

RD-AAT-110

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ACTION MEMORANDUM FOR THE OAR/LOME AID REPRESENTATIVE

From: Sidney ~~Blase~~ RDO

0002-11

Subject: Sio River Economic Development Project (693-0226)
Operational Program Grant with Partnership, for Productivity

Problem: Your approval is required for field authorization for the subject project per DOA 140, Revised. Authorization subject to REDSO/WCA concurrence was specifically delegated to the field in State 104273.

Discussion: On August 24, 1984 the project development process was concluded by OAR/Lome and PFP representatives in an ECPR-like meeting at REDSO/WCA involving representatives of PDRI, Contracts, Commodities, RLA, WAAC, Engineering, PADS and the Office of the Director. There was a consensus that the project be approved on the condition that the following modifications be included in the OPG proposal:

- 1) The contribution of the Government of Togo be quantified and included in the financial summary.
- 2) OAR/Lome and PFP provide justification for the use of the Federal Reserve Letter of Credit financing method.
- 3) PFP demonstrate that the requirement of 20% non-United States government financing be met.
- 4) A statement that prior to the disbursement of funds under this Agreement for other than operating costs related to PFP technical assistance personnel, USAID, PFP and the Government of Togo shall enter into a tripartite agreement for the implementation of the Sio River Project.
- 5) An intention to negotiate a tripartite agreement which will include arrangements for equitable allocation of water available through the Sio River irrigation system.

Recommendations: That you sign the attached project authorization, thereby authorizing the REDSO/WCA Grant Officer to proceed with the execution of a Cooperative Agreement with PFP, subject to the concurrence of the REDSO/WCA Director.

Concur: 

Do not Concur: _____

Myron Golden
AID Representative
OAR/Lome

Date: 24 August 1984

Cleared by: RLA P.K.

Attachments: Draft Project Authorization
Draft Cooperative Agreement
Operational Program Grant Proposal

PROJECT AUTHORIZATION

ENTITY : Partnership for Productivity, International
PROJECT TITLE : Sio River Economic Development
PROJECT NO. : 693-0226

Pursuant to Part I, Chapter 1, Section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize a Cooperative Agreement to provide a Grant to Partnership for Productivity, International, a registered American private non-profit organization, for the economic development of the Sio River region in Togo, involving planned obligations of not to exceed Three Million Five Hundred Thousand United States Dollars (\$3,500,000), the "authorized amount," in Grant funds over a five year period from the date of authorization, or any other date that the parties may mutually agree upon in writing. The Cooperative Agreement is subject to the availability of funds in accordance with the AID OYB allotment process and will assist in financing certain foreign exchange and local currency costs for goods and services required by the project.

The AID Grant is made available to assist Partnership for Productivity, International to accomplish four basic objectives over the life of the project: (1) Strengthen and develop local farmer-producer organizations; (2) Strengthen public agricultural development organizations through training and a collaborative relationship with the project; (3) Work towards the institutionalization of credit education, management assistance and adult problem-solving education for the benefit of Sio River region producers; and (4) Develop the productive potential of the Sio River Irrigated Perimeter.

Major project inputs financed by the U.S. Government will consist of:

- (1) A three person technical assistance team, a twelve person Togolese field and administrative staff, two Peace Corps Volunteers and twenty person-months of short-term technical assistance;
- (2) Programmatic, monitoring and administrative support from PFP's Washington headquarters, USAID/Togo and REDSO/WCA;
- (3) A program of active collaboration with Togolese agricultural services;
- (4) A credit training fund, currently capitalized at \$200,000;
- (5) Agricultural training activities for farmers as well as PFP and government extension agents;
- (6) A small quantity of vehicles and agricultural machinery for logistical and training purposes.

The Cooperative Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with AID regulations and Delegations of Authority, shall be subject to the following essential terms, covenants and major conditions, together with such other terms and covenants as AID may deem appropriate.

A. Condition Precedent to Disbursement

Prior to disbursement of funds under this Agreement for other than operating costs related to PFP technical assistance personnel, USAID, PFP and the Government of Togo shall enter into a separate tripartite agreement for the implementation of the Sio River Project.

B. Source and Origin of Goods and Services

Goods and services, except for ocean shipping, financed by AID under the Grant shall have their source and origin as specified in AID Handbook 1, Supplement B, Chapter 16 B1b and AID Handbook 13, Chapter 4, or in the Cooperating Country, except as AID may otherwise agree in writing. Ocean shipping financed by AID under the Grant shall, except as AID may otherwise agree in writing, be financed only on flag vessels of the United States.

C. Waivers

Based on the justification presented in the project proposal submitted by Partnership for Productivity, International, I hereby:

- (1) approve a source/origin waiver from Geographic Code 000 (U.S. only) to Code 935 (Special Free World) to allow for the procurement of four vehicles (six vehicles are anticipated to be used by the Grantee over the life of project), and twelve motorcycles/bikes, the approximate total cost of which is \$50,000 or less;
- (2) approve a source/origin waiver from Geographic Code 000 (U.S. only) to Code 935 (Special Free World) to allow for the procurement of farm machinery (including one tractor and five rototillers, with attachments) the approximate total cost of which is \$67,000;
- (3) certify that special circumstances exist which justify the waiver of the requirement of Section 636(1) of the TAA;
- (4) approve local currency costs for commodities in the approximate amount of Two Hundred Twenty Thousand United States Dollars (\$220,000) and having their origin in Geographic Code 899 countries; and
- (5) certify that exclusion of procurement from Free World Countries other than the Cooperating Country and countries included in Code 941 would seriously impede attainment of U.S. foreign policy objectives and objectives of the foreign assistance program.

Approved:



Myron Golden
AID Representative
Lome, Togo

Date: 24 August 1984

Concurrence:



Laurance Bond
Director, REDSO/WCA
Abidjan, Ivory Coast

Date: 24 August 1984

Clearances:

USAID:	RDO	<u>JB</u>
REDSO:	PDO	<u>JL</u>
	RLA	<u>OK</u>
	SMO	<u>AS 8/24/84</u>

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT
REGIONAL ECONOMIC DEVELOPMENT SERVICES OFFICE. WEST AND CENTRAL AFRICA

UNITED STATES ADDRESS
ABIDJAN (REDSO)
DEPARTMENT OF STATE
WASHINGTON, D. C. 20520

INTERNATIONAL ADDRESS
REDSO/WCA
C/O AMERICAN EMBASSY
01 B P 1712 ABIDJAN 01
IVORY COAST

August 24, 1984

Mr. Andrew Oerke, President
Partnership for Productivity/International
2001 "S" Street, N.W.
Washington, D.C. 20009

Subject: Cooperative Agreement No. 693-0000-A-00-4077-00

Dear Mr. Oerke,

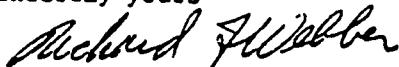
Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development (hereinafter referred to as "AID" or "Grantor") hereby grants to Partnership for Productivity/International (hereinafter referred to as "PFP/I" or "Pfp" or the "Recipient") the sum of \$3,500,000, of which \$500,000 is currently obligated, to provide support for the Sio River Economic Development Project in Togo, as more fully described in Attachment 2 of this Cooperative Agreement, entitled "Program Description." Additional funds, subject to their availability, may be added to this Cooperative Agreement at a later date. It is anticipated that, subject to the availability of funds, AID's total contribution to the Recipient will be Three Million Five Hundred Thousand United States Dollars (\$3,500,000).

This Cooperative Agreement is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Recipient in furtherance of program objectives during the period beginning August 1, 1984 and ending July 31, 1989.

This Cooperative Agreement is made to the Recipient on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1, entitled "Schedule," Attachment 2, entitled "Program Description," Attachment 3, entitled "Standard Provisions," Attachment 4, entitled "Statement of Assurance of Compliance" and Attachment 5, entitled "Provisions for Logistical Support," which have been agreed to by your organization.

Please acknowledge receipt and acceptance of this Cooperative Agreement by signing the original and six copies of this Cover Letter, retaining one set of copies for your files, and returning the remaining copies to the undersigned.

Sincerely yours



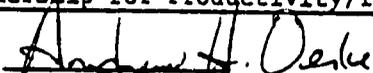
Richard F. Webber
Regional Agreement Officer
REDSO/WCA

Attachments:

1. Schedule
2. Program Description
3. Standard Provisions and Alterations
4. Statement of Assurance of Compliance
5. Provisions for Logistical Support

Acknowledged:

Partnership for Productivity/International

By: 

Typed Name: Andrew H. Oerke

Title: President, Partnership for Productivity/International

Date: Aug 24, 1984

Fiscal Data

Appropriation: 72-1141021

Budget Plan Code: GDAA-84-21693-AG13

PIO/T No.: 693-0226-3-40001

Project No.: 693-0226

Total Estimated Amount: \$3,500,000

Total Obligated Amount: \$500,000

IRS ID #: 54-0853733

Funding Source: USAID/Togo

Copy to USAID/Togo

SCHEDULE

A. Purpose of Cooperative Agreement

The purpose of this Agreement is to provide support for the Recipient to assist the people of the Sio River region of Togo attain higher levels of economic, human and institutional development by increasing production through better utilization and mangement of resources, as more specifically described in Attachment 2 of this Agreement entitled "Program Description."

B. Period of Agreement

1. The effective date of this Agreement is August 1, 1984 and the estimated completion date is July 31, 1989.
2. Funds obligated hereunder are available for program expenditures for the estimated period shown in the Financial Plans set forth in Part D of this Agreement.

C. Amount of Agreement and Payment

1. The total estimated amount of this Agreement for the period shown in B.1. above is \$3,500,000.
2. AID hereby obligates the amount of \$500,000 for program expenditures during the period set forth in the Financial Plans in Part D of this Attachment.
3. Payment shall be made to the Recipient in accordance with procedures set forth in the Standard Provision of this Agreement entitled "Payment - Federal Reserve Letter of Credit (FRLC) Advance", as shown in Attachment 3.
4. Additional funds up to the total estimated amount of this Agreement shown in C.1. above may be obligated by AID subject to the availability of funds, and to the requirements of the Standard Provision of this Agreement, entitled "Revision of Financial Plans."

D. Financial Plan

The following is the Financial Plan for this Agreement. Revisions to this Plan shall be made in accordance with Standard Provision of the Cooperative Agreement, entitled "Revision of Financial Plan."

(\$US)

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Personnel	186,995	308,735	304,385	344,825	311,030	1,455,970
Commodities	68,740	100,070	22,475	-	-	191,285
Operating Costs	37,675	74,355	67,895	70,015	69,130	319,070
Consultants/ Evaluation	38,745	102,025	123,275	43,280	55,995	363,320
Contingency*	48,945	61,135	50,835	43,650	38,510	243,075
Credit Fund	15,000	60,000	75,000	50,000	-	200,000
Indirect Costs	95,975	171,140	156,010	133,695	115,010	671,830
Organization/ Information Costs	7,925	14,125	12,875	11,035	9,490	55,450
<u>Total</u>	<u>500,000</u>	<u>891,585</u>	<u>812,750</u>	<u>696,500</u>	<u>599,165</u>	<u>3,500,000</u>

*Due to an anticipated funding limitation both in Year One and in the authorized life of project amount, the Contingency line-item has been variously adjusted above or below the 12% programmed rate, depending on the year.

The Recipient may adjust costs between budget line items. The adjustment shall not exceed 15% from year one to year two or between line items within year one or two, without the consent of the Agreement Officer. Subsequent revision authority may be decided upon following the initial project evaluation.

E. Substantial Involvement Understandings

It is understood and agreed that AID will be involved in the following:

1. The AID Project Officer is the Rural Development Officer assigned to the AID Mission in Lome, Togo.
2. Concurrence for international travel to Togo, originating in the United States which will be charged to the Agreement shall be requested by the Recipient from USAID/Togo via the AID Togo desk (AFR/CWA). (See the Standard Provision of this Agreement entitled, "Travel and Transportation".)
3. The first disbursement of funds for activities under the Agreement shall require a Project Implementation Letter (PIL) from USAID/Togo, with the concurrence of REDSO/WCA.
4. Prior to disbursement of Agreement funds for specific activities under the Agreement, the Recipient, in collaboration with USAID/Togo and appropriate representatives of the Ministries of Rural Development and Plan within the Government of Togo, will draft and approve a specific country agreement which will serve to:
 - (a) confirm PFP's status as an AID Recipient operating within Togo;
 - (b) outline the plan of work for Year One;
 - (c) present a budget for local expenditures scheduled to take place during Year One;
 - (d) define the person(s) within the Government of Togo who will have the responsibility for acting in its name with regard to program considerations related to the project;
 - (e) specify the appropriate government technical and planning services, their human and physical resources and budget provisions which will participate in the implementation of project activities over the course of Year One.
5. The USAID Mission in Togo, with the concurrence of the appropriate office in AID/W, will work with PFP to determine future year spending needs under the project in order to help assure that incremental AID financing will be approved, subject to the availability of funds.
6. To the degree that PFP periodic project reports and local expenditure financial reports will be submitted to AID via the USAID Mission in Togo, the Mission will be responsible for monitoring project activities.

7. AID will participate in scheduled and unscheduled evaluations of this project, in coordination with PFP, and in collaboration with independent contractors (see Part F of Attachment 1, entitled "Reporting and Evaluation").
8. If necessary, AID will cooperate with PFP to amend this Cooperative Agreement to reflect the agreements reached between USAID/Togo, the Recipient and the Government of Togo regarding project implementation in Togo.
9. With respect to Part I of Attachment 1, entitled "Authorized Geographic Code", source/origin waivers for goods and services to be procured under the Grant will be requested from the USAID/Togo Mission.
10. Various members of the USAID Mission in Togo, oftentimes accompanied by official U.S. government personnel, may have occasion from time to time to visit project activities. The Mission will inform PFP's offices in Togo prior to such visits.

F. Reporting and Evaluation

1. Financial Status Report

- (a) The Recipient is required to use the standardized financial Status Report, SF-269, to report the status of funds.
- (b) The report shall be on the accrual basis.
- (c) The report shall be required on a quarterly basis only. A final report shall be required at the completion of the Cooperative Agreement.
- (d) The Recipient shall submit the Financial Status Report to AID/W (FM/PAD) (original and no more than two copies) no later than 30 days after the end of each specified reporting period for quarterly, and 90 days for final reports. The specified report period, at the Recipient's election, may be either its fiscal year, or the Government's fiscal year, or the yearly period commencing and ending on the last day of the month of the Agreement's anniversary.

2. Report of Federal Cash Transactions

- (a) When funds are advanced to the Recipient through a Federal Reserve Letter of Credit (FRLC) or periodic Treasury checks, the Recipient shall submit a Report of Federal Cash Transactions. AID will use this report to monitor cash advanced to the Recipient and to obtain disbursement information for the Agreement from the Recipient.
- (b) The Recipient shall forecast Federal Cash requirements in the "Remarks" section of the report.
- (c) The Recipient shall submit not more than the original and two copies of the Report of Federal Cash Transactions in 15 working days following the end of each quarter. A monthly report shall be submitted in the event that the Recipient receives advances totaling \$1 million per year.

- (d) AID may waive the requirement for submission of the Report of Federal Cash Transactions when monthly advances do not exceed \$10,000 per Recipient, provided that such advances are monitored through other forms contained in this Agreement or if, in AID's opinion, the Recipient's accounting controls are adequate to minimize excessive federal advances.
- (e) Financial reporting requirements shall be in accordance with the Standard Provision of this Agreement entitled "Payment - Federal Reserve Letter of Credit (FRLC) Advance."

3. Monitoring and Reporting Program Performance

- (a) The Recipient shall monitor the performance under this Cooperative Agreement and, where appropriate, ensure that time schedules are being met, projected work units by time periods are being accomplished, and other performance goals are being achieved.
- (b) The Recipient shall submit semi-annual program performance reports, and a final report, which briefly present the following information:
 - (1) A comparison of actual accomplishments with the goals established for the period, the findings of the investigator, or both. If the output of programs or projects can be readily quantified, such quantitative data should be related to cost data for computation of unit costs.
 - (2) Reasons why established goals were or were not met.
 - (3) Other pertinent information including, where appropriate, analysis and explanation of any cost overruns or high unit costs.
- (c) Between the required performance reporting dates, events may occur that have significant impact upon this project. In such instances, the Recipient shall inform AID as soon as the following types of conditions become known:
 - (1) Problems, delays, or adverse conditions that will materially affect the ability to attain program objectives, prevent the meeting of time schedules and goals, or preclude the attainment of project work units by established time periods. This disclosure shall be accompanied by a statement of the action taken, or contemplated, and any AID assistance needed to resolve the situation.
 - (2) Favorable developments or events that enable time schedules to be met sooner than anticipated or more work units to be produced than originally projected.

- (d) If any performance review conducted by the Recipient discloses the need for change in the budget estimated in accordance with the criteria established in the Standard Provision of this Agreement entitled "Revision of Financial Plans", the Recipient shall submit a request for budget revision.
- (e) Three copies of each program performance report shall be submitted to USAID/Togo.
- (f) The monthly report on local expenditures which accompanies the submission of vouchers, shall be presented to the Project Officer for administrative approval, prior to being forwarded to the Recipient's home office.
- (g) The original and two copies of all financial reports emanating from Recipient's home office shall be submitted to AID, Office of Financial Management, Program Accounting Division (FM/PAD), Washington, D.C. 20523. In addition, one copy of these financial reports shall be submitted to each the West African Accounting Center, c/o REDSO/WCA Abidjan via Air Pouch, Dept. of State, Washington, D.C. 20520, and the Project Officer, USAID, Lome via Air Pouch, Dept. of State, Washington, D.C. 20520.

G. Indirect Cost Rates

- 1. Pursuant to the Standard Provision of this Cooperative Agreement entitled "Negotiated Overhead Rates - Nonprofit Organizations Other than Educational Institutions", a rate or rates shall be established for the first of the Recipient's accounting periods which apply to this Agreement (August 1, 1984 until amended). Pending establishment of revised provisional or final indirect cost rates for the first of the Recipient's accounting periods which apply to this Agreement, provisional payments on account of allowable indirect costs shall be made on the basis of the following negotiated provisional rate applied to the base which is set forth below.

<u>Rate</u>	<u>Base</u>
24.23%	Total Direct Costs

H. Title to Property

Title to property procured hereunder shall vest in the Recipient for the purposes of project implementation in Togo throughout the life of project. Title to property of certain commodities (e.g. vehicles, rototillers and farm machinery) shall be transferred by the Recipient to the Government of Togo for its own disposition, at the conclusion of project activities

I. Authorized Geographic Code

The Recipient shall procure all goods and services financed hereunder in accordance with the Standard Provisions of this Agreement entitled "Procurement of Goods and Services Under \$250,000", as modified by the July 1982 Attachment to AID Forms 1420-51, -52, -53, -54, entitled "Alterations in Grant." In the event that procurement of goods and services from non-U.S. sources becomes necessary, the Recipient shall request a source/origin waiver with concurrent copies to the USAID Mission and the Agreement Officer. The Recipient shall not procure non-U.S. goods and services unless a waiver has been granted. The Recipient shall provide a copy of all waivers to the Agreement Officer, and shall retain copies for audit purposes. In preparing proposals for country-specific activities, the Recipient shall, to the maximum practical extent, identify the need for such waivers, in order to permit consideration of such need as part of the project approval process.

J. Special Provisions

1. OMB Circular A-122

(a) The cost principles of OMB Circular A-122 are synonymous with Subpart 1-15.6 of the Federal Procurement Regulations (FPR), which includes Subpart 7-15.6 of the AID Procurement Regulations.

(b) Subpart 1-15.6 reserves the sections on bid and proposal costs and independent research and development costs. AID and the Recipient hereby agree upon the following treatment of these costs, pending such time as the FPR is amended to include them:

(1) Bid and proposal (B&P) costs are the immediate costs of preparing bids, proposals, and applications for potential Federal and non-Federal grants, contracts and agreements, including the development of scientific, cost, and other data needed to support the bids, proposals, and application. B&P costs of the current accounting period are allowable as indirect costs. B&P costs of prior accounting periods are unallowable in the current period. In this regard, B&P costs incurred for the preparation of requests for specific projects and programs are acceptable for recovery as indirect costs. However, proposal costs incurred in the attempt to obtain unrestricted funds are to be treated as fund raising and must be included in the organization's direct cost base. B&P costs do not include independent research and development costs which are covered by paragraph (2) below, or preaward costs covered by Attachment B, Paragraph 33, of OMB Circular A-122. (FPR 1-15.603.2.)

- (2) Independent research and development (IR&D) costs are for research and development conducted by an organization which is not sponsored by Federal or non-Federal grants, contracts or other agreements. IR&D costs must be included in the organization's direct cost base for allocation of its proportionate share of indirect costs. The costs of IR&D, including its proportionate share of indirect costs, are unallowable under AID agreements.

2. Computer and Computer-Related Purchases

The Recipient shall obtain the prior approval of the Project Officer for any purchases of automation equipment (e.g. computers, word processors, etc.), software, or related services financed hereunder, according to AID regulations governing such procurement in effect at the time.

K. Alterations and Additions to Standard Provisions

1. The Standard Provisions applicable to this Agreement are set forth as Attachment 3 to this Agreement, and consist of form AID 1420-52, dated 2-82, which includes provisions 1 through 34.
2. The Standard Provisions, as defined above, are modified as set forth in the July 1982 Attachment to AID Forms 1420-51, -52, -53, -54 entitled "Alterations in Grant", which is attached hereto and made a part of this Agreement.
3. In Addition to the alterations in Standard Provisions set forth in Attachment 3 attached to the Standard Provisions and made part thereof, the following Provisions as set forth in Attachment 3, Standard Provisions of this Agreement are hereby deleted:
 - (a) Provision 10A : Procurement of Goods and Services Under \$250,000
 - (b) Provision 13C : Title To and Care of Property (Grantee Title)
 - (c) Provision 13B : Title To and Care of Property (U.S. Government Title)
4. The Standard Provision entitled "Patents", as set forth in AID Form 1420-52, dated as above, is superseded by the Standard Provision entitled "Patent Rights (Small Business Firms and Nonprofit Organizations) (March 1982) (OMB Circular A-124", which is attached hereto and made a part of this Agreement.
5. The Standard Provision entitled "Workmens' Compensation Insurance" is attached hereto and made a part of this Agreement.

L. Additional Provisions to be used in Partially Funded AID Cooperative Agreements

1. The funds provided by this Cooperative Agreement represent partial support of the program/project as described in the Schedule of this Cooperative Agreement, and may be used to support the costs of the program/project as specified in the Financial Plan included in the Schedule.
2. The restrictions on the use of AID grant funds hereunder set forth in the Standard Provisions of this Cooperative Agreement are applicable to expenditures incurred with AID funds provided under this Agreement. The Standard Provisions are not applicable to expenditures incurred with funds provided from non-Federal sources. The Recipient will account for the AID funds in accordance with the Standard Provisions of this Cooperative Agreement entitled "Accounting, Audit and Records."
3. Notwithstanding paragraph (3) of the Standard Provision of this grant entitled "Refunds," the parties agree that in the event of any disallowance of expenditures from AID grant funds provided hereunder, the Recipient may substitute for such disallowance expenditures made with funds provided from non-Federal sources provided they are otherwise incurred for the purpose of this Cooperative Agreement. At the expiration or termination of this Cooperative Agreement, amounts of disallowance of expenditures from AID grant funds for which a substitution with expenditures from non-Federal funds cannot be made will be refunded to AID.

Sio River Economic DevelopmentProgram DescriptionA. Purpose of Agreement

The purpose of this Agreement is to enable the Recipient to assist the inhabitants of the Sio River region of Togo to attain higher levels of economic, human and institutional development by increasing productivity through better utilization and management of resources.

B. Specific Objectives

This Agreement is designed to provide support to the Recipient to enable the attainment of the following objectives:

1. To strengthen and develop local farmer-producer organizations that will make production more efficient, give producers greater control over the purchase of inputs and marketing, work collaboratively with other public and private sector institutions and provide members with the opportunity to develop group management skills.
2. To strengthen local agricultural institutions, primarily through training and a collaborative relationship with the project, so that Sio River producers may make better use of their agricultural resources.
3. To institutionalize credit education, management and business development training and adult problem solving education as resources that will enable regional producers to develop a wide range of small scale agricultural and agriculturally-related economic activities.
4. As a consequence of the above and by working with the Direction Regionale de Developpement Rural (DRDR) of the Maritime Region, improve the productivity of the Sio River Irrigated Perimeter.

C. Implementation

In order to accomplish the foregoing objectives, the Recipient shall, with funds from this Agreement, carry out the activities set forth below with the following personnel.

Expatriate Technicians

General Manager (5 PY's) The general manager has overall responsibility for the execution of the project implementation schedule including policymaking, the establishment of procedures, personnel, finance, administration, training, the use of consultants, monitoring, evaluation and reporting. He represents PfP and the project to the Government of Togo, OAR/Lome and other organizations. Specific technical responsibilities include the setting up of the credit training and business extension systems and supervising their operation.

Project Agronomist (5 PY's) -- The project agronomist is the project's primary source of agricultural technical expertise. His primary duties are the development of a project agricultural strategy, coordinating project agricultural activities with the appropriate government technical services, especially DRDR, organizing technical training, directing the field testing of technical packages, organization and management of the demonstration fund, and the setting up of farm level data collection systems. He has primary responsibility for the implementation of irrigated perimeter activities.

Mechanic Trainer (3 PY's) -- The mechanic trainer's duties include the development of appropriate mechanical packages for project beneficiaries, the conducting of feasibility studies on farm machinery and training beneficiaries in farm machinery utilization, maintenance and repair. He is responsible for written records on project vehicles and equipment and for their maintenance and repair. He also provides training for credit training agents in motorcycle maintenance. He works with the project agronomist and the agricultural coordinator in conducting field tests, supervising demonstration activities and strengthening producer groups.

Togolese Staff

Operations Manager (4 PY's) -- The operations manager has overall field level responsibility for the implementation of the full range of project activities including credit, management assistance, the promotion of agricultural activities, training, monitoring and evaluation. He also works closely with the general manager in formulating policy and procedures and contributes to project reports.

Credit Manager (5 PY's) -- The credit manager has primary responsibility for the management of the credit fund and the business extension service. He evaluates all loan proposals, and with the concurrence of the general manager or the operations manager, makes loans. He supervises the credit training agents, organizes client follow-up, is responsible for loan collections, and keeps credit fund records. He compiles and analyzes all credit fund and small scale economic activity performance data.

Agricultural Coordinator (5 PY's) — As a counterpart to the project agronomist, the agricultural coordinator is the principle field agent responsible for the implementation of agricultural activities. He actively participates in the organization and delivery of technical training, works with the credit manager and credit training agents in their dealings with agricultural clients, maintains a close working relationship and plans strategies with government technical services, field tests technical packages and carries out demonstration fund activities. He also compiles and analyzes data on project agricultural activities.

6 Credit Training Agents (25 PY's) — The credit training agent is the principle point of contact between the project and its clients. Credit training agents receive loan proposals, conduct feasibility studies, provide management assistance to assigned groups of clients, collect loan repayments, maintain written client files and evaluate clients' progress,

Mechanic/Operator (4 PY's) — The mechanic/operator works with the mechanic trainer on the maintenance and repair of project vehicles and machinery. He is responsible for the day to day operation of the project tractor and other project vehicles he may be assigned. He assists the mechanic trainer in training clients in machinery use, maintenance and repair.

Administrative Assistant (5 PY's) — The administrative assistant has responsibility for managing the Lome office, financial recordkeeping, the preparation of monthly financial reports and procurement. He also performs statistical analyses of project activities.

Secretary (5 PY's) — The secretary is responsible for all clerical duties, preparing project documents and reports, receiving visitors and messages in the Lome office and some translation duties.

Peace Corps Volunteers

2 Group Formation Specialists (6 PY's) — The group formation specialist develops a detailed group formation methodology that can be applied to the promotion of producer groups in the project area. By working with and through the credit training staff, the specialist develops and reinforces the management capabilities of producer groups and their members. The specialist may also concentrate in a certain technical field such as grain storage or fish farming, if there exists the possibility of promoting a particular activity among large groups of project beneficiaries.

PfP/International Project Backup

Senior Manager (2 PY's) -- The senior manager is the PfP/I person directly responsible for monitoring project activities and reinforcing PfP/Togo capabilities through at least one yearly site visit and analysis of project correspondence and reports. Specific responsibilities include the recruiting and hiring of short term consultants, inputs into the project's monitoring and evaluating systems, participation on the mid-term and final project evaluations, staff assessments and the reinforcement of field level training.

Project Associate (1.5 PY's) -- The project associate works under the supervision of the senior manager, assisting in procurement, recruiting, project analysis, program evaluation and the acquisition of technical resources required by the project.

Consultants

Non-Formal Education Specialist (3 PM's) -- The non-formal education specialist will design and implement training workshops and conduct follow-up sessions for PfP and government field agents. This training will be especially designed to make the agents into good communicators and teachers, and will be combined with technical training organized by PfP expatriate technicians. Workshops and follow-up are scheduled in years one, two and three.

Irrigation/Water Management Specialists (5 PM's) -- Personnel in this speciality will come from AID's Water Management Synthesis Project and will probably include a water engineer, a cooperatives formation specialist and an irrigation agronomist. Their role will be to develop models for the productive exploitation of the irrigated perimeter in water management, perimeter maintenance, producer group formation, extension service delivery and the like. In addition they will provide training in implementing these models to government extension agents and farmers. A diagnostic visit, workshops and follow-up are scheduled in years two and three.

Agronomist (2 PM's) -- Short consultancies in tropical agronomy are foreseen to obtain assistance in the growing of rice, corn, cassava and vegetables. Possible sources for these technicians are WARDA in Liberia and IITA in Nigeria. Visits are programmed in years two, three and four.

Marketing Specialist (1 PM) -- The advice of a marketing specialist will be sought to help design marketing strategies for irrigated perimeter producers, extra-perimeter agricultural groups and other clients with particular marketing problems. A visit is programmed in year three.

Economist (2 PM's) — The services of an economist will be used in years one and three to help project personnel utilize the tools of economic analysis to measure project benefits. The economist is expected to play a role in the design of the project's monitoring and evaluation system and in devising models that will enable project management to discover the extent of the impact it is having on the Sio River region.

Computer and Information Specialist (1 PM) — The project will attempt to computerize its monitoring and evaluation system to minimize data processing time and to obtain timely information for project managers. The computer and information specialist will provide training in the use of the project personal computer as well as programming assistance. Visits are scheduled in year two and four.

Organization Specialist (1 PM) — Towards the end of the third year, project management will draw up a series of strategies for the institutionalization of the various project components that are successful. This consultant will assist in the development of those strategies.

Sociologist (5 PM's) — The operations research design phase of this project was made more meaningful by the part-time presence of a Togolese rural sociologist who evaluated the socio-cultural appropriateness of project activities and who recommended implementation strategies. Similar contributions by local sociologists are programmed for each of the five years of the project.

Project Activities

Project activities are expected to commence September 1, 1984 with the arrival in Lome of the PFP general manager. He will be followed one month later by the project agronomist. During the first year six Togolese staff members will be hired; the credit manager, the agricultural coordinator, two credit training agents, an administrative assistant and a secretary.

The first nine months will consist largely of setting up systems. Credit training and management assistance will be the first priority. The task will not be difficult thanks to the existence of the PFP Upper Volta Credit Training Manual which lays out the credit training system in great detail, a simplified version of which was successfully utilized in Togo during ORA experimental activities. Modifications made necessary by conditions particular to Togo will be worked out between PFP and the project coordinator in the Ministry of Rural Development, and then communicated to appropriate government services. During this time the project will be working closely with CNCA in order to make the project's credit training process as complementary to CNCA's approach as possible.

At the same time an agricultural strategy will be written and procedures developed and coordinated with the credit and management assistance systems. The first set of agricultural technical packages to be promoted will be prepared in coordination with government technical services. Concrete, joint implementation plans for working with area farmers will also be worked out at this time. Procedures will be devised for the agricultural demonstration fund and an initial list of demonstrations to be undertaken will be drawn up. Work will also begin on setting up the monitoring and evaluation system, with important assistance coming from PfP/International Washington staff. Once the outlines of the system are established, baseline data will be collected.

In preparation for the beginning of field activities, an office will be set up in Mission Tove. There will also be a smaller office in Lome in part of the general manager's house where purely administrative functions will be carried out. Only the secretary and administrative assistant will work out of the Lome office. All other personnel will be assigned to Mission Tove. At this time the first order for vehicles will be placed and other commodities, like the personal computer and other office equipment, purchased.

Staff training will also begin at this time, highlighted by the participation of a non-formal education specialist consultant. Quarterly technical training sessions will begin and will continue throughout the life of the project. They will be open to both PfP and government extension agents, and may be held in the project region or elsewhere. These training sessions will result in cross-fertilization among PfP projects in Africa, and will make use of other training resources in West Africa like IITA in Ibadan, Nigeria.

As a consequence of the above, the project should begin promoting small scale economic activities outside the irrigated perimeter by the sixth month of implementation (this also coincides with the beginning of the long rainy season). These activities will fall within Zone I where the project design operations research activity was carried out and where PfP is already known. All field activities will be directed out of the Mission Tove office.

The approach in the beginning will be very conservative. The idea will be to identify serious clients whose projects have a good chance of succeeding. Priority will be given to agricultural proposals, but there will be a mix of other activities as well in an effort to see what works and to show the population the kinds of things that can be done through the PfP approach. As the field staff acquires expertise through experience and training, the pace at which new clients are accepted will accelerate. Between years two and four, the project will expand into Zones 2 and 3. In order to insure close follow-up of clients' activities, smaller field offices, containing no more than two credit training agents

each, will be set up, probably in Keve for Zone 2 and Tsevie for Zone 3. Throughout the life of the project, the effort to promote small scale economic activities will emphasize a coordinated approach, both among the different systems within the project and between the project and other organizations.

Year two will see the beginning of preparations for irrigated perimeter activities. The mechanic trainer will arrive, agricultural machinery will be ordered, initial feasibility studies performed and training packages for machinery use prepared. Planning will be undertaken with DRDR concerning the project's involvement with perimeter producers. Soil testing will commence in the perimeter and technicians from the Water Management Synthesis Project will make their diagnostic visit in preparation for their training workshop which will follow. At this time the public health situation, especially as regards schistosomiasis, will be evaluated and a suitable approach developed. The first group of perimeter clients will be chosen around March 1986. Groups for successive production campaigns should get larger with each season. The goal will be to place one hundred fifty hectares under intensive cultivation by the fifth year of the project, have functioning models in place for the management of water and the delivery of extension services, be working with a number of functioning and viable producer groups and to have integrated project assistance to the perimeter with extra-perimeter activities.

During year two PFP will recruit and hire an operations manager, two additional credit training agents and a mechanic/operator for the agricultural machinery. One Peace Corps volunteer will arrive to begin producer group formation activities.

The staff will reach its full complement in year three with the hiring of the final two credit training agents and the arrival of the second Peace Corps volunteer.

PROJECT IMPLEMENTATION SCHEDULE

	Year 1	Year 2	Year 3	Year 4	Year 5
<u>Expatriate Staff</u>					
General Manager arrives Sept 1, 1984	X				
Zoologist arrives Oct 1, 1984	X				
Mechanic Trainer arrives March 1986		X			
Peace Corps volunteers arrive		X	X		
<u>Sierra Leone Staff</u>					
Credit Specialist, 1 Agricultural Coordinator	X				
Secretary, 1 Administrative Assistant	X				
2 Credit Agents	X-----X				
Operations Manager		X			
Credit Agents		X			
Credit Agents			X		
Mechanic/Operator		X			
<u>Consultants and Evaluation</u>					
Non Formal Education Specialist	X--X	X--X	X--X		
Irrigation/Water Management Specialist		X--X	X--X		
Zoologist		X	X		
Marketing Specialist			X		X
Zoologist		X	X		
Computer & Information Specialist	X				
Organization & Institutionalization Specialist				X	
Sociologist	X--X	X--X	X--X	X--X	X--X
Project Evaluations			X--X		X--X
<u>Project Activities</u>					
Establish Lome office	X-X				
Establish field offices	X-X	X-X	X-X		
Order vehicles	X				
Establish credit procedures	X--X				
Collect baseline data	X---X				
Develop ag. procedures & strategy	X---X				
Promote extra-perimeter small scale economic activities	X				
Soil Testing and mapping	X---X	X---X	X---X	X---X	
Quarterly technical training for PFP & GOT extension staff	X X X X	X X X	X X X X	X X X X	X X
Farm machinery feasibility studies	X---X				
Order farm equipment		X			
Set up training program for motorcycles		X---X			
Implement perimeter activities		X---X			
Submit annual reports	X	X	X	X	X
Institutionalization plan			X	X	X
			X---X		

D. Indicators

By the end of this Agreement period it is anticipated that the Recipient shall have:

1. Worked with 2,000 direct project beneficiaries through the provision of credit and/or technical assistance;
2. Improved the management and technical skills of at least 500 farmers;
3. Helped create and strengthen 20 producer groups with increased group management skills; members' incomes will have been raised because of organization;
4. Helped develop a functioning model for the operation of the Sio River Irrigated Perimeter in which at least 150 hectares are under intense cultivation;
5. Assisted 10 government extension agents to operate more effectively in serving local farmers;
6. Trained eight project agents to deliver credit training and business management services to Sio River inhabitants;
7. Achieved progress in the institutionalization of credit education, management assistance and technical training for agricultural and agriculturally-related producers in the Sio River Region;
8. Helped create a more complete and dynamic regional economic infrastructure to better satisfy peoples' production and consumption needs;
9. Refined implementation methodologies and models; disseminated lessons learned both nationally and internationally regarding small farm management, credit and management training, regional economic development and small scale economic development.

E. Evaluation

Internal monitoring and evaluation will comprise an important and ongoing part of the Sio River project. A complete internal monitoring system will be set up within the first six months of implementation during which time a baseline survey of the region will be conducted.

Regular project progress reports will be furnished to USAID/Togo, the first covering activities through December 1984, and on a semi-annual basis thereafter. In addition, supplementary reports on subjects of significant interest will be prepared periodically.

Two outside evaluations have been scheduled, one at the beginning of year three of implementation, the other at the midpoint of year five. Participants in these evaluations will include outside consultants, PFP/International staff, government of Togo officials, USAID/Togo and REDSO/WCA.

While the project will be judged in part by its ability to produce projected quantifiable outputs, attention to less precise indicators like the project's ability to promote "development" as opposed to simple "growth" as well as its ability to convert knowledge from lessons learned to an operationally sound implementation program, will be part of external evaluation criteria.

SIO RIVER ECONOMIC DEVELOPMENT PROJECT

A Cooperative Agreement Between
The United States Agency for International Development
and
Partnership for Productivity/International

Total Funding Request: \$3.5 million

Project Location: Sio River Region, Togo

PFP Central Headquarters: 2441 18th Street, N. W.
Washington, D. C. 20009

Contact Persons: Andrew Oerke and John Schiller

Date of Submission to USAID: July 14, 1984

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LIST OF ACRONYMS

AID	Agency for International Development
CIDA	Canadian International Development Agency
CNCA	Caisse Nationale de Credit Agricole
CRS	Centre Rizicole du Sio
CUSO	Canadian Universities in Service Overseas
DREER	Direction Regionale de Developpement Rural
EA	Environmental Assessment
EOPS	End of Project Status
FAO	Food and Agriculture Organization
GOT	Government of Togo
IEE	Initial Environmental Examination
IITA	International Institute for Tropical Agriculture
IRAT	Institut de Recherches Agronomiques Tropicales
MIS	Management Information Systems
MRD	Ministry of Rural Development
MRE	Ministry of Rural Equipment
OAR	Office of the AID Representative
ORA	Operational Research Activity
PCV	Peace Corps Volunteer
P'P	Partnership for Productivity
PID	Project Identification Document
PP	Project Paper
PRC	Peoples' Republic of China
REDSO/WCA	Regional Economic Development Service Organization/West & Costal Africa
RLDC	Relatively Lesser Developed Country

ROC Republic of China
SATAL Societe Agricole Togolaise Arabe Lybienne
SOL Standard of Living
SOTOCO Societe Togolaise du Coton
SRIP Sio River Irrigated Perimeter
ULVS Ultra Low Volume Sprayer
WHO World Health Organization
WMSU Water Management Synthesis Unit

EXECUTIVE SUMMARY

The Sio River Economic Development Project is designed to enable the inhabitants of the Sio River region of Togo attain higher levels of economic, human and institutional development by increasing productivity through the better utilization and management of resources. The Sio River region, defined for the purposes of this project, comprises the lower two thirds of the Sio Prefecture to the north of Lome, and contains one hundred thirty thousand inhabitants. The region has great agricultural potential because of favorable rainfall, ready access to the material, commercial and technical resources of Lome, an irrigation infrastructure capable of watering 550 fertile hectares and an energetic population which for some time has been exposed to modernizing influences due to its mobility and proximity to Lome. The project will be implemented by Partnership for Productivity/International (PfP) which will collaborate closely with the Togolese Ministry of Rural Development and appropriate government technical field services.

