PD-ABD-344

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: Guinea (USAID)

3. PROJECT NUMBER: 675-0216

4. BUREAU/OFFICE: AFR [06]

5. PROJECT TITLE *(maximum 40 characters)*: RURAL ROADS PROJECT

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 96

7. ESTIMATED DATE OF OBLIGATION *(Under 'B', below, enter 1, 2, 3, or 4)*: A. Initial FY 91 B. Quarter 4 C. Final FY 95

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 91 B. FX	C. L/C	D. TOTAL	LIFE OF PROJECT E. FX	F. L/C	G. TOTAL
AID Appropriated Total						
(Grant)	(5300)	(0)	(5300)	(33000)	(0)	(33000)
(Loan)	( )	( )	( )	( )	( )	( )
Host Country (Beneficiaries)				1,000		1,000
Host Country (GOG)				13,500		13,500
Other Donor(s)				47,300		47,300
TOTALS				94,800		94,800

9. SCHEDULE OF AID FUNDING ($000)

APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE 1 Grant	2 Loan	D. OBLIGATION TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1 Grant	2. Loan	F. LIFE OF PROJECT 1 Grant	2. Loan
(1) SS								33,000	-0-
(2)									
(3)									
(4)									
TOTALS								33,000	-0-

10. SECONDARY TECHNICAL CODES *(maximum 6 codes of 3 positions each)*

11. SECONDARY PURPOSE CO

12. SPECIAL CONCERNS CODES *(maximum 7 codes of 4 positions each)*

A. Code							
B. Amount						-	

13. PROJECT PURPOSE *(maximum 480 characters)*

The purpose is to improve market access for rural producers.

14. SCHEDULED EVALUATIONS: Interim MM 07 YY 93 — Final MM 03 YY 96

15. SOURCE/ORIGIN OF GOODS AND SERVICES: [ ] 000 [ ] 941 [ ] Local [X] Other *(specify)* 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED *(This is page 1 of a ____ page PP Amendment.)*

17. APPROVED BY — Signature: Scott M. Spangler — Title: Assistant Administrator for Africa Bureau — Date Signed: MM 09 DD 21 YY 91

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

AID 1330-4 (3-89)

Agency for International Development
Washington, D.C. 20523

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR AFRICA

FROM: AFR/PD, J. Paul Guedet

SUBJECT: Guinea Rural Roads Project (675-0216)

I. Problem

Your approval is requested to authorize US $33,000,000 from the Development Fund for Africa Appropriation Account for a five-year project designed to provide financing for rural road rehabilitation and related management, engineering and technical services. The planned FY 1991 obligation is $5,300,000.

II. Discussion

A. Background

Guinea's road system consists of about 18,500 kilometers, one of the least dense networks in Africa. Of that total, 14,500 km are rural feeder roads, and of these only about 5,000 km are in minimally acceptable condition. The deplorable state of the rural road network has left much of the rural population confronted with a dearth of motorized transport and prohibitive transport costs. The movement of agricultural produce, inputs and other goods is severely inhibited along the coast, from the hinterland to Conakry, and from rural areas to regional market centers. These conditions pose a major obstacle to agricultural development.

The reasons for the neglect of the road system stem from the legacy of Guinea's First Republic (1958-1984). The government during that era ran an overly-centralized, statist public works system that suffered from lack of funds for systematic road maintenance, and a shortage of trained managers and technicians. What little maintenance the Government undertook was by force account, while major construction contracts were awarded to international firms. In this context, small and medium-scale contractors (SMCs) had little opportunity to develop their competence and financial standing.

The GOG has taken significant steps to overcome these problems in the context of its overall structural and economic reform program. A single agency, the National Rural Engineering Department (DNGR), has been placed in charge of all rural road construction, rehabilitation and maintenance. DNGR has created

eight semi-autonomous field units to supervise rural infrastructure work; however, they are yet to be fully staffed. DNGR has also shifted most of its road rehabilitation and maintenance operations to private firms and is promoting the use of SMCs. The national budget now has a line item for maintenance and an increasing share is being designated each year for rural roads. A policy of decentralization has strengthened local community participation in activities such as road maintenance.

However, major constraints remain to be addressed: scarce GOG funds for investment in rehabilitation, lack of a firmly established system for road maintenance, human resource gaps in planning and managing rural infrastructure work, inadequate facilities and equipment for DNGR, and poorly trained and financially insecure SMCs. To address these constraints, the GOG and the International Development Association (IDA) organized a five-year, $94.8 million multi-donor effort called the National Rural Infrastructure Project (PNIR) for which agreements were signed in 1990 with IDA ($40.0 million), the German KfW ($6.8 million) and the French FAC ($0.5 million). The GOG is contributing $13.5 million and beneficiaries an estimated $1.0 million. The $33.0 million Rural Roads project will represent the U.S. contribution to PNIR, provided as parallel financing.

The overall PNIR effort provides for rehabilitation and maintenance of rural roads; development of bottomlands and rural water supply; management and technical training for DNGR central, regional and prefectoral units; construction, equipment and financial assistance to these units; technical and business management training for SMCs; and pilot labor-intensive rehabilitation/maintenance work with SMCs and local communities. Approximately 87 percent of PNIR's resources are devoted to road-related activities; the AID project will be concerned solely with roadwork.

Over 2,000 km of rural roads are to be rehabilitated under PNIR. The segments, located in 16 prefectures throughout the country, were chosen from a "Master Plan" subset of 8,000 km on the basis of a multi-criteria ranking that considered agricultural, traffic, population, administrative and other factors. The selection process involved consultation among government and local authorities, local beneficiaries, and technical advisors.

B. Project Description

The purpose of the Rural Roads project (RRP) will be to improve market access for rural producers. The outputs will be the rehabilitation of 1,265 km or rural roads, the growth and development of SMCs, and the establishment in DNGR of a

monitoring and evaluation system. These objectives and the inputs to achieve them will complement the assistance of the other PNIR donors, chiefly IDA. The RRP will provide the major share of financing for road rehabilitation -- 1,265 km out of a total of 2,073 km. Road rehabilitation contracts will account for 88 percent of the RRP budget -- $29.0 million. This amount has been set as a limit for rehabilitation contracts in the face of uncertain and rising costs; should the amount not suffice to rehabilitate all planned road segments, cuts in roadwork will be made.

The RRP will use the fixed amount reimbursement (FAR) method to finance the contracts. IDA will finance the initial contractor advance for each road lot, this not being possible either for AID or GOG. The reasons for selecting the FAR method are three-fold: (a) to help control rehabilitation costs; (b) to take advantage of the same GOG contracting mechanism which the other PNIR donors are using, thereby strengthening the institutional capacity of DNGR to plan and oversee roadwork; and (c) to avoid the complications and management intensiveness of direct-AID or host-country contracting per AID Handbook procedures. However, since GOG contracting has often proved cumbersome, conditions precedent for establishment of efficient contracting procedures will govern the disbursement of AID funds for rehabilitation. A project manager/engineer and a field engineer, financed through personal services contracts, will inspect rehabilitation output segments for payment under FAR, and will monitor the contracting process. They will also closely monitor the progress of IDA technical assistance and training insofar as these affect the implementation of AID assistance and the adequacy of resources for road maintenance (which AID will not be financing). Several conditions precedent and a covenant will address the availability of human, organizational and financial resources for rural road maintenance.

Direct assistance to SMCs will be provided by IDA in the form of technical and business management training, and by the GOG in developing bid packages and financing procedures appropriate to smaller firms. AID's principal contribution in this area will be to afford pre-qualified SMCs the opportunity to win AID-financed rehabilitation contracts. Pending the upgrading of SMCs, such contracts will be awarded to international firms.

The RRP will finance technical assistance to DNGR for the establishment of a monitoring and evaluation system, the one area of capacity-building and institutional development not covered by other donors to PNIR. This system will be designed both to track implementation progress of PNIR and RRP, and to monitor and evaluate the impact of road rehabilitation and maintenance on agricultural marketing and the environment.

C. Financial Summary

1. Financial Plan

The life-of project funding will be $33.0 million, including $29.0 million for road rehabilitation, and $4.0 million for management, engineering and technical services and support. The project will be obligated as follows ($ millions):

FY 91	FY 92	FY 93	FY 94	FY 95	Total
5.3	9.5	7.9	7.9	2.4	33.0

2. Funding Mechanism

Obligations will be by project grant agreement. Procurement for management/engineering services will be by personal services contracts (PSCs). Disbursement for roadwork will be on the basis of fixed-amount reimbursement for road rehabilitation output segments agreed to by AID and the GOG prior to contract signature between GOG and the contractor. Disbursements will be made to a GOG PNIR account following the PSC engineer's determination, and the AID project officer's certification, of proper completion of each segment. For the monitoring/evaluation assistance component, it is anticipated that the services of an institutional contractor will be obtained through a direct contract with a disadvantaged enterprise -- either through an 8(a) set-aside or limited competition among Gray Amendment firms in accordance with AIDAR 726.

3. Host Country Contribution

The proposed project is part of a major multilateral effort; therefore, the provisions of FAA Section 110, which requires a minimum 25 percent host country contribution, do not apply.

D. Committee Action and Findings

The Project Committee (PC) met on August 2,1991 to review the project paper. The PC included representatives from AFR/PD, AFR/CCWA, AFR/DP, AFR/MDI, and AFR/TR. The PC recommended the project be approved subject to the following guidance:

1. Maintenance Plan and Performance:

The PC found that the proposed rural road activity would be

strengthened by the inclusion of a condition precedent relating to a road maintenance plan and related performance in order to assure an adequate and timely maintenance program during and after the A.I.D. intervention. The CP language is included in the Project Authorization.

2. Other Concerns

A. Environmental Assessment (EA)

The PC reviewed the EA, specifically the recommendation to develop a separate environmental monitoring system for the Rural Roads Project. The PC recommended that the environmental monitoring system should be incorporated into the general Monitoring and Evaluation Plan. The M & E plan has been modified to provide for the development and inclusion of an environmental monitoring component.

B. Relationship of the RRP to the Country Program Strategic Plan (CPSP)

The PC was concerned about the relationship of the proposed project to other Mission projects/programs given the absence of an agreed upon CPSP. A draft CPSP (which is scheduled to be reviewed in October, 1991), establishes the following strategic objectives: (a) increased sustainable private sector agricultural output for domestic and export markets; (b) improved human resources for sustainable economic growth; and (c) increased local level participation in economic and social development planning and management. The PC concluded that by making rural roads passable year-round, the proposed project will facilitate the expansion and lower the cost of private transport between farmgate and markets, provide incentives for greater production and productivity, improve the access of rural inhabitants to non-agricultural services and strengthen the small and medium scale private contractors in Guinea. Based on the review of the draft Mission CPSP and on the observations of members of the project design team, the PC was assured that RRP was not developed in isolation. The PC concluded that the RRP will directly contribute to the attainment of the Mission's proposed strategic plan.

III. Environmental Assessment

The Environmental Assessment was approved on August 9, 1991. (Annex F of PP).

IV. Waivers
No waivers are anticipated at the present time.

V. Congressional Notification
Congress was notified on September 11, 1991 and the waiting period expires on September 26, 1991.

VII. Recommendation
That you sign the attached (a) PP Data Sheet and (b) Project Authorization, thereby authorizing financing of up to $33.0 million for the Guinea Rural Roads Project.

CLEARANCES:

DAA/AFR:ELSaiers		Date: 9/23/91
AFR/DP:MBonner		Date: 9/20/91
AFR/CCWA:MGolden		Date: 9/20/91
GC/AFR:PJohnson		Date: 9/30/91
AFR/TR:RCobb	(Draft)	Date: 8/26/91
PPC/PB:RMaushammer	(Draft)	Date: 8/27/91
AFR/CONT:MRogal	(Draft)	Date: 8/26/91
AFR/MDI:WWeinstein	(Draft)	Date: 8/26/91

Attachments:
Project Authorization
Project Data Sheet
Project Paper and Annexes

Drafted by:RHellyer/CMorgan:AFR/PD/CCWAP:X79069:8/7/91
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AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D C 20523

PROJECT AUTHORIZATION

Name of Country: Guinea

Name of Project: Rural Roads

Number of Project: 675-0216

1. Pursuant to Section 496 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Guinea Rural Roads Project, involving planned obligations of not to exceed Thirty-three Million United States Dollars (US $33,000,000) in grant funds ("Grant") over a five-year period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the project is five years from the date of initial obligation.

2. The project ("Project") consists of financial and technical assistance activities required to implement and support the rehabilitation of 1,265 kilometers of unpaved, rural roads, thereby improving market access for rural Guinean producers.

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

a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in Guinea, the United States or in countries

included in A.I.D. Geographic Code 935, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have Guinea, the United States or countries included in A.I.D. Geographic Code 935, as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Project shall be financed only on flag vessels of the United States or countries included in A.I.D. Geographic Code 935, except as A.I.D. may otherwise agree in writing.

b. Conditions Precedent

The Project Agreement shall contain, in substance, the following conditions precedent:

(1) First Disbursement

Prior to any disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., the following:

(a) An opinion of counsel to the Grantee that the agreement has been duly authorized and executed on behalf of the Grantee and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms.

(b) A statement of the name of the person holding or acting in the office of the Grantee empowered to act on behalf of the Grantee, and of any additional representatives, together with a specimen signature of each person specified in such statement.

(2) Disbursement for Procurement for Road Rehabilitation

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for road rehabilitation or other purposes in the initial year and in each succeeding year of the Project:

Availability of Resources. The Grantee shall submit evidence at the beginning of each project year, in form and substance satisfactory to A.I.D., that the funds required of

both the Grantee and of other donors to PNIR are available for that year to pursue the training, supervision, and other support necessary for the timely progress of A.I.D.-supported activities under the roads rehabilitation and maintenance component of PNIR.

(3) Disbursement for Road Rehabilitation

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for road rehabilitation:

Assignment of Personnel. The Grantee will submit, in form and substance satisfactory to A.I.D., signed documents confirming the assignment of those professional, technical and support personnel not yet assigned to positions in DNGR that are essential to the implementation of the PNIR component concerned with rehabilitation and maintenance of rural roads. These are the 250 positions at central and regional levels concerned with administration, finances, programming, training, rural roads construction, and technical support services.

(4) Disbursement for Initial Contract and Each Subsequent Contract for Rehabilitation of a Road Lot

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for the initial contract, and for each subsequent contract, for rehabilitation of a particular road lot:

Readiness of BTGRs. The Grantee shall submit evidence, in form and substance satisfactory to A.I.D., that the necessary plans, personnel, training programs, equipment and operating funds for the Rural Engineering Technical Office (BTGR) responsible for the road lot to be rehabilitated with A.I.D. financing are or will be in place so as to assure timely maintenance of the road segments within the lot following the period of maintenance guaranteed by the rehabilitation contractor.

(5) Disbursement for Each Subsequent Contract for Rehabilitation of a Road Lot

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for each subsequent contract for rehabilitation of a road lot:

(a) Grantee's Contract Approval Procedures. The Grantee will submit evidence, in form and substance satisfactory to A.I.D., that Grantee has established procedures to assure that when responsible and responsive bids are received in response to invitations for bids, the time which elapses between the submission of said bids and the notification of contract award does not exceed the validity period specified in the bidding documents.

(b) Payment of Contractors' Invoices. The Grantee will submit evidence, in form and substance satisfactory to A.I.D., that Grantee has established procedures for payment of contractors' invoices within three months of receipt of such invoice, or such shorter period as may have been established for small- and medium-scale contractors (SMCs).

(6) Disbursement for Contract for Rehabilitation of Road Lots after Initial Lots 5, 6 and 7

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for rehabilitation of road lots after initial Lots 5, 6 and 7:

(a) Plan for Road Maintenance. The Grantee will submit, early in Project Year 1, in form and substance satisfactory to A.I.D., a five-year nationwide rural road maintenance plan which specifies (i) the prioritization of Guinea's rural roads for maintenance purposes; (ii) the number of kilometers of rural roads to be maintained each year; (iii) the maintenance standards to be applied during routine, periodic and emergency maintenance of rural roads; (iv) in connection with PNIR-rehabilitated roads, the consistency of those maintenance standards with rehabilitation standards; and (v) the funding, contractual and supervisory requirements related to the entire rural road maintenance program.

(b) Nationwide Rural Road Maintenance Performance. The Grantee will submit annually, in form and substance satisfactory to A.I.D., a report of performance of rural road maintenance for the preceding year which finds that implementation of the plan for road maintenance is proceeding satisfactorily as to personnel, scheduling, funding and technical quality.

c. Covenant

The Grantee agrees to take all reasonable measures to provide opportunities for qualified small- and medium scale contractors (SMCs) to be awarded contracts for rehabilitation of road lots funded by this project.

Scott M. Spangler
Assistant Administrator,
Bureau for Africa

9/24/91
Date

Clearances as Shown on
Action Memorandum

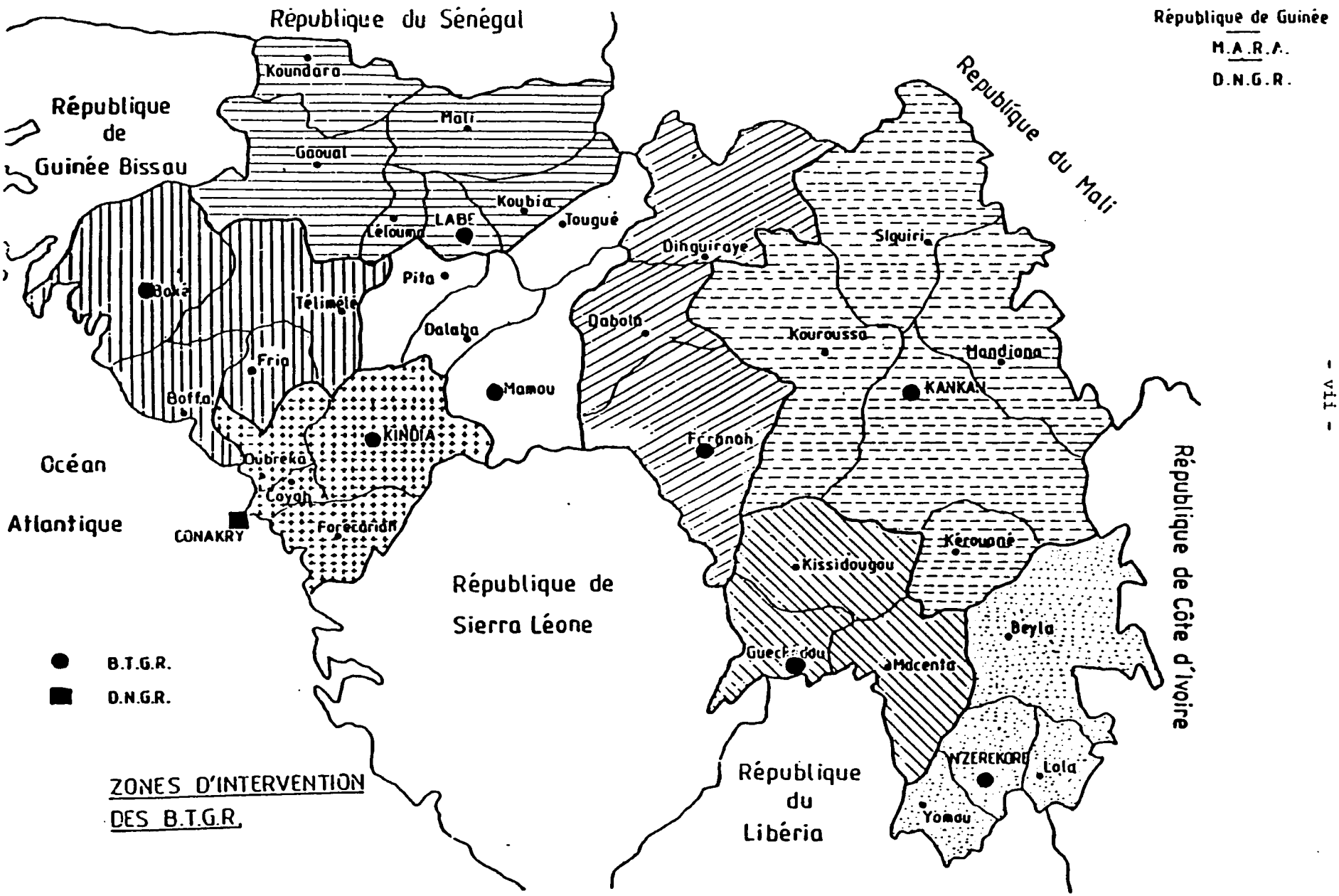
GC/AFR,PGJohnson/tim:17Sept91:79218:GuineaRR.216

TABLE OF CONTENTS

LIST OF ACRONYMS

AID	Agency for International Development
BCEOM	French engineerng firm
BDPA	French consulting firm
BSD	Strategy and Development Office (MARA)
BTGR	Rural Engineering Technical Office (DNGR)
CCCE	Central Fund for Economic Cooperation (French aid)
CP	Condition Precedent
C.P.	Programming Cell (DNGR)
CAF	Administration and Finance Cell
DAP	Support-Promotion Facility (for small enterprises)
DNE	National Department for Environment (MRNE)
DNGR	National Department for Rural Engineering (MARA)
DNFPR	Training and Rural Promotion Department (MARA)
DNSI	National Dept. of Statistics and Data Processing
DPDRE	Prefectoral Department for Environment and Rural Development (MARA)
EEC	European Economic Community
ERR	Economic Rate of Return
FAA	Foreign Assistance Act
FAC	Aid and Cooperation Fund (French aid)
FAO	Food and Agriculture Organization
FAR	Fixed Amount Reimbursement
FED	European Development Fund (EEC)
FSN	Foreign Service National
GOG	Government of Guinea
HB	Handbook (AID)
HCIA	Host Country Implementing Agency
IDA	International Development Agency (World Bank)
IFAD	International Fund for Agricultural Development
IFB	Invitation for Bid
ILO	International Labor Organization
IMF	International Monetary Fund
IQC	Indefinite Quantity Contract
KfW	Credit Institution for Reconstruction (German aid)
MARA	Ministry of Agriculture and Animal Resources
M&E	Monitoring and Evaluation
MICA	Ministry of Industry, Commerce and Handicrafts
MRNE	Ministry of Natural Resources and Environment
MTTP	Ministry of Transport and Public Works (GOG)
NGO	Non-Governmental Organization
NPV	Net Present Value
PACD	Project Assistance Completion Date
PID	Project Identification Document
PIP	Public Investment Program (GOG)
PNIR	National Rural Infrastructure Project (Multi-donor)
PP	Project Paper
PSC	Personal Services Contract
PTR	Rural Works Program (DNGR)
PY	Project Year

REDP	Rural Enterprise Development Project (USAID/Guinea)
REDSO/WCA	Regional Economic Development Support Office/West and Central Africa (AID regional office in Abidjan)
RD	Rural Development
SAL	Structural Adjustment Program
SBA	Small Business Administration
SCETAGRI	Consulting firm
SEGMENT	Consulting firm
SESPD	Development Projects Monitoring and Evaluation Section - DNE
SI	Intervention Service (GOG)
SMC	Small- and Medium-Scale Contractor
SNAPE	National Company for Water Supply Development (GOG parastatal)
SOW	Scope of Work
SPGR	Prefectoral Rural Engineering Section (DNGR)
SPSA	Permanent System of Agricultural Statistics (MARA)
SPTP	Pilot Public Works Company (DNGR)
SSE	Monitoring and Evaluation Section (MARA)
STA	Senior Technical Advisor
TA	Technical Assistance
UME	Mobile Training School (part of PNIR)
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
USDH	U.S. Direct-Hire
UTR	Rural Works Unit (DNGR)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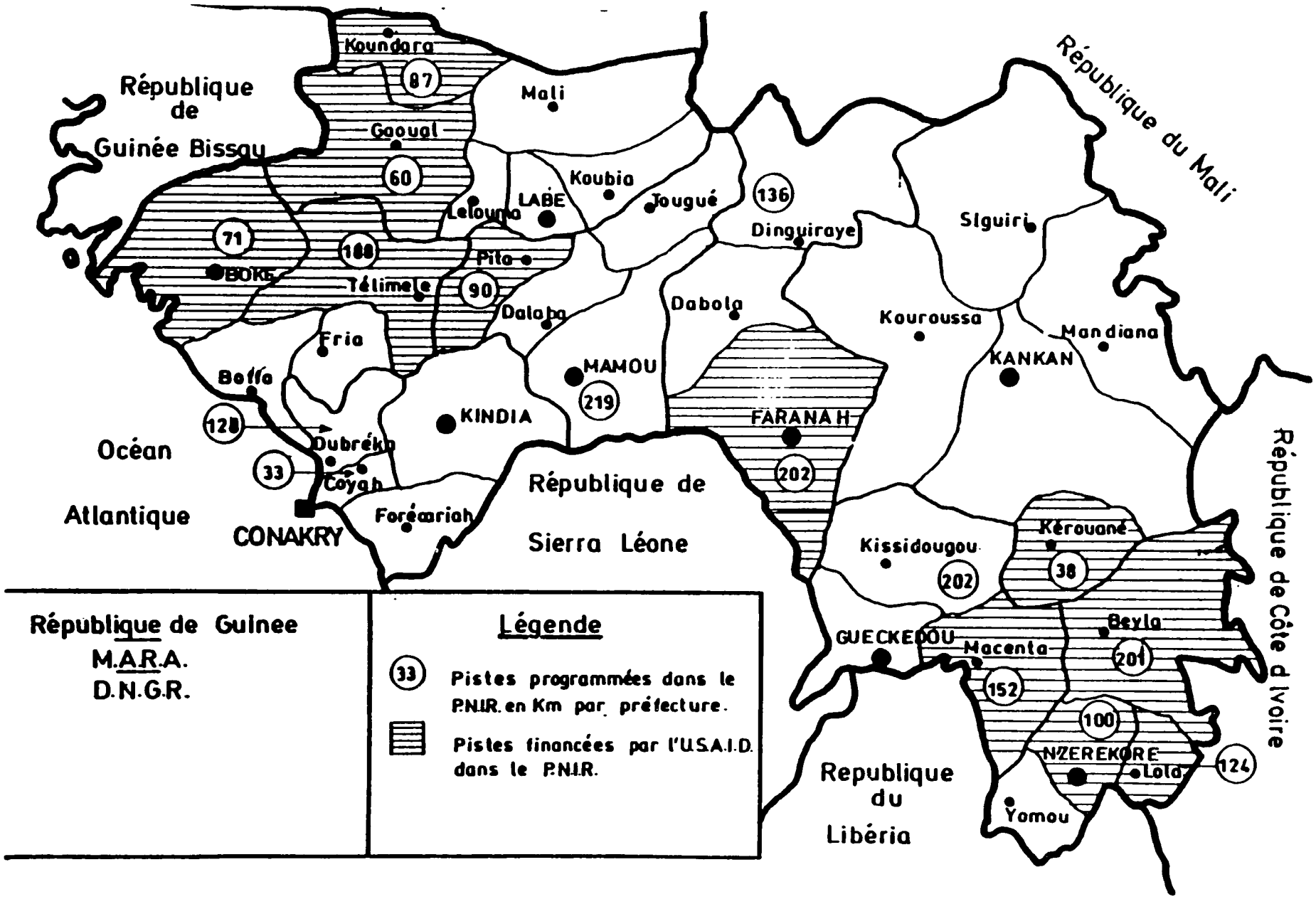
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Pistes financées par l'U.S.A.I.D. dans le P.N.I.R.

I. PROJECT SUMMARY AND RECOMMENDATIONS

A. PROJECT SUMMARY

1. Project Goal and Purpose, and Relationship to Strategic Program Objectives

The goal of the Rural Roads project (RRP) is to increase sustainable agricultural production and productivity in rural areas throughout Guinea. The purpose is to improve market access for rural producers. Through its financing of rural road rehabilitation and related assistance benefiting both the public and private sectors, the project will contribute to USAID/Guinea's three strategic objectives: (a) "Increased sustainable private sector agricultural and light manufacturing output for domestic and export markets"; (b) "Improved human resources for sustainable economic growth"; and (c) "Increased local level participation in economic and social development planning and management."

2. The Problem and the Constraints to Its Solution

One of the principal obstacles to improving market access for rural producers is the state of the country's rural, or feeder road network. Only 5,000 kilometers out of a total of 14,500 km of regional and local rural roads in Guinea are in minimally acceptable condition. The wear and tear which vehicles suffer when attempting to negotiate the deteriorated roads, and the long time it takes to traverse them -- if they are not blocked by wash-outs or other obstructions -- has left much of the rural population confronted with a dearth of motorized transport and prohibitive transport costs. The movement of agricultural produce, inputs and other goods is severely inhibited along the coast, from the hinterland to Conakry, and from rural areas to regional market centers.

The constraints to solving this problem stem from the legacy of Guinea's First Republic (1958-1984). The government during that era ran an overly-centralized, statist public works system that suffered from lack of funds for systematic road maintenance, and a shortage of trained managers and technicians, combined with an excess of staff at lower levels. Road maintenance work, when undertaken by the Government of Guinea (GOG), was accomplished with equipment and labor it controlled. Major construction works, largely financed by donors, were carried out almost exclusively by foreign contractors. Domestic private contractors were small, disorganized, lacked access to credit, and, as a result, were squeezed out of both activities. Much remains to be done to overcome these constraints.

3. Initial Steps to Overcome the Constraints

A number of corrective measures have been initiated:

- A single agency, the National Rural Engineering Department (DNGR) of the Ministry of Agriculture and Animal Resources (MARA), has been placed in charge of all rural road rehabilitation, construction and maintenance.

- As part of a government-wide reform to delegate responsibilities to the field, DNGR is creating semi-autonomous Rural Engineering Technical Offices (BTGRs) in the eight regions of the country to oversee infrastructure work. However, staffing below the chiefs' level awaits confirmation of assignments by the minister in the context of a government-wide reduction in force.

- The DNGR has shifted most of its road rehabilitation and maintenance operations to private firms and is promoting the use of domestic small- and medium-scale contractors (SMCs).

- The national budget now has a line item for road maintenance, and an increasing share of the funds is being designated each year for rural roads.

- Community participation in activities such as local road maintenance is being strengthened through the recent creation of "decentralized collectivities" which have democratically elected leaders.

4. The National Rural Infrastructure Project (PNIR) -- Multi-Donor Framework for AID Action

The above developments are occurring in the context of both general governmental reform and a joint GOG/multi-donor effort -- the National Rural Infrastructure Project (PNIR; the French acronym will be used throughout this paper). The participating donors are the International Development Association (IDA), AID, the German Kreditanstalt fur Wiederaufbau (KfW), and the French Fonds d'Aide et de Cooperation (FAC). The project is designed to build on the above initiatives and address the following constraints:

- <u>Financial constraint to meeting road-rehabilitation and ancillary costs</u>: PNIR forms part of the GOG's Public Investment Program (PIP) of which the GOG is able to finance only about 15 percent. The PIP budget for PNIR for 1991- 1993 shows $33.4 million externally financed, and $6.0 million funded by GOG. PNIR is a five-year project whose total cost is $94.8 million; the GOG will contribute $13.5 million of the amount. About 87

percent of PNIR funds are destined for rural road rehabilitation and related activities, the remainder for development of bottomlands and water supply. RRP is concerned only with the roads component.

- Lack of a firmly established system for road maintenance: This will require money, qualified supervisory personnel and suitable organizational structures. A start has been made with the establishment of the above-mentioned road maintenance fund in 1989 and the creation of the BTGRs. IDA is planning to provide assistance in the development of both the fund and DNGR structures for supervising maintenance.

- Shortage of trained personnel: Top-level personnel in DNGR are well-qualified, but tests have shown that many skills are lacking among lower-level technicians. IDA and FAC technicians have begun an intensive training and technical assistance program, but full implementation is subject to the minister's decision on assignment of mid- and lower-level personnel.

- Inadequate office facilities and equipment: Construction and equipment financed by IDA will address these problems.

- Lack of a monitoring and evaluation system: AID will help DNGR create a system able to assess project effectiveness and the impact of road work on agricultural marketing and the environment.

- Disfavored and poorly trained SMCs: A broad program of IDA training and other assistance, combined with opportunities to win rehabilitation contracts funded by AID and other donors, will address SMC needs. Pending the upgrading and pre-qualification of SMCs for such contracts, the project will use international firms for rehabilitation work.

An institutional constraint of a general nature that could pose a major problem if not addressed is the slow processing of contract actions by the GOG. At the urging of the donors, DNGR is seeking to resolve the problem; it will be closely monitored by AID.

The roads component of PNIR includes rehabilitation and maintenance of over 2,000 km of rural roads selected for priority attention. The anticipated impact will be year-round access to points throughout Guinea that are linked by the roads, allowing for an increase in the volume of produce and goods traded among the areas linked, an increase in the amount of rural producers' output marketed, and greater volume of commercial transport provided at lower cost. These gains, in

turn, are expected to contribute to growth in agriculture, broader economic development, and improved access to health, education and other services for the rural population. Direct benefits will accrue to a wide range of people (men and women) including small farmers, traders, retailers, transporters, local road maintenance workers, and SMCs. A total of about 495,000 people are expected to benefit from PNIR activities, including 279,000 people living in areas of AID-financed road rehabilitation.

PNIR agreements with the other donors have been signed and implementation has begun, with some IDA-funded GOG contracts for services and equipment being processed expeditiously, others more slowly. The first road rehabilitation contracts (IDA and KfW) are at the bid stage. The other-donor funds are budgeted as follows: IDA, $40.0 million; KfW, $6.3 million; FAC, $0.5 million; GOG, $13.5 million; and local beneficiaries, an estimated $1.0 million.

The $33.0 million AID contribution, provided in the form of parallel financing over a five-year period, will be devoted entirely to rural roads and related assistance: $29.0 million for road rehabilitation, and $4.0 million for management/ engineering services, technical assistance, audits/evaluations and support costs.

The roads to be rehabilitated under PNIR were selected jointly by the GOG, local authorities, beneficiaries, and IDA-funded experts. Out of a "Master Plan" total of 14,500 km, a subset of 8,000 km was ranked according to multiple criteria such as population served, local priority/interest expressed, volume of traffic, and agricultural production and potential. This analysis resulted in a final selection of 2,600 km. AID will finance the rehabilitation of 1,265 km in 11 prefectures located in various parts of the country. The KfW will finance 421 km, and the IDA 308 km, including 161 km using labor-intensive methods. The UNDP, under a separate program, is financing 79 km of roadway originally planned for PNIR.

This totals 2,073 km out of the total 2,600 km planned. AID's share of the rehabilitation work has dropped by 35 percent from the 1,938 km identified for AID financing in the IDA staff appraisal report for PNIR. The reduction is in the main attributable to construction costs (confirmed by bid openings on two other-donor rehabilitation lots) which are substantially in excess of initial World Bank estimates made in 1989. In addition, AID has judged that the financing of 475 km of community-based road works identified in the PID for RRP is beyond the scope and financial means of this project. The DNGR plans to use part of its contribution to PNIR for the community-based roads and is seeking additional local-currency financing for this purpose.

The PID envisioned substantial AID technical assistance to DNGR and other elements of the ministry -- both within and outside the framework of PNIR. However, the project will limit technical assistance to monitoring and evaluation, the one area of institutional development and capacity-building essential to PNIR that is not covered by other donors.

5. Project Implementation

RRP will enter into fixed-amount reimbursement (FAR) agreements with the GOG whereby AID will reimburse the cost of properly produced rehabilitation output segments according to pre-determined specifications and costs. This will accommodate DNGR's own contracting approach and avoid the management intensiveness of direct-AID or host-country contracting per AID Handbook procedures. Under FAR, the AID contract engineers assigned to the project will inspect each segment for the proper completion before recommending payment by AID. Since the GOG is not in a position to provide the initial advances required by contractors, IDA has agreed to do so out of its PNIR road budget. AID and IDA will therefore jointly finance eight road lots whereby IDA will advance the initial tranche and AID will pay the balance under the system. The source of funds for IDA's advances will be the money that it had planned to invest fully in the 147-km Gaoual-Koundara lot 7-a. The estimated cost of that lot is $3.2 million. The lot has now been incorporated into the AID portfolio and will be financed proportionally with IDA on the same basis as the other seven AID lots, for a total of eight lots funded under RRP.

PNIR has the statute of a "public project," or semi-autonomous unit within DNGR. The director of DNGR is also the project manager for PNIR, holding executive authority for the project vis-a-vis the GOG and the donors. This arrangement provides a degree of independence for PNIR while ensuring its integration with DNGR's ongoing activities and enhancing the chances for sustainability of the procedures and training introduced by PNIR.

A key operational element of DNGR for the long-term success of the rehabilitation effort will be the aforementioned regional technical offices, the BTGRs. Their major responsibility under the roads component of PNIR will be to oversee maintenance, beginning in 1993. For this reason, RRP managers will be particularly interested in the BTGRs' development, even though AID will not be directly involved in their training or in the funding of maintenance.

6. Conclusion

Five major factors convince USAID/Guinea of the value and feasibility of the Rural Roads project: (a) the clear need; (b) the large number of beneficiaries; (c) the positive outcome of the feasibility analyses (see Section III); (d) the significant commitments made by the GOG and the other donors to launch PNIR; and (e) the initiatives which the GOG has already taken to deal with identified constraints.

To encourage further vigorous action on the removal of constraints to implementation and to reinforce project sustainability, the RRP design provides for continuing review of implementation, supported by a set of conditions precedent and covenants and by a mid-term evaluation. The focus of these reviews, conditions and covenants will be to ensure (a) the availability of adequate GOG and other-donor personnel and financial resources to carry out the project as planned, and (b) the expeditious processing of GOG contract and financial transactions (see Section V for details).

B. RECOMMENDATION

It is recommended that AID approve a $33.0 million grant for the Guinea Rural Roads project (675-0216) from the Development Fund for Africa. Planned obligations are for $5.3 million in U.S. FY 1991, $9.5 million in FY 1992, $7.9 million in FY 1993, $7.9 million in FY 1994, and $2.4 million in FY 1995. Project implementation years will be FYs 1992 - 1996.

II. PROJECT RATIONALE AND DESCRIPTION

A. BACKGROUND

1. Rural Road and Transport Conditions and their Impact on Agricultural Marketing

Guinea is one of the more poorly served countries in Africa in terms of road density, having 4.3 kilometers (km) of road per 100 km^2, compared with 11.9 km in Ghana, 13.6 km in Cameroon, and 14.8 km in Cote d'Ivoire. The road system totals about 18,500 km. Of this total, about 4,000 km are national arteries connecting the capital, Conakry, to most prefectures and to the main border points and sea ports. The national road network includes about 1,300 km of paved roads.

This project is concerned with Guinea's feeder road system, which consists of approximately 14,500 km. About 3,000 km of these roads, termed the regional road network, connect administrative centers to the national road network and to secondary border points. Another 11,500 km, known as the rural

road network, connect farming villages to market centers and market centers to administrative centers. Both the regional and rural networks are referred to in this paper as rural roads, because in their present condition both networks serve essentially rural, agricultural purposes.

The rural road system is in severe disrepair. It has not been regularly maintained since the country's independence in 1958. Rural transport is scarce, and transport costs are prohibitive. Transporters attempting to negotiate the deteriorated roads must drive at low speeds and subject their vehicles -- for the most part already over-aged -- to severe wear and tear. The environmental assessment team covered every road segment planned for this project and was able to average only 5-10 km per hour.

The extremely poor condition of the network is a major constraint to the movement of produce along the coast, from the hinterland to Conakry, and from rural areas to regional market centers; in some instances these flows have almost ceased. Farmers are severely hampered in marketing their surplus crops and buying producer and consumer goods. These conditions jeopardize government efforts to move the country from predominantly subsistence farming to a productive, market-oriented agriculture as part of the newly liberalized economy.

2. Reasons for Past Neglect of Rural Roads

Maintenance of rural roads has been neglected for reasons stemming from an overly-centralized, statist system initiated at the time of independence in 1958 that became economically and administratively dysfunctional in many areas of activity, including public works. The funds, planning, and trained managers and technicians required for systematic road maintenance were in short supply. What little GOG-funded maintenance work occurred was accomplished by force account, i.e., with government-owned equipment and hired labor. Major construction works, largely financed by donors, were carried out almost exclusively by foreign contractors. This situation, coupled with the hostility of the former regime toward local private enterprise, deprived domestic contractors of the chance to develop. Even today, seven years after the creation of the more liberal Second Republic, most small- and medium-scale contractors (SMCs) remain constrained by lack of qualified personnel, credit and guarantees.

3. Host Country Objectives and Strategy

The above problems inherited from the First Republic have begun to be addressed, in the context of both general reforms and of a multi-donor effort known as the National

Rural Infrastructure Project (PNIR). The latter will be discussed in detail in subsection C. below. The general framework for addressing the problems is a set of wide-ranging macroeconomic reforms that the GOG has been undertaking with donor assistance to create a functioning, market-oriented economy and a more efficient, leaner public sector, as described in the PID for this project and in other USAID and World Bank program documents. The GOG's objectives with regard to rural roads are to rehabilitate and maintain them in order to stimulate development in large areas of the country now isolated to varying degrees, and to meet the needs of hundreds of thousands of rural inhabitants for improved roads that will afford them ready access to markets, services, and opportunities for a more productive life. In pursuit of these objectives, the GOG has taken the following initiatives:

- The National Rural Engineering Department (DNGR) of the Ministry of Agriculture and Animal Resources (MARA) has been placed in charge of constructing, rehabilitating and maintaining both regional and local rural roads because of their almost exclusive use for agricultural traffic at this time. In the future, when the regional roads are rehabilitated and able to support not only increased agriculture but also broader economic development, and when the Ministry of Transport and Public Works (MTTP) has expanded its own operational capacity, DNGR, per written agreement, will progressively cede the responsibility for class A regional roads back to MTTP. At present MTTP maintains operational responsibility for national roads.

- As part of a government-wide reform to delegate responsibilities to the field, DNGR is creating semi-autonomous Rural Engineering Technical Offices (BTGRs) in the eight regions of the country. These offices will have broad responsibility for overseeing infrastructure work in their regions. Chiefs for the BTGRs have been given firm assignments but the remainder of the staffs have not. Mid- and lower-level personnel in DNGR and other services are awaiting the decision of the minister as to which of them will be retained and which will be laid off as redundant. This decision will be rendered in the context of government-wide staff reductions.

- In conformance with GOG policy under the Second Republic to maximize use of the private sector, the DNGR is closing down most of its own road rehabilitation and maintenance operations and shifting to contracting with private firms, preferably domestic SMCs. Some maintenance contracts have already been let to SMCs, and a few SMCs now serve as sub-contractors to international contractors for road construction. However, the SMCs are still in a nascent

stage and require a combination of training, ready access to financing, hands-on experience and market incentive to develop into viable competitors of the international firms.

- A budgetary line item for road maintenance was created in 1989. Sharing access to the fund with MTTP and the Ministry of Housing and Urban Affairs, DNGR initially received none of the funds but is now obtaining increasing amounts for its road maintenance operations.

- Grassroots participation in activities such as road maintenance is being fostered by the recent creation of "decentralized collectivities" which have democratically elected leaders at village and regional levels. These leaders organize to provide different services and request government assistance. Villagers' readiness to participate in road maintenance of direct concern to them is evident from examples of local initiative to repair bridges and fill up washed-away road sections. These works are often carried out through informal arrangements between DNGR and local communities, DNGR supplying civil works equipment and the communities providing fuel and controlling its use. There are also instances of bridges built with little or no government assistance, demonstrating vividly the interest of some communities in improving their roads. Local authorities have also been consulted in selecting roads for rehabilitation.

