

**4. Duration** (proposed start and completion dates): May 1, 2002 – May 1, 2005

**5. Geographic Location:** Uganda

**6. Activity Description** (*describe purpose/outputs and potential environmental impacts*):

The international community has recognized the Afromontane forests of southwest Uganda and neighboring countries as some of the most ecologically rich habitat on the planet. In addition to serving as home to the critically endangered mountain gorilla, these forests harbor many other important species and provide crucial environmental services to surrounding human communities.

During these decades, the African Wildlife Foundation (AWF) and many other conservation organizations have invested in the protection, care and study of the mountain gorillas and the parks that are their home. The International Gorilla Conservation Program (IGCP), a collaborative program of AWF, Fauna and Flora International (FFI) and the World Wide Fund for Nature (WWF) has become the principal effort to support the conservation of the mountain gorillas throughout their habitat spanning three countries, as well as a model for cooperation. Efforts to conserve the mountain gorilla have been tentatively successful. Despite civil and military strife in the region, relatively few individual gorillas have been lost and the total population has grown by a small percentage.

While these resources of international significance have been preserved intact so far, there are two prevailing conditions that demand a more integrated and broad-based effort to conserve mountain gorillas and their forest homes:

- The first is that during this period of conservation action, the threats posed to the gorillas by human populations and human activities have greatly increased; and
- The second is that despite the high inherent value of this resource and the importance attached to it by the international community and the three national governments, the human communities living around the parks remain some of the poorest in Africa, and thus, in the world.

This document describes a program of activities designed to place the conservation of mountain gorillas and their afro-montane habitat in a broader landscape context. This ‘landscape context’ includes looking at both of the relevant national parks in Uganda; the threats to these parks that originate in the surrounding areas of human settlement; the social and economic requirements of

the interface between the parks and surrounding communities; and the international, transfrontier nature of the resource.

This activity will be informed and supported by the AWF African Heartlands Program and the AWF Conservation Service Center (CSC) Program. The AWF Heartlands Program is developing systematic approaches to landscape level conservation in Africa with support from USAID's Global Conservation Program. The AWF CSC Program aims to develop sustainable conservation based business ventures that empower communities across these landscapes. The design of this activity mirrors the evolution of USAID's strategic focus, with USAID/ Uganda's Strategic Objective 2 "critical ecosystems conserved to sustain biological diversity and to enhance benefits to society" now linked and contributing to a new SO7 "expanded sustainable economic opportunities for rural sector growth".

Building on the capacity of its International Gorilla Conservation Program and with other collaborating institutions, notably the Uganda Wildlife Authority and the Institute of Tropical Forest Conservation, AWF will seek to achieve the following three intermediate results:

- Greater Virunga Landscape (GVL) managed to ensure the conservation of mountain gorillas and other priority conservation targets;
- Increased capacity of protected areas to serve as ecological and economic core areas of the landscape;
- Expanded economic opportunities for rural communities in the GVL.

It is not anticipated that the subject activity will result in negative environmental impacts the implementation activities are Category 1 (Require no further environmental review). These activities include capacity building, policy development, implementation of protected area management (e.g., mapping, wildlife monitoring), limited infrastructure development for Mgahinga National Park, and provision of seed funding for conservation business ventures.

## **7. Determine the Extent of the Activity's Potential Environmental Impact**

**a. Environmental Review Report Needed?** Does the activity include funds to support any *physical* natural resource management activities, or any community and rural development services, infrastructure, public facilities or road rehabilitation? Does it involve development of income-generating or resource management systems, or certain kinds of applied ecological or natural resources research? If the answer is "Yes" to either of these questions, the proposed activity will likely require an Environmental Review of the kind described in Step 4 of this form. Determine which Category the activity falls under, to establish the need for the Environmental Review.

**b. No Further Environmental Review Required?** Is the activity exclusively to provide technical assistance, training, institutional strengthening, or research, education, studies or other information analysis, awareness-building or dissemination activities *with no foreseeable negative impact on the biophysical environment*? This probably qualifies as a Category 1 activity - no

further environmental review or action may be necessary. Complete form to establish this circumstance.