The project's primary beneficiaries will be two thousand rural producers and their families (among whom women and young farmers will be prominent) who will be touched by credit, credit education, management assistance and technical training offered by the project. Most of the region's population is also expected to benefit in some way from the introduction of improved agricultural techniques, better farm management practices and a more vigorous and comprehensive regional economic infrastructure that will provide more goods and services. In addition, there will be a strengthening of Togolese government agricultural services which should consequently have a greater impact on agricultural production. Finally, the project is expected to produce a development model for stimulating rural productivity that could be applied elsewhere in Togo.

The cooperative agreement between USAID and Partnership for Productivity will make available \$3.5 million over five years to accomplish four basic objectives: 1) to strengthen and develop local farmer-producer organizations; 2) to strengthen public agricultural development organizations through training and a collaborative relationship with the project; 3) to work towards the institutionalization of credit education, management assistance and adult problem-solving education for the benefit of Sio River producers, and 4) to work to develop the productive potential of the Sio River Irrigated Perimeter.

The project will have two basic components. The first will concentrate on the development of a wide range of small scale economic activities in the region. The aim will be to assist producers develop agricultural and agriculturally-related activities by making available appropriate amounts of credit, management assistance and technical training. The first two elements will be supplied by the project; the latter, to the greatest extent possible, by government extension agents.

Within the second component, which will come on line during the second year of implementation, the project will work to develop a functioning model for the productive exploitation of the Sio River Irrigated Perimeter through the promotion of viable producer groups and the strengthening of institutional capacity to provide perimeter-wide management and extension services. Work on this component will not begin immediately in order to allow the government to complete a reorganization of the perimeter-wide extension service and to clarify the details of a Chinese commercial farm which will probably be established on the eastern side of the irrigated perimeter. The farm will be financially and administratively separate from Togolese government activities and this project, and will have no development objective.

This project is the result of a year long operational research design phase which consisted of agricultural trials, experimental loans to a small number of local producers, the administration of several survey questionnaires and the completion of a comprehensive socio-economic study on the Sio River region. The design phase allowed PFP to successfully test its credit training methodology under local conditions, and learn much about local agriculture, investigate important socio-economic and socio-cultural phenomena and develop implementation strategies.

Major project inputs will consist of: 1) a three person expatriate technical assistance team, a twelve person Togolese field and administrative staff, two Peace Corps volunteers and twenty person-months of short term technical assistance; 2) programmatic, monitoring and administrative backup from PFP's Washington headquarters, OAR/Lome and REDSO/WCA; 3) the active participation of Togolese agricultural services; 4) a \$200,000 credit fund; 5) training activities for farmers as well as PFP and government extension agents; and 6) a small quantity of vehicles and agricultural machinery for logistical and training purposes.

Monitoring and evaluation will receive considerable attention, as it is anticipated this project will provide useful knowledge for other rural development projects. In addition to the documentation that the monitoring system will provide, there will be two external evaluations, one in year three and one in the final year of the project.

PROJECT PURPOSE AND DESCRIPTION

1. Project Purpose

The purpose of this project is to enable the inhabitants of the Sio River region of Togo to attain higher levels of economic, human and institutional development by increasing productivity through better utilization and management of resources.

Specifically, the cooperative agreement between the Agency for International Development (AID) and Partnership for Productivity International (PFP) will make available the necessary resources to realize the following objectives:

1. To strengthen and develop local farmer-producer organizations that will make production more efficient, give producers greater control over the purchase of inputs and marketing, work collaboratively with other public and private sector institutions and provide members with the opportunity to develop group management skills.
2. To strengthen local agricultural institutions, primarily through training and a collaborative relationship with the project, so that Sio River producers may make better use of their agricultural resources.
3. To institutionalize credit education, management and business development training and adult problem solving education as resources that will enable regional producers to develop a wide range of small-scale agricultural and agriculturally-related economic activities.
4. As a consequence of the above and by working with the Direction Regionale de Developpement Rural (DRDR) of the Maritime Region, improve the productivity of the Sio River Irrigated Perimeter.

2. Beneficiaries

The primary beneficiaries of this project will be two thousand regional producers and their families who will receive direct assistance in the form of credit, credit education, and management and technical training. In addition, the region's population of approximately one hundred thirty thousand inhabitants should directly benefit from project outputs which will include an increased food supply, improved agricultural techniques, better farm management practices and the development of a more complete and dynamic regional economic infrastructure that will provide more goods and services.

An AID-financed socio-economic study during the design phase of this project identified women and young farmers as two groups whose economic potential was under-utilized. PFP will consciously provide access to resources for these two groups, in order to further social equity and also because they are an important resource to the area's productivity that is not to be overlooked.

The government of Togo will benefit from the refinement of a methodology for producer-oriented regional development that could be applied to other areas of Togo. Of special interest to the government in this regard are the implementation of an effective small scale credit methodology and the definition of an effective way of transforming the graduates of its young farmer training centers into productive and socially secure members of their communities.

There will also be a major policy benefit deriving from the privatization of agriculture, especially within the Sio River Irrigated Perimeter. The project will promote the formation of farmers' organizations that will permit farmers to gain maximum control over production and marketing activities, and lessen their claim on public resources. Finally, there will be educational and productivity gains by other government services working to promote development in the Sio River region, as their personnel benefit from project-supplied training and as the population places a greater demand on their technical expertise.

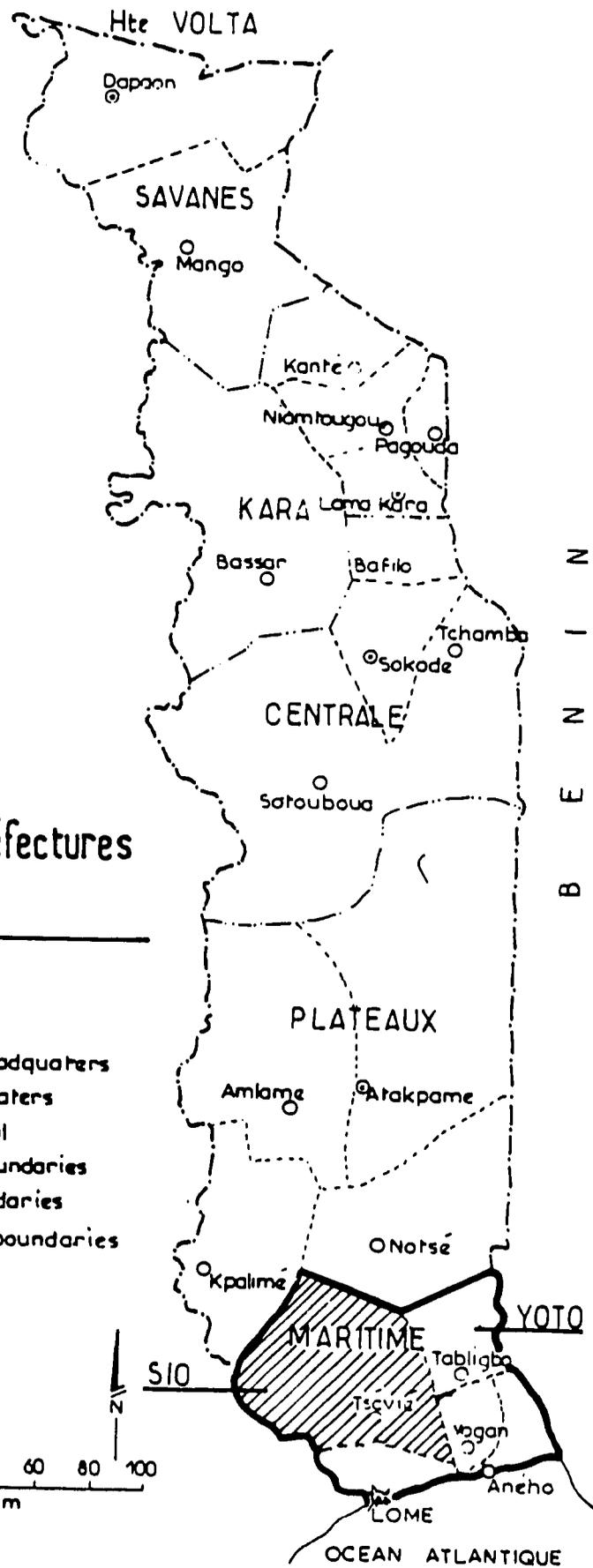
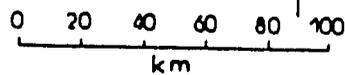
3. Project Area

As the accompanying maps illustrate, the Sio River region, as defined for the purposes of this project, consists of the southern and western portions of the Sio Prefecture. Subdivided by the project design team into three zones to facilitate implementation, the region contains around one hundred thirty thousand inhabitants, sixty-five percent of the prefecture's total population. While the region is not a precise geographical or administrative entity, its several parts do share certain common themes: proximity to the capital city of Lome and commercial, transport, labor, administrative, ethnic and financial linkages.

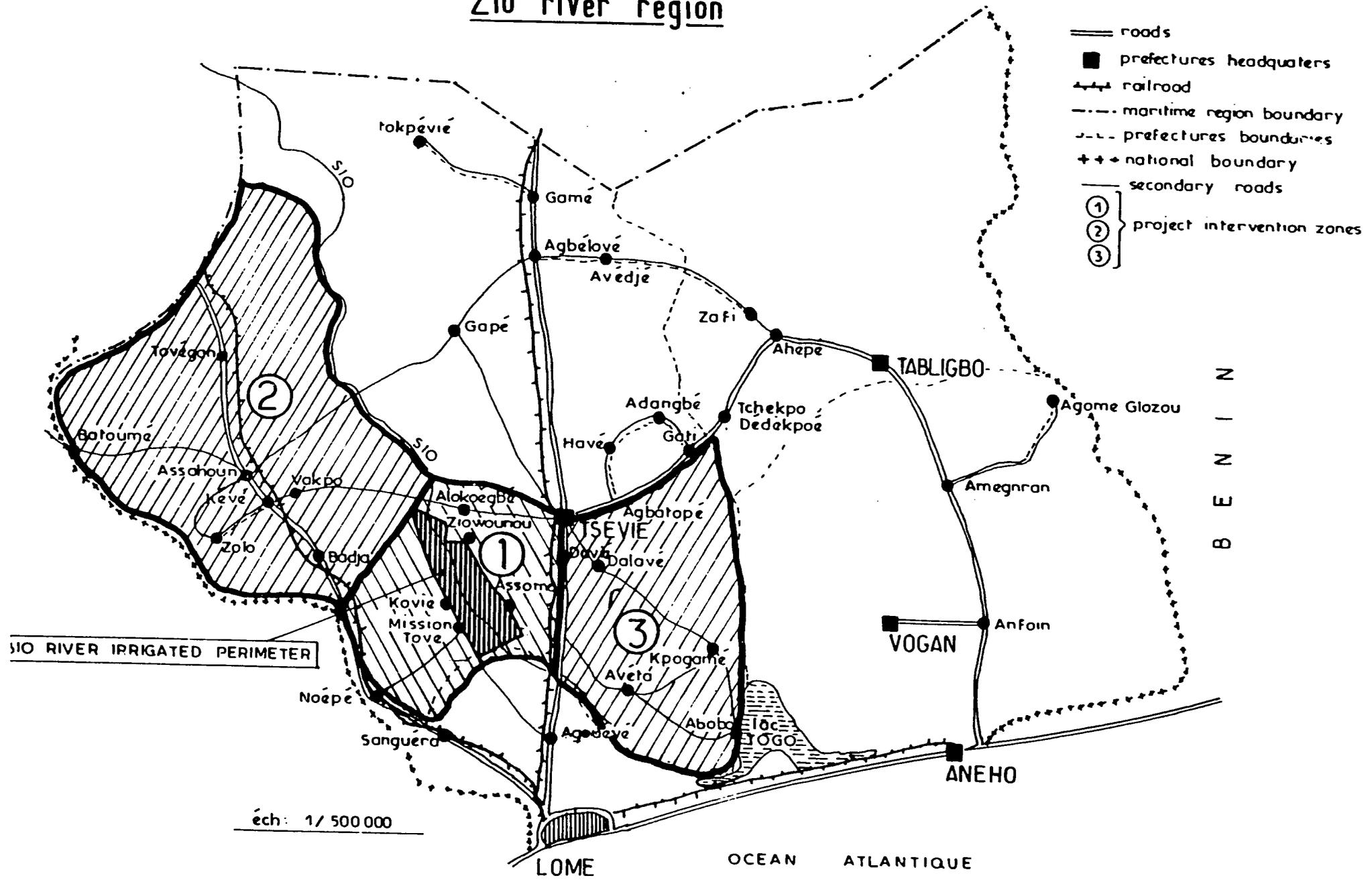
From a development standpoint, the region is attractive because of the presence of a wide range of resources and great agricultural potential. There is an annual rainfall of 1,070 millimeters (43 inches) in most of the region which increases to 1,227 millimeters (48 inches) in the Ave zone along the border with Ghana. The rainfall is divided into two rainy seasons that favor the growing of a variety of crops: corn, cassava, rice, cowpeas, peanuts and both traditional and Western vegetables. Oil palm cultivation is also extensively practiced, and mango and citrus trees are grown near village compounds. Sheep, goats, poultry and swine

Regions and Préfectures of Togo

- prefectures headquarters
- ⊙ regional headquarters
- ★ national capital
- - - - - préfetures boundaries
- · - · - regional boundaries
- · - - - international boundaries



Zio river region



are raised as an economic supplement to food crops. The region contains a large number of fertile "bas fonds" areas suitable for rainfed rice production, and possesses a well-constructed and maintained irrigation infrastructure -- the gravity flow Sio River Irrigated Perimeter -- capable of watering approximately 550 fertile hectares. The proximity to the capital city of Lome provides residents of the region with access to that city's banking, transport and marketing infrastructure, import and export facilities, agricultural inputs, raw materials for artisan manufacturing and commercial goods. There are also considerable technical resources both in and near the region in the form of government services whose mandate is to promote and contribute to agricultural development. Finally, the region contains a population that has been exposed for a long time to other cultures and new ideas because of its proximity to the capital city and by its mobility.

A strikingly underutilized agricultural resource in the region is the Sio River Irrigated Perimeter (see map). The scheme was begun in 1965 by the Taiwan government (ROC) which provided US \$1.5 million through 1972 to establish 147 hectares of developed rice land that were irrigated by water pumped from the Sio River. In 1973 the project was taken over by the People's Republic of China (PRC). The PRC spent US \$9 million between 1973 and 1979 for technical assistance and the construction of a gravity flow system featuring a dam across the Sio River, and an extensive network of concrete-lined irrigation canals equipped with sluice gates. These improvements expanded the capability of the perimeter to irrigate approximately 550 hectares, according to a study prepared for the Ministry of Plan in May 1983.

Conversations with Togolese who were involved in the perimeter during the PRC years, and observations made in the AID-financed socio-economic study of the irrigated perimeter in 1981 reveal that PRC technicians saw themselves primarily as developers of the irrigation infrastructure and not responsible for the organization of production. In the absence of effective extension, production and marketing strategies of the irrigation authority and with declining discipline among perimeter producers, the cultivation of irrigated rice became a less attractive option for Sio River farmers. Production never surpassed the 1971 level and by the time the PRC technicians departed in 1979, participation had fallen from 238 farmers in 1971 to 142 in 1979.

When the Centre Rizicole du Sio (CRS), whose staff had worked alongside Chinese technicians, assumed responsibility for the management of the perimeter and the organization of production in 1979, it was immediately handicapped by the lack of an effective production methodology. At the same time the government of Togo did not have the budgetary resources to adequately replace and maintain the necessary farm machinery -- especially rototillers -- that was necessary for efficient production. Farmers discovered moreover, that they had no ready access to credit to cover the substantial start-up and operating costs that irrigated rice production requires.

The understandable result was that participation declined even further, especially in 1982 and 1983 when below-normal rainfall greatly reduced the flow of water in the Sio River. In the second agricultural season of 1983, apart from some CRS seed multiplication activity and occasional paddies being cultivated by a handful of CRS employees and area farmers, the land and infrastructure were unused.

Today the primary infrastructure is in good condition, a fact that has been confirmed during site visits by three REDSO engineers. Farm level, tertiary infrastructure is in less favorable repair, mainly because of lack of use. What now remains is the introduction of systems that will stimulate Sio River farmers to make productive use of the irrigated facilities as well as insure their maintenance and repair.

4. Project Description

The role of this project over the next five years will be to make better use of the regional resource base of the Sio River Irrigated Perimeter, government of Togo agricultural services, the favorable environmental conditions for agriculture, and the economic and educational advantages in being so close to Lome. This will allow the producers of the Sio River area assisted by PFP's expertise in promoting producer-oriented regional development, to realize the great economic, human and social development potential that is within their reach. This will be done through two major project components: 1) the promotion of small-scale economic activities throughout the Sio River region, and 2) a concerted effort to make better productive use of the Sio River Irrigated Perimeter.

Promoting Small Scale Economic Activities

The operational research design phase leading up to the preparation of this proposal revealed a fundamental economic fact about the Sio River region: namely, that local producers and their families engage in a variety of economic activities in a search for options and in an attempt to minimize economic risk. A survey of family incomes in the region showed that families that engaged in activities in addition to food crop production -- usually livestock raising and the transformation of palm products -- exceeded the average income of families engaged only in crop production.

Throughout the five years of this project, PFP will work in an incremental fashion to assist regional producers in developing agricultural and agriculturally-related activities by eliminating two major constraints: the scarcity of appropriate amounts of credit and limited knowledge of money management. This campaign will begin in Zone I, the area which was studied intensely during the operational research

design phase, and proceed to Zones 2 and 3 as the project is able. Utilizing the project credit fund as its major training tool, PFP will employ a methodology combining credit education and management assistance that was developed in Upper Volta and tested in Togo during the operational research design phase. This methodology will be administered by a locally trained Togolese staff based in the Sio River region. Links will be established between this staff and the personnel of the several Togolese government agricultural services located in the region and nearby Lome. The goal will be to combine the technical know-how of these services with the credit and management assistance furnished by the project to offer a comprehensive array of business development services for interested regional producers.

Essential to the success of this component will be the training offered by the expatriate project staff who will be backed up by outside consultants. The project general manager will have primary responsibility for organizing credit and management assistance activities. The project agronomist, also assisted by consultants, will be responsible for training local personnel in a farming systems approach to regional development, and will organize quarterly training sessions treating appropriate agricultural subjects. Both PFP and government field agents will benefit from this training. While it is expected that the majority of beneficiaries of this component will be individuals, a major effort will be made to promote appropriate group activities. Two Peace Corps volunteers trained in small group formation will be assigned to the project to assure that this important area is covered.

PFP's overall desire is to encourage local producers to fill the gaps and exploit opportunities in the region's economy, thus ensuring that the surplus created by a more productive agriculture revolves to the benefit of local people. There are several keys to this approach. The first is not to disturb the base of people's subsistence agriculture production, but to value it and to recognize that subsistence agriculture needs good management just like other resources. A second key is for people to understand that agricultural improvements such as fertilizer use or crop rotation are not just for irrigated land, but can be applied to traditional crops grown on rainfed parcels as well. A third key is to realize that even if small farmers are able to produce a surplus, they have to be able to manage money produced by the surplus and reinvest it; otherwise, the value of their efforts is lost to them. A fourth key is to encourage local entrepreneurs to meet the consumption and production demands of farmers in the region. This will retain within the area much more of the value being produced. At the level of individuals, there is no secret to economic development: it consists simply of creating more and better options to be productive throughout the year. It is from the synergy of these many small producers, processors, suppliers and transporters that sustained regional economic growth comes about.

Throughout the project, PFP will explore ways in which to institutionalize the credit, management and small scale business development services that this component provides. If, as expected, the regional development methodology proves successful, the possibility exists of creating a private sector organization based on the PFP Upper Volta model which could develop a self-sustaining financial base and offer services throughout an expanded portion of the Maritime Region.

Making Better Use of the Sio River Irrigated Perimeter

The role of the project in this component will be to develop an appropriate and functioning model for the productive exploitation of the irrigated perimeter. This will be accomplished primarily through the promotion of viable producer groups and the strengthening of the government's institutional capacity to provide certain necessary services to those producers. The goal of the project is to have one hundred fifty hectares under intense cultivation by the end of the fifth year of the project.

Irrigated perimeter activities will be phased into the project towards the latter half of the second year of implementation. This timing is the result of two recent developments: the Togolese government's decision to replace the current perimeter management and extension service -- the Centre Rizicole du Sio -- with another; and, the likelihood that the PRC will be operating an independant commercial farm on two hundred irrigatable hectares adjacent to irrigated land reserved for local farmers.

In the future, irrigated perimeter management and extension activities are most likely to fall under the purview of the Direction Generale du Developpement Rural (DRDR) in the Maritime Region. However, both the timing of the reorganization and the form and scope of responsibilities that the new entity will have are unclear at present. Rather than work in an institutional vacuum, the project will instead concentrate on the establishment of a strong set of systems -- especially credit training, management assistance and agricultural technical packages -- to promote rainfed agriculture and other extra-perimeter small scale economic activities. The project hopes to build a strong base of credibility on these early activities, a fact which should give it influence in policy discussions on perimeter development as implementation progresses.

The Chinese proposal is still under study within the Togolese ministries of Rural Development and Plan. Government officials have informed AID and PFP that it involves the establishment of a two hundred hectare irrigated farm. The land the farm will occupy lies within the eastern portion of the irrigated perimeter and consists of the greater part of

the two hundred and thirty hectares of the perimeter that to date have remained undeveloped (this land is in contrast to the three hundred developed hectares reserved for local farmers where the PFP project will take place). The Chinese will develop the land and will use water diverted into the perimeter irrigation system from the dam at Alogkoegbe. The government of Togo will retain control of water management over the entire perimeter, including the Chinese farm.

Togolese officials have been appraised of the importance of the commingling issue to AID and have taken pains to emphasize the distinct differences between the Chinese and the PFP projects. The Chinese project has no development objective. It is a commercial enterprise to be run by Chinese technicians that will supply certain commercial establishments in Lome as well as the Chinese Embassy and workers on other Chinese aid projects in Togo with vegetables and cereal grains. It will not attempt to develop the productivity of Sio River farmers in irrigated agriculture. In fact, Togolese government officials have stressed the fact that the three hundred already developed irrigated hectares are to be reserved exclusively for area farmers, and that PFP's role -- especially the delivery of agricultural credit and the promotion of producer groups -- is considered vital to the development of this important resource. The Sio River project has, in fact, been included in the Ministry of Plan's latest five year exercise on agricultural development planning.

Given, then, the reorganization of perimeter management and extension services and the still-to-be completed negotiations between the Chinese and the government of Togo, AID/Lome and the PFP design team have determined not to commence perimeter activities before the second year of implementation. In addition, written assurance will be sought from Togolese authorities which guarantee that adequate water will be made available to perimeter farmers in order that they may obtain the potentially high yields that the perimeter infrastructure makes possible.

The operational research design phase has allowed members of the design team to study prior and actual methods of promoting agricultural production within the perimeter. Given the almost total lack of activity in the perimeter at present, a relevant question is what exactly will this project do that is different from what has been done in the past. An outline of PFP's approach to solving the problem of this underutilized resource follows.

1. Unlike past management styles, the project will avoid a top-down paternalistic approach to producers that can only promote dependence and mistrust. The new style will emphasize responsabilizing the producer through the promotion of producer groups and acting as an advocate for this approach in policy discussions with the government.

2. The project will regard the perimeter as irrigated land and not just land suitable for producing irrigated rice. It will encourage farmers to experiment with the cultivation of other crops that might require less water, are less labor intensive and might be more suitable to local soil conditions.
3. The project will regard the farmer as a producer of several things and his farm as an economic unit. Accordingly, every effort will be made to integrate perimeter farming activities into the farmer's overall agricultural calendar. When appropriate, labor saving techniques like the direct seeding of rice and the use of injection planters and of rototillers will be promoted in order to increase overall farm productivity.
4. The project will work to privatize perimeter production to the greatest extent possible through the promotion of small producer groups of from ten to twelve farmers. Strong groups will enable farmers to gain control over important productive functions like agricultural input acquisition, rototiller ownership and operation, marketing and land levelling and maintenance.
5. The project will provide access to credit and training in money management, two elements which have been almost totally lacking in the past.
6. The project will promote the institution of realistic user fees to provide producers with a sense of ownership and to assure the long-term maintenance of the irrigation infrastructure.
7. Through on-the-ground technical assistance, consultants and training sessions, the project will assist rural development authorities and technicians to strengthen their capabilities in water management and the delivery of extension services.

Primary responsibility for implementing this component will lie with the project agronomist and the mechanic trainer. Major assistance is also expected from short-term personnel recruited by AID's Water Management Synthesis project. Other consultants have been provided for in the budget in agronomy, soils analysis, producer group formation and extension service delivery, and will be called upon as needed.

In addition to the economic and social benefits that the project will bring to the Sio River region, we believe it is important to share the learning of this project with many people and agencies in Togo. We expect this to be a laboratory that both teaches and learns in a dynamic way and is open to everyone. By requesting that those who have raised their productivity through receiving technical assistance from the project serve, in turn, as learning models to others, we hope to

encourage a more beneficial way of people relating to one another. We also hope that this project will assist the participants to reveal something very important about the national character: that the people of Togo can be highly productive and can convert underutilized resources into opportunities for shaping their own future.

5. End of Project Conditions

The conditions which PFP expects to exist at the end of the project are listed below.

1. Increased productivity on the part of regional producers through better utilization of local resources.
2. Beneficiary skill mastery of new farming techniques and farm and money management, and better appreciation of the farm as an economic unit that integrates crop production, livestock and off-farm activities.
3. A significant number of women and young farmers touched by the project and participating in productive economic activities.
4. The existence of at least twenty viable producer groups with significantly developed group management skills and whose members' income have been raised because of organization.
5. An appropriate, functioning model for the productive exploitation of the Sio River Irrigated Perimeter. Intensive cultivation of one hundred fifty hectares by the last year of the project.
6. Progress made towards the institutionalization of credit education, management assistance and technical training for agricultural and agriculturally related producers in the Sio River region. The process of institutionalization will include both the public and private sectors.
7. A strengthening of Togolese government institutions in agriculture, credit and rural development.
8. A more complete and dynamic regional economic infrastructure to better satisfy peoples' production and consumption needs.
9. Project beneficiaries and implementors embracing error, refining methodologies and learning more about the development process.
10. The national and international dissemination of lessons learned and models concerning small farm management, credit and management training, regional economic development and small scale economic development.

PROJECT BACKGROUND

1. Designing the Project 1982-83; AID-PfP Operations Research

Following discussion and exchanges of correspondence between the AID Representative in Lome and the PfP president, PfP involvement in the Sio River began in March 1982 with a site visit by the PfP Upper Volta general manager. The objective of the visit was to determine what role PfP might play in the revival of the Sio River Irrigated Perimeter. During the course of the visit, PfP benefited from what was already a voluminous file containing reports on site visits to the irrigated perimeter by a REDSO/WCA sociologist and two engineers and by an AID financed and technically assisted socio-economic study performed in 1981 by the Societe Togolaise d'Etudes de Developpement (SOTED).

These reports were unanimous in concluding that the basic irrigation infrastructure was in good condition, that soil fertility and the availability of irrigation water were favorable, and that there appeared to be no insurmountable technical problems inhibiting rice production. Rather, the serious problems were managerial and institutional in nature: the sporadic availability in the region of vital agricultural inputs like fertilizer; almost no access to credit, either for production or marketing; the poor condition of agricultural machinery like rototillers due to insufficient maintenance and a lack of spare parts; a marketing system that was disadvantageous to farmers; and conflicts in the agricultural calendar between rice and traditional subsistence crops. A combination of these and other factors had greatly diminished the profitability of rice as a cash crop and caused many farmers to lose interest.

It was obvious that the irrigated perimeter was a tremendous resource that should be utilized to the benefit of the region's producers and to contribute to the Togolese campaign for food self-sufficiency. One could also see that many problems that had been identified were ones that PfP was well suited to deal with. But the March 1982 visit produced a whole new perspective: namely, that the irrigated perimeter was only one resource in a larger region that had significant productive potential, and that any eventual project should attempt to realize that potential on a regional scale. The key to achieving this goal was to increase the productivity of the region's overwhelmingly agricultural population. An important observation was that no one was just a rice farmer, and, in fact, farmers did not live within the irrigated perimeter boundaries. Rather, producers engaged in a variety of activities in an attempt to minimize risk. The starting point of a household economy was subsistence agriculture. Added to that base were other layers that included the

production of subsistence crop surpluses, the cultivation of cash crops like rice, cocoa and oil palm, the raising of small livestock, artisan activities, food processing and small scale commerce, and occasionally wage employment.

While the revitalization of the irrigated perimeter would result in significant benefits to a portion of the region's population, a project that targeted producers and the development of all the varied activities of households would result in a larger and more dynamic regional economy with benefits to a much larger population.

This line of reasoning lay behind the project concept paper that was produced at the end of the March 1982 visit. It proposed the outline of a project that would assist and strengthen the CRS to re-establish incrementally high levels of production within the perimeter and also work outside the perimeter to develop a wider range of extra-perimeter agricultural and agriculturally-related activities through an approach emphasizing credit and management assistance. PFP believed that the regional approach to the development of small scale activity it refined in Upper Volta and Liberia would be appropriate to achieve these tasks, but that a period of experimentation would be needed to adapt it to conditions in Togo.

In early 1983 AID approved a PFP proposal for a twelve month operations research activity design phase (ORA) to develop an appropriate model for the economic development of the Sio River region that could constitute the basis for a long term project financed by AID and managed by PFP. The ORA was supported both by PFP's matching grant and AID/Lome PD&S funds.

The Operations Research Activities began in May 1983. Most of the activities were carried out by members of a four person team including the PFP Upper Volta general manager with experience in small scale credit and management assistance, the former head of the PFP Liberia agricultural extension service who has considerable knowledge of both rain-fed and irrigated agricultural and modernizing subsistence farmers, a Togolese credit specialist with extensive experience in the African credit union movement and a Taiwanese agriculturalist who participated in the original Taiwanese project to develop Sio River and who manages a successful farm in the region. This core staff got good support from AID/Lome, the CRS director and his staff and the project liaison within the Ministry of Rural Development. There were also significant technical contributions furnished by REDSO/WCA and AID/W, and by a two person Togolese team consisting of an agricultural economist and a rural sociologist. Significant numbers of regional producers also participated in design activities.

The ORA was composed of three main types of activities: 1) agricultural trials, which included determining the feasibility of the direct seeding of irrigated rice, loans to farmers for growing irrigated and non-irrigated corn, and the appropriateness of growing cowpeas on residual moisture at the end of the second rainy season; 2) assistance to non-agricultural producers consisting of loans and simple management training to a weaver, a baker and the owner of a small village restaurant; and 3) information gathering through surveys, a review of appropriate documents and discussions with government officials and Togolese and expatriate technicians. The findings and information that the team gathered provide a valuable data base for an expanded project. They consist of:

1. 221 individual questionnaires giving a general economic profile of regional producers;
2. fourteen questionnaires with detailed farming systems data;
3. files providing economic and behavioral data on eleven experimental loan recipients;
4. a 107 page socio-economic study with data on regional incomes, the marketing of agricultural produce, the availability of agricultural inputs, the propensity of the population to adopt technical agricultural innovation, the role of women and young farmers in regional economic life and an inventory of small economic activities;
5. three activity reports prepared by the design team;
6. a pre-feasibility analysis on the Sio River Irrigated Perimeter prepared by the World Bank in 1983 that gives financial and economic data on the perimeter and CRS;
7. an AID study on irrigated schemes entitled "Irrigation and AID's Experience: A Consideration Based on Evaluations".

The information and experience that the design team gained during ORA led to the following conclusions regarding a long term project.

1. The regional approach, concentrating on the development of the producer, is appropriate both to the needs and desires of the population. The team found many existing economic linkages among producers, activities and villages that the project would help strengthen and develop to the benefit of the region. Within this context, a flexible approach that takes into account what producers already know and assists them to achieve what they want would be well received by a large portion of the population.

2. Gains in productivity can be made and the regional economy can be stimulated through credit training and management assistance furnished by the project and combined with agricultural technical assistance from already existing Togolese services. Nevertheless, the ORA experience with experimental loans suggests it will be necessary to adhere to a conservative and rigorous approach to the granting of credit at the outset of the project to make sure that beneficiaries understand credit mechanisms and their obligations as borrowers.
3. The best way to promote the productive use of the irrigated perimeter is through the privatization of production activities. Working in an incremental fashion to gradually increase the number of participating farmers and the hectares under cultivation, an effort should be made to enable farmers to exercise maximum responsibility and control over production. At the same time, training should be supplied to Dkh agents to increase their effectiveness in extension and perimeter-wide water management.
4. The irrigated perimeter should be regarded as irrigated land capable of producing a variety of crops in addition to rice. A more effective method, however, of integrating rice production into the region's agricultural calendar so as not to conflict with the production of subsistence crops would be to promote labor saving techniques like the direct seeding of rice and the use of herbicides.
5. There is an impressive technical resource base in the form of agricultural extension and research organizations both in the region and in nearby Lome (described in detail below). These organizations operate at varying degrees of effectiveness. The services that they offer and the knowledge they possess are not especially sought after by farmers and they do not have much of an impact on agricultural production. The proposed project could, however, act as a catalyst by utilizing these organizations and promoting contact between them and farmers. The project credit fund and the management assistance that will be offered to producers will serve as an appropriate complement to the technical know-how these organizations possess.

The ORA process was a very effective way to go about project design. While it made PFP and USAID aware of the sort of difficulties that may be encountered during project start-up and implementation, it also acquainted the design team members with many of the resources, techniques and expertise that can be utilized to resolve potential issues and problems. An additional advantage was that area residents actively participated in the operational design process, thereby getting to know PFP staff members and gaining an understanding of the planned project.

In addition, certain government of Togo officials have begun to appreciate some of the advantages in this type of development approach. Their reactions to the ORA phase indicate that they view a full scale implementation effort in Sio River as an opportunity to develop models -- in credit delivery, a comprehensive approach to rural producer development, the integration of newly trained young farmers into their communities -- that could be applied elsewhere in Togo.

2. Previous experience

An exciting aspect of this project design is that it builds upon the many lessons learned by PFP staff during ten years in Liberia and six in Upper Volta in credit training, management assistance, working with subsistence level farmers, regional development and the formation of producer level institutions. The synthesis of that experience is presented below as the "PFP approach".

- a. Recognize the economic and social importance of subsistence agriculture and work to develop it. Once farmers are confident of meeting their subsistence needs, they can devote time to other crops and other activities that will enable them to produce a surplus and fill up the less productive periods of the year.
- b. Respect what rural producers already know and want to do, which is often substantial, and build on it. Instead of forcing them to adopt certain styles of management or forms of organization, make them aware of adaptations that are to their economic advantage and within their capability to master and assist them in making such adaptations.
- c. Work to eliminate the major constraints to increased productivity by making available credit, management assistance and technical innovations.
- d. Proceed in an incremental fashion with appropriate doses of the above mentioned resources, helping producers achieve higher levels of their human potential.
- e. Develop a sense of both the gaps and the linkages in the local economy, and work with producers to fill and exploit them.
- f. Avoid duplication of effort by recognizing exploitable local human and institutional resources, and through a collaborative approach, utilize them to the greatest extent possible.

3. Other Institutions in the Sio River Region

As stated above, the design team discovered a substantial technical resource base during the ORA phase. This base is composed of a variety of government extension and research institutions that fall under the jurisdiction of either the Ministry of Rural Development or the Ministry of Rural Equipment. Below is a list of these institutions with which the project will collaborate.

Centre Rizicole du Sio (CRS) -- Organized as an extension/production service in 1979 upon the departure of the last Chinese aid contingent to work on the irrigated perimeter, CRS has as its mandate the management of the perimeter infrastructure, the organization of production campaigns and the production of rice seed. With a staff of twenty and an annual budget of around sixty thousand dollars, CRS represents the Togolese government's commitment to the productive utilization of the Sio River irrigated land.

CRS has not brought overall agricultural production in the perimeter to its potential for two basic reasons. First, no effort was made in the past to achieve sustainability in the perimeter through community-based organization and management such as the imposition of user fees and realistic charges for services provided. Togolese government subsidies to CRS for perimeter operations are too small to make up for the shortfall in real production costs. Secondly, previous technical assistance did not emphasize the design of appropriate production and delivery systems or a transfer of management skill based on cost to allow those systems to function over time to the benefit of perimeter farmers.

The government of Togo has now decided to disband CRS and place authority over the perimeter in the hands of DRDR. The project will work with the new entity, which will certainly contain elements of the CRS staff, to develop a more effective approach to the utilization of the perimeter.

Direction Regionale de Developpement Rural/Region Maritime (DRDR) -- The DRDR in the Maritime Region grew out of the PRODERMA project, an effort to promote rural development in the Maritime Region between 1976 and 1981. DRDR exists today to furnish agricultural inputs to farmers, promote improved agricultural techniques and promote farmer group activity. The twelve agents that are presently in the Sio River project region suffer from lack of training and an inappropriate approach to the farmers of the region who require their services. The proposed project would make better use of these agents by improving their technical level through project-initiated training and by teaming them up with project credit and management extension agents to present a complete package of agricultural services to area farmers.

Caisse Nationale de Credit Agricole (CNCA) -- In its capacity as the national agricultural credit bank, the CNCA's mandate is to lend money to rural producers. However, its credit granting procedures are somewhat complicated and discourage many prospective borrowers, a fact that was revealed during the administration of the operational design phase questionnaire on the economic activities of Sio River producers. The project will simplify credit and make it available, along with management assistance, to large numbers of farmers. Through the process of credit education, the project will permit many borrowers to exhibit their "credit-worthiness" in the hope that they may later graduate into the CNCA loan system. PFP also believes that the project, to the extent that it is able to exhibit the effectiveness of its approach to credit and the development of the regional economy, will have a policy influence on CNCA.

Livestock Promotion -- Two government organizations, Service de la Production Animale and Service de la Sante animale are present in the Sio River region to promote the development of livestock among small scale farmers. In addition, the Entente Fund-financed Small Ruminants Project under the Ministry of Rural Development has one extension agent in the region to specifically assist farmers in goat and sheep production through vaccination campaigns, treatment against animal parasites and improved nutrition. Each of these services offers an excellent technical package that the project will combine with credit and management assistance to enable interested farmers to develop livestock as a complement to crop production.

Agricultural Research -- Three research stations are located in the project area: one for the West African Rice Development Association (WARDA) next to the irrigated perimeter, one under the supervision of the Institut de Recherche Agronomique Tropical (IRAT), and one belonging to the Ministry of Rural Development's Direction de la Recherche Agronomique. All do experiments on different cultural practices for maize, rice, cowpeas and peanuts, as well as test improved varieties of these crops. In addition, the National Plant Protection Service, located just outside the project area at the north end of Lome, performs herbicide and insecticide tests. While all these organizations have a very high technical capability, the results of their research usually do not reach the farmer. The project will establish relationships with these organizations that will enable farmers to benefit from their knowledge.