These initiatives are the entry point of a strategy whose full realization requires large donor contributions in the form of money, technical assistance and training. As the requirement exceeds the means of any single donor to meet entirely, a multi-donor effort -- the National Rural Infrastructure Project (PNIR) -- has been mounted at the initiative of the GOG and the International Development Association (IDA). AID will be one of the four participating donors, as described in Subsection C. below.

4. AID Program Strategy and Objectives

USAID/Guinea's strategic program objectives are:

(a) increased sustainable private sector agricultural and light manufacturing output for domestic and export markets;

(b) improved human resources for sustainable economic growth; and

(c) increased local level participation in economic and social development planning and management.

The Rural Roads project contributes to all of the objectives. By making rural roads passable year-round, the project will increase agricultural marketing by producers and traders, facilitate the expansion and lower the cost of private transport between farmgate and market, provide an incentive for greater production and productivity, improve the access of rural inhabitants to non-agricultural services, and provide open roadways that the communities will have a stake in helping maintain in order to keep open. The construction financed by the project will provide a direct market stimulus to small- and medium-sized private Guinean contractors (SMCs). RRP will strengthen the capacity of DNGR in the area of monitoring and evaluation, complementing other-donor training and technical assistance it will receive in road rehabilitation and maintenance.

The RRP complements a number of other projects that USAID/Guinea has mounted or is planning for early implementation in support of the above objectives. The Agricultural Infrastructure Development project is financing the construction of 104 km of all-weather road to connect a major coastal rice production area with Conakry. USAID is also financing a $3.5 million Farm to Markets Road Project (AFRICARE). Futhermore the Rural Enterprise Development project (REDP) will help rural-based, small-scale entrepreneurs gain access to existing commercial and project-related credit lines, and may be in a position to help SMCs wishing to bid on PNIR roadwork. The Economic Policy Reform Support project is providing management assistance to other elements of MARA, complementing the efforts of PNIR and RRP to strengthen the capacity of DNGR to manage rural construction projects. To the extent producers in regions opened up by the roads project can bring exportable goods to market, they may benefit from the planned Agricultural Marketing project.

B. PROJECT RATIONALE

Roads that suffer from deep ruts and damaged bridges and culverts make wheeled traffic extremely difficult and costly. Farmers living in these areas are severely hampered in bringing their produce to market and purchasing the necessities for consumption and production. Agricultural production and productivity thus cannot advance, traders cannot thrive, and basic services cannot reach the affected population. This condition afflicts an estimated 495,000 people in the PNIR areas targeted by the Master Plan. The RRP portion covers about 279,000 of these people.

If impassable roads prevent agricultural and rural development, then opening them through rehabilitation and keeping them open through continued maintenance are critical steps to development. Even if no other actions are taken, successful

implementation of this project can give a significant boost to agricultural production and marketing. Vehicle operating costs will drop, the number of vehicles available for transport will increase, and transport costs will decrease, in interdependence with a rise in commercial activity. If collateral actions are taken -- e.g., in agricultural research and extension, natural resource management, and increased provision of credit and information to the private sector -- the development impact will be all the greater. USAID is in the final stages of designing a $14.5 million Guinea National Resources Management Project and the World Bank is funding a national Extension Project and an Ag. Export Promotion Project. This project, however, focuses only on improving and maintaining rural roads.

C. PROJECT DESCRIPTION

1. Goal and Purpose

The goal of the project is to increase sustainable agricultural production and productivity in rural areas throughout Guinea. The purpose is to improve market access for rural producers. The Government of Guinea, the beneficiary population and the USAID mission consider these as primary objectives, and the project as a primary means of attaining them.

2. Strategy

a. Summary of Constraints

The National Rural Infrastructure Project deals with a range of constraints, some of which are addressed by all the participating donors, some by one or two, as described in the subsections below on project components:

- Financial constraint to meeting road-rehabilitation and ancillary costs: PNIR forms part of the GOG's Public Investment Program (PIP) whose realization will require substantial external assistance. The total 1991-1993 budget for PIP is $1.17 billion, of which external sources are to provide $1.0 billion and the GOG $169 million. The rural development sector accounts for $321 million, with PNIR having by far the highest budget, adding up to $39.4 million for the three-year period: $33.4 million to be financed externally, $6.0 million by the GOG. PNIR is a five-year project whose total cost is $94.8 million; the GOG will contribute $13.5 million of the amount. About 87 percent of PNIR funds are destined for rural road rehabilitation and related activities, the remainder for development of bottomlands and water supply. RRP is concerned only with the roads component.

- Lack of a firmly established system for road maintenance: This will require money, qualified supervisory personnel and development of suitable organizations. A start has been made with the establishment of the above-mentioned road maintenance fund in 1989 and the creation of the BTGRs. IDA is planning to help finance maintenance of PNIR-rehabilitated roads on a declining basis and provide major assistance in development of BTGRs and other units which will be responsible for maintenance.

- Human resources constraint: The implementation and sustainability of PNIR will require a higher level of technical and managerial skills than has been needed for DNGR operations to date. More complex institutional structures are being created to carry out more technically demanding activities. DNGR has competent and dedicated leadership that can readily absorb technical assistance and advanced training. However, tests have shown that knowledge of basic skills, not to mention advanced ones, is limited among lower-level technicians in DNGR. PNIR's response to this constraint is to provide substantial levels of training and technical assistance as described below throughout the DNGR structure. AID's RRP will add a component of technical assistance and training in monitoring and evaluation.

- Inadequately trained and financially insecure SMCs: Small- and medium-scale contractors need both technical and business training and access to financial resources and guarantees. In particular, they need to have their invoices for services to the government paid more promptly.

An institutional constraint of a general nature affecting this project is the often slow processing of GOG contract actions because of excessive and duplicative clearance layers. The time between submission of bids and notification of contract should not exceed four months, yet often eight or more are required. Payment of invoices takes an average of five months instead of the three months generally specified by the contract. Agency directors have authority to approve contracts only up to GF 20 million (about $27,000 at the current exchange rate), a long-established level that has eroded in value owing to inflation and a declining exchange rate. Contracts between GF 20 million and GF 1.2 billion must go to an inter-ministerial commission, and contracts above that level to a presidential commission. The experience of PNIR with contract approvals has been mixed: some IDA-funded contracts for services and equipment have been processed expeditiously, others more slowly (see Administrative Analysis, Section III.F. for details). DNGR is aware of AID and other-donor concern about these problems, and is pressing within the GOG for improvements in contract management.

b. PNIR Funding, Management, Planning, and the Division of Tasks among Participating Donors

(1) Funding

The donors participating in PNIR include IDA, AID, the German Kreditanstalt fur Wiederaufbau (KfW), and the French Fonds d'Aide et de Cooperation (FAC). PNIR agreements with the other donors have been signed and implementation has begun. The other-donor funds are budgeted as follows:

- IDA: $40.0 million for feeder roads, bottomlands, water supply, equipment, technical assistance and training for both DNGR and SMC personnel, operating and road maintenance costs, and pre-project financing;

- KfW: $6.8 million for feeder roads and consultants;

- FAC: $0.5 million for training;

- GOG: $13.5 million for operating and road maintenance costs, project investment, and taxes on investment; and

- Local beneficiaries: an estimated $1.0 million for labor and cash for participation in road rehabilitation and maintenance, bottomlands development and the purchase of handpumps.

The $33.0 million AID contribution, to be provided in the form of parallel financing over a five-year period, will be devoted entirely to rural road rehabilitation and related costs: $29.0 million for road rehabilitation, and $4.0 million for project management and engineering services and support, technical assistance in evaluation and monitoring, and external audits and evaluations. A condition precedent to annual disbursement for new AID procurement under RRP will be evidence that GOG and other-donor funding necessary for support of AID-funded activities are available.

(2) PNIR Management

PNIR has the statute of a "public project," or semi-autonomous unit within DNGR. The director of DNGR also serves as project manager for PNIR. This arrangement provides a degree of independence for PNIR while ensuring its integration with DNGR's ongoing activities and enhancing the chances for sustainability of the procedures and training introduced by PNIR. The director holds executive authority vis-a-vis the GOG and the donors. He reports to a steering committee which meets twice a

year to determine policy, review implementation progress and the budget, and reconsider strategy as necessary. The committee does not exercise continuing operational oversight. Committee members include representatives of participating donors and of ministries directly concerned with different aspects of the project (see Section III.F. for a list of members and their interests in the project).

Given the multi-donor nature of the project and the close connections among many of the activities, USAID/Conakry and the project manager will need to deal with various levels and offices in DNGR and with other-donor technical assistance units. The key interlocutors for AID will be the director for overall PNIR and RRP project coordination, the programming cell for the monitoring and evaluation component, and the IDA-financed expatriate engineering firm that will supervise rehabilitation work.

A key operational element of DNGR for the long-term success of the rehabilitation effort will be the aforementioned regional technical offices, the BTGRs, which will be equipped and trained to carry out a wide range of programming, monitoring, control and technical functions in support of road works and other aspects of DNGR's rural infrastructure program. Their major responsibility under the roads component of PNIR will be to oversee maintenance, beginning one year after each road segment is rehabilitated, when the contractor maintenance guarantee expires. For this reason, RRP managers will be particularly interested in the BTGRs' development, even though AID will not be directly involved in their training or in the funding of maintenance.

(3) Planning

To restore the feeder road network, MARA/DNGR undertook a planning process with IDA support that evolved as follows:

a) In the context of preparation studies for projects in the agriculture sector in 1986 and 1987, consultants established a rural roads program of 1,500 km to be rehabilitated over five years and submitted to donor agencies.

b) Following a donors meeting on the agriculture sector in October 1987, DNGR carried out further studies, mostly synthesizing existing information, and MARA commissioned a study to prepare a Master Plan for the development of feeder roads.

c) The Master Plan was completed in April 1989. It was based on data for 14,500 km of roads and provided for the ranking of a subset of 8,000 km of these roads pursuant to a multi-

criteria analysis including population served, agricultural potential, existence/efficiency of administrative services, volume of traffic, physical accessibility, existence of other development projects, priority/interest expressed by local authorities, and other development impacts. The Master Plan analysis was undertaken in consultation with local authorities and beneficiaries and resulted in the selection of 2,600 km of roads in 16 prefectures out of the 8,000 km total. The road sections selected for rehabilitation were grouped into construction lots for financing by various donors including AID. The Master Plan is computerized and can be updated and further developed for future planning use. The GOG and IDA signed a credit agreement for PNIR on April 30, 1990, making the Master Plan operational.

(4) Division of Tasks

No road rehabilitation work has yet begun under the project, but bid packages on several of the road lots have been prepared with IDA financing. Bids for two lots in the Gaoual-Koundara area -- one under IDA financing, the other under French (CCCE) financing outside the scope of PNIR -- have been secured and were recently opened. The IDA loan has also been used to begin a training program, hire a financial management specialist, initiate contract action with the ILO to train selected small contractors in labor-intensive methods, and undertake other preliminary implementation steps. The ILO contract is scheduled to be signed shortly by the Minister of Plan. (The financial management specialist was originally planned for AID financing, but was transferred to the IDA account in 1990 to allow for earlier implementation. He began his assignment in May 1991.)

At the time the PID for the AID component of PNIR was prepared in April 1990, the proposed AID contribution was broadened beyond the IDA's multi-donor plan to include assistance to MARA in planning and policy formulation and to provide for an aerial survey. The AID planning level was therefore increased from $27.0 million to $33.0 million. AID/Washington approved the higher level, but deemed the project scope as defined in the PID too broad and asked the mission to narrow the focus (see Annex K). This the mission and the PP design team have done, concentrating the project on rural road rehabilitation and assistance in monitoring/ evaluation.

AID will finance the rehabilitation of 1,265 km in 11 prefectures located in various parts of the country. The KfW will finance 421 km, and the IDA 308 km, including 161 km using labor-intensive methods under ILO tutelage. The UNDP, under a separate program, is financing 79 km of roadway originally planned for AID. This totals 2,073 km out of the total 2,600 km

planned. AID's share of the rehabilitation work has dropped by 35 percent from the 1,938 km identified for AID financing in the IDA staff appraisal report for PNIR. (The AID PID identified the same roadways for AID funding plus a portion of the Gaoual-Koundara lot, #7-b, that was not included in the IDA report and is being financed separately by the French government).

The reduction in the amount of road rehabilitation to be financed by AID is in the main attributable to construction costs (confirmed by bid openings on two other-donor rehabilitation lots -- see next subsection) that are substantially in excess of initial World Bank estimates made in 1989. In addition, AID has judged that financing of 475 km of community-based road works identified in the PID is beyond the scope and financial means of this project.

The above changes include a trade-off between IDA and AID in the road lots covered. Since IDA is already financing a contract with ILO to oversee the six labor-intensive lots, located near Conakry between Coyah and Dubreka, IDA will also take on the cost of rehabilitating the 161 km involved; these were originally slated for AID funding. USAID, in turn, will assume responsibility for a 100-km road between Macenta and Kansankoro originally planned for IDA financing. This road was not inventoried in the Master Plan for rural road rehabilitation because it is designated as a national highway, but it is in severe disrepair and was included under PNIR because of its importance to agriculture (particularly coffee production) in the region it serves.

c. Rehabilitation Component

The $29.0 million RRP commitment to road rehabilition is to be divided among eight road lots listed below which total 1,412 km. This is 147 km more than the 1,265 km noted above. IDA will finance a portion of each lot that will equal the cost of 147 km it was planning to invest entirely in one of the lots, Gaoual-Koundara #7-a. That lot has now been added to the AID portfolio and will be financed by IDA on the same shared basis as the others. The reason for this arrangement is that IDA has agreed to make the initial advance to the contractor on each lot, enabling AID to pay the balance on a fixed-amount reimbursement (FAR) basis. IDA financing of the initial advance for each lot is necessary because the GOG is unable to provide it from its own resources. FAR will mesh well with DNGR's own approach and avoid the management intensiveness and complications inherent in direct-AID or host-country contracting per AID Handbook procedures.

Under FAR, AID will reimburse the cost of properly produced rehabilitation output segments according to pre-determined specifications and costs. These fixed-cost output segments will be defined by DNGR's IDA-funded supervising engineers for all PNIR road rehabilitation lots (Louis Berger International) on the basis of the unit costs provided in the winning bid for each lot. The two AID contract engineers assigned to the project will monitor the rehabilitation process and inspect each output segment along with the DNGR supervising engineers before recommending AID project officer certification for payment. The latter will then make certain that AID funds are promptly made available for payment and the engineers will monitor the process through GOG channels to determine whether the contractor is reimbursed within the contractually specified period. The engineers, along with the project officer will also monitor the efficiency of the contract approval process. The aim will be to avoid delays in implementation and use of project resources (see constraint on contract processing in Subsection 2.a. above, and Conditions Precedent and Covenants in Section V. below).

Both the engineer and the contract specialist on the design team found the bid packages that have already been prepared as technically and contractually sound (see sections below on technical analysis and contracting and procurement planning.) In addition to the package for Gaoual-Koundara, bid documents have been prepared by an outside firm under IDA financing for Lots 5, 6 and 10 (see below). Packages for further lots will be prepared "in-house" by GOG and IDA-funded PNIR engineers.

In May 1991, confirmation of construction cost increases was received in the form of bids on the two Gaoual-Koundara lots: 7-a (currently slated for IDA financing, pending approval of the AID project) and 7-b (being financed outside of PNIR by the French). These bids ran 60 percent to 170 percent higher than had been estimated. In analyzing the bids and re-analyzing the work to be done, DNGR and its engineering advisors have determined that, apart from the inflation factor, the bid package in some cases called for more expensive solutions than required, e.g., entirely new bridges when only the culverts needed replacement.

The more cost-effective solutions are now being incorporated where appropriate into a revised package, and all future bid packages will be similarly drawn. Pending the approval of the FY 91 AID grant for RRP, new bids will be invited on the Gaoual-Koundara lot in terms of the originally planned IDA financing. However, the timing is such that the bids will not be opened and the contract will not be signed until after the anticipated AID grant agreement is signed; once that occurs, the lot will be

subject to the shared AID-IDA financing and the FAR procedures described above.

Although it is anticipated that future bids will be lower than those received for Gaoual-Koundara, final costs are still likely to be higher than estimated in 1989. Taking account of these increases, the design team engineer set a maximum cost for each road lot in the AID portfolio that could be financed within the $29.0 million limit (see Section III.A.6. for cost basis):

Lot No.	Préfectures	Km	Rehabilitation Cost
3	Beyla-Kérouané	239	$ 5,742,922
5	Faranah	202	4,337,233
6	Lola-N'Zérékoré	226	5,238,924
7-a	Gaoual-Koundara	147*	3,227,807*
8	Macenta	152	3,256,312
9	Boké	71	1,745,108
10	Pita-Télimele	275	5,972,921
11	Macenta-Kansankoro	100	2,702,800
	Total	1,412	$32,224,027
	*Total excluding Lot 7-a	1,265	$28,996,220

As noted above, IDA will distribute as advances on all eight lots the amount it was planning to invest totally in Lot 7-a. Should bids exceed the $29.0 million limit, DNGR, in consultation with USAID and prefectoral and local authorities, will select road segments for elimination to the extent necessary to remain within the cost limit.

The funding and rehabilitation start-up schedules have been coordinated so that funds will be available to meet output costs as required (see Annex J). The anticipated pace of rehabilitation is 9-10 km per month during the dry season on each lot under contract; no roadwork is planned during the rainy season.

d. Maintenance Component

Under the terms of the rehabilitation contracts, the GOG assumes responsibility for maintaining rehabilitated roads after a one-year contractor guarantee period. Thus the GOG's responsibility begins approximately one year after completion of each road segment. While no AID funds are budgeted

for support of GOG maintenance costs, the application of systematic and timely maintenance is crucial to success of the AID-financed portion of the initiative. The maintenance program will provide periodic maintenance (including resurfacing every five to eight years), routine maintenance (such as pruning of trees, clearing vegetation, cleaning water outlets), and emergency spot maintenance (repair of damage due to landslides, potholes, erosion, etc.). A combination of SMCs, communities and NGOs will be involved in different aspects of the work.

The IDA-GOG credit agreement for PNIR provides for IDA support of maintenance funding on a declining basis of 75 percent, 55 percent and 35 percent in project years (PY) 3, 4 and 5, respectively. To finance its contribution, the GOG created a budgetary line item for road maintenance in 1989. Contracts worth $320,000 have been signed for 200 km of road maintenance in 1991 (not connected with PNIR). In addition, experience has shown that communities are prepared to contribute at least 15 percent of the cost of local rehabilitation/maintenance.

The RRP grant agreement will include conditions precedent which relate disbursements for road rehabilition to the adequacy of the GOG's road maintenance program. This is deemed appropriate given the newness of systematic funding and planning for road maintenance in Guinea. (See Sections III.A. and V. below.)

e. Institutional Development and Capacity-Building of DNGR by Other PNIR Donors

Except for technical assistance in monitoring and evaluation, which will be supported by RRP (see next subsection), the institutional support component is being funded almost entirely by IDA. French technical assistance, both PNIR and non-PNIR, also plays a role. The support is being provided to DNGR and its decentralized services, and consists of technical assistance, staff training, construction and renovation of offices and facilities, and provision of miscellaneous equipment. Resident and visiting experts have begun programs to advise and train national staff in rural engineering, administration, accounting, finance, procurement and contract management. Five resident experts are in place at the top managerial level, including one for two of the BTGRs, and two additional experts are expected shortly for service in two other BTGRs. In addition, contract technicians from Canada have arrived to organize a Mobile School Unit (UME) which will dispense both classroom and on-the-job training for DNGR and SMC personnel in road construction and maintenance techniques.

DNGR headquarters staff will be relocated from cramped, sub-standard facilities in downtown Conakry to a new site on the outskirts of the city that will permit easy links with field

units in the interior. Miscellaneous office, technical and communications equipment, furniture and vehicles will be provided for DNGR headquarters and BTGRs. Rural engineering sections attached to prefectures (SPGRs) will also receive some equipment, office rehabilition and training from IDA funding.

The personnel of all eight BTGRs will receive IDA-financed training. For example, the expatriate engineers supervising rehabilitation contracts will provide on-the-job training to BTGR engineers. The four BTGRs of Boke, Mamou, Faranah and N'Zerekore, which are located in areas covering the bulk of PNIR road rehabilitation works, will receive technical assistance and equipment solely from IDA. The remaining BTGRs of Kankan, Labe, Kindia and Gueckedou may benefit from the assistance of other donors in connection with projects they are financing; to the extent necessary for PNIR operations in those areas, IDA is planning to furnish needed TA and equipment to the additional BTGRs. The issue of BTGR staffing and readiness to assume maintenance responsibilities will be closely monitored and be the subject of USAID conditions precedent.

f. AID RRP Assistance in Monitoring and Evaluation

The monitoring and evaluation (M&E) system to be established within DNGR will serve the needs of all parties concerned with PNIR: the GOG, USAID, and the other donors. It will monitor and evaluate the overall impact of improved roads on the environment and on specific target groups such as government institutions, SMCs, farmers, traders and transporters, disaggregated by gender. Hence it will be the principal device for assessing whether PNIR objectives are being realized, and for providing the quantitative and qualitative information that will enable the three parties to make mid-course corrections on strategy and management of PNIR. In this connection the system will help monitor conditionalities to allow disbursement of USAID funds. The M&E system also will allow for collection of data relevant to key socio-economic, institutional and political issues, providing essential input for long-term programming of rural infrastructure development throughout the country.

To accomplish this task, RRP will provide a senior technical advisor (STA) on a full-time basis for two years and intermittently thereafter to provide technical assistance in data collection, monitoring, evaluation, and feedback. Funds will also be provided under the contract for a vehicle and computer equipment, and to help finance in-country and on-the-job training, short-term training abroad in impact evaluation, and special surveys.

Working in collaboration with other ministry offices concerned with statistics and data collection, the STA will help

the chief of DNGR's Programming Cell (C.P.) create an impact monitoring and evaluation system for DNGR's rural roads program, identify both DNGR and donor data needs, coordinate GOG and donor data and reporting requirements to eliminate duplication of effort, and design a management information system for DNGR.

The STA will be responsible for developing a plan that ensures that data are collected, analyzed and presented in a format that facilitates analysis and timely decision-making by the various users. Information will be transmitted by means of DNGR engineers' roadwork progress reports, USAID implementation reports and semi-annual progress reports, PNIR semi-annual and annual reports, the RRP mid-term and final evaluations, and special surveys conducted by C.P. as needed to obtain baseline and progress data on agricultural production and marketing, the environment, and the overall impact of feeder road rehabilitation and maintenance on the rural population.

The M&E plan includes a matrix listing 49 impact indicators as well as RRP output and input indicators. It also cites which indicators will rely on data obtainable from existing sources and which will require special surveys, and sets forth a data collection approach that includes disaggregation by gender.

g. Assistance to Small- and Medium-Scale Contractors

The social soundness analysis cites a number of studies on the capabilities and constraints of Guinean SMCs. The latest study, funded by IDA, identified five medium-sized and 18 small contractors, including 12 micro-enterprises. Their annual gross income, in the period 1988-90, ranged from $15,000 to $1.4 million, and their assets from $2,000 to $260,000. Their permanent staffs are small. The larger ones sub-contract regularly with large foreign firms, while the smaller ones work mostly for the public administration. The SMCs' three principal constraints are lack of qualified personnel, lack of credit, high interest rates (37%) and inability to provide collateral and loan guarantees.

DNGR is designing a PNIR component to be launched in the coming months that will assist the contractors studied with contract preparation, resource allocation, work execution, quality control, respect of deadlines, and cost control. The component will be called "Dispositif d'Appui-Promotion" (DAP) (Support-Promotion Facility). DAP's assistance will complement two other activities: UME training of SMC workers and team leaders, particularly mechanical personnel; and ILO supervision

of small contractors using labor-intensive methods of road rehabilitation and maintenance. Other steps being considered to help SMCs participate in PNIR are to break large bid lots into smaller sizes, simplify and speed up procurement and award of contracts, prepare bidding documents adapted to SMCs, require a lower start-up guarantee, speed up payment procedures (an objective that will be reinforced by the condition precedent with respect to prompt payment of invoices -- see Section V), assist SMCs in on-site resource allocation, and recommend SMCs to banks for obtaining performance bonds.

AID and other PNIR donors financing roadwork will support SMCs by affording them the opportunity, once they are pre-qualified, to bid on rehabilitation contracts. SMCs are not expected to be ready to undertake rehabilitation contracts until Project Year 2 or 3. Until the SMCs are ready, international firms will be contracted to carry out PNIR-funded road rehabilitation.

The GOG already contracts directly with qualified SMCs to carry out road maintenance. "Contracting out" for these services facilitates the twin objectives of promoting the private sector and reducing the public sector's involvement in the conduct of the economy.

3. Summary of AID RRP Outputs and Inputs

The principal output is the rehabilitation of 1,265 km of roads to appropriate rural-road standards. Essential to its accomplishment will be professional management by DNGR as assisted by IDA-financed technical advisors, equipment and supervising engineers. AID project engineers will monitor the contracting and construction process and inspect output segments for proper completion before recommending payment under FAR procedures.

A second and ancillary output is the growth and development of SMCs. AID will facilitate this process by affording pre-qualified SMCs an opportunity to gain contracts for rehabilitation work. The pace at which SMCs develop will depend largely on the success of IDA-funded training efforts and on the easing financial constraints. A covenant in the grant agreement will emphasize the interest of AID and the GOG in advancing the prospects for competent, pre-qualified SMCs to participate in PNIR contracts.

The third output is a monitoring and evaluation system that will give DNGR the capacity to: measure the developmental and environmental impact of the project; provide data to both the GOG and the donors for long-term planning; and help the parties assess the effectiveness of PNIR implementation and the extent to which conditionalities have been met. Monitoring and evaluation

is the only area of PNIR institutional development and capacity-building in which the AID project will provide technical assistance.

AID will provide $33.0 million in grant financing for this project. Of this amount, $29.0 million will be expended for road rehabilitation; $2.04 million for project management/engineering services and support; $1.28 million for technical assistance in monitoring and evaluation; $0.22 million for external evaluations and audits; and $0.48 million for contingency/inflation in connection with the service components. (See Section III.E and Annex J.)

Inputs from the GOG and other donors are as follows (in $ millions equivalent):

International Development Association (IDA)	$40.0
Kreditanstalt fur Wiederaufbau (KfW - German)	6.8
Fonds d'Aide et de Cooperation (FAC - French)	0.5
Government of Guinea	13.5
Beneficiaries	1.0
Total Other Donors and GOG/Beneficiaries	$61.8

The portion of the host country contribution attributable to RRP is less than 25 percent of the total RRP cost. However, as the project is part of a major multilateral effort, Foreign Assistance Act provisions (Section 110) that normally require a 25 percent contribution do not apply.

Provision of incremental AID's inputs will be subject to continuing implementation monitoring, a mid-term evaluation, and a series of conditions precedent and covenants detailed in Section V. which address resource and management constraints identified above.

III. PROJECT FEASIBILITY -- SUMMARY OF ANALYSES

A. TECHNICAL ANALYSIS

1. Selection of Road Lots and Rehabilitation Plans

As part of the preparation for PNIR, the GOG commissioned a study to inventory approximately 14,500 km of rural roads in all prefectures of the country. The study also gathered information on population, agricultural production and potential, and administrative considerations in the areas served by these roads. This information was used to prepare a Master Plan for the development of feeder roads. The road sections to be rehabilitated were selected on the basis of a multi-criteria

analysis whereby the cost of rehabilitation and maintenance was weighed against the expected benefits (see Economic Analysis). The Plan ranks a subset of 8,000 km of feeder roads in terms of priority for rehabilitation.

Out of the 8,000 km total, about 2,600 km of roads in 16 prefectures were selected as priorities for rehabilitation. Road sections destined for rehabilitation in the same or adjoining prefectures were grouped together to form contract lots. As explained in Section II.C.2., multi-donor financing is currently available for about 2,073 km of the 2,600 km planned, the reduction being caused mainly by higher rehabilitation costs than originally estimated (see below). The road lots now included in AID's RRP portfolio are the following:

LOT #	PREFECTURE(S)	# KM.
3	Beyla-Kérouané	239
5	Faranah	202
6	Lola-N'Zérékoré	226
7-a	Gaoual-Koundara	147
8	Macenta	152
9	Boké	71
10	Pita-Télimele	275
11	Macenta-Kansankoro	100
	TOTAL	1412

For reasons explained in Section II.C.2., IDA, the other major donor to PNIR, will reallocate the funds it had originally planned for rehabilitation of Lot 7-a, and will use them instead to provide the initial advances for all of the above eight lots. AID will finance the balance of the cost of the lots, covering a total of approximately 1,265 km (1,412 - 147).

Roads will be rehabilitated to one of three standards: A, Ba or Bf. All standards will have a 40 KM/PH design speed. These standards are described in detail in the World Bank's staff appraisal report on PNIR and are summarized here:

Standard	Description
A	4.5 meter carriageway, 1 meter shoulders, 10 cm minimum laterite gravel surface, triangular side drains 1.5 meters wide, 50 cm deep
Ba	3.5 meter carriageway, 0.5 meter shoulders, 10 cm minimum laterite gravel surface, triangular side drains 1.5 meters wide, 50 cm deep
Bf	same as standard Ba except no laterite gravel surface will be placed (may be upgraded to standard Ba later)

The rehabilitation is straightforward. It consists of re-opening a road to traffic or improving the present road. Drainage structures (bridges and culverts) will also be rehabilitated. The work is similar to new construction in many cases except that it follows the existing profile and alignment as much as possible. This minimizes the need for additional earthwork and will not require extensive right-of-way clearing. The plans call for a simple laterite gravel surface using materials found in Guinea. Standard culvert designs using either steel pipe or reinforced concrete will be used. Bridges will use reinforced concrete construction for abutments, piers and decks. The construction process does not require sophisticated techniques, equipment or knowledge. In short, the expected construction is simple and appropriate.

2. Contracting for Rehabilitation

The rehabilitation work will be carried out by either international or local contractors. Lots initiated in Year 1 will be opened to international bid solicitation. This will allow rehabilitation work to begin pending the upgrading of local small- and medium-scale contractors (SMCs). They will be trained by IDA-financed teams in both technical and business management skills (see Social Soundness Analysis for details). In addition, international firms which win rehabilitation contracts are likely to use Guinean firms, as they already do in some cases, to work as subcontractors. The aim is to prepare the SMCs to undertake PNIR (and other) rehabilitation contracts on their own, possibly by Year 2, more probably by Year 3. However, in the event that SMCs fail to pre-qualify, project rehabilitation contracts will continue to be let to international firms. The maintenance of rural roads, and limited aspects of rehabilition work, are already within the capability of some Guinean contractors. Recently, three firms won contracts for the periodic maintenance of some 200 kilometers of rural roads under DNGR. Successful completion of maintenance contracts will help them improve both their skills and finances. DNGR is considering breaking up large rehabilitation lots into smaller sizes more appropriate to the capacities of local enterprises, and is planning other steps to facilitate SMC contracting (see Section IV.B.).

3. Rehabilitation and Maintenance Oversight

The DNGR will confide life-of-project responsibility for supervision of all PNIR rehabilitation contracts -- both AID- and other-donor-financed -- to an expatriate engineering firm (Louis Berger International) under a contract financed by IDA. The supervisory engineers will have multiple responsibilities. In addition to supervising rehabilitation, they will participate, along with other PNIR

engineers already hired, in the development of future rehabilitation bid packages (those on the initial lots were prepared by an outside firm, also under an IDA contract.) Another major duty will be to participate, along with other PNIR training units, in the training of engineers of DNGR's regional units, the Rural Engineering Technical Offices (BTGRs). BTGR engineers who successfully complete the training and are certified as qualified will be given supervisory responsibility for rehabilitation of PNIR lots under the contract firm's authority.

The BTGRs, which will also receive other training and material support, will be responsible for managing the maintenance of project roads. The role of the BTGRs is detailed in the institutional analysis. In addition to overseeing road maintenance and eventually assuming full responsibility for rehabilitation contracts, they will be involved in other PNIR operations such as bottomlands development and local initiatives.

4. Maintenance Program

The importance of a comprehensive, effective maintenance program for the roads after rehabilitation cannot be overstressed. The Bank's appraisal report and the DNGR's leadership both recognize this. The types of maintenance actions to be performed are detailed in the Bank's appraisal report and the DNGR's Master Plan and are summarized in Annex B.

Maintenance will be performed entirely by contract. The rehabilitation contractor will be responsible for the maintenance of the road segment for the first year after the completion of rehabilitation work. In succeeding years, the BTGRs will plan, contract for and supervise the maintenance work done by private contractors. Multi-year maintenance contracts will be awarded based on competitive bidding. Periodic maintenance, which is machine-intensive, will be contracted to qualified SMCs. Routine maintenance, which is labor-intensive, will be contracted to groups, associations, local communities or SMCs and performed using a "cantonnage" system. (In cantonnage, one person is responsible for all the hand maintenance over a short -- one- or two-kilometer -- segment of road.)

5. Equipment Considerations

To perform the rehabilitation and maintenance programs described above, contractors will need access to a fleet of heavy equipment. International contractors have ready access to such a fleet, but this may not be the case for Guinean SMCs. They do not have a large enough existing fleet and do not have easy access to the capital to buy one.

There are several potential sources of equipment for the Guinean SMCs. The government has formed a quasi-private company which has taken over some government-owned equipment and is renting it to SMCs. International contractors may have equipment available for rental. There is some equipment in individual private hands. Also, contractors who recently fled to Guinea from turmoil in Liberia are selling and renting out their equipment.

6. Road Program Costs

Establishing valid cost estimates for road rehabilitation and maintenance is complex. Inflation has been stronger in Guinea than anticipated in the estimates prepared for DNGR in 1989; moreover, the quantities of rehabilitation required are greater than originally estimated. On the other hand, some factors serve to act in the opposite direction. It is common practice for international contractors to request between 60% and 80% of their payments in a foreign currency. The Guinean franc has declined steadily in value since the Bank's appraisal report. Further, it can be reasonably expected that unit prices for lots after the first year, to the extent they can be awarded to local SMCs, will be lower than those for international contractors. Local firms do not have the large foreign overhead costs and high salaries of expatriate personnel.

The design team engineer has taken the various offsetting factors into account and revised the original cost figures. Based on the plans reviewed, the estimates for seven road lots (excluding Lot 7a) are as follows:

Lot #	Préfecture(s)	Length	Est. Start Year	Estimated Costs (000,000's GF) Master Plan	Revised Est
3	Beyla-Kerouane	239	1992	2333.4	5133.5
5	Faranah	202	1991	1735.1	3281.0
6	Lola-N'Zerekore	226	1991	2423.1	4550.6
8	Macenta	152	1992	1414.8	2971.2
9	Boké	71	1992	1064.3	2235.0
10	Pita-Telimele	275	1991	2759.9	6464.9
11	Macenta-Kansankoro	100	1992	N/A	2079.8
	TOTALS	1265		11,730.7	26,716.0

Converting the revised total at the estimated 1992 exchange rate of GF 750 = $1.00, this would amount to $35.6 million, far exceeding AID's planned funding level of $29.0 million for road rehabilitation.

In May 1991, confirmation of construction cost increases was received in the form of bids on the two Gaoual-Koundara lots:

7-a (currently slated for IDA financing, pending approval of the AID project) and 7-b (being financed outside of PNIR by the French). These bids ran 60% to 170% higher than had been estimated on the basis of outdated costs. In analyzing the bids and re-analyzing the work to be done, DNGR and its engineering advisors have determined that the bid package in some cases called for more expensive solutions than required, e.g., entirely new bridges when only the culverts needed repair or replacement, gravel imported from other locations in Guinea when local laterite properly compacted would do equally well, and road shoulders prepared separately from the carriageway when both could be done in the same operation. The more cost-effective solutions are now being incorporated where appropriate into a revised package for rebidding. All future bid packages will be similarly drawn.

To ensure that road rehabilitation does not exceed the $29 million budget, a maximum cost per lot (in U.S. $$) has been set proportional to the standard planned for each road segment within the lot. Segments designated for Standard A have been calculated at $27,028 per km, for Standard Ba at $22,198 per km, and for Standard Bf at $18,111 per km. The results are as follows:

Lot #	Préfecture(s)	Length	Cost (US $$)
3	Beyla-Kerouane	239	5,742,992
5	Faranah	202	4,337,233
6	Lola-N'Zerekore	226	5,238,924
*7a	Goual-Koundara	147	3,227,807
8	Macenta	152	3,256,312
9	Boké	71	1,745,108
10	Pita-Telimele	275	5,972,921
11	Macenta-Kansank	100	2,702,800
	Total	1,412	32,224,097
	*Total excluding 7a	1,265	28,996,220

If bids are received which exceed the maximum cost, DNGR will remove selected road segments from the lot until the cost matches the budget. All cutbacks will be carefully studied and decided upon only after consultation with USAID and with prefectoral authorities and the communities concerned, to ensure that the original criteria for selection of roads for rehabilitation are taken fully into account.

Maintenance program costs have also risen. The cost increases to unit prices for maintenance activities are mainly a function of fuel price increases (56 percent). Prices will continue to increase due to simple inflation. It is anticipated that SMCs will qualify for and receive all maintenance contracts, making the inflation rates for the Guinean franc applicable. A

revision was made to the maintenance-per-kilometer cost and that revision applies to the expected maintenance quantities (see table below). This gives AID an idea of the amount of funding necessary for this part of the program, financed by the GOG and IDA.

Maintenance Standard	Master Plan Cost	Revised Cost (1993)
A	GF 849,365	GF 1,500,400
B	GF 606,525	GF 1,004,300

The costs below reflect the new estimated maintenance rates and include a cost escalation of 15% per year.

Estimated Maintenance Costs On Rehabilitated PNIR Road Segments
(GF Millions)

Road Standard	1993 Km	1993 Cost	1994 Km	1994 Cost	1995 Km	1995 Cost	1996 Km	1996 Cost
A	85	127.5	289	498.7	423	839.4	467	1,065.7
B	241	242.0	614	709.0	858	1,139.6	948	1,448.0
Total	326	369.5	903	1,207.7	1281	1,979.0	1415	2,513.7
Equival. ($000)		462		1,421		2,199		2,646
Est GF/$ Rate		(800)		(850)		(900)		(950)

Based on these figures, the total estimated dollar cost for maintenance of the AID-financed road lots during the life of the project is $6.7 million. When asked to comment on these estimates after the design team engineer's departure, DNGR said it considered them much too high because they incorporate into each year's cost a portion of the resurfacing done every five to eight years. The amount budgeted for PNIR maintenance (financed by IDA and GOG) is $4.2 million, which DNGR deems adequate. This issue will need to be resolved. Several conditions precedent and a covenant to be included in the grant agreement are designed to ensure adequate funding for maintenance of AID-rehabilitated roads (see Section V.).

7. Conclusions of the Technical Analysis

It is obvious that Guinea's rural road system urgently needs rehabilitation and maintenance. The project is technically feasible. The rehabilitation plans call for simple construction methods which do not demand sophisticated skills,

equipment or materials. The roads can be maintained in large part by hand with only periodic necessity for mechanical intervention. SMCs are currently capable of most maintenance functions and some have already received contracts for periodic maintenance. Some medium-sized contractors could be ready to bid on the rehabilitation of the second round of lots, provided the lots are reduced in size and the bidders are extensively trained and pre-qualified. The accomplishment of the various contractor training components financed by IDA will ensure that SMCs are adequately prepared to bid. The maintenance program, and the role of the BTGRs in managing it, will safeguard the investment AID plans to make in the rural road system.

Equipment availability will be a crucial issue for the SMCs. There will be some equipment available but a shortfall may occur as demand rises. Market forces may supply the incentive and capital to overcome this concern.

With rehabilitation costs higher than originally planned and subject to further increases, cost control measures have been put in place. The design team engineer has considered a series of both firm and shifting factors in arriving at new, higher cost estimates to replace IDA's 1989 figures. The new estimates, and recent confirmation through bids received that costs have indeed risen substantially, have led to a reduction in the number of road lots to be rehabilitated, a review of plans to ensure that specifications relate to essential rehabilitation needs, and a limit on AID financing of rehabilitation. If these steps do not suffice, it is planned to cut road segments within lots.

B. ECONOMIC ANALYSIS

1. Introduction

The Rural Roads Project (RRP) consists primarily of the rehabilitation of Standard A and B roads, although there are a few other small components. For the purpose of the economic analysis, only the road rehabilitation is relevant. The road standards are explained in the Technical Analysis.

2. Overview

The approach has been to analyze the whole group of A and B roads as a unit, and then the three categories of roads (A, Ba, Bf), separately. The degree of confidence diminishes at each level because the smaller number of road segments increases the likelihood of error. The major assumption in the analysis is that errors are distributed in a random pattern and will tend to cancel out each other.

3. Economic Review of Individual Roads.

Both the Master Plan analysis by BCEOM and the PNIR report by BDPA - SCETAGRI evaluated rural roads in terms of the costs of rehabilitation and the benefits likely to flow from the improvements. The BCEOM study examined the entire tertiary, or rural road network. The network consists of 777 segments in 33 prefectures, totaling to 14,500 km. As a part of the analysis, the study rated the top 8,000 km on the basis of a benefit-cost ratio. The benefits and costs were all in terms of index numbers. The SCETAGRI study concentrated on the 16 prefectures that had been selected for the National Rural Infrastructure Project (PNIR). The study analyzed 248 segments of A and B roads, totaling 4,500 km. It evaluated all the segments through a system of index numbers that took into account economic benefits (traffic, population, agriculture and other development impacts), social considerations (administration, projects, cuts in service), and degree of local interest. The road segments were divided into three priorities, with the two highest priorities totaling 2,078 km divided among 188 segments.

The results of these two studies were then further refined through additional consultation with administrative officials. A total of 2,600 km was finally selected for the 16 prefectures, including 250 km of category C roads associated with bottom-land development (not included in the AID portfolio). The total number of identified road segments in the 11 prefectures in which AID financing will be involved is 62 and the total length is 1412 km. As explained in Section II C. 2., IDA will finance a small portion of each lot, and hence of each kilometer; these portions total the equivalent of 147 km, making the AID total the equivalent of 1265 km.

The economic rate of return (ERR) analysis was done for 61 roads segments or 1312 km. The remaining 100 km (Macenta-Konsankoro) does not lend itself to quantitative analysis because of the lack of data. However, this road segment which crosses the main coffee producing area is in deplorable condition. It is therefore expected that once it is rehabilitated, the Macenta-Konsankoro segment will generate substantial traffic as a result of increase in both agricultural and non-agricultural activities.

4. Results

The two types of benefits estimated in the analysis are those related to the traffic associated with the increase in agricultural production and those associated with non-agricultural activities. The first type of benefits, i.e., producer surplus was estimated by the increase in agricultural production whereas the second type of benefits, i.e., consumer

benefits, was calculated through the savings on vehicle operating cost.

The analysis for the A, Ba and Bf type roads yields economic rates of return of 12.5, 26.5 and 35 percent, respectively, which are higher than the assumed 10 percent opportunity cost of capital. The net present value (NPV) for the three categories of roads is $1.7 million, $19 million and $14 million, respectively. Note that the A type roads are substantially more costly than the B type roads. However, the incremental agricultural benefits near the B type roads are greater than those associated with the A type roads where a relatively high level of production is already taking place. For all the road segments taken together, the ERR is 24.4 percent and the NPV is $35.5 million. The sensitivity analysis shows that the results are robust to changes in cost and population. However, these results are sensitive to changes in the agricultural potential index used in the cost benefit analysis. The detailed results as well as the methodology used in the economic analysis are contained in Annex C.