**c. Emergency Circumstances Apply?** Does the activity involve an emergency circumstance (e.g. drought)? Under specific conditions, the activity may be *exempt* from further environmental review. Must be determined by Bureau Environmental Officer with input from Regional and Mission Environmental Officers. Sound environmental implementation principles are to be applied to any urgent programs. Note that exemptions *cannot* be applied in the case of assistance for use or procurement of *pesticides*.

**d. Multiple Categories.** Many activities will have more than one category. Mark all that apply.

Please refer to the attached Environmental Screening/Report Form completed by the grantee.

USAID Activity/Program Administrator or Designee: \_\_\_\_\_ Date: \_\_\_\_\_  
Greg Booth, CTO

Mission Environmental Officer \_\_\_\_\_ Date: \_\_\_\_\_  
Greg Booth, CTO

**Clearances:** (as appropriate)

USAID Mission Director \_\_\_\_\_ Date: \_\_\_\_\_

Filename: IEE SO2 AWFgorillas4902

**Clearance:**

LKiingi, Project Devel/PPD \_\_\_\_\_ Date \_\_\_\_\_

KFreeman, Program Officer \_\_\_\_\_ Date \_\_\_\_\_

R Stryker, Team Leader \_\_\_\_\_ Date \_\_\_\_\_

**Example No.3**

**Environmental Planning Checklist and Review Report  
for Small-Scale Irrigation**

**1. Small-Scale Irrigation Site Identification and Characteristics (fill in the blanks)**

Date Project Planning Began: October 1999

Expected Completion Date: April 2002

Present Status: Construction of headwork just started

Site/Community Name: **Wanzaye Diversion Project, Gebre Anba Community**

Location (Region, Woreda, Village) Amhara Region, North Wollo Zone, Gubalafto Woreda,  
Gebre Anba Community

Approximate Altitude of Scheme: 1950 (masl): Agro-ecological Zone: Dry Woyna Dega

Cooperating Sponsor: Food for the Hungry International

Brief Project History (proposed by, how identified, by whom): Proposed by ORDA (FHI Sub-grantee), identified by ORDA and MOA experts because of potential for expanding/upgrading traditional scheme

Community Concurrence: Yes How Reached: During initial discussions with users, land holders

Water User Association Established: Yes

How Established: Community and ORDA established bylaws for operation Date: Jan 2001

Number of Beneficiary Participants in WUA: 264

Number of Males: 174 Number of Females: 90

Percentage of Total Community to be Included in Scheme: 3% (of kebele)

Area to be Irrigated: 50 (hectares) – Type of Irrigation: *Diversion through intake canal (no diversion weir)*

Average Size of Household Irrigated Plot: 0.189 (hectares)

Previous use of irrigated land: *Farmland, 18 hectares was traditionally irrigated*

Is this (Check all that apply): a New Scheme: , Rehabilitation of Traditional Scheme: \_\_\_\_\_,

Upgrading of Traditional Scheme: , Rehabilitation of Modern Scheme \_\_\_\_\_

Proposed Crops- Wet Season: *Teff, Barley, Millet, Wheat*, Dry Season: *Horicot Bean, Potatoes, Garlic, Shallot, Swiss Chard*

Average Household Holdings Outside the Scheme: 0.5 hectare

Other Major Infrastructure or Investments linked to SSI: 3 km road following RR10 standards  
(e.g., roads, potable water, watershed management)

What is the total cost of the scheme: *Birr 508,504.42*; broken down by cash costs: *Birr 393,814.42*

food aid cost equivalents: *Birr 63,840*; community contribution in labor and in kind: *Birr 50,850*

Estimate the costs in either US Dollars or Ethiopian Birr. Include all necessary investments required for the scheme to operate. Food aid costs should be calculated by multiplying the number of person/days of labor by the equivalent value of the day's ration. Community contribution should be accounted for, including contributed free labor if any and the estimated value of the materials provided (stone, sand, soil, etc.).

What is the expected unit cost per hectare of irrigable land within the command area during the dry season: *\$1,205.20 /hectare*.

