

## APPENDIX A

### PROJECT DESCRIPTION

#### NIONO SANITATION PROJECT

##### I. Introduction

This appendix describes the activities to be undertaken and the results to be achieved with the funds obligated under this Agreement. Nothing in this Appendix A shall be construed as amending any of the definitions, conditions, or terms of the Agreement.

##### II. Background

Niono, located in the Ségou region of Mali, has earned a reputation as a dirty city and a breeding ground for malaria and hydrous diseases such as diarrhea and bilharzias. The city is situated in a swamp area that does not have adequate water and sanitation infrastructure. During the rainy season, Niono is covered by pools of polluted, stagnant water that provides a breeding ground for mosquitoes, flies, and parasites. The health consequences are severe. For example, in 2002 almost 9 percent of Niono's population was infected with malaria -- the highest infection in Mali.

Dugu Ka Jeya, other enterprises enterprise involved in sanitation services in Niono, and non-governmental organizations are working with the local government to address this environmental and health problem. Dugu Ka Jeya's primary activities include collection of household wastes, emptying of latrines and cesspools, construction of improved cesspools and latrines, and the sale of garbage cans.

Dugu Ka Jeya has approximately 428 households clients. Market studies show that the total unmet demand for Dugu Ka Jeya's services is approximately 4,912 households annually. Dugu Ka Jeya's current ability to meet this demand is limited by a lack of space to store and process wastes and house its production equipment properly, inadequate transport to collect liquid and solid wastes, and inadequate operating capital to meet its orders for cesspool construction.


##### III. Funding

###### 1. ADF Contribution

The financial plan for ADF's contribution is set forth in Appendix A-1 to this Agreement. The Parties may make changes to the financial plan without formal amendment, if such changes are made in accordance with Article 7 of the Agreement and do not cause ADF's contribution to exceed the obligated amount specified in Article 3, Section 3.1 of the Agreement.

###### 2. Grantee Contribution

Dugu Ka Jeya will provide land for construction (valued at 9,500,000 CFA), existing equipment (valued at 23,350,000 CFA), approximately 16,550,000 FCFA for the purchase of five (5) new carriages, and fencing of the headquarters site (3,750,000 FCFA).

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#### IV. Project Goal

The goal of the Project is to improve the environmental and health conditions for Niono city residents.

#### V. Project Description

A. The purpose of the Project is to increase and sustain the use of improved sanitation services in Niono, as measured by the following.

1. The number of clients that pay for Dugu Ka Jeya's waste collection service will increase from the current level of 428 to 968 in Year I; 2,580 in Year II; 3,440 in Year III; 3,784 in Year IV; and 3,784 in Year V.
2. The number of improved latrines purchased by Dugu Ka Jeya's clients will increase from the current level of 64 to 114 in Year I; 189 in Year II; 289 in Year III; 439 in Year IV; and 639 in Year V.
3. The number of improved cesspools purchased by Dugu Ka Jeya's clients will increase from the current level of 44 to 74 in Year I; 124 in Year II; 224 in Year III; 374 in Year IV; and 574 in Year V.

B. The Project will generate the following major outputs.

1. Financial sustainability of Dugu Ka Jeya strengthened, as measured by:
  - 1.1 Dugu Ka Jeya's net income before taxes will decline from current level of 1,452,000 FCFA to 3,994,657 FCFA in Year I and to 2,533,016 FCFA in year II; then increase to 8,899,751 FCFA in year III; 15,153,212 FCFA in year IV and 18,145,663 FCFA in Year V.
  - 1.2 Total wages paid to employees will increase from the current level of 2,922,000 FCFA to 6,760,200 FCFA in year I; 10,372,536 in year II; 2,860,960 FCFA in year III; 15,059,297 FCFA in year IV; and 16,565,220 FCFA in year V.
  - 1.3 Sales will increase from the current level of 10,436,600 FCFA to 30,929,000 FCFA in Year I; 50,511,284 FCFA in year II; 65,105,744 FCFA in year III; 80,117,945 FCFA in year IV; and 90,056,897 FCFA in Year V.
  - 1.4 The quantity of compost sold will increase from current level 0 to 750 tons in Year I; 1,250 tons in Year II; 1,500 tons in Year III; 2,000 tons in Year IV; and 2,000 tons in Year V.
  - 1.5 Tax payments will increase from 0 FCFA in year I to 556,028 FCFA in year II; 1,953,604 FCFA in year III; 3,326,315 FCFA in year IV; and 3,983,194 FCFA in year V.

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2. Technical and management capacity of Dugu Ka Jeya strengthened, as measured by:
  - 2.1 The number of full-time employees will increase from 7 to 43 by Year II.
  - 2.2 The number of part-time jobs will increase from the current level of 8 to 20 at the end of the Project.
  - 2.3 The commercial production of mould will increase from current level 0 to 1,500 tons in Year I; 2,250 tons in Year II; 2,500 tons in Year III; 3,000 tons in Year IV; and 3,000 tons in Year V.
  - 2.4 The volume of waste removed from latrines and cesspools will increase from the current level of 464,000 liters (580 loads of Spiros of 800 liter) to 7,680,000 liters (960 loads of Spiros of 8,000 liters) each year during five years.
  - 2.5 The Grantee will produce monthly profit and loss statements in Year I and thereafter.
  - 2.6 The Grantee will establish a business plan in Year I and update it at least annually, thereafter.