On the basis of the above results, it is clear that the proposed project is economically sound since the expected benefits are substantially higher than the costs.

C. INSTITUTIONAL ANALYSIS

1. The Ministry of Agriculture and Animal Resources (MARA)

MARA is responsible for crop, livestock, fisheries, forestry, meteorology and rural infrastructure development. MARA contains six operational departments for technical activities and currently oversees some 84 projects throughout the country. The National Rural Infrastructure Project (PNIR) is one of these existing large projects that provide logistical and technical support, personnel training and financing of certain field activities. The areas in which MARA currently provides services to agriculture include agricultural statistics, economic analysis and policy formulation, agricultural extension, crop protection and quality control, forestry management and protection, and rural infrastructure development.

Besides the National Department of Rural Engineering (DNGR), MARA has two more units important in the context of the PNIR: the Strategy and Development Office (BSD) and the Training and Rural Promotion Department (DNFPR).

The BSD was created in 1986 as part of the Second World Bank Agricultural Services Project to provide MARA with logistical support, analytic capacity, and policy advisory services. It is

responsible for planning and strategy formulation, and for investment selection and evaluation. It has a monitoring and evaluation division, which may work for various development projects, for system design and for training project teams in monitoring and evaluation. However, the BSD's current capacity appears to be limited judging from the resources allocated since the early withdrawal of the World Bank's funding and from the documentation that is available.

The DNFPR is responsible for MARA's staff training and development, as well as agricultural extension activities. Despite the high staffing levels which continue to exist in the regions, almost no material resources have been made available for agricultural extension for many years. The effectiveness of these services is thus severely limited. The DNFPR is responsible for several rural development projects, such as the FAO-funded Rural Development Project in the Fouta Djalon area, which uses prefectoral extension services, with the participation of more than 70 staff employees at prefectoral and sub-prefectoral levels, and the UNDP-funded Rural Work Program (PTR) in the prefectures of Dabola and Dinguiraye, implemented by the ILO, aimed at reinforcing the capacity of decentralized administration to manage the development of rural infrastructure.

Each prefecture has a Rural Development and Environment Department (DPDRE) where DNFPR has staff specialized mostly in agronomy, rural engineering and livestock health. They are located in key positions as far as the involvement of people at the community level is concerned, be it for agricultural purposes or for building rural roads or social infrastructure. (See Subsection 4 below).

2. The National Department of Rural Engineering (DNGR)

The DNGR is responsible for rural roads, buildings and structures, and irrigation and drainage works, while large trunk roads and other public structures are the responsibility of the Ministry of Transport and Public Works (MTTP). Until now, the DNGR has been planner, designer and builder of nearly all important physical public investments in the rural sector. It reorganized recently to remove itself from construction activities and to leave them to the private sector.

The DNGR has three technical divisions, four support services, and eight Rural Engineering Technical Offices (BTGR) referred to as "Services rattachés". The technical divisions are Rural Roads and Buildings, responsible for the design, coordination and monitoring of the road construction and maintenance program, Hydro-Agricultural Development, and Agricultural Mechanization. The support services are: the Programming Cell, responsible for the management of the rural

roads master plan, program coordination, monitoring and evaluation, the Training Cell, the Technical Support Service, and the Administrative and Financial Cell (CAF). Since MARA's restructuring, the CAF is responsible for managing the central office's operating and equipment budget.

BTGRs were created in 1990, with administrative and financial autonomy and statutes of "services rattachés". They are decentralized services of DNGR in the field, reporting directly to DNGR, with functional relations with SPGR at the prefectoral level. The Mobile School Unit (UME) was created as a "service rattaché", to carry out training activities financed by IDA under the PNIR project, for both government and private sector staff. It is located in Mamou and will start as soon as the buildings it will use are rehabilitated. The technical assistance team has arrived. The School will act as a Training Center and a "School Brigade", dispensing both classroom and on-the-job training, the latter being done by implementing road maintenance contracts awarded by DNGR.

Intervention Services (SI) exist as remnants of former rural engineering brigades which worked on force account. They were created under development projects funded by international donors and are to be abandoned by DNGR as they move towards becoming private contractors.

3. Other Interventions in the Agricultural Sector

As stated above, MARA oversees development projects all over the country. The Ministry of Plan 1991-1993 public investment program shows a total of 84 rural development projects, totalling $321 million. The agricultural sub-sector receives two thirds of the amount ($200 million). PNIR has by far the highest budget among all projects, adding up to $ 39.4 million. Two more projects in the sub-sector have an importance for the success of the USAID project, in connection with monitoring and evaluation: Technical Assistance to the BSD and the Permanent System of Agricultural Statistics (SPSA)

a. National Rural Infrastructure Project (PNIR)

The PNIR started in 1990 with the funding of IDA and the German and French Governments. With the $6 million increase in the USAID component, the budget for five years now totals $94.8 million. The project assists the GOG in implementing Structural Adjustment policies in the rural infrastructure sector by strengthening the institutional capacity to plan and oversee the execution and maintenance of rural infrastructure and by promoting private sector participation in building and maintaining rural infrastructure.

Donor support continues to be provided at the institutional, technical and training levels. Groups targeted for this support are GOG staff (DNGR and other technical ministries concerned) and private sector contractors, including employees of local community organizations. While training is scheduled for 1991-1993, there could be delays in its implementation in that many of the DNGR staff have yet to be appointed.

In order to promote sustainable feeder roads development, the PNIR also includes pilot programs funded by IDA and implemented by the ILO. Their objective is to test labor-based methods for road rehabilitation and maintenance, relying on local resources using domestic contractors, NGOs and communities for implementation.

b. Technical Assistance to the Strategy and Development Office (BSD)

The Permanent System of Agricultural Statistics (SPSA) project consists of three surveys of the traditional rural sector to be used to estimate agricultural GNP: an annual agricultural survey of 1,848 representative production units (rural households) located in 462 villages, a livestock survey and a farm-level price survey.

The Permanent Agricultural Survey is a random sample survey. Data are collected for the following variables: demographic data on household heads, economic activity, means of production, agricultural methods, surface cultivated, and yields. Data are collected through interviews or direct measurement.

The Agricultural Sector Assessment prepared by USAID reviewed the project in detail and strongly supported it. The project is considered a necessity for a rational and effective agricultural policy. However, the Assessment underlined several critical weaknesses: a lack of experience and expertise of the staff in data entry, processing and analysis, and high recurrent costs to be covered by the Government.

The director has recently contacted MARA's departments in order to organize a series of seminars aimed at improving their data collecting methods and their data presentation. The SPSA may provide technical support for designing and planning, as well as for data collection and analysis. The project paper team's opinion is that the SPSA's technical and human resources could be used by DNGR for help in designing an impact monitoring and evaluation system and for training.

4. Functional Relationship Between DNGR and Territorial Institutions

Territorial organization of Government is based on two structures: (1) an administrative territorial structure ("administration déconcentrée") by which the Prefecture is an administrative unit for the Government central administration, thus giving the Prefects an expanded role in the coordination and control of government technical services, and (2) an administrative "decentralized" structure by which the Prefecture is the representative of local populations, thus giving more weight to non governmental structures allowed at the village level (referred to as "collectivités décentralisées"), with freely elected leaders. The latter is particularly significant for the PNIR since it is aimed at mobilizing grassroots participation for road maintenance.

For the implementation of rural roads rehabilitation and maintenance programs, the following roles are assigned to existing structures : (1) The DNGR is the central service responsible for programming, preparation and awarding of contracts, contract management, acceptance of work, and implementation of training and technical support. It has administrative services and operational units, including the BTGRs, located in the field. (2) Prefectoral territorial structures, in contact with the field, are responsible for identification of actions and local operators, and for permanent monitoring of infrastructure conditions.

At the prefectoral level, MARA is represented by technical departments. Rural roads rehabilitation and maintenance are overseen by the Prefectural Rural Engineering Section (SPGR), which is part of the Prefectural Rural Development and Environment Department (DPDRE). Under the new guidelines adopted to reduce staff members and to integrate functions in the field, MARA's decentralization brought a reduction of resources and staff at regional and central levels and an increase at the prefectoral level.

a. Role of the DNGR

DNGR is responsible for developing, carrying out, coordinating, supervising and following-up on all construction and maintenance activities for rural roads throughout the country. It carries out its mandate by providing technical and logistical support to the various operators in the rural areas and by promoting private sector development. Its by-laws also require that it carry out its responsibilities with the participation of the rural population and by assisting local structures in their initiatives.

In an attempt to ensure coherent management of the rural road network throughout the country, it was decided to transfer to DNGR responsibility for all rural roads, including those which, due to their regional use, fall under the jurisdiction of MTTP. (See Section IV. A., Annex E).

b. Role of the Rural Engineering Technical Offices (BTGRs)

BTGRs were created in 1990. Hierarchically, they are at the same level as central administration divisions. They are DNGR's tools for the implementation of its program and they have functional relations with the prefectoral service structures.

BTGRs have four basic functions: programming, monitoring, control and technical support. They are divided into four sections: Administration and Finance, Rural Roads and Buildings, Hydro-Agricultural Development, and Drawing/Topography/Copy. They have a certain amount of autonomy when it comes to operation and management of the resources allocated to them by DNGR through their legal capacity to have "annexed budgets". In this way, DNGR's role in financial management is limited to budget allocation and inspection of expenses a posteriori.

Although BTGRs are well defined as official structures, their operational capacity is still very limited and is expected to increase only once PNIR's implementation is well underway. Their actual existence is limited to eight Chiefs nominated and a few remnant structures created in the wake of rural development projects. Training will be provided to personnel of all eight BTGRs, and the four BTGRs of Boke, Mamou, Faranah and N'Zerekore have been programmed to receive material assistance as well. Support arrangements for the other four remain to be worked out between IDA and other donors which have projects in their areas. Of those four, Labe, Gueckedou and Kankan assume particular importance for the USAID project, especially in terms of road maintenance capacity. Among the roads to be rehabilitated, nine segments totalling 252 km are found in the prefecture of Macenta, in the jurisdiction of the Gueckedou BTGR, and three sections (38 km) are in the prefecture of Kerouane, and thus are the responsibility of the Kankan BTGR. The 147 km Gaoual-Koundara lot lies in the zone of the Labe BTGR.

c. Role of the Prefectoral Rural Development and Environment Department (DPDRE)

Under the official authority of the Prefect and the technical supervision of the central administration, prefectoral departments promote, coordinate, and supervise all

the activities carried out by the governmental administration in their sector. They are responsible for assisting and advising the technical offices of the central administration in the field, particularly NGOs and village groups. DPDRE's mandate with respect to rural infrastructure is to coordinate and monitor rural development activities, to promote the coherence of rural production activities at the prefectoral level, to initiate local population to maintenance of infrastructure, and to provide the DNGR with information needed for its rural development programs. DPDRE includes six sections, including the Rural Engineering Section (SPGR).

5. Institutional Impacts of the Project

The impact on the capacity of MARA and DNGR's staff to manage rural infrastructure development programs is to come mainly from PNIR's institutional support component. The USAID project will have direct institutional impact on the DNGR's capacity to monitor and evaluate its rural infrastructure program, and to gain a thorough understanding of the impact of rural roads improvement on rural development (see the monitoring and evaluation plan).

6. Remaining Issues

a. Institutional Issues

DNGR's administrative and managerial responsibilities are increasing rapidly with the expansion of its mandate in the GOG reorganization and with the starting of PNIR. Up to now, these responsibilities have been addressed by an undertrained and underpaid staff operating under very poor physical conditions. As a result, financial and management procedures are slow and cumbersome and the capacity to monitor and evaluate its rural road program is very low. PNIR was designed so as to minimize such a risk through training, technical assistance and a minimal use of force account in carrying out works during the initial years.

Up to now, a number of factors lead one to believe that PNIR has gotten off to a good start and that the government is taking the development of the rural road network seriously. All the new structures are in place and DNGR was allocated a budget for maintenance by the Ministry of Finance for the first time in 1991. The administrative and financial relationship between MARA and MTTP has been elaborated. A three-year training program has been developed for DNGR agents, in which emphasis during the first year is put on the training of executives in management and a review of basic knowledge for technicians. The facilities in which the UME is to be installed have been obtained by the DNGR, and the contract consulting team has arrived. Finally, the strong motivation and availability of the DNGR executives show

the will to succeed in meeting the challenge which the PNIR represents for the rural development of the country.

Institutional problems remain though, which will need to be carefully monitored during the implementation of the USAID project. There is a need to evaluate DNGR's capacity to carry out its tasks, mainly for programming road maintenance and for training private contractors for road rehabilitation and maintenance works. (For a summary of the major institutional contraints see Section VI. A., Annex E).

b. GOG's Commitment to Rural Road Rehabilitation and Maintenance

The GOG has demonstrated that it considers the development of rural roads a priority. The PP design team finds the results at administrative and institutional levels encouraging so far. However, today's DNGR capacity to program, supervise, control and monitor the implementation of maintenance work on the 2,000 km of feeder roads to be rehabilitated by PNIR is negligible. The Department will be in a position to handle this difficult task only if all the staff are quickly designated to their positions, if central and regional offices are rehabilitated and equipment is delivered as planned, and if technical assistance and training achieve their objective. The success of the IDA assistance being a major assumption, it will be necessary for USAID to monitor closely the implementation of the institutional support component of the PNIR and to undertake an evaluation after Year 2.

c. Evaluation of Environmental Impact

Present circumstances in Guinea appear very favorable for implementing a procedure to study the environmental impact of development projects, because of the increasing awareness of authorities of environmental issues in general, the evolution of legislation during the past few years, and the support from the majority of donors.

The ministerial authority with responsibility for the environment is the Ministry of National Resources and the Environment (MRNE). The responsibility for impact evaluations was given to MRNE's National Department for Environment (DNE).

There are nine types of major work which require an environmental impact study at the time of their preparation, and roads in rural zones are included. However, roads are mentioned only under the general heading of "road construction"; maintenance and major repair work are not listed. In addition, the procedure is not yet operational. The DNE has only three untrained employees to look after the 300 projects registered for an environmental impact evaluation, and the technical ministries

concerned (including MARA) have no technical advisors with specific training in environmental matters.

DNE's responsibilities include environmental data collection. In this area, there is a need to collect data on a nationwide scale, and particularly from implementing agencies, which can provide detailed descriptions of the circumstances of the specific areas in which they work. Therefore DNGR is called upon to play an important role in this matter, in view of the vastness of the area covered by the rural road network. Contact for collaboration was established between DNGR and DNE in March of this year.

D. SOCIAL SOUNDNESS ANALYSIS

1. Direct Beneficiaries

The National Rural Infrastructure Project (PNIR) will have nearly half a million direct beneficiaries representing approximately 7% Guinea's population. The major expected benefits are those normally associated with rural road projects, i.e., the reduction of transportation costs between villages and small towns, better access to market for village producers (both for produce and inputs), expansion of commercial services through better marketing, and acceleration of economic growth in rural areas. The project will also have a direct positive impact in rural areas which are isolated and densely populated. The main beneficiaries in these areas will be local farmers, women retailers and collectors, DNGR staff, and Small and Medium Contractors (SMCs). (See Annex D).

a. Rural Population

The rural population is by far the largest group of direct beneficiaries of the project. Rural roads rehabilitated with USAID financing will benefit a total of 211 villages and a rural population estimated to be 279,000, or 4 percent of the country's population of 7 million. The extent to which this population is impacted by the rehabilitation of rural roads has been well-documented in several previous analyses.

For example, the multi-volume UNDP socio-economic survey of Guinea's 33 prefectures, published in 1989, identified a series of constraints to development for each prefecture. The isolation of rural areas is mentioned as a constraint for the 11 prefectures of the USAID project and a deeply deteriorated rural road network is mentioned as a constraint for ten of them. The absence of suitable roads is mentioned as a problem for agricultural production marketing in all prefectures and as being extreme in four of them (Boke, Lola, Pita and Telimele).

In addition, the PNIR report prepared by BDPA-SCETAGRI assigned a "social score" to all roads. The index for the 11 USAID-financed prefectures is 15.2, which is higher than the average index for the 16 PNIR prefectures (12.4). Also, the traffic index calculated from the Rural Roads Master Plan analysis prepared by BCEOM gives an estimation of the weekly number of vehicles using a road segment. The average index for the USAID-financed prefectures is 38.9, which is much higher than PNIR prefectures as a whole (22.0).

b. Traders

A comprehensive survey of marketing in the agricultural sector throughout Guinea was conducted by FAO in 1990. The study identifies four groups of traders: Collectors (Small Traders called "Collecteurs"), Women Retailers ("revendeuses"), Retail-Wholesalers ("détaillants-grossistes"), and the local farmers.

The improvement of the rural road network is expected to benefit mostly local farmers, Women Retailers and Collectors, who are the main traders located between the prefecture and sub-prefecture towns. The three groups will benefit from easier and more rapid trade flows between prefecture and sub-prefecture towns, permitting fewer losses due to unsold perishable goods, a higher volume of trade and more regular prices.

c. Transporters

Guinea's vehicle fleet is considered as one of the oldest on the African continent. The vehicles all over the country are in very bad repair and it is the vehicles which transport goods to and from weekly markets which are in the worst repair due to the state of the roads and the preference of transporters with new trucks to use them on national paved roads. According to the FAO survey mentioned above, trucks used for weekly market transport are generally five to ten tons. They are Soviet-made, consume gas not diesel fuel, and are between 15 and 25 years old. Traders thus live under very difficult conditions due to numerous delays caused by breakdowns, accidents, and insecurity. In addition, repair work is very difficult to accomplish and broken vehicles can spend weeks by the side of the road due to lack of parts or of money to buy them.

Improvement of road conditions will result in less damage to vehicles, less time lost and consequently, lower transport costs. Truck owners will hesitate less to use their new vehicles on rural roads and the improvement of the flow of merchandise should lead to the purchase of new vehicles. It is thus to be expected that transporters will invest in expanding their fleet of trucks, as they have done since the liberalization of the economy in 1984.

d. Small- and Medium-Sized Contractors (SMCs)

In the last few years, a number of studies and tests have been carried out involving Guinean Small and Medium-Sized Contractors (SMCs) in an attempt to identify and support the most promising among them. Since the establishment of the new economic framework by the GOG, some medium scale conttracting firms have emerged, (mainly from neighboring countries), have expanded their operations in Guinea's building sector and have started competing with larger foreign firms for road rehabilitation and maintenance, and other construction works. There are also small Guinean contractors for the construction of relatively small buildings in towns. However, these firms usually have minimal equipment, perform sub-standard workmanship and little experience with rural infrastructure projects.

The PNIR is designed to promote the expansion of private road construction firms to undertake road work. A recent suggestion for enhancing their activity in Guinea stems from a study on Guinea's SMCs in the construction and public works sector conducted by DNGR with World Bank financing. This suggestion is called "Dispositif d'Appui-Promotion" (DAP) (Support-Promotion Facility). This project would assist the 23 contractors studied with contract preparation, resource allocation, work execution, quality control, respect of deadlines, and cost control.

The draft study recommended that DNGR adopt a series of concrete and tangible measures to help the SMCs participate in the work of PNIR: breaking large lots into smaller sizes more appropriate to the capacities of SMCs; simplifying and speeding up procurement and award of contracts; preparing bidding documents adapted to SMCs; not requiring a provisional guarantee; requiring a lower start-up guarantee; speeding up payment procedures; assisting SMCs in on-site resource allocation when starting a contract; and recommending SMCs to banks for obtaining a performance bond. These advantages would be added to a large training component for the workers and work team leaders, particularly mechanical personnel, in collaboration with the UME in Mamou.

PNIR's strategy to promote the expansion of local firms' capacity to undertake road work, is the following:

- Award contracts for periodic and routine road maintenance;

- Implement rehabilitation work on 161 km of rural roads in Coyah and Dubreka, and on 180 km of rural roads in Dabola and Dinguiraye, with small contractors and using labor-based methods (through contracts with ILO); and

- Offer technical and management training to small and medium local contractors, mainly through the services of UME and DAP.

For 1991, DNGR has awarded its first maintenance contracts to two medium-size private firms, as well as one of its Rural Work Units (UTR), for implementing its program in three prefectures. The total amount is the equivalent of $320,000, financed from the road maintenance account. For the 1991 program, it is planned to award three contracts for maintenance of 315 km in Labe, Kissidougou and Gueckedou, for a total of about $490,000.

e. MARA and DNGR

As shown in the Institutional Analysis, PNIR is expected to have a high impact on the capacity of MARA's and DNGR's staff to manage rural infrastructure development programs, through both its institutional support and investment components.

2. Participation

a. Participation of the Rural Population

Local participation is not a feature of the USAID component of PNIR. However, substantial innovative pilot efforts are already being implemented as special components of PNIR to ensure that post-implementation maintenance activities are undertaken in a timely and organized manner. The immediate objective of these pilot efforts is to develop a capacity at the community level and with NGOs to plan and implement rehabilitation and maintenance of feeder roads. New approaches are being tested, and experience has demonstrated that even in the most difficult cases, local participation would save at least 15% of the cost of activities. Such efforts are in accordance with USAID's policy of assuring maximum recurrent cost recovery from users.

b. Local NGOs' Participation

The USAID Project should have little direct impact on local NGOs because none of them are likely to participate in road works included in the USAID-financed component (rehabilitation work will be awarded by contracts to private contractors). The design team does not expect to see NGO involvement in road maintenance either as they seem to be in a better position to support local communities with construction, rehabilitation of Standard C roads, and drainage work. However, the PNIR is expected to have a positive impact on Guinean NGOs, through the improvement of DNGR's capacity to provide technical support to local community associations in rural infrastructure

work, provided there is a better coordination between them and DNGR's structures.

3. Socio-Cultural Feasibility

There does not appear to be any socio-cultural obstacle to project implementation. There is unanimity that the project would be beneficial to the rural areas of the country. Rural populations, as well as prefectoral authorities, are highly motivated and have proven to be capable of assigning financial and human resources to the improvement of feeder roads.

4. Gender Considerations

The proposed project will benefit women in several important areas. Women's primary income earning activities in rural areas tend to be agricultural production, collection and transformation of natural resources, as well as small scale commerce. Local farmers are mostly women. They tend to have an increasing role in the garden production and marketing of vegetables and they have a prominent role in arranging for the transport and sale of household products to town markets. Any positive impact the project will have on farmers and small traders, therefore, will be immediately applicable to women.

5. Socio-Political Issues

a. Rural Road Maintenance

Long-term project sustainability resides in the capacity of the GOG to perform effective maintenance on all rural roads rehabilitated. In 1989 the GOG opened a special account financed through the national budget with the purpose of "financing maintenance on roads classified as national and regional". According to its statutes, it contributes to: (1) local counterpart funding for road investment projects financed by outside sources; and (2) the maintenance of the rural road network. The national budget for road maintenance works rose from $2.4 million in 1989 to $3.2 million in 1990, of which only $320,000 was granted to DNGR for rural road maintenance works in three prefectures. It is estimated that the allocation for 1991 will rise to $3.8 million and that DNGR will receive about $490,000, a good sign of the willingness of the government to allocate financial resources for the maintenance of rural roads. It will be important, nevertheless, to follow the evolution of the budgets allocated carefully.

b. GOG's Policy Towards the Private Sector

One of the first policy decisions announced by the emerging government of the Second Republic was to adopt the free market system as the new politico-economic orientation of the government body. In April 1984, the freedom to create private enterprises was offered to Guinean nationals for the first time in 26 years. Since then the new political orientation of the government has been to set the conditions necessary for the expansion of the private sector. The PNIR is seen as a supplement to GOG's effort to revise and ease regulations applicable to SMCs and improve efficiency of support institutions.

c. Regulatory Constraints to Transporters' Operations

There is a unanimous opinion in Guinea that the unofficial taxes levied against the transporters by representatives of the forces of order along the roads is a real constraint to their operation and generates increase in transport costs.

d. Land Tenure

The Guinean land code is currently in the process of being elaborated. The focus of the new code is very different from earlier GOG policies in that it would lead to the evolution of private ownership and its provisions would formally recognize that customary tenure systems prevail over much of the country. It also seeks to support local communities in the attainment of their rights to land. Expropriation of land for public use will be done, under the new code, only with compensation to the owner.

With some 2,000 km of rural roads to be rehabilitated, the PNIR will have to deal with expropriation for public use on a limited scale. As it is planned, rehabilitation work will require only widening existing road courses. Officials at DNGR have indicated that compensation for the addition of a narrow strip of land to the road course should not generate significant problems.

e. Impact on Regional Migrations

According to pilot projects carried out in several prefectures, local people have a tendency to abandon their areas when roads become impassable due to rains, but are less likely to leave if roads remain open. As an example, after two years of work on the UNDP project in the prefectures of Dabola and Dinguiraye, the evaluators stressed the positive impact of a decrease in the exodus of youth.

Overall, the limited secondary data available and the direct testimony obtained underline the positive impact which the improvement of the rural road network is expected to have on conditions of rural life in terms of agricultural production, income, health and education services, etc. Such improved conditions should diminish the attractiveness of urban centers and encourage rural populations to remain in their home regions.

E. FINANCIAL ANALYSIS

1. Cost Effectiveness

The principal financial issue facing this project has been addressed in Sections II.C.2., III.A. and Annex B, namely, how to program limited resources in the face of higher construction costs than were anticipated when PNIR was designed by IDA in 1989. A five-step cost control program has been adopted: (a) the number of road lots and hence the overall length of roadways to be rehabilitated with AID funding have been reduced; (b) rehabilitation cost estimates have been increased; (c) bid packages are being carefully reviewed to ensure that specifications relate to essential rehabilitation needs; (d) AID has set a limit of $29.0 million for rehabilitation of eight road lots, and will use the fixed-amount reimbursement (FAR) method of payment, with IDA providing the initial advances for each lot; and (e) if, despite these measures, the lowest responsible and responsive bid for work on a given road lot should be higher than the funds available, the number of kilometers to be rehabilitated will be cut.

Project cost effectiveness and benefit to rural road users has been further enhanced by devoting 88 percent of available funds directly to road rehabilitation, and the remainder to essential support of this effort.

2. Financial Plan

a. AID will provide $33.0 million in FAA Development Fund for Africa grant funds, as detailed in the attached budget table. The AID grant constitutes 35 percent of the total cost of PNIR, and 41 percent of the donor share. The participating donors--IDA, AID, KfW, and FAC--are making their contributions through independent, parallel financing. Coordination is effected by the Guinean project director who is also the National Director of Rural Engineering (DNGR).

b. IDA, the International Development Association of the World Bank Group, is providing a loan of $40.0 million for feeder roads, bottomlands, water suppy, equipment, technical assistance, training, operating and road maintenance costs (on a declining basis), and pre-project financing.

c. KfW, the German Kreditanstalt fur Wiederaufbau, is providing $6.3 million for feeder road rehabilitation and $0.5 million for consultants.

d. FAC, the French Fonds d'Aide et de Coopération, is furnishing $0.5 million for training.

e. The Government of Guinea is contributing the equivalent of $13.5 million to PNIR for DNGR operating costs ($3.5 million), road maintenance ($1.5 M), project investment ($4.15 million), and taxes on investments ($4.35 million).

f. The beneficiary population is contributing an estimated $1.0 M for road rehabilitation and maintenance, bottomland development, and the purchase of handpumps.

The host country contribution attributable to RRP is less than 25 percent of the combined AID-GOG total. However, the project is part of a major multilateral effort. Therefore, the provisions of Foreign Assistance Act Section 110 requiring a 25 percent host country contribution do not apply.

Rural Roads Project (675-0216)
Summary of AID Project Costs By Fiscal Year

Components	1991	1992	1993	1994	1995	LOP
Road Rehabilitation Contracts	4,100,000	8,700,000	7,150,000	7,300,000	1,750,000	29,000,000
Engineer/Management Services	522,437	346,856	363,859	353,622	368,113	1,954,887
-PSC Manager/Engr	265,668	180,692	189,635	184,972	197,154	1,018,120
-PSC Field Engineer	250,769	160,164	168,224	162,650	164,959	906,766
-Secretary	6,000	6,000	6,000	6,000	6,000	30,000
Evaluation/Monitoring Services	551,963	368,514	147,924	151,645	155,000	1,275,066
External Audit/Eval			110,000		110,000	220,000
-Audits			50,000		50,000	100,000
-Evaluations			60,000		60,000	120,000
Project Commodities (3 Vehicles)	60,000		30,000			90,000
Contingency/Inflation	65,580	84,630	98,217	94,733	116,887	460,047
TOTAL	5,300,000	9,500,000	7,900,000	7,900,000	2,400,000	33,000,000

F. ADMINISTRATIVE ANALYSIS

1. Legal Status of the Implementing Agency

The implementing agency for both PNIR and RRP is the National Directorate for Rural Engineering, DNGR, a permanent agency within the Ministry of Agriculture and Animal Resources, MARA. PNIR is organized as a part of DNGR, not as a separate operational project unit. It has a statute as a "public project" within DNGR. This is a legal mechanism to ensure the proper steering of project activities independently of the regular activities of DNGR. The director of DNGR serves as project manager of PNIR. The fact that the project is incorporated as a public project into DNGR and managed by its director enhances the chances for the sustainability of its operations.

2. Steering Committee

A PNIR steering committee (comité de pilotage) was created by decree on April 23, 1990. The chairperson is the secretary of state for MARA. The member organizations represented, and their reasons for membership, are as follows:

- DNGR, the implementing agency, whose director has executive authority for the entire project;

- SNAPE (water supply agency), also a participant in PNIR;

- the Ministry of Plan and International Cooperation, which plans the Public Investment Program (PIP) of which PNIR is a part, and which is the principal GOG organ for contact with donors;

- the Ministry of Economy and Finance, which allocates funds to the road maintenance account, makes payments, and has a major voice in setting contracting procedures;

- the Ministry of Public Works, which has delegated responsibility for rehabilitation and maintenance of regional roads to DNGR;

- the Secretariat of State for Decentralization, which is concerned with participation of local communities in activities such as road maintenance; and

- the participating donors.

The role of the steering committee is to determine policy and implementation strategy, review implementation progress, review budget operations of the preceding year, and deal with

other matters of concern to the project. The body is not intended to provide continuing operational oversight; meetings are scheduled twice a year, in April and November. The first meeting was held in June 1991 after a delay owing to a change in assignment of the secretary of state for MARA. The meeting was devoted to reviewing the current implementation and financial status of the project, and to improving the participants' understanding of project modalities.

3. Interlocutors for AID

The principal interlocutor for USAID/Conakry and the project manager will be the DNGR director and his staff for overall project coordination. The chief of the programming cell will be the counterpart for the monitoring and evaluation specialist. The engineers will work with Guinean and expatriate engineers on the central staff and with the IDA-financed expatriate engineering firm that will supervise rehabilitation work. Other PNIR donors may be contacted through their local offices and on the steering committee.

4. Financial and Contract Management

Operating under the authority of the steering committee, the DNGR's Administrative and Financial Cell (CAF) administers both IDA and GOG funds allocated to PNIR. At present the CAF has a $500,000 revolving fund, including $450,000 for DNGR and $50,000 for the water supply component (SNAPE). World Bank headquarters in Washington generally approves contracts in advance and groupings of small expenditures after the fact on a replenishment basis. On the GOG side, until recently all transactions required the approval of the project director and the minister. Five clearances stand between the director and the minister. As this is a cumbersome process for small expenditures, CAF in June 1991 received from the minister authority to set up a GF 30 million (about $40,000) revolving sub-account which allows for small current expenditures upon the director's signature.

Under current GOG regulations, contracts under GF 20 million ($27,000) may be approved within a ministry. Contracts between GF 20 million and GF 1.2 billion (about $1.7 million) must be approved by an Inter-ministerial Commission composed of representatives of the Minister of Plan (chair), the Minister of Economy and Finance (vice-chair), the utilizing service, and the supervisory agency or minister. Contracts valued at more than GF 1.2 billion must be approved by a presidentially authorized National Commission for Major Public Contracts. Members of this commission are the Minister for Economic and Financial Control (chair); the Ministers (or their representatives) of Economy and Finance, of Plan, and of Justice; and the Governor of the Central

Bank or his representative. In the case of external financing, donor representatives are entitled to attend bid openings of both committees and exercise a consultative voice.

Recent World Bank experience has been that GOG contracting on average takes excessively long because of the large number and duplication of clearances interposed at each stage: evaluation of bids, signing of contracts, and payment of invoices. Bid evaluation and contract signing should take no more than four months; the actual practice averages twice as long. Payments should be made within three months of invoicing; the time often required is five months to a year. The results are delays in implementation and in some cases payment of claims for cost overruns when contractual approval deadlines are missed. Slow payment is a particular problem for small contractors; DNGR is keenly aware of this problem and is seeking a solution.

The experience of the DNGR in administering PNIR contracts has been mixed. Three contracts for services -- one to run the PNIR Mobile Training Center (UME), the second to provide engineering services for PNIR, the third to provide technical assistance to DNGR -- were processed efficiently, even though they had to go to the presidential commission for approval. However, contracts for procurement of equipment have taken inordinately long, apparently because of definitional problems. Moreover, a $1.67 million contract with the ILO for supervision of the labor-intensive construction training component of PNIR still awaits Ministry of Plan signature, although ILO signed it in August 1990. The reasons for the delay seem related to the uniqueness in GOG practice of entering into an implementation contract with an international agency.

Slow contracting and payment processing is of particular concern to RRP because it will finance road rehabilitation through fixed-amount reimbursement (FAR) contracting, a method which by definition is not compatible with cost increases once a cost has been set. (See Section IV.B.). The contracts will need both GOG and IDA approval, however, because IDA will make initial advances to rehabilitation contractors (See Section II. C.2). However, IDA's processing time is not expected to be lengthy. All the major donors have expressed their deep concern to the GOG about its slow contract mechanisms, and the GOG is aware that future assistance is at stake. AID is adding its voice to this effort: To ensure that RRP-financed contracts are processed expeditiously, the project agreement will contain a series of conditions precedent to initial and subsequent disbursement that address the above constraints (see Section V).

5. Road Maintenance Funding

Definite progress is being made in providing for maintenance of rural roads, and the situation will continue to be monitored. The GOG had originally planned to establish an extra-budgetary account for road maintenance financed by special levies on petroleum products. This would have given the fund some autonomy and perhaps simplified its management. Because of IMF and World Bank opposition to earmarking, however, this approach was suspended. Pending a permanent solution more satisfactory to the GOG, the Government, in 1989, established a special account at the Central Bank, to be funded from a line item in the national budget and from any external assistance that might be obtained (no AID project funds are budgeted for road maintenance). Access to the fund is shared by the Ministry of Transport and Public Works (also the manager of the fund), the Ministry of Housing and Urban Affairs, and DNGR. Initially, DNGR received none of the funds made available; however, its access is improving, now that the fund's procedures and the participating agencies' relative needs for the fund's resources are better understood by all concerned. In 1990 DNGR received $320,000 which it is using for maintenance contracts during the 1991 dry season. For next year's maintenance program, DNGR expects to disburse about $490,000 of funds to be allocated in 1991. To date, the maintenance fund has been financed solely from the GOG national budget and applied to roads not related to PNIR. Beginning in 1993, when PNIR roads will require the first post-rehabilitation contract maintenance, IDA will contribute maintenance funds on a declining basis for three years at the rate of 75 percent, 55 percent and 35 percent. This amount may need to be increased (see Technical Analysis). The RRP grant agreement will include conditions precedent and a covenant with respect to road maintenance (see Section V.).

6. USAID Management Capability

The project will be managed by the USAID Rural Development Office. The RD office is staffed with a USDH Supervisory Agricultural Development Officer and an USDH Agricultural Development Officer, plus a FSN Program Assistant, and a Secretary. The office currently manages the two other infrastructure support projects (675-0213 and 675-0224). The Agriculture Development Officer will be assigned the overall responsibility for project management and will oversee both the PSC Project Manager and the PSC Field Engineer. Additional assistance from REDSO/WCA and IQC contracts will be supplemented as needed.

G. ENVIRONMENTAL ASSESSMENT

1. Introduction

An Environmental Assessment was conducted, as mandated by 22 CFR 216 and FFA 118.66 (B), to determine the possibility of environmental degradation resulting from road reconstruction activities of the Guinea Rural Roads project (675-0216). Thirty-nine roads segments, totaling 1412 kilometers were assessed.

2. Field Procedure

The field procedure was composed of the following activities. The start point of a segment was identified and the locational data of the data sheet for the segment was filled out. The route was driven and observations were made of the conditions in the viewable corridor along the route. The observations were entered onto the field data sheet in the schematic display provided. At the end of the segment the team members discussed their observations and completed the reverse side of the sheet where categories were provided indicating: 1) condition of the forest vegetation, 2) condition of wildlife habitat, 3) erosion hazard, 4) density of water courses, and 5) indicators of level of human presence and activity. The analysis was finished by filling out the second part of the reverse side of the sheet dealing with forseeable potential impacts on the vegetation and water resources, and wildlife habitat. A summary of the results was completed and a preliminary decision written on the data sheet: whether to recommend construction or not. Every segment programmed was studied in this manner.

3. Results

Reference to the summary sheet presented at the end of this executive summary indicates the results in general. For each of the seven issues, listed below:

Issue 1	Road construction through undegraded tropical forest
Issue 2	Tropical forest conversion
Issue 3	Soil degradation and/or loss
Issue 4	Wetland conversion
Issue 5	Wildlife species and habitat loss
Issue 6	Loss of biodiversity
Issue 7	Disease transmission

No road segments were observed to have any direct significant adverse environmental impacts. The predominance of the "N" response in the summary table makes this evident. Four segments,

those showing some "PI" (potential indirect impacts) responses were notable in that they were in the general area of either an established national park, or a protected forest area. These segments were noted, not because these conditions existed along the route, but because the potential increase in human activity resulting from road improvement could put greater pressure on the reserved zones. Buffer zone management activities and an appropriate environmental monitoring activity were indicated as mitigation alternatives for these particular cases.

A second, and important conclusion reached was that the road improvement activities would have a positive effect on the environment. In the case of the hydrographic system the better designed and stable wet area crossings; bridges, culverts, etc., will actually decrease water ponding and move the conditions back to a more pristine status. The better water crossing structures will also eliminate the need for several alternative routes during wet periods, thereby reducing actual size of the impact zone of the associated with the road.

As a direct result of the field observations and subsequent analysis of the field data sheets, the EA team recommends that construction proceed for all segments.

SUMMARY SHEET OF FINDINGS BY SCOPING STATEMENT ISSUE

Prefecture	Segment	Stand	Vegetation Type	Issue Number 1	2	3	4	5	6	7
Faranah	4301	A	WS	N	N	N	N	N	N	N
	4302	A	WS	N	N	N	N	N	N	N
	4303	B	WS/GF	N	N	N	N	N	N	N
	4304	Bf	MF	N	PI	N	N	PI	N	N
	4308	Bf	WS/D	N	N	N	N	PI	N	N
	4309	B	WS	N	N	N	N	N	N	N
	4310	B	WS/BL	N	N	N	N	N	N	N
	4313	B	WS/P/BL	N	PI	N	N	N	N	N
	4316	B	WS/P/BL	N	N	N	N	N	N	N
Lola	8205	A	P1/SB	N	N	N	N	N	N	N
	8207	B	P1/SF	N	N	N	N	N	N	N
	8208	A	P1/SB	PI	PI	N	N	PI	PI	N
	8210	B	PL/SB/P	N	N	N	N	N	N	N
	8211	B	S/A/F	N	N	N	N	N	N	N
	8212	Bf	SF/P1/GF	N	PI	N	N	N	N	N
N'Zerekore	8404	Bf	SF/GF/SB	N	N	N	N	N	N	N
	8405	B	F/A/P1	N	N	N	N	N	N	N
	8406	B	P1/SF	N	N	N	N	N	N	N
	8407	A	P1/SB	N	N	N	N	N	N	N
	8410	Bf	P1/SB/F	N	N	N	N	N	N	N
	8411	Bf	P1/GS	N	N	N	N	N	N	N
	8412	A	P1/SF/SB	N	N	N	N	N	N	N
	8413	Bf	P1/SF	N	N	N	N	N	N	N
Telimele	6406	B	SB/F	N	N	N	N	N	N	N
	6407	Bf	LP/F/SB	N	N	N	N	N	N	N
	6410	Bf	SB/F	N	N	N	N	N	N	N
	6411	--	-------	(SEE TEXT)						
Pita	7501	A	P/WS	N	N	N	N	N	N	N
	7502	A	P	N	N	N	N	N	N	N
	7506	A	P	N	N	N	N	N	N	N
	7507	A	LP/LW	N	N	N	N	N	N	N
	7508	A	RU/F/SB	N	N	N	N	N	N	N
	7512	A	SB/LP/P	N	N	N	N	N	N	N
	7514	A	LW/F/P	N	N	N	N	N	N	N
Koundara	1401	A	LW/WS/P	N	N	N	N	N	N	N
	1403	B	F/LW/P	N	N	N	N	N	N	N
	1404	Bf	LW/SB/F	N	N	N	N	N	N	N
	1407		P/WS/F	N	N	N	N	N	N	N
Gaoul	----	--	-------	(SEE TEXT)						

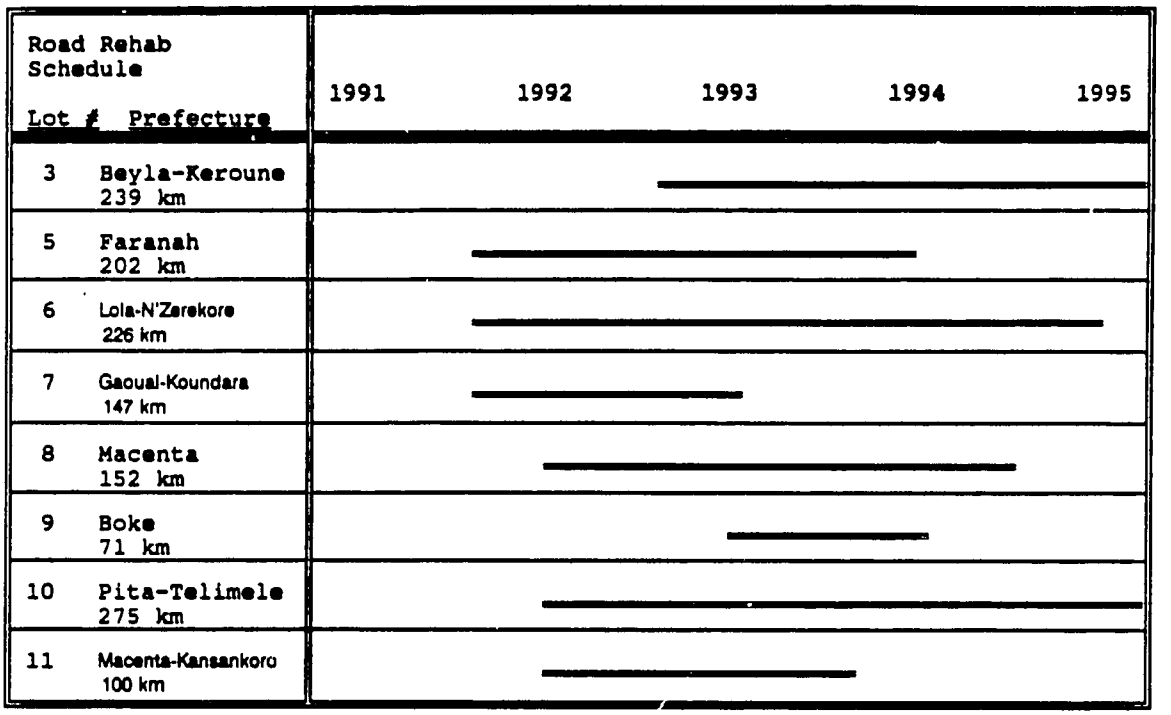
Table Code:

BL - Bottom lands
DI - Direct adverse impact
F - Fallow
GF - Gallery forest
GS - Grassy savanna
LP - Laterite plain
LW - Laterite woodland
MF - Mountain forest
N - No adverse impact
P - Plain
P1 - Plantation
PI - Potential adverse impact
SB - Slash & burn agriculture
SF - Secondary forest
RU - Rocky upland
WS - Wooded savanna

IV. PROJECT IMPLEMENTATION

A. IMPLEMENTATION PLAN AND SCHEDULE

1. The following is the road rehabilitation schedule by calendar year:



2. Project Management Services
Procurement Responsibilities: USAID/Guinea

PSC Project Manager and PSC Field Engineer
- Position announcements - August 1991
- Selection - November 1991
- Entrance on duty - Nov/Dec 1991
- Length of Service
  - Project Manager - to PACD September 1996
  - Field Engineer - to end of road rehabilitation

Secretary
- Position Announcement - October 1991
- Selection - November 1991
- Entrance on duty - Nov/Dec 1991
- Length of Service - to September 1996

3. Procurement of Vehicles for PSCs
   Procurement Responsibility: USAID/Guinea
   Two vehicles upon arrival of PSCs.
   One replacement vehicle November 1993.