What percentage of the annual operating budget for the program of the Cooperating Sponsor: *12% (For the project operating within Gubalafto Woreda)*

**ENVIRONMENTAL ACTION RECOMMENDED:**

A. **Category 2 (Negative Determination)** is recommended for the FHI Ethiopia Wanzaye Intake Diversion Project, given the mitigation to be incorporated into implementation.

B. The **Conditions** set up for under the original IEE for the FHI DAP .... [ADD title] are satisfied by the process hereby documented.

**APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:**

**CONCURRENCE:**

Bureau Environmental Officer: \_\_\_\_\_ Date: \_\_\_\_\_

Carl M. Gallegos

Approved: \_\_\_\_\_

File No: \_\_\_\_\_ (USAID/W)

Disapproved: \_\_\_\_\_

**ADDITIONAL CLEARANCES:** (Type Name Under Signature Line)

Mission Environmental Officer: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_

Yesuf Abdella

SO Team Leader: \_\_\_\_\_ Date: \_\_\_\_\_

Tim Shortley, FHA

Regional Environmental

Officer: \_\_\_\_\_ /cleared/ \_\_\_\_\_ Date: 11/01/2001

Walter I. Knausenberger

**FOOD FOR THE HUNGRY INTERNATIONAL**  
**Environmental Review Report**  
**Wanzaye Intake Diversion Project**  
October 16, 2001

## 1. Executive Summary

Food for the Hungry International (FHI), in conjunction with the sub-grantee Organization for Rehabilitation and Development in Amhara (ORDA), has proposed a 50-hectare small-scale irrigation project on the Tikur Wuha River of Wanzaye kebele. FHI recommends that USAID/BHR grant environmental approval for the project. The Wanzaye Intake Diversion Project has three positive factors that will contribute to the environmental and social sustainability of the project:

- *A long history of traditional small-scale irrigation at the proposed site.* Water users within the 18-hectare traditional command area have a rich experience in mobilizing the community to operate and maintain the irrigation system and in resolving conflicts associated with access for other water users.
- *Copious lean flow and a large basin of fertile land.* With more efficient water harvesting, the lean flow of the Tikur Wuha River has the potential to support a command area roughly three times the size of the traditional command area.
- *Close proximity to a large market.* Woldiya, the administrative capital of North Wollo Zone, lies only 10 km from the proposed site.

The main area of controversy lies in the strength of the new water users committee. Although the project will benefit from experiences with traditional irrigation, the threefold expansion of the command area and corresponding increase in the size of the water users association will place stress upon its ability to confront and adapt to future challenges and changes. FHI recognizes the vital importance of a well-defined, community based monitoring plan for the proposed SSI project. The large scope of the capital project leads to the potential for disputes among users and between users and non-users regarding access rights to water. To address this challenge, the target community is participating in project design, implementation and monitoring. Section 5 and Appendices A-C outline the major monitoring and mitigation activities to be carried out in conjunction with the project.

## 2. Introduction

The proposed Wanzaye Diversion Project lies in Gubalafto woreda, North Wollo Zone, a food insecure area in the Amhara National Regional State. The project will upgrade and expand an 18-hectare traditional irrigation scheme on the Tikur Wuha River. The expanded 50-hectare project would benefit 264 households with an average holding of 0.189 ha at a cost of 508,504.42 Birr (\$60,260 USD).

### 2.1. Design

The width of Tikur Wuha at the diversion point (> 20 meters) and the intensity of the peak flood make the construction of a diversion weir both economically unfeasible and environmentally inadvisable. A lateral intake structure with a gate will extract water for the single main canal, which will extend for 2 km. The main canal will follow the route of the ½ km pre-existing traditional canal, extending 1½ km beyond the terminal point of the traditional canal. For more detailed information, please refer to *Detail Design Report on Wanzaye Intake Irrigation Project* (ORDA/FHI, 2000), *Engineering Geology and Feasibility Report on Wanzaye Diversion Project* (ORDA/FHI, 2000), and *Feasibility Study for Wanzaye Diversion Irrigation Project Socioeconomic Part* (ORDA/FHI, 2001)



## 2.2. Purpose of project

The Wanzaye Diversion Project composes an integral part of the IFSP outlined in the 1999 DAP for FHI/Ethiopia. In conjunction with agricultural, health and soil conservation components, the project will achieve the objectives of crop diversification, increased household income and improved nutritional status of the community.