## C. Activities

### 1. Solid Waste Collection

Dugu Ka Jeya will acquire ten new carriages (motor-cultivator-pulled carts), each of which will be used to collect waste from approximately 400 households. In addition, Dugu Ka Jeya will manufacture and sell approximately five hundred garbage cans. Dugu Ka Jeya will design the garbage cans in ways that increase the efficiency of trash collection.

Dugu Ka Jeya will organize teams to carry out the waste collection activities. It will recruit approximately thirty individuals as full-time permanent members of the teams. Dugu Ka Jeya will hire temporary workers, as needed. All team members will be equipped with small tools for collection, and adequate protection clothing. Each team will have its own first aid kit.


The collection teams will deposit solid waste in transit rubbish dumps. Dugu Ka Jeya will enclose the transit and final dump sites with a fence to prevent scattering of rubbish and trespassing.

### 2. Latrine and Cesspool Emptying

Dugu Ka Jeya will use a SPIROS pump to remove liquid wastes. It will equip the workers with boots, gloves, and mufflers. The workers will deposit the liquid waste in settling tanks.

### 3. Production of Compost and Moulds

Two teams will conduct the composting operation. The first will transport the waste from the transit dumps to the composting site and deliver the finished products (composts and moulds) to customers. The second team will process the waste into compost and mould. Dugu Ka Jeya will install 100 composting pits (approximately 4 meters long, 2 meters wide and 0.75 meters deep) with a capacity to produce 30 tons of compost annually. Dugu Ka Jeya will ensure that both teams are equipped with the proper tools and protective clothing.

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#### 4. Latrine and Cesspool Construction

A conductor, mason, and two temporary workers will comprise the team for the construction of latrines and cesspools. Dugu Ka Jeya will pay these individuals on a per job basis rather than on a wage rate basis.

#### 5. Project Infrastructure

Dugu Ka Jeya will construct the following:

- a shed approximating 300 m<sup>2</sup> (30 x 10 m) for the carriages, truck, and Spiros vehicle;
- an office approximating 24 m<sup>2</sup> (6 x 4 m);
- a warehouse approximating 16 m<sup>2</sup> (4 x 4 m) for storing tools and accessories;
- lodging for a watchman approximating 20 m<sup>2</sup> (5 x 4 m);
- a fence and the fitting works for the final rubbish dumps; and
- two transit rubbish dumps.

Dugu Ka Jeya will ensure that the entire Project site is fenced, and necessary utilities are installed (water, electricity, telephone). It will obtain blueprints for the construction, and will acquire construction supervision and inspection services.

#### 6. Marketing

Dugu Ka Jeya will consolidate its market position with a more aggressive advertising strategy. It will conduct a limited radio advertising campaign and distribute promotional materials (tee-shirts, bags, etc.).

#### 7. Training and Technical Assistance

Members of Dugu Ka Jeya will receive training in management and technical areas, including personnel management, financial management and accounting, administration, marketing, waste management and processing techniques, rules of hygiene, and health and safety measures. Trainees will receive appropriate follow-up technical assistance, particularly in the areas of financial management and waste management and processing techniques. The technical assistance may include on-site consultations and exchange visits to other structures working in the same sector within Mali, mainly SEMA SANIYA in Bamako and COTAPE in Sikasso. A specialized organization will provide HIV/AIDS prevention training to all Dugu Ka Jeya members and employees.

#### D. Roles and Responsibilities of the Parties

Dugu Ka Jeya is responsible for ensuring the proper management and implementation of the Project. Dugu Ka Jeya will hire a Project Financial Manager to oversee the day-to-day activities of the Project and ensure compliance with ADF's reporting requirements. The ADF Partner will provide Dugu Ka Jeya technical and management assistance during the implementation of the Project.

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E. Monitoring and Evaluation


Within sixty days of the effective date of this Agreement, the Grantee, working with the ADF Partner, will form a monitoring and assessment committee composed of a representative cross-section of the Grantee's organization. The committee will work with the Partner to develop a Project monitoring plan. In addition, during implementation, the committee will ensure that the Project follows the implementation plan, and that problems identified through monitoring and evaluation are properly addressed in a timely manner.

F. Other Implementation Issues

Dugu Ka Jeya will establish three bank accounts: (a) an account to manage reinvestment funds; (b) an account to receive ADF funds; and (c) a current account. The reinvestment account will be the depository of funds for capital improvements, including for equipment replacement, reserves to acquire additional equipment, construction of headquarters facilities, and so on. At minimum, Dugu Ka Jeya will make quarterly deposits into the reinvestment account.

Before beginning construction of the production facility, Dugu Ka Jeya will provide ADF with a profit-sharing plan that specifies how non-member workers will benefit from distribution of dividends.

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