Societe Agricole Togolaise Arabe Lybienne (SATAL) -- SATAL operates a modern poultry farm in the Sio River region (1,000,000 eggs and 70,000 broilers produced in 1982/83) and a one hundred hectare maize farm for animal feed. While primarily a commercial enterprise, SATAL would make feed and veterinary supplies available to farmers wanting to raise poultry, and would provide tractor service for land clearing as well.

Societe Togolaise du Coton (SOTOCO) -- A recent accord signed between SOTOCO and the Ministry of Rural Development gives SOTOCO the responsibility for agricultural extension in the northern part of the Sio Prefecture, a region that could be touched by this project during its latter stages. Collaboration between PFP and SOTOCO would aid the development of cereal crops, cultivated in rotation with cotton, since SOTOCO provides credit for cotton cultivation, but not for other crops.

Project d'Hydraulique Villagoise -- This project, which is financed by the Canadian development agency (CIDA) and will be executed by CUSU volunteers, has as its goals the emplacement of 200 deep bore wells in the Sio and Yoto Prefectures. In addition, it will put a system of village health education in place. These activities will directly complement efforts of the PFP project and will increase the productive possibilities open to farmers by raising the general level of health.

PROJECT IMPLEMENTATION

A. Implementation Plan

1. Project Personnel

Responsibility for the implementation of this project will rest with a fifteen person PFP staff consisting of three expatriate technicians and twelve Togolese who will be hired and trained locally. Through the project general manager, this team will work closely with a project coordinator in the Ministry of Rural Development who will assure the project access to ministry decisionmakers and adequate communication and coordination among the different services within Rural Development and other ministries with which the project will collaborate. This person will also coordinate on a regular basis the government officials who will play an important role in planning, policymaking and the implementation of project activities.

Two Peace Corps volunteers will be assigned to the project to deal specifically with the dynamics of producer group formation and sustainability. A number of short term consultants will participate in training activities and provide necessary technical advice. Two staff members from the PFP/International office in Washington will be assigned on a part time basis for project monitoring and backstopping.

The project will maintain close contact with OAR/Lome in continuation of the excellent collaborative relationship that has existed throughout the design of this project. Through OAR/Lome, PFP also intends to call upon REDSO/WCA technicians for training and technical assistance.

The success that PFP has enjoyed in many of its other projects is due, in large measure, to the dedication and resourcefulness of its staff. Consequently, considerable time and effort will be spent in recruiting and training a top quality cadre of personnel. Technical competence is a necessity, but what PFP looks for even more are problem solvers who can broaden their technical knowledge, become familiar with new disciplines, and, most importantly, think on their feet. In the hiring, training and assignment of new staff members PFP uses an approach similar to the one that it employs with its clients. Responsibility is conferred in an incremental fashion, allowing employees to gradually rise to their maximum level of competence in accord with their professional interest. PFP has discovered in other projects that this approach usually results in high levels of commitment and energy.

Below is a list of the personnel who will be involved in this project, the length of time they will work and concise descriptions of their responsibilities.

Expatriate Technicians

General Manager (5 PY's) -- The general manager has overall responsibility for the execution of the project implementation schedule including policymaking, the establishment of procedures, personnel, finance, administration, training, the use of consultants, monitoring, evaluation and reporting. He represents PFP and the project to the Government of Togo, OAR/Lome and other organizations. Specific technical responsibilities include the setting up of the credit training and business extension systems and supervising their operation.

Project Agronomist (5 PY's) -- The project agronomist is the project's primary source of agricultural technical expertise. His primary duties are the development of a project agricultural strategy, coordinating project agricultural activities with the appropriate government technical services, especially DRDR, organizing technical training, directing the field testing of technical packages, organization and management of the demonstration fund, and the setting up of farm level data collection systems. He has primary responsibility for the implementation of irrigated perimeter activities.

Mechanic Trainer (3 PY's) -- The mechanic trainer's duties include the development of appropriate mechanical packages for project beneficiaries, the conducting of feasibility studies on farm machinery and training beneficiaries in farm machinery utilization, maintenance and repair. He is responsible for written records on project vehicles and equipment and for their maintenance and repair. He also provides training for credit training agents in motorcycle maintenance. He works with the project agronomist and the agricultural coordinator in conducting field tests, supervising demonstration activities and strengthening producer groups.

Togolese Staff

Operations Manager (4 PY's) -- The operations manager has overall field level responsibility for the implementation of the full range of project activities including credit, management assistance, the promotion of agricultural activities, training, monitoring and evaluation. He also works closely with the general manager in formulating policy and procedures and contributes to project reports.

Credit Manager (5 PY's) -- The credit manager has primary responsibility for the management of the credit fund and the business extension service. He evaluates all loan proposals, and with the concurrence of the general manager or the operations manager, makes loans. He supervises the credit training agents, organizes client follow-up, is responsible for loan collections, and keeps credit fund records. He compiles and analyzes all credit fund and small scale economic activity performance data.

Agricultural Coordinator (5 PY's) -- As a counterpart to the project agronomist, the agricultural coordinator is the principle field agent responsible for the implementation of agricultural activities. He actively participates in the organization and delivery of technical training, works with the credit manager and credit training agents in their dealings with agricultural clients, maintains a close working relationship and plans strategies with government technical services, field tests technical packages and carries out demonstration fund activities. He also compiles and analyzes data on project agricultural activities.

6 Credit Training Agents (25 PY's) -- The credit training agent is the principle point of contact between the project and its clients. Credit training agents receive loan proposals, conduct feasibility studies, provide management assistance to assigned groups of clients, collect loan repayments, maintain written client files and evaluate clients' progress,

Mechanic/Operator (4 PY's) -- The mechanic/operator works with the mechanic trainer on the maintenance and repair of project vehicles and machinery. He is responsible for the day to day operation of the project tractor and other project vehicles he may be assigned. He assists the mechanic trainer in training clients in machinery use, maintenance and repair.

Administrative Assistant (5 PY's) -- The administrative assistant has responsibility for managing the Lome office, financial recordkeeping, the preparation of monthly financial reports and procurement. He also performs statistical analyses of project activities.

Secretary (5 PY's) -- The secretary is responsible for all clerical duties, preparing project documents and reports, receiving visitors and messages in the Lome office and some translation duties.

Peace Corps Volunteers

2 Group Formation Specialists (6 PY's) -- The group formation specialist develops a detailed group formation methodology that can be applied to the promotion of producer groups in the project area. By working with and through the credit training staff, the specialist develops and reinforces the management capabilities of producer groups and their members. The specialist may also concentrate in a certain technical field such as grain storage or fish farming, if there exists the possibility of promoting a particular activity among large groups of project beneficiaries.

PfP/International Project Backup

Senior Manager (2 PY's) -- The senior manager is the PfP/I person directly responsible for monitoring project activities and reinforcing PfP/Togo capabilities through at least one yearly site visit and analysis of project correspondence and reports. Specific responsibilities include the recruiting and hiring of short term consultants, inputs into the project's monitoring and evaluating systems, participation on the mid-term and final project evaluations, staff assessments and the reinforcement of field level training.

Project Associate (1.5 PY's) -- The project associate works under the supervision of the senior manager, assisting in procurement, recruiting, project analysis, program evaluation and the acquisition of technical resources required by the project.

Consultants

Non-Formal Education Specialist (3 PM's) -- The non-formal education specialist will design and implement training workshops and conduct follow-up sessions for PfP and government field agents. This training will be especially designed to make the agents into good communicators and teachers, and will be combined with technical training organized by PfP expatriate technicians. Workshops and follow-up are scheduled in years one, two and three.

Irrigation/Water Management Specialists (5 PM's) -- Personnel in this speciality will come from AID's Water Management Synthesis Project and will probably include a water engineer, a cooperatives formation specialist and an irrigation agronomist. Their role will be to develop models for the productive exploitation of the irrigated perimeter in water management, perimeter maintenance, producer group formation, extension service delivery and the like. In addition they will provide training in implementing these models to government extension agents and farmers. A diagnostic visit, workshops and follow-up are scheduled in years two and three.

Agronomist (2 PM's) -- Short consultancies in tropical agronomy are foreseen to obtain assistance in the growing of rice, corn, cassava and vegetables. Possible sources for these technicians are WARDA in Liberia and IITA in Nigeria. Visits are programmed in years two, three and four.

Marketing Specialist (1 PM) -- The advice of a marketing specialist will be sought to help design marketing strategies for irrigated perimeter producers, extra-perimeter agricultural groups and other clients with particular marketing problems. A visit is programmed in year three.

Economist (2 PM's) -- The services of an economist will be used in years one and three to help project personnel utilize the tools of economic analysis to measure project benefits. The economist is expected to play a role in the design of the project's monitoring and evaluation system and in devising models that will enable project management to discover the extent of the impact it is having on the Sio River region.

Computer and Information Specialist (1 PM) -- The project will attempt to computerize its monitoring and evaluation system to minimize data processing time and to obtain timely information for project managers. The computer and information specialist will provide training in the use of the project personal computer as well as programming assistance. Visits are scheduled in year two and four.

Organization Specialist (1 PM) -- Towards the end of the third year, project management will draw up a series of strategies for the institutionalization of the various project components that are successful. This consultant will assist in the development of those strategies.

Sociologist (5 PM's) -- The operations research design phase of this project was made more meaningful by the part-time presence of a Togolese rural sociologist who evaluated the socio-cultural appropriateness of project activities and who recommended implementation strategies. Similar contributions by local sociologists are programmed for each of the five years of the project.

2. Project Activities

Project activities are expected to commence September 1, 1984 with the arrival in Lome of the PfP general manager. He will be followed one month later by the project agronomist. During the first year six Togolese staff members will be hired; the credit manager, the agricultural coordinator, two credit training agents, an administrative assistant and a secretary.

The first nine months will consist largely of setting up systems. Credit training and management assistance will be the first priority. The task will not be difficult thanks to the existence of the PfP Upper Volta Credit Training Manual which lays out the credit training system in great detail, a simplified version of which was successfully utilized in Togo during ORA experimental activities. Modifications made necessary by conditions particular to Togo will be worked out between PfP and the project coordinator in the Ministry of Rural Development, and then communicated to appropriate government services. During this time the project will be working closely with CNCA in order to make the project's credit training process as complementary to CNCA's approach as possible.

At the same time an agricultural strategy will be written and procedures developed and coordinated with the credit and management assistance systems. The first set of agricultural technical packages to be promoted will be prepared in coordination with government technical services. Concrete, joint implementation plans for working with area farmers will also be worked out at this time. Procedures will be devised for the agricultural demonstration fund and an initial list of demonstrations to be undertaken will be drawn up. Work will also begin on setting up the monitoring and evaluation system, with important assistance coming from PFP/International Washington staff. Once the outlines of the system are established, baseline data will be collected.

In preparation for the beginning of field activities, an office will be set up in Mission Tove. There will also be a smaller office in Lome in part of the general manager's house where purely administrative functions will be carried out. Only the secretary and administrative assistant will work out of the Lome office. All other personnel will be assigned to Mission Tove. At this time the first order for vehicles will be placed and other commodities, like the personal computer and other office equipment, purchased.

Staff training will also begin at this time, highlighted by the participation of a non-formal education specialist consultant. Quarterly technical training sessions will begin and will continue throughout the life of the project. They will be open to both PFP and government extension agents, and may be held in the project region or elsewhere. These training sessions will result in cross-fertilization among PFP projects in Africa, and will make use of other training resources in West Africa like IITA in Ibadan, Nigeria.

As a consequence of the above, the project should begin promoting small scale economic activities outside the irrigated perimeter by the sixth month of implementation (this also coincides with the beginning of the long rainy season). These activities will fall within Zone I where the project design operations research activity was carried out and where PFP is already known. All field activities will be directed out of the Mission Tove office.

The approach in the beginning will be very conservative. The idea will be to identify serious clients whose projects have a good chance of succeeding. Priority will be given to agricultural proposals, but there will be a mix of other activities as well in an effort to see what works and to show the population the kinds of things that can be done through the PFP approach. As the field staff acquires expertise through experience and training, the pace at which new clients are accepted will accelerate. Between years two and four, the project will expand into Zones 2 and 3. In order to insure close follow-up of clients' activities, smaller field offices, containing no more than two credit training agents

each, will be set up, probably in Keve for Zone 2 and Tsevie for Zone 3. Throughout the life of the project, the effort to promote small scale economic activities will emphasize a coordinated approach, both among the different systems within the project and between the project and other organizations.

Year two will see the beginning of preparations for irrigated perimeter activities. The mechanic trainer will arrive, agricultural machinery will be ordered, initial feasibility studies performed and training packages for machinery use prepared. Planning will be undertaken with DRDR concerning the project's involvement with perimeter producers. Soil testing will commence in the perimeter and technicians from the Water Management Synthesis Project will make their diagnostic visit in preparation for their training workshop which will follow. At this time the public health situation, especially as regards schistosomiasis, will be evaluated and a suitable approach developed. The first group of perimeter clients will be chosen around March 1986. Groups for successive production campaigns should get larger with each season. The goal will be to place one hundred fifty hectares under intensive cultivation by the fifth year of the project, have functioning models in place for the management of water and the delivery of extension services, be working with a number of functioning and viable producer groups and to have integrated project assistance to the perimeter with extra-perimeter activities.

During year two PFP will recruit and hire an operations manager, two additional credit training agents and a mechanic/operator for the agricultural machinery. One Peace Corps volunteer will arrive to begin producer group formation activities.

The staff will reach its full complement in year three with the hiring of the final two credit training agents and the arrival of the second Peace Corps volunteer.

3. Project Evaluations

As explained in the following section, internal monitoring and evaluation will comprise an important and ongoing part of the Sio River project. Information will be constantly collected and analyzed to enable project managers to make the best use of available resources. At the same time, two outside evaluations have been scheduled, one in year three and the other at the end of the project. Participating in these sessions will be outside consultants, PFP/International staff, government of Togo officials, OAR/Lome and REDSO/WCA.

The project, of course, will be judged in part on its ability to produce the projected quantifiable outputs. But while the measurement of these outputs is necessary (number of clients assisted, growth in net worth of activities, numbers of hectares under cultivation, agricultural yields, etc.), indicators linked exclusively with numbers and economic growth often give an imprecise or erroneous image of the process of development. More fundamental issues are at the base of the development process, and these the project will include among the criteria for midterm and final evaluations.

One key issue here is the distinction between development and growth. PFP believes that a human and socio-economic evolution is at the base of development. Development therefore focuses on who benefits and the human and socio-economic evolutionary processes by which things improve, whereas growth counts whether things are "bigger" or "more" without necessarily considering the social implications. In line with this distinction, a development project such as this one should be asking and responding to the following questions. Is participation increasing for the bottom strata of the socio-economy along with their access to resources such as credit, skill training, management assistance and the goods and services they want and need? Is the project able to allow the socio-economically disadvantaged to create assets for themselves, and do they have the capacity to hold on to those assets? How can traditional forms of management be built upon and how able are people to acquire a broad problem-solving approach to socio-economic issues? To what extent does the project take into account the cultural and personal dignity of local individuals and societies? Is the rate at which a project promotes technical change controlled by the beneficiaries themselves or by outside experts? Project evaluators should consider these questions as well.

A second issue that should be examined by evaluators is what the project has learned and how that knowledge has been translated operationally to improve and strengthen the development process. As the Ford Foundation's David Korten has written describing successful rural development programs in Asia, "The key was not preplanning but an organization with a capacity for embracing error, learning with the people, and building new knowledge and institutional capacity through action."¹ An important concept in this regard is that of "context". Both project implementors and evaluators should be able to understand the setting in which the project evolves, judge the appropriateness and effectiveness of its response to that setting and evaluate the significance of its accomplishments in the light of local conditions. Thus a rural credit fund operating in an area where people have had little exposure to borrowing for investment purposes and a limited entrepreneurial tradition will naturally operate differently and produce a different level of achievements than a commercial bank in an urban setting.

¹"Community Organization and Rural Development: A Learning Process Approach", Public Administration Review, September/October 1980.

A final issue that PFP hopes project evaluators will address is that of institutionalizing the various services that the project will be providing. The midterm evaluation should provide some guidance which will be elaborated on later in the third year by project management and a short term consultant. By the final evaluation, PFP should have concrete strategy for continuing the worthy parts of the project beyond year five.

PROJECT IMPLEMENTATION SCHEDULE

	Year 1	Year 2	Year 3	Year 4	Year 5
<u>Expatriate Staff</u>					
General Manager arrives Sept 1, 1984	X				
Agronomist arrives Oct 1, 1984	X				
Mechanic Trainer arrives March 1986		X			
Peace Corps volunteers arrive		X	X		
<u>Togolese Staff</u>					
1 Credit Specialist, 1 Agricultural Coordinator	X				
1 Secretary, 1 Administrative Assistant					
2 Credit Agents	X-----X				
Operations Manager		X			
2 Credit Agents		X			
2 Credit Agents			X		
Mechanic/Operator		X			
<u>Consultants and Evaluation</u>					
Non Formal Education Specialist	X--X	X--X	X--X		
Irrigation/Water Management Specialist		X--X	X--X		
Agronomist		X	X		
Marketing Specialist				X	
Economist	X		X		
Computer & Information Specialist		X		X	
Organization & Institutionalization Specialist			X		
Sociologist	X--X	X--X	X--X	X--X	X--X
Project Evaluations			X--X		X--
<u>Project Activities</u>					
Establish Lome office	X-X				
Establish field offices	X-X	X-X	X-X		
Order vehicles	X				
Establish credit procedures	X--X				
Collect baseline data	X---X				
Develop ag. procedures & strategy	X---X				
Promote extra-perimeter small scale economic activities	X				
Soil Testing and mapping	X---X	X---X	X---X	X---X	
Quarterly technical training for PFP & GOT extension staff	X X X X	X X X X	X X X X	X X X X	X X
Farm machinery feasibility studies	X---X				
Set up training program for motorcycles		X			
Implement perimeter activities		X---X			
Semi annual reports		X			
Institutionalization plan	X X	X X	X X	X X	X
			X---X		

B. Project Monitoring and Evaluation System

PfP believes that the learning from this project on the part of other development practitioners in Togo and elsewhere can be as significant as the benefits to the direct participants themselves. This is an excellent opportunity to observe how small farmer organization and agricultural development can become a motor force for regional development, and specific ways in which credit education and management assistance complement technical improvements. The project area itself is compact enough that in five years time one may anticipate significant development of the Sio River region and can monitor the effectiveness of the methods used to accomplish it. The human and institutional changes this project will bring about have the potential to be every bit as significant as the economic ones. With Lome only 30 kilometers away and a number of other agencies in Togo expressing interest in methods to raise productivity, there will be much curiosity about what this project is doing and how. It is therefore appropriate with this relatively high profile project to have a monitoring system that is creative and thorough in tracking and measuring socio-economic change.

PfP will put in place a comprehensive data collection and analysis system that will be useful both to participants and managers of this project as well as designers of other small enterprise programs. The monitoring system is intended primarily to show the dimensions of socio-economic impact and will be able to reveal just as much the absence of change as the presence. It will measure gains in income, skills and employment of individual producers. It will monitor critical aspects of service delivery such as the types of loans being made and repayment rates. This management information system (MIS) features a representative sampling of area households to determine project impact over time on income and standard of living. Survey data will also be collected on the development of local market infrastructure and the processes by which local village economies are shaped to become more dynamic. Comparison and control groups will be used, including producers who have access to irrigation but not the kinds of assistance offered by this project, and producers who do not have external assistance.

The six areas of project output and impact which will be monitored include:

1. Key elements of Service Delivery
 - A. Credit Fund Performance
 - B. Agricultural Demonstration & Extension
2. Economic performance of small farms and other small scale economic activities assisted by the project
3. Economic and social changes in households of the Sio River region

4. Changes in agricultural production and productivity both within and outside the irrigated perimeter
5. Formation and strengthening of producer groups in the region
6. Regional economic development

Data Sources and Types

Data will be collected from different sources. One is records kept by producers, DRDR and PFP about the economic activities of project participants. Literate and numerate clients will keep some business records, as will farmer organizations. PFP's practice is to keep fairly extensive records on loan feasibility and credit follow-up. PFP credit agents assist non-literate or numerate clients to prepare a feasibility analysis of their proposed economic activity. PFP does semi-annual balance sheets of its clients' activities to monitor their economic performance. There is also a loan close-out questionnaire which determines what clients have learned in terms of management skills as well as attainment of economic objectives.

A second way of collecting data will be through household and market surveys. Because the rural producer spreads risks among several activities during the course of a year, project impact is probably best measured at the household level. PFP will do a baseline survey and once a year sample 60 households for the economic and social change they are experiencing. The sample will include 10 households of producers working on the irrigated perimeter; 30 households of producers or other entrepreneurs working in the Sio River region but whose main activity is not on the perimeter; 10 producers from the Agome Giozou irrigation scheme in the east of the Maritime Province (comparison group); and 10 producer households from a village out of the Sio River region and without any major external agricultural development interventions (control group). The household survey will be stratified to draw from:

- villages throughout the region
- producers on all parts of the perimeter
- different crop mixes
- different levels of well-being and social position.

Once the initial baseline survey is taken and the dimensions of each household's economy are determined, a survey taker will return to each household once a year. The survey will be structured so that for purposes of comparison, questions are asked and answers recorded in a uniform way.

A market survey will be done in addition to the household survey to determine whether consumers have a better and/or cheaper array of goods and services available to them and whether or not the infrastructure and links enabling them to increase commercial transactions are developing. Twenty villages and hamlets will be visited twice a year. Villages will be chosen to include those near the perimeter and those further from it. Smaller and more isolated villages will be chosen as well as main villages. Two villages in the Agome Glozou area will be surveyed as a comparison group.

Two villages outside the region where there is not a major agricultural or economic development project will be surveyed as a control group. Details of the indicators of both the household and village market surveys are contained in the Benefit Indicator tables in Annex

A third form of data collection will be simple aerial photographic surveys. With the Lome airport only a short distance away, this can be an inexpensive and unobtrusive way of obtaining data about changes in the region. Aerial photographs are a good way to examine the spread of improved agricultural practices. Because physical structures are prominent from the air, development of physical market infrastructure and standard-of-living improvements such as better dwellings can also be noted. The value of aerial photography is that actual physical evidence is well preserved in such pictures. With practiced interpretation, aerial photographs are well-suited to comparisons of change over time.

A fourth form of data collection, particularly of changes in human beings and groups, will be video and the social interpretation of other kinds of photographs.

The project will report semi-annually on a variety of indicators contained in Annex C. In addition, it will produce special reports, training materials, and documentaries that will be available to project participants and other development practitioners in Togo and elsewhere.

SIO RIVER ECONOMIC DEVELOPMENT PROJECT

FINANCIAL SUMMARY

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL		Total
	FX	LC	FX	LC	FX & LC								
I. Personnel	139,500	63,055	172,565	120,610	177,475	126,910	193,035	151,790	161,675	149,355	844,250	611,720	1,455,970
II. Commodities	13,880	64,860	4,500	85,570		22,475					18,380	172,905	191,285
III. Operating Costs		47,875		64,355		67,895		70,015		69,130		319,070	319,070
IV. Consultants/Evaluation	43,745	5,000	66,275	5,750	116,660	8,615	35,875	7,605	47,250	5,745	329,605	33,715	363,320
V. Contingency @ 12%	23,655	21,670	31,600	33,155	35,295	26,865	27,445	27,530	25,070	27,270	143,065	136,490	279,555
VI. Credit Fund		25,000		50,000		75,000		50,000				200,000	200,000
VII. Overhead @ 24.23%	53,495	55,065	71,465	67,090	79,520	78,930	62,065	74,370	56,695	61,665	323,540	357,120	680,660
VIII. Fixed Fee @ 2%	4,415	4,545	5,900	7,190	6,590	6,515	5,125	6,140	4,680	5,090	26,710	29,480	56,190
IX. Grand Total	278,690	256,870	372,305	453,720	415,840	411,205	323,345	367,450	295,370	321,255	1,655,550	1,860,500	3,516,050

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ECONOMIC ANALYSIS

An economic analysis for the project was conducted and is presented in detail in Annex E. The major points brought out in the analysis include the following. First, Togo's agricultural sector has suffered from continuing droughts and poor economic policy, although policy reform has restored sector economic incentives. At the same time, Togo, due to past overinvestment and falling world primary material prices (phosphate, in particular), has been forced to reschedule debts and has less foreign exchange than it has had in the past. The PIP project, to the extent that it helps farmers increase agricultural production, will help replace food imports and hence provide relief for needed foreign exchange.

Second, the project is expected to generate a series of quantifiable and non-quantifiable benefits. The non-quantifiable benefits (not discussed in Annex E) include the following:

1. A more developed regional economic infrastructure:

- more goods and services available,
- goods and services closer to consumers,
- new and better-managed economic activities stimulating other economic activities: i.e., suppliers, transporters, backward and forward linkages,
- proceeds of increased agricultural production being spent and invested in the region,
- lower consumer prices to the extent that competition is stimulated.

2. Social development:

- group activities fostering a spirit of cooperation that brings economic benefits to members,
- a "network" of project clients exchanging information and reinforcing one another's activities,
- "model" farmers and entrepreneurs promoting development through assistance to others,
- greater participation of women in productive economic activities,
- rural exodus slows down to the extent people perceive options and participate in rural productive activities (less of a drain on scarce GOT resources to provide services to urban residents).

3. Human development:

- people learn the problem-solving approach as management and analytical skills improve,
- people gain greater control over their lives and reduce risk as economic options are opened,
- an improved sense of well-being,
- the existence of a "happiness quotient" or the ability of people to satisfy wants and desires,
- an improvement in the standard of living: i.e., food, shelter, clothing, scolarity rates.

4. Policy impact:

- the GOT obtains models for regional economic development that can be applied elsewhere in Togo,
- the GOT obtains an effective methodology for the delivery of credit to rural procedures that can be adopted by the CNCA,
- the privatization of irrigated perimeter agriculture reduces demand on scarce GOT financial resources and can serve as a model for similar schemes,
- higher productivity within the GOT agricultural services because of training, better motivation, increased farmer demand for services and the combination of agricultural technical training with credit and management assistance,
- a solution to the problem of making young farmers productive and allowing them to be socially secure in their new communities.

5. Institutional impact:

- the existence of a trained staff delivering credit, management assistance and technical training,
- stronger GOT agricultural services,
- the possibility of local savings institutions encouraging savings and regional investments and dispensing credit,
- project clients "graduating" to CNCA as credit-worthy prospects.

Quantifiable Returns

A computer model was developed that estimated project IRR's due to project economic benefits earned from activities financed by the credit fund. The model does not include all benefits, such as those mentioned above. Instead the model seeks to determine project returns based on the number of clients supported by the credit fund and benefits generated by the activities of the clients. Five sample activities were chosen for both agricultural and non-agricultural loans and budgets were drawn up based on available agronomic and case study data. The number of clients per activity was based on the credit fund size, loan needs per activity, loan repayments, loan loss rate, and assumed proportion of loan fund allocation to each of the activities. Benefits from potential multiplier effects are not included.

Assuming that loan clients do not use PfP loans for more than four years - one year of initial start-up costs plus three years of operating expense loans - and that PfP or other individuals or organizations can provide sufficient mechanisation services to handle all of its agricultural clients' needs, the project will generate a 7% economic return after only 10 years of operation. Other scenarios such as varying the exchange rate, increasing the assumed loan loss rate from 5% to 15% or adding administrative loan costs to cover expenses left over from insufficient loan service charges resulted in the IRR varying from 0 to 10%. The details of this analysis are shown in Annex E.

SOCIO-ECONOMIC AND SOCIO-CULTURAL ANALYSIS

1. Population

An important socio-cultural feature of the project region is the ethnic homogeneity of the population. The overwhelming majority come from the Eve ethnic group whose ancestral home is Notse in the Plateau Region. There was a fundamental political division among the Eve during the eighteenth century under the reign of King Agokoli. Several major groups left Notse and moved south where they founded the major villages in the Maritime Region. Sio River was one area they settled.

The population of the Sio Prefecture increased from 156,000 to 200,000 between 1970 and 1981. The yearly increase of 2.2 percent was less than the 3.2 percent for the Maritime Region as a whole. This lower rate is attributable to a strong outward migration in the early 1970's. The migration has not been documented, but residents of the region say that it was especially directed towards Ghana and Lome, and to a lesser extent, Nigeria and Gabon. The motive was a search for economic opportunity.

The movement of people has now reversed, according to local residents, due to the extreme economic conditions in Ghana, the expulsion of many undocumented aliens from Nigeria and less favorable possibilities for wage employment in Lome and elsewhere in southern Togo (there are no statistics after 1981 to document this impression).

PfP believes that the project, by opening up local economic opportunities, will provide an alternative to outward migration and will result in a more profitable exploitation of the resources of the Sio River region. It may also attract inhabitants of other regions. Farm workers from the Kabye and Losso ethnic groups in the Kara Region, where pressure on the land is high, migrate to Sio River when agricultural conditions are favorable. These immigrants, because of their reputation for hard work and their adaptability to local customs, have not engendered a spirit of resentment among the local population. Inclusion of these people in project activities can only add to the productive capacity of the region.

2. Earning a Livelihood and the Organization of Work

The homogeneity which characterizes the ethnic make-up of the Sio River region also applies to the way in which people make their living. With the exception of the commercial or salaried residents of the larger regional population centers such as Tsevie and Keve, nearly everyone is engaged in some form of agriculture.

Both the SOTED study of 1981 and the Socio-Economic Study of the Sio River Valley that was a part of the ORA research activities, identified the average farm family as containing six to seven members who were cultivating between two and three hectares of land. The principle crop and dietary staple is corn which is most often planted in pure stands, but which is also frequently intercropped with cassava, cowpeas or peanuts. Local vegetables such as okra, red peppers and greens (ademe and gboma, for example) are also part of every family farm. Cash crops occupy a much smaller place in this traditional system of agriculture. They consist mainly of oil palms (subsistence crops are often interplanted with palm trees), both rain-fed and irrigated rice, sugar cane, and occasionally cocoa in the more humid parts of the region. Animal husbandry is also practiced with the average family possessing four to eight goats, ten chickens and occasionally a few pigs.

This image of traditional agriculture reveals several significant points which need to be taken into account by any project that wants to develop the agricultural base of the regional economy. First, the diversity of crops cultivated and animals raised by the average farm family is an expression of the desire to spread economic risk as much as it is an indication of dietary taste. A project which attempts to promote only one crop, such as rice, to the exclusion of others will be ignoring an important cultural and economic reality. An integrated approach aimed at increased productivity among all elements of the family farm is much more likely to result in a more productive agriculture. Second, the distinction between "subsistence" and "cash" crops is vague in the context of the local culture. With the possible exception of rice, which constitutes a very minor part of the local diet, all of the foods cited above are consumed. What really matters in economic terms is the generation of an agricultural surplus. Market analyses conducted during the course of the Sio River socio-economic study showed national deficits among all the major subsistence crops and meat and correspondingly good marketing opportunities for local farmers. Their advantage is heightened by their proximity to Lome with its high demand for food as well as its role as an agricultural distribution center for other areas of Togo.

A third important point is the low level of agricultural production realized by the Sio River farmers. Average yields obtained in the region per hectare are 800 kilograms for corn, four tons for cassava, 250 kilograms for peanuts and 300 kilograms for cowpeas. Conservative estimates of what farmers should be getting, provided that rainfall is normal and improved techniques are used, are two tons of corn, ten tons of cassava and one ton each of peanuts and cowpeas. In like manner, approximately fifty percent of goats and sheep die before reaching market for sale.

This low productivity is the symptom of a fourth significant local phenomenon; a reluctance on the part of most farmers to employ improved agricultural techniques. There are two main exceptions to this generalization. One is the cadre of farmers trained in irrigated rice production during the Taiwanese and Chinese period from 1966 to 1979 in the Sio River Irrigated Perimeter. These farmers are used to a certain level of mechanization (rototillers), employ fertilizer and insecticides and follow certain other improved methods like nursery-making and planting in lines. The other exception consists of those farmers who have been taught improved cotton cultivating techniques by SOTOCO in the northern part of the Maritime Region. An interesting characteristic of both these groups, however, is that they do not regularly apply their newly-learned techniques to the cultivation of traditional crops. The reasons most cited for this are the general ineffectiveness of extension personnel responsible for improving the production of traditional rain-fed crops and the lack of access to credit for the acquisition of necessary inputs. (This second point may be more of an excuse than a reason. Farmers often claim poverty when asked why they do not buy fertilizer. They manage to find funds, however, to pay for relatively unproductive day laborers. A likely explanation for this behavior is that they do not thoroughly trust fertilizer because they do not completely understand its agronomic and economic benefits.) The project will work to correct this situation by reinforcing the existing government extension services through training, by furnishing farmers appropriate levels of credit and instruction in its management, and by conducting demonstrations that illustrate the benefits of improved techniques.

The low level of productivity described above translates into correspondingly low family incomes. The average net yearly income calculated during the ORA socio-economic study was only 146,000 CFA most of which represented food that was raised and consumed by the family (it did not, however, include the production of the wives' fields, most of which was consumed by the family). Reasons given for this low figure are two. The first is the difficult circumstances brought about by two successive years of drought. Families were obliged to liquidate many of their assets in order to purchase food they could not produce. The second results from the relatively high costs of production. Instead of using techniques that would result in an intensive, productive agriculture, Sio River farmers have the tendency instead to employ an extensive system which features the liberal use of paid day laborers. These laborers consume in wages a relatively high portion of what they produce.

It is interesting to note that those families at the higher end of the income scale engage in activities other than crop production, usually the raising of small livestock and preparation of foods and beverages from

oil palm trees. Involvement in these activities is consistent with the propensity to cultivate a variety of crops: both are tactics to minimize risk. Other non-agricultural activities commonly practiced are the fabrication and sale of charcoal, the sale of firewood, the preparation of snack foods, artisan occupations like weaving, carpentry, masonry and blacksmithing, small-scale commerce and for those living next to the Sio River the quarrying of gravel for sale to construction enterprises. During the administration of the ORA economic profile questionnaire, there was an overwhelming opinion expressed that any eventual project should provide assistance for the development of these activities. Given their importance, both in supplementing farm family incomes and in furnishing necessary goods and services to the region, the project will support economic activities that complement crop production.

Mention also needs to be made of the way Sio River farmers work together in groups, for there exist both traditional and modern groups within the region. Three social welfare groups with an economic orientation that play an active role in village life are FIDODO, SODJOJO and EKHHA.

FIDODO assembles groups of adults (the groups may be segregated by sex or mixed) to undertake agricultural work to the profit of its members. The group may also "contract" itself out to non-members. In these cases the proceeds from the work are placed in a central fund and used for a common purpose later on. SODJOJO is a savings society. Regular dues are paid, the sum of which is periodically awarded to members on a revolving basis. EKHHA is a type of mutual aid society. Dues are collected in a central fund that is used to help members during emergencies or times of need.

These traditional groups are solid institutions that play an important role in the economic and social life of the village. They owe their success to certain shared cultural characteristics: a feeling of solidarity and common understanding among members; strong leaders who are usually distinguished by impressive personality traits and a prestigious reputation; members who possess a sense of discipline and confidence in the group. They also show that Sio River farmers are capable of collective action in pursuit of economic and social goals.

Attempts have been made to create groups of a more modern form, specifically agricultural producer groups within the context of the PRODERMA project and rice grower groups in the Sio River Irrigated Perimeter. Unlike their more traditional counterparts, these groups have met with less success and have not proven to be durable institutions. Several reasons explain this. First, the impetus to create the group often comes from outside. Groups are formed because a particular development project has decided it will promote development exclusively through group action for administrative convenience, or because group

formation is a prerequisite for receiving agricultural credit. Second, there is seldom a realistic strategy for progressively conferring management responsibility over to group members. Outside technical assistance tends to assume large amounts of responsibility until the end of a particular project. When the assistance is no longer there, the group finds that it is unprepared to manage its activities and usually quickly disintegrates. Third, groups seldom have all the tools at their disposal to effectively carry out their activities. They usually need access to credit, management assistance and solid technical packages all at the same time.

PfP intends to build upon the tradition of collective action in the Sio River region by putting in place a relatively flexible strategy for group formation that will emphasize the following approach:

- group formation will not be a precondition for receiving project assistance;
- there will no be rigid organizational form for group formation;
- groups will be created by the members themselves; the primary role of the project in the formative process will be to act as a catalyst in assisting members to become aware of the possibilities open to the group;
- once the group is formed and meets PfP's project criteria, it will be eligible for the complete array of project services: credit, management assistance and technical counselling.

3. Land Tenure

Throughout the Sio River region, land tenure is based on the traditional Eve system in which land belonging to a family (in its most extended and general sense) is allocated to family members or outsiders who request it by the family head. In the four villages surrounding the irrigated perimeter, for example -- Mission Tove, Kovie, Assome and Ziovounou -- the land belongs to between five and seven families per village. However, with each succeeding generation, this land is identified less with the original extended family and more with the smaller individual family units that actually farm it.

The right of land acquisition and ownership is transferred through inheritance from father to son. Women cannot inherit traditionally owned land. This interdiction is based on the desire of families to protect their ancestral land holdings and prevent them from passing to other families through marriage. Women can, however, inherit land that has been purchased by a female relative and can in turn pass it on to their children.

Apart from inheritance or outright purchase, there are other ways that farmers can gain access to land. One is through the payment of a fixed rent to the recognized proprietor. Another is through a system of sharecropping where a tenant gives an agreed-upon portion of his harvest to the landowner. A third system, known as AWOBA, confers the right to utilize a tract of land for a specified period of time in exchange for a cash payment.

Given the population, land is abundant in the Sio River region, and peoples access to it is not restricted. In addition, the project design team has discovered nothing in traditional land ownership and use that would inhibit farmers from employing improved agricultural techniques.

Within the irrigated perimeter, the traditional system of land tenure was followed until 1980. The traditional right of ownership was recognized and owners who did not farm their land had the right to receive a rent of one bag of white rice (approximately 100 kilograms) per hectare for each harvest. However, in 1980, as an incentive to producers, a decision by the Minister of Rural Development abolished the system of rents and conferred the power to allocate land within the perimeter to the CRS director (this decision also nullified purchases of perimeter land which had been made for speculative purposes by certain residents of Lome). The decision, which is still in force, favors the acquisition of land by those who want to produce. Significantly, women are not discriminated against, although up to the present, none have availed themselves of their right to acquire irrigated land. (During the design phase of this project, women working as agricultural laborers in the perimeter were asked why they were not farming for themselves. They responded that a lack of credit made this impossible.)

Despite the ministerial decision, there is still a small minority of farmers (less than twenty percent by one estimate) that pay traditional rent. This is due in part to their ignorance of the law, a reluctance on the part of some traditional proprietors to surrender an economic advantage and perhaps a fear on the part of certain farmers of acting against traditional practice.

As with extra-perimeter lands, the design team has found no legal or traditional obstacle to farmers who want to produce within the irrigated perimeter. However, as the project progresses and succeeds in making the perimeter a more productive resource, it will probably be necessary for Togolese authorities to limit the amount of land that any one producer can acquire, and reserve perimeter land for local farmers.

4. The Role of Women in the Local Economy

Women have the possibility of playing a major part in this project as beneficiaries, as their role in the local economy is fundamental. In addition to their many household duties women are active in agriculture and engage in a series of non-agricultural income generating activities.

In agriculture women work in their husbands' fields during periods of seeding, weeding and the harvest, but they have their own field as well and can also sell their services as agricultural laborers. (Women usually receive land on loan, either from a relative or their husband. Their production belongs entirely to them and can be used to feed the family or sold.) While concentrating primarily on traditional subsistence crops, there is a certain interest in becoming involved in irrigated rice that was expressed to design team members. As was stated above, the rules governing the acquisition of irrigated land favor the inclusion of women, and the project will make available credit to provide them with working capital.