## 2.3. Results of the scoping exercise

Based upon extensive surveys and discussions with community members, the proposed 50-hectare SSI is the preferred alternative. Participants in the traditional SSI scheme will benefit from expanding their irrigable land and from no longer needing to reconstruct the traditional diversion weir and initial section of main canal that is destroyed by annual floods. Improved efficiency water diversion and application will allow the number of beneficiary families to increase from 144 to 264 and the average size of their irrigated plot to increase from .125 ha to .189 ha.

## 3. Affected Environment and Environmental Consequences

The team for the feasibility study and environmental impact assessment consisted of an irrigation engineer, geologist, hydrologist, soil scientist, agronomist, sociologist and environmental expert. Studies and preliminary site identification and selection began in March 2000 and continued through May 2001.

### 3.1. *Water availability, other users and catchment status*

While historic annual rainfall data is available for the nearby town of Woldiya (10 km N.E.), there is no long-term hydrological data available for the Tikur Wuha River. The lean flow measurement of 150 l/sec was recorded during May 2000, a time which followed three consecutive years of drought. Because of the steep gorges prevailing in the catchment area, no major water harvesting is taking place upstream. Downstream users require water for household and livestock consumption. However, it is not expected that people or livestock will consume a significant amount of water within the scheme. The main canal runs parallel to the Tikur Wuha River, staying within 100 meters at all times. This decreases the convenience factor that usually leads to households and livestock extracting of water from the main canal. A hand dug well is also being constructed adjacent to the main canal, 500 meters below the lateral intake structure. The main canal will be lined with concrete to prevent leakage; secondary and tertiary canals, however, will remain unlined.

Because of the short history of water availability data, stream gauging has been identified as an important component of the monitoring program. Given that Co-SAERAR is in the process of expanding its domain to include the operation and maintenance of irrigation schemes, FHI is looking to Co-SAERAR to coordinate stream gauging and the collection of future water data availability. To lay a foundation for this process, FHI and ORDA will train local development agents in stream gauging. In the event of DA turnover, ORDA and woreda government officials will ensure that new DAs receive training to continue the program of monitoring.

### 3.2. *Estimating crop water requirements*

The primary crops to be grown in the command area include teff, barley, wheat and millet during the wet season, and potatoes, garlic, shallot and horse bean during the dry season. Table 3A presents the expected crops and the expected percentage of that total command area that each will represent.

*Table 3A: Selected crops and proposed cropping pattern*

Wet Season Crop	Percentage	Dry Season Crop	Percentage
Teff	40	Horse Bean	35
Barley	25	Garlic	25
Wheat	25	Shallot	20
Millet	10	Potato	20

Initial crop water requirements were made using the FAO Irrigation and Drainage paper-24. Since the command area receives rain during the “belg” or short rainy season during which “dry season crops” will be grown, one standard deviation below the average belg rainfall was subtracted from the total crop water requirement to reach the requirement for irrigation water. Accord to this methodology, the net requirement for irrigation water came to 1 l/sec per hectare, making the total water requirement for the command area 50 l/sec. This represents 33.3% of the total lean flow. In the event that the lean flow decreases due to extreme drought, a minimum of 75 l/sec (half of the current lean flow) will be released for downstream users.

All proposed crops have been previously farmed within the command area. However, fertilizers and improved seeds of these crops will be provided through MOA Development Agents. DAP and UREA are the primary fertilizers provided by the MOA, both of which will be applied according to MOA standard recommendations.

The size of the command area will remain the same during the wet and dry seasons, with the exception of a reduction in the command area due to extraordinarily low rainfall. During such circumstances, the command area will reduce according to the choice of each individual farmer. They are allotted a certain amount of time each week to access water, and will make decisions about how much they will irrigate according to their individual expectation. The creation of a seasonal operation plan by the water users association should facilitate the process by which each farmer will decide his or her plot size. A copy of the seasonal operational plan is attached as Appendix B. An Amharic version will be used by the farmers.

