

**APPENDIX A:
PROJECT DESCRIPTION
SUSTAINABLE AQUACULTURE COMMERCIAL TILAPIA PRODUCTION
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

There is a large potential demand for Sustainable Aquaculture Limited's (SAL) Tilapia, both domestically and abroad. The international market for Tilapia exports is valued at over US\$5 billion per year with demand ever increasing. Locally, annual consumption of fish is estimated at 750,000MT and it is estimated to be growing at 3.3% per annum. The current Ghanaian market for Tilapia is reliant on supplies from isolated small-scale fish farms and traditional fishermen, who are unable to meet the quantity and quality demanded. The supply gap is filled by imports, which Ministry of Food and Agriculture (MOFA) estimates to be in excess of 4,000MT in 2002.

Ghana is ideally located for all-year round commercial Tilapia production in its fresh water bodies, such as the Volta Lake, which possesses the largest potential given its size. Although Lake Victoria has similar conditions that enable wild Tilapia catches in Uganda, fish processors and exporters in that country focus on other fresh water fishes such as Perch, thus posing little direct competition to Ghana.

Ghana's location also gives a commercial export-oriented aquaculture production cost advantage in terms of short flight times (only six hours to Europe) as compared to competitors from Zimbabwe and South East Asia with flight times of 10 hours or more.


SAL's ability to operate and realize these potentials is constrained by the lack of a sufficient raw materials supply base (of Tilapia) to satisfy the domestic market. Moreover, SAL does not have the capital needed to expand their business and increase production and sales of Tilapia as a first step towards their eventual goal of producing value-added products, chilled and frozen fillers for export.

III. Funding

A. 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

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contribution to exceed the obligated amount specified in Article 3, Section 3.1 of the Agreement.

B. Grantee Contribution

SAL is responsible for the payment of the following items or tasks: 1) the building of the feed mill; 2) the purchase of four scales, four large pallet jacks, and an extruder to make feed pellets; 3) the purchase of an ice maker and a 2nd Refrigerated van. SAL's total contribution to the project is estimated at 833,193,000 cedis; however it is SAL's responsibility to pay for these items regardless of the actual final cost.

IV. Project Goal

The goal of the Project is to improve the living standards of the project participants, particularly the workers of SAL who will earn sustained employment and improved incomes as well as the fish farmers and fishermen who will ultimately benefit from the planned out-grower and fingerling seeding programme.

V. Project Purpose

The purpose of the Project is to profitably increase SAL's quantity of fresh whole Tilapia production through the expansion of production facilities. In doing so, employment levels will increase and incomes of workers will grow, as measured by the following:

- A. SAL's net profit from all activities after PF and taxes will increase from zero in 2003 to 1,536,237,000 cedis in year 1; 12,454,151,000 cedis in year 2; 36,340,932,000 cedis in year 3; 65,656,423,000 cedis in year 4; and 101,831,549,000 cedis in year 5.
- B. SAL employment will increase from 76 in year 1; to 90 in year 2 and 3; 100 in year 4; and 120 in year 5.
- C. The SAL payroll will grow from 1,120,419,000 cedis in year 1; to 2,102,799,000 cedis in year 2; 2,523,359,000 cedis in year 3; 3,028,030,000 cedis in year 4; and 3,633,636,000 cedis in the fifth year.

VI. Project Outputs

The Project will generate the following major outputs in order to attain the Project's purpose.

Current output of fresh whole Tilapia will increase to meet market demand and create a sustainable raw material base for Tilapia processing, demonstrated by the following:

1. SAL will increase annual whole Tilapia production from 3MT per month to 240MT in year 1; 888MT in year 2; 1,953MT in year 3; 2,958MT in year 4; and 3,926MT in year 5.
2. The total annual quantity of feed produced will increase from the current 1MT per day to 5MT/day in the first year; 10MT/day in

- year 2; 15MT/day in year 3; 20MT/day in year 4; and 25MT/day in year 5.
3. SAL's sales turnover will grow from almost nil currently to 7,415,280,000 cedis in the first year; 31,552,016,000 cedis in the second year; 79,826,601,000 cedis in year 3; 139,012,325,000 cedis in year 4; and 212,183,357,000 cedis in the fifth year.

VII. Activities

A. Site Development

SAL will complete the construction of the feed mill building and will purchase and install milling machines and equipment. The company will complete the first three additional nursery ponds in the first year and will add five new ponds in the following years. SAL will purchase and install sixteen additional net cages for on-growing of Tilapia in the first year of the project. The procurement and installation of 32 cages per year for years 2 to 5 will follow.

SAL will improve the piping on location, in turn enhancing the water pumping capacity, and it will complete construction of a concrete jetty, enabling trucks to discharge supplies to and take harvested fish from the supply boat. In addition, the company will purchase an engine and crane to outfit the large boat used for moving the net cages and will complete construction of farm/production manager house on site.

B. Personnel, Training, and Secondary Development

The existing Board of Directors will expand from the current two members to five people. SAL will hire additional management and operational personnel and will conduct staff training on topics including equipment handling, management procedures, and HIV/AIDS prevention. The company will develop their outgrower network, including stocking the inlets of the lake with Tilapia fingerlings enabling the surrounding fishing communities to acquire modern fish stock management and preservation knowledge and this ensuring that they continue to have a means of earning income. SAL will implement a provident fund along with a board of trustees to oversee the fund. The company will also install a community development fund, in which 3% of SAL's profits in the first two years are given to a community program. By year 5 SAL will donate 5% of profits to the development program. SAL will explore and expand new markets over the course of the five-year project plan.

VIII. Roles and Responsibilities of the Parties

ADF's Partner, INPRODEC, will provide the necessary standard ADF training in bookkeeping and monitoring/assessment.

SAL is responsible for ensuring the proper management and implementation of the Project. Within SAL, the Board of Directors will be the highest decision making body that will set

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general policies, rules and regulations of the company. The management team, led by the Managing Director, will ensure that the delivery of the different work streams of the project is coordinated. The Managing Director has full responsibility for the financial management aspects of the company.

The Project Paper should be used as a reference for additional or more specific details.

IX. Monitoring and Evaluation

ADF's partner, INPRODEC, will use close monitoring as the main instrument for quality assurance for the project. Besides tracking general progress of the project, it will also continuously assess the identified project risks. Monitoring by ADF's partner will be an important aspect of the ongoing coaching and advisory service. INPRODEC will review SAL quarterly reports and will provide comments and observations to SAL.