4. Technical Assistance Contract for Monitoring and Evaluation
   Procurement Responsibility: REDSO/WCA

Solicitation	- October 1991
Selection	- January 1992
Entrance on duty	- March 1992

See Monitoring and Evaluation Activity Chart in Section IV.C. for activity timeline. Data collection and training activities will begin with the arrival of the senior technical advisor. Monitoring will commence with the arrival of the project manager and field engineer.

5. External Audits
   Procurement Responsibility: USAID/Guinea

   First audit.....September 1993
   Second audit.....December 1995

6. Evaluations
   Procurement Responsibility: REDSO/WCA /QC

   Mid-term evaluation.....June 1993
   Final evaluation.....March 1996

B. CONTRACTING AND PROCUREMENT PLANNING

1. Acquisition Background and Objectives

The following acquisition plan, to obtain the necessary project inputs in support of RRP activities, outputs, and purpose, centers almost exclusively on the provision of services: construction services, supervisory engineering services, monitoring and evaluation services and audit services. The plan sets forth (a) inputs/activities planned for the Rural Roads project, (b) proposed contracting approaches and mechanisms in support of all project inputs/activities, as well as a rationale for choice of contractual instruments, and (c) the proposed timing for the acquisition of these inputs.

2. Inputs/Activities

The AID-financed inputs envisioned, and the estimated required funding levels for each component of RRP, are as follows (project years cited are implementation years, with Year 1 being FY 92 -- the first obligation year is FY 91):

- $29.0 million for construction services to rehabilitate approximately 1,265 km of rural roads to Standards A, Ba and Bf (see Technical Analysis for definition of standards);

- $1.95 million for management engineering services of two personal services contractors (PSCs) during Years 1 through 5 of the project;

- $1.28 million for evaluation and monitoring services of an institutional contractor, to provide both long- and short-term technical assistance to monitor and evaluate the progress and impact of the RRP;

- $0.22 million for external audit and evaluation services to be provided over the life of the project;

- $0.09 million for purchase of project commodities (outside contracts) for purchase of three 4-wheel drive vehicles;

- $0.46 million for contingency/inflation related to services other than for construction.

Total LOP funding = $33.0 million.

To determine the appropriate mechanisms/sources for acquiring the above inputs, the PP design team, in conjunction with USAID/Conakry and the Regional Contracting Officer, REDSO/WCA Abidjan, conducted a detailed review of feasible and desirable acquisition alternatives to best accomplish project objectives. These alternatives included: AID direct contracting mechanisms (AID Handbook 14), host country contracting mechanisms (AID HB 11), and the fixed amount reimbursement (FAR) method (AID HB 3).

Due consideration was given to the trade-offs involved in the choice of each alternative, including the study of accountability, implementation time required, intensity of necessary AID involvement vis-a-vis direct hire staffing levels/constraints, capability of host country implementing agencies, project focus on strengthening host country institutions, availability of GOG and other donor financing, etc. The following constitutes the choices made and rationale behind each proposed mechanism of acquiring technical assistance inputs to implement project activities/components.

3. Contracting Approaches/Mechanisms/Rationale

a. Construction Services for Road Rehabilitation

AID will finance approximately $29 million for construction services to rehabilitate 1,265 km of rural feeder roads. The mechanism chosen to finance these services is the fixed amount reimbursement (FAR) method, whereby USAID will reimburse the GOG implementing agency, the Ministry of Agriculture and Animal Resources (MARA), on the basis of outputs produced (kilometers of road rehabilitated).

The design team, USAID mission, and REDSO/WCA staff considered, but rejected, other methods of contracting for financing these road construction activities, including AID direct contracting and host country contracting mechanisms.

Direct AID contracting was rejected for several reasons. First, it entails a significant administrative burden on Agency personnel, especially in terms of Contracting Office and Engineering Office involvement. As the Regional Contracting Officer for USAID/Guinea is located in REDSO/WCA in Abidjan, Cote d'Ivoire, and as USAID/Guinea will not have a USDH Engineering Officer in its future staffing pattern, it was determined that AID did not have the in-house capacity to directly solicit, award, and adequately monitor and administer the substantial number of construction contracts envisioned. More important, however, the choice of AID direct contracts for these rehabilitation activities would ignore or even negate a major project subgoal: to strengthen the institutional capacity and capability of the GOG National Rural Engineering Department (DNGR) to plan and oversee the rehabilitation and maintenance of rural roads throughout the country. Direct AID contracting would effectively establish a parallel system which would duplicate DNGR's implementation role in PNIR, would discourage host country involvement and diminish the GOG's "stake" in the project, and would seriously impede the chances for project sustainability at the end of AID's involvement. Finally, it would also hamper overall coordination of PNIR, as all other donor organizations are working through DNGR to implement road rehabilitation and construction activities.

The PP design team, Mission, and RCO also assessed, but ultimately rejected, the use of Handbook 11 host country contracting procedures to obtain the required construction services. Recent guidance issued by the AID Procurement Executive, resulting from General Accounting Office and Inspector General reports, makes the option of country contracting modes extremely problematic. The new guidance requires a detailed and stringent assessment of the host country implementing agency (HCIA), including assessment of financial and administrative

management policies and procedures, internal control systems, accounting practices and records, internal auditing, contracting and monitoring functions, invoice examination and payment procedures, files maintenance, etc. From a realistic standpoint, design team members felt that very few, if any, host governments in West Africa would favorably pass such an assessment.

Also, new Agency country contracting procedures entail numerous AID reviews and approvals of host country contracts at virtually every step of the solicitation process, from evaluation to selection and award of each contract, necessitating intense involvement of USDH contracting, legal, financial, technical, and management staff. Finally, voucher payments under host country contracts pose a significant management burden on Mission controller staff, especially for the size and numbers of contracts envisioned. For these reasons, the PP design team determined that HB 11 procedures would not be appropriate.

The FAR Approach

Per AID policy, as outlined in Handbook 3J, use of the FAR method of financing is subject to various criteria and preconditions which may be difficult to meet. However, as stated in HB 3, "...the benefits of the FAR method are such that field Missions should seek to apply the method as often as possible." This is especially true of the FAR method, wherein reimbursement by AID is made strictly upon physical completion of a project or subproject or a quantifiable element within the project (i.e., AID pays a fixed, agreed-upon amount, based on outputs produced). Using the FAR approach, as stated in HB 3, "AID is not concerned about the procedures used by the Borrower/Grantee in acquiring the inputs. It is merely concerned about the conformance of the outputs to previously agreed specifications or standards."

According to HB 3, the criteria or circumstances under which the FAR method of local cost financing is deemed appropriate include "projects which can be made divisible into segments small enough to enable the executing agency to complete subprojects or quantified elements within the project, before receiving AID disbursement." HB 3 also states that subprojects for which the FAR method is used "should be self-sustaining units that will be useful and desirable in their own right, regardless of whether other subprojects or elements are completed." Finally, HB 3 stipulates that the FAR reimbursement method "lends itself particularly well to projects under which a large number of physically separate construction activities are to be carried out...." The design team felt the Rural Roads project was tailor-made to meet these criteria for the following reasons:

First, construction activities envisioned under PNIR are divided into discrete bid lots, each of which is, in turn,

subdivided by regions and by road segments to be rehabilitated. Individual road segments characteristically range from a few kilometers to up to 40 or 50 km in length, thus are easily divisible and constitute discrete "stand-alone" elements which are useful and desirable in their own right (whether or not other road construction/rehabilitation in the same area or region takes place).

Second, the GOG will have access to timely funding in sufficient amounts to allow use of the FAR method. Per HB 3.J.C.7., use of the FAR method "assumes that the recipient country and organization has sufficient financial resources to provide necessary working capital so that delays in [AID] reimbursement until completion of a subproject or element will not have a detrimental effect on project implementation." HB 3 guidance also states, "The Mission should thoroughly analyze the financial standing and resources and budgetary procedures of the recipient organization prior to recommending the use of the fixed amount reimbursement method." The PP design team performed an in-depth analysis of the DNGR's organization and of the GOG's budgeting cycle and funds allocation and disbursement procedures for rural road maintenance and rehabilitation. On the basis of this analysis, the team concluded that, although budgetary procedures appeared generally sound, the GOG's financial resources were slim indeed, and would not, in themselves, allow for use of the FAR method. However, PNIR is a multi-donor effort, and it was found, after several discussions with World Bank representatives, that their regulations would allow for advancing funds (working capital) to the GOG. This would be done through a procedure described in Section II.C.2. This would, in turn, allow MARA and DNGR to finance road construction and rehabilitation activities while awaiting AID reimbursement for completed road segments.

Finally, IDA is providing significant levels of technical assistance to the DNGR in developing bid packages and cost estimates, in the solicitation and award process, in construction monitoring, and in training of DNGR field engineers. Among the expatriate firms already contracted are BCEOM, which has prepared bid packages in accordance with FIDIC (Federation Internationale des Ingenieurs-Conseils) standards, and Louis Berger International, which will perform supervisory engineering services and training of DNGR field staff.

Invitations for bids (IFBs) for all initial road rehabilitation activities and bid lots will be on the basis of full and open (international) competition. Sealed bidding techniques will be employed, and contract will be awarded locally to the lowest responsible and responsive bidder. Fixed unit price contracts with economic price adjustments (in recognition of the high rate of inflation in Guinea) are contemplated.

The fixed amounts for reimbursement to the GOG will be established on the basis of unit costs provided in the winning bid for each road job. DNGR's supervising engineers will divide each lot into suitable output segments (e.g., a segment might be a 10 km stretch of some uniformity), specifying the exact requirements and costs applicable to each segment.

Beginning in Project Year 2 or 3, as soon as small- and medium-scale contractors "graduate" from PNIR-financed training programs and pre-qualify for rehabilitation contracts, IFBs restricted to SMCs will be issued. The training program and the precise manner in which SMCs will be contracted are matters under intense review at this writing between DNGR and IDA technicians. Once this component of PNIR is fully designed, it will be reviewed by AID in relation to the requirements of RRP. Contracting with SMCs is likely to take something like the following form:

The bid packages, for down-sized lots, will likely include the following elements designed to ensure the receipt of reasonable and realistic bids:

- a simplified list of specifications with administrative and technical clauses;

- a priced bill of quantities with detailed descriptions of each item;

- a detailed estimate of constuction costs;

- a draft contract.

The contracts will be let to the lowest responsible and responsive bidders.

In summary, the method of acquisition, the solicitation process and documentation, and the personnel and procedures currently in place and envisioned for PNIR road rehabilitation activities look more than adequate to ensure a successful project and successful use of the FAR method of reimbursement. The Mission will review SMC contracting procedures now being developed to ensure their adequacy for FAR purposes.

b. Management/Engineering Services

Per Handbook 3, use of the FAR method requires that the Mission, either through its own staff or through contract, provide periodic inspections of the project, as well as certification that the subprojects or elements have been completed in accordance with plans and specifications. It is therefore particularly important that attention be given to guaranteeing that the projects be implemented in accordance with

agreed plans and specifications and that any possible collusion between implementing and inspection personnel concerning modifications in inputs be avoided.

As stated above, other donors are already providing expatriate engineering assistance to the DNGR for specifications development and construction monitoring. However, in addition to these TA resources, AID will provide significant levels of technical assistance in engineering to ensure the integrity of the FAR method and to certify to the appropriateness of AID reimbursements. To this end, the Mission will solicit and award two personal services contracts (PSCs) for engineering specialists to carry out construction monitoring, bid specifications development, and project reporting activities. Both PSC positions are envisioned for up to 60 person/months apiece. The first PSC position is that of project manager, who will have overall responsibility for project coordination and implementation. The second PSC engineer will have primary responsibility for field monitoring, site visits, and inspection of rehabilitation outputs as basis for the AID Project Officer's payment certification. Necessary funding for these positions is estimated at $1.95 million for approximately 120 person/months of effort.

c. Monitoring and Evaluation Services (Institutional Contractor)

The services of an institutional contractor will be obtained to provide approximately 24 person/months of long-term and 14 PM of short-term and home office support for project monitoring and evaluation activities. The M&E services are described in Section IV.C. below.

In order to meet Agency Gray Amendment goals, it is anticipated that these services will be obtained through a direct AID contract with a disadvantaged enterprise. Contract mechanisms could include either an 8(a) set-aside through the Small Business Administration (SBA), or a contract resulting from limited competition among Gray Amendment firms in accordance with AIDAR 726. The estimated cost of these activities is $1.28 million.

d. External Audit and Evaluation Services

As required by AID Handbook 3, RRP has incorporated several external audit and evaluation activities to ensure the prudent management and expenditure of AID funds. The Mission will obtain these services under existing IQCs. Financial and compliance reviews (non-Federal audits), which will likely be obtained under REDSO/WCA-issued IQCs, are envisioned at the end of Years 2 and 5 of the project. The estimated cost of the audits is $30,000 each. There will be one external evaluation at

the end of Year 2 to evaluate progress towards project objectives and to redirect activities, as necessary. A final external evaluation is also contemplated. The approximate cost of these evaluations is $50,000 each.

e. Project Commodities

Most project commodities such as computers, household furnishings, generators, etc. in support of technical assistance, have been budgeted for under the TA contracts. However, in order to support start-up activities such as the short-term IQC and PSC engineering assistance envisioned for Year 1, the Mission will initially procure two 4-wheel drive vehicles, either on the local market or offshore. Additionally, one replacement vehicle for the field engineer will be budgeted for Year 3. Although consideration should be given to purchase of US.-manufactured vehicles, in accordance with the Buy America Act, the Mission must also take into consideration the lack of support and repair facilities up-country, and the harsh operating and road conditions outside Conakry.

C. MONITORING AND EVALUATION PLAN

1. Purpose and Strategy

a. Purpose

The RRP Monitoring and Evaluation (M&E) System will be multi-purposed, assessing the RRP at five different levels. It will:

(1) monitor conditionalities to allow disbursement of USAID funds;

(2) evaluate the effectiveness of USAID financial support in rehabilitating rural roads, and the effectiveness of USAID technical assistance in strengthening the institutional capacity to monitor and evaluate impact of rural infrastructure development;

(3) evaluate the effects of the project in terms of market access and trade volume for rural producers;

(4) evaluate the impact of the project on the growth of agricultural production;

(5) evaluate the impact of the project on the capacity of the Guinean public and private sector to develop rural infrastructure, the overall impact of improved roads on the quality of life of the rural population, and the impact of the project on environment.

Certain terms in the M&E Plan have meanings that correspond to the logframe. "Effectiveness" refers to the project outputs and measures the extent to which prescribed actions have been implemented. "Effect" refers to the purpose and end-of-project-status indicators and gauges the extent to which prescribed measures have resulted in year-round access to markets and increase in amount of outputs marketed. "Impact" refers to the expected effect of the project on agricultural production (project goals) and to the overall effects of improved roads on specific target groups and on the environment.

Monitoring and evaluation of the overall impact of improved roads on the environment and on specific target groups---such as GOG institutions, SMCs, farmers, traders, and transporters---will serve two purposes. First, it will allow for collection of data relevant to key socio-economic, institutional and political issues raised in the PP, providing essential input for long term efficient programming of rural infrastructure development throughout the country. And second, it will provide input for a continuing policy dialogue on rural infrastructure management between GOG and various donors. Data collected will be disaggregated by gender and analyzed accordingly.

b. Users of the Information

The RRP M&E System will provide quantitative and qualitative information which will enable USAID, the GOG and other donors to make mid-course corrections on strategy and management. USAID will use this information to determine if and when conditionalities for disbursement of funds have been met.

This information will also provide feedback on the appropriateness of USAID implementation modalities and the effectiveness of its financial and technical support interventions. Further, it should serve to draw out a number of generalizable lessons for possible application to the GOG's agricultural development policy, to agricultural sector reform in other countries, and to USAID assistance strategy.

c. Institutional Locus

The RRP M&E System avoids creating parallel information and evaluation structures. Responsibility rests with the GOG to demonstrate to the donors that it has met the conditionalities and is implementing the actions as planned, and that its rural infrastructure development program has a positive impact on the population and does not have negative effects on the environment.

The M&E System will rely on data collected by:

- MARA/DNGR, through its "Cellule Programmation" (C.P.) and "Cellule Administrative et Financière" (CAF) assisted by its field services (BTGRs and SPGRs);

- MARA/BSD ("Bureau de Stratégie et Développement"), through its "Section Suivi et Evaluation" (SSE); and

- MARA's project SPSA ("Système Permanent de Statistiques Agricoles") through its annual agricultural survey.

Therefore, USAID's M&E System will depend on collaboration with the appropriate ministry offices in data validation, interpretation and analysis, as well as on the effectiveness of USAID technical assistance in building DNGR capacity in data collection and analysis.

USAID's M&E System will be the principal device through which the primary donors and the GOG will assess whether the anticipated effects and long-term impacts of the improvement of feeder roads are being realized. The IDA, the KfW and the FAC will assess the effectiveness of their individual components. Therefore, it is imperative that USAID take the lead -- in consultation with its partners -- in working with the GOG to develop appropriate data collection and evaluation mechanisms to yield an overview of the benefits received by the target population through the development of rural infrastructure.

The USAID Senior Technical Advisor (STA) will work during PY 1 and 2, with the Chief of the C.P. assisting him, in:

- the identification of specific DNGR and donor data needs;
- the coordination of GOG and donor data, and reporting requirements to eliminate duplication of effort and documentation;
- the designing of a management information system for DNGR;
- the creation of an impact M&E System within DNGR.

Initial STA efforts will assess DNGR, BSD and SPSA capacity to collect, process, analyze and report the data needed, and identify training needs. The STA will be responsible for ensuring the collection of specific data not currently generated by the C.P. and the SPSA and the development of appropriate formats and structures necessary to satisfy both monitoring and assessment requirements. He/she will define and propose to the GOG a program of action to supplement MARA activities, such as the review of existing data collection instruments, assistance in elaborating neglected process and impact indicators, assistance in designing and implementing special surveys to collect quantitative and qualitative data, and assistance in data processing.

In addition, the TA will include a short-term natural resources management consultant who will work with the STA in developing an M&E component that provides for (a) an appropriate environmental monitoring program (including refinement/expansion, as needed, of the environmental indicators in the attached table); (b) an initial biological baseline survey; and (c) a data storage system, as suggested in the EA (Annex F). The consultant will also make recommendations for coordination of RRP environmental monitoring with the World Bank's National Environmental Action Plan and USAID's Natural Resources Management project.

2. Monitoring/Evaluation Activities & Methodologies

The M&E System will include three basic activities: 1) assessing performance on conditions precedent and covenants; 2) monitoring project progress; and 3) evaluating the socio-economic and the environmental impact of the project.

a. Assessing Performance on Conditions Precedent and Covenants

(1) Assessment

Conditions precedent (CPs) and covenants related to disbursement of USAID funds for rehabilitation will seek to enhance the chances of project success. The monitoring of CPs and covenants will serve a dual purpose. First, it will enable USAID to verify GOG fulfillment of minimum performance criteria prior to disbursement of funds. Second, it will identify significant outputs as well as some process indicators which will contribute to the evaluation of the project's long-term sustainability. Tracking GOG performance on CPs is not a substitute for evaluation, but is an integral part of the M&E System. Some of the information collected to track GOG fulfillment of CPs will serve as a data base for mid-term and final evaluation purposes.

The GOG is required to respond to two sets of CPs: one negotiated with IDA and the other with USAID. The USAID CPs and covenants encompass those established by IDA and call for additional confirmation of and action on assumption of the recurrent costs of road maintenance, and of human and material resource deployment to adequately provide DNGR's central and field structures to perform their management needs. The CPs also relate to assignment of personnel and contract management. (See Section V. below.)

(2) Process and Mechanisms

There will be two means of assessing GOG responsiveness to CPs. First, all the policy conditions will require some written documentation to demonstrate that specified policy changes and actions have been accomplished. The CPs themselves call for specific plans and reports, which must be furnished to USAID. For example, the GOG will present documents demonstrating that staff have been nominated and that budgets and programs for feeder road maintenance correspond to target levels. Second, a mid-term evaluation will assess the institutional capacity to cope with management needs and to provide maintenance on the roads rehabilitated. For example, evidence that key staff from both public and private sectors have been trained and all staff in BTGRs concerned with maintenance of roads rehabilitated have adequate equipment to perform their tasks, would indicate the kind of progress called for in CPs.

Donor collaboration is a key element of the PNIR. Both IDA and USAID will jointly review GOG reports and documentation addressing the CPs in a donor semi-annual meeting, prior to the Steering Committee meetings scheduled in April and November of each year. These donor meetings will provide an opportunity to discuss GOG performance, flag constraints to disbursements, and harmonize discussions with the GOG. These meetings will also provide the opportunity to ensure that all donor assessments are in line with one another. Donors should make every effort to coordinate and base discussions on the same data and preliminary conclusions to eliminate conflicting signals to the GOG.

GOG-USAID quarterly review meetings will result in either approval for disbursement of the funds related to the CP or in a request for further substantiating data. Should the GOG not have met the CPs, USAID will determine to either renegotiate the conditions or to withhold disbursement. USAID representatives will be named by the Mission.

(3) Reporting

Documentation demonstrating GOG fulfillment of CPs will include: 1) ministerial decrees for the approval of "cadres organiques" and staff nomination; 2) quarterly and annual budgetary reports of DNGR; 3) annual budget reports of the road maintenance fund; and 4) USAID mid-term evaluation report.

b. Measuring Project Progress

The day-to-day monitoring of the project will be the responsibility of the PSC project manager contracted by USAID. S/he will be assisted by an expatriate field engineer who will help monitor the road rehabilitation work. This monitoring will be done through the review of the DNGR's reports,

comparison of actual outputs and expenditures to plans, on-site spot checks of quality and quantity of work in progress and completed, and participation in quarterly USAID-GOG progress meetings.

(1) Existing Data

Data concerning road work progress and control are specified in the terms of reference prepared by the DNGR for the engineering consultant firm (Bureau d'Etudes) hired to provide technical assistance in road work supervision and control, as part of IDA assistance to the PNIR. A total of 17 specific control-related tasks are included, and four formal reports will be required by DNGR: monthly progress reports, quarterly reports, special reports (as needed) and end-of-work report. Data concerning lot rehabilitation progress will also be available from bidding documents and from contracts awarded to private firms.

Data concerning the implementation of the M&E System will be available from the Assistants' reports.

(2) Additional Data Requirements

The M&E Plan calls for high quality data to be obtained in accordance with USAID FAR contract procurement procedures. On-site spot checks will be performed to measure the quantity and quality of work performed and to compare actual outputs to those specified in the contracts.

Of particular importance to the monitoring effort will be some of the immediate social effects caused by the actual rehabilitation of the roads. For example, the supervisory engineer (IDA component mentioned above) should gather data on the structures demolished and replaced, to make sure the contractor takes adequate remedial actions. The engineer should also count the number of local laborers (men and women) that the road rehabilitation contractor employs, obtain wage rates, collect data on SMCs which may sub-contract road work, and communicate this information to the Chief of DNGR's C.P.

c. Evaluating Impact

USAID will assist the C.P. of the DNGR in implementing the impact evaluation component of the project. This component is aimed at developing the institutional capacity

to measure the changing conditions occurring during and after the roads are built, rehabilitated and maintained.

The main parameters of the impact evaluation are as outlined at the purpose, goal and impact levels, in the matrix table below. They are divided into six groups:

1) Achievement of project purpose: increased market access for rural producers;

2) Impact on agricultural production (project goal): increased production and productivity;

3) Impact on the rural population: improvement in the socio-economic condition and expectations of specific target groups (farmers, traders, and transporters, all disaggregated by gender) and of the rural population in general;

4) Impact on small- and medium-sized private contractors: increase in number and capacity of SMCs to contract and carry on road construction and maintenance work;

5) Institutional impact: improved GOG's capacity to plan and implement a rural road development program;

6) Impact on environment: improvement in the conditions of the existing eco-system and human settlements.

(1) Existing Data

A total of 49 impact indicators are listed in the attached table matrix, of which 39 concern effects beyond the project purpose and goal. Some data will be available and used for the establishment of a suitable baseline, by the C.P., for the evaluation of the changes resulting from of the project. They come from five sources, divided into two groups:

Data likely to be generated on a regular basis, which will permit keeping the baseline up-to-date:

1) SPSA's annual agricultural survey, by prefectures:

- growth rate of agricultural output (AID program baseline indicator)
- number of agricultural producers
- number of weekly markets
- surface cultivated, by crops, households and

cultivation method
- use of tools and equipment, use of tractors
- yields for rice, millet, sorghum, fonio, manioc, potatoes and peanuts
- number of cattle
- number of farmers doing commercial activities
- number of light and heavy transport vehicles

2) DNGR's reports:

- surface cultivated in bottomlands
- road contracts awarded to private contractors
- staff trained
- budgets for road maintenance

Data available for the baseline, but not collected and published on a current basis:

3) National Census of Population (every ten years, planned for 1991):

- rural population
- farmers' income

4) The Rural Road Master Plan

- Road cuts
- Traffic

5) UNDP 1988 Socio-Economic Survey:

- Varieties of goods produced in the prefectures
- Level of participation of local communities in rural road rehabilitation and maintenance work

(2) Additional Data Requirements

Out of the 49 indicators listed for impact evaluation, 33 will require high quality data that are not currently collected and published. The C.P. and evaluation experts will have to assess the quality of data provided, and establish a system that guarantees the collection of valid data on a regular basis. To begin with, eight data sources are identified in the matrix:

- GOG and donor statistics and reports
- PNIR's reports

- MARA's statistics and reports
- Prefectoral reports
- School and health centers records
- DNGR's statistics
- MTTP's statistics
- MICA's statistics

In spite of the large number of these existing data sources, however, a series of 22 indicators will remain to be assessed through specific surveys:

Quantitative data not yet available - need to be collected for the baseline, and regularly afterward:

- Number of road cuts
- Volume of trade
- Volume of commercial transport
- Rural producers' output marketed
- Price fluctuation of agricultural goods
- Size of weekly markets
- Variety of goods available in weekly markets
- Traders' income (men/women)
- Cost of vehicle maintenance
- Number of transport unions members
- Proportion of women as traders in weekly market
- Commercial activity of women
- Better access to performance bonds for SMCs
- Regional migration
- Afforestation / deforestation due to road work
- Erosion / erosion control due to road work
- Level of participation of local communities in rural road rehabilitation and maintenance work

Qualitative data to be collected for the baseline, and regularly afterward:

- DNGR's role in promoting small enterprise development (AID program baseline indicator)

- Nature and quality of public sector services for private agriculture development (AID program baseline indicator)
- Changes in time use patterns and in agricultural and commercial activity of women and men
- Changes in land use due to road work
- Changes in flora and fauna due to road work

(3) Data Collection Approach

Data from all sources (statistics, reports, surveys, etc.) will be collected according to a few basic principles:

- The baseline will use a series of measurements on the population over a certain period of time (e.g.; up to two years), in order to have a steady condition or state existing before the project, and identify changes due to pre-existing trends (stable baseline).

- Data will be collected in areas both with-rehabilitation and without-rehabilitation of roads, in order to increase the validity of causal links between road work and observed results.

- Data will be collected at least three times a year, following more or less the agricultural cycle (pre-planting, during, and post-harvest periods), in order to evaluate the use and the impact of the roads under different weather conditions.

- Where applicable, all data will be disaggregated by gender, so as to monitor and evaluate the extent to which women benefit or participate; for example, in the case of interviews in villages, gender differences demand that not only the husband, but also his wife or wives be interviewed.

3. Means of Providing Feedback

It will be the responsibility of the STA to develop a plan that ensures that data are collected, analyzed and presented in a format that facilitates analysis, and communicated back to the users identified in Section C.1.b.above in a way that permits them to make appropriate corrections in a timely fashion.

There will be seven means of transmitting the information:

1) DNGR's monthly and quarterly road work control reports. These reports will be prepared by an engineering consultant firm to be hired by DNGR as part of the PNIR, as part of the IDA component.

2) USAID's Project Manager quarterly activity reports.

3) PNIR semi-annual and annual reports. These reports are part of MARA's management information system and are presented in a specific format.

4) USAID semi-annual progress reports. These reports will focus on progress of prescribed actions and elaborate on all the activities included in the M&E Activity Chart.

5) Mid-term evaluation. This evaluation will be implemented after project Year 2 and will focus on the project's progress and effectiveness. In addition, the mid-term evaluation will assess progress in the DNGR's capacity to cope with its management needs and to provide maintenance on the roads rehabilitated during the first two years, as well as the SMCs' capacity to pre-qualify for the rehabilitation of subsequent lots. This evaluation will be designed in conjunction with the GOG and IDA.

6) Special surveys. The DNGR's C.P. will conduct surveys, as needed, to obtain baseline and progress data on agricultural production and marketing, and on the environment, in rural areas throughout the country. These surveys will be used also to collect data on the overall impact of feeder road rehabilitation and maintenance on the rural population. The first surveys will seek to enhance the data base to be used for the DNGR's impact M&E System, and will be conducted during PY 1. The C.P. will use DNGR's staff to carry on survey activities (within BTGRs and SPGRs) and will request SPSA's and SSE's professional support, for example, for survey design and staff training, and for data collection in areas covered by the SPSA in its annual survey.

7) Final evaluation. This evaluation will be conducted at the end of PY 5. It will be aimed at assessing the degree of success in achieving the project's purpose and goal, and the overall impact of the project on the specified target groups and on the environment. It will also provide recommendations for future USAID support to the agricultural sector. As part of the institutional capacity building effort, appropriate DNGR personnel will participate to the design of the evaluation and will be included on the evaluation team.

4. M&E Project Component Inputs

a. Technical Assistance

The project will provide technical assistance to help the C.P. develop impact monitoring and evaluation capabilities. The technical assistance package will include: one resident specialist during PY 1 and 2, for a period of two years (24 person/months).

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(1) Tasks and responsibilities

The impact monitoring and evaluation specialist will be responsible for all monitoring and evaluation needs associated with the project and described above, and for assisting the Programming Cell in designing and implementing an impact monitoring and evaluation system for DNGR's rural road program.

(2) Qualifications

- Post Graduate degree (Ph.D level preferred) in rural sociology or cultural anthropology, with at least five years experience with emphasis on rural development and methodology of socio-economic studies and evaluation;

- Experience in agricultural and/or environmental sector preferred, including field survey work in the LDC's;

- Experience in training;

- Knowledge of traditional and modern political, economic and social institutions in Sub-Saharan Africa;

- Proven capacity to perform policy-oriented analysis and to work in a computer environment; and

- French language capability at the FSI S-3, R-3 level.

b. Training

- One two-month training session in impact evaluation in Europe or North America, for the C.P.'s Chief; because of the language capacity of the candidate, training should be performed in a French-speaking institution;

- In-country formal and on-the-job training sessions for DNGR's staff, to be conducted by the STA, and by SPSA and SSE professional staff.

c. Equipment

- One 4-wheel drive truck, to be used by the STA during his/her assignment periods, and by the C.P. staff for survey activities afterwards;

- One micro-computer, IBM-compatible, with a 40 meg hard disk and a 286 co-processor + one dot-matrix printer + Software package.

d. Operating costs

- Local costs to conduct surveys (drivers, assurance, gasoline, office and computer supplies, printing costs, etc.) and for hiring SPSA and/or SSE staff for specific surveys (fees and/or per diem).

e. Disbursement of Funds

USAID/Guinea will obligate project funds through a Project Agreement with MARA.

USAID will contract directly for all component assistance, as described in Section IV.B., Contracting and Procurement Planning.

The vehicle should be purchased locally with appropriate guarantees and should be marked "PNIR-USAID / SUIVI-EVALUATION". The markings should lessen the chances of the vehicle being used for other-than-project purposes.

Disbursement of local operating funds to carry out the surveys should be carried out in the following manner:

1) The C.P. will issue a purchase order for the survey and report with an appropriate level of advance money to cover the field costs.

2) The C.P. will submit all actual expenditure papers to the DNGR's CAF for verification, then to USAID for payment after all work has been completed on the particular survey.

Monitoring and Evaluation Activity Chart - Guinea Rural Roads Project (675-0216)

Narrative	Indicators	Sources
GOAL: To increase sustainable agricultural production and productivity in rural areas throughout Guinea.	- Growth rate of agricultural output - Increase in surface cultivated: . by crops . by households . by cultivation method - Increase in use of tools & equipment for agricultural production - Increase in numbers of cattle - Increase in yields for rice, millet, sorghum, fonio, manioc, potatoes and peanuts - Increase in the number of tractors used	- SPSA's annual survey - GOG and donor statistics and reports - Surveys of financial and information media - PNIR's reports - Final evaluation report
PURPOSE: To improve market access for rural producers.	- Decrease in the number of road cut days between points linked by project-aided roads - Increase in volume of produce and goods traded among areas linked - Increase in amount of rural producers' output marketed - Increase in the number of farmers doing commercial activities	- DNGR's surveys - Rural Road Master Plan - Prefectoral reports - GOG statistics - SPSA's annual survey - PNIR's reports - Final evaluation report
OUTPUTS: (1) 1,265 km of rural roads rehabilitated to Standards A, Ba and Bf.	- Km of roads rehabilitated	- DNGR's monthly and quarterly control reports - Project manager's and engineer's reports
(2) Road rehabilitation work contracted to competent Guinean SMCs beginning Year 2	- Number and size of contracts awarded to SMCs - Open bidding process for contracts - Award of contracts to most qualified SMCs	- DNGR's reports - Controller's reports - Project manager's reports - Contract records - Surveys of SMCs - Interviews with SMCs - Evaluations
(3) System established in DNGR for monitoring and evaluation of impact of rural road construction and maintenance on agricultural production and marketing, and on environment	- DNGR obtains baseline and progress data on agricultural production and marketing, and on environment throughout the country and uses findings for programming road construction and maintenance programs - MARA obtains baseline and progress data on agricultural production and marketing throughout the country and uses findings for refining its agricultural strategy - DNGR obtains data on structures demolished and replaced or compensated for	- STA's reports - Evaluations

Monitoring and Evaluation Activity Chart - Guinea Rural Roads Project (675-0216)

Narrative	Indicators	Sources
INPUTS:		
(1) Budget for rehabilitation of 1,265 km of rural roads	- Financial disbursement on schedule	- AID controller records - Audits
(2) Engineering consultants and logistical support for FAR activities	- Financial disbursement on schedule	- AID controller records - Audits
(3) Technical assistance for monitoring and evaluation	- Arrival of STA in Guinea on schedule	- Contract records
(4) PSC project manager and logistical support	- Project manager on duty at the beginning of the project	- Contract records
(5) AID evaluations and audits	- Mid-term evaluation implemented after Year 2 - End-of-project evaluation implemented measuring Project effectiveness, efficiency and impact - Audits conducted at end of Years 1, 3 and 5	- Evaluation reports
IMPACT OF IMPROVED ROADS ON THE RURAL POPULATION:		
(1) Impact on rural population in general	- Number of laborers employed by contractors - Higher rate of school attendance in project areas - Increase in the number of patient visits originating from project-aided roads areas, registered at prefectoral and sub-prefectoral medical centers	- DNGR's statistics - PNIR's reports - Prefectoral reports - School and health centers records - Final evaluation report
(2) Impact on farmers	- Increase in farmers' income received from goods marketed - More stable prices for goods due to fewer road cuts	- GOG statistics - 1990 National Census - DNGR's surveys - Final evaluation report
(3) Impact on traders	- Increase in number and size of weekly markets - Greater volume of trade - Increase in number of traders in the project areas - More varieties of goods available in the project areas - Decrease in the cost of commercial transport - Increase in traders' income	- SPSA's annual survey - MTTP's statistics - MICA's statistics - Prefectoral reports - Interviews with traders - DNGR's surveys - UNDP 1988 Socio-economic survey - Final evaluation report

Monitoring and Evaluation Activity Chart - Guinea Rural Roads Project (675-0216)

Narrative	Indicators	Sources
(4) Impact on transporters	- Increase in the number of transport vehicles - Increase in the volume of commercial transport, within and between prefectures - Decrease in the cost of vehicle maintenance - Increase in the number of transport unions members	- SPSA's annual survey - Rural Road Master Plan - MTTP's statistics - DNGR's surveys - Interviews with transporters - Final evaluation report
(5) Impact on women	- Number and proportion of women as traders in sub-prefecture and prefecture markets - Number and proportion of women employed by road contractors - Increase in women traders' income - Changes in time use patterns and agricultural and commercial activity of women	- Prefectoral reports - PNIR's reports and surveys - DNGR's reports - MARA's reports - Final evaluation report
OTHER IMPACTS: (1) Institutional impacts	- DNGR's road construction and maintenance programs - Number and size of road work contracts awarded by DNGR and MTTP to SMCs and local community associations - Number of government staff trained - Increase of GOG budget for rural road maintenance - Level of participation of DNGR's prefectoral staff in its rural road program - Level of participation of local communities in rural road rehabilitation and maintenance work - Increase in prefecture revenues from market fees - Role played by DNGR in promoting small enterprise development - Nature and quality of public sector services for private agriculture development	- UNDP 1988 Socio-Economic Survey - DNGR's statistics - Prefectoral reports - IDA reports - GOG statistics and reports - DNGR's reports - Final evaluation report
(2) Impact on small and medium contractors (SMCs)	- Increase in number and size of Guinean SMCs working in road rehabilitation and maintenance - Increase in number and volume of road rehabilitation and maintenance contracts awarded to SMCs by DNGR and MTTP, and sub-contracts awarded by big firms - Increase in number of bids from SMCs - Number of SMCs staff trained - Better access to performance bonds for SMCs	- DNGR's statistics - MTTP's statistics - Interviews with SMCs - Evaluations - Surveys
(3) Impact on the environment	- Regional migration - Population resettlement caused by road rehabilitation work - Afforestation or deforestation near project-aided roads - Increase in erosion / erosion control due to road works - Level/type of land use in project areas - Impact on flora and fauna	- SPSA's annual survey - 1991 National Census - DNGR's reports - DNGR's surveys

MONITORING AND EVALUATION ACTIVITY CHART

TIMELINE

ACTIVITY / OUTCOME	PY 1 Q1	PY 1 Q2	PY 1 Q3	PY 1 Q4	PY 2 Q1	PY 2 Q2	PY 2 Q3	PY 2 Q4	PY 3 Q1	PY 3 Q2	PY 3 Q3	PY 3 Q4	PY 4 Q1	PY 4 Q2	PY 4 Q3	PY 4 Q4	PY 5 Q1	PY 5 Q2	PY 5 Q3	PY 5 Q4	PRINCIPALS
Data Collection																					
AID/DMGR data needs assessment	X																				STA
Develop technical assistance plan:		X																			STA
Provide technical assistance: design management information system, develop data instruments and collection systems elaborate indicators and reporting formats, data dissemination and feedback systems		XXXXXXXXXXXXX			XXXXXXXXXXXXXXXX																STA
Conduct special surveys		XXXXXXXXXXXX					XXXXX				XXXXX				XXXXX				XXXXX		STA, CP, BTGRs, SPGRs, SPSA, SSE
Assist the preparation of DMGR Annual Report to USAID				XXXX			XXXXX				XXXXX				XXXXX				XXXXX		STA, CP, CAF
Training																					
Conduct in-country formal and on-the-job training session		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	STA, SPSA, SSE
Training abroad in impact evaluation		XXXXX																			CP's Chief
Monitoring																					
Quarterly progress meetings: address constraints	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	PM, STA, CP, CAF
Project Manager quarterly reports:		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		PM
AID semi-annual reviews:			X			X		X			X				X				X		PM, STA

MONITORING AND EVALUATION ACTIVITY CHART

TIMELINE

ACTIVITY / OUTCOME	PY 1				PY 2				PY 3				PY 4				PY 5				PRINCIPALS
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Donor meeting: identify constraints, coordinate	X		X		X		X		X		X		X		X		X		X		AID, IDA, KFW, FAC
Steering Committee Meeting	X		X		X		X		X		X		X		X		X		X		AID, IDA, KFW, FAC, MTTP, MEF, MPCI, SED, DMGR, SNAPE
Field visits and spotchecks: verify data accuracy	XXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXX				PM, STA, CP, BTGRs
Evaluation																					
Plan evaluations							XXXXX														STA, CP, SSE, PM
Conduct mid-term evaluation: Report and Phase II design								XXXX													CP, SSE, PM
Conduct final evaluation: Report and recommendations for future action																			XXXX		CP, SSE, PM
Feedback																					
Disseminate evaluation reports: review results											XXXXX									XXXX	AID, DMGR, BSD, donors
Conduct evaluation review meetings: discussion, response to results, recommendations											XXXXX									XXXX	AID, DMGR, BSD, donors
Conduct evaluation workshops: discussion, response to results, recommendations											XXXXX									XXXX	AID, DMGR, BSD

V. CONDITIONS AND COVENANTS

(1) First Disbursement

Prior to any disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., the following:

(a) An opinion of counsel to the Grantee that the agreement has been duly authorized and executed on behalf of the Grantee and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms.

(b) A statement of the name of the person holding or acting in the office of the Grantee empowered to act on behalf of the Grantee, and of any additional representatives, together with a specimen signature of each person specified in such statement.

(2) Disbursement for Procurement for Road Rehabilitation

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for road rehabilitation or other purposes in the initial year and in each succeeding year of the Project:

Availability of Resources. The Grantee shall submit evidence at the beginning of each project year, in form and substance satisfactory to A.I.D., that the funds required of both the Grantee and of other donors to PNIR are available for that year to pursue the training, supervision, and other support necessary for the timely progress of A.I.D.-supported activities under the roads rehabilitation and maintenance component of PNIR.

(3) Disbursement for Road Rehabilitation

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for road rehabilitation:

Assignment of Personnel. The Grantee will submit, in form and substance satisfactory to A.I.D., signed documents confirming the assignment of those professional, technical and support personnel not yet assigned to positions in DNGR that are essential to the implementation of the PNIR component concerned with rehabilitation and maintenance of rural roads. These are the 250 positions at central and regional levels concerned with administration, finances, programming, training, rural roads construction, and technical support services.