### 3.3. Land and water management and conservation

Of the proposed users, 55% have experience with the traditional SSI scheme. These users participated in the initial discussions about upgrading the traditional site, and their experiences and water committee format are being included in the operational style of the water users committee that will operate the upgraded scheme. In their attempts to maintain high yields, traditional SSI users have used well-developed crop rotations and correct water application and drainage structures that prevent water logging and nutrient leaching. In the traditional system, very little water drains off of irrigated areas during the dry season. Under this system, water logging and salinization have never been identified as constraints to crop growth.

The command area is comprised of very gentle slopes (<5% grade) and does not require extensive physical and biological soil conservation measures. For grades between 3-5%, some farmers have begun to construct soil bunds. The area surrounding the intake structure, although outside of the actual command area, has the greatest need for conservation measures. A concrete retaining wall is being constructed in conjunction with the intake structure and first 100 meters of main canal to curb erosion problems.

### 3.4. Post construction follow up and technical assistance

The kebele DA assigned from the Woreda Agriculture Office has been included in project planning from inception. He has received training and support from FHI through the sub-grantee ORDA, and is aware of the operational requirements of the SSI scheme and his role in providing extension services to the users. He is also responsible for engaging the users in dialogues with the kebele cooperative to try to increase the marketing capacity of the users.

Co-SAERAR will also play a vital role in follow up and technical assistance. Co-SAERAR, which has an office in Woldiya, participated in designing the scheme. The close proximity of the Wanzaye scheme to the Co-SAERAR office makes the scheme ideal for receiving technical support. As noted in section 3.1, this will include ongoing measurements of water availability.

In part because the irrigation scheme is located only 10 kilometers from the zonal capital, Woldiya, zonal MOA experts have taken a keen interest in the project. This additional supervision should enhance future operations.

### 3.5. *Water related disease hazards*

The risk that the project will proliferate water related diseases appears to be quite low. At an altitude of 1950 meters above sea level, the command area does suffer from seasonal outbreaks of malaria. However, since the project will not have a diversion weir (rather an intake structure will be used), standing water in the main canal is the primary risk for creating a breeding area conducive for the anopheles mosquito. The gate at the intake structure will remain closed during periods of inactivity in order to minimize this risk. In addition to standard trainings given to farmers regarding canal maintenance, a participatory monitoring schedule will be used to encourage the timely clearing of canals (see Annex B).

As noted in section 3.1.1, at least one hand dug well is being developed in conjunction with the irrigation site. At the writing of this report, one hand dug well located 500 meters below the lateral intake structure was completed. This potable water site will reduce the risk that canal water will become a source for household drinking water.

### 3.6. *Displacement and land-use changes*

Scheme construction will not lead to the displacement of any farm plots. The diversion structure and first half of the main canal will utilize the traditionally developed areas. Farmers having user rights over the land required to extend the main canal have agreed to cede user rights to the water users association in return for access to irrigation water.

## 4. **Environmental and Sustainability Concerns**

### Strength of the water users committee

The size of the project requires that more than 250 users coordinate water extraction activities and perform maintenance on both the headwork and 2 km of main canal. A weak or ineffective water committee will threaten the sustainability of the project and increase the potential for negative impacts such as the breeding of disease vectors and water borne diseases. To alleviate this problem, members of the water users association are being closely drawn into the project planning and monitoring phases. On an annual basis, the water users committee will prepare and submit to both ORDA and the MOA both a seasonal operational plan and a participatory monitoring record (following the phase out of ORDA, the MOA will be the primary recipient of the record). These will not only strengthen the capacity of the committee by providing a framework for predicting and analyzing problems, but they will also provide FHI and ORDA with a parameter for monitoring and evaluating the effectiveness of the committee.