In the domain of non-agricultural activities, women are active in small-scale commerce, food processing (manufacture of palm and palm kernel oil, gari, alcoholic beverages, the preparation of snack foods and the operation of simple "fufu bars" or restaurants) and the marketing of agricultural produce. Since women are usually the least favored when it comes to obtaining credit, they seldom have the possibility of expanding these activities to their greatest potential. The project will remedy this situation. Addressing the subject of the role of women in this project, the recent ORA-sponsored socio-economic study of Sio River strongly suggested assisting women to develop those activities in which they have traditionally played a role. The idea is to build on the base of cooperation between men and women which is found in village level institutions and not set women up as competitors and rivals to men. PFP agrees with this recommendation and will take it into account during implementation.

5. Graduates of the Young Farmer Training Centers

One final social issue that deserves mention is that of the group of approximately one hundred fifty young farmer training center graduates residing at Mission Tove. Coming from regions outside of Sio River and having received two years of agricultural training at the five regional centers around Togo, they have been waiting to be settled in the Mission Tove area for the past year and a half. There is considerable misunderstanding between this group and officials of the government. The young farmers insist that the government, having trained them, should also provide them with land and the means to get established in the region and practice what they have been taught. The government denies this responsibility.

The reality is that these young people are lingering in the region, subsisting on a monthly government ration of food and a 10,000 franc allowance, but making little progress towards becoming productive farmers. They claim that one of their great problems is acquiring land: they say that the prices and rents demanded by local landowners are beyond their means. Another complaint is no access to credit, either for the acquisition of land or the purchase of agricultural inputs. There have also been disputes with local villagers who often look down on the immigrant young farmers as unresourceful pampered youth whose commitment to hard work is open to question.

PfP worked with a group of six young farmers as a part of the ORA experimental loan and agriculture trials. Despite unfavorable rainfall that severely limited their agricultural production, members of the group proved themselves hardworking and resourceful, and have been repaying their loan. PfP regards this as a positive sign and believes that significant numbers of young farmers can benefit from project services. PfP asked the authors of the Sio River Socio-Economic Study, who researched the problem of the young farmers, to devise an approach that would enable them to benefit from the project. They have suggested the following:

- assist young farmers with credit to acquire land in order to eliminate a common source of disputes with local landowners;
- make loans available for the purchase of agricultural inputs to young farmers who possess land;
- make more important loans covering the purchase of equipment and settling in costs to young farmers who are successful in putting smaller loans to productive use.

PfP finds this approach both reasonable and compatible with its own, and during project implementation, will incorporate it into its overall regional development strategy. X

Additional details regarding the implementation of the project and the issues can be found in the notes on the ... F.

TECHNICAL ANALYSIS

PfP's definition of technology within the context of producer-targeted development is an improved way of doing something that fits into the socio-cultural and economic framework of project beneficiaries. Implicit in this definition is the premise that the way in which technology is transferred is as important as the technology itself, and that this transfer must take into account the way people learn. Accordingly, PfP reduces the complex to a series of simple steps and proceeds with beneficiaries in an incremental fashion, adjusting the pace to allow mastery of different techniques and steady progress towards increased productivity. A technology is mastered if people can use it to solve problems and apply it in different situations. In this process of technology transfer, both sides teach as well as learn.

The technologies described below are ones in which PfP has experience and which are appropriate to Sio River producers. They are a combination of "hard" technologies which are oriented towards production and "softer" ones that emphasize management. Used together, they will permit a better utilization of the Sio River resource base.

1. A Farming Systems Approach

As stated above, the focus of this project will not be on production as such, but rather on producers and the varied activities they and their families undertake. In dealing with their clients, PfP agents will look at the total farm economy, reinforcing the subsistence base when necessary and helping the client to generate a surplus through the adoption of better production techniques and the improved management of resources. The emphasis will always be on discovering the relationship among different systems within the family farm and using the surplus from certain activities to develop and strengthen others.

An example of this principle taken from the OKA design phase was an experiment to test the effectiveness of the direct seeding method for rice in the irrigated perimeter. Labor demands for land preparation, nursery making and transplanting are high at a time when Sio River farmers need to tend their dryland subsistence crops. The purpose of the experiment was to see if the direct seeding method, which requires less early season labor, could produce an adequate yield. The method was combined with herbicide application to reduce the amount of time necessary for weeding. The results were very encouraging as the additional investment per hectare of fifty kilograms of seed and six liters of herbicide reduced labor requirements by sixty-eight person-days

and produced an additional ton of rice yield. This technical package would thus allow farm families to spend proportionally more time in subsistence agriculture while also producing a cash crop with a good economic return.

2. Credit Training

PfP's credit training process is designed for both literate and non-literate producers who have had relatively little exposure to the acquisition, obligations and management of investment credit (credit obtained for the purpose of stimulating or improving productive activities). Many producers have dealt with traditional forms of credit which are usually obtained for the purpose of surviving "hard times". However, investment credit is a relatively new phenomenon, the importance of which has grown with the relatively recent introduction of the Western concepts of goods and services to the traditional economy. With the expansion of the range of necessary or desired goods and services, the importance of money as an exchange medium has also grown and the spectrum of productive activities to be engaged in has widened. Investment credit has the potential to provide the borrower with great moral and pecuniary satisfaction, or to saddle the borrower with hardship and "loss of face" -- all depending on how it is administered by the lender and managed by the borrower.

PfP's goal is to foster the achievement of a greater measure of people's human potential through their pursuit of monetized, surplus-generating, economic activities. The credit training process is more precisely a credit learning process for both the lender and the borrower. Applicants and clients learn about the potential benefits -- or harm -- of borrowing money, while PfP learns about the evolving needs, goals and aspirations of people undergoing tremendous and relatively rapid changes as they merge themselves and their traditions with monetized economies.

The credit training process consists of six separate stages identified by the different actions and responsibilities of each party in the relationship between PfP and the people it assists. The stages of this process were not conceived of first and then "delivered" as a package. They were developed over several years of field experience in part through conversations with rural producers, and in part through experimentation with ways of effectively helping them meet their economic objectives. This process is based on the conviction that "development" is a function of the participation and recognized interdependence of all parties. The six stages of the credit training process are:

- Stage 1: Request
- Stage 2: Interview
- Stage 3: Pre-Loan Visits
- Stage 4: Loan
- Stage 5: Follow-up
- Stage 6: Post-Loan Evaluations

Although lending institutions cannot always judge with one hundred per cent accuracy what people will do once they have received loans, the six stages of the credit training process are designed to assure the following:

1. Establish and maintain a relationship of trust, understanding and cooperation between PFP and its clients;
2. "Weed out" people with insincere motives or character;
3. Determine and deliver the appropriate amounts and forms of credit and management assistance;
4. Incrementally teach people about financial obligations and responsibility in step-wise preparation for entry into the formal banking system;
5. Be flexible enough under a wide variety of circumstances to continually encourage people to be productive while making sure that loan repayment obligations are upheld so that the credit fund remains intact.

A major function of this project will be the delivery of credit and training in its use by a locally based PFP staff in coordination with the appropriate authorities. A conservative approach will be followed at the beginning so as not to leave the impression that the project is the source of a great deal of "free money". Emphasis will be placed on working with serious clients who are very aware of their obligations and whose success will serve as a model for others later on.

PFP will not require that the loans it grant be secured by "bankable collateral". This is to allow people access to credit training who have very little that can be legally used as collateral. Instead, PFP credit agents will rely on their judgement of applicants' character and

sincerity as well as a close working relationship based on an understanding of each other's goals. They will make sure that loans are granted in appropriate amounts for viable economic activities. When clients understand that they are participating in a step-wise credit learning process using incremental loans, repayment becomes a welcome part of the process and not a burden to overcome.

While the credit training process stresses flexibility and attempts to be inclusive in accepting clients, its goal is not to make credit "easy" or undercut other established credit institutions. Consequently, no concessionary interest rates will be used and clients will have to pay an administrative fee to help defray staff costs. PFP has learned from its project in Upper Volta that the return on investment for the scale and kinds of economic activities undertaken by local producers allows them to support a significant portion of the costs of administering the credit fund without suffering economic hardship.

Up to 40% of the cost of the credit training process is covered by the clients.

3. Management Assistance

Management assistance is an integral part of the credit training process, and occurs during each of the six stages mentioned above. It is most intense, however, during the follow-up period following the granting of the loan and its final repayment when PFP extension agents pay regular visits to clients' activity sites.

PFP management assistance consists of promoting four basic concepts which are applicable to all kinds of rural small scale economic activities:

1. Organization and planning -- following organized plans for doing things related to the economic activity such as supply and marketing;
2. Working capital maintenance -- knowing the difference between working capital and profits, and realizing the importance of maintaining an adequate level of working capital;
3. Cash flow management -- being able to foresee cash requirements (e.g. inventory replenishment, maintenance of machinery and equipment, loan repayments) and having an appropriate policy for customers who buy on credit;
4. The use of business tools -- understanding the importance of having an appropriate system for collection and analysis of information.

Rural entrepreneurs who request assistance from PFP take an untraditional risk and they feel strongly that they are putting their reputations on the line in many ways. When they arrive at a PFP office they are sure that what will affect their lives most in the new relationship will be the fact that they owe money, not that they will learn something about management. Most of these people are quite confident that they know exactly what they need to know in order to make their economic activities succeed without endangering their reputations -- otherwise they would not take the risk of borrowing money from a community resource.

Offering management assistance to people who are sure that all they need is money requires extreme sensitivity. Too strong an interference by extension agents may alienate the client; too weak an interaction may deny the client a learning opportunity, and condemn the activity to failure.

PfP uses something analogous to a "carrot and stick" approach to management assistance. People receive credit when they have completed a series of tasks they were assigned during the initial interview. By completing those tasks with the supervision and help of extension agents, people are introduced to various management concepts which are appropriate for them. Through credit follow-up based on conversation and participation, people come to realize that appropriate management of their resources is as important as having resources.

Clients are encouraged to keep some sort of record system for disbursements and receipts. Balance sheets and profit and loss statements are periodically filled out by PfP extension agents with client participation. The results of these exercises are almost always of interest to the client. Even if the client can't read what the extension agent writes down, the information is interesting enough that it encourages learning the concepts. Together they may devise other ways of recording things for later analysis: pebbles put in a box may record the number of hours a machine runs between oil changes; different pants pockets may separate working capital and profits; straw marks in a notebook may indicate the number of barrels of water delivered during the week.

Once this management assistance system becomes established on a regional scale, the past and present clients constitute a significant network of appropriate technical and managerial expertise. That network is available to each client. Often people who have proven to be models of a particular technique or technology are asked to receive training visits from other clients. Some of these models even find work with other clients; for instance, an expert miller who is paid to help another client install a new grain mill.

As a local and international organization, PfP has relationships with other organizations of all types. Establishment of these ties in Togo will be a high priority, and will provide clients with yet another network of technical and managerial assistance.

4. Agricultural Extension

While the primary responsibility for regional agricultural technical extension will remain with DRDR and other Togolese government agricultural technical services, PfP will provide training in

understanding farming systems to its own credit and management assistance agents to enable them to better comprehend the local farm economy in which the clients live and work. This training will also emphasize how to learn from and communicate with farmer clients. The training will be conducted by long term PFP technical advisors and by short term consultants, and will be open to all extension agents in the region.

The training will focus on farm planning and not just on promoting single activities or techniques. This focus reflects the fact that farm resources, including money, land, labor, machines and tools, are almost always allocated among different activities which compete for them. The extension worker who can help the farmer client make wise allocations that increase the productivity of the total farm unit will be making a much greater contribution than one who only teaches production technology. Extension agents will be trained to do a simple farm plan, taking into account such things as family size, the availability of labor, the interest and experience of the farmer, the amount and type of land available for exploitation, the availability of cash and credit, marketing possibilities, non-farm activities, and the availability of other inputs.

Another theme that will be stressed is the use of demonstrations by extension agents, other farmers or technicians from research facilities. Demonstrations are useful to illustrate a proven technique like the correct pruning of a fruit tree or a system of intercropping vegetables and tree crops. They are also valuable for showing farmers problem-solving approaches that they can use to discover new techniques on their own. For this purpose, PFP, in collaboration with other agricultural technical services, will manage a small demonstration fund. The following criteria will be used in selecting technologies to be tested or demonstrated.

1. A high probability of economic benefit,
2. Minimal environment and health hazards,
3. Sustainability,
4. Social acceptability,
5. Affordable by a large number of farmers,
6. Easy mastery by farmers,
7. Provides options, thereby spreading farmers' risks.

Linked to the efficacy of demonstrations is the technique of using "model" farmers to convey agricultural knowledge to their neighbors. PFP has employed this technique in several of its projects and has observed that a local farmer is often the best teacher of his peers. (As mentioned in the Management Assistance section, PFP has also used this technique with non-agricultural activities.) This technique needs to be thoroughly organized and managed and the following considerations must be taken into account:

1. The "model" farmer must know what is expected of him or her and what others will learn from his or her experience.
2. The technology that has been mastered is the model, not the farm or the farmer who has mastered it.
3. The "model" farmer should receive some sort of incentive, whether in the form of extra technical assistance, or simply community recognition.
4. Extension agents should play at most a minor role in the transfer of information, serving as a clarifier of information as necessary.

Another agricultural extension method that the project will employ is the formation of producer groups. PFP has no preference in terms of working with groups or individuals, since different cultural patterns and economic conditions might favor one or the other of these forms of economic organization. Nevertheless, the formation of viable producer groups around specific activities will constitute an important part of the project's institution building effort as they represent one way in which the efforts of the project can have long-lasting impact. PFP believes that groups have four basic advantages.

1. They bring producers together for the furtherance of economic advantage.
2. They promote communication among farmers, traders and artisans who possess complementary interests and skills.
3. They foster the creation of independent local institutions that develop managerial competence and involve people in working towards goals that surpass their individual interests.
4. They enable a project such as this one to provide assistance to greater numbers of producers.

The project will take a non-ideological approach with regard to the forms groups take and the functions they exercise. It is only essential that

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people get together because of a commonly perceived need, decide by themselves what they want to do and evolve at their own pace. The project's contribution will be to offer managerial, technical and financial assistance where needed and to make group members aware of the options open to them.

Other methods of technology transfer that PFP will employ include the rote learning of certain essential information (e.g. the correct amount of spray to use in a sprayer), the use of posters, photos and line drawings to illustrate various technologies and procedures and the utilization of video equipment to heighten the impact of cause and effect relationships to farmers.

5. Agricultural Production Technologies

PFP will promote and test a variety of production technologies that will be combined with credit training and management assistance to raise the level of agricultural productivity.

Farmers in the Sio River region, especially those who have farmed within the irrigated perimeter, have been exposed to farm machinery. PFP will attempt to build on this tradition when it can be shown that the correct use of machinery contributes to greater productivity and financial profitability. Inherent in this concept is the understanding that farmers need to understand the machines they are using and must adhere to rigorous maintenance schedules. To insure this, technical training by the PFP mechanic trainer will be the major part of the machinery promotion campaign.

PFP plans to introduce a farm tractor into the project area that will serve several beneficial functions to both area farmers and PFP. Several different implements will be purchased with the tractor to enable farmers to realize that a tractor has several applications. One of the tasks of the project will be to test the feasibility of a farmer or farmer group owning machinery and offering rental services to other farmers. Some of the ways the tractor will be used include the following:

1. Land levelling in the irrigated perimeter is an important aspect of proper water management. A reversible plow and other implements such as a box scraper and scraper blade will be used with the tractor to accomplish this.
2. Transport of produce and inputs will be accomplished with a farm trailer.
3. Land preparation before planting will be quickly done by the tractor in better fashion than is currently done by hand. This is especially true where heavy crop residues or other organic matter is present.

Irrigated crops other than rice benefit when the soil is ridged. This operation can be quickly done with a ridger plow.

5. Milling, pumping and many other operations can use the tractor as a power source.

The PFP mechanic trainer will train farmers to do preventive maintenance and simple repairs. The PFP agronomist will teach farmers correct techniques such as plowing, while the Peace Corps volunteer assigned to the project for group formation might help groups organize and become functional around the activity. The credit and management specialists will help the groups to learn management skills that will allow them to operate machinery profitably.

The experience gained in using the project tractor will provide much useful information that can be utilized to:

1. Determine the long term demand for tractor service at non-subsidized prices;
2. Determine the feasibility and appropriateness of organizing local producer groups around tractor service;
3. Establish realistic rate structures that would cover both owning and operating costs;
4. Train persons in both utilization and maintenance of farm machinery;
5. Provide a model that could be duplicated in the region by farmer groups who would own and manage their own tractor service.

As with the tractor, PFP plans to employ five rototillers as training tools. It is often thought that rototillers are only viable for rice cultivation but millions are sold to gardeners and small farmers in the U.S. and Europe for use in rainfed production. PFP believes that rototillers are appropriate in the Sio River region where many farmers cultivate both rainfed and irrigated crops. The five rototiller will be used for the following:

1. Test the feasibility of rototiller use on both rainfed and irrigated land.
2. Establish rates which includes both owning and operating costs.
3. Test ownership models that are appropriate and workable over time, especially group ownership.
4. Train farmers in the utilization and maintenance of the machines.

5. Train local mechanics in rototiller repair.

Groups of ten to twelve farmers will be organized around the ownership and use of a rototiller. Groups will select a manager who will assign the machine for tasks, keep records, make charges, effect repairs and the like. The credit agents will work closely with the manager to insure good management practices. An operator or operators will be selected by the group and trained in preventive maintenance by the project mechanic trainer. The agronomist will teach good cultivation practices that could improve production.

PFP believes that this approach has the possibility of giving farmers responsibility for and control over an appropriate production technology. To the extent that it does this it will lessen farmer dependence on government and development projects for this important service.

The distribution of rototillers will be done in a manner that will give PFP a chance to observe their effectiveness in both irrigated and non-irrigated situations. Three might be posted in villages near the irrigated perimeter, probably Mission Tove, Assome and Kovie with the remaining two in more distant villages, perhaps Davie and Tsevie.

To improve food crop production, the project will promote simple technical ameliorations like better spacing of plants in the field, planting in lines, fertilizer application and the use of improved seed.

A system frequently employed by farmers is to interplant corn, the primary crop, with cassava, cowpeas and peanuts. Corn is planted with four or five seeds to the pocket with a meter or more between pockets. This system has several disadvantages. Corn requires high nitrogen fertilization if good yields are to be attained. Nitrogen fertilization suppresses the formation of nitrogen fixing bacteria on the legume crop of cowpeas and peanuts, thus one of their major benefits, that of fixing atmospheric nitrogen is lost. In addition, the interplanted crops severely compete for light, moisture and nutrients. During short dry periods in the early growing period, more soil moisture is lost as the direct sunlight falling between the pockets heats the soil, permitting more evaporative moisture loss.

Evenly planted and closely spaced plants, on the other hand, form a sort of living mulch as they quickly shade the soil during early growth. The amount of seed required for this system is basically the same as for the traditional method, but the in-line, evenly spaced plants allow for mechanized or animal traction weeding and orderly spraying.

Fertilizer is necessary if soils are to remain fertile and not become depleted under the intense cultivation made possible by the two growing seasons in Togo. The economics of fertilizer use is highly favorable even at non-subsidized prices. The present situation in Togo is that fertilizer is sold at about fifty percent subsidy. Corn requires sixty units of nitrogen to produce a ton of grain. The addition of one hundred kilograms of urea (46 percent nitrogen) and two hundred kilograms of 15-15-15 (NPK) per hectare would have the potential for increasing yields by 1,250 kilograms per hectare. The present price of fertilizer is 40 CFA per kilogram plus 4 CFA for transport to the region, or a total of 13,200 CFA per hectare. Labor and seed for a fertilized or non-fertilized field would be the same. If the corn price were 60 CFA (the present price is 120 CFA), the return would be 75,000 CFA per hectare or 5.5 CFA for each one invested in fertilizer. Even if all subsidy is removed the use of fertilizer would still be favorable.

Improved seed will be promoted with varieties available from the German aid-supported seed farm in Sotouboua (south central Togo). Farmers will be encouraged to purchase corn, cowpea and peanut seed from this valuable resource. Improved seed has been shown to give ten to twenty percent increased yields over local varieties and even more where improved practices are employed.

The project will also promote pesticides and herbicides where appropriate. Pesticides will be used in the context of a system of integrated pest management. The biological control of insects and diseases can be partially effective and will be promoted in the form of crop rotation, the introduction of beneficial insects, and specific cropping systems. The use of highly toxic and persistent chemicals will be avoided, and the use of economic thresholds as criteria for pesticide treatment will be promoted. Within the irrigated perimeter, techniques will be used to minimize the contamination of run-off water that may be used later by humans and animals. Pesticide containers will be disposed of properly.

The keeping of sheep and goats is an activity practiced by Sio River farmers as a complement to crop production. Nationwide, small ruminants number an approximate 1.6 million and account for four percent of the total national agricultural income. However, other than some herding to keep them from destroying crops, these animals receive very little care. An estimated fifty-six percent die before reaching the market.

To increase the productivity of small ruminant raising, PIP will collaborate with the AID-supported Entente Fund Small Ruminants Project, the national veterinary service and the national animal production service to promote vaccinations, worming and mineral feeding.

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A recent study in the Maritime Region showed that almost one hundred percent of sheep and goats are parasitized with several different worms. There are, however, very effective wormers available in Togo at reasonable prices. Thiabendazole is a very safe drug which is effective against a large range of worms. A bolus of two grams that will worm a 25 kilogram animal costs only 60 CFA. Assuming that a farmer bought this medicine commercially at a twenty-five percent markup and wormed his animals four times a year, the total cost per animal would be only 300 CFA (\$0.75).

PfP, through its credit fund and business development program, will attempt to promote the distribution of wormers and mineral feed through private enterprises, probably small village stores. Interested farmers will be taught correct feeding practices including the building of a simple feeding area where minerals could be protected from the weather. For an estimated cost of 485 CFA per animal per year, the productivity of small ruminant raising can increase through an increased birth rate of twenty-three percent.

With regard to milling, the project will promote the private ownership of rice hullers and grain and cassava mills. As with farm machinery, the individuals and groups that receive assistance to establish mills will also benefit from technical training in machinery utilization and maintenance. By-products from regional mills as well as other agricultural by-products available locally and in Lome will be promoted as animal food.

The project will also address the problem of post-harvest loss and marketing. This will be done through the promotion of improved grain storage facilities, the organization of producer-controlled grain banks and assisting producers to obtain greater control over and access to transport.

Finally, as was mentioned above, the project will manage a demonstration fund which will be used to test the appropriateness of various agricultural technologies. A partial list of these tests is as follows.

1. Use of an injection planter -- The direct seeding method of planting rice has been shown to be economically feasible through a test done as part of the operational research activities. However, the broadcast technique of direct seeding makes hand weeding difficult. The use of an injection planter designed by the International Institute for Tropical Agriculture (IITA) in Nigeria would retain the advantages of direct seeding and facilitate hand weeding for farmers who have access to ample labor and do not wish to spend money for herbicide. Rice, corn and other crops can be seeded with this planter.

2. Use of Ultra Low Volume (ULV) sprayer for herbicide and insecticide application -- The battery powered spinning disk ULV sprayer takes much of the drudgery out of applying pesticides and herbicides since a hectare can be covered with a minimum amount of spray. Eight liters of spray can be used with ULV sprayers as contrasted to two to four hundred liters for canister or backpack spray. Two types of ULV sprayer are available, one for herbicides and one for insecticides. A sprayer of each type would be purchased and demonstrated to area farmers under field conditions. Minimum tillage methods would be tested using herbicides and the results compared to those produced by traditional land preparation methods.
3. Optimum fertilizer use on rice -- Most farmers who grow rice in the irrigated perimeter have used fertilizer but the optimum levels are not known. The response to minor nutrients such as zinc, copper, sulfur and magnesium is not known. Soil tests will be carried out with the assistance of the national soils lab in Lome and a series of demonstrations utilizing different rates and kinds of fertilizer will be conducted on several paddies to demonstrate response.
4. Use of fertilizer on crops other than rice -- Farmers who grow rice in the irrigated perimeter also engage in extra-perimeter agriculture. The use of fertilizer on rice is an accepted practice but very few farmers use it on their subsistence crops. The application of fertilizer on crops such as corn, okra, peanuts, cowpeas and others will be demonstrated.
5. Parboiling rice -- Parboiling of rice is not being practiced by area farmers even though much benefit can be realized from this technique. Milling percentage can be increased by eight to ten percent and breakage of grains much reduced. Parboiling increases the storage quality of rice and helps retain nutritional value. The process is simple and could be demonstrated using locally available materials like discarded oil drums.
6. Use of mist nets to control weaver birds -- Weaver birds consume much of a farmer's crop during two phases of production. At planting they uproot small plants for the seed and from pannicle initiation to harvest they eat the ripening grain. The use of nets suspended above the fields in strategic places might contribute to a lessening of the loss.
7. The treatening of seed for fungus and disease control -- Many crop diseases can be controlled by simple treatment of seed. Chemicals can be added to the water in which the seed is soaked prior to planting or dusted on the seed.

8. Improved grain storage --Farmers in the region store their corn on the ear in traditional elevated structures. The structures could be improved by the installation of metal aprons for rat control. In addition, improved storage containers made of metal or mud brick that allow fumigation for insects and rodent control could be tested for their relative advantages and adaptation.
9. Seed inoculation -- Many legume crops such as beans and peanuts benefit from inoculation with a nitrogen fixing bacteria culture prior to planting. Most farmers in Togo have never used this technique. A mixing drum can be locally fabricated to demonstrate this and other seed treatments. The project would import bacteria cultures to test this practice.
10. Appropriate fencing -- Roving pigs, sheep and goats can cause much damage to crops, and effective fencing is one way to control this problem. The use of solar-powered electric fencing employing fiberglass posts might be an effective and appropriate technology, especially if a group of farmers owned the fence.
11. Threshing racks -- These racks can be made from locally available materials such as bamboo or pissava palm and do the same work performed by much more expensive imported pedal threshers. They have also been shown to be less tiring and may be faster. The demonstration of their utility might result in acceptance of this technology by Sio River farmers.

6. Water Management in the Irrigated Perimeter

Given the primary importance of an adequate water supply to the success of agriculture in the irrigated perimeter, the following aspects of water management are discussed.

Water Supply

The hydrograph of the Sio River is bi-modal with discharge peaks corresponding to the two periods of highest rainfall, May-July and September-October.

The 1983 IBRD - Ministry of Plan Study examined the flow available to the main supply canal of the polder from the diversion sill dam located at Alogkoegbe. This examination yielded the following five year minimum flows (i.e. the statistically probable flow in the driest year in five years) in the main canal:

Month	J	F	M	A	M	J	J	A	S	O	N	D
Average Rainfall in mm	28	60	78	120	169	279	138	45	65	123	48	24
Flow l/s	420	276	590	960	1320	1400	1400	1400	1400	1400	1400	804

During the months of maximum discharge, the capacity of the main canal (1400 l/s) limits the amount of flow available to the polder. The low stage of the river substantially reduces the amount of water available during the drier months.

Without taking into consideration the contribution of rainfall (which is not negligible), the water requirement for the irrigated perimeter can be estimated at 2.4 - 2.8 l/s/ha. Therefore, these five-year flows would permit the irrigation of approximately 500-580 hectares during six and possibly seven months of the year.

Two main secondary canals of equal capacity (700 l/s) branch from the main canal into the east and west portion of the polder. The eastern portion, "Perimetre Est", contains 230 ha of irrigable land of which a small portion (36 ha) is prepared. The Chinese farm project along with existing small holders are expected to exploit most of this area. The PFP project will operate only in the western portion, "Perimetre Ouest". Based on the conservative estimates of probable flow and water requirements above, and capacity of the canals, enough flow should be available to at least single crop, and probably double crop an area of approximately 250-290 ha in the western perimeter.

Water Measurement

The flow of the Sio River is measured at two points within the project region: at Kpedzi, several kilometers above the dam at Alogkoegbe by the Office de Recherche Scientifique et Technique d'Outre Mer (ORSTOM); and below the irrigated perimeter at Togble Kope by the Rural Engineering Division of the Ministry of Rural Equipment. The data are analyzed by ORSTOM and published annually in the "Annales Hydrologiques du Togo" which will be available to the project. Water flow within the perimeter, however, is not presently measured. In order to be able to collect the necessary data to set up an efficient water distribution system, the project will purchase and install through DRDR certain water measuring equipment which has been recommended by the REDSO/WCA engineering office.

Rainfall is also measured at at least two points in the project region: the agronomic research station at Attiveme near the perimeter, and the IRAT station at Davie. Data from these stations will be available to the project.

Water Distribution and User Fees

As stated above, the government of Togo will retain control over the distribution of water within the irrigated perimeter. As part of the project agreement, USAID and PFP will request a written guarantee assuring sufficient water will be allocated to farmers working irrigated land that is covered by the project. Devising a model for the efficient distribution of water will be one of the primary tasks of short term consultants furnished by AID's Water Management Synthesis Project and perhaps by REDSO/WCA's engineering office. The starting point for such a system could be the prefeasibility study on the rehabilitation and extension of the irrigated perimeter performed by the Togolese Ministry of Plan in May 1983. The study treats the subjects of water distribution and long term infrastructure maintenance in the context of the imposition of user fees. The CRS director has already discussed the subject of user fees with some of the farmers who are using the irrigated perimeter and believes that farmers understand both their utility and necessity.

INSTITUTIONAL ANALYSIS

PfP views institutionalization as the development of lasting patterns of socio-economic behavior which result in groups of people being able to achieve progressive change over time. Institutions may be very informal in structure -- networks or loose associations -- where participants are not continually conscious that they are part of a larger whole. These institutions result from a recognition that complementary behavior patterns are mutually beneficial. This realization creates its own internal dynamic that promotes sustainability.

Other institutions take on a more formal character as they acquire a common image, more focused goals, and a structure to manage tasks and delegate authority within themselves. As goals grow more complex and larger in scope, so do the institutions for accomplishing them. Thus there are development agencies in the public and private sectors with paid staff, budgets to manage, vehicles and the like, and complex programs for service delivery. These formal organizations require such things as financial means, effective field methods, a sense of mission and morale and a long term plan for viability.

PfP believes that for development to occur at Sio River, the project will need to develop and strengthen a mix of institutions at several levels. It is fortunate, as has been stated elsewhere in this paper, that there are already a number of institutions in and near the region to work with. Also fortunate is the liberal economic climate in Togo which allows a mix of public and private institutions. The lack of a rigid socio-economic ideology is an incentive to private sector development which this project will be promoting.

In its approach to institutional development, the project will be guided by the following principles.

1. Building linkages among institutions -- Sio River has been endowed with a fairly well developed public institutional resource base. But coordination among different organizations is poor if it exists at all, and is at best inadequate between those organizations and their intended beneficiaries. Much needs to be done to develop relationships between research and extension, credit and extension, animal promoters and crop promoters, health and agriculture and all of the above with farmers, to cite just a few examples. This project, as has been emphasized, will not work in isolation. It will promote linkages and cooperation between itself and public institutions, among different but complementary public organizations and between those organizations and farmers. In addition, and in a less formal setting, it will work to strengthen the linkages in the regional economy by such measures as reinforcing private marketing systems, providing assistance to develop complementary commercial, artisanal and service enterprises, and linking all of these with agricultural producers.

2 Developing institutional learning capacity -- As mentioned in the section on project evaluations, one of the criteria PFP hopes this project will be judged upon is the staff's ability to learn as implementation progresses and to translate that learning into a more effective program. Learning and adaptability are, therefore, among this project's primary objectives. Through its example and through training it will attempt to convey this flexibility to other institutions. PFP expects especially to have an effect in this regard on private sector institutions like producer groups where incentives for learning from things like market forces, and improved production techniques are strong.

3. Promoting participation -- Consistent with the learning objective is a concerted effort to assure beneficiary participation in setting institutional goals and priorities, highlighting what could be socio-cultural constraints and furnishing technical information. Local participation helps create a sense of institutional ownership, which can stimulate the investment of local resources, which in turn often results in greater attention to good management and a demand for better services. All of these things contribute to institutional sustainability.

4. Assuring access to resources -- The creation of strong, functioning local institutions has as its ultimate effect the making available of essential resources to the population. Productive capability is enhanced when people have local access to things such as capital, skill training, knowledge, transport, raw materials and the like on a regular basis. All of the above can be institutionalized in the Sio River region.

The institutional mix that the project will be working to develop includes the following.

1. The regional economy -- Informal though it may be, the Sio River economy is a durable institution which has a very high degree of participation and has an impact on every person in the region. However, it is greatly underdeveloped, containing both gaps and opportunities. For it to work better, participants need access to productive resources and need to manage those resources correctly. In order for sustained development to occur, other institutions must be strengthened and created that will make those resources available on a permanent basis. An interesting aspect of efforts to develop the regional economy is that assistance to certain types of producers often favors others as well. Agricultural assistance that results in increased production, for example, has positive effects on consumption and on enterprises that furnish goods and services. A loan to a transporter may also assist traders who need a way of getting goods to their shops as well as helping farmers to get their crops to market. Given the complexity of this institution and the impact it has on peoples' lives, developing the regional economy is the biggest institutional challenge this project faces.

2. Producer networks -- One phenomenon that PFP has observed in Upper Volta is that many beneficiaries who have been touched by the project feel a common identity as a result of their experience, and, as a result, begin to communicate and even collaborate with one another. The communication often involves the exchange of technical information which is then used in one's own activities. These loose networks are again quite informal institutions, but can constitute a useful technical and economic resource for those involved. They also have the possibility of evolving into more structured organizations such as purchasing or marketing groups or businessmen's associations.

3. Traditional groups -- As mentioned in the section on socio-cultural analysis, traditional village groups like FIDODO, SODJOJO and EKUHA play important roles in the socio-economic lives of people. Moreover, they are solid institutions because of their strong cultural roots. With an expanded awareness of possibilities for group action combined with technical and managerial training, it should be possible for some groups to evolve into more complex institutions offering more developed services to their members. Traditional money clubs, for example, could develop into village or regional savings and credit associations. Collective farm labor groups could increase agricultural economic benefits by also pooling their resources to store and market their produce.

4. Producer groups -- Agricultural producer groups have not worked well in the past at Sio River because impetus to form them has not come from within and members have not been taught the necessary management skills. PFP has already outlined its approach to group formation in the technical analysis section, emphasizing the need for internal motivation, organizing members around specific economic activities and group access to credit, management assistance and skills training. With this formula PFP believes that the project can make real institutional headway in both agricultural and non-agricultural activities.

5. Public development organizations -- Sio River has a good collection of established public development organizations (see pages 17 to 19) that possess much of the knowledge and have the capacity to deliver many of the services that rural producers need. They are not, however, being adequately utilized and do not have much of an impact on productivity.

As has been stated before, one of the primary aims of this project will be to strengthen the institutional capacity of these organizations by making them more relevant to producers' needs. It will do this in the following ways:

- a. by providing complementary services (credit and management assistance, for example) that enable already-developed technical packages to be used, or by encouraging collaboration among organizations that offer complementary services;

- b. reinforce the technical and motivational levels of extension agents through training;
- c. help organizations refine their technical packages to enable farmers to use them (for example, adapting research results to the level of farmers);
- d. encourage changes in approach through the example of the project and policy discussions with government decision makers.

As a consequence of the above actions it is logical to assume that the personnel in these organizations will develop an increased sense of purpose, morale and motivation. Seeing one's efforts cause successful results at the field level, is perhaps the strongest productivity incentive that rural development workers can experience.

6. Regional development catalyst -- As a result of experience in other countries, PFP believes that despite the presence of established development institutions in the Sio River region, there will exist for some time the need for a regional development catalyst to play a coordinating development role, to offer services that other organizations do not and to reinforce newly developing institutions, especially at the producer level.

Moreover, PFP believes that the role of such a catalyst is best filled by an indigenous, private sector organization that can maintain a decentralized, flexible, action-oriented structure and provide strong incentives for success. The form this organization would take or its identity is not now evident, although it will probably become so during the latter two years of this project. Such an organization might grow out of the program and the trained indigenous staff produced by this project. If so, the institution-building process would consist of the following steps.

The first is learning to be effective, or developing a working program model that suits the needs of the region's producers. This stage requires a lot of investment in the form of resources and intellectual input and demands that the lessons learned be translated into action.

Stage two involves learning to be efficient, and consists of refining the program model, eliminating the less important activities and becoming more conscious of cost-effectiveness. Considerable attention must be given to the question of financial sustainability. A realistic evaluation must be made as well of organizational capabilities and constraints.

The third and final stage consists of expansion: in the case of Sio River enlarging the boundaries of the region, or taking the program and organizational model and applying it elsewhere in Togo. During this phase attention must be given to maintaining high rates of effectiveness and efficiency.

After nearly seven years of work in Upper Volta in somewhat similar conditions, PFP finds itself midway through the second stage and beginning to think about the third. The experience gained there plus the liberal politico-economic climate in Togo, suggest that the applicability of the model outlined above merits at least investigation for Sio River.

HEALTH AND ENVIRONMENTAL ANALYSIS

1. The General Health Situation

The health situation in the Sio River region presents a classic disease picture found in tropical West Africa: nutritional problems, water associated diseases and other communicable diseases predominate and are indicators of poor water and sanitation health practices. Morbidity and mortality resulting from poor health reduces agricultural productivity and constrains development. The Sio River Economic Development Project is not a health project; however, proposed activities, particularly within the irrigated perimeter, may result in health impacts. Various activities are proposed to mitigate adverse health impacts and produce a net positive health benefit to project beneficiaries. Where possible, private sector activities will be utilized in support of the project's private sector initiative.

2. Nutrition

This project is not oriented to the introduction or promotion of non-food or beverage cash crops. Instead, the subsistence food production base is valued and an accent is placed on generating cash through the sale of subsistence crop surpluses. The greater use of high protein leguminous crops in rotation patterns could result in higher levels of protein in local diets. Likewise, the promotion of animal production improvements will raise the amount of meat available for local consumption. The planting of vegetables behind irrigated cereals will not only extend the growing season and make fuller use of available farm labor, but will also make available vitamin-rich foods during a season when they are normally scarce. These qualitative aspects of food production combined with a generally greater supply of food resulting from increased yields, should have a positive net nutritional benefit on the Sio River population.

3. Water Associated Diseases

Water associated diseases such as diarrhea, guinea worm and schistosomiasis are major health problems in the Sio River region. However, a comprehensive wells program funded by the Canadian International Development Agency (CIDA) and managed by Canadian Universities in Service Overseas (CUSO), has just been approved for the Sio and Yoto Prefectures of the Maritime Province. This project will provide a well or alternate potable water source for every 250 persons and will work with villages to establish village health committees and improve health conditions. Health education will be an important part of the CUSO project. Given the importance of good health to agricultural production and the fact that the CUSO project will cover all of the Sio River region, the two projects are seen as complementary. Thus no major investments in health need to be

made by the Sio River Economic Development Project. Instead, project staff will work with the CUSO project staff to promote improved health to project beneficiaries in a coordinated way.

4. Project Health Activities

From a health perspective this project has two distinct areas of operation: the Sio River region exclusive of the perimeter and the irrigated perimeter. In the non-irrigated areas the project involvement is such that there will be little or no health impact. An approach that will emphasize better water, improved sanitation and health education will be provided by CUSO as described above. Irrigated perimeter activities are not due to start for two years.

Several health related activities are proposed for the irrigated perimeter, primarily to control schistosomiasis (see Annex G for details). However, project needs will be re-evaluated at the time irrigated perimeter activities are initiated. Thus the plan presented in the Annex should only be considered as a guideline and will be modified to suit project needs at the appropriate time. Although epidemiological monitoring is proposed throughout the life of the project as an evaluation tool, it is an optional activity.

5. Land Use

Project activities will not include land clearing or the destruction of forests to provide more cultivatable land. On the contrary, the agronomic objective is to make more intensive use of land already under cultivation through the use of fertilizer, better seed, proper plant density and plant protection. A production target is for per hectare yields of crops to double as a result of the improved practices adopted by farmers.