(4) Disbursement for Initial Contract and Each Subsequent Contract for Rehabilitation of a Road Lot

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for the initial contract, and for each subsequent contract, for rehabilitation of a particular road lot:

Readiness of BTGRs. The Grantee shall submit evidence, in form and substance satisfactory to A.I.D., that the necessary plans, personnel, training programs, equipment and operating funds for the Rural Engineering Technical Office (BTGR) responsible for the road lot to be rehabilitated with A.I.D. financing are or will be in place so as to assure timely maintenance of the road segments within the lot following the period of maintenance guaranteed by the rehabilitation contractor.

(5) Disbursement for Each Subsequent Contract for Rehabilitation of a Road Lot

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for each subsequent contract for rehabilitation of a road lot:

(a) Grantee's Contract Approval Procedures. The Grantee will submit evidence, in form and substance satisfactory to A.I.D., that Grantee has established procedures to assure that when responsible and responsive bids are received in response to invitations for bids, the time which elapses between the submission of said bids and the notification of contract award does not exceed the validity period specified in the bidding documents.

(b) Payment of Contractors' Invoices. The Grantee will submit evidence, in form and substance satisfactory to A.I.D., that Grantee has established procedures for payment of contractors' invoices within three months of receipt of such invoice, or such shorter period as may have been established for small- and medium-scale contractors (SMCs).

(6) Disbursement for Contract for Rehabilitation of Road Lots after Initial Lots 5, 6 and 7

Prior to the disbursement, or the issuance by A.I.D. of documentation pursuant to which disbursement will be made, for rehabilitation of road lots after initial Lots 5, 6 and 7:

(a) Plan for Road Maintenance. The Grantee will submit, early in Project Year 1, in form and substance satisfactory to A.I.D., a five-year nationwide rural road maintenance plan which specifies (i) the prioritization of Guinea's rural roads for maintenance purposes; (ii) the number of kilometers of rural roads to be maintained each year; (iii) the maintenance standards to be applied during routine, periodic and emergency maintenance of rural roads; (iv) in connection with PNIR-rehabilitated roads, the consistency of those maintenance standards with rehabilitation standards; and (v) the funding, contractual and supervisory requirements related to the entire rural road maintenance program.

(b) Nationwide Rural Road Maintenance Performance. The Grantee will submit annually, in form and substance satisfactory to A.I.D., a report of performance of rural road maintenance for the preceding year which finds that implementation of the plan for road maintenance is proceeding satisfactorily as to personnel, scheduling, funding and technical quality.

Covenant

The Grantee agrees to take all reasonable measures to provide opportunities for qualified small- and medium scale contractors (SMCs) to be awarded contracts for rehabilitation of road lots funded by this project.

GUINEA RURAL ROADS (675-0216)
PROJECT PAPER

Annexes

Annex

A Logical Framework
B Technical Analysis
C Economic Analysis
D Social Soundness Analysis
E Institutional Analysis
F Environmental Assessment
G Statutory Checklist
H FAA Section 611(e) Cert.
I B/G Request for Assistance
J Budget Tables
K PID Review & DIR Approval For Procurement Exception Cables
L Scopes of Work for Project Technicians

ANNEX A

LOGICAL FRAMEWORK

ANNEX A

LOGICAL FRAMEWORK
Guinea Rural Roads Project
(675-0216)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
GOAL:	MEASURES OF GOAL ACHIEVEMENT:		
To increase sustainable agricultural production and productivity in rural areas throughout Guinea.	- Sustained positive (real) growth of agricultural production.	- GOG and donor statistics and reports.	- Sustainable agricultural production and natural resource management practices adopted.
		- Survey of financial institutions and information media.	- Availability of finances and information to exploit domestic and export markets increased.
		- DNGR reports.	- DNGR and prefectoral authorities and communities continue effective program of rural road rehabilitation and maintenance after project terminates.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
PURPOSE:	END-OF-PROJECT STATUS:		
To improve market access for rural producers.	- Year-round access to points linked by project-aided roads.	- DNGR, prefectoral and project manager reports.	- GOG and communities keep the rehabilitated roads open by systematically planning, funding and executing road maintenance.
	- Increase in volume of produce and goods traded among areas linked.	- Project M&E system; GOG statistics.	- Improved roads alone will produce increase in volume. Further increase will depend on (a) agricultural development programs in areas served by roads; and (b) implementation of policies (fiscal, monetary, financial and legal) and of improved services (telecom, power, storage & handling) aimed at lowering costs of agricultural marketing.
	- Increase in amount of rural producers' output marketed.	- Project M&E system; MARA statistics.	
	- Greater volume and lower cost of commercial transport.	- Project M&E system; fuel use statistics.	- Improved roads will result in greater volume and reduced cost of transport. Further increases will depend on improved transport services and fuel provision, and a reduction in official and unofficial tolls collected at highway barriers.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
OUTPUTS:			
1,265 km of designated rural roads rehabilitated to Standards A, Ba and Bf.	- Roadwork completed as close to schedule as possible.	- Project manager and engineer reports.	- Technical assistance, engineers (funded by IDA) and DNGR manage roadwork effectively.
		- Project manager reports, contract records.	- GOG administers contract procurement and payment processes effectively and expeditiously.
		- Project manager and engineer reports.	- Rehabilitation contractors perform in acceptable manner.
To the extent possible, road rehabilitation work is contracted to competent Guinean SMCs beginning in Year 2 or 3. Balance of roadwork is contracted to international firms.	- Number and size of contracts let to SMCs is consistent with their interest and competence to do the work.	- Project manager reports, contract records, surveys of SMCs	- SMCs respond positively to substantial growth in volume of road rehabilitation and maintenance work provided by PNIR, and to bid packages specially sized for smaller bidders.
		- Training records, project manager and engineer reports, evaluations.	- SMCs are trained in construction business management practices by IDA-funded trainers.
		- Training records, project manager and engineer reports, evaluations.	- SMCs are trained (a) by IDA-funded UME in road construction/ maintenance methods (involving normal amount of heavy equipment); and (b) by IDA-funded ILO in labor-intensive road construction/maintenance methods (for selected SMCs).
		- Project manager and engineer reports, interviews with SMCs.	- SMCs are able to get bonding and expansion capital as needed.
		- Project manager and engineer assessments.	- Sufficient equipment is available for purchase or leasing; spare parts and maintenance facilities are available and properly used.
System established in DNGR for monitoring and evaluation of (a) project implementation, and (b) impact of rural road construction/ rehabilitation and maintenance on agricultural marketing and the environment.	- DNGR works with AID and other donors in tracking PNIR progress, and obtains and processes baseline and progress data on agricultural marketing and environment in rural areas, using findings for road programming.	- Project reports, evaluations.	- DNGR makes competent personnel and facilities available to carry out monitoring/evaluation tasks.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
INPUTS:			
I. A.I.D.:	- See budget tables, implementation plan.	- AID controller records, AID contracts for technical services, GOG contracts for road rehabilitation.	- Operational year budgets are timely and adequate.
$33.0 million for:			
- rehabilitation of 1,265 km. of roads to Standards A, Ba and Bf;			
- project management/ engineering services and support related to FAR contracting;		- AID contract records.	- Personal services contracts awarded in timely manner.
- technical assistance and training for monitoring and evaluation;		- AID contract records.	- Contract for services awarded in timely manner.
- external evaluations and audits.			
II. OTHER DONORS:	- Project agreements between GOG and other donors.	- GOG and other-donor records, PNIR financial records.	- Conditions allowing continued other-donor funding are met.
a. IDA: $40.0 million for feeder roads, bottomlands, water supply, equipment, TA, training, operating and road maintenance costs (on declining basis), and pre-project financing.			
b. KfW: $6.3 million for feeder roads, $0.5 million for consultants.			
c. FAC: $0.5 million for training.			
III. GOG/Beneficiaries:			
(a) $13.5 million for PNIR, including an estimated $11.7 million for roads component: operating and road maintenance costs (on increasing basis), investment, and taxes on investment; (b) DNGR personnel; (c) estimated $1.0 million in beneficiary participation.	- World Bank Staff Appraisal Report on Guinea National Rural Infrastructure Project, 11/27/89.	- GOG financial statistics, PNIR financial records, NARA and DNGR staffing records.	- GOG is able to provide the funds and personnel required.

ANNEX B

TECHNICAL ANALYSIS

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A. Guinea's Feeder Road Network

The Guinean secondary, or feeder road system consists of approximately 14,500 kilometers (km) of roads. These roads fall into two general categories:

- The rural network which connects farming villages to market centers and market centers to administrative centers (about 11,500 km).

- The regional network which connects administrative centers to the national road network and to secondary border points (about 3,000 km).

In terms of road density, Guinea is one of the more poorly served countries in Africa, having 4.3 km of road per 100 km^2 and 1.8 km per 1,000 inhabitants.

This feeder road system is in severe disrepair. Of the 14,500 km of feeder roads, only about 5,000 km are considered to be in minimally acceptable condition. These roads have not been regularly maintained since the country's independence and this lack is very evident. The gravel surface of most roads has been eroded and rutted and most of the surfacing material has long since disappeared. Culverts have been silted closed, their approaches and outlets have been overgrown with vegetation and some have been crushed and broken by the weight of traffic. The side drains and evacuation channels are generally silted level with the road and overgrown with vegetation to the point that most do not exist. There is much evidence of water having regularly flowed across the road or in the wheel ruts parallel to its centerline. Many bridges are in deteriorated condition although some have been recently rebuilt. The wooden decks of some bridges have been broken by traffic, although local communities in many cases have attempted to maintain the decks. Concrete decks sometimes have gaping holes with exposed reinforcing steel. Many of these bridges have well-travelled detours to nearby fords. Visual inspection of some abutments and piers shows examples of crumbling concrete. During inspection tours to various roads it took the project paper team 50 minutes to drive one section of 14 kilometers in Télimélé's rolling terrain and one hour to traverse a ten kilometer-hardpan section in Pita's mountainous terrain.

The Ministry of Transport and Public Works (MTTP) is ultimately responsible for the maintenance of the 3,000 km regional network, but has delegated this responsibility, in writing, to MARA, thereby making the latter responsible for the entire 14,500 km of feeder roads. Within MARA, DNGR is

responsible for the planning, construction, rehabilitation and maintenance of feeder roads. The rationale for DNGR's responsibility for roads is their linkage with agriculture. Since the interior of Guinea is very underdeveloped in economic and infrastructure terms, the rural and regional roads are still used mostly for agricultural traffic. Therefore, policies and investments concerning the networks largely affect agriculture.

The DNGR has not had the financial and equipment resources to maintain these networks. Maintenance and repair work, when carried out, has mainly been performed at the behest and with the financing of local communities. The team encountered several examples of road maintenance or improvements financed and performed by local communities in Coyah, Dubreka, Télimélé, Labé and Pita. Under this system, the community gathers money, contracts with equipment operators and truck drivers for their services, supplies fuel for the vehicles, contracts with skilled trades people for drainage works, locates sources of gravel or fill material and provides unskilled labor to complete the project. Examples of work done in these operations includes patching potholes, building up low sections, building bridges and culverts and grading the road. These isolated operations, although they provide useful examples, are not sufficient to maintain the entire road system.

B. General Information About Rehabilitation Lots

As part of the preparation for the PNIR, the MARA commissioned a study by a consultant to inventory approximately 14,500 km of rural roads in all prefectures of the country. The consultant also gathered information on population, agricultural production and potential and administrative considerations in the areas served by these roads. This information was used to prepare a Master Plan for the development of feeder roads. The Master Plan was completed in April 1989 and is being made operational under the PNIR. The Plan provides an estimate of the rehabilitation and maintenance costs and of the benefits which would accrue if these roads were rehabilitated.

The road sections to be rehabilitated were selected on the basis of a multi-criteria analysis whereby the cost of rehabilitation and maintenance was weighed against the expected benefits. The information gathered for each section inventoried included:

- population served,
- agricultural potential,
- existence/efficiency of administrative services,
- volume of traffic,

- physical accessibility,
- existence of other development projects,
- priority/interest expressed by local authorities, and
- other development impacts.

The selection method used involved a multi-stage decision sequence with classification at the prefecture level prior to integration at the national level. This methodology permitted an interface with local authorities and beneficiaries prior to moving to a higher decision-making level. The Plan ranks a subset of 8,000 km of feeder roads in terms of priority for rehabilitation. The Plan is available in the form of a computerized database in both Apple Macintosh and IBM PC compatible versions. Guinean nationals have been trained to use, maintain and update the database.

Out of the 8,000 km total, about 2,600 km of roads in 16 prefectures were selected as priorities for rehabilitation. Road sections destined for rehabilitation in the same or adjoining prefectures were grouped together to form contract lots. As explained in Section II.C.2. of the main project paper text, multi-donor financing is currently available for about 2,073 km of the 2,600 km planned, the reduction being caused mainly by higher rehabilitation costs than originally estimated (see below). The road lots now included in AID's RRP portfolio are the following:

LOT #	PREFECTURE(S)	# KM.
3	Beyla - Kerouane	239
5	Faranah	202
6	Lola - N'Zerekore	226
7-a	Gaoual-Koundara	147
8	Macenta	152
9	Boké	71
10	Pita - Telimele	275
11	Macenta - Kansankoro	100
	TOTAL	1412

For reasons explained in Section II.C.2., IDA, the other major donor to PNIR, will reallocate the funds it had originally planned for rehabilitation of Lot 7-a, and will use them instead to provide the initial advances for all of the above eight lots. AID will finance the balance of the cost of the lots, covering a total of approximately 1,265 km (1,412 - 147).

Roads will be rehabilitated to one of three standards: A, Ba or Bf. All standards will have a 40 kph design speed. These standards are described in detail in the World Bank's appraisal report of November 1989 (paragraph 3.23, page 23 and Annex 11, page 74) and summarized here.

Standard	Description
A	4.5 meter carriageway, 1 meter shoulders, 10 cm minimum laterite gravel surface, triangular side drains 1.5 meters wide, 50 cm deep
Ba	3.5 meter carriageway, 0.5 meter shoulders, 10 cm minimum laterite gravel surface, triangular side drains 1.5 meters wide, 50 cm deep
Bf	same as standard Ba except no laterite gravel surface will be placed (may be upgraded to standard Ba later)

The rehabilitation is straightforward. It consists of re-opening a road to traffic or improving the present road. Drainage structures (bridges, and culverts) will also be rehabilitated. The work is similar to new construction in many cases except that it follows the existing profile and alignment as much as possible. This minimizes the need for additional earthwork and will not require extensive right-of-way clearing. The plans call for a simple laterite gravel surface using local materials. Standard culvert designs using either steel pipe or reinforced concrete will be used. Bridges will use reinforced concrete construction for abutments, piers and decks. The construction process doesn't require sophisticated techniques, equipment or knowledge. In short, the expected construction is simple and appropriate.

Culverts will be either pipe culverts or box culverts. Pipe culverts will be constructed with either corrugated metal (ARMCO) pipes or prefabricated concrete pipes. The culverts will be approximately seven meters long under standard A roads and six meters under standard B roads. All culverts will have reinforced concrete head walls, wing walls and aprons at each end. Depending on the type of culvert, the cover thickness over it will be adequate to distribute the traffic load so as to prevent deformation or rupture. Culverts will be of a minimum 800 mm diameter to permit manual cleaning. In cases where flows higher than can be passed by a single pipe culvert are expected, multiple pipe culverts or box culverts will be used. Multiple culverts will also be protected by head walls, wing walls and aprons which form a single structure uniting the multiple pipes. Box culverts will be sized according to the expected hydraulic flows. To simplify construction, only three sizes of box culverts will be constructed. Boxes of 2m x 1m, 2m x 2m and 2.5m x 2.5m will be used. In some cases, multiple box culverts will be used where heavier flows are expected. Box culverts (single and multiple) will be protected both upstream and downstream by reinforced concrete headwalls, wingwalls and aprons. In certain areas, the slopes into or out of the culverts will be protected by grouted rip rap.

Bridges will be designed for each specific crossing. They will be designed for one-way traffic (3.0 m carriageway) with sidewalks (0.5 m wide) on either side. In the bid documents for the lots already prepared, the designer has replaced many originally proposed bridges with multiple box culverts. This significantly decreases both the cost and complexity of construction. This procedure should be continued in succeeding lots. Bridge abutments and piers will be of a standard design using reinforced concrete. The heights of these structures will be adjusted to the specific location of the bridge and the presence of solid foundation material.

In a few cases, concrete fords will be used. These fords will be of reinforced concrete construction. The upstream and downstream beds will be protected with grouted rip rap. Occasionally, these fords will have pipe culverts running through them.

The present road sections contain some drainage structures. During the planning process, these structures will be analyzed and a decision will be made to either rehabilitate the structure or to demolish and replace it. If a structure is to be rehabilitated, the rehabilitation will bring the structure up to the standards of new structures.

The present lots contain a listing of specific road sections to be rehabilitated. When the time arrives for a contract to be prepared for the rehabilitation of a lot, some adjustments in the specific road sections may be necessary or desirable. With the exception of section-specific criteria (i.e. length, standard, cost, etc.), the technical analysis applies to all sections given in the Master Plan. The section characteristics and the work to be performed are sufficiently similar that this general analysis applies to them all.

C. Contracting for Rehabilitation

The rehabilitation work will be carried out by either international or local contractors. For lots 5, 6 and 10 (Faranah, Lola-N'Zérékoré and Pita-Télimélé), bid packages have been prepared for international bid solicitation. The bid documents were prepared using the general specifications of the Fédération Internationale des Ingénieurs-Conseils (FIDIC). The team engineer reviewed the packages and found them to be complete and acceptable. An AID contracting officer from REDSO/WCA in Abidjan made a subsequent review and agreed with this assessment, noting that the packages would be suitable for fixed amount reimbursement (FAR) contracting under the project (see Section IV.B. of the main PP text). The packages include instructions to bidders, general and specific terms and

conditions, written descriptions of the work and the quality expected, model forms for the bidders to complete, a project schedule to be completed by the bidder, a bill of unit prices upon which the bidder will be evaluated, location maps, strip plans for each road section showing the type and location of work to be done, engineer's drawing of typical road sections and culverts and specific plans for each bridge to be constructed or rehabilitated.

Bid packages on succeeding rehabilitation lots will be prepared by DNGR with the help of a firm of consulting engineers hired with IDA funding to supervise all PNIR road rehabilitation contracts. Contracts for the succeeding lots are intended, to the extent possible, for local small- and medium-sized contractors (SMCs). The DNGR is prepared to break the large lots up into smaller sizes, as appropriate, to accommodate the capacities of qualified local enterprises. Lots, or portions of lots, deemed beyond the capacity of SMCs at the time of bid solicitation will be advertised for international competition.

International contractors from Europe, Africa and the United States are working or have recently worked in Guinea. Recent bid solicitations have drawn the interest of numerous international contractors and there is ample reason to suppose that they would bid on appropriately sized rehabilitation lots.

The local contracting market is much less advanced. Until recently, the government performed all road construction, rehabilitation and maintenance which it did not contract out to international firms. Therefore, road construction is a new field for Guinean contractors.

Several small Guinean contracting firms and numerous tâcherons (skilled tradespeople who undertake small construction projects, notably drainage structures) are identified in a December 1990 report to the Ministry of Transport and Public Works (MTTP). These firms have performed limited road construction and maintenance work in Guinea. The tâcherons are mainly in charge of hand maintenance of roads using the "cantonnage" system. Under this type of system, a single individual or a small group of two or three is responsible for all of the routine activities on an assigned section of road of one to four kilometers. The "cantonniers" live on or near the section for which they are responsible.

The firms identified in the MTTP report have limited capital and a small equipment fleet but have served as subcontractors and would be capable of subcontracting parts of the rehabilitation work of the international contractors. One firm has constructed a dike system for the MARA. This construction involved activities similar to those required in

road construction. Another contractor is currently performing well in constructing the drainage works on the Dalaba-Tougue road.

In a preparatory study for the DNGR (March 1991), a consultant has identified and interviewed 23 SMCs. All of the firms cited in the MTTP report were interviewed as well as many others. The consultant found only a few who had performed much road construction work. Many others had significant experience in building construction or in maintenance by "cantonnage." The consultant's report analyzed the firms' financial, human and equipment resources, as well as their past experience and management capabilities. The objective of this study is to develop a plan to build up the SMCs so that they will eventually be capable of performing road construction and rehabilitation. The results and recommendations of this study are discussed in the social analysis section. In brief, the consultant found that five of the firms could be considered "medium"-sized and are capable of:

- clearing and grubbing,
- maintenance of drainage works,
- small earthworks,
- construction of masonry drainage works,
- rehabilitation of hydraulic structure, and
- other small civil engineering works.

The other 18 "small" contractors have little or no experience, little technical competence and limited management experience.

The consultant gives some criteria which should be observed when contracting work with these enterprises, namely that the works contracted be simple, well-defined and easily quantifiable. The consultant concludes that some of the small firms identified could perform the "cantonnage" type work of hand maintenance and that a few of the medium sized firms could perform the mechanized maintenance described above as "periodic" but would have to be pre-qualified.

Various provisions for enhancing the capabilities of these Guinean firms are being planned for IDA financing under PNIR (see the institutional analysis).

In addition to the strictly Guinean firms identified in these two reports, there are other firms operating in Guinea. Some of these have mixed foreign and Guinean capital and management. Some are small foreign-owned firms working in Guinea. These firms are generally more competent and have access to foreign sources of funding, equipment and materials.

Recently, three firms have won contracts for the periodic maintenance of some 200 kilometers of rural roads under the

DNGR. One of these is a Guinean firm rated highly in the consultant's report cited above. One is a mixed foreign and Guinean firm. The third is a parastatal Rural Work Unit (UTR) of the DNGR. These maintenance contracts are for work during the current (March - June 1991) construction season.

Four Guinean firms have been identified and will take part in labor-intensive training. These firms will be trained by the International Labor Organization (ILO) while performing actual rehabilitation work in the Coyah-Dubreka prefectures. At the end of the first year, two or three of these firms will be selected and will be awarded small contracts for the second year. They will manage these second-year contracts on their own. At the end of the third year, they will, it is planned, be prepared to compete for construction and maintenance contracts on the open market.

At least one example exists of an association formed to undertake road construction work. This association (in Télimélé) is composed of former employees of the MTTP. The association's members have already performed a number of small works for the prefecture of Télimélé, ranging from the rehabilitation of a few kilometers of road to the construction of culverts and a small bridge. In an interview, the leader of the association expressed a willingness to undertake both rehabilitation and maintenance works. This association has access to a few pieces of equipment and would rent additional equipment when needed.

Several impediments restrict the growth of local contractors. One major impediment is the hesitancy of Guinean banks to loan money as investment capital. Local banks are willing to loan money for short term commodity purchases but are reluctant to extend credit for the purchase of heavy equipment or trucks. In addition, the current interest rate of 30% per annum discourages the long term loans which are necessary for the purchase of construction equipment. Another restriction is the legal requirement for a significant performance bond or guarantee. There is no existing system to provide bonding for contractors and banks will not enter into this type of financial support. Talks with some local contractors have shown that, for many of the contracts which they have performed to date, the project owner has not required bonding and has, in some cases, helped finance the purchase of equipment.

D. Rehabilitation and Maintenance Oversight

The DNGR will confide life-of-project responsibility for supervision of all PNIR rehabilitation contracts -- both AID- and other-donor-financed -- to an expatriate engineering firm

(Louis Berger International) under a contract financed by IDA. The supervisory engineers will have multiple responsibilities. In addition to supervising rehabilitation, they will participate, along with other PNIR engineers already hired, in the development of future rehabilitation bid packages (those on the initial lots were prepared by an outside firm, also under an IDA contract.) Another major duty will be to participate, along with other PNIR training units, in the training of engineers of DNGR's regional units, the Rural Engineering Technical Offices (BTGRs). BTGR engineers who successfully complete the training and are certified as qualified will be given supervisory responsibility for rehabilitation of PNIR lots under the contract firm's authority.

The BTGRs, which will also receive other training and material support, will be responsible for managing the maintenance of project roads. The role of the BTGRs is detailed in the institutional analysis. In addition to overseeing road maintenance and eventually assuming full responsibility for rehabilitation contracts, they will be involved in other PNIR operations such as bottomlands development and local initiatives. Specifically with respect to roadwork, the BTGRs will be trained to

- receive requests for road improvements from the local authorities,
- evaluate the requests and perform feasibility studies, perform site engineering and prepare bid documents,
- administer rehabilitation, construction and maintenance contracts,
- react to reports of road damage by planning and administering the emergency interventions of contractors, and
- plan maintenance work and prepare a budget for the fiscal year.

E. Maintenance Program

The importance of a comprehensive, effective maintenance program for the roads after rehabilitation cannot be over-stressed. The Bank's appraisal report, the DNGR's own philosophy and the AID Project Identification Document recognize this. To address this important component, the PNIR proposes a strong maintenance program.

The types of maintenance actions to be performed are as follows:

Emergency: quick action to repair damaged or hazardous areas, damage to the drainage system and damage to bridges and low water crossings;

Routine: patch potholes, prune trees and clear vegetation, maintain drainage system, cut grass on shoulders and side drains and report problems to appropriate authorities.

Periodic: grade surface twice per year, reopen side drains with a motor grader twicxe per year, compact the surface after regrading, spot patch the road surface with up to five cubic meters of laterite per kilometer per year, regravel road approximately every five or six years.

Between the appraisal report and the Master Plan there is a difference in the level of maintenance service. The above description reflects the higher-intensity program of the appraisal report. An analysis performed using the World Bank's Highway Design and Maintenance Standards Model (HDM) shows the appraisal report maintenance program to be adequate to prevent excessive deterioration. The HDM analysis was used to determine the optimum maintenance strategy. This optimum strategy includes spot regravelling of a portion of the lost surface material each year.

The maintenance daily productivity rates used in the DNGR's Master Plan are higher than can reasonably be expected. These productivity rates were the basis for the maintenance costs given in the Plan. The Master Plan expects that the grading of the road surface can proceed at seven to nine kilometers per day and that the reopening of side drains can proceed at three kilometers per day. In practice these two operations are usually carried out together. Experience from other countries having similar conditions suggests that 3.5 kilometers per day for the two combined operations is more likely.

The low level of maintenance service and the high productivity rates used in the Master Plan cast doubt on the predicted maintenance program costs. The costs will need to be adjusted to reflect the above, more accurate values.

Maintenance will be performed completely by contract. The rehabilitation contractor will be responsible for the maintenance of the road segment for the first year after the completion of rehabilitation work. For succeeding years, the DNGR (acting through its BTGRs) will plan, contract for and supervise the maintenance work done by private contractors.

Small- and medium-sized contractors would perform periodic, emergency and routine maintenance on standard A, Ba and Bf roads. Multi-year maintenance contracts will be awarded based on local competitive bidding. Periodic maintenance, which is machine-intensive, will be contracted to qualified

SMCs. Routine maintenance, which is labor-intensive, will be contracted to groups, associations, local communities or SMCs and performed using a "cantonnage" system.

In order to attract labor and, at the same time, avoid a negative impact on agricultural and other productive activities, each cantonnier would be assigned tasks which require only part-time work on the road (approximately 12 days per month). This assignment would leave him sufficient time for other activities. The small contractors, local communities or NGOs would be paid at an agreed rate on a monthly basis for works carried out correctly and in a timely fashion. The BTGRs would be responsible for checking on satisfactory performance.

The cantonnage system has been used successfully in the past. The report to the MTTP about SMCs details the use of several examples of this system.

F. Equipment Considerations

To perform the rehabilitation and the maintenance programs described above, contractors will need access to a fleet of heavy equipment. This basic fleet must include motorgraders, front end loaders, bulldozers, compactors, dump trucks, stake body trucks and small vehicles. For international contractors, this does not pose a significant problem. Such contractors either own their fleets or have sufficient capital to buy and quickly import the necessary equipment. For the Guinean SMCs, however, access to equipment is problematic. These contractors do not have a large enough existing fleet and do not have easy access to the capital to buy it.

There are several potential sources of equipment for the Guinean SMCs. As a condition precedent to the disbursement of IDA funds, the government has formed a quasi-private company, Société Guinéen de Travaux Routiers (SOGUITRO). This company will take over most of the heavy equipment fleets which used to belong to the OPR (Roads Project Office, the former construction arm of the MTTP) and the DNGR. It has already begun to make some of this fleet available for rental to the private sector. Prior to the creation of SOGUITRO and the dissolution of OPR, OPR placed an order for US$ 10 million worth of equipment and parts. That equipment is due to arrive soon and will be delivered to SOGUITRO.

Another potential source of equipment is the existing fleet in the hands of the international contractors. They have rented out equipment in the past and may continue to do so. Still another source would be equipment in private hands. A limited number of bulldozers, graders, loaders and trucks are owned by private individuals. The rental of this equipment has

been cited during descriptions of various small projects carried out at the local community level. A few small contractors interviewed during the course of the team's investigation mentioned that they had rented equipment from the Army's Civil Engineering division.

Because of recent turmoil in neighboring Liberia, a number of contractors who were active there have moved a sizeable portion of their fleet into the Forest Guinea region. This equipment is currently available for rental or purchase. These contractors might also bid for rehabilitation or maintenance contracts. If the turmoil in Liberia calms down, these contractors and their fleets might return there.

It must be noted that uncertainties exist with respect to all these sources of equipment.

The equipment ceded to SOGUITRO is in various states of repair. MARA commissioned a study of the equipment in OPR and MARA. The study lists the number, type, age, manufacturer and condition of MARA's equipment and the number, type and manufacturer of OPR's equipment. This equipment has not been systematically maintained. The number of vehicles in this rental fleet which are in good repair and have a reasonably long useful life left is small compared to the expected need. It is uncertain whether SOGUITRO will be responsible for and is capable of the maintenance and repair of this equipment.

SOGUITRO will acquire all of the equipment of the OPR. It will, however, only acquire some of the equipment of MARA. The ministry has, in effect, already ceded some of its equipment to the prefecture authorities. No precise numbers are available for this equipment. MARA has several projects underway which are being constructed by the Rural Work Units (UTRs). These units would retain their equipment and continue to work on projects. In addition, SOGUITRO will have two functions. (It is unclear whether SOGUITRO will in fact be two entities or just have two arms.) One function will be the rental of equipment. The other will be construction, for which it will retain a portion of the equipment it acquires from the other institutions.

The consultant's report on equipment showed the following situation:

TYPE OF EQUIPMENT	MARA (Functioning or repairable)		OPR (Condition unknown)
	UTRs	Other	
Motorgrader	5	2	14
Bulldozer	22	16	15

Front End Loader	11	3	15
Compactor	10	0	15
(vibrating and rubber-tired)			
Dump and Stake			
Body trucks	23	8	65

The fleet in international contractors' hands will only be available if the contractor himself does not need to use it. There will be rehabilitation and construction contracts going on both as part of and outside of PNIR. The international contractors will likely be competing for some of these contracts. These contractors cannot be expected to rent out their equipment if they are working on or bidding for projects. Indeed, they may have obligated their fleet for their existing or potential contracts. In an interview with the manager of one international contractor, he said he would only rent out his equipment with the operator and with a mechanic to make sure that the proper service schedule was followed. This would likely make such a rental too expensive for a SMC.

The fleet of equipment in private hands is both small and in an unknown state of maintenance. Both SOGUITRO and private equipment owners will have delays and capital problems when it is necessary to order spare parts. The use of equipment from the army is uncertain.

According to the rehabilitation schedule presented in the Bank's appraisal report, the PNIR will see the following amounts of activity:

	KILOMETERS IN ACTIVITY			
ACTIVITY	1992	1993	1994	1995
Rehabilitation	710	890	170	0
Maintenance	175	885	1775	1945

These figures do not include any work outside of PNIR but both DNGR and MTTP have indicated that they will be contracting for other road construction and rehabilitation work during this same period. This amount of construction and maintenance may demand more equipment than is currently available. The availability problem is further exacerbated because most of the maintenance work will occur during the same time of the year throughout Guinea. Therefore, the equipment demand cannot be easily distributed throughout the year.

To provide numbers to back up these statements, the team's engineer used a software package to determine the minimum equipment requirements for only the maintenance activity shown above. These requirements are based on the periodic maintenance program described in the maintenance section of this analysis and do not take into account the regravelling

activity which would be necessary in 1996. The calculations do not account for the wide dispersement of the work sites; the scattered nature of the work will certainly demand more equipment than the numbers given here.

TYPE OF EQUIPMENT	AVG. NUMBER REQUIRED IN MOST ACTIVE MONTH			
	1992	1993	1994	1995
Motorgrader	3	9	17	19
Bulldozer	3	6	9	11
Front End loader	3	6	9	11
Compactor	3	9	17	19
Dump/Stake Truck	6	12	24	26

If it is assumed that all of the project (UTR) equipment and half of the OPR equipment is dedicated to projects, there will be a shortfall in the number of graders needed starting in 1994 and a shortfall in the number of loaders in 1995. This comparison does not take into account the attrition of equipment during the project years. It doesn't account for the rental of any of this material for rehabilitation purposes, although that will almost certainly occur and could be a significant amount of equipment. This analysis doesn't include the equipment on order for OPR for which information was unavailable. Neither does it account for the possible purchase of equipment, particularly by entrepreneurs responding to the market stimulus provided by PNIR and other activities. Finally, delays in implementing the road rehabilitation program and in the subsequent timing of maintenance needs could alter the projections. (Based on updated plans completed after the above section was written, there will in fact be a delay of approximately one year in the above rehabilitation and maintenance schedule for PNIR.)

G. Road Program Costs

The issue of valid cost estimates for road rehabilitation and maintenance is complex. The original cost estimates used in the Bank's appraisal report were prepared by BDPA-SCETAGRI in early 1989. The cost estimates used in the DNGR's Master Plan were prepared about the same time by BCEOM. Both consultants used a similar method to prepare their estimates. The consultants conducted on-site road inventories on a sample of the roads in each prefecture of the PNIR. (BCEOM's study included all prefectures in Guinea.) To complete their information for those roads which they did not visit, they questioned local authorities (prefecture, MTTP, DNGR and others). These inventories occurred during a short, two-month period. The two consultants coordinated their programs and exchanged information to improve their coverage. In both of their reports, the consultants admit to errors and advise the reader about the uncertainty of the inventory. The consultants

then calculated the work quantities for the major work activities and applied unit prices to those quantities. The unit prices came from a survey of recent (at that time) road construction bids.

Since that time costs in general and construction costs in particular have risen. The Ministry of International Cooperation reports that inflation in Guinea was 26% in 1989, 27% 1990 and is forecast at 16% for 1991. Fuel prices have risen by 56% since 1989. There is currently an increase in building construction in Guinea, prompting greater demand for construction services and, hence, increased prices.

In addition, the construction quantities reported in the BDPA and BCEOM reports were underestimated. Neither of these estimates included costs for setting up a work camp and providing support for the construction inspection mission. The number of culverts was seriously underestimated. This fact was discovered during site visits by the project paper team and confirmed by a comparison of the bid documents for the first three lots with the original inventories. The rehabilitation bid documents, however, substitute large box culverts for some bridges, thereby reducing the number of bridges and, hence, the overall construction cost.

At the same time, there are factors which serve to retard the growth of costs. It is common practice for international contractors to request between 60 and 80% of their payments in a foreign currency. The Guinean franc fluctuates according to the international market and has declined steadily in value since the Bank's appraisal report. [In 1989: US$ 1.00 = GF 615; April 1991: US$ 1.00 = GF 700] Therefore, while the costs, in Guinea Francs, for the Faranah rehabilitation lot (#5) increased by 14.6%, the cost when converted to US$ at the rates current at the time each estimate was made increased by only 7.6%.

To compound the difficulties, unit prices are available for recent international bids but no such prices are available for local SMC bid contracts. Up to this time, no local SMCs have bid on extensive rehabilitation projects.

Nevertheless, a revision of the original cost figures has been made. This revision takes a middle-of-the-road approach. The unit prices used come from recent internationally bid contracts. The first lots will be awarded to this type of firm. The inflation rates used for 1989 and 1990 are those for Guinean francs. The inflation rate for 1991 and 1992 are assumed to be 15% and 10%, respectively. In comparing unit prices between the Master Plan estimates and the Engineer's Estimate for the bid documents, many prices jumped by large amounts -- up to 900%. The cost revision is based on average

increases for the significant materials. This average increase was about 40%.

It can be reasonably expected that unit prices for lots after the first year, to the extent they can be awarded to local SMCs, will be significantly lower than those for international contractors. Local firms do not have the large foreign overhead costs and high salaries of expatriate personnel.

The new rehabilitation estimates for the AID lots are as follows:

			--- Costs (000,000's GF) ---		
Lot#	Prefecture(s)	Length	Year	Mstr Plan	Revised Est
3	Beyla-Kérouané	239	1992	2333.4	5133.5
5	Faranah	202	1991	1735.1	3281.0
6	Lola-N'Zérékr	226	1991	2423.1	4550.6
8	Macenta	152	1992	1414.8	2971.2
9	Boké	71	1992	1064.3	2235.0
10	Pita-Téliméle	275	1991	2759.9	6464.9
11	Macenta-Kansankoro	100	1992	N/A	2079.8
	TOTALS	1265		11,730.7	26,716.0

Converting the revised total at the estimated 1992 exchange rate of GF 750 = $1.00, this would amount to $35.6 million, far exceeding AID's planned funding level of $29 million for road rehabilitation.

In May 1991, confirmation of construction cost increases was received in the form of bids on the two Gaoual-Koundara lots: 7-a (currently slated for IDA financing, pending approval of the AID project) and 7-b (being financed outside of PNIR by the French). These bids ran 60% to 170% higher than had been estimated on the basis of outdated costs. In analyzing the bids and re-analyzing the work to be done, DNGR and its engineering advisors have determined that the bid package in some cases called for more expensive solutions than required, e.g., entirely new bridges when only the culverts needed repair or replacement, gravel imported from other locations in Guinea when local laterite properly compacted would do equally well, and road shoulders prepared separately from the carriageway when both could be done in the same operation. The more cost-effective solutions are now being incorporated where appropriate into a revised package for rebidding. All future bid packages will be similarly drawn.

To ensure that road rehabilitation does not exceed the $29 million budget, a maximum cost per lot (in U.S. dollars) has been set proportional to the standard planned for each road segment within the lot. Segments designated for Standard A

have been calculated at $27,028 per km, for Standard Ba at $22,198 per km, and for Standard Bf at $18,111 per km. The results are as follows:

Lot#	Prefecture(s)	Length	COST (US$)
3	Beyla-Kerouané	239	5,742,992
5	Faranah	202	4,337,233
6	Lola-N'Zérékoré	226	5,238,924
*7a	Goual-Koundara	147	3,227,807
8	Macenta	152	3,256,312
9	Boké	71	1,745,108
10	Pita-Télimélé	275	5,972,921
11	Macenta-Kansankoro	100	2,702,800
	Total	1,412	32,224,097
*Total excl. 7a		1,265	28,996,220

(*See Subsection 1 above and Section II.C.2, in the main PP text, for the role of Lot 7a).

If bids are received which exceed the maximum cost, DNGR will remove selected road segments from the lot until the cost matches the budget. All cutbacks will be carefully studied and decided upon only after consultation with prefectoral authorities and the communities concerned, to ensure that the original criteria for selection of roads for rehabilitation are taken fully into account.

Maintenance program costs have also escalated. The cost increases to unit prices for maintenance activities are mainly a function of fuel price increases (56%). There are also increases in the quantity of work to be performed, as described in the Maintenance Program section above. Prices will continue to increase due to simple inflation in the later years of the program. It is anticipated that all maintenance contracts will be awarded to local SMCs, therefore the inflation rates for the Guinean franc are applicable.

Only the Master Plan includes costs for maintenance activities. The costs are based on international contractors' rates. These costs are given as a simple cost per kilometer. Combining the increases from inflation and from increased work quantities, the following costs (in Guinean francs per kilometer) should now be used:

Mtce Std	Master Plan Cost	Revised Cost (1993)
A	GF 849,365	GF 1,500,400
B	606,525	1,004,300

The costs below reflect the new estimated maintenance rates and include a cost escalation of 15% per year.

Estimated
Maintenance Requirements on Rehabilitated PNIR Road Segments
(GF Millions)

Road Standard	1993 Km	1993 Cost	1994 Km	1994 Cost	1995 Km	1995 Cost	1996 Km	1996 Cost
A	85	127.5	289	498.7	423	839.4	467	1,065.7
B	241	242.0	614	709.0	858	1,139.6	948	1,448.0
Total	326	369.5	903	1,207.7	1281	1,979.0	1415	2,513.7
Equivalent ($000)		462		1,421		2,199		2,646
Est. GF/$ rate		(800)		(850)		(900)		(950)

Based on these figures, the total estimated dollar cost for maintenance of the AID-financed road lots during the life of the project is $6.7 million. When asked to comment on these estimates after the design team engineer's departure, DNGR said it considered them much too high because they incorporate into each year's cost a portion of the resurfacing done every five to eight years. The amount budgeted for PNIR maintenance (financed by IDA and GOG) is $4.2 million, which DNGR deems adequate. This issue will need to be resolved. Several conditions precedent and a covenant to be included in the grant agreement are designed to ensure adequate funding for maintenance of AID-rehabilitated roads.

H. CONCLUSIONS

The site visits of the project paper team and the description of the system presented here lead to the obvious conclusion that Guinea's rural road system needs rehabilitation. The project is technically feasible. The rehabilitation plans call for simple construction methods which do not demand sophisticated skills, equipment or materials. The roads can be maintained in large part by hand with only periodic necessity for mechanical intervention. The elimination of several project components from the scope of work presented in the PID has focused this project and will simplify AID management requirements. International contractors will accomplish the first lot of rehabilitation but a steadily increasing proportion of the succeeding lots and all of the maintenance will likely be awarded to local SMCs.

The present capacity of the SMCs is, admittedly, weak. They are presently capable, however, of most maintenance functions and some of the rehabilitation functions. Small contractors and tâcherons are already performing, in some

areas, the routine maintenance by cantonnage. It remains for DNGR to establish a more extensive system to contract for and to control this type of work. A beginning has been made towards having the periodic maintenance performed by SMCs. Some medium-sized contractors could be ready to bid on the rehabilitation of the second round of lots, provided the lots are reduced in size and the bidders are extensively pre-qualified. Other parts of the PNIR will provide the SMCs with the training in both managerial and technical skills which they need to grow into viable local contractors.

The maintenance program will be of paramount importance to safeguarding the investment AID plans to make in the rural road system. Other PNIR components address this concern. They seek to strengthen the existing capabilities to perform and control maintenance and will build more capacity. The continued funding of maintenance is already a condition of the World Bank's contribution to PNIR and will be a condition of AID's contribution.

Although it may take time for Guinean SMCs to attain the capability perform all the road rehabilitation, it is very likely that the local firms will be ready by 1993 (the first year maintenance of the rehabilitated roads is required) to meet the project's road maintenance needs. However, should this assumption prove invalid initially, the GOG could resort to international firms for a portion of the maintenance work requiring machinery, albeit at a higher cost than with the SMCs.

The Rural Engineering Technical Bureaus are one of the key elements for the success of the project. Their role will be critical in the maintenance of the road system. Technical assistance to these bureaus has been funded by IDA. The personnel to fill the bureaus have been nominated but only the chiefs of the bureaus have been confirmed. The bureaus still lack important equipment and facilities but some of these have been funded. A training plan to strengthen the capabilities of the bureaus' personnel is under development.