### Marketing strategy

FHI and ORDA have discussed marketing strategies with zonal MOA officials, but a concrete plan has not yet been established. Even though the local market is quite large, containing the zonal capital of North Wollo, the size of the project could stretch the ability of

local markets to absorb perishable vegetables. This in turn could invalidate the findings of the cost-benefit analysis, decreasing the expected gain per hectare and total utility per user household. The zonal MOA expressed an interest in incorporating the water users association into a larger cooperative and in expanding the size of the Woldiya marketplace to accommodate an increase in the number of sellers. Discussions are still in progress at this time. When a final consensus is reached, FHI will report the decision.

## 5. Monitoring and Mitigation Measures

The feasibility study identified different possible sources of potential negative environmental impact. The monitoring and mitigation activities attempt to prioritize and address these issues, providing a framework to ensure that the necessary conditions are met. A list of these activities is provided in Table 5A. Drafts of the proposed participatory monitoring program and seasonal operational plan are annexed to the report. A summary report of the Wanzaye Intake Irrigation Project will be provided in the annual Environmental Status Report submitted with the PAA.

**Table 5A: Proposed monitoring and mitigation activities**

<b>Environmental Impact</b>	<b>Mitigation Activity</b>	<b>Monitoring Format or Selected Indicators</b>	<b>Monitoring Schedule</b>
- Sustainability threatened by weak water users committee and incorrect operation	Committee and user training	Training on the following: <ul style="list-style-type: none"> <li>• Correct application of water</li> <li>• Maintenance requirements of the system</li> <li>• Preparation of seasonal operational plan</li> <li>• Participatory monitoring program</li> <li>• Stream gauging</li> </ul>	Completion of physical structures
- Inefficient water extraction - Breeding of disease vectors	Maintenance of headwork and canals	Inspection included in participatory monitoring program	Prior to each cropping season
- Excessive water extraction	Stream gauging	Completion of stream gauging table by the DA and water committee	Ongoing
- Sustainability threatened by lack of coordination among users	Seasonal operational plan	Completion of seasonal operational plan by the DA and water committee	Prior to cropping season
- Sustainability threatened because water users committee cannot adapt to changing conditions	Participatory monitoring program	Completion of participatory monitoring program by the DA and water committee	Seasonally, following harvest
- Inefficient use of	Agricultural	# of farmers involved in SSI project	Ongoing

water increasing stress upon the carrying capacity	extension/water management practices	who received agricultural extension	
- Soil erosion and gully formation from access road construction	RR10 standard applied to road construction	<ul style="list-style-type: none"> <li>• Roads will not pass through ecologically sensitive areas</li> <li>• Proper drainage construction</li> <li>• Gully treatment including checkdams and biological soil conservation measures</li> </ul>	Prior to and following road construction

## 6. Conclusion and Recommendation

Based on field observations and feasibility studies performed by experts from various fields, the Wanzaye Intake Diversion Project passes the environmental review. FHI recommends that it be implemented according to the proposed monitoring and mitigation plan. Special attention should be given to the ability of the water users committee to operate the system and mobilize labor for maintenance in a timely fashion. The annual review in the ESR will also provide a platform to evaluate project performance and assess the water users committee's need for additional support.

## Appendix A: Small-Scale Irrigation Environmental Status Report

**Project Description**

**Responsible Person**

SSI Name: \_\_\_\_\_

Name: \_\_\_\_\_

Woreda: \_\_\_\_\_

Position: \_\_\_\_\_

No of Target Households: \_\_\_\_\_

Signature: \_\_\_\_\_

Date Reported: \_\_\_\_\_

Mitigation Activity	Monitoring Schedule	Monitoring Format or Selected Indicators	Completed?		
			Yes	No	N.A. *
Committee training	Completion of physical structures	Correct application of water			
		Maintenance requirements of the system			
		Preparation of seasonal operational plan			
		Participatory monitoring program			
		Stream gauging			
Maintenance of the system	Prior to cropping season	Silt removed from diversion structure			
		Primary and secondary canals cleaned			
		Physical and biological soil conservation measures maintained			
Stream gauging	Ongoing	Completion of stream gauging table by the water committee			
Seasonal operational plan	Prior to cropping season	Completion of seasonal operational plan by the water committee			
Participatory monitoring record	Seasonally, following harvest	Completion of participatory monitoring record by water committee			
Agricultural extension	Ongoing	# of beneficiaries involved in SSI project who received or used:	<b>Number of Beneficiaries</b>		
		Fertilizers			
		Improved seeds varieties			

		Other extension services (training, etc.)	