If the project succeeds in developing economic opportunities on a major scale, there might be increases in the region's population as people seek to take advantage of those opportunities. In this instance one would expect there to be some pressure for increased land use, pressure that the region should be easily able to support. There are vast tracts of good land which are not being cultivated at present, and land tenure patterns suggest that access to these lands for newcomers would not be difficult. Bas fonds areas suitable for rice cultivation are one category of fertile land that is greatly underutilized, for example.

6. Soil Conservation

Several soil conserving practices will be promoted by the project. Plowing and planting along the contour of the land, the planting of trees on steeper hillsides and the use of ridges to prevent erosion will be taught.

The project tractor and rototillers will be used in environmentally beneficially ways such as plowing under quantities of plant stubble and crop residues instead of burning them. Chisel and subsoil plows will be used to open up hard clay soils to allow better moisture penetration. Both rototillers and the tractor will be used to form anti-erosion ridges which conserve both soil and moisture.

7. Pest Management

The project will work closely with the national plant protection service to promote effective techniques for pest control during crop production and post harvest storage. The project will not promote the use of pesticides that are highly toxic to humans and domestic animals. Where irrigation is concerned, the possible contamination of streams from which people or animals obtain drinking water will be avoided. Users will be instructed in safe practices in handling and using pesticides including the proper disposal of shipping and storage containers. Integrated pest management practices that do not totally depend on pesticides, but instead use a combination of cultural practices including crop rotation, biological controls and improved storage, will be explored.

ANNEX A

1. Letter from General Gnassingbe Eyadema, President of the Republic of Togo, to Andrew Oerke, President of Partnership for Productivity, informing him of a request to be sent to USAID for a feasibility study of the Sio River project.
2. PID Approval Cable



APR 10 1982

Le Président de la République

Lomé, le 8 Avril 1982

N° 57 /CAB/PR

Monsieur le Président,

C'est avec plaisir que j'ai pris connaissance de votre lettre en date du 29 Octobre 1981 par laquelle vous avez bien voulu offrir vos services afin d'élaborer un programme pour le Togo et je vous en remercie.

Je souhaite vivement que vos démarches en vue de trouver les fonds nécessaires pour le financement dudit programme soient couronnées de succès.

Je vous informe par ailleurs que j'ai donné au département ministériel compétent les instructions nécessaires pour l'introduction d'une requête à l'USAID, requête tendant à réaliser l'étude de factibilité du projet SIO.

.. / ..

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Vous voudrez bien trouver ci-annexé les
fiches techniques exposant la position du TOGO sur le rôle
du secteur privé, indiquant les priorités du TOGO en inves-
tissements privés et montrant l'importance du TOGO dans la
CEDEAO.

Veillez agréer, Monsieur le Président, les
assurances de ma haute considération.


Général Gnassingbé EYADEMA.

Monsieur Andrew H. OERKE
Président
Partnership for Productivity
Foundation
2441 18th Street, Northwest
WASHINGTON, D.C. 20009
U. S. A.

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TAGS:

SUBJECT: SIO RIVER ECONOMIC DEVELOPMENT (693-0226) -
ECPR GUIDANCE

REF: (A) STATE 19013, (B) LOME 1152, (C) LOME 1492,
(D) LOME 1641, (E) LOME 1701 (F) STATE 090825
(G) STATE 098721

1. A SECOND ECPR TO RECONSIDER DISAPPROVAL DECISION OF FEB. 8 ECPR WAS HELD ON MARCH 10, 1984, CHAIRED BY DAA/AFR, JAY JOHNSON; REPRESENTATIVES OF AFR/CVA, AFR/TR/ARO, AFR/PRE, AFR/OP, AFR/PD/CCVAP, GC/AFR AND PPC/PPR/SPD PARTICIPATED. AS REPORTED REF (G) PID WAS APPROVED WITH GUIDANCE AND DESIGN INSTRUCTIONS AS OUTLINED BELOW:

2. AID/M APPRECIATED LEVEL OF EFFORT PUT FORTH BY THE MISSION TO CLARIFY MANY CONCERNS RAISED BY EARLIER REVIEW. THE ECPR BEGAN BY SUMMARIZING AREAS WHERE MISSION EXPLANATION RESULTED IN ISSUES REQUIRING RECONSIDERATION AT THE ECPR. FIRST AMONG THESE WAS THE MARKETING OF OUTPUTS WHERE PROXIMITY TO LOME AND EASE OF ACCESS WAS ACCEPTED AS A BASIS FOR CONCLUDING THAT FARMERS MAY ORGANIZE ON THEIR OWN INITIATIVE. SECOND, AND MOST SIGNIFICANT, WAS BASIC RATIONALE FOR RELATIONSHIP WITH CRS. THE ECPR ACCEPTED THAT IT WOULD APPEAR TOO COMPLEX AN UNDERTAKING WITH LIMITED TECHNICAL ASSISTANCE TO SEEK TO REPLACE CRS IN KEY AREAS OF CENTRAL WATER MANAGEMENT, EXTENSION SERVICES AND INPUT DISTRIBUTION. IMPLICATIONS AND RISKS ARE DISCUSSED BELOW. ALSO, THE MISSION'S EXPLANATION REGARDING PROJECT SUB-ACTIVITIES ALLAYED CONCERNS ABOUT THE NUMBER AND COMPLEXITY OF ACTIVITIES, ALTHOUGH SOME QUESTIONS REMAIN (SEE BELOW). FINALLY, THE MISSION'S EXPLANATION OF ATTEMPTING TO ESTABLISH RELATIONSHIP FROM GOT PLACED RELATIONSHIP WITH GOT IN PROJECT IMPLEMENTATION ON A POSITIVE, EVOLUTIONARY NOTE.

3. THE ECPR WELCOMED MISSION'S RECEPTIVITY TO PROCEEDING WITH SUBJECT PROJECT AS COOPERATIVE AGREEMENT AND SIGNIFICANTLY INCREASED MISSION AND REDSO INVOLVEMENT IN DESIGN PHASE AND IMPLEMENTATION. THE ECPR DEVOTED CONSIDERABLE TIME TO THE MANPOWER ISSUE.

RECOGNITION WAS GIVEN TO THE MISSION'S EFFORT TO AVOID PROVISION OF A MANPOWER PLAN WITH A PROJECT AS WELL AS OF AN EFFORT BY THE MISSION TO REDUCE NUMBER OF PROJECT UNITS. REDUCTION IS STILL IN PROGRESS, ESPECIALLY AS REGARDS PERIPHERAL AND CENTRAL PROJECTS. THE PARTICIPANTS EXPRESSED AT MOST DUBIOUS ABOUT WHAT LEVEL OF EFFORT THE MISSION WOULD NEED TO EXPEND AND THEIR ABILITY TO RESPOND, BUT WITH ONE UNANIMOUS THAT THE QUESTION NEEDED TO BE ADDRESSED BY LOOKING AT THE OVERALL PROGRAM. THE FINAL DECISION WAS TO DEFER THIS QUESTION TO BE ADDRESSED THROUGH THE SPDS EXERCISE, WITH SPDS TO PRESENT CONCLUSIONS AND RECOMMEND APPROPRIATE ADJUSTMENTS IF NECESSARY.

4. THE ECPR CONCLUDED THAT INITIATION OF IRRIGATED PERIMETER ACTIVITIES WOULD REQUIRE MAJOR APPLICATION OF LIMITED TECHNICAL ASSISTANCE RESOURCES AND WOULD AFFECT ABILITY TO ACCOMPLISH RANGE OF OTHER ACTIONS RECOMMENDED. THEREFORE, DESIGN MUST INCLUDE A REALISTIC TIME FRAME FOR ACCOMPLISHING OUTPUTS AND SHOULD ADDRESS THE SEQUENCING OF PROJECT ACTIONS. THE ECPR REITERATED CONCERN ABOUT PFP INVOLVEMENT WITH PUBLIC SECTOR INSTITUTION BUILDING ACTIVITY AND SUGGESTED DESIGN CONSIDER INCREASING SHORT TERM TA SO THAT PFP MAY MAKE PROVISION FOR PERIODIC PARTICIPATION OF SOMEONE KNOWLEDGEABLE IN THIS AREA.

5. THE ECPR ACCEPTED AS A PROJECT CONCEPT THAT IT WOULD BE TOO COMPLEX AN UNDERTAKING TO CONSIDER ALTERNATIVES TO RELY UPON CRS AT PROJECT INCEPTION AS REGARDS WATER MANAGEMENT, EXTENSION SERVICES AND INPUT DISTRIBUTION. THE GROUP ALSO AGREED THAT MISSION'S STRATEGY TO ACCENT PRIVATIZATION IN AREAS OF FARM ENTREPRENEURSHIP, RURAL RADIO SERVICE, WATER AND LAND MANAGEMENT AND MAINTENANCE OF PERIMETER WAS APPROPRIATE, ESPECIALLY IN VIEW OF LIMITED TECHNICAL ASSISTANCE. THE STRATEGY OUTLINED BY THE MISSION OF GRADUAL PRIVATIZATION ACCOMPANIED BY A DIALOGUE WITH GOVERNMENT TO OPEN THEIR ATTITUDES TOWARD PRIVATIZATION AND EVENTUALLY POSSIBLE ALTERNATIVES TO A PUBLIC AGENCY WAS WELL RECEIVED. HOWEVER, THERE IS CONSIDERABLE EXPERIENCE IN OTHER PERIPHERAL PROJECTS INDICATING THAT PARTICULARLY WHEN WATER MANAGEMENT BUT ALSO INPUT DISTRIBUTION ARE IN THE HANDS OF PUBLIC INSTITUTIONS, UNCERTAINTY AND THE LACK OF ACCOUNTABILITY OFTEN ARISE AS CRITICAL PROBLEMS WHICH MAY TERRIBLY UNDERMINE THE PROJECT. ACCORDINGLY, SIO WOULD WANT PROJECT DESIGN LOOK INTO THESE PROVISIONS AND MAKE A MORE ANALYTICAL ASSESSMENT OF THE POTENTIAL RISKS DESCRIBED, INCLUDING MANAGEABILITY.

6. A NUMBER OF TECHNICAL ISSUES WERE DISCUSSED. FIRST TO BE NOTED IS WHETHER A SUFFICIENT ANALYSIS HAS BEEN PROVIDED DOCUMENTING REASONS WHY THERE HAS NOT BEEN BETTER UTILIZATION OF THE PERIMETERS. MISSION EXPLANATIONS REGARDING ABSENCE OF RESOURCES AND OF MANAGEMENT CAPABILITY WERE TAKEN INTO ACCOUNT, BUT ECPR FELT THAT DESIGN MUST DELVE MORE DEEPLY INTO WHETHER THERE ARE OTHER POSSIBLE CAUSES INCLUDING TECHNICAL

PROBLEMS SUCH AS NEED FOR PHYSICAL IMPROVEMENTS, FERTILITY, MOISTURE, SOIL SALINITY, ETC. THERE MAY INVOLVE A CLOSE REVIEW OF PERIMETER DATA, MUCH OF WHICH WE UNDERSTAND IS REPORTED IN DUBIOUS. A SECOND ISSUE IS MANAGEMENT OF LAND AND WATER RESOURCES. ECPR CONCLUDED THAT SINCE PROPER MEASURES WERE INTRODUCED TO PREPARE LAND AND MAKE WATER AVAILABLE, I.E., SINCE PERIMETER SURFACES ARE PERCEIVED AS REPRESENTING ASSETS OF MAJOR VALUE, THERE WILL BE SERIOUS PROBLEMS RELATED TO MEETING DEMANDS ASSOCIATED WITH PRODUCTION AND

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COMPETITION FOR ACCESS RIGHTS. KEY CONCERNS WILL BE DEPENDENCE UPON AND ABSENCE OF ALTERNATIVES TO PUBLIC SERVICES, COMPETING SOURCES OF AUTHORITY (TRADITIONAL VERSUS GOVERNMENTAL DETERMINATION OF USE RIGHTS) AND ABSENCE OF A CLEAR UNDERSTANDING OF WHICH PREVAILS, WHO GETS ACCESS TO LAND AREAS NOT YET UNDER CULTIVATION, ASSURING QUALITY BASIC SERVICES EARLY IN THE PROJECT, ETC. COMMENTS FROM FIELD NOTWITHSTANDING, ECPR CONTINUED IN BELIEF THAT LAND TENURE WOULD BECOME A CONCERN WHEN THE ECONOMIC BENEFITS OF FARMING WITHIN THE PERIMETER SURFACES ARE DEMONSTRATED AND, AS A RESULT, FORMERLY RELUCTANT FARMERS WANT TO BECOME INVOLVED. DOCUMENTATION TO SUPPORT THIS VIEW WILL BE PROVIDED TO MISSION AND REDSO. ECPR CONCLUDED THAT DESIGN SHOULD RE-EXAMINE THIS AND RELATED LAND AND WATER USE QUESTIONS, PRESENT FINDINGS IN THE SOCIAL SOUNDNESS ANALYSIS AND DEVELOP A STRATEGY FOR DEALING WITH THEIR FINDINGS AND ECPR'S STATED CONCERNS DURING PROJECT IMPLEMENTATION. THE ECPR ALSO SUGGESTED THAT PROJECT DESIGN TEAM LOOK INTO THE QUESTION OF WHETHER SECTION 511 (B) IS APPLICABLE AND IF SO MAKE AN APPROPRIATE COST/BENEFIT ANALYSIS. FINALLY, THERE IS A NEED TO SPECIFY IN DETAIL THE MODEST PHYSICAL IMPROVEMENTS WHICH REMAIN TO BE ACCOMPLISHED ON THE PERIMETERS AND THE COST INVOLVED. THIS DATA AS WELL AS MAINTENANCE COSTS SHOULD BE TAKEN INTO ACCOUNT IN WRITING THE ECONOMIC ANALYSIS SECTION OF THE PP.

7. SUSTAINABILITY WAS A CRITICAL THEME AT ECPR. AID/W APPRECIATES THE MISSION'S RECOGNITION OF THE NEED FOR PROJECT DESIGNERS TO SET MORE REALISTIC ESTIMATES OF REVENUE GENERATION THROUGH USER FEES. DESIGN TEAM MUST LOOK AT RECURRENT COST IMPLICATIONS AND THE RELATION TO QUALITY OF WATER MANAGEMENT, MAINTENANCE OF INFRASTRUCTURE AND EQUIPMENT AND REMUNERATION OF BASIC

SERVICES. THE NEED FOR GREATER SAY BY BENEFICIARIES IN DECISIONS REGARDING FEES AND LABOR INPUTS SHOULD BE CONSIDERED. AN ANALYSIS OF APPLICATION OF PROJECT FUNDS AND GROWTH IN REVENUE GENERATED DURING THE LOP SEEMS MOST APPROPRIATE TO INDICATE WHAT THE PATHWAY TO AND STRATEGY FOR RECOVERY OF OPERATING COSTS WILL BE.

B. ECONOMIC ANALYSIS WAS DISCUSSED FROM TWO VANTAGE POINTS: FIRST, WITH REGARD TO THE COST PER BENEFICIARY, IT WAS RECOGNIZED THAT THE ISSUE OF HIGH COST PER BENEFICIARY ON THE IRRIGATED PERIMETERS HAD BEEN MISPERCEIVED SINCE THE INVESTMENT IN PHYSICAL INFRASTRUCTURE HAD LARGELY BEEN MADE AND THE PRINCIPAL COST IS FOR TECHNICAL ASSISTANCE. RATHER, THE IRRIGATED PERIMETERS ARE VIEWED AS AN ECONOMIC MOTOR FOR THE OFF-PERIMETER RURAL ENTREPRENEURSHIP ACTIVITIES WHICH ARE THE LONG TERM INTEREST OF THE PROJECT. FROM THIS VANTAGE POINT, THE DESIGN SHOULD VIEW THE APPLICATION OF RESOURCES TO THE IRRIGATED PERIMETERS AS A HEAVY INITIAL INJECTION AS PART OF A BROADER SYSTEM AND SHOULD APPRAISE WHETHER THE INVESTMENT IS JUSTIFIED AND ASSESS THE TIME REQUIRED TO ACHIEVE RECOVERY THROUGH THE REALIZATION OF PROJECT OUTPUTS. THE SECOND CONCERN WAS THE VIABILITY OF THE APPROACH PROPOSED TO PROJECT IMPLEMENTATION (I.E. DEPENDENCE UPON TWO CRITICAL SERVICES AND THE STRATEGY FOR PROVISIONING) TO BE REFINED IN THE DESIGN. THE ECONOMIC ANALYSIS SHOULD APPRAISE WHETHER THE SEQUENCE OF STEPS AND TIMING INDICATED CAN BE SUSTAINED IN ECONOMIC/FINANCIAL TERMS. (SEE PARA 5 ABOVE.)

9. THERE WAS A BRIEF DISCUSSION OF WHETHER GRAVITY IRRIGATION WOULD MEET ALL PROJECT NEEDS; WHETHER THERE WOULD BE A NEED DURING THE LOP TO EXPAND OR TO

PREPARE FOR CULTIVATION OF THE AREA UNDER IRRIGATED CULTIVATION. SHOULD THIS BE ACCOMPLISHED; AND WHETHER THERE WERE OTHER INFRASTRUCTURE NEEDS ASSOCIATED WITH PERIMETER EXPLOITATION. WHETHER ANY OF THESE CONCERNS ARE RELEVANT SHOULD BE DETERMINED DURING THE DESIGN PROCESS.

10. THERE ARE A NUMBER OF ECOLOGICAL AND ENVIRONMENTAL CONCERNS WHICH HAD BEEN ADDRESSED. NOTED AT THE ECPR WAS IMPACTS ON SOIL CONDITION, ASSESSMENT OF POTENTIAL RISK OF SCHISTOSOMIASIS AND OTHER WATER

RELATED DISEASES, THE NEED FOR AN INITIAL ENVIRONMENTAL EXAMINATION (NEE), IMPLICATIONS OF DROUGHT, USE OF PESTICIDES, HERBICIDES AND FERTILIZER, EROSION, LOGGING, GALT WATER INFILTRATION AND DECLINING SOIL FERTILITY RESULTING FROM IRRIGATED SYSTEM AGRICULTURAL PRACTICES.

11. ECPR CONCLUDED THAT THE DESIGN SHOULD PROVIDE FOR CONSTRUCTIVE PROJECT EVALUATIONS TO PERMIT EARLY ADJUSTMENTS IF NECESSARY, AND PROVIDE DATA FOR DIALOGUE WITH GOT ON PROGRESS TO DATE AND RECOMMENDED CHANGES IF APPROPRIATE.

12. THE SHIFT FROM AN OPG FORMAT TO COOPERATIVE AGREEMENT IS NOT SEEN AS AFFECTING QUESTION OF PFP'S CASH CONTRIBUTION TO PROJECT UNDER NEW AGENCY GUIDELINES. EMPHASIS IS PLACED ON PVO MAKING A CASH CONTRIBUTION. THE DESIGN TEAM SHOULD DETERMINE WHAT LEVEL OF CASH CONTRIBUTION IS APPROPRIATE FOR THIS PROJECT.

13. THE PRINCIPAL AREAS OF ANALYSIS OUTLINED HERE, IN ADDITION TO HANDBOOK REQUIREMENTS, ARE SUMMARIZED AS FOLLOWS:

- A. ASSESSMENT OF PREMISES REGARDING PROPOSED RELATIONS WITH OPS, INCLUDING INTRODUCTION OF ECONOMIC/FINANCIAL IMPLICATION INTO ASSESSMENT OF RISKS;
- B. REVIEW OF TECHNICAL DATA AS REGARDS UNDERUTILIZATION OF PERIMETERS TO DATE;
- C. RECONSIDERATION OF LAND TENURE AND RELATED QUESTIONS;
- D. SPECIFICATIONS OF COSTS FOR PHYSICAL IMPROVEMENTS AND MAINTENANCE AND INCORPORATION INTO THE ECONOMIC ANALYSIS;
- E. FUNDS GENERATION AND APPLICATION ANALYSIS RELATED TO SUSTAINABILITY;
- F. ECOLOGICAL AND ENVIRONMENTAL CONCERNS;
- G. PVO CASH CONTRIBUTION.

14. AAO WITH CONCURRENCE OF REDSO HAS DELEGATION TO AUTHORIZE SUBJECT PROJECT WHEN IT DETERMINES THAT DESIGN REQUIREMENTS OUTLINED HEREIN ARE MET. AID/W APPRECIATED MISSION'S DEPENDENCY TO POSSIBLE INVOLVEMENT OF AID/W PPS. IN ORDER TO PROMOTE ECONOMIC TO WORK ON ECONOMIC ANALYSIS AND SUSTAINABILITY SINCE THIS PERSON IS MOST LIKELY TO BE A CONSULTANT AND IN VIEW OF SIGNIFICANT REDSO INVOLVEMENT IN DESIGN, WOULD AAO/REDSO PREFER INDIVIDUAL TO BE PROVIDED BY REDSO? SHULTZ

UNCLASSIFIED

ANNEX B

LOGICAL FRAMEWORK OF THE SIO RIVER PROJECT

NARRATIVE SUMMARY

Program goal

Stimulate economic, human and social institutional development by increased productivity and better management of resources in the Sio River region of Togo.

Project purpose

To increase the involvement of rural producers in more productive economic activities through regional economic development, credit education, management training and introduction of technical packages in the Sio River region.

OBJECTIVELY VERIFIABLE INDICATORS

1. Improved agricultural and management practices and problem-solving abilities within the Sio River region.
2. Increased quantity and quality of agricultural and agriculturally related activities within the framework of a more balanced local economy.
3. Creation and promotion of local, production-related institutions that will enhance people's access to resources and decision-making, especially the poor majority.

EOPS

1. 2000 direct beneficiaries touched by loans and/or technical assistance.
2. 500 farmers with improved management and technical skills
3. 20 producer groups with increased group management skills whose member incomes have been raised because of organization.
4. 75 clients a year receiving training and management assistance. Loan recovery rate of 90%.

MEANS OF VERIFICATION

1. Pfp baseline data study.
2. Project Monitoring and Management Information System
3. Pfp and MRD periodic reports.
4. External evaluations. (USAID)

1. Monitoring system; project evaluation
2. Monitoring system, project evaluation and Pfp reports.
3. Financial reports, Pfp reports

IMPORTANT ASSUMPTIONS

1. Market prices for agricultural produce, especially cereals, encourage production.
2. GOT continues support to development of Sio River region.

1. GOT commits promised resources
2. Rainfall follows normal patterns.

NARRATIVE SUMMARY

Outputs

1. Increased crop and animal production and marketing among rural producers
2. Provision of credit and credit training to rural producers
3. Collaborative relationship established between producer groups and institutions offering technical, credit and management assistance
4. More productive utilization of Sio River Irrigated Perimeter
5. Trained cadre of extension personnel
6. Trained project agents, farmers, producers.

OBJECTIVELY VERIFIABLE INDICATORS

1. Doubling of average crop yields per hectare; increased animal marketing; producer groups formed and functioning.
2. Ongoing credit program administered by PFP training Togolese project staff
3. Producer groups receiving credit, participating in training and receiving regular extension visits.
4. Functioning model for the irrigated perimeter and 150 hectares under intense cultivation by year 5.
5. 10 MRD agents operating more productively.
6. 8 project agents trained
500 farmers receiving training

MEANS OF VERIFICATION

1. Surveys, monitoring PFP activity reports, etc.

IMPORTANT ASSUMPTIONS

1. GOT provide extension personnel
2. Rainfall in Sio Watershed remains normal
3. No material or social disasters interfere with small scale economic activity.
4. An institutional base in the irrigated perimeter with which the project can collaborate.

LOGICAL FRAMEWORK OF THE SIO RIVER PROJECT

NARRATIVE SUMMARY

OBJECTIVELY VERIFIABLE
INDICATORS

MEANS OF VERIFICATION

IMPORTANT
ASSUMPTIONS

Inputs

AID

Personnel
Commodities
Credit fund
Operating costs
Evaluation

GOT

Personnel
Operating costs
Office space
Other government services

Peace Corps

6 volunteer person-years

ANNEX C
PROJECT MONITORING

Benefit Indicator Tables

1. Credit Training Fund
2. Socio-Economic Change in Individual Households
3. Development of Agricultural Productivity
4. Group and Organizational Development
5. Regional Economic Development

CREDIT TRAINING FUND

VARIABLES	INDICATORS	MEASUREMENT NOTES
1. Credit fund beneficiaries	<ul style="list-style-type: none"> -- Total number of loans made -- Amount loaned -- Average size loan -- Loans by economic sector/activity -- Loans in/out of perimeter -- Loans to groups -- Loans to women -- Loans to young farmers 	<p>Monitoring of the credit training fund will be the primary responsibility of the Credit Manager assisted by the Agricultural Coordinator.</p>
2. Types of benefits	<ul style="list-style-type: none"> -- Working capital/investment capital -- Permanent enterprises established -- Adoption of improved technology -- Effects on other economic activities in the region -- Benefits by economic sector 	<p>Detailed record systems will be established and maintained in PFP field offices and will be the source of data for monitoring this activity.</p>
3. Credit fund performance	<ul style="list-style-type: none"> -- Initial size of loan fund/current size -- Number of loans amortized/due to date -- Total funds repayed/due to date -- Total loans in arrears/approved to date -- Delinquency rate -- Fund performance by economic sector 	

GROUP AND ORGANIZATIONAL DEVELOPMENT

VARIABLES	INDICATORS	MEASUREMENT NOTES
<p>1. Development of local producer organizations, including capability to:</p> <ul style="list-style-type: none"> a) assess needs b) understand causes and consequences of action c) design viable plans d) organize and administer activity e) manage finances f) have a realistic strategy for further development <p>2. Development of the DRDR as a viable public institution, including</p> <ul style="list-style-type: none"> A. Project Management Systems B. Viable Strategy for Institutional Sustainability C. External Organizational Strength in the Eyes of Local Constituents 	<p>For local producer groups and organizations we will be assessing their ability to perform the following functions:</p> <p><u>Needs Assessment:</u> Identify and articulate common needs, problems; focus on short-term actions; learn to communicate among themselves to achieve a common focus.</p> <p><u>Understanding Causes & Consequences of Action:</u> Understand the local project context; prioritize needs, activities and the costs and risks associated with them. Understanding and acceptance of risk by group members is a key condition of their investment in a group approach.</p> <p><u>Designing Viable Plans:</u> choosing among approaches for action and problem-solving; making an informal estimate of benefits and costs to group members</p> <p><u>Administrative Capability:</u> delivery of services to group members; preventative maintenance of group assets; arbitration of questions or disputes among individual members; ability to carry out necessary tasks on a routine basis</p> <p><u>Financial Management:</u> keeping records; obtaining and maintaining good credit; having a positive cash flow; disposing of surplus; sustaining profitability</p> <p><u>Realistic Development Strategy:</u> Plan to avoid losing momentum and credibility; to reduce critical dependencies; to raise resources; to broaden and deepen mutually beneficial behavior.</p> <p>For the DRDR/Maritime Reg. "viability" is defined as the capability to:</p> <ul style="list-style-type: none"> --establish and implement a perimeter water management system --plan and execute a production campaign which involves an increasing number of farmers, cropping seasons and crop mixes on the perimeter each year --operate a perimeter maintenance program financed primarily by user fees --raise the productivity of CRS workers --insure the longterm productive utilization of the perimeter, especially by defining the CRS's role vis-a-vis producer groups farming perimeter land 	<p>The project will have two Peace Corps volunteers working in the formation and strengthening of producer groups. They will be the individuals primarily responsible for monitoring group formation. The main objective of this monitoring will be to enhance the local organizing of producers rather than to collect and analyze production or performance data. Therefore reporting is more likely to be in the form of descriptions of <u>processes</u> of organization building. These reports will analyze not only the actions taken by the group to benefit their membership, but also the complementary sharing of function between private groups and public agencies.</p>

REGIONAL ECONOMIC DEVELOPMENT

VARIABLES

INDICATORS

MEASUREMENT NOTES

The overall concept which we wish to monitor for change is Gross Regional Product. Several variables which are expressions of it include:

1. Gross Village Product: increased availability of goods and services (price, quantity, quality, diversity, availability of key inputs, regularity of supply)
2. Improved local market infrastructure
3. Development of other local economic infrastructure
4. New, expanded local industry
5. Developmental shaping of the local economy
6. Positive influence on the local balance of payments
7. Improved employment
8. Strengthening horizontal and vertical linkages of region's economy
9. Increased savings and investment in productive activities

More operational definitions of these variables are:

Improved Market Infrastructure:

- + economic organization
- + improvements to physical facilities
- + information about prices and demand
- + creation of alternative marketing channels
- + regularized legal requirements

Development of other economic infrastructure which complements small scale economic activity

- transport, packing, grading and storage facilities
- businesses which supply goods and services which are key to many other producers
 - *distributors
 - *suppliers of farm inputs
 - *veterinary services
 - *tool and machine repair

New, Expanded Local Industry

- increased processing of local primary goods
- increased collection and use of local raw materials, waste, byproducts
- increased organization of small producers
- introduction of improved production technology that uses local resources

Developmental Shaping of the Local Economy

- + balance among the types of small enterprise and small scale activity in a local economy
- + rationalization of competition by encouraging people to fill needs rather than engage in an activity where there is too much supply
- + strengthen the local chain of businesses key to the support of agricultural production and processing
- + encourage producers to utilize effectively the public services available to them
- + facilitate linkages among firms at different levels of the economy

Expanded Vertical and Horizontal Linkages include

- + ability of local entrepreneurs to supply the goods and services that local producers and consumers want and need
- + ability of the local economy to adjust to situations of surplus and deficiency
- + connection of local individuals to resources at higher economic levels (eg., banking services, investment, technology)
- + transportation and communications linkages

The monitoring of regional economic development will be done primarily through periodic surveys of local economies and special studies.

The periodic market surveys will collect information about prices, the availability of goods and services, and new kinds of economic activity or investment.

These market surveys will be done in 20 villages located at varying distances from the Sio River Irrigated Perimeter. Two villages will be added as a control group from an area without such technical assistance. Two villages will be added as a comparison group from an irrigation scheme elsewhere.

With close monitoring and analysis of the processes of regional economic development, we hope to refine the understanding of Togolese practitioners, AID, PFP and others about practical methods to promote this.

Increased Local Savings and Investment in Productive Activities

- Movement of savings from small, non-productive forms to business or farm investment, banks, credit unions, or other local institutions that concentrate capital
- Increase in longterm productive investments such as wells, education, land improvements
- Decrease in purely speculative activities
- Reduction in the total number of economic activities and

SOCIO ECONOMIC CHANGE IN INDIVIDUAL HOUSEHOLDS

VARIABLES	INDICATORS	MEASUREMENT NOTES
<ol style="list-style-type: none"> 1. Increasing options for productivity 2. Labor: changes in the amount used and distribution throughout the year 3. Cash earnings 4. Agricultural production 5. Increased productivity 6. Human capital formation (Formation of Entry-Level Entrepreneurs) 7. Technology Adaptation 8. Improvements in Standard of Living (SOL) 9. Increased economic access of women and young farmers 10. "Happiness Quotient" (Ability of people to satisfy what they define as their wants and needs. A measure of project responsiveness to local demand) 11. Increased economic security, problem-solving ability, risk reduction. Ability to change course and adopt new, higher yielding options. Ability to make a successful transition from extensive to more intensive modes of production that feature <ul style="list-style-type: none"> + complexity + risk management + adaptive ability + innovation relative to peers + ecological preservation + feasibility analysis (calculation of return on investment) 	<p>Several of the more interesting indicators that demonstrate these variables are:</p> <p><u>Formation of Entry Level Entrepreneurs</u></p> <ul style="list-style-type: none"> --Interest in productivity; ability to see and define options for it --Presence of, and increasing scope and complexity of cash activities --Planning: thinking about future courses of action and evaluating them in realistic, analytic ways --Marketing: thinking about what to sell, where, when and at what price --Increased and better thinking about the relations among the elements of a business or economic activity (inputs, production process, marketing, management and financial decision-making) --Adaptation of innovation relative to peers in terms of technical or managerial processes (eg., written records, preventative maintenance, etc.) <p><u>Increased Productivity</u></p> <ul style="list-style-type: none"> --Increase in the percentage of an individual's own consumption being produced by themselves (food, housing, etc.) --Increased surplus; increased capturing of the surplus for further productive activities --Increased tapping of the economic potential available from family labor; crop selection; improved production techniques; natural resources; artisan skills --Increased efficiency of the enterprise for economic activity in terms of: <ul style="list-style-type: none"> *waste *use of by-products *use of local raw materials *purchasing at wholesale prices *cutting loss of storage or shipment --Ability to adjust production to seasonal or other market fluctuations --Ability to organize the relationship between the 'enterprise' and other aspects of the family economy. Recognition of the consequences of drawings and investment and control of family 	<p>Socio economic impact of the Sio River Project will be monitored by a socio-economic survey of 60 households, 40 of which are project participants, 10 of which are a comparison group in another irrigation scheme and 10 of which are a control group without external technical assistance.</p> <p>At the start of the project a baseline survey will be performed to determine the economy of the household. This will include the activities engaged in; the use of labor; economic returns both in subsistence consumption and cash; and skill levels demonstrated in farming practices and money management.</p> <p>To measure changes in the standard of living, households will be classified into five levels of economic well-being according to what is consumed. Each of the SOL levels will be characterized by a "market basket" of food, shelter, clothing, education and other items being consumed. Families will be surveyed annually to determine if they are advancing to higher levels of SOL.</p> <p>Certain variables such as the "Happiness Quotient" may not find good expressions in data form. We still value this and will continually ask people about their happiness because it is such a crucial indicator of local peoples' satisfaction with processes of change.</p> <p>Although this socio-economic household survey will require no small amount of effort at the beginning to design and test the survey instruments, it represents a continuing distinctive use of "operations research." It wedges research on the nature and impact of socio-economic change to a very active program of technical assistance. It is not common to see this quality of monitoring in most implementation efforts.</p>

VARIABLES	INDICATORS	MEASUREMENT NOTES
<p>1. Agricultural and livestock production, including</p> <ul style="list-style-type: none"> --rice --corn --casava --yams --traditional vegetables --Western vegetables --sugar cane --tree crops <ul style="list-style-type: none"> *palm *mangoes *citrus --small animal raising <ul style="list-style-type: none"> *goats *sheep *poultry *swine <p>2. Increased agricultural productivity</p> <p>3. Acceptance and spread of agricultural innovation</p> <p>4. Improved farm management</p> <p>5. Improved farm business management</p>	<p>Several of the indicators that demonstrate these variables are:</p> <p><u>Improved Agricultural Practices</u></p> <ul style="list-style-type: none"> --use of fertilizer --improved animal husbandry <ul style="list-style-type: none"> *vaccination *parasite control *worming *use of minerals *forage production --crop rotation (gets rid of parasite crops, restores soil fertility) --anti-erosion measures <ul style="list-style-type: none"> *living fences *small dykes *tied ridges (terracing) --use of animal traction rather than hand plowing <p><u>Improved Farm Management</u></p> <ul style="list-style-type: none"> --use of improved techniques and practices with traditional indigenous crops --crop rotation --pure stands (versus intermixing of several types of crops) --better distribution of labor throughout the agricultural calendar because of improved practices <p><u>Agricultural Innovation</u></p> <ul style="list-style-type: none"> --use of injection planter --use of ultra low volume sprayers --optimum use of fertilizer on rice --use of fertilizer on traditional crops --parboiling of rice --use of mist nets to control birds --treating of seed for fungus and diseases --improved grain storage --seed inoculation --appropriate fencing --use of threshing racks 	<p>Data sources for the monitoring of agricultural production and productivity include:</p> <ol style="list-style-type: none"> 1. GOT records and reports 2. PFP client files (essentially the feasibility analyses and follow-ups of agricultural loans) 3. Household socio-economic survey 4. Records and investigations of the Ag Demonstration Fund 5. Aerial photographs 6. Video documentation of improved practices and skill mastery <p>During the Operations Research & Design phase of the project an initial surveying of farm practices both on the perimeter and outside it was done. These farm studies will be combined into a baseline analysis at the start of the project of prevailing agricultural practices and farm systems in the Sio River region. More detailed and operational indicators will be developed in conversations with experienced area farmers, CRS and other agricultural development professionals.</p>
		<p><u>Farm Business Management</u></p> <ul style="list-style-type: none"> --Ability to manage the cash from the sale of farm surplus and to reinvest it in productive activities --Ability to plan and carry out a production campaign which shows innovation relative to traditional practices --Feasibility analysis of the relationship of inputs to production practices, to marketing to cash management --Preventative maintenance of farm land, animals, tools, machinery --Farm record-keeping

1/2

Annex D

AID PROJECT STATUTORY CHECKLIST

INTRODUCTION

A. The statutory checklist is divided into three parts: 5C(1) - Country Checklist, 5C(2) - Project Checklist, and 5C(3) - Standard Item Checklist.

*B. The Country Checklist, composed of items affecting the eligibility of the country as a whole, is to be prepared by AID/W at the beginning of each fiscal year. In most cases responsibility for preparation of the country checklist would be assigned to the desk officers, who would work with the Assistant General Counsel for their region. The responsible officer should ensure that this part of the checklist is updated periodically. The checklist should be attached to the first PP of the fiscal year and then referenced in subsequent PP's.

*C. The Project Checklist focuses on statutory items which bear directly on the project. Although the project checklist should be prepared in the field, information should be requested from Washington whenever necessary. A completed project checklist should be included with each PP; however, the list should also be reviewed at the time a PID is prepared so that legal issues that may bear on project design are flagged early.

D. The Standard Item Checklist is intended as a working tool, rather than for inclusion in a project paper. It provides condensed coverage, in checklist form, of statutory matters routinely covered in the project agreement (e.g., 50/50 shipping, etc.). Items from this list should be noted in the PP or added to the project checklist when they require or warrant special treatment or concern.

E. - As indicated by their subdivisions, these Checklists are intended for projects funded from Development Assistance and the Economic Support Fund.

*F. These Checklists include the applicable statutory criteria from the Foreign Assistance Act of 1961, as amended ("FAA"), the International Security and Development Cooperation Act of 1981 ("ISDCA of 1981"), and the Foreign Assistance and Related Programs Appropriations Act, 1982, P.L. 97-121 ("FY 1982 Appropriation Act").

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G. These Checklists do not purport to list every conceivable statutory provision which might be relevant, but are intended to provide a convenient reference for provisions which may be of more frequent or more significant relevance.

H. Space has been provided at the right of the Checklist questions for responses and notes. Extra copies of the appendix may be requisitioned from SER/MO/PAY for use in project development and drafting.

5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable generally to FAA funds, and criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 481. Has it been determined that the government of the recipient country has failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?
NO

2. FAA Sec. 520(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government?
NO

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3. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? NO

4. FAA Sec. 532(c), 620(a), 620(f), 620D; FY 1982 Appropriation Act Secs. 512 and 513. Is recipient country a Communist country? Will assistance be provided to Angola, Cambodia, Cuba, Laos, Vietnam, Syria, Libya, Iraq, or South Yemen? Will assistance be provided to Afghanistan or Mozambique without a waiver? N/A

5. ISDCA of 1981 Secs. 724, 727 and 730. For specific restrictions on assistance to Nicaragua, see Sec. 724 of the ISDCA of 1981. For specific restrictions on assistance to El Salvador, see Secs. 727 and 730 of the ISDCA of 1981. N/A

6. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property? NO

7. FAA Sec. 620(1). Has the country failed to enter into an agreement with OPIC? NO
8. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters? NO
- (b) If so, has any deduction required by the Fishermen's Protective Act been made? NO
9. FAA Sec. 620(g); FY 1982 Appropriation Act Sec. 517. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any AID loan to the country? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the appropriation bill appropriates funds? No
10. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the amount of foreign exchange or other resources which the country has spent on military equipment? (Reference may be made to the annual "Taking into N/A

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Consideration* memo:
 *Yes, taken into account
 by the Administrator at
 time of approval of
 Agency OYB.* This
 approval by the
 Administrator of the
 Operational Year Budget
 can be the basis for an
 affirmative answer during
 the fiscal year unless
 significant changes in
 circumstances occur.)

11. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?

NO

12. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? (Reference may be made to the Taking into Consideration memo.)

According to 81 US UN, 0094, Togo was current on it's dues as of January 1981. No more recent information has been recieved on this.

13. FAA Sec. 620A; FY 1982 Appropriation Act Sec. 520. Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed an act of international terrorism? Has the country aided or

NO

abetted, by granting sanctuary from prosecution to, any individual or group which has committed a war crime?

14. FAA Sec. 666. Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA?
15. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device, after August 3, 1977? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.)
16. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Session of the General Assembly of the U.N. of Sept. 25 and 28, 1981, and failed

NO

NO

NO

to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.)

- 17. ISDCA of 1981 Sec. 721.
See special requirements for assistance to Haiti.

N/A

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria.

a. FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

No

2. Economic Support Fund Country Criteria

a. FAA Sec. 5023. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the country made such significant improvements in its human rights record that furnishing such assistance is in the national interest?

NO

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b. ISDCA of 1981, Sec. 725(b). If ESF is to be furnished to Argentina, has the President certified that (1) the Govt. of Argentina has made significant progress in human rights; and (2) that the provision of such assistance is in the national interests of the U.S.?

N/A

c. ISDCA of 1981, Sec. 726(b). If ESF assistance is to be furnished to Chile, has the President certified that (1) the Govt. of Chile has made significant progress in human rights; (2) it is in the national interest of the U.S.; and (3) the Govt. of Chile is not aiding international terrorism and has taken steps to bring to justice those indicted in connection with the murder of Orlando Letelier?

N/A

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5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: 3.1. applies to all projects funded with Development Assistance Funds, 3.2. applies to projects funded with Development Assistance loans, and 3.3. applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? YES

A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 534A; Sec. 553(D).

(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project;
 (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that amount)?

Congressional Presentation
 FY 85 (Annex I, Page 369)
 Congressional Notification

YES

2. FAA Sec. 511(a)(1). Prior to obligation in excess of \$100,00, will there be

YES Included in PP

(a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

NO

4. FAA Sec. 611(b); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.)

Cost/benefit analysis contained in EA and shown to be favorable.

5. FAA Sec. 611(f). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

N/A

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6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

NO

PfP's unique and effective method of small enterprise management assistance thru credit training has led the GOT to request PfP to execute a program of regional development.

7. FAA Sec. 501(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

- a) Agricultural inputs of fertilizer, plant protection and animal protection products should increase.
- b) The project is strongly oriented toward private sector initiatives.
- c) The project has a group formation specialist PCV in it's staffing projectionsl
- d) Project's emphasis on private sector will help diversify agricultural inputs access.
- e) PfP will help national Services to become more effective. Private sector will be strengtened thru better management taught by the project personnel.
- f) N/A

8. FAA Sec. 501(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

The small scale producers in project area do not have access to international trade channels.

- 9. FAA Sec. 512(b), 535(h);
FY 1982 Appropriation
Act Sec. 507. Describe
steps taken to assure
that, to the maximum
extent possible, the
country is contributing
local currencies to meet
the cost of contractual
and other services, and
foreign currencies owned
by the U.S. are utilized
in lieu of dollars.

NOT is meeting virtually
all costs related to the
extension services in the
project region.

- 10. FAA Sec. 512(d). Does
the U.S. own excess
foreign currency of the
country and, if so, what
arrangements have been
made for its release?

NO

- 11. FAA Sec. 501(e). Will
the project utilize
competitive selection
procedures for the
awarding of contracts,
except where applicable
procurement rules allow
otherwise?

YES

- 12. FY 1982 Appropriation Act
Sec. 521. If assistance
is for the production of
any commodity for export,
is the commodity likely
to be in surplus on world
markets at the time the
resulting productive
capacity becomes
operative, and is such
assistance likely to
cause substantial injury
to U.S. producers of the
same, similar or
competing commodity?

No export commodities are
expected to result from
this project.

- 13. FAA 119(c) and (d).
Does the project comply
with the environmental
procedures set forth in
AID Regulation 16? Does

YES

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the project or program take into consideration the problem of the destruction of tropical forests?

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

N/A

8. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(b), 111, 113, 231(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and

- a) Project's target population is that portion not reached by traditional banking and credit institutions.
- b) There will be a PCV specialist in group formation, whose efforts may lead to some cooperatives being formed.
- c) The project provides for strengthening community initiated self-help efforts.
- d) Women's participation in project activities is addressed in the PP. Two of the five loans for non-ag activities in the Operational Research Activity (ORA) were to women.
- e) The Togo Project is benefiting from experience gained by P&P personnel in Liberia and

Upper Volta.

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otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

ARDN YES

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

YES REDSO Agronomist, Roy Bronson confirmed the need for machinery in a report to the design efforts for the Sio River Project due to the heavy soils in the area.

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?

NO Togo is an RLDC

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e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"? (H.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.

NO

f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

Yes Refer to economic analysis and the technology section.

g. FAA Sec. 231(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage

Methods of improved farm and small enterprise management is a concern of Togolese whether farmer, artisan, small business or government. Increased food production is a stated national goal. A large part of the PFP budget is for training of government extension staff, farmers and PFP's staff of Togolese credit agents.

institutional development;
and supports civil
education and training in
skills required for
effective participation in
governmental processes
essential to self-government.

2. Development Assistance Project
Criteria (Loans Only)

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan, at a reasonable rate of interest. N/A
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan? N/A
- c. ISDCA of 1931, Sec. 724 (c) and (d). If for Nicaragua, does the loan agreement require that the funds be used to the maximum extent possible for the private sector? Does the project provide for monitoring under FAA Sec. 624(g)? N/A

3. Economic Support Fund
Project Criteria

- a. FAA Sec. 531(a). Will this assistance promote economic or political N/A

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stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

- b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities? N/A
- c. FAA Sec. 534. Will ESP funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives? N/A
- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 502. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?

N/A
2. FAA Sec. 504(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?

YES, except as otherwise authorized by waivers included in this PP.
3. FAA Sec. 504(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company?

N/A
4. FAA Sec. 504(e); ISDCA of (33) Sec. 705(a). If offshore procurement of agricultural commodity or product is to be

N/A

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financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

5. FAA Sec. 504(a). Will construction or engineering services be procured from firms of countries otherwise - eligible under Code 941, but which have attained a competitive capability in international markets in one or these areas?

N/A

6. FAA Sec. 503. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates?

NO

7. FAA Sec. 521. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other

YES

Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

8. International Air Transport Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? YES
9. FY 1982 Appropriation Act Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? N/A

3. Construction

1. FAA Sec. 501(d). If capital (e.g., construction) project, will U.S. engineering and professional services to be used? There is no construction in the project apart from a small shelter that will cost less than \$10,000.
2. FAA Sec. 511(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? N/A

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3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)?

N/A

C. Other Restrictions

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?

N/A

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?

YES

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?

YES

4. Will arrangements preclude use of financing:

- a. FAA Sec. 104(f); FY 1982 Appropriation Act Sec. 525: (1) To pay for performance of abortions as a method of family

YES

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- planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion?

YES

- b. FAA Sec. 520(a). To compensate owners for expropriated nationalized property?

YES

- c. FAA Sec. 650. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs?

YES

- d. FAA Sec. 562. For CIA activities?

YES

- e. FAA Sec 535(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained?

YES

- f. FY 1982 Appropriation Act, Sec. 503. To pay pensions, annuities, retirement pay, or

YES

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adjusted service
compensation for military
personnel?

g. FY 1962 Appropriation
Act, Sec. 503. To pay
U.N. assessments,
arrearages or dues? YES

h. FY 1962 Appropriation
Act, Sec. 505. To carry
out provisions of FAA
section 209(d) (Transfer
of FAA funds to
multilateral
organizations for
lending)? YES

i. FY 1962 Appropriation
Act, Sec. 510. To
finance the export of
nuclear equipment, fuel,
or technology or to train
foreign nationals in
nuclear fields? YES

j. FY 1962 Appropriation
Act, Sec. 511. Will
assistance be provided
for the purpose of aiding
the efforts of the
government of such
country to repress the
legitimate rights of the
population of such
country contrary to the
Universal Declaration of
Human Rights? NO

k. FY 1962 Appropriation
Act, Sec. 513. To be
used for publicity or
propaganda purposes
within U.S. not
authorized by Congress? YES

ANNEX E

Economic Analysis

Background

Partnership for Productivity has a unique approach to the development of a rural community or region. Instead of focusing a program on a single economic activity, such as crop production, PFP targets its projects to helping the entrepreneur or producer who may be engaged in more than one activity. By providing training along with credit, PFP is able to increase technical and management skills needed for handling the more complex activity while building on skills already possessed by the participant. Second, PFP does not actively pursue clients. Rather, the clients approach PFP with a proposal or to obtain help in preparing the proposal. Interaction with PFP by farmers or commercants has also led to the development of voluntary pre-cooperative groups which, because of their size, can obtain economy of scale savings from bulk marketings or input purchases. Tight control over initial loans and continued supervision helps to preliminarily establish a good reputation for PFP and satisfied clients who observe growth in their own businesses. Additional incomes generated from these PFP financed activities are expected to have multiplier effects which, in turn, will produce additional economic activities resulting in greater development.

Togo's Economy

Togo is divided into five administrative/geographic regions, according to latitudes. The Savanna region is in northern most Togo, which is followed by Kara, Central, Plateau, and Maritime, the southern most region. The middle regions have the most rain 1400 mm/year, while the north and south each receive as low as 1000 mm/year. Seventy five percent of Togo's 2.8 million population derive their livelihood from agriculture which contributed approximately 25% to the GDP.

In 1982 Togo's GDP was 270 Billion FCFA (\$818 million) with a per capita income of \$300. Phosphate mining is the principal source of foreign exchange, accounting for 40% of exchange earnings in 1980 and 30% of government revenues. Agriculture contributed to 35% of the GDP in the early 70's. Due to a heavy investment program, growth in the government sector, disincentives caused by agricultural price controls, and poor extension services, the agricultural sector GDP contribution was reduced to 25% by the early 1980's. The heavy investment program (infrastructure, tourism, and industry) was brought about by a boom in world phosphate prices. The subsequent lowering of phosphate prices found Togo overextended in its investments and highly in debt. Real growth was 3% p.a. between 1975-1980 and has been less than 1% or negative since then. Togo is now \$727 million in debt and has rescheduled its payments several times. Debt service due is now 35% of annual exports earnings.

The recent two year drought, (1982/83-83/84) has hurt agricultural production for both cash crops (coffee, cocoa, and cotton) and food staples (corn, manioc, sorghum, and rice), though production had declined prior to that time due to poor agricultural policy. Cocoa purchases dropped from 16000 MT in 1980/81 to only 10000 tons in 1982/83. For coffee, the figures are 9400 and 6000 tons, respectively. Purchases are projected to increase for the 83/84 season. Concomitantly, rice imports rose from 5000 tons p.a. in 1978 to over 15000 tons for 1984. Wheat imports also rose sharply from 11000 tons in 1978 to 40000 tons in 1981.

Negotiations with the IMF has resulted in fiscal reform, elimination of non-productive parastatals, improvement in government prices in cocoa and coffee, and more emphasis on rural development. The PfP program complements GOT reform measures in that it seeks to provide rural producers with credit and training to make better use of their own resources ultimately resulting in greater economic output, particularly in crop and animal production. The additional foodstuffs produced from this project will help to alleviate the drain on critically needed foreign exchange caused by food imports and debt payments.

Project Zone Economic Enterprises

The PfP project will cover the lower half of the Zio Prefecture of the Maritime region. This area has a population of approximately 130,000 people, or 65% of the prefecture's population. Overall density of the Maritime region is 140 person/km², the highest in Togo.^{1/} The density is unevenly distributed, though, since the upper northwest portion of the project zone is characterized by open tracts of unsettled land.

Only a few of the region's population centers exceed 5000 inhabitants in size. These centers include Mission Tové, Bodja, Bogame, Balougan, Dalane, Darie, Kevé, Zolo and Tsevié which, as the largest city, has over 20,000 inhabitants. While the remaining 70,000 zone residents live in smaller villages, the majority of the people (in the larger villages also) are engaged in agricultural related activities. Below, a description of these activities is presented. These activities will be used in analyzing the economic returns to the project.

Farms

According to recent SOTED reports 1981 and 1983 (see references), the average farm size in the region varies between 1.9 and 2.2 ha which includes both annual and perennial crops. Sixty percent of the households cultivate less than 1.5 ha. Each farm, according to a survey that sampled 5% of the Ave^{2/} district's 54,000 inhabitants, has 2.4-2.7

^{1/} Density varies from 17 inhabitants/km² in Central region to 65/km² in Kara to 140/km² in Maritime. The national average is 45/km².

^{2/} Ave is located in the project zone.

active workers with a total of 6.1 persons per household (farm). Average rainfall is 1,227 mm/year with two rainy seasons - one which extends from 15 March to 15 July and the other from 15 September to 15 November. The dry season exists between November and March, and a shorter dry season between July and September. Irrigation can be practiced during the longer dry season, and vegetable gardening during the shorter dry season. The typical exploitant has three fields on which he or she cultivates (11% of the household heads are women) and 50% of the fields are 1.5 km or further from the residence. Maize (corn) and manioc are the predominant crops, covering 60% and 22% of the land devoted to annual crops while root crops (sweet potatoes, etc.), peanuts, and rice each cover about 5%, 6%, and 5% respectively. Sixty-two percent of the crop land area is cultivated in the first season so that 38% is farmed in the second. Corn is nearly equally divided between the two seasons: 52% in the first season, 48% in the second season. Seventy-three percent of the farmers interviewed also indicated that they had some land devoted (about one half hectare) to perennial crops usually palm trees and/or some cocoa. Of the annual crops that are grown, 41%, on average, are pure stand, 33% mixed (manioc and corn, for example) and 25% interplanted with the trees.

The crops suffer from a lack of rotation, depleted soils, lack of improved varieties, insect attack, etc. As a result, yields for corn and rice are currently one-third of their potential while manioc and peanuts are at the 50% level. Without using the more complex technology, the introduction of a few basic innovations such as fertilizer, portable sprayers, proper storage, etc., yields could easily be doubled. It is these kinds of techniques that PfP will introduce and finance during the project life.

Farmers of Avé, during the time the survey was conducted were also requested to list their desire for help. Fifty percent of the respondents listed credit as their first need, while 21% of the respondents expressed the need for mechanisation services and 12% for inputs.

A second farm enterprise undertaken in the area is that of livestock production - chicken, eggs, small ruminants, and pork. USAID already sponsors a small ruminant project which aims at increasing animal production through increased health. By financing mineral salts and deworming drugs, PfP can help improve birthing rates and weight gains. Pork activities are not as well developed as the few yard chickens and two to three goats or sheep that most of the farmers possess.

Irrigation Potential

The major agronomic constraints determined by the SOTED team (Maritime study) in 1981 was first, the lack of water and second, the

difficulty of working with the soils. Rainfall varies intraregionally such that while some fields experience temporary drought neighboring fields do not. Likewise, regional droughts are being experienced more frequently than in the past - droughts have occurred in 1977/78, 81/82 and 82/83 resulting in shortages and decreased crop production. Irrigation, outside of government or donor-assisted projects and traditional gardening activities, is not widely practiced. Rice, when grown, has been of the rainfed variety and has not taken more than 4% of the land area devoted to crops. The Sio River, located in the project zone, has irrigation potential. In fact, an irrigation perimeter on the Sio River was built by the Taiwanese in the middle 1960's. It was later taken over by Communist China who changed the water delivery system from pump to gravity fed. A potential 550 ha can be irrigated in the perimeter. As described earlier in this paper, problems and lack of involvement by the Chinese in later stages have resulted in a near abandonment of the perimeter by farmers: in 1983 only 20 ha out of the previous 330 developed ha were still being cultivated. PFP intends to help farmers, through credit and provision of technical advice, to increase perimeter cultivation.

Recent decisions made by the government of Togo resulted in dividing the perimeter between two donors - USAID, which will receive the developed portion of the perimeter, and Communist China, which will develop the remaining land within the perimeter boundaries. GOT will monitor water flow and dam maintenance. PFP was originally going to have access to the entire perimeter. Because of the recent GOT decisions, PFP has decided to wait on the redevelopment of the irrigated land in order to determine what actions the Chinese will take to develop their part of the perimeter. PFP has a number of different activities that it can be involved in, and is not centered entirely around the development of the perimeter. The second reason for the delay is because GOT is in the process of re-organizing the Centre Rizicole du Sio (CRS) whose extension agents will be used on the perimeter. Until CRS gets re-organized, PFP cannot make solid plans concerning how to best utilize the perimeter and extension resources. Nevertheless, PFP anticipates that by the third year of the project, irrigation activities will begin, and PFP will, at that time, provide the needed credit and technical assistance.

Crop budgets for both irrigated and non-irrigated agriculture, with and without project intervention are shown in Tables 1-4. Economic prices were used in crop valuation and all subsidies were removed. The determination of financial revenues (earnings based on local prices) is difficult and thus not done, because of the effects of the two year drought on local harvests. The poor harvests resulted in higher than usual prices, which would overstate the financial returns if they were

used in the calculations. Data for the budgets are from studies that were previously performed in the region (see references). The results, summarized in Table 5, from the four tables indicate to the extent that economic prices reflect the long term situation, why rice is not being cultivated at the moment. The returns from unimproved irrigation farming are not much greater than that for unimproved non-irrigated farming. The table also shows the gains attributable to the project. Table 6 shows the returns from the livestock operations. Activity budgets for the livestock operations, which will be introduced on a smaller scale, are shown in the Appendix.

TABLE 1

Improved Irrigated PackageRevenues

1st and 2nd Season				<u>Economic</u>	<u>Financial</u>
Rice	1.35 ha	3.0 T/ha	103 Cfa/kg	417,150	
Corn	.25 ha	2.5 T/ha	101	63,125	
Cowpeas	.10	1. T/ha	160	16,000	
	(1.7 ha)			<u>496,275</u>	

ExpensesLabor

Rice	175 man-days (md)/ha x 1.35 ha	236	
Corn	70 X .26	17.5	
Cowpea	50 X .10	5	
		<u>258.6</u>	
	258.5 X 300 =	77,580	45,630

Fertilizer

(sub) 2220 X 6 sacks (50 kg/sack)	13,320
(non-sub) 4400 X 6 sacks	26,400

Seed

Rice	100 kg ha X 1.35 ha X 200 cfa/kg	31,125	31,125
Corn	25 X .25 X 240		
Cowpeas	25 x .10 X 1050		

<u>Machinery</u>	1800 cfa/ha X 18 ha rototiller	32,400	32,400
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<u>Bag Cost</u>		600	600
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<u>Users Fee</u>		27,000	27,000
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<u>Phytosanitary Material</u>	5700 X 1.7 X 1.05 (inflation)	10,174	10,174
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<u>Interest</u>	(all financial cost except half of paid labor and user fees) X 18%		19,878
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(110,434 cfa) Total Costs 205,279

Net returns 290,996

Return/ha 291,000

TABLE 2

Unimproved Irrigated Rice

	<u>Economic</u>	<u>Financial</u>
<u>Revenue</u>		
1.0 T/ha X 103 CFA/kg		
1.0 T/ha X 103 CFA/kg	206,000	
<u>Expenses</u>		
Labor: 175 X 300 CFA/day		
175 X 300 CFA/day	105,000	61,200
Bags:	600	
Seed: 100kg/ha X 2ha X 200 CFA/kg	40,000	
Total Expenses	<u>145,600</u>	
<u>Net Returns</u>	60,400	

Data Sources for Tables 1-4

- Prices: Economic price for rice and other crops calculated (see notes)
Yields: Best approximations of current yields according to perimeter data, SOTED studies
Labor : SOTED, World Bank Studies
Financial Cost of Labor: 60% of farm labor is paid by salary
Seed : Current seeding rates, and seed prices

TABLE 3

Unimproved Non-irrigated Typical Farm

Crop Mix and Area

	First Season		Second Season	
	Pure	Mixed	Pure	Mixed
Corn	1.7	.3	.2	.2
Peanut	.15	-	.05	-
Cowpea	-	.1	-	-
Manioc	.25	.2	-	-
	<u>2.1</u>	<u>.3</u>	<u>.25</u>	<u>.2</u>
 <u>REVENUES</u>				
			<u>Economic</u>	<u>Financial</u>
Corn	1.7 ha X .8T/ha X 101 cfa/hg		137,360	
	.3 X .4		12,120	
	.2 X .4		8,080	
	.2 X .2		4,040	
Peanut	.15 X .4 X 194		11,640	
	.05 X .3		2,910	
Cowpea	.1 X .3 X 160		4,800	
Manioc	.25 X 4 X 45		45,000	
	.2 X 2		18,000	
			<u>243,950</u>	
 <u>EXPENSES</u>				
<u>Labor</u>				
Corn	1.7 ha X 95 md/ha X 300			
	.3 X 90			
	.2 X 80			
	.2 X 70			
Peanut	.15 X 100			
	.05 X 90			
Manioc	.25 X 85			
	259.25 days X 300		77,775	46,665
Bag	600 X 2.4 ha		1,440	1,440
 <u>SEED COSTS</u>				
Corn	1.9 ha X 25 kg/ha X 240 cfa/kg			
	.5 X 12.5 X 240			
Peanut	.2 X 80 X 220			
Cowpea	.10 X 25 X 1050			
Manioc	.25 X 1125 X .2 X 563			
	Seed Cost		<u>19,439</u>	<u>19,439</u>
Total Expenses			98,654	
Net Return			145,296	
Return/ha (-2.4)			60,540	

md = man-days of labor

TABLE 4

Improved Non-irrigated Package
Crop Mix and Area

	<u>First Season</u>		<u>Second Season</u>	
	<u>Pure</u>	<u>Mixed</u>	<u>Pure</u>	<u>Mixed</u>
Corn	1.7	.3	.2	.2
Peanut	.15	-	.05	-
Cowpea	-	.1	-	-
Manioc	.25	.2	-	-
	<u>2.1</u>	<u>.3</u>	<u>.25</u>	<u>.2</u>

Financial
Revenues

Economic

Corn	1.7 X 2.0 T/ha X 101 CFA/kg	343,400
	.3 X 1.0 T/ha X 101 CFA/kg	30,300
	.2 X 1.0 T/ha X 101 CFA/kg	20,200
	.2 X .6 T/ha X 101 CFA/kg	12,120
Peanut	.15 X 1.0 T/ha X 194 CFA/kg	29,100
	.05 X .5 T/ha X 194 CFA/kg	4,850
Cowpea	.1 X .4 T/ha X 160 CFA/kg	6,400
Manioc	.25 X 8.0 T/ha X 45 CFA/kg	90,000
	.2 X 4.0 T/ha X 45 CFA/kg	36,000
		<u>572,370</u>

Expenses

Labor:	Corn	1.7 X 73 days/ha X 300		
		.3 X 70 days/ha X 300		
		.2 X 60 days/ha X 300		
		.2 X 60 days/ha X 300		
	Peanut	.15 X 80 days/ha X 300		
		.05 X 70 days/ha X 300		
	Cowpea	.1 X 50 days/ha X 300		
	Manioc	.25 X 60 days/ha X 300		
		204.6 X 300	61,380	36,828
Seed:	(same as previous)		19,439	19,439
Fertilizer:	1.9ha X 5 sacks/ha			
	.5ha X 2.5 sacks/ha X 4400	47,300		23,865
Machinery:	2.4ha X 20,000 CFA/ha	48,000		48,000
Bag Costs:		1,440		1,440
Phytosanitary Mat.:				
		5,700CFA/ha X 1.25 X 1/2 X 2.4	8,550	8,550
Interest:	(On half the labor plus all financial costs X 18%)			
		119,708 X .18		
Total Expenses:			<u>186,109</u>	<u>21,547</u>

Net Returns

Returns/ha (÷2.4)	386,261
	160,940

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Notes TABLE 1-4

Economic Price for

	<u>Rice</u>	<u>FCFA</u>
Reference Price	\$400/MT	150,000
Transport Charges		43,690
Insurance		4,315
CAF, Lome		198,005
Port Charges		1,230
Handling		2,100
Value at Lome		201,330
Transport & Finance Charge		27,680
Value of Milled Rice		173,650
Equivalent Paddy price (.65)		112,872
Milling Charges		10,000
Economic Price to Producer		102,872
	(paddy)	103 cfa/kg
	(milled)	163

	<u>Corn</u>	
Reference Price	\$170/MT	63,750
Transport Charges \$121	\$121	45,280
Insurance		1,598
CAF, Lome		110,628
Port Charges		1,230
Handling		2,100
Value at Lome		113,958
Transport & Finance Charges		13,005
Economic Price to Producer		100,953
		101 cfa/kg

	<u>Peanut</u>	
Reference Price	\$600/ton	225,000
Transport - Nigeria - Europe		33,735
Depart Nigeria		191,265
Transport Nigeria Lome		16,800
Insurance Handling		4,273
Value Lome		212,338
Transport & Finance charge		18,798
Economic Price to Producer		193,540
		194/cfa/kg

Source: SOTED Programme Semencier National Relatif Aux Culture Vivrieres, Etude de Factibilite Tome 5, Annex 3, Table 10. July 1983, All charges up-dated by 5%. Reference prices adjusted to reflect long term price outlook. Exchange rate 375 FCFA/\$

TABLE 5

Summary of Per hectare Net Returns By Technical Package

	Unimproved	Improved	Returns to Project
Non Irrigated	60,540	160,940	100,400
Irrigated	60,400	291,000	230,600

TABLE 6: Livestock Activities

Est. No. of Clients	Activity	Loan Value	Payback Period (yr)	Total Investment (Facilities)	Total Annual Operating Cost	Annual Return to Investment
10	Pork	1,200,000	1.5	100-300,000	2,101,900	617,520
25	Eggs	150,000	1	20-50,000	558,400	403,600
20	Small Remnants	62,900	1	-0-	62,900	117,000

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Non-Agricultural Project Activities

The project intends to sponsor a series of loans for non-agricultural related activities. These activities are covered in detail in the report written by REDSO/WCA's Private Sector Development Specialist. The non-agricultural activities most cited as sources of income for the project zone participants include the following:

<u>Principal Source of</u> <u>Non-Ag-Revenue</u>	<u>Frequency of</u> <u>Response</u>
Charbon de bois (charcoal)	29%
Artisan work	26%
Sodabi (fermented brew)	20%
Commerce	10%
Salaried Work	7%
Palm Wine	5%
Palm Oil	2%
Fishing and Other	1%

Only 8% of the 507 households interviewed indicated that they received greater income from non-agricultural than agricultural sources. Most of the activities are small scale, and do not qualify for loans given by the CNCA, which requires that collateral be given for obtaining the loan.

PfP has identified a series of activities, with estimated costs and revenues, based on their experiences in Liberia and Upper Volta that represent the different mix of loans made for non-agricultural activities. These budgets are presented in the Appendix and are summarized here:

TABLE 7

<u>Activity</u>	<u>Payback Period (yr)</u>	<u>Initial Loan Required</u>	<u>(2nd Year) Annual Loan Needs</u>	<u>Estimated Marginal Gain in Income/Yr.</u>	<u>Estimated No. Potential Clients</u>
Store	1.5	200,000	133,000	195,000	30
Tailor	1	165,000	80,000	324,000	25
Carpenter	2	300,000	150,000	480,000	15
Palm Oil Proc.	2	315,000	100,000	189,000	60
Grain Mill	3	797,000	-0-	216,000	15

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The initial loans include capital assets or other start-up costs. The following loans include operating capital needs. The number of potential clients was determined more on the ability of PFP credit agents and anticipated staff capacity to handle the accounts than on actual market surveys. However, compared to the region's population of 130,000, the number of loans planned for may be considered conservative.

These activities are only considered to be representative of the numerous activities available to the rural producer. What is important to note, based on actual case histories of previous loans, is that the returns to the project (i.e. increase in producer income) are fairly high. The rate of return on loans varies from 150-400% (excluding the grain mill) for loans given out as operating capital. The increase in productivity can be substantially raised through the provision of small amounts of capital. With such potentially high returns, PFP plans not to extend a loan to the same individual beyond the fourth year of operation. It is assumed that by this time the operator will have generated a sufficient amount of his own operating capital to cease needing loans from PFP. In this way, PFP can also expand the number of clients and beneficiaries that will be affected by the project.

PFP plans to charge 18% for the loan - a 5% service charge and 13% interest plus loan loss recovery factor. In Upper Volta, PFP has not yet been able to cover all of its loans expenses with the 5% service charge - in fact, it has only covered 40% of the loan expenses in Upper Volta. Additional funding has been required to maintain loan administration expenses.

Lack of loan repayment is a project concern. In Togo, the CNCA experienced the following loan repayment rate over the period 1979-80.

TABLE 8
 CNCA Loan Repayments
 Togo 1979-1980 (Sept. 30)
 (Million CFA)

Activity	Total Loans	Reimbursements	Unpaid Loans	% Unpaid
Crops and Plantations	566.1	216.5	349.6	62
Livestock and Fishing	23.6	13.6	6.4	27
Corn Milling	16.6	11.4	6.5	13.8
Small Materials	19.2	8.6	11.6	57.9
Agricultural Construction	4.3	-	4.3	100.
Hungry Season Loans	464.3	424.4	39.9	6.4
Housing	5.7	5.4	.3	5.7
Operating Capital Credit	<u>3274.0</u> 4374.8	<u>3072.2</u> 3752.0	<u>201.8</u> 622.8	<u>6.1</u> 13.9

The table indicates that, overall, 14% of the loan values made in 1979/80 remained unpaid as of September 1981 at the time the document was written. Rates of repayment vary substantially across activities, but also depends on the number of individuals to whom the loans are given - the 100% unpaid agricultural construction loan probably was to an individual firm. The two other areas with the highest unpaid loan rate is crops and small materials, two areas that PFP will probably concentrate on. Thus PFP plans to exercise caution in extending the loans in these areas.

Economic Analysis

A cost/benefit analysis of the proposed project was conducted to determine its profitability. A computer model was developed that calculated the net present value of the project in the following manner:

$$\begin{aligned} & 10 \text{ year} & 5 & \\ & & & \frac{(\text{Project Benefits/Activity}_i \times \# \text{ Units/Activity})_{it}}{(1+r)^t} \\ t = 1 & i = 1 & & \\ & 10 & 5 & \\ & & & \frac{(\text{Project Benefits/Activity}_j \times \# \text{ Units/Activity})_{jt}}{(1+r)^t} \\ t = 1 & j = 1 & & \\ & & 10 & \\ & & & \frac{\text{Project Costs}_t}{(1+r)^t} \\ & & t = 1 & \end{aligned}$$

Where:

- i = ith non-agricultural activity
- j = jth agricultural activity
- t = time
- r = discount rate

Project Benefits (per unit.) were shown in Tables 5 - 7 along with the number of participants in the non-agricultural activities. Credit needs for the non-agricultural activities are first determined and subtracted from the available annual credit fund. The number of agricultural units is then determined by dividing the amount of remaining available credit for a particular activity by the credit needed for that activity plus the number of units financed four years prior to the current time period. The latter units are added in because the analysis assumes that the project will not permit participants to receive credit for more than four years - one year for initial startup plus three years of operating expenses. This restriction is imposed so that the number of project participants can be increased. The higher rates of return due to project financing are sufficient to permit participants generate sufficient operating capital over that period of time. Since these participants are assumed to become self-financing, their economic profits are counted as part of the project benefits.

The amount of available credit per agricultural activity is determined by the proportion of the remaining credit fund allocated to the i th activity. These proportions are determined according to the relative number of participants per activity. The number of crop activity units is expected to be greater than the number of chicken activities which, in turn, is greater than the number of pork activities, etc. The mix is important only in realizing that the expected value (i.e. average) of returns is affected by the proportions: a higher proportion of credit given to an activity with a higher return will raise the average.

The amount of total agricultural (remaining) credit available is determined by the amount of new credit made available each year plus previous years' non-agricultural loan repayments, adjusted for loan repayment losses, less non-agricultural loans plus non-agricultural loan repayments. Since the representative activities have different payback periods, the stream of loan repayments is dependent on the proportion of activities financed by the loan fund. Funds allocated in greater proportion to the three year payback activity will reduce the amount of loans fund made available in the following years. The above statements are represented by the following equations:

(1) Total Credit Needed for Non-Agricultural Activities per Time $t =$

$$\sum_{j=1}^5 (\text{No. of units}_j \times \text{credit needed}/_{j\text{th activity}}) + (\text{operating capital loans}) \times (\text{No. of units}_j \text{ in years } t-1, t-2, t-3)$$

(2) Credit Available to (i th) Agricultural Activities per Year =

$$\text{New Credit}_t + \text{Loan Repayments for Non-Ag. Activities adjusted for loan losses}_t - (\text{Loan needs for non-ag. activities (equation (1))}) + (\text{Loan repayments for ag. activities (adjusted for loan losses)})$$

(3) Number of Units of j th Ag Activity =

$$\frac{(\text{Proportion of total credit fund allocated to } j\text{th activity}) \times (\text{Credit available for ag. activity (equation 2)})}{(\text{Credit needed per } j\text{th activity})}$$

Loan repayments are determined by the payback period of the loans. Loans, assumed to be disbursed on Jan. 1, are paid back by December 31st. If the payback period = 1 year, 100% of the loan is available in year 2; if payback = 2 years, 50% of the loan is paid back for use in year 2, and 50% for use in year 3, etc.

PfP plans to add \$25,000, \$50,000, \$75,000, and \$50,000 to the fund in years 1, 2, 3, and 4 respectively. The fund will be built up slowly to prevent rapid disbursement of loans to less profitable activities.

Results

A computer model was developed to determine the cost and benefits of the project and what effect a change in the mix of financed activities and credit fund size have on the benefits and number of beneficiaries. The model base case consisted of using the following parameters:

Data from Tables 5-7
 Loan loss rate .05
 Exchange rate 375 CFA/\$1
 Credit Fund \$25000, 50000, 75000, 50000, 0 (Years 1-5)
 Administrative Costs for years 6-10=0

Proportion of Agricultural Activities

	year 1,2	year 3-10
Non-Perimeter	.75	.35
Perimeter	.0	.35
Sheep/goats	.03	.03
Egg Production	.20	.20
Pork Production	.07	.07

(The project does not plan to use the perimeter until the third year.)

Fourteen model runs were performed to test the sensitivity of the project profitability to changes in the model variables. The results are summarized in Table 9. Most of the scenarios presented in the table are self-explanatory.

TABLE 9

Model Results

<u>No.</u>	<u>Scenario</u>		<u>IRR</u>
1.	Base Case		.07
2.	Exchange Rate	350	.04
3.		375	.07
4.		400	.10
5.	Loan Loss Rate	.05	.07
6.		.10	.03
7.		.15	0
			0
8.	Decrease		
	Benefits by	-.20	0
9.	Increase		
	Costs by	+.20	.02
	Administrative Costs		
10.	Years 6-10	0	.07
11.		\$100000	.04
12.		\$200000	.01
13.	Increase No-Agricultural Loan Activities by 50%		.07
14.	Complete Exclusion of Irrigated Perimeter from Project		.06

The first scenario presents the base case which included yield improvement assumptions of 2 MT/ha for non-irrigated corn (from .8 MT/ha) and 3 MT/ha for irrigated rice (from 1 MT/ha). A 20% reduction in benefits (scen. 8), (which is nearly equivalent to reducing the improved yields from 2.0 to 1.6 MT/ha and 3 MT to 2.7 MT/ha) reduces the IRR from the base case 7% to less than 1%, indicating the sensitivity of yield assumptions on model results. The exclusion of the perimeter lowers the project IRR by only 1% (scen. 14) but results in an increase in the number of non-irrigated hectares that must use the improved technology if all of the credit funds are to be used.

The model is also sensitive to changes in the exchange rate - a 25 CFA increase or decrease in the rate changes the IRR by 3%. Currency rate changes have two effects - a rise in the exchange rate raises the crop economic prices while at the same time reduces project local currency costs. Likewise, an increase in the loan loss rate to 15% also decreases the IRR to 0%. Lastly, the addition of loan administrative costs (if the loan fund cannot recover all office and personnel expenses) reduces the IRR by 3% and the increase in non-agricultural activities by 50% has little effect on the overall IRR.

It should also be understood that the project's profitability hinges entirely on the ability of PFP to find new project loan clients after four years of loans so that other rural producers can take advantage of PFP training and funds. Project benefits will be insufficient to cover project costs unless loan clients become independent of loan needs. The largest benefits are not earned until the end of the assumed 10 year life. The project does not generate a positive return until the 6th year, as shown in Table 10.

Table 11 indicates the number of agricultural activity units that can be financed after credit needs for non-agricultural units and loan repayments are accounted for. The analysis thus assumes that enough mechanisation services will be available, either via PFP, a PFP financed client, or other individuals in the zone, to provide plowing and harrowing to some 545 ha. in the 5th year and increasing to 1255 ha. in year 10, as well as 211 ha. of irrigated land.

Summary

See discussion in main section of report.

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APPENDIX A

PP ANIMAL PRODUCTION ACTIVITIES

The PFP team has analyzed several aspects of animal production activities in Togo. The present situation is that some activities are profitable while others are not. The prevalence of cheap imported beef from Argentina and Upper Volta make beef cattle production unattractive while broiler production is uneconomical due to European Imports of spent fowl and turkey tails and wings from the U.S.

The production of animals recommended by PFP is based on by-products (used as feed) found in the country and products that can be grown locally. PFP will try to identify producers who are interested in getting into animal production or who are already producing them but want to improve their operations.

Pork

The feasibility for pig production shows a producer who has breeder animals and feeds the pigs to market weights. This example is based on six gilts and a boar and two litters of offspring which are marketed at 5-6 months of age. From a cash flow view point if PFP granted a loan for this activity you would expect repayment when the first group of 42 pigs are marketed. The loan would be in the area of 1,200,000 cfa if all pigs and feed were financed. We estimate that around 10 loans will be given during this phase of the project for this activity.

Small Ruminants

PFP proposes to promote and assist farmers in improving their animal production as part of the over all program. The project Petits Ruminants and service veterinaire both have personnel stationed in the area who can be enlisted to assist with programs. The national service production animale in nearby Lome can assist also. The services report that they often do not have vaccines or drugs and gasoline for transport because of lack of funds. PFP will provide credit to producers who can then pay for the vaccines and drugs they need to protect animals.

A recent study in the Maritime region revealed that 40% of the small ruminants (sheep and goats) die before reaching market. This mortality could be reduced to 10-15% by vaccinations, better nutrition, especially minerals and parasite control. The feeding of a good mineral mixture can increase birth rates of sheep, goats and cattle by well over 20%. The inclusion of refined grade of phenothiazene "Banfly" into the sale mineral mixture can greatly reduce flies which reproduce in the manure and intestinal worms on a continual basis at very little additional cost.

PfP does not anticipate many requests for cattle production loans and thus will concentrate more on pigs, sheep, goats and laying chickens. Broiler chickens are not profitable in Togo at present because of pricing structures and cattle are less appropriate than sheep or goats for several reasons which include:

TABLE 1

Production cost for the breeder animals:

6 gilts at 40,000 cfa each (50 kg each liveweight)	240,000
1 boar at 60,000 (60 kg. liveweight)	60,000
2,520 kg of feed (3 kg per day per animal X (120 days) to breeding age at 50 cfa per kg	126,000
Total cost of breeding	426,000

Gestation period 114 days, nursing period 49 days and dry period 18 days times two litters per year would be broken down as follows;
 228 days gestation at 3 kg per animal X 7 animals or 4,688 kg of feed.
 98 days nursing at 5 kg per animal X 6 sows or 3,528 kg of feed. 38 days dry at 5 kg per animal X 6 sows or 1,140 kg of feed.
 Total breeder feed 9,355 kg at 50 cfa per kg 467,800
 Boar feed would be accounted in sow feed during nursing and dry period.