Equipment availability will be a crucial issue for the SMCs. Some equipment will be available but not enough information is available to say for sure whether the supply will balance the demand. There is little immediate prospect of the SMCs purchasing their own equipment; the financial demands are beyond their current means. Rental, however, is a viable and, in fact, current option. Throughout our interviews with contractors, government functionaries, associations of tradesmen and workers, and local community leaders, the team was impressed by the innovative means and determined purpose to get the job done. This determination, combined with the market

stimulus which PNIR will provide to private entrepreneurs, may be equal to the problem of equipment availability.

With rehabilitation costs higher than originally planned and subject to further increases, cost control measures have been put in place. The design team engineer has considered a series of both firm and shifting factors in arriving at new, higher cost estimates to replace IDA's 1989 figures. The new estimates, and recent confirmation through bids received that costs have indeed risen substantially, have led to a reduction in the number of road lots to be rehabilitated, a review of plans to ensure that specifications relate to essential rehabilitation needs, and a limit on AID financing of rehabilitation. If these steps do not suffice, it is planned to cut road segments within lots.

ANNEX C

ECONOMIC ANALYSIS

ANNEX C

ECONOMIC ANALYSIS

A. METHODOLOGY FOR ROAD BENEFITS

1. Overview

The approach has been to analyze the whole group of A and B roads as a unit, and then the three categories of roads (A, Ba, Bf), separately. The road standards are explained in the Technical Analysis. The degree of confidence diminishes at each level because the smaller number of road segments increases the likelihood of error. No attempt has been made to evaluate individual segments or even prefectures because the underlying data are so weak as to be unreliable. The major assumption in the analysis is that errors are distributed in a random pattern and will tend to cancel out each other.

The two types of benefits used in the analysis relate to the traffic associated with increase in agricultural production (producer benefit) and that associated with non-agricultural activities (consumer benefit).

2. Calculation of the Non-Agricultural Benefit

The non-agricultural benefit is captured by the savings on vehicle operating cost (VOC). Various considerations that went into the socioeconomic analyses in the BCEOM Master Plan and the SCET-AGRI PNIR preparation report[1] are implied in both the producer surplus and the consumer benefit. That is, administrative linkages, population density, projects served and market locations result in vehicular traffic that includes both light and heavy vehicles. Data on traffic are obtained from the BDPA SCET-AGRI PNIR preparation report. As indicated in table 1, the traffic on the A, Ba and Bf roads averages 17.5, 18 and 5 heavy vehicles per week, respectively. Similarly, the average traffic rates for light vehicles are 5.06, 16 and 2 vehicles per week for the A, Ba and Bf roads, respectively. Following the World Bank Staff Appraisal Report (8012-GUI), it is assumed that for the heavy vehicles, the non-agricultural traffic for the A type roads represents about 53 percent of the total traffic, for the Ba type, 36 percent and for the Bf type roads, 30 percent. For light vehicles, the corresponding percentages are 36, 66 and 50 percent.

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[1]BCEOM, Etude de Schema Directeur d'Amenagement des Pistes Rurales, Annexe du Rapport Final, Octobre, 1989.
BDPA - SCET AGRI, Projet National d'Infrastructure Rurale, Rapport Final, Juillet, 1989.

A 1989 update of the CEF "Projet du Developpement Rural en Guinee Maritime" (1988) and the IFAD "Projet Pistes Rurales du Sud-Est du Fouta Djallon" (1986) gives the following figures for savings on VOC: GF 115/Km for heavy vehicles and GF 45/Km for light vehicles. The cost of fuel is estimated to have increased by 53 percent on average since 1989. Based on the above information, the first year consumer benefit for one average kilometer of road was estimated for all the road segments being considered in this project. The first year average savings on VOC per kilometer for the A , Ba and Bf type roads are $120, $71 and $24, respectively. Assuming an average annual growth of 4 percent for the non-agricultural traffic, the consumer benefits for the expected life of the roads (20 years) were calculated (Table 7-10). The data used in the calculations are contained in Table 11.

Table 1. Selected Road, Production and Socioeconomic Parameters

	A type	Ba type	Bf type	Overall
Traffic (heavy Veh/week)	17.5	18	5	14.4
Traffic (light Veh/week)	5.06	16	2	9.4
Pop. density (inhab/km2)	19	30	22	25.15
Current Production index	8.74	7.12	5.05	7.05
Potential Production index	10.45	9	8.04	9.16
Current paddy yields (kg/ha)	1041	847	601	839
Paddy yield in PY5 (kg/ha)	1244	1071	957	1090

Source: BDPA-SCET AGRI, PNIR Preparation report

3. Calculation of Agricultural Benefits

The purpose of the overall A.I.D. project is to improve and increase the marketing of agricultural products. The expectation is that such increases would be the major economic benefit of the project. The project was not designed by the GOG solely to achieve this goal, however. The 18 prefectures in the PNIR were selected because they had received less attention than the other 17 in terms of rural roads, not just because they offered the most agricultural potential. Similarly, the distribution of project funds among the 14 prefectures was not solely to maximize agricultural benefits.

Agricultural benefits for this project are based on production indexes contained in the BCEOM master study (1989). These indexes result from information obtained from local experts on the importance of the various types of agricultural activities (i.e., food crops, cash crops, wood). For each activity, a score of 0, 1 , 2 and 3 (zero, low, medium, high) was given. For the current or base situation, weights of 3, 2 and 1 were assigned

to cash crops, food crops and wood, respectively. Hence, an area with intense (high) rice production, moderate (medium) pineapple production and no timber activity would have an index of 12 [(3)x(2) + (2)x(3) + (0)x(1)].

In the present analysis, the indexes of agricultural potential assume that no specific, important investments will take place, "other than the rehabilitation of the road." The process used to calculate them was similar to the above, but took into account the existence of exploitable bottomlands and livestock production. Subjective estimates also were made for food crops, cash crops and timber, i.e., from 0 to 3, and the weights were 1 for bottomlands, 1 for food crops, 3 for cash crops, 0.3 for timber and 0.2 for livestock, resulting in a maximum index number of 16.5. For the road segment considered in this study, the highest index value is 15.6. The minimum value is 3.4.

In general, the estimated indexes show that current agricultural production is greater around the A type roads. Similarly the weighted (road length) average indexes indicate that the road rehabilitation would induce a 19 percent increase in agricultural production for the A type roads, 26 percent for Ba type roads and 59 percent for the Bf type roads. The road rehabilitation project would induce a greater increase in agricultural activities near the Bf and Ba type roads than the A type roads where a relatively high level of production is already taking place.

The key factors in determining the increases in production are population density and the difference between the index number for current agricultural production and the index number for agricultural potential. The population density determines the number of farms and number of hectares cultivated per kilometer of road. The index numbers determine the assumed output per hectare under current conditions and in the future. Changes in these index numbers result more from changes in the intensity of agricultural activity than from investments agricultural inputs. That is, they represent changes in the number of hectares and the value of production (e.g., cash crops) rather than investment the production of basic food crop such as rice.

The transition from index numbers of agricultural activity to value of production is based on a methodology developed in the World Bank Staff Appraisal Report (SAR) for the project. The assumption was made that a production index of 6.3 was equivalent to the average production of paddy rice per hectare in Guinea, or 750 kg/ha. Another assumption was that the value of production per hectare was proportional to the index number. Consequently, in the present analysis, based on the weighted average indexes, the average current yields for farms near the A, Ba and Bf roads are found to be 1041, 847 and 601 Kg/ha,

respectively. In the same way, the weighted averages of the potential indexes leads to potential yields of 1244 for A roads, 1071 for Ba roads and 957 for Bf roads. The difference between current and potential yields corresponds to the increase induced by the project.

Each family, composed of 7 people on average, is assumed to produce 3.5 hectares of paddy equivalent: 1.5 hectare of paddy and 2 paddy-equivalent hectares of non-rice production. The road impact which is estimated to extend 4 km on each side, and the population density are then used to calculate the number of families, the area cultivated and subsequently the production increase for the average km of road. For example, for the A type road, the average population density is 19 inhab/km2. Consequently, around a standard one kilometer road, total population would be 152 (19x8) which would correspond to 21.7 families. These families would cultivate the equivalent of 76 ha (21.7x3.5) of paddy. Given a yield increase of 203 Kg/ha (1244-1041) induced by the project, the total production increase along a standard one kilometer A road would be 15,504 kg.

A number of factors were used to calculate the value of the production surpluses. A sixty (60) percent milling ratio was used to convert paddy to rice, ready for sale. The price of rice was set at GF 315 kg, which is based on the average of the market prices in Conakry (GF 350/kg) and the Fouta Djallon (GF 460/kg) minus transportation costs respectively of GF 65 and GF 80/kg. A final GF 17/kg was deducted to cover the cost of inputs other than labor.

The population in these areas was assumed to increase at 1.5 percent per year, which is roughly half of the natural increase. The sensitivity analyses also considered a stable population and one declining at 1 percent per year.

As in the World Bank SAR report, the improvements in output were assumed to increase over five years and then reach their full potential. Thus there are no increases in production after year 5 except that due to population growth.

Table 2 gives the producer surplus per unit (average km) of road for each type during the first five years. The surpluses were converted from Guinean francs to US dollars (1 US dollar = GF 800).

4. COSTS OF REHABILITATION AND MAINTENANCE

The costs used were calculated by the engineers based on the best information available. All costs were put in 1991 prices regardless of when the project starts. There was no justification for expecting maintenance costs to change at a

Table 2. Unit Producer Surplus for the Average Km of Road for Each Type of Roads (U.S. dollars)

	A Type Roads	Ba Type roads	Bf Type roads
Year 1	660	1,157	1,374
Year 2	1,399	2,450	2,911
Year 3	2,137	3,743	4,447
Year 4	2,992	5,340	6,225
Year 5	3,885	6,805	8,085

different rate from agricultural prices and vehicle operating costs.

The project paper proposes a cap on the total construction cost so that increase in the unit cost will affect only the number of road segment rehabilitated, but not the road standard. However, the impact of such increase on the project, will depend on the road segments that would ultimately be selected. It is expected that reducing the number of A type roads in the project portfolio will not have a significant impact on the rate of return.

5. RESULTS

Summary results of the economic analysis are found in Table 2-5. Detailed results can be found in Tables 6-9. For all roads taken together, the economic internal rate of return is 24 percent in the base case. All 3 categories of roads fall in the 12-35 percent range. The results are not very sensitive to increases in costs or decreases in population. However, errors in the agricultural potential index have significant impact on the ERR. The average figures are:

	Average Ag. Production Index	Average Ag. Potential Index
All Roads	7.05	9.16
Standard A	8.74	10.45
Standard Ba	7.12	9.00
Standard Bf	5.05	8.04

A 10 percent decrease in the average agricultural potential index (for all the road) would lower this index from 9.16 to 8.24. This has the effect of lowering the ERR to 14 percent, down from 24 percent in the base case. Another 10 percent reduction brings the rate to 0 percent and leads to a negative net present value.

6. CONCLUSION

The quantitative results are very robust in terms of the economic value of the project. The key factor however, is the agricultural potential index, which is a very weak measure. There is not, however, any realistic method for estimating increases in production for this many kilometers of road. What is definite, is that the poor state of the roads is a constraint to production that must be removed. The impact of the road is likely to extend more than four kilometers from the road, and thus the benefits will be much larger. There is little doubt that rehabilitation and maintenance of the roads is economically sound.

Table 3. Summary Results of Economic Analysis - All Roads

		NPV ($000S)	EIRR
Base case		35,514	24.4%
Change in costs:	+ 10%	32,872	22.5%
	+ 20%	30,230	20.7%
Change in POP:	+ 0%	27,446	22%
	- 1%	22,736	21%
Change in Ag potential Index:	- 10%	9,098	14%
	- 20%	(17,318)	0%

Average (current) Production Index: 7.05
Average (potential) Production Index: 9.16

Table 4. Summary Results of Economic Analysis - A Type Roads

		NPV ($000)	ERR
Base case		1,718	12.5%
Change in costs:	+ 10%	836	11%
	+ 20%	(46)	9.9%
Change in Pop:	+ 0%	(385)	10.6%
	- 1%	(394)	9.4%
Change in Ag potential Index:	- 10%	(4,441)	2%

Average (current) Production Index: 8.74
Average (potential) Production Index: 10.45

Table 5. Summary Results of Economic Analysis - Ba Type Roads

		NPV ($000)	ERR
Base case		18,990	26.5%
Change in costs: (construction)	+ 10%	17,768	24%
	+ 20%	16,547	22%
Change in Pop:	+ 0%	14,918	24%
	- 1%	12,541	22%
Change in Ag potential Index:	- 10%	4,307	14.3%
	- 20%	(10,375)	0%

Average (current) Production Index: 7.12
Average (potential) Production Index: 9

Table 6. Summary Results of Economic Analysis - Bf Type Roads

		NPV ($000)	ERR
Base case		13,751	35%
Change in costs:	+ 10%	13,212	33%
	+ 20%	12,674	30%
Change in Pop:	+ 0%	11,224	32%
	- 1%	9,748	31%
Change in Ag potential Index:	- 10%	8,627	27%
	- 20%	3,504	18%

Average (current) Production Index: 5.05
Average (potential) Production Index: 8.04

TABLE 7. COSTS - BENEFIT ANALYSIS FOR THE A TYPE ROADS
($000)

	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
AG BENEFITS	237	502	767	1074	1395	1416	1437	1459	1480
NON AG BENEF	43	45	47	49	51	53	55	57	59
COSTS	-9703	0	0	0	0	0	0	0	0
NETBENEF	-9423	547	814	1123	1445	1468	1492	1515	1540

PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
1503	1525	1548	1571	1595	1619	1643	1668	1693	1718	1744
61	64	66	69	72	75	78	81	84	87	91
0	0	0	0	0	0	0	0	0	0	0
1564	1589	1615	1640	1667	1694	1721	1749	1777	1806	1835

NPV: 1,717.891
ERR 0.12

TABLE 8. COST-BENEFIT ANALYSIS FOR THE Ba TYPE ROADS
($000)

	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
AG-BENEFITS	724	1534	2343	3280	4260	4324	4389	4455	4521
NON AG-BENEF	45	46	48	50	52	54	56	59	61
COSTS	-13436	0	0	0	0	0	0	0	0
NETBENEF	-12668	1580	2391	3330	4312	4378	4445	4513	4582

PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
4589	4658	4728	4799	4871	4944	5018	5093	5170	5247	5326
64	66	69	71	74	77	80	84	87	90	94
0	0	0	0	0	0	0	0	0	0	0
4653	4724	4797	4870	4945	5021	5098	5177	5257	5338	5420

NPV: 18990
ERR 0.26

TABLE 9. COST - BENEFIT ANALYSIS FOR THE Bf TYPE ROADS
($000)

	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
AG-BENEFITS	449	952	1454	2036	2644	2684	2724	2765	2806
NON AG-BENEFITS	7	7	8	8	8	9	9	9	10
COSTS	-5922	0	0	0	0	0	0	0	0
NETBENEF	-5466	959	1462	2044	2652	2692	2733	2774	2816

PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
2848	2891	2934	2978	3023	3068	3114	3161	3208	3257	3305
10	10	11	11	12	12	13	13	14	14	15
0	0	0	0	0	0	0	0	0	0	0
2858	2901	2945	2990	3035	3080	3127	3174	3222	3271	3320

NPV: 13,751
ERR 0.35

TABLE 10. COST - BENEFIT ANALYSIS FOR THE ALL THE ROADS
($000)

	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
AG-BENEFITS	1434	3037	4724	6496	8436	8563	8691	8822	8954
NON AG-BENF	95	99	102	107	111	115	120	125	130
COSTS	-29062	0	0	0	0	0	0	0	0
NET BENEF	-27533	3136	4827	6603	8547	8678	8811	8947	9084

PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
9088	9225	9363	9504	9646	9791	9938	10087	10238	10392	10548
135	140	146	152	158	164	171	177	185	192	200
0	0	0	0	0	0	0	0	0	0	0
9223	9365	9509	9655	9804	9955	10108	10264	10423	10584	10747

NPV: 35,514
ERR 0.24

TABLE 11. SELECTED PRODUCTION, SOCIOECONOMIC AND ROAD PARAMETERS BY PREFECTURE

CODE	COSTS (U.S.$)	LENGTH (Km)	POP DENSITY (Inhab./ha)	AG PROD INDEX	AG POTENT INDEX	TRAFFIC (VEH./WEEK) HEAVY VEHICLE	TRAFFIC (VEH./WEEK) LIGHT VEHICLE
BOKE							
1201	945,980	35	39	5	4.2	6	0
1203	799,128	36	9	10	12.0	18	0
GAOUAL							
1309	1,331,880	60	20	8	8	1	0
KOUNDARA							
1401	648,672	24	8	5	7.6	16	6
1403	577,148	26	8	4	8.3	10	4
1404	452,775	25	7	2	7.3	6	4
1407	217,332	12	36	2	7	2	0
FARANAH							
4301	405,420	15	10	10	10.3	14	2
4302	351,364	13	10	10	10.3	14	2
4303	399,564	18	12	9	10.4	2	0
4304	434,664	24	13	9	10.4	1	0
4308	814,995	45	14	2	6	4	4
4309	199,782	9	12	7	9	20	8
4310	377,366	17	12	4	6.3	20	8
4313	665,940	30	16	5	9.3	19	6
4316	688,138	31	5	9	8.2	14	0
KEROUANE							
5201	443,960	20	10	9	9	7	1
5205	270,280	10	12	6	10.5	26	9
5206	177,584	8	15	4	10.9	18	8

ANNEX D

SOCIAL SOUNDNESS ANALYSIS

SOCIAL SOUNDNESS ANALYSIS

LIST OF ATTACHMENTS

ANNEX D

SOCIAL SOUNDNESS ANALYSIS

I. DIRECT BENEFICIARIES

The National Rural Infrastructure Project (PNIR) will have nearly half a million direct beneficiaries, which represents around 7% of the country's population. Most of the beneficiaries are located in the 16 prefectures included in the Project, out of the total of 33 prefectures in the country. These 16 prefectures were selected because they had no development projects sponsored by international funding agencies with rural road work components, yet had an urgent need for improving their rural road networks.

As listed below, USAID will participate in financing rehabilitation of 1,412 km of rural roads located in 11 prefectures. It is the major funding source for the rural road rehabilitation component of PNIR.

- Beyla,	201 km
- Boke,	71 km
- Faranah,	202 km
- Gaoual	60 km
- Kerouane,	38 km
- Koundara	87 km
- Lola,	126 km
- Macenta,	252 km
- N'Zerekore,	100 km
- Pita,	139 km
- Telimele,	136 km
- Total	1,412 km

As explained in Section II.C.2. of the main PP text, USAID and IDA will share in the financing of each lot, such that USAID will be funding 1,285 km of the total. This represents 9% of all rural roads in the country (14,424 km), and 61% of the 2,073 km of rural roads to be rehabilitated in the 16 prefectures by the PNIR.

Major expected benefits are those normally associated with rural road projects, i.e., reduction of transportation costs between villages and small towns, better access to market for village producers (both for products and inputs), expansion of commercial services through better marketing, and acceleration of economic growth in rural areas.

Major benefits are spread among five categories of beneficiaries: rural population in general, traders, transporters, Small and Medium Contractors (SMCs) and the staff of the Ministry of Agriculture and Animal Resources (MARA).

The project will have a direct positive impact in rural areas which are isolated and with high density population. The main beneficiaries will be local farmers, women retailers and collectors, who will gain from easier and more rapid flows between prefecture and sub-prefecture markets. Improvement of road conditions will also result in less damage to transporters' vehicles, less time lost and lower transport cost, and will encourage transporters to purchase new vehicles. Third, the project will have a high indirect impact on DNGR staff, because of its strong financial support for the department's rural road program. Finally, the project is expected to have a positive impact on SMCs, but only to the extent that they qualify for road rehabilitation contracts, which is not expected to be possible before FY 2.

A. Rural Population

Rural population in general is by far the largest group of direct beneficiaries of the project. On the basis of the data collected for the preparation of the Rural Roads Master Plan, rural roads rehabilitated with USAID financing will benefit a total of 211 villages and a rural population estimated to be 278,600, or 4% of the country's population of 7 million.

The table next page presents major social data for the road segments to be rehabilitated. Data disaggregated by road segments are presented in Table 1 in the Annex.

Roads included in the USAID project are located in densely populated areas. The prefecture of Pita ranks first, in the area of the Fouta Djalon mountains, Middle Guinea Region, with 58.8 inhabitants per square kilometer; Kerouane in Upper Guinea ranks second with 57.3 and N'Zerekore in the Forest Region ranks third with 45.7. The national average is 24.

The PNIR report prepared by BDPA-SCETAGRI used a series of criteria to include social consideration in the evaluation of rural roads and assigned a "social score" to each segment. Four criteria were used for the final score:

(1) the number of road-cut days in a year,

(2) the number of sub-prefectures and markets served by the road,

(3) the number and importance of development projects in the area served by the road, and

(4) the priority given by local authorities.

Table 1 - Selected data used for the selection of rural roads segments to be rehabilitated by PNIR

Prefectures	Length (km)	No. of villages	Population served	Inhab./Km2	Social Score*	Traffic Score*
USAID-financed 11 prefectures						
Beyla	201	40	21,050	9.1	13.9	33.0
Boke	71	9	8,600	24.0	12.0	25.5
Faranah	202	38	19,800	11.6	19.2	41.3
Gaoual	60	2	22,600	20.0	20.0	4.0
Kerouane	38	6	8,750	57.3	13.7	57.3
Koundara	87	15	61,000	18.0	15.3	29.3
Lola	128	16	15,350	19.7	14.8	43.0
Macenta	152[1]	23	21,100	21.6	16.5	23.9
N'Zerekore	100	18	29,000	45.7	11.4	11.0
Pita	139	28	52,750	58.8	18.3	139.3
Telimele	136	16	18,600	22.4	12.4	19.8
Total	1,312	211	278,600	28.0	15.2	38.9
PNIR's 16 prefectures						
	1,983[2]		496,000		12.4	22.0

*Index for social and traffic scores are explained in the text.

Through a system of index numbers, a social score was given to all roads. The index for the 11 USAID-financed prefectures is 15.2, which is higher than the average index for the 16 PNIR prefectures (12.4). The prefecture of Gaoual in Maritime Guinea ranks first with a score of 20, Faranah in Upper Guinea ranks second with a score of 19.2, and Pita in Middle Guinea is third with 18.3. Five prefectures are equal to or above the average.

[1]The Macenta-Konsankoro road segment (100 km) is excluded from this list and has not been taken into account in the social soundness analysis, because no socio-economic data were available. Since it is a national road (RN #10), it is not included in the Rural Road Master Plan and the MTTP could not provide useful data.

[2]This total excludes the 450 km of roads to be rehabilitated under local initiative, because they are to be selected gradually, as requested by local communities.

The traffic index was calculated from the Master Plan analysis prepared by BCEOM. It gives an estimation of the weekly number of vehicles using a road segment. Calculation was made from the knowledge of prefectoral authorities on vehicle traffic, added to data obtained in previous surveys when available. Results were then adjusted to take into consideration the types of vehicles and the length of time traffic was interrupted because of bad road conditions. The average index for the USAID-financed prefectures is 38.9, which is much higher than PNIR prefectures as a whole (22.0). Only three prefectures are below the average: Telimele (19.8), N'Zerekore (11.0), and Gaoual (4.0). Pita has by far the highest score (139.3), and Kerouane ranks second (57.3).

UNDP financed in 1989 a comprehensive socio-economic survey in the country's 33 prefectures, which produced a report in four volumes entitled Bilan-diagnostic au niveau des préfectures. The study identified a series of constraints to development for each prefecture. Isolation of rural areas is mentioned as a constraint for the 11 prefectures of the USAID project, and a deeply deteriorated rural road network is mentioned as a constraint for ten of them. The absence of suitable roads is mentioned as a problem for agricultural production marketing in all prefectures, and as being extreme in four of them (Boke, Lola, Pita and Telimele).

B. Traders

Trade of agricultural products as organized and conducted today in Guinea is very recent. In 1975, under the Sekou Toure Government, private commercial activity was declared illegal. Big traders fled the country and others were ruined. State trading centers became the only place where small producers could sell their products. In 1985, when the Government decided to liberalize the economy, the State trade structure was dismantled. From then on, marketing of agricultural products developed without any government legislation.

Data provided by the national agricultural census published in January, 1990, show an average of 25 weekly markets by prefectures throughout the country. For the 11 USAID-financed prefectures, the average is 27:1

- Beyla,	34
- Boke,	21
- Faranah,	31
- Gaoual	24
- Kerouane,	21
- Koundara	8
- Lola,	31
- Macenta,	37
- N'Zerekore,	27
- Pita,	35
- Telimele,	32
- Total	301
- 33 prefectures	834

A comprehensive survey of marketing in the agricultural sector throughout Guinea was conducted by FAO in 1990. The organization of trade is a major issue addressed in the study (traders, location of trade, cost and benefit margins, trade flow and current material and financial capacities), and existing constraints are analyzed (economic, administrative, legal, material, institutional and organizational).

The study identifies four groups of traders:

1. Collectors (Small Traders called "Collecteurs")
2. Women Retailers ("revendeuses")
3. Retail-Wholesalers ("détaillants-grossistes")
4. The local farmers

1. The collectors act as a liaison between the productive zones and consumers. They go to weekly markets in the sub-prefectures to buy the farmers' production and sell them manufactured goods (soap, oil, salt, etc.). They sometimes go directly to villages and remain several days to negotiate the purchase and sale of merchandise. The Collectors are mostly women (see section IV-B). This type of trader generally has her own funds, often obtained by putting together loans from the husband, the family, or friends, and sometimes she uses money advanced by the Retail-Wholesaler located in the prefecture town. The Collector can sell her merchandise to the Retail-Wholesaler; if the latter has given her an advance, he can resell directly to the "revendeuses" or she can sell directly to consumers if this is advantageous.

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[1]MPCI/Direction Nationale de la Statistique et de l'Informatique. Résultats du recensement national de l'agriculture 1988-1989 - Tome 2: Résultats Préfectoraux. January, 1990, pp. 10-13.

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According to an investigation carried out by FAO, traders' working capital is very low, varying on average between 30,000 and 100,000 francs,[1] just barely the amount necessary to buy three 100-kg sacks of rice.[2] The profit margins are very low. Taking rice as an example, the Collector makes an average profit of 0 to 10 francs by selling rice at 100 francs a kilo. This adds up to a mere 500 to 1,000 francs profit for a 100 kg sack, and sometimes there are losses. The investigation revealed that, in addition, the profit margins of the Collectors are often squashed by commercialization costs. These costs run on average 5,000 francs a sack of rice, of which 3,500 francs goes for transport.

2. Women Retailers work in the Prefecture town markets. They sell back goods purchased from the Collectors or the Retail-Wholesalers. Most of them are women. Men are very rare as Retailers. Women Retailers trade local products, mainly cereals and tubers, as well as various condiments (tomatoes, gombo, peanut butter, etc.). Their financial resources are very limited, with a cash flow of between 25,000 and 50,000 francs, obliging them to stay at the prefectoral level. The profits usually amount to between 500 and 1,000 francs daily, which is not enough income for the family needs.

3. Retail-Wholesalers have their stores in the Prefecture towns. Many of them are too small to be real Wholesalers, but they are called such because they often buy directly from importers in Conakry, mostly for rice. All Retail-Wholesalers are men. These traders are "established", in comparison with the first two groups which are itinerant traders. They have one or more stores in the Prefecture towns, and have the capacity to stock products and speculate.

Retail-Wholesalers use their own funds, the only credit available being from other traders in the group and at a high cost. Their cash flow may extend from 700,000 to 10 million francs. They trade both agricultural and manufactured goods. Agricultural goods turnover is higher but the profit margin is lower; they are mostly dry non-perishable goods, such as cereals and rice. They also trade kola nuts, palm oil, dried peppers and peanuts.

The Retail-Wholesaler usually stays at his trading post. He may trade with the Collector, who delivers the merchandise to his store; occasionally he sends a truck to a sub-prefecture town to collect the merchandise bought by the Collector. His customers come from three groups: 1) consumers with enough money to buy "large quantities" (i.e., one bag of rice), mainly state employees; 2) Women Retailers, who buy one bag at a time and sell rice in small quantities at the market or on the street; and 3) Retail-Wholesalers from other prefectures, who take an active part in inter-regional commerce. Retail-Wholesalers are good suppliers for state

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[1]The exchange rate is around 700 Guinean francs for US $1.

[2]Rice is by far the basic food product consumed in the country. Many people consider they have not eaten if they had no rice.

employees located in the prefecture town because they can sell on credit, thus permitting them to sell imported rice.

Gross profit margins are low when Retail-Wholesalers sell to Collectors and Women Retailers. On the other hand, margins are higher when they sell to Retail-Wholesalers from other prefectures.

4. Local farmers are located upstream in the commercial chain for local agricultural goods. They are mostly women, who get installed in their local weekly markets, buying their spots for 25-50 francs. They usually reach the market place by walking, especially if road conditions keep trucks or taxis away, thus limiting the capacity to supply markets.

Some goods may be presented in large bowls (rice, fonio, corn, palm oil), or in small piles, such as dried peppers, potatoes, tomatoes, bananas, onions and gombos. Prices are fixed at the beginning of the market day, according to supply and demand, and are influenced by farmers' knowledge of the prices fixed at the prefecture market, which is the first consumer market downstream. Collectors are their main customers, sub-prefecture weekly markets being merely producer markets for local agricultural goods.

Impact of the Rural Roads Project on Traders

The improvement of the rural road network is expected to benefit mostly local farmers, Women Retailers and Collectors, who are the main traders located between the prefecture and sub-prefecture towns. The three groups will benefit from easier and more rapid trade flows between prefecture and sub-prefecture towns, permitting fewer losses due to unsold perishable goods, a higher volume of trade and more regular prices.

In the case of dried food and non perishable goods, a more regular trade flow will prevent the Women Retailers from being at the mercy of the Retail-Wholesalers who have the capacity to stock merchandise and gain from a price increase. When prices go up because of road cuts, Women Retailers' profits may easily go down. The example of peanut trade was given during an interview when the Project Team visited the prefecture of Pita. During the dry season, a Woman Retailer can buy a peanut jar at 50 francs and sell it at 75 francs, thus making a profit of 25 francs, or 50%. When roads are bad, during the rainy season, she may have to pay 100 francs; she would sell it then at 125 francs, being twice penalized, making only a 25% profit on each jar and having less volume to trade.

Better roads will present a great advantage for Collectors, because they will have the possibility of having a higher capital turnover. A high capital turnover is crucial for both Women Retailers and Collectors, who have too low a cash flow to buy large quantities. An increase in the turnover rate becomes the only way to increase income.

Improved rural roads will give local farmers more opportunity to sell garden crops, which otherwise can easily be lost if roads are bad, and farmers will get more capacity to carry larger quantities to weekly

markets. Moreover, with more regular trade flows downstream, local farmers will develop more regular contacts with Collectors, who easily change their trade networks if an area become inaccessible. As rice is the most important food product, local farmers with low income will also particularly benefit from better rural roads when they buy imported rice, because of less speculation.

On the other hand rice producers who sell their rice surplus to the markets will lose if there are no more price increases due to supply cuts when roads are bad, since the price of local rice is determined by the price of imported rice (local rice being preferred and therefore sold at a slightly higher price than imported rice).

Among Retail-Wholesalers, the small ones will benefit from the improvement in rural roads by an increase in inter-prefectoral trade volume. Higher volume would compensate them for losses caused by fewer opportunities for speculation. On the other hand, large operators will gain little, as a large part of their profits come from their capacity to stock and speculate on basic food supply. Their main gains may come from the increase in inter-regional trade volume.

The Rural Roads Project is expected to have little impact on the development of prefectoral Chambers of Commerce. The National Chamber of Commerce was created in 1985, with one branch in each prefecture. The FAO survey has revealed that prefectoral branches are mostly inactive. Few Retail-Wholesalers, very few Collectors and no Women Retailers are members. Problems are mostly of an organizational nature.

On the other hand, the project should have a positive effect on prefecture revenues. There should be an increase in fees collected from markets. Such an increase could come from either an increase in the number of weekly markets or an increase in market activities.

C. Transporters

Every prefecture has a taxi park from which transport vehicles depart. The owners generally rent out their trucks because either they are too old to drive them themselves (those with the money to buy a truck are often old traders who have saved up their money) or they have other jobs.

> "The person renting the truck manages it as he wishes: he is in charge of loading his truck with people and merchandise to go and come back from markets; he accompanies the truck all along the trip, pays for gas, 'makes arrangements' with the police agents along the way, and collects payment from clients/Collectors"[1]

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[1]TERPEND Noëlle, "Assistance à la commercialisation des produits et intrants agricoles", Mission Report submitted to FAO, February, 1991, p. 14.

There is an authorized tax for transport costs inside the country. In 1990, this tax was 125 francs per metric ton. But in reality, the tax is not fixed, mainly because of the instability of the cost of fuel. Prices are thus fixed the day of departure, depending on the price for gas paid by the renter. Prices can be fixed as high as quadruple the normal price. The cost evaluation is made according to the size and weight of items transported. Included within the transport cost is not only the cost of gas, but also the "prélèvements illicites" which are exacted all along the way by various forces of order (See Section V.C). Transport prices rarely include vehicle depreciation costs.

Transporters are represented by the Transporters' Union, created in 1988. The Union exists in each prefecture, where it has an office at the taxi park. Its role is to defend the interest of vehicle owners (trucks and taxis) with regard to the prefecture and the traders, to organize transportation at the prefectoral taxi park (to avoid crowding and anarchic rivalry), and to regulate disputes among transporters and between transporters and security services. The largest number of claims made by the Transporters' Union to prefectoral authorities up to now have been over the crucial problem of fuel supply, for example, giving the Union a special pump in order to get around the parallel market, but these repeated demands have not gotten anywhere.

The results which came out from the first Agricultural National Census in 1989 show the number of transport vehicles (See Table 2). The number of vehicles in the 33 prefectures is 860 heavyweight vehicles (véhicules lourds) and 484 lightweight vehicles (véhicules légars), making an average of 15 lightweight vehicles and 26 heavyweight vehicles per prefecture. Table 2 found in the annexes shows the breakdown of transport vehicles by prefecture. The average is practically the same for the prefectures touched by the PNIR and those which are not.

However, vehicles are divided unequally among prefectures, regions of Upper Guinea and Middle Guinea being less well-equipped. The table next page presents a list of prefectures with 10 heavyweight vehicles and less, and those with five lightweight vehicles and less (the letters within parentheses indicate the region).

Guinea's vehicle fleet is considered as one of the oldest on the African continent. The vehicles all over the country are in very bad shape. It is the vehicles which transport goods to and from the weekly markets which are the oldest and least comfortable, because, due to the state of the roads, transporters with new trucks prefer to use them on the national paved roads.

According to the FAO survey, trucks used for weekly market transport are generally five to ten tons. They are Russian-made and consume gas and not diesel. They are almost all between 15 and 25 years old. Traders thus live under very difficult conditions, due to numerous delays caused by break downs, accidents, insecurity, and discomfort.

	Heavyw. Veh. 10 T and less	Lightw. Veh. 5 T and less
PNIR's Prefectures	Dinguiraye (HG)	Dinguiraye (HG) Dubreka (Mar. G) Gaoual (Mar. G) Kerouane (HG)
Prefectures outside PNIR	Koubia (MG) Mandiana (HG) Tougue (MG) Youmou (FG)	Koubia (MG) Mandiana (MG) Tougue (MG) Dalaba (MG) Dabola (HG) Kouroussa (HG) Mali (MG) Siguiri (HG)

Supply of spare parts is very difficult in the prefectures. It is almost always necessary to go to Conakry for parts, and even there the availability of parts is not assured. For this reason, repair work is very difficult for transporters to accomplish, and broken down vehicles can spend weeks by the side of the road due to lack of parts or of money to buy them.

Impact of the Rural Roads Project on Transporters

Obviously, improvement of road conditions will result in less damage to vehicles, less time lost and consequently, lower transport costs.

Truck owners will hesitate less to use their new vehicles on rural roads, and the improvement of the flow of merchandise will lead to the purchase of new vehicles. It is thus to be expected that they will invest in an increase in the fleet of trucks, as they have done since the liberalization of the economy in 1984.

A better provisioning of weekly markets will allow long-distance transporters to increase slightly their productivity while lowering their transport costs. Currently, a number of the trucks which transport manufactured goods to the prefectures must return empty or with sand, for lack of merchandise, even though they often come from areas which are especially well-endowed with fruits and vegetables, such as Forest Guinea and Lower Guinea. The price charged to go is thus increased to include half the full cost of a return trip. With the help of a very simple information system which an organization such as the Transporters' Union could implement, the Transporters and the Retail-Wholesalers will be able to benefit from a better rural road network.

D. Small and Medium Contractors (SMCs)

In the past, large scale construction works were carried out almost exclusively by foreign contractors, because domestic construction contractors were extremely small and disorganized. As a result of this exclusion, domestic contractors had no opportunity to emerge. Maintenance works were done by force account, in particular for road work. Since the establishment of the new economic framework by the GOG, some medium scale contractors have appeared, coming mainly from neighboring countries. These firms have expanded their operations in Guinea's building sector and have started competing with large foreign firms for road rehabilitation and maintenance, and other construction works. There are also small Guinean contractors for the construction of relatively small buildings in towns. These firms usually have only minimal equipment, their workmanship is substandard and they have little experience with rural infrastructure projects.

In the last few years, a number of studies and tests have been carried out involving Guinean SMCs in an attempt to identify and support the most promising among them. One study was done by the firm SEGMENT in 1989, while undertaking planning for the PNIR. Through governmental organizations responsible for the registration of commercial enterprises, approximately 75 enterprises established and working primarily in the building sector, all located in Conakry, were identified. However, only five of these were judged capable of being involved in building activities costing up to $200,000 (SETRA, Aboli Agbo, SOPRING, SACOF and SEK). They could act as primary executing enterprises, but they did not have heavy-weight digging equipment and generally were not used to this kind of work. Sometimes these companies employed a foreign management, but they found themselves confronted with financial problems (low cash flow, lack of bank guarantee), due primarily to a deficit in equity funds. The study concluded that all these contractors lacked qualified personnel at all levels and needed training for management personnel corresponding to the contract acquired.

Another study is presently being carried out by MTTP. A preliminary report was produced based on interviews with entrepreneurs, which presents five legally constituted SMCs, seven "tâcherons" (small contractors), and a few more tâcherons working without formal registration.[1] The description of the five SMCs presented in the report portrays the kind of SMCs dealt with:

- SOGIT: Founded in 1986, capital of $30,000. The owner has a diploma from the Institute of Enterprise Management of Lyon, in France. The enterprise sub-contracted with European contractors until 1990, when it got its first direct contract, for $500,000, to construct a water supply point in the city of Kankan. SOGIT has two tip trucks, one 500-liter loader, two compressors, and water equipment. It has access to rented equipment. The company has eight permanent employees, of which five are professionals. It can obtain up to $20,000 from the bank in performance bonds. SOGIT has been in touch

[1]MTTP. Tâcherons et PME du secteur des travaux publics en Guinée - Eléments de monographies. (Draft Report), December, 1990.

with DNGR for the past two years, waiting for a contract linked to the PNIR.

- GUITER: Founded in 1988, capital of $15,000. The owner is an engineer trained at the University of Conakry. He created this enterprise by taking over what was left over of the work left uncompleted by the bankruptcy of a Togolese contractor who had taken it on. Its first contract was obtained in 1988, for $200,000. The contractor has always rented its equipment, particularly a D7, from an old Kissidougou mine, and he has started renting and leasing a DGH. He just acquired a grader (120B) in a broken-down state form the "Office des Projets Routiers" (OPR) in Kankan for which he needs spare parts. He has taken on two classmates to work with him, but it is difficult to pay their salaries when he is not on contract. He intends to work together with a Togolese well-known in the construction business.

- SEKROO: Founded in 1989. Capital of $15,000, headquarters in Labe. The owner returned to Guinea in 1989 after seven years in Senegal and Chad, where he worked for building contractors. SEKROO acted as sub-contractor to the Italian company Astaldi, for the repair of culverts on the rail line near Mamou and on the construction of a 22-meter concrete bridge roadway along the Telimele-Gaoual road; Astaldi provided the equipment and the drivers and SEKROO provided the labor. The entrepreneur contacted DNGR to be involved in the work of the projects financed by IFAD in the prefecture of Labe. Two contracts were obtained from MTTP in 1990 for the repair of works in wood and concrete, for a total of $80,000. Equipment was rented. The owner employs only laborers and does not deal with banks. SEKROO got one of the first maintenance contracts with DNGR this year, in the prefecture of Koubia.

- SOTRA BOIS: Founded in 1990, following the privatization of a training center in Forest Guinea belonging to the State, capital of $20,000. This enterprise was created by an old employee of the center, and is known by the name "Scierie-menuiserie du Centre forestier de Sérédou". It has one tip truck equipped with a crane, two tractors, and some chain saws. The sawmill is often used for MTTP, for construction involving wood. Its first large-scale contract was the repair of 21 bridges in the prefecture of N'Zerekore, for $70,000.

- PICOLI: Enterprise located in the prefecture of Lola. It has one grader (in a non-operating state), one DB, and one tip truck. This enterprise has sub-contracted several times with SOGUIPAH, for the construction of a residential complex and the development of an airport road.

The seven tâcherons identified are for the most part ex-MTTP engineers who did not pass the tests administered in 1988 as part of the administrative reform process. The tâcherons work mostly as the heads of small workshops.

They are provided with material, and they hire "cantonniers", who are paid local laborers responsible for specific sections of road.

A third, more in-depth study on Guinean SMCs in the construction and public works sector was just carried out by DNGR, through World Bank financing. The purpose of the study was to better determine the capacity and the needs of SMCs and to define a special component for the PNIR to prepare them to take on rehabilitation and maintenance contracts for its rural roads. The survey was carried out by a French consulting firm (H. Castaing Consultants) and final results have just been published.[1]

This study took place in February and March, 1991, in Conakry, N'Zerekore, Seredou, and Kankan. The consultant studies 23 SMCs of entirely Guinean capital, most of them working regionally and having already been involved in road maintenance activities integrated into rural development projects. The study identified the management problems encountered by these contractors (organization, financial management, cost analysis, submission presentation, personnel and stock management, etc.), as well as the constraints they encounter (size of markets, financial credibility, purchase of equipment, input supply). The consultant submitted recommendations for a support project appropriate to Guinea's present administrative and political context, making maximum use of the favorable factors engendered by the implementation of the PNIR.

The 23 SMCs analyzed formed three groups:

- 5 Medium contractors, with offices in Conakry: BATCO, SACOF, EGSAT, SOGIT, SETRA
- 12 Small contractors, with offices in Conakry: ADRAME, EGUICOR, SOGEBATI, EGT-SOGES, EGCM-TP, SOCITRAG, AFRICATEC, NOUVELLE DE BATIMENT, SOBAGEC, CETP, GUINEE SERVICES, SOGER SA
- 6 Small contractors, with offices in N'Zerekore, Kissidougou, Mamou, Dubreka and Kankan: GUITER, SERCO, SOTRA-BOIS, KOIVOGUI, STP, PIVI

Medium contractors had, in the period 1988-1990, an annual gross income between $300,000 and $1.4 million, and assets between $13,000 and $280,000; and small contractors had a gross income between $15,000 and $200,000 and assets between $2,000 and $40,000. Among the small contractors, 12 were considered "micro-enterprises".