\*N.A. – Activities are N.A. (Not Applicable) when the monitoring schedule given for that activity does not correspond to the reporting period. For example, committee training only applies during the first year of the SSI activity. Following that, it will receive a status of N.A.

1. Did the community note any increase in water borne diseases or diseases with water borne vectors such as malaria and schistosomiasis? Comment.
  
2. Did the SSI project encounter operational problems such as excessive siltation, soil erosion, insufficient community mobilization, or yield decreases from leaching and salinization? Comment.

## Appendix B: Small-Scale Irrigation Seasonal Operation Plan

Annual plan prior to utilization of SSI project

### Project Description

SSI Name: \_\_\_\_\_  
 Woreda: \_\_\_\_\_  
 No of Target Households: \_\_\_\_\_

### Responsible Community Member

Name: \_\_\_\_\_  
 Relationship to SSI activity: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date Reported: \_\_\_\_\_

### 1. User Profile

Target number of households: \_\_\_\_\_  
 Target number of hectares: \_\_\_\_\_

Expected number of households: \_\_\_\_\_  
 Expected number of hectares: \_\_\_\_\_

### 2. Maintenance Schedule

a) Routine maintenance activities

Activity	Completion Date
Removal of sediment and debris from the diversion structure	
Removal of sediment and debris from the canals	
Repairing soil conservation structures	

b) List and comment upon other maintenance activities and their costs. How will these costs be covered?

### 3. Cropping Pattern

a) List the varieties of crops to be grown and the number of hectares for each crop. Improved and unimproved varieties should be listed separately.

Crop Variety	Area (ha)	Expected Water Requirement (l/s)	Expected Yield (qtls/ha)	Expected Value (Birr)



<b>Total</b>				

b) Number of hectares that will use fertilizer: \_\_\_\_\_

**4. Water Use**

- a) What is the expected water availability (l/s)? How does this compare to the expected water requirement?
  
  
  
  
  
  
  
  
  
  
- b) How will the water committee decide when individual members take water and how much water they can consume? If there is a user schedule, please state how it functions.

**5. Water Users Committee Endorsement**

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

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Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

## Appendix C: Small-Scale Irrigation Participatory Monitoring Record

Annual post-harvest results

### Project Description

### Responsible Community Member

SSI Name: \_\_\_\_\_  
Woreda: \_\_\_\_\_  
No of Target Households: \_\_\_\_\_

Name: \_\_\_\_\_  
Relationship to SSI activity: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date Reported: \_\_\_\_\_

### 1. User Profile

Target number of households: \_\_\_\_\_  
Target number of hectares: \_\_\_\_\_

Actual number of households: \_\_\_\_\_  
Actual number of hectares: \_\_\_\_\_

- a) Since the previous harvest, have there been any changes in land tenure within the irrigation system? If yes, state the number of hectares and describe how the transfer in user rights occurred.

### 2. Maintenance Schedule

- a) Were routine maintenance activities completed in a timely manner? If not, please comment on the challenges faced.
- b) How much money did the water users' committee collect from the community during the last twelve months? \_\_\_\_\_
- c) List and comment upon other maintenance activities and their costs. How was this maintenance funded?

### 3. Cropping Pattern

- a) List the varieties of crops to be grown and the number of hectares for each crop. Improved and unimproved varieties should be listed separately.

Crop Variety	Area (ha)	Actual Water Requirement (l/s)	Yield (qtls/ha)	Actual Value (Birr)
<b>Total</b>				

b) Number of hectares that used fertilizer: \_\_\_\_\_

c) If the yield was decreased from the previous year (either in quantity or total value in Birr), please explain the reasons for the decrease. Are any steps being taken to counter this trend?

**4. Water Use**

a) Was the amount of water sufficient for crop requirements? If not, how did the committee reallocate the water (i.e. reduce number of households, reduce amount per household, etc.)?

b)