Feed for market hogs:

7 pigs per litter X 2 litters per year X 6 sows is 84 pigs.

30 kg pig feed X 84 pigs is 2,520 kg of feed at 54	136,080
350 kg hog feed X 84 x 29,400 kg at 43	1,264,000
Total for pigs	1,400,080
Total for breeders	467,800
Feed for one year	1,867,880
Iron shots, vaccinations and health care at 1,000	84,000
Transportation of feed pigs, etc.	150,000
Total cost of production	2,101,880
Plus Labor	40,000

Return:

84 hogs at 90 kg each 7,550 kg X 365 pr. kg live	2,759,400
Return on labor and investment	617,520

Sale of 5 breeders at end of 2.5 years ave. liveweight of 200 kg 1,000 kg at 450 per kg would be 450,000. Initial breeder cost of 426,000 so there would be no breeder depreciation.

- (1) There is no tradition of cattle production in Maritime region.
- (2) Sheep and goats are better suited to village production because of their smaller size and the lack of refrigeration.
- (3) There is little tradition of animal traction use in the region.
- (4) The region is well suited to intensive crop production.
- (5) Beef and broiler chickens are very low in price due to cheap imports.

Sheep and goats in the coastal region are rather small animals but well suited to the region. They are small enough to transport easily on a bicycle, moto or taxi. They can be consumed before the meat spoils by an extended family or small village restaurant. They can browse on under brush during cropping seasons without any special pastures. They are ruminants so they do not compete with humans for food.

For project planning purposes we assume the producer has a flock of 20 sheep or goats or mixed sheep and goats. This flock would consist of 10 female breeders, 1 male breeder plus 9 young animals. The innovations of vaccination and feeding minerals will be used to illustrate benefits to be derived.

- (1) Sheep and goats produce two crops of young per year.
- (2) Multiple births are quite common in these species especially twinning.
- (3) Price of weaned animals is 5,000-6,000 cfa.
- (4) Average weight of adults is 25 kilograms.
- (5) Sheep and goats are found on 30% of farms in Togo with concentrations in the Maritime area.
- (6) Production rate of 80% or 16 young per yr.
- (7) Young animals sold for meat at 6 months of age.

The veterinary service will be used for vaccination programs and the exact intervention of PFP or the cost is unclear at present. Two areas of interventions over which PFP may have substantial control are the feeding of mineral supplements and routine worming. The cost for these would be:

Worming:

Adult breeder animals will be wormed 4 times per year with Thiabendazole while young animals will be wormed one time. Each adult animal will require 1 bolus of 2 grms while young will require 1/2 bolus.

11 breeders X 4 wormings X 1 bolus at 60 cfa	2,640 cfa
16 young X 1 worming X 1/2 bolus at 60 cfa	380 cfa
Total	<u>3,020 cfa</u>

Feeding of mineral/salt supplement:

11 breeders X 10 grams/day X 365 days	40.1 kg
16 young X 5 grams/day X 180 days	14.4 kg
Total	<u>54.5 kg</u>
at	50 cfa/kg
Total Cost	<u>2225.0 cfa</u>

The total cost of the two interventions would be 5,245 cfa to the average producer.

The amount needed to finance these interventions is too small to grant loans for this activity. The project evaluation of the Togo small ruminants project cites breakdowns in the supply chain and delivery system for such items as a real constraint to their utilization. PFP believes that an innovative approach is possible with the regional activities planned by the project.

The present projections that a total of 30 village stores will receive loans and management assistance. PFP will encourage these store owners to stock the wormers and mineral supplements needed. PFP would supply initial stocks as part of the loans with each store stocking enough for 10-12 farmers. The credit extension agents could remind village animal producers when it was time to repeat treatment. He could also check the store to insure adequate supplies are on hand if pricing is fair, etc.

If 20 stores stock an average of six months supply for 12 farms this would require a loan of around 30,000 cfa or 600,000 cfa for the twenty stores. These loans should roll over at six months interval

Cost:

240 producers at 5,245 cfa	1,258,800 cfa
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Return:

240 producers X 3 animals extra (20% improvement)	720
720 animals at 5,000 cfa	3,600,000 cfa
benefit expected	2,342,000

Eggs

Layer production is based on a unit of 100 layer pullets. The chicken will start to lay at 5 1/2 months of age and will be paying their current cost at around 7 months. The loan would be for 150,000 cfa with one 1 1/2 year repayment. We estimate 25 loans for this activity.

Feasibility of Animal Production in Togo

For animal production to become a viable part of the total farming operation there must be reliable sources of the necessary inputs at reasonable prices. Of course the price of the product produced must be sufficient to give the producer an adequate return for his investment and his labor. In developing countries there are often several resources that are unknown to many of the farmers who want to raise animals. Togo has several sources for the inputs needed and many of by-products that are available at reasonable prices and in quantity. The following list is not complete but will give an idea of what is available.

Ferme Avicole de Baguida: This center is located on the road from Lome to Aneho and sells day old and started chicks for broilers and layers from parent stock imported from Europe. The center offers training for persons wishing to learn poultry production and also sells vaccine, feed, medication and other supplies. The current price for day old chicks is 200 cfa for broilers and males from egg strains and 285 for layer pullets.

Societe Generale de Moulins du Togo "SGMT": This is the flour mill located near the Port of Lome. They have by-products for sale in quantities of one bag or several tons at prices that average about 20 cfa per kg. The products are pellets, coarse, fine and very fine with the finer products better for chickens and pigs and the coarser ones for ruminants.

R. H. Mensah Feed Mill: This is a feed mill located near the lagoon on the Route to Kpalime in Lome that offers mixed feeds for poultry and swine. The current price is 90 cfa for layer feed and 96 cfa per kg for broiler feed.

Societe Nationale de Huileries de Palme "SONAPH": This is the palm oil factory between the city of Lome and Kpalime in the town of Agou. Industrial grade palm oil and palm kernel cake are both possible feed ingredients but the quantity available and the price is unknown at present.

Les Huileries Togolaises: This is a peanut oil mill located near the brewery in Lome. Peanut oil cake is a valuable feed for poultry and pigs. Protein content is 45-50% and the price quoted was around 70-80 cfa per kg.

There are many other by-products available at different locations throughout the country.

Cyster Shell: These are available from local fishermen in the Aneho area. The price in Lome is around 50-60 cfa per kg. This is a valuable source of calcium for all animal species. For layer hens break into bits the size of a shirt button or small pebble, and for pigs and ruminants it should be crushed into a powder and added to a salt mixture.

Dried Fish: These are available from local fishermen or at the fishing port on the East side of the Port of Lome. This is a valuable source for the sulfur bearing amino acids and very valuable for poultry and pigs. The current price is around 6.000 cfa for a bag of around 35 kg or 171 per kg.

Rice Bran: This is available from rice mills throughout the country and the price may vary from 10 cfa per kg to more or less according to local demand. Rice bran is a good source of energy but is high in fiber which limits its use for poultry and young pigs.

Bone and Blood Meal: These are usually available where there is a slaughter house for animals. Bones should be cooked to prevent spreading disease and blood can be sun dried. Prices vary according to local demand and supply.

Feasibility for Egg Production

Hypothesis:

100 day old layer pullets is a base unit of production.

Mortality of 10% during the growing period (day old to 6 months).
Mortality of 10% during the laying period (6 month to 13 months).
Egg production of 240 eggs per hen (based on average of 85 hens).

Cost

100 day old pullets at 285 each	28.500
8 kg starter and grower feed/chick at 90	72.000
vaccines, medication & fuel for brooding	5.000
Transport of feed and chicks	5,000

Total growing cost 110.500

90 pullets to nest stage x 42 kg feed each during one year of lay - 3780 kg feed at 90	340.000
Transport of feed and eggs	15.000
Egg flats 720 at 100	72.000
Medication and miscellaneous expenses	20.000

Total laying cost 447.900

Total cost of Prod. 558.400

Return

240 eggs x 85 hens - 20,400 at 45	918.000
80 spent fowl at 700	56.000
90 empty feed bags at 200	18.000

Total return 982.000

Potential return and labor and investment 423.600

The investment in building and equipment is not great if local materials are used extensively and can be depreciated over several groups of layers.

Feasibility of Broiler Chicken Production in Togo

The growing of broiler chickens in most countries of West Africa seems to be a way of quickly meeting the demand for meat that can result in a fair return to the grower and at the same time produce meat at reasonable prices to the consumer. For this to be an economically viable part of the agricultural production there must be a reasonable return to the grower for his labor and investment. The following study uses prices in effect in Togo in September 1983.

Day old broiler chicks are available from Ferme Avicole de Baguida at 200 francs each and broiler chick feed is available at R.H. Mensah for 96 francs per kilogram. Kerosene for brooding is available throughout the country for under 200 francs per liter. Transports to various parts of the country will vary but those quoted in this study are for Mission Tove area 35 kms from Lome.

Costs:

500 day old chicks at 200 cfa	100.000
1485 kg feed at 96 cfa (2.2 to 1 conversion)	14 .560
Transport of chicks and feed	6.000
Fuel, vaccine and medicine (50 cfa per chick)	2,500
Transport of live chickens to Lome Market	10.000
Total cost	260.000

Returns:

450 chickens at 1.5 kg 675 kg at 400 cfa	270.000
30 empty feed bags at 200 cfa	6.000
Total return	276.000

These figures do not consider the investment in buildings and equipment nor the labor for the care of the chickens or interest on money etc. There would be an actual loss on the project when these are considered so this would not be a viable activity unless a more viable market can be assured.

Tailer Shop

Tailor works in his village on his own machine. Makes clothing for clients who bring him cloth or pay cash advance.

Assets & Liabilities

Building	50,000
Sewing machine	40,000
Cash & miscell. cloth	15,000
Miscell. materials (iron scissors, buttons, thread, etc.)	<u>20,000</u>
	125,000

Monthly sales of 50,000 produce 20,000 net profit.

Loan of 165,000 is to purchase embroidery machine and small stock of cloth to fabricate ready-made clothes.

Assets

Building	50,000
2 machines	160,000
Cash & cloth	55,000
Miscell. mats.	<u>25,000</u>
	290,000

Liabilities

Loan	165,000
Own invest.	125,000
	290,000

Monthly sales

80,000

Expenses

Materials consumed	30,000
Deprec. & Maint.	2,000
Loan interest	1,000
Withdrawals & misc.	<u>10,000</u>
	43,000

Net profit 37,000

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Non-Agricultural Activity Budgets

Village Stores - Loan to a trader who sells Sunday merchandise in his village. Sales take place in front to house on a table. Capital fluctuates as money is withdrawn on an "as needed" basis. Supply and sales are irregular. Client is literate.

Assets & Liabilities

Merchandise & cash	75,000
Miscell. materials (table, chair, kerosene lamp)	<u>10,000</u>
	<u>85,000</u>

Monthly sales of 50,000 produce a net profit of 10,000.

Loan of 200,000 to smeliorate and diversify stock, reduce transport and increase sales (new line of merchandise includes small quantity of fertilizer).

Condition of loan is that applicant contribute entire assets and construct suitable building using own labor and selling 5 sheep.

Assets

Building (includes counter and shelves	125,000
Merchandise and cash	275,000
Miscell. materials	<u>10,000</u>
	<u>410,000</u>

Liabilities

Loan	200,000
Own invest.	210,000
	410,000

Sales of 175,000/month produce net profit of 26,250. One son becomes responsible for sales and day-to-day management. Owner adopts an elementary bookkeeping system to keep track of sales and inventory. Distinction is made between working capital and profits.

Grain Mill

Applicant has worked in another village as a miller. Knows mill operation and machinery maintenance. Has managed to save some money and wants to open his own mill. Client is illiterate.

Loan of 797,000. Condition of loan is that applicant construct his own building and contribute 300,000 towards purchase of machinery.

<u>Assets</u>		<u>Liabilities</u>	
Building	125,000	Loan	797,000
Slip drive R motor	650,000	Own investment	425,000
No. 1 grain mill	300,000		
Barrels and pipe for cooling system	35,000		
Material and labor for machinery installation	35,000		
Misc. accessories and spares	25,000		
Transport	20,000		
15 l oil	12,000		
	<u>1,222,000</u>		1,222,000

P & L

Daily receipts average 3,000 x 25 day/month 75,000

Expenses

Fuel	20,000	
Oil	6,000	
Depreciation	11,000	
Loan interest	5,000	
Spares & Maint.	5,000	
Withdrawals & misc.	<u>10,000</u>	<u>57,000</u>

*Net profit 18,000

Client keeps records for machinery maintenance using clock and pebbles. Keeps track of clients with pebbles in coffee can.

Palm Oil Transformation

A group of 5 women want to produce palm oil for the local market. Each woman has 20,000 to invest. Activity is part time.

Assets and Liabilities

Cash 100,000

Loan for 315,000 to purchase press, auxiliary tools, working capital and transport.

Assets

Press	300,000
Aux. tools	30,000
Fund for palm nuts	60,000
Plastic containers	5,000
Water & wood	-
Transport	<u>20,000</u>
	415,000

Liabilities

Loan	315,000
Own invest.	100,000
	<u>415,000</u>

Monthly receipts 100 l at 500 cfa

50,000

Expenses

70 bunches at 200 cfa	14,000	
Depreciation	6,000	
Interest on loan	2,000	
Transport	5,000	
Miscell	<u>2,000</u>	<u>29,000</u>

Net Profit 21,000

Carpentry Shop

Carpenter works in village alongside major secondary road that taxis use on market day. Has 2 apprentices that he lodges and feeds, and who receive occasional pocket money. Small amount of working capital limits his stock of lumber. Produces doors, windows and some furniture to order. Also roofs buildings.

Assets and Liabilities

Workshop	75,000
Tools and equip	100,000
Cash & raw materials	<u>30,000</u>
	<u>205,000</u>

Monthly receipts of 80,000 of which 35,000 is net profit.

Loan of 300,000 for lumber to enable him to sell lumber and to make items for display (attracts customers and can be sold to people passing by shop).

Assets

Workshop	75,000
Tools & equipment	100,000
Cash & raw materials	<u>330,000</u>
	205,000

Liabilities

Loan	300,000
Own investment	<u>205,000</u>
	505,000

Monthly receipts 160,000

Expenses

Lumber, nails, etc.	70,000	
Deprec. tools	3,000	
Interest on loan	2,000	
Expenses for Apprentices	10,000	
Withdrawals & Miscell.	<u>10,000</u>	<u>95,000</u>

Net profit 65,000

ANNEX F

SOCIO-ECONOMIC AND SOCIO-CULTURAL NOTES

1. Population

The Togolese census which was performed in 1981 shows the Sio Prefecture with a population of 199,692 inhabitants of which 130,185 fall within the project region. Table 1-1 shows the population of each zone within this region as well as population densities.

The population of Zone 3 is concentrated in the eastern and southern portions along the Sio and Haho Rivers, with the land in the center being almost uninhabited. This is attributed to a scarcity of groundwater resources.

The average family contains between six and seven persons with the majority being female. This is due to the fact that most households are polygamous and that many men have emigrated out of the region in search of economic opportunity.

Over eighty percent of the population is from the Eve ethnic group whose ancestors came from Notsé in the Plateaux Region just to the north of the Sio Prefecture. The other principal groups represented in the population are Mina, Kabye, Losso and Ana, the great majority of whom are farmers.

2. Earning a Livelihood

The economy of the region is overwhelmingly agricultural. However, people also engage in non-agricultural activities which are an important supplement to family incomes.

Agriculture

Most agriculture in the region is directed towards subsistence production (Table 2-1), although surpluses of subsistence crops are also sold for cash. Eighty percent of production is directed towards the staples of corn, cassava, cowpeas, peanuts and traditional vegetable like okra, pepper, and a variety of indigenous greens. Rain-fed rice cultivation is also practiced, especially in Zone 2 where there are many fertile low-lying areas (bas-fonds) that are suitable for this type of agriculture. The only irrigated rice cultivation is practical within the Sio River Irrigated Perimeter. Sugar cane is one other crop that is cultivated in bas-fonds areas, although it is less common than rice.

Yields on all crops are low. With the exception of irrigated rice, little fertilizer, improved seed or pesticides are used on traditional crops.

Table 1 - 1

Population of the Sio Prefecture

<u>Project zones</u>	<u>Area (km²)</u>	<u>Population¹</u>	<u>Population inhabits./km²</u>
1	434.0	42,736	98.5
2	848.4	48,518	57.2
3	467.6	38,931	83.2
Remainder of Sio Prefecture	1,395	69,507	49.8
Total Sio Prefecture	3,154	199,692	63.3

¹ Source: Recensement general de la population et de l'habitat, 1981.

Table 2 - 1

Frequency of Annual Crops Grown in the Ave Region¹

<u>Crop</u>	<u>Total Area</u> <u>(acres)</u>	<u>%</u>
Corn	43,916	60.3
Cassava	16,081	22.1
Other root crops (sweet potatos, yams)	4,304	5.9
Peanuts	3,612	5.0
Rice	3,022	4.2
Cowpeas	920	1.3
Souchet ²	458	0.6
Vegetables	<u>447</u>	<u>0.6</u>
	72,760	100.0

¹ Study of 511 producer units

² Indigenous grain eaten uncooked as a snack

Source: Etude socio-economique dans la Region Maritime, SOTED, 1981

The major perennial crop in the region is the oil palm, which is usually poorly cared for and consequently produces low yields from 1.5 to 2.5 tons per hectare. Other perennials are mango and citrus trees that are found almost exclusively planted around family compounds.

Livestock

Small animals are kept by many households, but few receive veterinary care or an improved diet. Most households that keep animals have four to eight goats or sheep, ten chickens and, more rarely, a few pigs. Animals are most frequently kept as insurance to be sold to enable families to get through periods of subsistence crop shortages.

Non-Agricultural Activities

x In addition to agricultural activities, which constitute the principal source of livelihood in the region, most families participate in certain non-agricultural activities in order to supplement their incomes.

The oil palm constitutes the base of many activities, for in addition to satisfying a large part of family domestic needs in cooking oil, the oil palm is the base of cottage-style processing activities producing red palm oil, palm kernel oil, palm wine, palm alcohol, baskets and fencing material.

A recent study conducted in Zone 2 of the project region investigated the economic activities of 508 families. It found that artisan activities (especially masonry and carpentry), the making of charcoal, and the processing of oil palm were the principal non-agricultural occupations (Table 2-2). Next came small scale commerce and salaried employment. Other activities noted were the processing of coconut oil and cassava flour (gari).

The socio-economic study conducted for the design of this project in Zone I(1) found interest in a number of other activities that the project could promote. These consisted of fish farming, off season vegetable growing, weaving, blacksmithing, bicycle repair, motor mechanics, various forms of commerce and transport.

A limited number of ponds for fishing already exist in the region, but water supply is irregular and there is no significant production. This could be remedied by placing ponds near the Sio River or adjacent to the

(1) Etude Socio-Economique dans la Vallée du Sio, Kenkou & Foli, March 1981.

Table 2 - 2

Frequency of Non-Agricultural Activities¹

(Measured in days worked)

<u>Activity</u>	<u>Number of Days</u>	<u>%</u>
Artisan activities	9,735	29.4
Charcoal making	8,332	25.0
Sodabi* preparation	4,078	12.3
Small scale trade	4,019	12.1
Salaried employment	2,644	8.0
Palm wine preparation	2,317	7.0
Palm oil preparation	853	2.6
Fishing (fresh water)	660	2.0
Coconut oil production	300	0.9
Gari** preparation	<u>240</u>	<u>0.7</u>
	33,178	100.0

* A local liquor distilled from palm wine

** Cassava flour

(1) The survey was conducted in the Ave region (Zone 2) among 508 households containing 1,318 adult producers, "Etude Socio-Economique dans la Region Maritime", SOTED, 1981

primary and secondary irrigation canals of the irrigated perimeter. Fish farming could also be combined with chicken and goat and sheep raising as well as vegetable production as part of a biologically balanced food production system.

The production of traditional African vegetables during the long dry season (December to March) would be profitable because of the habitual shortage of vegetables during this time. Water running through the perimeter irrigation system is sufficient to provide a significant economic opportunity during an habitually slack production season.

X Despite the existence of a market for handwoven cloth, especially in Lome, weaving is not a widely practiced activity in the Sio River region. Weavers claim they do not have the monetary resources to purchase sufficient quantities of thread. A loan of 200,000 CFA to a weaver in the village of Kovie during the operational research design phase of this project rejuvenated his trade and caused him to hire three other weavers who had completely abandoned this activity. The increased production and sale of traditional cloth that this relatively minor assistance has stimulated, suggest that weaving could become a more important artisanal activity in the region.

Assistance to blacksmiths, especially in the area of improved tools and money for raw materials, could act as another stimulus to a productive activity. Blacksmiths make agricultural hand tools like hoes, machetes and knives as well as other useful articles such as bicycle baggage racks that are in demand both in and outside the region.

Bicycle repair is an important activity, as the bicycle is the primary means of wheeled transport in the region. Repairmen, however, are often hampered by lack of working capital to purchase spare parts. Were they to stock inventories of the most commonly demanded spares, they could reduce the amount of time they spend in making trips in search of parts for individual customers and devote more time to satisfying the demand for their services.

There also exist opportunities for village mechanics to maintain and repair motorcycles and milling machinery. If the project is successful in introducing rototillers for irrigated and rain-fed agriculture, their presence will also require repair facilities and spare parts.

There are many opportunities to develop commerce in the region, both in introducing new goods and in bringing goods closer to the consumer. Village stores selling a variety of merchandise could also include bicycle and motorcycle parts, farm inputs like fertilizer, handtools and veterinary supplies, and construction materials. Other commercial opportunities include agricultural grain banks, restaurants and small cafes.

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Along with the development of these other activities comes the need for transport to move both people and goods. Limited transportation was continually mentioned as a important problem by residents of the Sio River region.

3. Family income

The incomes of twenty families in Zone 1 of the project region were analyzed for the 1983/84 agricultural season (Table 3-1). Incomes varied between 48,000 CFA and 329,500 CFA with an average of 146,000 CFA. These figures include food that was produced for consumption as well as cash income, but do not count the production from the small fields of the wives of the different households, all of which was consumed by the family.

Subsistence food production accounted for between 18 and 83 percent of total income. Nearly all food produced came from crop production, with animals being destined for sale instead of eaten by the family. Cash income came from the sale of crop surpluses and animals, but especially from the sale of oil palm products and charcoal.

It should be noted that cash incomes are the lowest in households that did not keep animals for sale or did not engage in non-agricultural activities. Consequently, it seems evident that assistance to promote and develop these activities would provide farmers with a buffer against a poor agricultural season which the 1983/84 season was.

About sixty percent of gross income was used to pay agricultural day laborers (Table 3-2). Fertilizer was hardly used, except on rice. The other forty percent of income went for food, healthcare, school fees, and funerals. Non-agricultural activities received only an infinitesimal part of this income in the form of investment. On the contrary, non-agricultural activities were used to finance agriculture and to cover a portion of consumption needs.

4. Agricultural Technical Innovation

In the project region, most farmers do not employ ameliorated farming techniques like the use of fertilizer, improved seed, pesticides, planting in lines, etc., on their traditional subsistence crops. The results of a study conducted on twenty farmers who do not grow irrigated rice in Zone I of the project region confirmed that opinion (Table 4-1).

Seventy-five percent of those studies did not use improved techniques, advancing most frequently the following two reasons:

- a lack of access to credit to allow them the purchase agricultural inputs;
- a weak agricultural extension system.

Table 4 - 1

Producer Attitudes Towards the Use of Improved Agricultural
Techniques on Subsistence Crops (corn and cassava)

Villages	Use improved techniques	Do not use improved techniques	No Opinion	Observations
			X	No opinion
Mission-Tove	X			No comment
	X			Treats improved seed
	X			Uses fertilizer on corn and peanuts
		X		No extension assistance
Kovie	X			No comment
		X		Land is still fertile
		X		No credit
Assome		X		Land is still fertile
		X		No money
		X		No credit or machinery
		X		No money
Wli		X		In the habit of following tradi- tional practices
		X		No money
Ziovounou		X		No money
		X		No money
Kouahoe		X		Crops only raised for subsistence needs
		X		Lack of land
Attiveme	X			--
		X		No money
Total	4	15	1	

Source: Etude Socio-economique de la Vallee du Sio, Kenkou et Tinkoua,
March 1984

However, as shown in Table 4-2, farmers who have grown rice in the Sio River Irrigated Perimeter and who were the beneficiaries of more regular extension advice, did use some improved techniques on their extra-perimeter subsistence crops. Of the five farmers questioned, three said they used fertilizer and a fourth said he would if he had access to credit.

It is generally admitted that the adoption of improved agricultural techniques on a wide scale depends directly on the presence of a development project that specifically targets certain crops for improvement. This was the purpose behind the PRODERMA project which ran from 1976 to 1981 in the Maritime Region, and was designed to increase the production of traditional subsistence crops. However, given a weak extension effort and a credit system which functioned poorly, the gains made were unimpressive.

Farmers in the north of the Sio Prefecture who receive extension assistance and some credit from SOTOCO, the national cotton monopsony, reveal a different experience. Because of good extension work and the ability to obtain essential inputs like fertilizer, seed and pesticides from SOTOCO on credit, they practice modern techniques when cultivating cotton. They might do the same with subsistence crops which are rotated with cotton, except for the fact that they must pay cash for inputs for these crops, cash they do not often have at planting time.

The lessons from these experiences are that good extension work must be combined with access to credit in a consistent and regular fashion if progress is to be made in getting farmers to adopt improved agricultural techniques.

5. Groups

The project region contains both traditional and modern forms of groups that bring people together for economic as well as non-economic activities. Traditional groups of an economic nature are known either as FIDODO or SODJOJO.

FIDODO assembles from thirty to fifty adults within a particular village to do collective agricultural work in the fields of group members. Given the nature of the relation among group members, this work is accomplished in a spirit of friendship and reciprocity. The group can also do work for non-members who pay for the services they receive. The money is placed in a common fund and is later used to organize celebrations for the members. Groups are usually segregated by sex, although mixed groups exist as well.

SODJOJO brings together a number of people for the purpose of establishing a central fund which is regularly distributed to one of the

Table 4 - 2

Attitudes of Producers Growing Irrigated Rice Towards
Using Improved Techniques on Subsistence Crops
(corn and cassava)

Villages	Use improved techniques	Do not use improved techniques	Observations
Mission - Tove	X X		No comment Uses fertilizer
Kovie	X	X	Land is still naturally fertilized Fertilizes corn
Assome		X	No money
Total	3	2	

Source: Etude Socio-economique de la Vallee du Sio, Kendou et Tinkoua, March 1984

members. Fixed dues are decided upon. They are paid at intervals determined by the members; each week, every two weeks or each month. Equally, members decide upon the intervals at which the fund is paid out. Up to two hundred persons can belong to a SODJOJO, but the number usually depends on the amount of dues which are normally fixed around 200 francs. Dues above that amount result in smaller groups.

A third group which has more of a social welfare orientation is EKHUA. Like SODJOJO, members pay regular dues, but the common fund which results is reserved for members who find themselves in need because of a death or some other misfortune. Dues are usually 200 francs for men and 100 francs for women.

There exist other types of non-economic groups as well: religious associations, both animist and Christian, dancing groups and sporting clubs.

The fact that such groups exist shows that Sio River residents are capable of undertaking collective economic and social action. During the recent socio-economic study conducted in Zone 1, respondents expressed a desire to undertake collective economic activities. They mentioned specifically subsistence crop production, vegetable growing, livestock raising, irrigated rice cultivation, marketing agricultural produce and purchasing agricultural inputs. Women respondents mentioned, in particular, food processing and food preparation.

In addition to these traditional groups there exist more modern agricultural production groups as well. Nearly all are due to two development projects: the PRODERMA project that worked in the Maritime Region from 1976 to 1981 and the Taiwanese and Chinese effort to develop rice production in the Sio River Irrigated Perimeter.

The efforts to promote groups by the PRODERMA project in the Ave region (Zone 2 of this project) resulted in the number increasing from 59 in 1979 to 98 in 1982 (Table 5-1), an annual increase of 22 percent. Most of these groups were organized for rice production in the many bas fonds areas that the region contains. While these groups may still exist on paper, however, there is little evidence of activity today. Nevertheless, they could constitute a starting point for resuming group agricultural activities in this region by a project that made sufficient resources and extension service available.

At the Sio River Irrigated Perimeter, the Taiwanese began group formation in 1966 and by the time they departed in 1972, 238 farmers organized into nine groups were working the perimeter.

1972 proved to be the high point of perimeter participation. The period of PRC involvement (when most of the basic infrastructure was constructed) saw a decline in the number of interested farmers. Extension and farmer organization was much weaker under the PRC than under the Taiwanese. In 1979, the last year of PRC involvement, there were 142 farmers

Table 5 - 1

Group Development in the Ave Region

<u>Year</u>	<u>Number of Groups</u>	<u>Number of Farmers in Groups</u>
1979	59	644
1980	80	972
1981	87	1,134
1982	98	1,300

Source: Etude Socio-economique dans la Region Maritime,
SOTED, 1981

cultivating rice in the perimeter of which only 52 were organized into a loose perimeter-wide "cooperative" (Table 5-2). In addition to the difficulties cited above, there were also problems in marketing, gaining access to credit and the poor state of repair of much of the agricultural machinery.

Table 5 - 2

Group Development in the
Sio River Irrigated Perimeter

<u>Year</u>	<u>Number of Groups</u>	<u>Number of Farmers in Groups</u>
1970	1	20
1971	5	60
1972	9	238
1979	1	52

Source: Etude Socio-economique dans le Perimetre
Irrigue du Sio, SOTED, June 1981

* 90 2-20

6. Marketing

The food situation in Togo at the present time (the most recent figures are from 1982) show favorable marketing opportunities for corn and rice and, at certain times of the year, traditional types of vegetables, due to shortfalls in local production. There exists as well a potentially substantial market in Nigeria, although marketing channels are currently blocked because of political circumstances. All of the following tables are taken from Kne^o and Tinkoua's "Etude Socio-economique de la Vallee du Sio", March 1984.

Corn

~~Normal~~ per capita

The consumption figures for corn in Togo for 1982 are as follows (kilograms/year):

Region	Lome	Urban	Rural
Maritime	81	77	85
Plateaux	-	67	53
Centrale	-	20	8
Kara	-	13	7
Savanes	-	6	6

The following table shows both the sources and uses of corn in Togo in 1982. Figures are in thousands of tons.

SOURCES			CONSUMPTION		
Origin	Quantity	%	Use	Quantity	%
Production	152	95.2	Post harvest loss (12% of gross production)	18.2	11.4
Imports	0.8	0.5	Seed (3% of gross production)	4.6	2.9
			Subsistence con- sumption	89.8	56.2
Apparent deficit	6.9	4.3	Urban consumption	43.9	27.5
			Animal feed	3.2	2.0
	<u>159.7</u>	<u>100.0</u>		<u>159.7</u>	<u>100.0</u>

It is probable that the apparent deficit indicated on the above table was filled by imports that entered the country from neighboring countries outside of official trading channels. It is also likely that because it was a deficit year, farmers sent less corn than normal to urban areas. The result was that these areas greatly reduced their consumption of corn and instead consumed much larger quantities of imported wheat flour and rice (39,800 tons of wheat and 13,700 tons of rice were imported in 1981). From this analysis it is evident that increased corn production in the Sio River region will not risk saturating the market.

Rice

White rice consumption per capita in 1982 was as follows:

Region	Lome	Urban	Rural
Maritime	30	17	0.7
Plateaux	-	40	4.0
Centrale	-	13	5.4
Kara	-	12	4.0
Savanes	-	21	5.0

And the sources and consumption of paddy rice were as follows:

SOURCES			CONSUMPTION		
Origin	Quantity	%	Use	Quantity	%
Production	16.5	38.4	Post harvest loss (12% of total production)	1.5	3.5
Imports (paddy equivalent)	26.5	61.6	Seed (3% of total production)	1.0	2.3
			Subsistence con- sumption	10.5	24.40
			Urban consumption	28.3	65.8
			Excess	1.7	4.0
	<u>43.0</u>	<u>100.0</u>		<u>43.0</u>	<u>100.0</u>

The above table clearly shows that local rice production is grossly inferior to urban demand and that Togo must resort to importation of considerable quantities of rice to satisfy that demand. Any increases in irrigated or rain-fed rice production will contribute to a reduction in these imports.

Staple Food Crop Production 1972 - 1982

The table below shows the evolution in staple food crop production in Togo between 1972 and 1982.

Crops	Ag. Census 1972 (tons)	Ag. Census 1982 (tons)	Increase + Decrease - (tons)	Annual Change %
Corn	115,040	152,000	+ 36,960	2.83
Sorghum-Millet	96,906	35,000	+ 38,094	3.37
Paddy Rice	8,700	16,500	+ 7,800	6.61
Cassava	388,000	371,000	- 17,000	- 0.45
Yams	383,200	394,000	+ 10,800	0.28
Peanuts	16,842	19,000	+ 2,158	1.21
Beans	12,887	28,000	+ 15,113	8.07
Total	1,021,575	1,115,500		0.88

The annual rate of crop production increase of 0.88% was inferior to the annual population growth rate of 2.8%. Moreover, it is estimated that in order to attain food self-sufficiency at a daily per capita calorie consumption figure of 2,200, Togo's food production would have to grow at about 3.5% per year. Given such data there is little reason to fear that increases in local production will place downward pressure on prices and discourage producers.

One additional interesting trend highlighted by this table is the decrease in the production of cassava. Little has been done to encourage cassava production which is presently the victim of mosaic disease and the mealie bug parasite. In addition, the soils in the Aneho region where much cassava has been traditionally produced are severely depleted. With this decrease in production, however, has also come a shift in demand towards sweet potatoes. Farmers, thus have an alternative tuber that is in demand.

Traditional Vegetable Production

Indigenous vegetables most commonly consumed consist of okra, hot peppers, tomatoes, and various leaves including those of okra, bean, baobab, "gboma" and "ademe". These vegetables are used in the preparation of sauces that accompany the main dish prepared most frequently from corn, sorghum, yams or rice.

Production of these vegetables is high during the rainy seasons and satisfies demand. In fact there is usually an excess of production with surpluses (especially tomatoes) spoiling because of inadequate means of processing or storing.

During the dry season, on the other hand, production diminishes considerably because of inadequate water supplies, and does not satisfy demand. The limited quantity of vegetables that does appear on the market at this time comes from gardens located near a water source and sells for relatively high prices. Consumption of vegetables naturally goes down during this period. Because of the availability of water in the Sio River and within the perimeter the irrigation system, off seasons vegetable could easily be sold a favorable prices.

7. Land Tenure

In addition to inheritance, there exist in the project region other means of acquiring access to agricultural land (Table 7-1). As this table shows, the relative importance of land which is transferred to another person as a gift shows the considerable importance of family relationships in land tenure practices.

Although sharecropping, rental and a local arrangement known as AWOBA are minor ways of gaining access to land. They merit mention because of the particular nature of the relationship between landowner and farmer that each one defines.

Table 7 - 1

Means of Acquiring Land

Means	Number of fields	Frequency %
Inheritance	966	78.4
Gift	135	11.0
Purchase	56	4.6
Sharecropping	3	0.2
Rental	51	4.1
Awoba	<u>21</u>	<u>1.7</u>
	1,232	100.0

The sharecropping arrangement is seen more as a kind of loan of land for which the beneficiary must show gratitude to his benefactor through an in-kind gift. In Zone 2 of the project region where this phenomenon was investigated the "gift" most frequently amounted to one-third of the harvest, and in the north of the zone it was usually one half. The contract is normally valid for one year and is renewable by oral agreement.

The rental price of land in the same zone varies considerably. Yearly rents that were recorded during the study ranged from 875 cfa to 4,445 cfa per hectare.

X Similar
 Similar to the rental arrangement is the relationship known as AWOBA. What distinguishes AWOBA is the fact that the use of the land is conveyed to the beneficiary for an extended period of from five to twenty years. Land is rented in this manner usually because the landowner is in need of money to settle an outstanding debt. The rent which he imposes on his renter usually corresponds in both amount and time to his own debt. AWOBA rents vary from 560 cfa to 2,200 cfa, lower than short-term rental agreements of one year. Thus, farmers who acquire land in this way often turn around and rent it to another farmer in order to earn a small profit.

ANNEX G

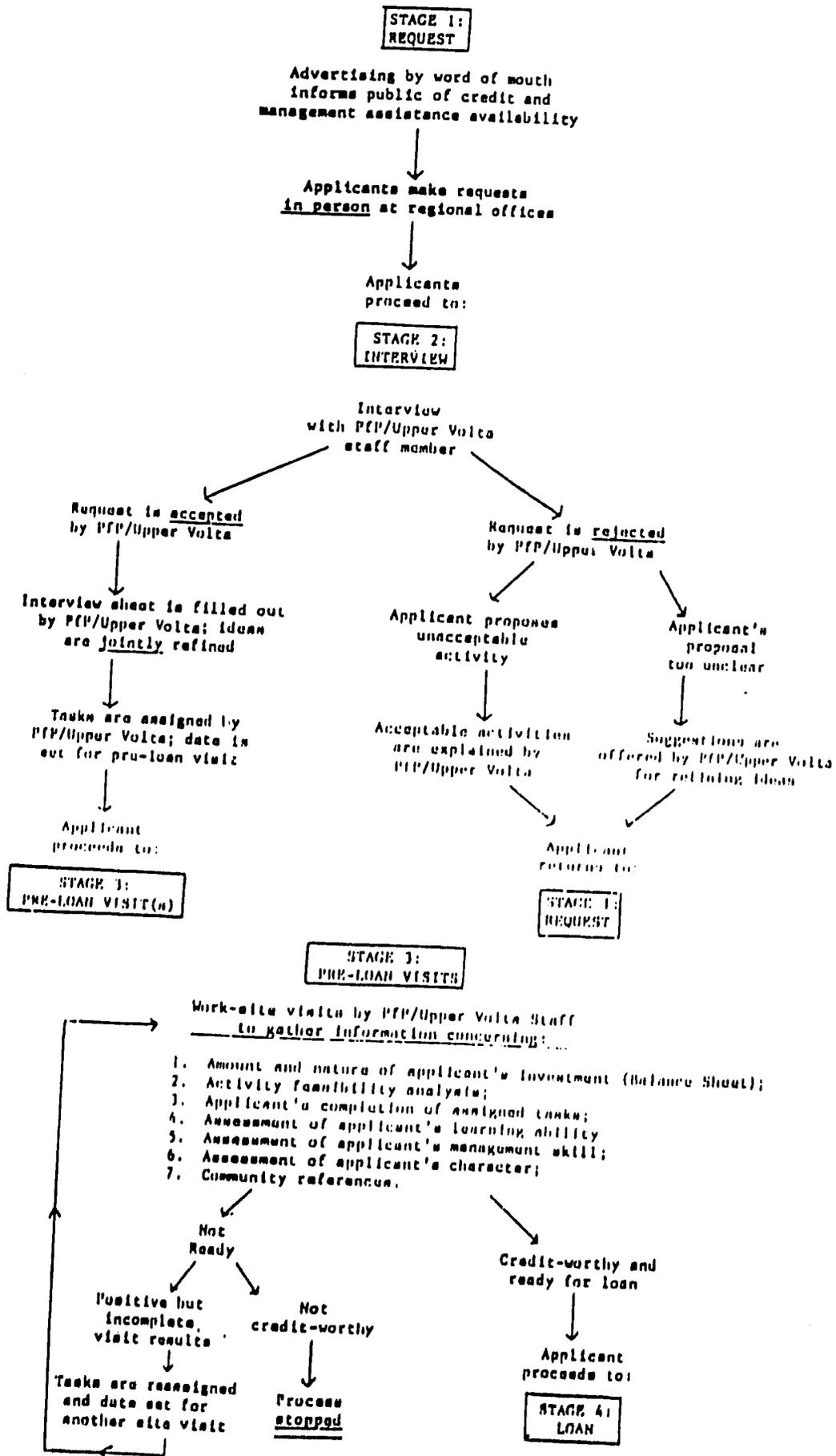
THE CREDIT TRAINING PROCESS

PfP's credit training process has developed to its most advanced state in Upper Volta where it has evolved over nearly seven years. Alex Brown, the former operations manager, has composed a detailed manual entitled Partnership for Productivity Upper Volta: Credit Training Manual (May 1984) which explains both how the system works and how it was developed.