The personnel policy of the majority of these contractors is to hire bit by bit, as required by their contracts. Only one contractor, EGSAT, maintains a permanent staff of over 100, and the small contractors employ anywhere between 7 and 37 on a permanent basis.

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[1]H. Castaing Consultants, Inventaire des PME guinéennes du B.T.P. pour leur articipation au PNIR - Etude d'un Dispositif d'Assistance-Promotion aux entreprises du B.T.P. - Rapport d'étude préliminaire / Documents annexes. Document prepared for MARA/DNGR, March 1991.

The medium contractors undertake most of their work with the public administration (between 40% and 70%), and three are regular sub-contractors with large contractors: SETRA, SOGIT, and SACOF, the latter in a proportion of 50%. As for the small contractors, their clients are mostly the public administration (70%) and sub-contracting is rather rare.

Three principal constraints were uncovered through interviews with contractors:

Personnel:

The lack of qualification of personnel is a chronic problem, and is attributable mainly to the suffocation of the private sector over many years and the departure of competent private agents out of the country. This concerns especially head foremen, site foremen, equipment operators, and specialized workmen. The large contractors jealously guard their qualified personnel.

Nevertheless, two factors allow for optimism in the future: (1) a number of ex-civil servants are attracted by money to be gained in the private sector; and (2) young university graduates have little hope of a career in public administration and have no other alternative except for the private sector.

Finance:

All the contractors complain about the lack of credit and the draconian conditions which commercial banks impose. Currently, the investments in equipment which the banks finance are made through SMC credit lines provided through international cooperation.

The principal reasons cited by the banks are the high risk inherent in the construction industry (problem of cash flow), the low level of enterprises' own capital, the practical and legal impossibility of using equipment as collateral, the absence of real guarantees from solvent partners, the lack of an efficient judicial system in case of reimbursement default, the weakness in the preparation of loan requests, and the obligation to use bank credit margin for buying fixed assets.

Procurement and Contract Management:

Guinean contractors participate rarely in large-scale public bidding, due to lack of guarantees, insufficient references and weak structures, but also due to delays in receiving payment from implementing agencies. In order to escape this vicious circle, the consultant recommends encouraging sub-contracting with large contractors, which would allow the smaller firms to avoid the guarantees required from bidders.

Impact of the Rural Roads Project on Small and Medium Contractors

As MTTP's and DNGR's road work in the future will be contracted to private enterprises and as the business climate in the country improves, there is good potential for the establishment of a small and medium scale construction industry. Normally, important income-generating spread effects should result first from sub-contracting with local construction firms but it would be only for the construction of drainage systems, small bridges or culverts, and for maintenance of short sections of roads. International construction firms currently working in Guinea, such as CBC (Couchery, Bourdin, Chaussé), Gendron Lefebvre, Astaldi, as well as engineering consultant firms, such as Louis Berger, have already sub-contracted with local firms or hired local engineers for their work.

The PNIR is designed to promote the expansion of private road construction firms to undertake road work. One of the means provided in the original plan was the creation of 2 Pilot Public Works Companies (SPTPs), based in N'Zerekore and Gaoual, with an initial State capital of $1.6 million, to undertake mostly emergency spot maintenance work. The SPTPs were to be equipped partly with heavy equipment then belonging to MARA, partly on a rental basis from the rental company that was to be set up by the GOG (SOGUITRO). They were to be established as private enterprises, but with a pre-determined work plan to follow with obligations vis-à-vis the DNGR. However, DNGR abandoned this component of PNIR, mainly due to a fear of any State structure in the sector, and the budget was used partly to fund the H. Castaing study mentioned above.

The new component which arose from the consultant's study is called "Dispositif d'Appui-Promotion" (DAP) (Support-Promotion Facility). This project would assist the 23 contractors studied with contract preparation, resource allocation, work execution, quality control, respect of deadlines, and cost control.

In addition, the study recommended that DNGR adopt a series of concrete and tangible measures to help the SMCs participate in the work of PNIR, including the following:

- breaking large lots into smaller sizes more appropriate to the capacities of SMCs;
- simplifying and speeding up procurement and award of contracts;
- preparing bidding documents adapted to SMCs;
- not requiring a provisional guarantee;
- requiring a lower start-up guarantee;
- speeding up payment procedures;
- assisting SMCs in on-site resource allocation when starting a contract;
- recommending SMCs to banks for obtaining a performance bond.

These advantages would be added to a large training component for the workers and work team leaders, particularly mechanical personnel, in collaboration with the UME in Mamou.

The results expected from the DAP are the following:

- the advancement of 13 micro-enterprises to the status of small contractors in the construction sector;

- the advancement of 7 contractors to the status of medium contractors in the construction sector;

- the advancement of 3 medium contractors to the status of well-organized small contractors in the area of public works.

It was proposed originally in the PNIR that international contractors' willingness to sub-contract certain tasks with small contractors (drainage systems, for instance) be taken into account in awarding them contracts for road rehabilitation work. However, bidding documents already prepared by DNGR when the Project Paper team arrived in Conakry, for rehabilitation of the first three lots to be financed by USAID (in the prefectures of Faranah, Lola, N'Zerekore, Pita and Telimele) did not include such a clause for the evaluation of bidders. DNGR's preference, as it was mentioned in an interview with the Director, is to prepare local SMCs by awarding them contracts for maintenance works and giving them access to the training offered by the Mobile School Unit (UME) based in Mamou (See Institutional Analysis) and assistance through the DAP. The DNGR director's opinion is that SMCs must prepare to compete in an open market, without feeling they are protected by some procurement rules of PNIR.

In short, PNIR's strategy to promote the expansion of local firms' capacity to undertake road work is the following:

- Awarding contracts for periodic and routine road maintenance;

- Implementing rehabilitation work on 161 km of rural roads in the prefectures of Coyah and Dubreka, and on 180 km of rural roads in the prefectures of Dabola and Dinguiraye, with small contractors and using labor-based methods (through contracts with ILO and funding from World Bank and UNDP);

- Offering technical and management training to small and medium local contractors, mainly through the services of UME and DAP.

For this year, DNGR has awarded its first maintenance contracts to two medium-size private firms, as well as one of its Rural Work Units (UTR), for implementing its program in three prefectures. The total amount is the equivalent of $380,000, financed from the Road Fund (Fonds Routier). The firms are BEG (Béton Bitume de Guinée - a French firm registered in Guinea), in the prefecture of Boffa, CKKRCO in Koubia, and the UTR posted in Faranah for maintenance works to be done in Dabola. For the 1991 program, it is planned to award three contracts for maintenance of 315 km in the prefectures of Labe, Kissidougou and Gueckedou, for a total of $490,000.

The USAID-financed component of PNIR is to make a direct contribution to SMC expansion in the construction sector mainly in two ways:

- Encouraging large international firms to sub-contract drainage works to SMCs. Large firms are, up to now and certainly for the next two years, the only companies capable of implementing rehabilitation of an entire lot of rural roads. Combined with a certain volume of road maintenance work contracted with DNGR and MTTP, these sub-contracts would offer the SMCs opportunities to generate income and receive technical and managerial training.

- Beginning the second year of the Project, awarding road rehabilitation contracts to SMCs, assuming that they are pre-qualified.

B. MARA and DNGR

As shown in the Institutional Analysis of this Project Paper, PNIR is expected to have a high impact on the capacity of MARA's and DNGR's staff to manage rural infrastructure development programs, mainly through its institutional support component.

Since the USAID-financed component is limited mostly to the implementation of road rehabilitation work, it is expected to have small direct institutional impact. However, with its participation at the level of about of about 40 percent of the $80.3 million total PNIR investment budget, activities to be implemented as part of USAID's component are crucial for the development of a sustained management capacity for DNGR's staff. Actually, without such a large investment component, there would be a high risk of building an empty shell.

The USAID Project includes a monitoring-evaluation component aimed at ensuring the capacity of MARA to gain full understanding of the impact of rural road improvement on the rural population. Technical assistant is included to help the Programming Division within DNGR (Cellule Programmation) to design and implement an impact monitoring and evaluation system.

II. PARTICIPATION

A. Participation of the Rural Population

The extent to which local communities are willing to commit their time or other resources to improvement of rural roads is crucial for the sustainability of the Projet.

Local participation is not a feature of the USAID component of PNIR. However, substantial innovative pilot efforts are already being implemented as special components of PNIR to ensure that post-implementation maintenance activities are undertaken in a timely and organized manner (See

Institutional Analysis). The immediate objectives of these pilot efforts is to develop a capacity at the community level and with NGOs to plan and implement rehabilitation and maintenance of feeder roads. New approaches are being tested, and experience has demonstrated that even in the most difficult cases, local participation would reach at least 15% of the cost of activities. Such efforts are in accordance with USAID's policy of assuring maximum recurrent cost recovery from users.

Local participation in the development of villages is often due to the fact that Guineans who live and work in towns continue to identify and follow the events that affect their relatives in their native villages. The strong social relations between many townspeople and villagers help form a bond of trust that facilitates the marketing of goods. Townspeople invest their money in the villages by building houses for their parents and for their own retirement. In Middle Guinea, for example, formal groups of people from the same sub-prefecture who work in towns such as Fria, Kamsar, Conakry and Kindia meet on a regular basis to discuss recent events in the rural areas. They also collect dues which their delegations periodically carry back to the sub-prefecture to help with the renovation of mosques, schools, roads, and other infrastructure.

In the prefecture of Mamou, they have created an NGO called the "Association for the Development of Poredaka" (ADP). The Project Paper team met with two representatives of the Association, who are DNGR's staff. Members of the Association include professionals living throughout the country as well as outside Guinea. There are regular meetings in the house of a pharmacist who lives in Matoto. The Association was created because of the need to reshape the road connecting the two sub-prefectures of Bofe and Poredaka, where traffic was interrupted during the rainy season. Equipment and technical help were obtained from MTTP and DNGR. Villagers participated intensively in the rehabilitation and drainage work on the 32 km of road, including two bridges, with funds coming exclusively from the Association and villagers.

The Rural Work Program (PTR) in the prefectures of Dabola and Dinguiraye offers a good example of the success of such projects recently implemented at the community level. The project, funded by UNDP and implemented by ILO, was conducted on a pilot basis for two years (1989-90). Its success led to the planning of a second phase on a larger basis, which is now in the process of being approved for four years. During the pilot phase, 115 micro-projects were implemented by the local population, on a contract basis, among which were 9 for building wooden decks and concrete deck bridges. In each case, the local population bought material and the project paid for labor. Availability of labour was not a problem. The project revealed that young men stay in the area as long as there are possibilities of income. For the second phase, it is planned to rehabilitate 180 km of rural roads in both prefectures and to build or rehabilitate drainage works and bridges on additional roads.

The project foresees that the rehabilitation of road sections and of capital works will be done by force account. The project will buy the necessary equipment, which will then be rented out to operators to enable

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them to carry out the work. At the time of a second contract, the ownership of equipment will be transferred to the operators, constituting a sort of payment in kind, the major portion of work always being paid in cash so that the operators can pay workers' salaries. In this way, the operators have the equipment to carry out work, and the project is relieved of the responsibility of management of equipment.

Before starting road work, the project will negotiate with the beneficiary population about responsibility for infrastructure maintenance, either partial or total responsibility. The contracts signed with local associations include a clause about the level and the conditions of participation of the various parties in the future maintenance of works completed.

The PP team visited the FAO-fimded Rural Development Project in the Fouta Djalon area, which covers a wide zone in the prefectures of Labe, Pita, Dalabe and Mamou. The project uses prefectoral extension services, with the participation of more than 70 staff employees at prefectoral and sub-prefectoral levels, and has succeeded so far with participation of local communities.

The "Forecariah Farm-to-Market Road Project", implemented by Africare, started this year with funds from USAID, for the rehabilitation of approximately 171 km of Standard C roads in the prefecture of Forecariah. The Project comprises a component for the establishment of a village-level pilot roads maintenance program and includes training in both road rehabilitation and maintenance.

PNIR has included an investment component for 250 km of standard C roads, a standard exclusively adopted for the "cul-de-sac" links between villages and production areas. These roads are to be used by animal-driven carts or by the occasional bush pick-up. They have a 3 meter non-gravelled surface which would not be improved under the project; they will get just enough maintenance to stay passable (a minimum of work necessary to keep the flow of traffic going), using labor-based methods. Rehabilitation work on drainage structures will be contracted to small contractors, NGOs or village communities. Of the total cost to be financed for bridges, culverts, etc., a minimum of 15% is to be borne by the communities benefitting from road rehabilitation and subsequent road maintenance is to be completely carried out by the communities.

Actually, in many villages, the desire to improve roads has already led the villagers to initiate road works without DNGR's technical assistance and supervision. This component of PNIR is therefore considered by DNGR's Director as strategic, for it is the best way to ensure its presence in remote rural areas and keep a certain control on the location and quality of drainage works build by local communities. However, since the PP team and USAID determined that this component was beyond the scope and financial means of RRP, DNGR is launching the effort with GOG funds and looking for other donor support.

Lessons learned from rural road development programs, as in the case of Bangladesh, show that the nature of incentives associated with most politically based decision-making processes is to emphasize immediate, short-term gains over longer-term benefits. This tendency is even stronger where there are weak methods available for beneficiaries to reveal preferences to decision makers and where there are weak links between the expenditures made on an activity and the burdens imposed on the beneficiaries of the service.

For the selection of rural road segments to be rehabilitated by PNIR, opinions of local authorities were taken into account through the social score referred to in Table 1, on page D-3. Interest communicated by the prefect was one of the four criteria used. His opinion was rated from 2 for high priority to 0 for low priority. Out of the 61 segments in the 11 prefectures included in the USAID Project, 44 were rated 2, 9 were rated 1 and only 8 were considered low priority (See Table 1 in the Annex). Since this rate was given a low weight in the calculation of the final "social score" compared to the other three rates (number of road-cut days in a year, number of sub-prefectures and markets served by the road and number/ importance of development projects in the area served by the road), it appears that, for these roads, a consensus has been reached to a certain extent among various interests existing in these rural areas on the need to improve feeder roads.

In the case of Standard C roads, which may reach 1,000 km in length, selection is made through recently created non governmental structures allowed at the village level (collectivités décentralisées), not governed by prefectoral authorities but supported by them. The villagers there elect representatives who organize to provide different services and request government assistance. The DNGR expects to have a budget to respond to needs expressed by these groups. However, it will be up to the DNGR, via the BTGRs, to make the final selection of road segments to work on, in order (a) to avoid inconsistency, and (b) to distinguish between prefectoral needs that may appropriately be met by DNGR's program on the one hand, and local needs that may be more suitable to intervention by the Rural Development and Environment Prefectoral Department on the other. In this regard, the triangular relationship which must be established among the DNGR, the BTGRs and the Rural Engineering Prefectoral Sections (SPGRs) will be crucial, for this will enable the DNGR to obtain, for a given operation, the opinion of the prefectoral authorities (who will be in close touch with the BTGR experts) and that of the village communities (who will have the ear of the SPGR agents).

B. Local NGOs' Participation

The liberalization policy of the Guinean government since 1984, as well as the decentralization of public powers in favor of decentralized local rural structures, has led over the past few years to a proliferation of NGOs of diverse origins and activities under the tutelage of the Ministry of the Interior and Decentralization (Secretariat for Decentralization). A count done by the Minister in 1988 found 125 NGOs officially registered working

in the country, 73 national and 52 foreign.[1] However, among theses NGOs, only 37 were actually operational, 17 of which were national.

NGOs are represented by the Guinean Office for Coordination of NGO Operations (SCIO).

The report cites 9 national and 13 foreign NGOs working in the rural development sector. These NGOs work in the following fields: reforestation, village water installation, rural community development, orcharding, market gardening, handicrafts, research and development, cooperatives, health, bottomland development, fishing, and fish culture.

The procedures for official creation of national NGOs in Guinea are simple. Their organizational structure has been governed by laws in effect since 1986. They must have a minimum of seven members, and they are exempt from taxes and customs duties on equipment and material to be used in their projects.

The results obtained by the NGOs up to now have been rather slim, considering their large number. A number of them have done nothing concrete other than obtain their authorization. In fact, a majority of national NGOs were born out of the unemployment situation of young graduates of the past few years, of the return of those previously exiled, and of the dismissal of a large number of civil servants through the administrative reform process. Their members lack experience, and the work methods used are often those inherited form the public administrative system.

A recent study of 43 NGOs was done by SCIO.[2] The 22 national NGOs visited in 21 prefectures represent a total of 39 projects and expenditures of $1 million. Most projects were carried out in Maritime and Middle Guinea, which the report's authors attribute to the difficulty in communication with Upper Guinea and Forest Guinea and also by the orientation of a good number of NGOs by those returning from Europe. More than half of investments were made in health, 11% were in the agricultural sector, and barely 1% were for work on rural roads.

SCIO's survey identified 6 national and 5 foreign NGOs having implemented rural road work, in 8 prefectures: Coyah, Dabola, Gaoual, Kindia, Kissidougou, Labe, Mamou et Siguiri. Four of these prefectures are covered by the PNIR, but none are concerned with the USAID Project. The NGOs are the following:

National NGOs:

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[1]MID, Ministère de l'Intérieur et de la Décentralisation. Les ONG en Guinée face au Redressement Economique National. Report prepared in collaboration with the World Bank. June, 1988, 6 p. + 8 annexes.

[2]S.C.I.O. Rapport sur les réalisations des ONG en Guinée. Conakry, November, 1990. 41 p.

- Association for the Development of Niagara (AMDN): rehabilitation of a 27 km road between the sub-prefectures of Niagara and Timbo, in the prefecture of Mamou;

- Association for the Development of Poredaka (ADP): rehabilitation of 32 km of road and drainage works between the two sub-prefectures of Bofe and Poredaka, in the prefecture of Mamou (See Section II-A);

- Association for the Development of the Prefecture of Gaoual (ADPG): rehabilitation of a road in the district of Wara;

- Association for the Development of Siguiri (ADESI): three bridges in the prefecture of Siguiri;

- Association for the Development of the Sub-Prefecture of Dogomet (ADSD): three bridges in the prefecture of Dabola.

- Guinean Union of Volunteers for Development (UGVD): rehabilitation of a 6 km road and construction of 4 bridges, in the sub-prefecture of Popodara, in the prefecture of Labe;

Foreign NGOs:

- Association de Coopération Technique (ACT-Belgique): rehabilitation of rural roads and drainage work in the prefecture of Kindia;

- Centre Canadien d'Etudes et de Coopération Internationale (CECI): construction of one bridge in the prefecture of Coyah;

- Centre Rural d'Education des Adultes (CREA): drainage work in the prefecture of Kissidougou;

- Groupe de Volontaires Civils d'Italie (GVC): construction of bridges in the prefecture of Labe;

- AFRICARE (USA): Executing Agency for the USAID-funded "Forecariah Farm-to-Market Road Project": rehabilitation of approximately 171 km of Standard C rural roads, establishment of a village-level pilot roads maintenance program, provision of training in road rehabilitation and maintenance, and small enterprise management.

One of the problems identified by the SCIO researchers was the lack of contact between national NGOs and the technical departments concerned with their activities. The NGOs have a tendency not to inform the technical departments of their work, and none of them sign any type of technical agreement with the department either. This leads to an absence of technical support and coordination of activities in the field. On the other hand, those carrying out the study found 33 agreements signed by foreign NGOs, 15 of these with the Ministry of Health and seven with MARA, which reflects the large number of projects in the health and agriculture sectors. On a sectorial basis, counting both national and foreign NGOs,

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the rural road sub-sector is the only one in which none of the projects referenced has been the object of an agreement. NGOs thus have a tendency to undertake rural road work without any form of collaboration with DNGR.

Impact of the Rural Road Project on Local NGOs

The USAID Project should have little direct impact on local NGOs, because none of them are likely to participate to road works included in the USAID-financed component (rehabilitation work will be awarded by contracts to private contractors).

The design team does not expect to see NGO involvement in road maintenance either, because they seem to be in a better position to support local communities at the construction level, mostly rehabilitation of Standard C roads, and for drainage work.

However, the PNIR is expected to have a positive impact on Guinean NGOs, through the improvement of DNGR's capacity to provide technical support to local community associations in rural infrastructure work, provided there is a better coordination between them and DNGR's structures.

III. SOCIO-CULTURAL FEASIBILITY

There does not appear to be any socio-cultural obstacle to project implementation. There is unanimity that the project would be beneficial to the rural areas in the country. Rural populations, as well as prefectoral authorities, are highly motivated and have proven to be capable of assigning financial and human resources for the improvement of feeder roads.

The project is suitable to the administrative context of Guinea. The measures proposed by IDA and adopted by the MARA and the DNGR to cope with its administrative inadequacies (See Institutional Analysis) appear to be sufficient to ensure project implementation success.

However, any shortcoming in the implementation of the PNIR institutional support component, funded by IDA, could result in a serious obstacle to the capacity of DNGR to manage its road development program. The DNGR could find itself unable to find competent private contractors to perform road work, or to manage its road maintenance program. In this case, AID should not hesitate to delay the implementation of the Project in order to protect the investment in the long term.

IV. GENDER CONSIDERATIONS

The proposed project will benefit women through expected positive impacts on farmers and small traders (See Section I-B).

Demographic data show that women compose the majority of the rural population in Guinea, mostly because of male migration outside the country and towards Conakry. Among the 11 prefectures covered by this Project, eight have a majority female population, with the highest score being in the prefectures of Pita (57%) and Telimele (53%).[1]

The project will also benefit groups of handicraft women. A large proportion of handicraft workshops in rural areas are operated by women. The PP design team met with a group of women operating a textile handicraft workshop in Labe. They emphasized the importance of having year round passable feeder roads to reach consumer markets regularly and at lower costs, and to obtain raw materials, in this case mostly cloth and natural dye. Small apiculture projects are also developing in the Fouta Djalon area.

The increased possibility of rapid evacuation of women suffering complications from childbirth is another project benefit of some importance.

A. Women as Farmers

Women's primary income earning activities in rural areas tend to be agricultural production, collection and transformation of natural resources, as well as small scale commerce. Local farmers are mostly women. They tend to have an increasing role in the garden production and marketing of vegetables and they have a prominent role in arranging for the transport and sale of household products to town markets.

Women usually reach the market place by walking, especially if road conditions keep trucks or taxis away. Men operate if "large quantities" (i.e., a bag of rice) have to be transported.

B. Women as Traders

The FAO study, referred to in Section I-B, reveals the importance of women in the two groups of traders located at the bottom of the small commerce scale.

(1) The majority of Collectors are women. Partly, this trade results in very low profits which only women are willing to accept. But also this type of work requires a certain skillfulness in handling goods, which women have acquired traditionally. Finally, those selling in the weekly markets are generally farmers' wives, and commercial relations are more easily established between women.

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[1]UNDP, Etude socio-économique régionale. Bilan-diagnostic au niveau des préfectures, (4-Volume report on the socio-economic situation in Guinea, disaggregated by geographic region), 1989.

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(2) Women Retailers (called "revendeuses") work on the Prefecture town markets. They sell back goods purchased from the Collectors or the Retail-Wholesalers. Men are very rare as Retailers. Women Retailers trade local products, mainly cereals and tubers, as well as various condiments (tomatoes, gombo, peanut butter, etc.). Their financial resources are very limited, with a cash flow of between 25,000 and 50,000 francs, thus obliging them to stay at the prefectoral level. The profits usually amount to between 500 and 1,000 francs daily.

C. Women as Road Maintenance Workers

Past experience has shown that the majority of workers involved directly in rural road rehabilitation and maintenance are men. Women participate by providing food for the workers.

V. SOCIO-POLITICAL ISSUES

A. Rural Road Maintenance

Long-term project sustainability resides in the capacity of the GOG to perform effective maintenance on all rural roads rehabilitated. Scarce resources could make it difficult to allocate the necessary budget to the DNGR. The GOG originally proposed to finance maintenance through a special tax levy. When this proposal was not accepted by the World Bank and the IMF, the Government in 1989 opened a special account financed through the national budget with the purpose of "financing maintenance on roads classified as national and regional".

According to its statutes, it contributes to:

- local counterpart funding for road investment projects financed by outside sources; and

- the maintenance of the rural road network.

The account is presided over by the Minister of MTTP. The national budget for road maintenance works rose from $2.4 million in 1989 to $3.2 million in 1990, of which only $320,000 was granted to DNGR for rural road maintenance works in three prefectures. It is estimated that the allocation for 1991 will rise to $3.8 million and that DNGR will receive about $490,000, a good sign of the willingness of the government to allocate financial resources for the maintenance of rural roads. It will be important, nevertheless, to follow carefully the evolution of the budgets allocated. The budget allocated to DNGR at the end of 1990 was received only after strong insistence on the part of DNGR that its needs be recognized, whereas MTTP received the lion's share.

Rural road maintenance depends also on the feasibility of attracting local and community level commitment either in kind or in local revenues.

The type of maintenance action which the rural population is likely to perform is routine maintenance (daily maintenance), which consists of patching potholes, pruning trees and clearing vegetation, maintaining drainage systems, cutting grass on shoulders and side drains and reporting problems to appropriate authorities. This maintenance can be executed in two ways: (1) set aside certain sections of the road (40-50 km) for small contractors (tâcherons), payments being made after each section is completed; (2) allocate certain sections of the road to certain village groups with responsibility for timely execution of work, the DNGR providing a set of hand tools for each village group. The local population can pay a proportion of the cost. The PNIR is testing various formulas through the pilot feeder roads component (See Institutional Analysis).

According to the UNDP's socio-economic survey conducted in 1987, the rural population is accustomed to provide in-kind or financial contributions for collective infrastructure in most prefectures. Most of the time, they use the resources for building schools, health centers or mosques. Investment on feeder roads represents between 10% and 25% of the total investment carried out by prefectures. In Kerouane, contributions from the local population represented twice the prefectoral budget in 1987; in Lola, villagers provided free labor for the rehabilitation of 179 km of road and 53 bridges; in Pita, villagers' contribution reached 49% of the prefectoral budget (70 km of road was rehabilitated and 7 bridges built). The survey revealed that, out of the nine prefectures covered by the USAID project, only three had a weak performance in terms of local participation in constructing collective infrastructure: Boke, Faranah and Telimele.

However, as is the case in other rural infrastructure development programs in developing countries, experience so far in Guinea demonstrates that the strong desire of short-term gains leads to preferences for repairs over protection and maintenance. This issue was examined by the PP design team during the field visit in the prefectures of Pita and Labe. According to the information received, toll systems and rain barricades are not known in Guinea. However, with better roads, heavier trucks could be tempted to use rural roads especially when the national road is blocked (as happens from time to time).[1]

This issue was raised with all the groups encountered: prefectoral authorities, representatives of the transporters, DNGR prefectoral personnel, and traders. In general, all share the opinion that it is better to protect roads against overuse (trucks which are too heavy, use of a section during a heavy rain) than to require a special financial contribution of users to fund a maintenance budget, particularly because there is a lack of confidence in the management of the money which would be accumulated. Where opinions diverge, however, is over the question of whom to give the necessary authority. Everyone agrees about the danger of giving this authority to the representatives of the police (See Section C below), but each group feels that it would be better served if one of its

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[1]The trucks which presently use rural roads are trucks of 3 to 10 tons. Cf. Noëlle Terpend, op. cit.

agents overseas the barricade. It thus seems improbable that this type of system will be introduced very soon in Guinea.

Consequently, we may expect, at least for the near future, that users will contribute mostly for repairs of roads and structures, because benefits are sufficiently obvious to them, and less for routine maintenance. This will need to be carefully monitored by the DNGR.

B. GOG's Policy Towards the Private Sector

One of the first policy decisions announced by the emerging government of the Second Republic was to discard socialism as the State doctrine and adopt the free market system as the new political orientation of the government body. In April 1984, the freedom to create private enterprises was offered to Guinean nationals for the first time in 26 years. Since then the new political orientation of the government has been to set the conditions necessary for the expansion of the private sector.

The political framework of the new economic orientation is contained in the famous "discours-programme" of December 22, 1985, delivered by the President of Guinea, General Lansana Conte. In this speech the President set the tone for the new economic philosophy which is based on the liberalization of the economy. One of the basic policies embodying this philosophy is the limitation of the role of the government to building basic infrastructure and providing basic services: communication, energy, roads, water supply, education, health, etc., and the creation of an institutional and legal environment to encourage the expansion of the private sector, particularly agriculture. To achieve its objectives the GOG has initiated a series of programs designed to foster private sector investment. The ambition of the new leadership is to build this sector into the engine of economic prosperity in the country.

The PNIR is seen as a supplement to GOG's effort to revise and ease regulations applicable to SMCs and improve efficiency to support institutions.

In the commercial sector, the situation is characterized by the lack of governmental regulation. With the arrival of the new regime in 1984, the retreat of the State from the industrial and commercial sector led to a rather chaotic situation where almost anybody did anything. An attempt at regulation was made in 1987, when traders were required to specialize in two or three types of products.[1] Nevertheless, in an attempt to reassure donors, the government decided to withdraw once again from the sector in September, 1990, and now everyone is free to carry out the commerce of their choice and to register with the authorities without furnishing details on their commercial dealings. This situation leads to a problem of follow-up, however, as it is practically impossible to obtain reliable statistics on traders in the country from government data.

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[1] TERPEND Noëlle, op. cit.

The FAO study brings up a problem for commercial development: the "handling tax" (taxe de conditionnement). This tax originates from a service which existed during colonial times, which persisted under the first regime and has continued to now. It involves a control service which is found everywhere (airports, weekly markets, stores, etc.), which verifies whether products are in a state to be eaten or if they conform to export/import standards, and if their storage areas are appropriate. The service has been under MARA's Department of Agriculture since 1980. It has employed more than 1,400 workers, but today the office employs 400, and this number will be reduced to 200 after the publication of authorized positions -- four people in each prefecture. This office collects a tax on Guinean products of agricultural, animal, or food industry origin. The study done by FAO made three important findings:

- With time, the role of tax collector has overtaken the service's initial role, which is quality control;

- The taxes are unevenly levied and change from one prefecture to another;

- It seems clear to a number of people who have dealt closely or more distantly with the handling service that part of the money collected is never declared and is kept by the handling agent.[1]

Since January, 1991, the collection of this tax has been suspended pending the reorganization of the handling service. The FAO study recommended its elimination, in view of the fact that it represents a significant hindrance to the movement of goods in the country and that it leads to serious diversion of funds on the part of handling agents. The study recommends that quality and storage condition and control become the responsibility of health services supported by advice given to farmers over rural radio.

C. Regulatory Constraints to Transporters' Operations

There is a unanimous opinion in Guinea that one aspect of the regulatory environment in which transporters operate is a real constraint to their operation and generates increase in transport costs: the unofficial taxes levied by representatives of the forces of order along the roads. The FAO study emphasized this problem, and the transporters' representatives encountered by the PP project team confirmed it.

In view of existing regulations, the forces of order (police, gendarmes, customs agents, the army in the forest area, and even, more recently, water and forest agents) are authorized to check vehicles, especially when these vehicles are overloaded or do not conform to correct driving regulations. These checks, according to the law, are only to be done on an *ad hoc* basis.

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[1] Ibid., p. 18.

However, the forces of order have gotten into the habit of parking their vehicles permanently in a certain area and stopping day after day all vehicles considered as being used for transport as well as trucks carrying merchandise. At these stops, it is practically impossible for a driver to leave without paying 500, 2,000, 3,000 francs or more. Of course these "fines" are paid without receiving receipts. They increase considerably the cost of transport, do nothing about the bad state of the vehicles, and discourage transporters from putting themselves right with the administration.

The representatives of the Transporters' Union mentioned, in an interview in the prefecture of Pita, that a trip to Conakry (approximately 400 km), can cost 50,000 francs ($70) in "tips", and this if the truck is in order and loaded according to the regulations, which happens rather rarely. The price for an overloaded truck or one with mechanical failings can thus be very high.

The FAO report emphasized that if the police applied a practical penalty (the unloading of passengers or baggage at the inspection site, for example), road regulation would be much more efficient for transporters.

D. Land Tenure

The question of land tenure, and the effect of road construction on land tenure was addressed by the design team.

The Guinean land code is in the process of elaboration at the present time. The focus of the new code is very different from earlier policy. Colonial land law arrogated all land to the state; some of this land was then given out as concessions to European colonists and business concerns. Registration of privately held land was an option, mostly used by Europeans, yet outside urban areas most land remained subject to customary tenure rules. The land policy of the First Republic was in stark contrast to that of the colonial regime: all land was proclaimed to belong to the state and private property rights were no longer obtainable. In reality, though, as in the colonial period, customary tenure systems continued to govern land use rights throughout most of the country.

While the proposed land code should lead to the evolution of private ownership, its provisions formally recognize that customary tenure systems prevail over much of the country, and it seeks to support local communities in their rights to land. Expropriation of land for public use will then be done with compensation to the owner.

With almost 2,000 km of rural roads to be rehabilitated, the PNIR will have to deal with expropriation for public use on a limited scale. Indeed, as it is planned, rehabilitation work will require only widening existing road courses. Most of the roads to be rehabilitated are now 3 to 4 meters wide, with no shoulder. Standard A roads will be 4.5 meters wide with 1 meter each side, and Standard B roads will be 3.5 meters wide with 0.5 meter each side.

Officials at DNGR explained that compensation for the addition of a narrow strip of land to the road course does not generate problems, mainly for two reasons: (1) villagers are very anxious to improve their roads and the concession they make is considered small in comparison with the benefits expected; (2) if a house or a building has to be destroyed because of road work, the community makes a collective effort to rebuild it and the contractor gives technical support, using his equipment if necessary.

E. Impact on Regional Migrations

The economic analysis included in the PID mentioned that "the population serviced by the considered roads [was] assumed to decrease slowly (-1% per year) in the without project case, and a little more quickly (-2%) in the with project case." The design team has not been able to confirm that assertion on the basis of data and information obtained.

According to the UNDP study of the socio-economic characteristics of Guinea, the migration of the country's rural population to date has been caused by two principal factors:

- the flight to neighboring countries resulting from the socio-political conditions which existed until 1984; this was the case principally for the prefectures of Telimele, N'Zerekore and Lola; despite the improvement in political conditions since then, a reversal in migration trend has been slow to develop: people return only if economic conditions improve, as has been noted in the prefecture of Lola;

- the departure of men for areas offering better employment opportunities (i.e., mining areas, urban centers, Conakry); the prefecture of Pita is the most notable case: the population density there is very high -- 48 inhabitants/km2, twice the national average -- while the area to the southwest remains lightly populated (16 inhabitants/km2) owing to its low level of economic development; men have emigrated in large numbers to all the neighboring countries and to Conakry.

The situation revealed so far by the pilot projects carried out in several prefectures corresponds more to the second factor. The local people have tendency to abandon their areas when roads become impassable due to rains, but are less likely to leave if roads remain open. This was the experience of UNDP and ILO in the prefecture of Dabola, on the road to Kindoye: one evaluation team found a road completely cut off and found its inhabitants hiring out their services in another zone. The evaluators recommended linking the depopulated region by first upgrading capital works and then working on the rehabilitation of the road.

After two years of work on the UNDP project in the prefectures of Dabola and Dinguiraye, the evaluators stressed the positive impact of a decrease in the exodus of youth.[1]

Overall, the limited secondary data available and the direct testimony obtained underline the positive impact which the improvement of the rural road network is expected to have on conditions of rural life in terms of agricultural production, income, health and education services, etc. Such improved conditions should diminish the attractiveness of urban centers and encourage rural populations to remain in their home regions.

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[1]UNDP, Programme Spécial de Travaux Publics à Haute Intensité de Main-d'Oeuvre - Projet GUI/87/014. Report of the Planning Mission for the PTR project in the Prefectures of Dabola and Dinguiraye, implemented in December 1990. Conakry, 1991. p. 4

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NUMBER OF TRANSPORT VEHICLES, BY PREFECTURES

	Lightweight Veh.	Heavyweight Veh.
PNIR's 16 prefectures		
Beyla*	11	31
Boke*	54	66
Coyah	10	12
Dinguiraye	4	10
Dubreka	5	12
Faranah*	11	18
Gaoual*	3	48
Kerouane*	2	19
Kissidougou	27	33
Koundara*	9	12
Lola*	15	15
Macenta*	24	25
Mamou	20	33
N'Zerekore*	32	44
Pita*	11	47
Telimele*	8	11
Total (Average)	246 (15)	436 (27)
Other 17 prefectures		
Boffa	18	16
Dalaba	5	14
Dabola	5	28
Forecariah	9	18
Fria	22	32
Gueckedou	19	25
Kankan	27	52
Kindia	58	38
Koubia	1	4
Kourousaa	0	15
Labe	42	75
Lelouma	7	20
Mali	2	19
Mandiana	3	6
Siguiri	20	48
Tougue	1	6
Youmou	1	8
Total (Average)	238 (14)	424 (25)
TOTAL 33 prefectures (Average)	484 (15)	860 (26)

*USAID-financed prefecture.

Source: MPCI/Direction Nationale de la Statistique et de l'Informatique. Résultats du recensement national de l'agriculture 1988-1989 - Tome 2: Résultats Préfectoraux. January, 1990, pp. 10-13.

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Segment #	Number of Villages	Length	Population Served	Hab/Km2	Social Note	Traffic	Interest of Authorities	Global Note
BEYLA								
8101	2	15	2500	7	20	12	2	73
8102	7	40	2500	10	18	12	2	71
8103	7	35	3750	3	17	14	2	34
8104	7	25	3750	27	10	110	2	149
8110	5	31	3750	7	7	74	1	104
8111	2	15	1600	5	20	14	2	57
8112	2	10	1600	3	16	14	2	29
8117	8	30	1600	11	3	14	0	76
Total	40	201	21050	9,1	13,9	33,0		74,1
BOKE								
1201	4	35	7000	39	14	24	1	97
1203	5	36	1600	9	10	27	2	152
Total	9	71	8600	24,0	12,0	25,5		124,5
FARANAH								
4301	4	15	3750	10	24	44	2	136
4302	3	13	3750	10	24	44	2	130
4303	6	18	1600	12	18	6	2	87
4304	4	24	1600	13	12	3	2	82
4306	6	45	2500	14	13	17	1	84
4309	1	9	1600	12	24	68	2	161
4310	4	17	1600	12	23	69	2	144
4313	7	30	2500	16	19	63	1	158
4316	3	31	900	5	16	58	0	126
Total	38	202	19600	11,6	19,2	41,3		123,1
KEROUANE								
5201	3	29	2500	23	17	23	2	89
5205	1	10	3750	87	13	87	1	87
5206	2	8	2500	62	11	62	1	136
Total	6	36	8750	57,3	13,7	57,3		104,7
LOLA								
8205	5	30	3750	22	20	95	2	187
8207	3	17	1600	19	15	24	1	160
8208	4	21	900	14	29	120	2	149
8210	1	9	3750	25	9	6	1	214
8211	2	24	3750	19	14	1	1	54
8212	1	16	1600	19	8	12	1	117
Total	16	126	15550	19,7	14,8	43,0		146,8

Segment #	Number of Villages	Length	Population Served	Hab/Km2	Social Note	Traffic	Interest of Authorities	Global Note
MACENTA								
8301	4	45	7000	13	21	22	2	102
8302	1	12	3750	20	20	22	2	135
8303	1	4	1600	29	20	22	2	169
8304	2	10	900	29	14	10	2	131
8308	2	18	1600	19	19	0	2	47
8309	6	30	1600	13	12	11	1	84
8310	4	20	900	10	16	36	2	102
8311	3	13	3750	40	10	68	0	152
Total	28	152	21100	21,6	16,5	22,9		115,3
N'ZEREKORE								
8404	1	7	2500	35	4	1	0	131
8405	5	23	3750	58	10	6	2	147
8406	2	11	3750	64	15	11	2	163
8407	1	9	7000	52	11	36	1	141
8410	1	9	2500	59	9	0	0	83
8412	4	21	7000	30	14	9	1	167
8413	4	20	2500	22	17	14	2	91
Total	18	100	29000	45,7	11,4	11,0		131,9
PITA								
7501	3	3	7000	86	26	260	2	213
7502	4	11	7000	85	24	260	2	220
7503	2	11	7000	72	17	250	1	179
7506	1	5	7000	72	22	140	2	286
7507	6	44	7000	62	16	26	2	108
7508	7	38	7000	37	10	12	2	153
7512	2	15	7000	29	18	50	2	148
7514	3	12	3750	27	13	116	1	125
Total	28	139	52750	58,8	18,3	139,3		179,0
TELIMELE								
6406	4	16	3750	22	15	12	1	113
6407	2	30	1600	15	14	7	1	84
6409	3	42	3750	21	9	21	0	98
6410	3	27	2500	26	13	39	1	131
6411	4	21	7000	28	11	20	1	144
Total	16	136	18600	22,4	12,4	19,8		114,0
USAID-FINANCED 9 PREFECTURES								
	124	1165	195000	29.0	14.7	42.8		123.7
PNIR-FINANCED 16 PREFECTURES								
	2072		426100		13.42			

ANNEX E

INSTITUTIONAL ANALYSIS

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3- Territorial Organization of Government

4- DNGR, "Tableau récapitulatif des formations liées aux pistes et constructions rurales" (1991-1993 Training Plan)

5- Présidence de la République, Décret portant attributions et organisation du MARA

6- MARA, Arrêté fixant le cadre organique du Bureau de Stratégie et de Développement

7- MARA, Arrêté fixant les attributions et l'organisation de la DNFPR.

8- Présidence de la République, Arrêté conjoint fixant le cadre organique de la DNFPR du MARA.

9- MARA, Arrêté fixant les attributions et l'organisation de la DNGR

10- Présidence de la République, Arrêté conjoint fixant le cadre organique de la DNGR

11- MARA, Décision portant nomination des chefs de division à la DNGR

12- MARA, Décision portant nomination des chefs de cellule et de section à la DNGR

13- Présidence de la République, Décret portant création, fonctionnement et organisation des Bureaux techniques de Génie rural (BTGR)

14- Cadre organique du BTGR de Kindia

15- MARA, Arrêté portant nomination des chefs des BTGR, de l'UME et de la Base Logistique de Matoto

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17- Présidence de la République, Décret portant création, fonctionnement et organisation de l'Unité Mobile Ecole (UME)

18- Présidence de la République, Arrêté conjoint fixant le cadre organique de l'UME

19- Présidence de la République, Décret portant missions et organisation de l'Administration Préfectorale

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20- Présidence de la République, Décret portant attributions et organisation de la direction Préfectorale du Développement Rural et de l'Environnement

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ANNEX E

INSTITUTIONAL ANALYSIS

I. THE MINISTRY OF AGRICULTURE AND ANIMAL RESOURCES (MARA)

A. Organization of MARA

Beginning in 1985, when the restructuring of the agricultural ministry was launched, the Government brought all state activities in the agricultural sector under a single ministry and reduced the level of staff from approximately 15,000 civil servants to 5,000. The Ministry of Rural Development was created and entrusted with responsibility for crop, livestock, fisheries, forestry, meteorology and rural infrastructure development. In 1988, the name was changed to the Ministry of Agriculture and Animal Resources (MARA).

The current configuration of the Ministry is provided in Document #1. MARA contains a cabinet of counsellors to the Minister, six operational departments for technical activities ("directions nationales"), including the National Department of Rural Engineering (DNGR), and a separate unit for administration and finance. MARA is unusual, however, in that its planning and evaluation unit, the Bureau de Stratégie et de Développement (BSD), is attached to the Secretary General's office rather than existing as a separate department. This arrangement gives the Secretary General's office an important operational role and dilutes the authority of the head of the BSD.