Here are presented two brief excerpts: the credit training process flow-chart which shows how beneficiaries enter and pass through the credit training system; and, an outline of credit training procedures. Readers who are interested in greater detail are directed to the full manual.

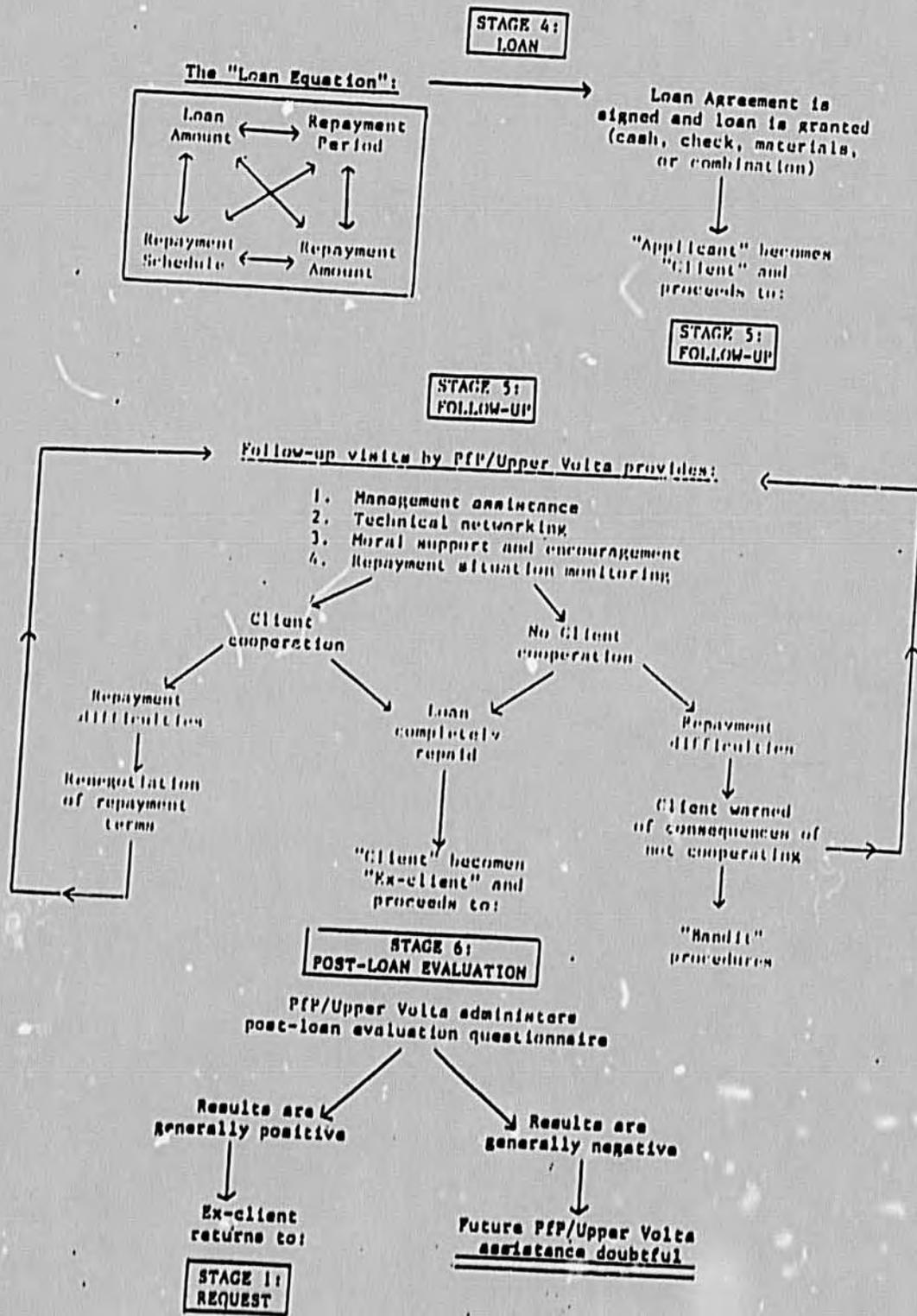
Although this system was developed in Upper Volta, it is applicable elsewhere. A simplified version of it was tested in Togo during the operational research design phase and found to be appropriate. It will constitute the base for the system to be utilized in Togo for this project.

THE CREDIT TRAINING PROCESS FLOWCHART



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THE CREDIT TRAINING PROCESS FLOWCHART (cont'd)



Credit Training Procedures

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ANNEX H

HEALTH AND ENVIRONMENT

1.0 NON-IRRIGATED PERIMETER HEALTH SECTOR ACTIVITIES

Outside the irrigated perimeter, the project's involvement with beneficiaries, primarily farmers, is such that health impacts will be minimal. However, there are two areas of possible concern, sanitation and pesticide use, which are discussed below. In addition various private sector health related activities are proposed.

1.1 Nutrition Education

While malnutrition does not appear to be a severe problem in the Sto River area, poor nutrition coupled with diarrhea and parasitic diseases always presents a health risk. As farmers move from food crops to cash crops, there is the concern that the effort in production of food crops will be reduced and the cash now generated will not be used to replace necessary food items. The impact may be particularly hard on women and children. If the cash increase is significant, then there is a positive benefit, but if the increase is marginal then the impact may be negative. It is assumed that agricultural education will be coupled with promotion of crop production. It is proposed that nutritional education be coupled with agricultural education activities.

Currently dispensary agents are meant to provide community based health education, but only do so at the clinic. The National Service for Health Education has material and personnel for community outreach programs, but lacks funds for travel etc. A manual for school-based health education was prepared by a PCV who worked in the area, but it is unclear whether the program is being implemented and is effective. The Peace Corps does have a very effective health education program coupled with USAID's well program, both of which received high praise, and the proposed CUSO well program will include a PCV-like health education component.

Project staff should work with the MOH health and nutrition education personnel and the CUSO health education staff to ensure that project beneficiaries also receive nutrition education. This activity will occur throughout the life of the project but should impose no additional costs.

1.2 Pesticide Use

Inappropriate pesticides use presents a potentially serious health and environmental risk. The project, while not actually purchasing pesticides, proposes encouraging farmers in the use of pesticides, therefore the project has some responsibility to ensure that they are used correctly, efficiently, and in such a way as to not cause undue environmental or health risks. Implied is an integrated pest management program with control of pesticides use, proper safety procedures, and safe disposal of waste containers, etc. It is recommended that this may best be handled by establishing a pesticide application company and providing appropriate technical assistance. PFP's agronomist should be qualified to assist with this activity.

1.3 Other Health Related Private Sector Activities

In support of the project's private sector initiative, it is suggested that the project identify and help establish private sector activities which will result in net positive health benefits. These are on-going activities with no additional costs. Possible activities to support include the following.

1.3.1 Water Supply Maintenance

The availability of safe, protected and accessible water sources are key to controlling many water associated diseases. A few wells do exist in the area, but not many. The objective of the CIDA funded CUSO wells project is to provide 1 well for every 250 persons. Project staff should work with CUSO to ensure that wells are provided to project beneficiaries as soon as possible. Further it should be possible to establish one or more individuals as well maintenance personnel. Basic plumbing skills, a spare parts inventory and rapid response would make such a service invaluable to villages.

Where wells are not viable CUSO proposes developing alternate water sources such as spring boxes, gravity feed systems and infiltration chambers. Such systems will require extensive masonry work, which presents another water sector economic opportunity.

1.3.2. Wastewater/Sanitation

Wastewater adjacent to the home and poor sanitation are potentially major health risk factors. While not impacts of the project, better management will have positive impacts. There is a field agent of the Service d'Hygiene who is located in Mission Tove and is responsible for hygiene activities, including latrine construction. However, there is a lack of materials, and the agent went home sick to his village eight months ago. The few latrines constructed were not VIP's. As a private sector activity, PFP should investigate the feasibility of a VIP latrine construction program. There appears to be some demand among the better off members of the community, and if good VIP latrines are constructed, the demand may grow. Currently the bush is the more acceptable alternative. Use of nightsoil for fertilizer is not recommended without proper treatment systems.

2.0 IRRIGATED PERIMETER ACTIVITIES

The timing type of involvement and level of activities by the project in the irrigated perimeter are unclear. For this reason it is difficult to design an effective program; however, guidelines are presented based on the PID design. It is recommended that project needs for health activities be reevaluated and redesigned at the time project involvement with irrigated perimeter farmers is initiated. Funds should be included in the budget for possible health activities. Schistosomiasis is the major health concern in the irrigated perimeter. The activities proposed are designed to reduce transmission, snail breeding, and contact with infected waters.

2.1 Vector Control

2.1.1 Schistosomiasis Vector Control

Snail elimination is difficult, but snail control is possible and if snails are periodically eliminated, disease control may result. Mollucides are effective, but not currently recommended because of the added costs to the project. Once slow release mollucides are marketed they may prove cost effective. However, intermittent irrigation, canal cleaning, good drainage, canal management and the proposed direct seeding approach, which will effectively minimize water contact in the rice paddies, are all effective in reducing transmission. When coupled with treatment of infected individuals, disease control may be effective. When possible and economically viable dry irrigation crops are preferred to paddy rice.

2.1.2 Malaria Vector Control

Rice paddies will provide excellent breeding sites for mosquitoes. The principal vector for malaria is Anopheles gambia, while other mosquitoes are a nuisance and have the potential to transmit other diseases, for example yellow fever. The Togo Malaria Control program used to spray houses, but now only makes chloroquine available to health centers. When seriously ill people are provided the initial treatment dose, but must pay for prophylactic treatment. In rice fields the larval stage should be attacked, which is acceptable given that there is not a concurrent program aimed at the adults. The best larvacide is ABATE, which is also used by the Onchocerciasis Control Program and is also effective against the vector for Guinea worm, a cyclops. However, large scale application of ABATE would be too expensive for this project.

Mr. Amegbo, Service de Parasitologie, Institut National d'Hygiene, has expressed his interest in conducting a pilot research program with larvae eating fish, which has the secondary benefit of fish becoming fertilizer in subsequent years. While such fish are not totally effective, they do provide reasonable control. A research project using fish in some fields and ABATE in others is encouraged.

2.2 Irrigation System Management

The project is fortunate in that a system of concrete lined feeder canals constructed by the Chinese is in place. However, older canals are not being maintained and are already choked with weeds. Also tertiary feeder and drainage canals are not concrete lined and are also choked with weeds. While the cement-lined canals do not present a major snail breeding site problem, they do provide for rapid transport of snails from the Sto River to the fields. If colonies do become established, most probably they will occur in weed-choked drainage canals. Currently farmers are responsible for maintaining their adjacent canal sections but the system is clearly not working. Therefore, it is proposed that a portion of the water-user fees be used to hire a two-man canal cleaning and maintenance team during the dry season. By proper management and maintenance of the canals, the system will work more efficiently and through vegetation control, snail breeding will also be controlled. Intermittant irrigation is also encouraged as this will facilitate canal cleaning and maintenance, and eliminate snail colonies through dissection.

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3.0 EPIDEMIOLOGICAL MONITORING

If activities in the irrigated perimeter are extensive and the project is able to work with farmers as a group then epidemiological surveys and treatment of individuals infected with schistosomiasis is strongly recommended. If no activities occur within the irrigated perimeter then epidemiological monitoring is optimal. The justification for including it is to quantify health problems, and in conjunction with the CUSO project, provide an evaluation mechanism. It is recommended that the final design and need for these activities be developed in conjunction with CUSO and be based on the actuality of irrigated perimeter activities. Of all health sector activities, this is one aspect that results in significant costs increases, of which a major portion would be treatment costs.

An epidemiological component was proposed in PFP's PID-like document. In discussions with Mr. Amegbo, the Service de Parasitologie is very interested in conducting such surveys, but require funding for transportation, laboratory supplies, field equipment and treatment, although treatment would be handled through existing health centers. Accordingly, it is proposed that an initial survey be conducted at the start of the project, coupled with treatment, and a second survey conducted at the end of the project to evaluate the impact, also coupled with treatment. A proposed cost estimate was submitted by Mr. Amegbo. The project should provide additional funding for treatment of schistosomiasis. Because of the research nature of such a program, it is also proposed that PFP contract with a U.S. tropical disease epidemiologist to assist in the design of the program (1 month visit) and participate in PFP's mid-term and final evaluation. Possible candidates include: Dr. DeWolfe Miller, University of Hawaii, and Dr. Edward Michelson, Uniformed Services University, Washington, D.C.

4.0 HEALTH SECTOR IMPLEMENTATION SCHEDULE

<u>Activity</u>	<u>Year</u>				
	1984	1985	1986	1987	1988
Non-irrigated Perimeter					
Nutrition Education	-----	-----	-----	-----	-----
Pesticide Use	-----	-----	-----	-----	-----
Private Sector Activities	-----	-----	-----	-----	-----
Irrigated Perimeter					
Vector Control	-----	-----	-----	-----	-----
Irrigation System Management	-----	-----	-----	-----	-----
Epidemiological Monitoring	----		----		----

INITIAL ENVIRONMENTAL EXAMINATION INPUT

- A. PROJECT COUNTRY : Togo
- B. PROJECT : Sio River Economic Development (693-0226)
- C. FUNDING (LOP) : \$ 3,400,000
- D. LIFE OF PROJECT : October 1984 - September 1989
- E. IEE PREPARED BY : _____
: J. Schiller
- F. DATE PREPARED : June 8, 1984
- G. THRESHOLD DECISION : A negative or anticipated threshold decision is recommended as minimal or not environmental impacts. Two possible areas of pesticide use and health. The Project Paper recognizes these areas of concern and presents mitigation measures which will ensure that no negative environmental occur and indeed will result in net benefits to project beneficiaries.

Concurrence: _____
MYRON GOLDEN (signed)
AID REPRESENTATIVE
USAID/Lome

Date:

Bureau Environmental Officer Decision:

Approval _____

Disapproval _____

Date _____

Clearance: _____

GC/AFR

Date _____

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2. IDENTIFICATION AND EVALUATION OF ENVIRONMENTAL IMPACTS IN IMPACT AREAS

A. LAND USE AND NATURAL RESOURCES	
1. Changing the character of the land through	
a. Increasing the population	N
b. Extracting natural resources	N
c. Land clearing	L-
d. Changing soil character	L-
2. Altering natural defenses	N
3. Foreclosing important uses	N
4. Irreversible, inefficient commitments	N
5. Building/Construction	N
6. Jeopardizing humans or their work	N
B. WATER QUALITY	
1. Physical state of water	N
2. Chemical and biological states	L-
C. ATMOSPHERIC	
1. Air additives	N
2. Air pollution	N
3. Noise pollution	N
D. CULTURAL	
1. Altering physical symbols	N
2. Changes of cultural traditions	L-
E. SOCIOECONOMIC	
1. Changes in economic/employment patterns	H+
2. Changes in population	L+
3. Changes in cultural patterns	L+
F. HEALTH	
1. Human nutrition	H+
2. Pesticide toxicity	L-
3. Water borne disease vectors	L+
4. Vector borne diseases	L-

ENVIRONMENTAL ANALYSIS

The threshold decision reached in the Initial Environmental Examination was for a Negative Threshold Decision. This Environmental Analysis is presented as justification for this negative decision.

A. LAND USE AND NATURAL RESOURCES

1. Changing the character of the land through

a. Increasing the population

No population increases are anticipated

b. Extracting natural resources

See 1.d

c. Land clearing

No land clearing operations are anticipated; although, individual farmers may decide to bring more land under production.

d. Changing soil character

While farming depletes soil minerals etc., the project will encourage farmers in the use of fertilizers to replace lost mineral content.

2. Altering natural defenses

The project will promote the use of herbicides and pesticides for improved agricultural production, and the use of veterinary medications to improve animal production. All products used will be U.S. Government and G.O.T. approved. Environmental consequences are considered low.

3. Foreclosing important defenses

No impact anticipated.

4. Irreversible, inefficient uses

No impact anticipated.

5. Building/Construction

No construction activities planned.

6. Jeopardizing humans or their work

No impact anticipated.

B. WATER QUALITY

1. Physical state of water

Outside of the irrigated perimeter no impacts on water quality are anticipated. Within the irrigated perimeter impacts should be minimal, but result only from use of existing systems. The irrigation canal intake structure is a run-of-the-river diversion dam. During periods of high flow most of the flow will remain in the Rio River. Intensive irrigation may result in raising the water table within the perimeter and salinity build up within the upper soil layers is possible.

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2. Chemical and biological status

A major environmental concern of the project is the downstream impact of agricultural wastewater which may contain toxic chemicals from fertilizer, herbicides and insecticides. Downstream uses and ecological conditions below the irrigated perimeter are unknown. Proper management of chemicals will mitigate the impact.

C. ATMOSPHERIC

1. Air additives
No impact anticipated.
2. Air Pollution
No impact anticipated.
3. Noise Pollution
No impact anticipated.

D. CULTURAL

1. Altering physical symbols
No impact anticipated.
2. Changes of cultural traditions
The project promotes private sector activities and agricultural development, therefore, encourages beneficiaries to become more involved in the local and national economy. Development tends to result in an erosion of traditional values and life styles.

E. SOCIOECONOMIC

1. Changes in economic/employment patterns
By promoting private sector economic activities and improving agricultural production the local economy should improve and more individuals will be encouraged to remain in the Sio region rather than migrate to urban areas.
2. Changes in population
If more jobs are created in the Sio region both in the private sector and in agriculture then out migration may be reduced.
3. Changes in cultural patterns
As individuals become more active in the local economy and, through the loan program, become better managers of their own finances, traditional cultural patterns will change. Those individuals with the initiative to get involved in the project will benefit relative to their neighbors.

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F. HEALTH

1. Human Nutrition

As the emphasis of the project is on agricultural production, nutrition levels should improve. However, a shift towards cash crops may reduce production of staple food crops; although, the project objective is to increase production of basic food products. Nutrition education is proposed to promote better health. The village health committees, to be established by the CIDA - CUSO wells project, should be the contact point for nutrition education activities.

2. Pesticide toxicity

Proper pesticide management is a major concern. The potential for misuse by farmers could result in significant health and environmental problems. The project, while not directly involved in pesticide use, anticipates loaning to and encouraging farmers to use pesticides to improve productivity. Therefore, the project assumes some responsibility to ensure that pesticides are used safely and effectively. Pesticides will be purchased from the government. The project should ensure that all pesticides purchased or approved for purchase by AID. Also to minimize health risks and in light of the project's private sector initiative, it is proposed the PFP consider establishing, via loans and training, a pesticides application company. This would result in better control of pesticides, reduced investment in equipment, more efficient application, and should prove to be a viable economic activity.

3. Water borne disease vectors

The CIDA - CUSO well construction program, modelled after the USAID program, will target the project population, among others, and will therefore result in a net reduction in water borne diseases. Village health committees will be established in each village and health education is a major component of the project.

4. Vector borne diseases

Outside the irrigated perimeter no impact on vector borne diseases is anticipated. Within the perimeter there is a potential for an increase in the prevalence of schistosomiasis and malaria. Various environmental mitigation measures are proposed. Also an optimal epidemiological survey, coupled with treatment, is proposed with follow-up evaluations at the midpoint and end of the project.

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ANNEX I
BUDGET NOTES

Exchange rate: \$1.00 = 375 cfa

I. Personnel

A. Salaries

Expatriate salaries fixed by PFP/I home office.

Senior Manager (USA) works four months a year on project at \$45,000/year.
Project Associate (USA) works four months a year at \$24,000/year

Togolese Personnel

Operations Manager	top starting salary	350,000 cfa/month
Credit Manager		265,000
Agricultural Coordinator		265,000
Credit Training Agents		60,000
Mechanic/Operator		80,000
Administrative Assistant		120,000
Secretary		80,000

Two credit training agents hired year 1, two year 2 and two year three.
15% salary increases budgeted yearly.

B. Benefits

Expatriate benefits calculated at 25% of salary. Togolese benefits at 18.1%.

Education allowance for expatriate children at \$2,000/child/year. Number of children budgeted for by year: 2, 5, 5, 3, 3.

C. Housing

House plus watchman for each expatriate at 145,000 cfa/month. Two houses for five years, one for three years. 15% rent increase every second year.

Settling in costs of \$1,500 per expatriate.

PCV housing for two volunteers for three years each. Rent of 36,000 cfa/month with 15% increase after two years.

D. Travel

Assumptions for travel: general manager, wife and 4 half fare children; agronomist, wife and 2 full fare children; mechanic, wife and 2 half fare children.

Home leave every second year. Four consultation trips to the U. S. budgeted for expatriate staff. Three trips to US for Togolese staff. Three inter-african trips per year for training, conferences, etc. Three trips per year to Togo budgeted for PFP Washington staff.

W.S.

Year 1.			
FX	6 full fares US - Lome at 1500	\$ 9,000	
	4 half fares US - Lome at 750	3,000	
	2 RT US - Lome at 2500	5,000	
	21 days per diem Lome at 88	1,850	\$18,850
LC	3 full fares interafrican at 1115	3,345	
	Per diem at 465 per trip	1,395	
	Per diem Lome 2 families 30 days at 81	4,920	9,655
Year 2			
FX	2 full fares US - Lome at 1500	3,000	
	3 RT US - Lome at 2700	8,100	
	60 days per diem DC at 75	4,500	
	35 days per diem Lome at 100	3,500	19.100
LC	9 RT Lome - US at 2510 (full)	22,590	
	4 RT Lome - US at 1255 (half)	5,020	
	3 RT interafrican at 1255	3,765	
	Per diem 3 trips at 520	1,565	32,945
Year 3			
FX	3 RT US - Lome at 2,900	8,700	
	35 days per diem Lome at 115	4,025	
	60 days per diem DC at 100	6,000	18,725
LC	5 RT Lome - US at 2,700 (full)	13,500	
	2 RT Lome - US at 1,350 (half)	2,700	
	3 RT interafrican at 1,420	4,265	
	Per diem 3 trips at 510	1,530	21,885
Year 4			
FX	4 RT US - Lome at 3100	12,400	
	42 days per diem Lome at 130	5,460	
	20 days per diem DC at 115	2,300	20,160

LC	7 RT Togo - US at 2885	\$20,195	
	2 Togo - US at 1445	2,890	
	4 RT Togo - US at 1445 (half)	5,780	
	2 Togo - US at 725(half)	1,450	
	3 RT interafrican at 1520	4,560	
	Per diem 3 trips at 535	1,605	\$36,480

Year 5

FX	3 RT US - Togo at 3300	9,900	
	35 days per diem Lome at 140	4,900	14,800

LC	6 Lome - US at 1580	9,480	
	4 Lome - US at 790 (half)	3,160	
	3 RT interafrican at 1675	5,025	
	Per diem 3 trips at 560	1,680	19,345

Local travel: 20 trips year 1 at 35,000 cfa/trip/person. Yearly increases for added trips and inflation.

E. Recruitment and relocation

Recruitment: Covers job advertising, local transport and expenses, interviewing and testing

Shipping: Rate of \$550/cwt. for airfreight (includes insurance). PFP allowance is 350 lbs. single individual, 600 lbs. couple, 100 lbs. per child.

General Manager	1,000 lbs.
Agronomist	800 lbs.
Mechanic	800 lbs.

Clearing, handling & transport fees Lome at \$100 per shipment. Add 10% year 2, 25% return baggage year 4, 35% return baggage year 5.

Relocation costs are for local staff to move into the project area. Calculated at \$235 per agent with 15% yearly increases.

II. Commodities

All prices are tax free.

6 Datsun double cabin diesel pickup trucks: dealer's price \$8,465 CIF Lome. Purchase four year 1, two year 3. Add 30% to price for year 3.

Massey Ferguson 285 tractor with attachments: dealer's price includes 15% inflation.

Tractor	6,500,000	cfa
Reversible plow (3 mould-boards)	1,860,000	
4 ton dumping trailer	1,850,000	
28 disc harrow	1,650,000	
Rotary mower (heavy duty)	1,700,000	
Rear scraper blade	600,000	
Box scraper	1,500,000	
Ridger	1,200,000	
chisel plow	1,800,000	18,660,000 or \$49,760

12 Yamaha 100 cc trailbikes. Dealer's price 370,000 cfa. Add for tools and accessories plus 15% for inflation. \$1,135 each.

5 Kubota 10 hp "Pony Super" rototillers

Rototiller	522,620	cfa
Disc clutch	6,100	
Trailer	134,120	
Ridger	15,750	
Steel wheels	19,305	
Plow	18,035	
Tow bar	4,320	
Mower	116,850	
Rubber tires	30,230	
Rotary plow mulcher	109,375	
Irrigation pump	136,410	
Sprayer	90,940	
Sharpener for blades	16,260	
Small wheel for gauge	4,575	
Additional rings for attaching steel wheels	11,430	1,236,320 or \$3,300

Add 15% for inflation. \$3,795 each.

Tools and equipment for mechanic workshop based on World Bank estimate for CRS garage of \$6,140. Water measuring equipment estimate based on information provided by the REDSO engineering office.

Workshop estimate based on a similar PFP construction in Upper Volta.

Personal computer system estimate from Wang of \$6,321. Add 15% inflation and \$500 for shipping, insurance and handling

2 portable computers estimate from Radio Shack at \$1,000 each. Add for inflation, shipping and insurance.

Photocopier estimate for Canon copier from AID/Lome.

Video equipment estimate \$2,445. Add 15% for inflation, \$300 for shipping, insurance and handling.

2 typewriters: \$1,395 for one office electric, \$465 for one office manual.

Office furnishings: \$4,000 for Lome (includes 2 air conditioners), \$2,000 for Mission Tove, \$1,000 each for two field offices. Add inflation.

Household furnishings: \$2,790 per expatriate house.

III. Operating Costs

Vehicle assumptions: 22,000 kilometers/vehicle/year on 2,445 liters of diesel fuel. Price of diesel 200 cfa increasing 10 cfa per year. Maintenance costs over 5 year life are 75% of purchase price. Insurance 100,000 per year/vehicle. 8.1% added for extra travel, tools and unforeseen repairs.

Motorcycle assumptions: 12,000 kilometers per year on 600 liters of gasoline and 24 liters of oil. Price of gasoline 200 cfa increasing 10 cfa per year. Price of 40W oil 900 cfa increasing 50 cfa per year. Maintenance and repair equal the purchase price over five years. Insurance 20,000 cfa/bike/year. 8 helmets at 17,500 cfa and 8 tool kits at 20,000 purchased year 1. Bikes in service by year: 2, 6, 8, 8, 6.

Ag/Credit Training:

12 magazine subscriptions/year at \$46.50	\$2,790
reference books	1,860
instructional materials	930
ag tools (tapes, levels, scales, sprayers soil testers, etc.)	930
10 extension kits (backpack, folders, calculator, reference manual, etc.) at \$46.50	465
tuition & registration for 15 agents at \$372	<u>5,580</u>
	\$12,555

Ag Demonstrations: \$23,250 to be used for ag experiments, testing and demonstrations as outlined in the Technical Analysis section.

Soil Testing: Estimate per hectare for testing and mapping of 31,705 cfa furnished by the National Soils Lab for 110 hectares in and outside the irrigated perimeter.

Health: three local health surveys at \$1,860 each, logistical support for 600 health education lectures at 2,500 cfa and 5,580 doses of Praziquantel for treatment of schistosomiasis by local health personnel.

Administration: Covers the following office expenses.

Office supplies	\$2,790	\$3,020	\$3,250	\$3,480	\$3,710
Computer supplies	1,115	1,210	1,205	1,400	1,495
Office rent - Lome	2,500	2,500	2,700	2,700	3,000
MT	940	940	1,080	1,080	1,165
others		470	1,090	1,090	1,165
Telephone	2,790	2,790	3,210	3,720	4,185
Telex	930	1,070	1,060	1,250	1,340
Utilities	3,225	3,485	3,555	3,835	4,165
	<u>14,320</u>	<u>15,485</u>	<u>17,250</u>	<u>18,555</u>	<u>20,225</u>

Language training: \$1,395 per expatriate.

Monitoring/documentation: 360 person days per year for enumerators starting at 2,790 cfa per day and increasing 370 cfa per year.
120 person days per year for data processing, analysis and presentation at 9,300 cfa per day increasing 465 cfa per year

Enumerators	\$2,680	3,035	3,390	3,745	4,100
Data analysis	2,975	3,125	2,275	3,420	3,570
Camera/film	500	240	290	350	450
Tape recorder/ tapes	400	75	100	125	150
Video/film development	2,000	3,000	4,000	4,500	5,000
Office supplies	665	800	925	1,080	1,185
	<u>9,220</u>	<u>10,275</u>	<u>11,980</u>	<u>13,220</u>	<u>14,455</u>

IV. Consultants

Non-formal education (3 PM's): Based on information from World Education

Year 1	Diagnostic vist 14 d @ \$250	\$3,500	
	Workshop 30 d @ \$250	7,500	
	Follow-up 14 d @ \$250	3,500	
	3 RT US Lome @ 2,500	7,500	
	58 d per diem @ \$88	5,105	31,105
Year 2	Follow up 14 d @ \$275	3,850	
	RT US Lome @ 2,700	2,700	
	14 d per diem @ \$100	1,400	7,950
Year 3	Follow up 14 d @ \$300	4,200	
	RT US Lome @ 2,900	2,900	
	14 d per diem @ \$115	1,610	8,710

Water management/irrigation: Based on information from AID/W
Water Management Synthesis Project. 5 PM's at 20,000 per month.

Agronomy (2 PM's):

Year 2	20 days @ \$275	2,750	
	2 RT's interafrican @ \$1,250	2,500	
	20 d per diem @ \$100	2,000	10,000
Year 3	10 days @ \$300	3,000	
	RT interafrican	1,100	
	10 d per diem at \$115	1,150	5,250
Year 4	10 days @ \$325	3,250	
	RT interafrican	1,200	
	10 d per diem @ 130	1,300	5,750

Marketing (1 PM)

Year 3	30 days @ \$300	9,000	
	RT @ 2,500	2,500	
	30 d per diem @ \$115	3,450	14,950

Economist (2PM's):

Year 1	30 days @ \$250	\$7,500	
	RT US Lome @ \$2,500	2,500	
	30 d per diem @ \$88	2,640	12,640
Year 3	30 days @ \$300	9,000	
	RT US Lome @ 2,900	2,900	
	30 d per diem @ \$115	3,450	15,350

Computers/information (1 PM)

Year 2	15 days @ \$275	4,125	
	RT US Lome @ \$2,700	2,700	
	15 d per diem @ \$100	1,500	8,325
Year 4	15 days @ \$325	4,875	
	RT US Lome @ 3,100	3,100	
	15 d per diem \$130	1,950	9,925

Organization/management (1PM)

Year 3	30 days @ \$300	9,000	
	RT US Lome @ \$2,900	2,900	
	30 d per diem @ \$130	3,450	11,615

Sociologist (5 PM's): Compensation calculated per assignment. \$5,000 year 1 increasing by 15% each year.

External evaluations: Salary rates are lower than for other consultants since evaluation team members will be made up in part by PFP/I staff.

Year 3	3 evaluators for 30 d @ \$200	18,000	
	3 RT US Lome @\$2,900	8,700	
	90 d per diem @ \$115	10,350	37,050
Year 5	3 evaluators for 30 d @ \$275	24,750	
	3 RT US Lome @\$3,300	3,300	
	90 d per diem @ \$140	12,600	47,250

VII. PFP overhead: Provisional rate of 24.23% fixed by AID June 30, 1983

VIII. Fixed fee: To pay for costs incurred in the performance of contract goals not covered as specific items, such as the use of PFP facilities during overtime hours, public relations to achieve overall organizational goals, documentation and dissemination of methodologies, techniques and lessons learned, and related project development.

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	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL		TOTAL Fx & Lc
	Fx	Lc	Fx	Lc	Fx	Lc	Fx	Lc	Fx	Lc	Fx	Lc	
I. PERSONNEL													
Salaries													
General Manager	32,000		34,000		36,000		39,000		42,000		183,000		
Agronomist	34,000		37,000		40,000		44,000		48,000		203,000		
Mechanic-Trainer			25,000		27,000		29,000				81,000		
Senior Manager (USA)	15,000		16,000		17,000		18,000		19,000		85,000		
Project Associate (USA)	6,000		6,500		7,000		7,500		8,000		35,500		
Project Manager				11,200		12,850		14,610		17,030		55,920	
Credit Manager		8,450		9,750		11,215		12,895		14,830		57,170	
Ag. Coordinator		5,450		6,250		7,215		8,295		9,630		37,170	
Credit Trng Agents		3,540		4,250		5,030		5,925		6,940		28,390	
Mechanic/Operator		2,560		2,945		3,395		3,895		4,480		17,265	
Administrative Assist.		3,840		4,415		5,075		5,835		6,710		28,875	
Secretary		2,560		2,945		3,365		3,895		4,480		17,265	
TOTAL SALARIES	87,000	29,760	118,500	49,260	127,000	60,465	137,500	69,550	117,500	80,000	587,500	289,055	
B. BENEFITS													
Expatriate	21,750		29,625		31,750		34,375		29,375		146,875		
Education Allowance		4,000		10,000		12,000		6,000		6,000		38,000	
Togolese		5,355		6,915		10,950		12,590		14,480		52,320	
TOTAL BENEFITS	21,750	9,355	29,625	26,915	31,750	22,950	34,375	18,590	29,375	20,480	146,875	90,320	
C. HOUSING													
Expatriate Housing		9,250		13,920		15,310		16,010		12,270		66,790	
Settling in costs	1,000	2,000	500	1,000							1,500	3,000	
PCV Housing				1,150		2,300		2,475		1,325		7,250	
TOTAL HOUSING	1,000	11,250	500	16,070		17,610		18,485		13,595	1,500	77,040	
D. TRAVEL													
International	18,850	9,655	19,100	32,945	18,725	21,995	20,160	36,460	14,800	19,345	91,635	120,420	
Local		1,860		2,325		2,790		3,060		3,505		13,540	
TOTAL TRAVEL	18,850	11,515	19,100	35,270	18,725	24,785	20,160	39,540	14,800	22,850	91,635	133,960	
E. RECRUITMENT & RELOCATION													
Recruitment	1,000	465		465		465	1,000				2,000	1,395	
Shipping Personal - Effects	9,900	155	4,540	65				5,625		12,430	14,740	18,335	
Relocation Allowance		465		535		615						1,615	
TOTAL REC/ RELOC.	10,900	1,085	4,540	1,065		1,080	1,000	5,625		12,430	16,740	21,345	
SUB TOTAL	139,500	63,055	172,565	120,610	177,475	126,910	193,035	151,790	161,675	149,355	844,250	611,720	1,455,970

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	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL		TOTAL Fx + Lc	
	Fx	Lc	Fx	Lc	Fx	Lc	Fx	Lc	Fx	Lc	Fx	Lc		
II. COMMODITIES														
6 Datsun Pickups		33,860				22,010								
Massey Ferguson Tractor w/ Attachments				49,760									55,870	
5 Rototillers				15,975									49,760	
12 Motorcycles		23,620											18,975	
Tools & Equipment			4,500	6,140								4,500	13,620	
Equipment workshop				6,975									6,140	
Personal Computer System	7,770											7,770	6,975	
2 Portable Computers	3,000											3,000		
1 Photocopier		2,500											2,500	
Video Equipment	3,110											3,110		
2 Typewriters		1,860											1,860	
Office Furniture		7,440		930		465							8,835	
Household Furniture		5,560		2,790									8,370	
SUB TOTAL	13,880	64,860	4,500	85,570		22,475						18,350	172,905	191,285
III. Vehicles														
Motorcycles		11,335		18,170		18,600		15,950		19,335			86,390	
AG/Credit Training		2,105		4,150		5,835		5,990		4,605			22,685	
AG Demonstrations		3,255		3,720		1,860		1,860		1,860			12,555	
Soil Testing		1,860		4,650		6,510		5,560		4,650			23,250	
Health		2,790		2,790		1,860		1,860					9,300	
Administration		3,720		4,000		4,000		4,000		4,000			15,720	
Language Training		24,320		15,465		17,250		19,555		20,225			85,835	
Monitoring/Documentation		2,790		1,395									4,165	
		9,220		10,275		11,980		13,220		14,455			59,150	
SUB TOTAL		47,675		64,355		67,895		70,015		69,130			319,070	319,070

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	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL		TOTAL	
	FX	LC	FX	LC	FX & LC									
IV. CONSULTANTS/EVALUATION														
Non Formal Education	31,105		7,950		5,710							47,765		
Water Management/Irrigation			60,000		20,000		20,000					100,000		
Agronomy			10,000		5,250		5,750					21,000		
Marketing					14,950							14,950		
Economist	12,640				15,350							27,990		
Computers/Information			8,325				9,925					18,250		
Organization/Management												15,350		
Sociologist		5,000		5,750		6,615				8,745			33,715	
External Evaluations					37,050		7,605	47,250			84,300			
SUB TOTAL	43,745	5,000	86,275	5,750	116,660	6,615	35,675	7,605	47,250	8,745	329,605	33,715	363,320	
Total Lines I-IV	197,125	180,590	263,340	276,285	294,135	223,695	228,710	229,410	208,925	227,230	1,192,235	1,137,410	2,329,645	
V. CONTINGENCY @ 12%	23,655	21,670	31,600	33,155	35,295	26,865	27,445	27,530	25,070	27,270	143,065	136,490	279,555	
IV. CREDIT FUND		25,000		50,000		75,000		50,000				200,000	200,000	
TOTAL ITEMS I-VI	220,780	227,260	294,940	359,440	329,430	225,760	256,155	306,940	233,995	254,500	1,335,300	1,473,900	2,809,200	
VII. PFP OVERHEAD @ 24.23%	53,495	55,065	71,465	87,090	79,520	78,930	62,065	74,370	56,695	61,665	323,540	357,120	680,660	
III. FIXED FEE @ 2%	4,415	4,545	5,900	7,190	6,590	6,515	5,125	6,140	4,680	5,090	26,710	29,480	56,190	
IX. GRAND TOTAL	278,690	266,670	372,305	453,720	415,540	411,205	323,345	387,450	295,370	321,255	1,685,550	1,860,500	3,546,050	

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SIO RIVER ECONOMIC DEVELOPMENT PROJECT

FINANCIAL SUMMARY

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL		TOTAL
	Fx	LC	Fx	LC	Fx+LC								
I. PERSONNEL	139,500	63,055	172,565	120,610	177,445	126,910	193,035	151,790	161,675	149,355	844,250	611,720	1,455,970
II. COMMODITIES	13,880	64,860	4,500	85,570		22,475					18,380	172,905	191,285
III. OPERATING COSTS		47,675		64,355		67,895		70,015		69,130		319,070	319,070
IV. CONSULTANTS/EVALUATION	43,745	5,000	86,275	5,750	116,660	6,615	35,675	7,605	47,250	8,745	329,605	33,715	363,320
V. CONTINGENCY @ 12%	23,655	21,670	31,600	33,155	35,215	26,865	27,445	27,530	25,070	27,270	143,065	136,490	279,555
VI. CREDIT FUND		25,000		50,000		25,000		50,000				200,000	200,000
VII. OVERHEAD @ 24.23%	53,495	55,065	71,465	87,090	79,820	78,930	62,065	74,370	56,695	61,665	323,540	357,120	680,660
VIII. FIXED FEE @ 2%	4,415	4,545	5,900	7,190	6,590	6,515	5,125	6,140	4,680	5,090	26,710	29,480	56,190
IX. GRAND TOTAL	278,690	286,870	372,305	453,720	415,840	411,205	323,345	387,450	295,370	321,255	1,685,550	1,860,500	3,546,050

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