In addition to its central departments, MARA currently oversees some 84 projects throughout the country. Document #23 provides a list of these projects. Most projects are associated with one or more ministerial departments. Large projects are often managed by semi-autonomous services ("services rattachés"), thus being administratively more efficient and allowing financial monitoring and reporting to be tailored to requirements of donor agencies. The National Rural Infrastructure Project (PNIR) is one of these existing large projects that provide to specific departments logistical and technical support, personnel training and financing of certain field activities (See Section III). The Livestock Department, as well as the Fisheries, Forestry and Rural Extension Departments, have support projects, but the Agricultural Department and the BSD are without an associated project except for some activity remaining from the terminated Second Agricultural Services Project (World Bank).

The areas in which MARA currently provides services to agriculture include agricultural statistics, economic analysis and policy formulation, agricultural extension, crop protection and quality control, forestry

management and protection, animal health and production support, fisheries management and rural infrastructure development.

Under new guidelines to reduce staff and to integrate functions in the field, MARA will be decentralized so that resources and staff will be concentrated at the prefectoral level, while regional and central staff will be reduced. Central staff levels have already been cut significantly, but reductions have not yet been put into effect in the regions and prefectures.

B. Strategy and Development Office (BSD)

The BSD was created in 1986 as part of the Second World Bank Agricultural Services Project to provide MARA with logistical support, analytic capacity, and policy advisory services. The project was ended prematurely, however, because it was not perceived to be achieving its objectives. Nonetheless, the BSD has continued to exist, and it moved into a modern, newly constructed building (funded by the project) at the end of 1990.

The BSD retains responsibilities for planning and strategy formulation, and for investment selection and evaluation. The current capacity to carry out these functions appears to be limited judging from the resources allocated since the withdrawal of the World Bank's funding and from the documentation that is available. With the exception of two reports on production and marketing of rice and tree crops, there appear to be no BSD reports presenting any statistically based analysis of issues in the agricultural sector.

The BSD has no donor-funded specific projects for the coming years.

1. Organization of the BSD

The BSD is made up of 3 services, apart from secretarial and logistic support. These are:

(1) Project Study and Analysis, charged with reviewing all projects submitted to MARA. The BSD initiated a procedure to coordinate the programming of rural sector projects with the national investment budget elaborated by the Ministry of Plan. This process is an important step in rational investment planning but does not go far beyond matching sources of financing with projects that have been identified. There is little capacity to appraise the long-run economic value or financial feasibility of projects.

(2) Macroeconomics and Planning. This division could play a vital role in conducting economic and other types of policy analysis required for broad-based policy decision, but the division is currently relatively ineffective.

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(3) Monitoring and Evaluation. The BSD had initiated a system to monitor rural sector project activities by collecting data on an annual basis from regular project reports, but the initiative came to an end in 1989 due to lack of resources. The system provided a good central source of information about the intended and actual results of all projects in the sector, including the lines of credit, and their effects in the fields. However, it did not include ex-post evaluation of projects using field survey techniques, nor did it provide indicators of project effects on target populations.

The Monitoring and Evaluation Service may work for various development projects, for system design and for training project teams in monitoring and evaluation. However, it works mostly on an ad hoc basis. There is today only one projet which receives an input from the Service: the Rural Extension Project ("Projet National de Vulgarisation"), funded by IDA. DNGR has initiated contacts with the Service, envisioning its collaboration to design a monitoring and evaluation system and to train the Department's staff.

The Service is equipped with three computers -- two IBM compatible and one MacIntosh -- but two are broken and there is no budget to repair them.

Until recently, the BSD included the Statistics and Documentation Service, created within the World Bank's project. This unit launched several specific surveys, and served as a training ground for the current statistics personnel at MARA. It is now developing separately under a FAO project that continues the agricultural statistics survey (SPSA) and will be replaced by a full department in MARA, to be called National Department of Statistics and Data Processing ("DNSI - Direction Nationale de la Statistique et de l'Informatique") (See Section III B).

The BSD included a Technical Support Division for Rural Engineering, which became the Rural Roads and Buildings Division at the DNGR.

2. Staffing of the BSD

The BSD's ability to assist the Secretary General is weak due to an insufficient number of trained and experienced staff. Only 14 designated staff remain, out of the 50 professional staff the BSD had by 1989 when World Bank funding came to an end. This large reduction is due primarily to the Administrative Reform and the transfer of services to other departments (like, for example, Rural Engineering, mentioned above), but the World Bank's early withdrawal caused the departure of some of the most experienced staff who went to work for other projects.

Today, each of the three Services has three staff members, i.e. one Chief and two Analysts, but with only one Analyst on duty. These are:

- At the Project Study and Analysis Service: two rural engineers, both with an education in Eastern Europe.

- At the Macroeconomics and Planning Service: one livestock technician and one economist with a specialization in mathematics, both educated in Guinea.

- At the Monitoring and Evaluation Service: one livestock technician and one rural engineer, both educated in Cuba. The third staff person is an agricultural economist who has just returned from his education program in the US, but has joined a rural extension project team.

All the BSD staff received short term training related to their working fields, in Guinea and in foreign countries, mostly in France.

C. Training and Rural Promotion Department (DNFPR)

DNFPR is responsible for MARA's staff training and development, as well as agricultural extension activities. Despite the high staffing levels which continue to exist in the regions, almost no material resources have been made available for agricultural extension for many years. The effectiveness of these services is thus severely limited. The director told the PP design team that the primary needs of DNFPR are in the areas of training (the managerial staff as well as the farmers) and in infrastructure. The building where the Department is currently housed is in terrible shape.

Several rural development projects funded by international development agencies provide extension services to rural populations in various areas of the country. One example is the FAO-funded Rural Development Project in the Fouta Djalon area (1987-1991). The project covers four prefectures, Dalaba, Labe, Mamou and Pita. It uses prefectoral extension services, with the participation of more than 70 staff employees at prefectoral and sub-prefectoral levels: inspectors, agricultural technicians, community development specialists, etc. Training is an important component of the project, and the staff is well equipped for its tasks.

The Rural Work Program (PTR), funded by UNDP and implemented by the International Labor Office (ILO), was conducted on a pilot basis for two years in the prefectures of Dabola and Dinguiraye, (1989-90). Its success led to the planning of a second phase on a larger basis; the project paper has been submitted and it is in the process of being approved for four years. One of its immediate objectives is to reinforce the capacity of decentralized administration to manage the development of rural infrastructure. A technical assistant is included for on-the-job training of prefectoral staff in rural engineering, forestry, agronomy, mechanics and community development support.

1. Organization of the DNFPR

The new structure of DNFPR approved at the end of 1988 has three divisions: Extension, Training, and Micro-Projects and Peasant Organizations.

- The Training Division is responsible for needs studies, planning, and follow-up of activities and offers pedagogical support, notably through agricultural manual development. This division is in charge of coordination of overseas training programs for the agents and for the training of those who have been identified for training as a result of tests administered as part of the administrative reform process;

- the Extension Division is responsible for the coordination of agricultural extension activities throughout the country;

- The Division of Micro-Projects and Peasant Organizations is responsible for stimulating the development of peasant groups by encouraging them in the development and execution of participatory projects. This division has 4 sections, including one to promote the advancement of women in agriculture.

In addition, the DNFPR is made up of 6 "services rattachés":

- The Agricultural Extension Pilot Project
- The National Center for Retraining and Agricultural Extension of Bamban (Prefecture of Kindia)
- The Experimental Center for Market Gardening Activities of Dalaba (CEPAM)
- The National Center for Retraining and Agricultural Extension of Yatia (Prefecture of Faranah)
- The Rural Extension Center of Tindo (Prefecture of Faranah)
- The Bee-Keeping Center of Labe

2. Staffing of the DNFPR

The DNFPR has 62 authorized positions. Top management staff includes one Director and Assistant Director, one Chief of Administrative Services, three Division Chiefs and ten Section Chiefs. The Department is currently developing a personnel strategy and training program for the managerial staff. When it is completed, they will be asking for support from various donor agencies. They would like to use Rindo, Yatia and Bamba centers as training centers for the agents as well as farmers. They currently have funds from the Chinese to restore Yatia and Bamba.

Each prefecture has a Rural Development and Environment Prefectoral Department where DNFPR has staff specialized mostly in agronomy, rural engineering and livestock health (See Section IV-C). The staff members are located in key positions as the involvement of people at the community level is concerned, be it for agricultural purposes or for building rural roads or social infrastructure (health centers, schools, etc.).

II. THE NATIONAL DEPARTMENT OF RURAL ENGINEERING (DNGR)

Within MARA, the DNGR is responsible for rural roads, buildings and structures, and irrigation and drainage works. Large trunk roads and other public structures are the responsibility of the Ministry of Transport and Public Works (MTTP) (See Section IV-A). Until now, the DNGR has been planner, designer and builder of nearly all important physical public investments in the rural sector. For this purpose it built up an impressive stock of equipment over the past several decades. This equipment was, however, poorly maintained and underutilized.

To correct this problem, the DNGR has reorganized to remove itself from construction activities and to leave them to the private sector. It will continue to provide technical assistance services as planner and designer of projects and as monitor and controller of construction activities.

A. Organization of the DNGR

The reorganization of the DNGR became effective in April, 1990 (See Document #9). The organizational chart is annexed (Document #2).

The permanent core structures underpinning the execution of the DNGR's program are 3 Technical Divisions, 4 Support Services (SA) and 8 Rural Engineering Technical Offices (BTGR) referred to as "Services rattachés".

The 3 Technical Divisions are:

- Rural Roads and Buildings (Pistes rurales et Bâtiments ruraux), responsible for the design, coordination and monitoring of the road construction and maintenance program; it includes 3 Sections:
  - Technical Studies and Work Program
  - Maintenance
  - Monitoring and Control
- Hydro-Agricultural Development (Aménagements Hydro-Agricoles)
- Agricultural Mechanization (Machinisme Agricole)

The 4 Support Services are directly linked to the Director. They are:

- Programming Cell (Cellule Programmation), responsible for the management of the Rural Roads Master Plan, for program coordination, monitoring and evaluation.
- Training Cell (Cellule Formation), in close relation with MARA's DNFPR, is responsible for DNGR's staff training and development, and for promoting the creation and expansion of Small and Medium Firms and training of their staff.

- Technical Support Service (STA), for topography, hydrology, drawing and printing, and for documentation and archives services.

- Administrative and Financial Cell (CAF), responsible for Personnel Management, Accounting, and Equipment maintenance.. While all of MARA's administrative matters are overseen by the Department of Administration and Finance (DAAF), which is attached to the Secretary General's office, each department of MARA also has a CAF for its own management purposes. Given the poor communications within MARA, this structure appears to improve management efficiency by decentralizing administrative and financial decisions. Before MARA's restructuring of 1988, the CAF was responsible for the disbursement of salaries and for certain accounting tasks within specific projects. Today, the CAF is responsible for managing the central office's operating budget (of which 73% is for vehicle maintenance) as well as its equipment budget. For the "Services rattachés", the DNGR allocates the funds, and the CAF supervises the disbursement for equipment, its responsibilities for operating budgets being limited to control.

BTGRs were officially created by a decree in October, 1990, and were given administrative and financial autonomy and statutes of "Services rattachés". They are, therefore, decentralized services of DNGR in the field, reporting directly to DNGR, with functional relations with SPGR at the prefectoral level. Their functions are described in Section IV-B.

The Logistical Base of Matoto (BLM) and the Mobile School Unit (UME) also have the status of "Service rattaché". The BLM is responsible mainly for maintenance of the Department's vehicles. Because of its building and logistic facilities, it is also responsible for stocking and distribution of food supplied by the World Food Program.

UME is a "Service rattaché" created in October, 1990 (See Document #17) to carry out training activities under the PNIR project, for both government and private sector staff. The UME is located in Mamou; the Technical Assistance team arrived and buildings are being rehabilitated. It will be equipped as a medium scale contractor, mainly with the equipment that formerly belonged to the Road Projects Authority (Office des Projets Routiers - OPR). The School will act as a Training Center and a "School Brigade", dispensing both classroom and on-the-job training. The latter training will be done by implementing road maintenance contracts awarded by DNGR.

UME's statutory functions are as follows:

- training of public and private sector (construction and maintenance) personnel, including management, supervision, and operations personnel, for management and implementation of road work;

- delivery of contract services for work requiring special skills and practical on-the-job training;

- evaluation of the operational capacity of those receiving training, with an eye toward offering them enterprise contracts as part of practical training;

UME's trainees will be Government and small- and medium-sized contractor (SMC) personnel, as well as equipment operators, mechanics, and technical and administrative support staff.

Intervention Services (SI) exist as remnants of former Rural Engineering Brigades which worked on force account. These services are to be abandoned by DNGR as they move towards becoming private contractors. They were created under development projects funded by international donors. They include the three Rural Work Units (UTR), located in the prefectures of Boffa, Faranah and Guackedou. Faranah's UTR is one of the contractors who was awarded a maintenance contract this year by DNGR.

B. Staffing of the DNGR

In order to provide DNGR with staff of specific profiles for the existing and new structures coming under the PNIR, the staffing plan was made up of civil servants with "confirmed" status, i.e. those who passed the tests recently given under the Government's administrative reform program. In addition, on an exceptional basis, some personnel were allowed to come from the category of staff "to be retrained", created as a result of the tests. No external recruitment was allowed other than in truly exceptional cases. Among the 669 employees "confirmed", DNGR accepted 326 and hold 264 more to be retrained, for a total of 590.

A total of 628 positions have been authorized in the "cadres organiques" formally approved by ministerial orders in 1990, of which 90 positions are at the central office of the DNGR. DNGR's central office staff includes 58 engineers and 7 assistant engineers. The remaining positions are divided as follows:

- 264 are located in the 8 BTGRs, including 136 engineers, 32 assistant engineers and 8 sociologists;

- 30 at the UME, of whom 7 are engineers and 7 are assistant engineers;

- 11 at the Base Logistique de Matoto, including 2 engineers and 4 assistant engineers;

- 231 at the territorial level, within the SPGRs.

The table on the next page shows the 58 key positions at DNGR. Of the total, however, only the 26 high managerial staff have been officially designated (most of them in November 1990). These are:

- the National Director,
- the Chief of Administrative and Financial Service,
- the 3 Chiefs of Support Services,
- the 3 Chiefs of Technical Divisions,[1]
- the 9 Chiefs of the Divisions' Technical Sections
- the 8 Chiefs of the BTGRs,
- the Chief of UME,
- the Chief of BLM.

All the other positions remain to be filled by decree of MARA's Minister (a new Minister was designated in January 1991). Among these, at least 50 are key positions for the success of PNIR, of whom 41 are the Chiefs of Sections in each of the 8 BTGRs, and for whom the training program scheduled for this year could suffer delay (See Section III-A-1).

Special care must be taken in staffing the BTGRs, since they must represent an appropriate mix of expertise to cover their fields of responsibility, i.e., programming and supervision of road works and bottomland development, and monitoring and evaluation of the work of prefectoral services in these areas. Moreover, the BTGRs have authorized positions that are likely to permit the creation of the multi-disciplinary teams required to undertake both feeder road and bottomlands development. The core staff for each BTGR comprises 2 civil engineers, 8 rural engineers, 2 agronomists and 1 sociologist.

LIST OF KEY POSITIONS (1)

Positions	Number
DNGR	
- National Director (*)	1
- Chief, Administrative and Financial Cell (*)	1
- Chief, Programming Cell (*)	1
- Chief, Training Cell (*)	1
- Chief, Hydro-Agricultural Development Division (*)	1
- Chief, Rural Roads and Buildings Division (*)	1
- Chief, Agricultural Mechanization Division (*)	1
- Chief, Technical Support Service (STA) (*)	1
- Chiefs, Sections (*)	9
Chief, Mobile School Unit (UME) (*)	1
- Chiefs, Rural Engineering Technical Offices (BTGRs) (*)	8
- Chiefs, Sections in BTGRs	32
TOTAL	58

[1]The Chief of the Agricultural Mechanization Division acts as DNGR's Assistant Director.

(1) An asterisk (*) indicates staff already in post; the remainder of the staff is still to be designated by decree of the MARA's minister as a condition of Credit effectiveness under the IDA PNIR loan.

Among DNGR's 17 managerial staff, there are 15 engineers, of whom 8 rural engineers, 2 rural engineers/agronomists, 1 agronomist, 1 civil engineer and 3 mechanics. All of them received their engineering degree before 1984, and six of them in a foreign country (four in Cuba, one in U.S.S.R and one at the New Mexico State University in the U.S.). All have received training courses in Guinea and abroad, for a duration of one week to one complete year. Most of these courses were held outside Africa, i.e., 40 courses in France, four in the U.S., two in Italy, and one in each of the following countries: Switzerland, Netherlands, Israel, Japan, Thailand, U.S.S.R. and Cuba. African countries where training courses were held are Senegal, Ivory Coast, Burkina Faso, Sierra Leone, Morocco, Liberia and Mali.

III. OTHER INTERVENTIONS IN THE AGRICULTURAL SECTOR

As said above, MARA oversees development projects all over the country. Data provided by the Ministry of Plan for the 1991-1993 public investment program show a total of 84 projects that fall under the responsibility of MARA, divided into 7 sub-sectors, totalling $321 million (See Document #23).

Agriculture:	$ 200,148,766
Livestock:	$ 9,122,740
Fisheries:	$ 31,118,493
Forestry:	$ 43,062,466
Village Water Supply:	$ 34,731,370
Water Supply:	$ 1,299,726
Meteorology:	$ 1,589,041
Total:	$ 321,072,602

PNIR has by far the highest budget among all projects, adding up to $ 39.4 million, which is 12% of the total budget, and 20% of the agricultural sub-sector budget. Two more projects in the sub-sector have an importance for the success of the USAID Rural Roads project: Technical Assistance to the BSD and the Permanent System of Agricultural Statistics (SPSA)

A. National Rural Infrastructure Project (PNIR)

In the context of the Structural Adjustment program (SAL) undertaken by the Government of Guinea, the 5-year National Rural Infrastructure Project was prepared in 1988-1989 and started in 1990, with the funding of IDA and the

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German Government. The initial total budget for 5 years was $88.8 million.[1] The project is aimed at addressing one of the major technical constraints to agricultural growth which is the dilapidated state of rural infrastructure. The project assists Government in implementing the SAL policies in the rural infrastructure sector by (a) strengthening the capacity of the concerned institutions to plan and oversee the execution and maintenance of rural infrastructure, and (b) promoting private sector development through participation of small and medium scale contractors and grassroots organizations in building and maintaining rural infrastructure.

In 1989, IDA financed a Rural Roads Master Plan which was used as the basis of the PNIR and a Credit Agreement was signed with the Government in April 1990 for the equivalent of SDR 31,300,000 subject to co-financing by USAID, FAC, KfW of an additional amount equivalent to $34,300,000, mostly for the rehabilitation of feeder roads.

The PNIR was established under the tutelage of MARA. However, in order to ensure more administrative autonomy, it was decided to locate it under the authority of the Director of the DNGR, who acts as project manager.

1. Institutional Support

The institutional support component of the PNIR provides support to DNGR and its decentralized services recently restructured under the Reform Program. This includes technical assistance, staff training, construction and renovation of offices and facilities, and provision of miscellaneous equipment. This component also provides for similar support to four of the eight BTGRs. It is funded almost entirely by IDA.

In the area of institutional support, the project has a dual objective:

(1) to strengthen government institutions so that they gradually acquire the capacity to assume their permanent responsibilities (planning, technical supervision, establishment of norms and standards, post evaluation, etc.), and

(2) to assist small and medium scale contractors so that they are able to execute tasks previously carried out by the Administration (e.g., emergency maintenance), and gradually move to replace large foreign-controlled contractors for tasks such as road rehabilitation and periodic maintenance.

As mentioned above, the project has already created the legal structure necessary to meet these objectives. The reorganization of the DNGR was formally approved and new "Services rattachés" were created. New staff positions ("cadres organiques") were also signed by Ministerial decisions.

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[1]With the $6 million increase in the USAID component, the budget now totals $94.8 million.

Technical Assistance

Technical assistance consists of resident and visiting experts. Internationally recruited resident experts are placed in advisory positions and give priority to the training of national staff, in line with government policies. They assist DNGR in all its activities, including rural engineering, administration, accounting, finance, procurement and contract management. Five resident experts are already working at the top managerial level, within the Director's Office, the Hydro-Agricultural Development Division, the Training Division, the Administration and Finance Cell, and one expert for two of the four BTGRs included in the PNIR.[3] Two additional experts are already recruited and should arrive in the two remaining BTGRs soon.

A contract was signed with a Canadian firm selected for the UME, which includes one training engineer for three years and one training mechanic for five years; enterred on duty in 5/1991. This contract also includes 35 person-months of short-term assignments.

Among visiting experts planned at the top level are one agriculturist, one road economist and one agricultural economist, one computer specialist, one financial auditor, one work supervision specialist and one environmental specialist. A total of 75 person-months is planned. The emphasis is to be placed on periodic visits of 2 to 3 weeks by visiting experts, each visit resulting in a 3-month work program for each key DNGR staff person. This approach might, in the short term, result in relatively slow progress of DNGR's work; however, it would place the burden of implementation responsibility entirely on national staff and ensure the sustainability of investments in technical assistance.

Staff Training

One of the main risks identified in the World Bank's staff appraisal report for PNIR was the weakness of the institutional structure, and it was proposed to minimize it through a formalized training program to be carried out alongside the training provided through the visiting expert program. The target groups for this training are:

(a) Government staff, including not only that of DNGR but also the staff of the other technical ministries concerned, in particular MTTP; and

(b) private sector contractors, including the staff of SMCs and the employees of local community organizations.

Training activities should be undertaken through a variety of means, including in-house training, local seminars, and external training

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[3]The BTGR's resident expert is presently working within the Rural Roads and Construction Division while his assigned BTGR of Mamou is installed.

sessions. The UME in Mamou will play an important role because of its responsibilities towards the private sector operators and its capacity to offer practical training.

The PNIR appraisal report indicated the estimated needs in training for DNGR's staff. A total of 9,387 person/weeks are planned, of which 14% should be done outside the country (Europe & North America / West & Central Africa).

Staff	Pers./Wks.	% of Total	% outside Guinea
DNGR's central office:	2,633	28%	21%
DNGR's Territorial Service:	2,304	24%	13%
BTGRs and UME Staff:	2,414	26%	17%
Private contractors & local communities:	2,036	22%	0
Total:	9,387	100%	14%

A training program for the next 3 years (1991-1993) was prepared under the supervision of the Technical assistant assigned to DNGR's Training Cell (See Document # 4) and the budget is allocated for the first year.

Priority was given to Chiefs of Divisions, BTGR Chiefs, UME and BLM, and Technical Sections Chiefs both at the DNGR's central office and in the BTGR's. During Year 1, training will be provided mainly in programming, work management and control, Master Plan management and consulting contracts. Technical staff will also receive refresher courses in rural engineering. Year 2 will focus on budget management and monitoring/ evaluation, and an 8-week training course is planned in geo-technic studies at the University of Conakry. Training in feasibility studies should begin in Year 3.

UME's training program is to be planned during the first year of the experts' assignment (1991-1992).

However, two important problems remain for the implementation of the training program, which could result in delays in the implementation of the PNIR.

(1) First, a large number of DNGR staff members have not been officially appointed, including the entire technical staff of the DNGR as well as the BTGR, excepting the heads. This will slow down considerably the implementation of the work plan for 1991;

(2) Secondly, the level of the employees to be trained is not really known. These employees were trained sometime between 1975 and 1985

and since that time have not worked, either for lack of equipment, or simply for lack of work in their field. The Training Cell for this reason decided to administer tests to certain workers, the results of which up to now have not been too good. For example, the tests measuring basic knowledge given to topographers (covering math, geometry, etc.) showed the following results: out of 40 people, the highest score was 7 over 20 (scored by one of the few employees who had done topographical work in the past few years) and 36 received a score between 2 and 0.

Office Facilities and Equipment

DNGR's office space requirements are estimated at about 900 m2. The staff is presently housed in Conakry's downtown area, in a sub-standard building dating back to the colonial era, whose total area is only about 300 m2. The staff will be relocated to a 2 ha site belonging to MARA in Matoto, Conakry's burgeoning industrial area. Although the site is somewhat far from MARA's headquarters located downtown about 20 km away, it offers the advantage of being close to Conakry's exit and the main Conakry-Mamou road axis. This location will permit easy links with the interior and will therefore greatly facilitate DNGR's required field work. Similarly, DNGR's regional offices (300 m2), workshops (600 m2) and prefectoral buildings (1,600 m2) will be renovated. Bidding documents are presently being prepared.

Miscellaneous office and technical equipment, office furniture and vehicles for DNGR's headquarters and four BTGRs will be provided under the IDA project, including communications equipment that will facilitate communication both with MARA's headquarters downtown and operational sites and administrative offices upcountry. At the prefectoral level, one vehicle and small basic equipment will be provided. In total, 44 pick-up trucks, 14 station-wagon cars, 99 motorcycles, 5 cars and 1 minibus are included in the project. Bids for buying the equipment have already been opened and analyzed and the procurement contracts will be signed shortly.

2. Bottomlands Development

The PNIR includes a bottomland drainage and infrastructure development component. This component is described in Section IV-D.

3. Rural Water Supply and Sanitation (RWSS)

The RWSS investment program component consist of drilling of 220 productive boreholes and constructing of 2 village piped water systems. The boreholes part will serve about 140 villages in the prefectures of Kissidougou and Guechedou. These prefectures were selected because they are located in Forest Guinea which has lagged behind in RWSS development compared to other regions and because they have not benefited to date from any RWSS programs. The second part will serve the villages of Yende-Millimou in the prefecture of Kissidougou, and Nongoa in the prefecture of Guechedou. These villages

were selected because they are markets of regional importance and are representative of the socio-ethnic fabric and physical environment prevailing in the two prefectures where they are located.

4. Studies and Pilot Programs

Feeder Roads Master Plan

The Master Plan for the rehabilitation of feeder roads ("Schéma Directeur") was prepared as part of the project (See Technical Analysis).

Pilot Feeder Roads Program

The objective of the Pilot Feeder Roads Program component is to test labor-based methods for road rehabilitation and maintenance relying on local resources using domestic contractors, NGOs and communities for implementation, in order to promote sustainable feeder roads development.

The program's immediate objectives are to:

(1) create a capacity within DNGR and a number of domestic private contracting firms to effectively apply low cost methods of feeder roads rehabilitation and maintenance, using locally available resources; and

(2) develop a capacity at the community level and with NGOs to plan and implement rehabilitation and maintenance of feeder roads.

The program includes the following actions:

(1) Assistance to domestic contractors for the rehabilitation, using mainly labor-based methods, of 161 km of Standard A/B roads in the prefectures of Coyah and Dubreka. A contract is now being negotiated with ILO as the executing agency for this component and the work is planned to start in the next dry season, by the end of 1991. Financing of the roadwork portion of this component was foreseen for USAID, but under a reallocation of road lots was transferred to IDA's account. Five domestic contractors will be selected for training during the first construction season; they will construct about 15 km of feeder roads. Of the trained contractors, 3 will be awarded contracts for the second construction season, using unit rates established in line with experience gained during the first year. In the third construction season, domestic contractors would be awarded contracts based on competitive bidding.

(2) Experimental rehabilitation of 20 km of Standard C roads and 20 km of Standard A/B roads. The GOG-ILO contract mentioned in point (1) includes the rehabilitation of 20 km of Standard C roads to be selected according to needs expressed by local population. In

addition, rehabilitation of 10 km of Standard C roads were to be initiated in the prefecture of Mamou in early 1990 by a NGO (an association of townspeople called Association for the Development of Poredaka - ADP), with project and NGO/community financing. The PP design team met with two representatives of the Association, who confirmed that rehabilitation of 32 km of road had been done between the two sub-prefectures of Bofe and Poredaka, including the construction of two bridges. Work was entirely done with funding from ADP and the community.

The results of the experimentation on 20 km of Standard C roads using labor-based methods would be used in rehabilitating 230 km of Standard C roads envisaged under the project, to permit vehicular traffic between villages and agricultural areas (mostly bottomlands). The rehabilitation works would be contracted out to small contractors ("tâcherons"), NGOs or village communities; of the total cost (including labor costs), a minimum of 15% would be borne by the communities benefiting from road rehabilitation. Subsequent road maintenance cost would be borne entirely by the communities. A budget of $1.3 million is included in PNIR for this component. USAID was asked to provide this budget but the PP design team and USAID determined that the component was beyond the scope and financial means of the AID project. DNGR will therefore launch the component with GOG funds and seek donor support.

(3) Minor repair and subsequent maintenance on a pilot basis of about 207 km of existing feeder roads (Standard A/B) in the prefectures of Dabola and Telimele, using IDA funds. This component is also part of the GOG-ILO contract.

(4) Technical assistance to assist DNGR in implementing labor-based feeder roads rehabilitation and maintenance works and in setting up contracting procedures to carry out these works, and to train DNGR staff, domestic contractors, communities and NGOs. ILO will be the executing agency to provide 63 person-months of expatriate technical assistance, and IDA will be the funding source.

B. Technical Assistance to the BSD

The Technical Assistance Project which initially organized the BSD consisted of five World Bank and two FAC funded positions. Working directly in the BSD were five expatriates, one provided by GITEC, a German consulting firm, and approximately 40 carefully selected managerial staff. After two years or so, the World Bank decided to terminate the above contract. The key points raised in discussion with a number of professionals associated with this project were insufficient achievements, too many long-term advisors and too much decision-making concentrated in the BSD.

Since the World Bank funding was terminated, two key activities continued with some external funding, nominally under the BSD, but effectively reporting directly to the Secretary General, with a budget of $1.1 million

for the next 3 years (1991-1993): the development of the Ministry's agricultural development policy and the Permanent System of Agricultural Statistics.

1. Development of the Ministry's Agricultural Development Policy

Following a major Funding Agency coordination meeting held in 1987 and a National Agricultural Conference held in 1989 to develop a policy and action plan for agriculture, a series of recommendations was made, geared to decentralization of public services, removal of the public sector from production and marketing and liberalization of agricultural markets. MARA was placed in charge of an interministerial committee to coordinate Government and donor efforts to undertake the recommendations. Task forces have been created which are currently developing a strategy for the agricultural sector.

The first draft of the Agricultural Development Policy was prepared in a highly participatory and integrative manner with the cooperation of each of the Technical Departments of the Ministry. Comments were received from interested parties, especially the donors, and a second version is currently being prepared. This planning process contrasted significantly with the previous approach in that it was participatory and consensus-building rather than directive, and it made intensive use of Government's technical capabilities in a training process and with a minimum use of expatriates. UNDP provided $290,000 and the World Bank $100,000 to continue this project.

2. The Permanent System of Agricultural Statistics (SPSA)

During the First Republic, agricultural statistics collection was nearly nonexistent with the exception of a few project-financed surveys. Among these, the most important was an agricultural census covering 3,000 agricultural households nationwide, conducted in 1975 with FAO assistance. The most useful source of current agricultural survey data has been up to now the National Agricultural Survey (Recensement National Agricole), which was carried out in 1988-89 through the Statistics Department of the Ministry of Plan. It consisted of a sample survey of about 4,500 rural households, with data analyzed using the DBase-III data base management system. The survey was generally well managed and carefully done. Its results, disaggregated by administrative region, which were published in January, 1990, provide a valuable basis for measuring activity in the agricultural sector, although agricultural production in urban areas was not included.

The above task, along with all the staff involved, was transferred to the MARA as part of the SPSA ("Système Permanent de Statistique Agricole"), an FAO project funded by UNDP with support from the World Bank for a total of $1.4 million for 2 years (1989-1991), in which USAID paid for vehicles. The project consists of 3 surveys of the traditional rural sector to be used to estimate agricultural GNP: an annual agricultural survey of 1,848

representative production units (rural households) located in 462 villages, a livestock survey and a farm-level price survey.

The Permanent Agricultural Survey is a random sample survey. Data are collected for the following variables:

- demographic data on household heads
- economic activity
- means of production
- agricultural methods
- surface cultivated
- yields

Data are collected using 6 questionnaires, through interviews or direct measurement.

The SPSA project includes two technical assistants: a senior advisor, a Togolese, who has been working with the Director since the beginning, and a second statistician, from Cameroon, who is expected to arrive shortly. At the central level, there are 4 divisions:

(1) Methodology and Analysis: responsible also for training;

(2) Surveys and Census: responsible for the implementation of surveys;

(3) Current Statistics: responsible for collecting data from MARA's other departments;

(4) Data Processing.

The SPSA has a staff of 13 professionals, of whom 5 will have been away on long-term training for most of the project's life (in the United States, Cameroon and Ivory Coast). The project is equipped with seven micro-computers and has received 10 pick-up trucks for the national agricultural census exercise. In addition of the central office, the SPSA has established offices in the four administrative regions of the country, each one with a supervisor, an assistant supervisor, one control officer for two prefectures and two survey technicians per prefecture. Each survey technician is responsible for collecting data from 28 households.

The Agricultural Sector Assessment prepared by USAID reviewed the project in detail and strongly supported it.[1] The project is considered a necessity if a rational and effective agricultural policy is to be made by the Government. Using the FAO's methodology, which is a field tested and proven approach, and being furnished with necessary equipment and materials to conduct its work, it is estimated the project would provide the capacity to measure the most important variables to monitor the agricultural sector.

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[1]USAID, Agricultural Policy Analysis Project, Phase II. Republic of Guinea: Agricultural Sector Assessment - Technical Report No. 107. May 1990, 147 pp. + Annexes.p. 131.

However, the Assessment underlined several critical weaknesses: a lack of experience and expertise of the staff in data entry, processing and analysis, and high recurrent costs to be covered by the Government.

The agricultural survey for the year 1990 fell behind schedule. It was carried out only for two regions (Forest Guinea and Middle Guinea) and the results have not been published yet. The central office uses a rented house for which the lease ends in October of this year while works for rehabilitation of the new office have not started yet. The director believes the project will need to be extended for one additional year. However, the 1991 survey is planned to be fully implemented in the four regions and the 33 prefectures.

Besides the permanent surveys, the SPSA is supposed to be capable of mounting targeted surveys to answer particular questions as they arise. The director has recently contacted MARA's departments in order to organize a series of seminars aimed at improving their data collecting methods and their data presentation. The SPSA may provide technical support for designing and planning, as well as for data collection and analysis.

The project paper team's opinion is that the SPSA's technical and human resources could be used by DNGR for the design of an impact monitoring and evaluation system and for training. However, since the SPSA is still at the project stage, the question remains of the feasibility of long-term support while the future of the structure is uncertain, mainly due to its high recurrent costs.

IV. FUNCTIONAL RELATIONSHIP BETWEEN DNGR AND TERRITORIAL INSTITUTIONS

Links between central administration and territorial institutions are defined by legal status. Territorial organization of Government is based on two structures (See Document # 3):

(1) An administrative territorial structure ("administration déconcentrée"), by which the Prefecture is an administrative unit for the Government central administration. This structure reinforces the administrative responsibilities entrusted to the four Resident Ministers, who are government members residing in the regions and considered the direct representatives of the President of the Republic, and gives the Prefects an expanded role in the coordination and control of technical services organized into six technical departments ("directions préfectorales").

(2) An administrative "decentralized" structure, by which the Prefecture is the representative of local populations, thus giving more weight to non governmental structures (referred to as "collectivités décentralisées"), allowed at village level, which will have freely elected leaders. This is particularly significant for the project aimed at mobilizing grassroots participation for a proportion of road maintenance.

For the implementation of rural roads rehabilitation and maintenance programs, the following roles are assigned to existing structures :

- The DNGR is the central service responsible for programming, preparation and awarding of contracts, contract management, acceptance of work, and implementation of training and technical support. It has administrative services, as well as operational units called "services rattachés".

- DNGR's "Services rattachés" are interprefectoral units located in the field, and responsible for implementing actions on behalf of DNGR. BTGRs have a key position in this respect.

- Prefectoral territorial structures, in contact with the field, are responsible for identification of actions and local operators, and for permanent monitoring of infrastructure conditions.

At the prefectoral and sub-prefectoral levels, MARA's departments are represented by Prefectoral Technical Departments. Rural roads rehabilitation and maintenance are overseen by the Rural Engineering Prefectoral Section (SPGR), which is part of the Environment and Rural Development Prefectoral Department (DPDRE). Under the new guidelines adopted to reduce staff members and to integrate functions in the field, MARA's decentralization brought a reduction of resources and staff at regional and central level and an increase at the prefectoral level.

A. Role of the DNGR

As the organization responsible for putting into effect the government's policies in the area of rural infrastructure, DNGR is responsible for developing, carrying out, coordinating, supervising and following-up on all construction and maintenance activities for rural roads throughout the country. DNGR carries out its mandate by providing technical and logistical support to the various operators in the rural areas and by promoting private sector development. Its by-laws also require that it carry out its responsibilities with the participation of the rural population and by assisting local structures in their initiatives.

DNGR has management responsibility for the PNIR.

In order to carry out its functions, DNGR:

- develops and oversees the Master Plan at the national level;

- finalizes diagnostic and synthesis tools necessary for programming purposes (computer models, norms, standards, and methods);

- implements and supervises the technical activities necessary for the preparation of studies and for rural road work (topography, teledetection, photo-restitution, and photo-interpretation);

- prepares the necessary plans for the preparation of files and for the follow-up and evaluation of rural road work;

- develops and carries out training plans for rural engineering, for its own staff and for private sector personnel (SMCs, "tâcherons", and "cantonniers").

In an attempt to insure coherent management of the entire rural road network throughout the country, it was decided to transfer to DNGR responsibility for all rural roads, including those which, due to their regional use, fall under the jurisdiction of MTTP.

The agreement about the division of responsibilities and collaboration between MTTP and MARA is contained in a report (procès-verbal) of two meetings which took place in January, 1990 (See Document # 23). Through this agreement, MTTP turns over responsibilities of management and implementation to DNGR, within the framework of PNIR. It is understood that these responsibilities will be progressively turned back over to MTTP, "at its request, in relation to its ability to take charge of maintenance for the corresponding road sections". Practically speaking, this means that MTTP will be able to take back over a section when its position changes slightly, as a result of implementation of a project expected to have an impact on road traffic, for example. In a case such as this, however, DNGR would make sure that MTTP is in possession of all the means and resources necessary in order to guarantee maintenance.

The agreement specifies collaboration in the following areas:

- Training for MTTP agents participating in the PNIR; these agents can participate in training at the IME in Maroua and overseas through the use of PNIR funds.

- Consultation between the two organizations for DNGR recruitment of certain categories of contracting personnel in the framework of PNIR.

- Agreement over the definition of conditions for putting into place maintenance programs for the regional road network, based on elements established by PNIR.

- The selection, by MTTP, of MTTP engineers to be put in BTGRs and SPGRs for PNIR-related activities.

B. Role of the Rural Engineering Technical Offices (BTGRs)

BTGRs were created as "Services rattachés" by a decree in October, 1990 (See Document #13). Hierarchically, BTGRs are at the same level as central

administration divisions. Therefore, BTGRs are DNGR's tools for the implementation of its program and they have functional relations with the prefectoral service structures.

BTGRs are located in eight prefectures, as shown on the map of the country included in this document:

REGION	PREFECTURE	RESPONSIBLE FOR:
MARITIME	BOKE	Boke, Boffa, Fria, Telimele
	KINDIA	Kindia, Coyah, Dubreka, Forecariah
MIDDLE	LABE	Labe, Lelouma, Koubia, Gaoual, Koundara, Mali
	MAMOU	Mamou, Dalaba, Pita, Tougue
UPPER	FARANAH	Faranah, Dabola, Dinguiraye
	KANKAN	Kankan, Kouroussa, Siguiri, Mandiana, Kerouane
FOREST	GUECKEDOU	Gueckedou, Kissidougou, Macenta
	N'ZEREKORE	N'Zerekore, Beyla, Lola, Yomou

BTGRs' have four basic functions: programming, monitoring, control and technical support. Under the decree creating them, BTGRs have the following functions:

- to coordinate the implementation of DNGR's rural infrastructure construction and maintenance program;
- to supervise road works implemented by private operators;
- to implement socio-economic and technical studies;
- to collect and process data and information needed to manage the Rural Road Master Plan;
- to participate in the designing of regional and prefectoral strategies and programs;
- to provide technical support to the Environment and Rural Development Prefectoral Department.
- to participate in the preparation of bids for rural road works;
- to promote the development of Guinean SMCs' capacity to implement rural infrastructure construction and maintenance works;
- to provide technical advice to local organizations and farmers;
- to promote and select projects originating from local communities and to provide technical and management support for their implementation;

- to identify training needs of public service and private sector staff for DNGR's Training Cell program;
- to monitor and evaluate actions implemented in rural infrastructure.

Each BTGR is headed by a Chief, whose nomination is proposed by DNGR's Director and designated by Ministerial decree. BTGRs' territorial mission is reflected in the fact that among the Chiefs nominated, two were Inspectors for the former Rural Engineering Regional Inspection.

BTGRs are divided into four Sections, each one being headed by a Chief also designated by the Minister:

- Administrative and Financial Section,
- Rural Roads and Buildings Section,
- Hydro-Agricultural Development Section,
- Drawing/Topography/Copy Section.

BTGRs have a certain amount of autonomy when it comes to operation and management of the resources allocated to them by DNGR, through their legal capacity to have "annexed budgets". In this way, DNGR's role in financial management is limited to budget allocation and inspection of expenses *a posteriori*.

Each BTGR has 33 approved official positions, including eight rural engineers, two civil engineers, two agronomists and one sociologist. Following the agreement between MTTP and DNGR, the engineer in charge of technical studies in the Rural Roads and Buildings Section, therefore in charge of the Master Plan, will be on secondment from MTTP.

Although BTGRs are well defined as official structures, their operational capacity is still very limited and is expected to increase only once PNIR implementation is well underway. Their actual existence is limited to eight Chiefs nominated and a few remnant structures created in the wake of rural development projects:

- The outlook for the four BTGRs of Boke, Mamou, Faranah and N'Zerekore, which are being taken over by PNIR, is excellent overall; however, the technical assistants are not yet on duty, the Chiefs have not yet begun the training planned for them for 1991, and Section Chiefs have not yet been designated by the Minister.

- The Kankan and Labe BTGRs, which became operational through projects financed by FED (KRC) and IFAD, respectively, have infrastructure already built in. Until recently, these BTGRs were ready to begin their new functions as part of PNIR, but financing negotiations with the donors (FED and IFAD) did not come off, and the two BTGRs find themselves without financing for transportation, material, and various kinds of equipment, and without an operational budget.

- The Kindia BTGR is to be created as new. It has nothing in the way of facilities or equipment. Installation of the BTGR and start-up were to be financed by FED funds, but these negotiations did not succeed either.

- The Gueckedou BTGR is expected to function with the infrastructure, personnel and workshops already operational through the terminating Gueckedou Agricultural Project (PAG) financed by the World Bank. Negotiations are still underway with the donor.

Among the BTGRs which do not seem to be in a position to carry out their tasks under the PNIR, those in Gueckedou, Kankan and Labe assume particular importance for the USAID project, especially in terms of road maintenance capacity beginning in 1993. Among the roads to be rehabilitated, nine segments totalling 252 km are found in the prefecture of Macenta, in the jurisdiction of the Gueckedou BTGR, and three sections (38 km) are in the prefecture of Kerouane, and thus are the responsibility of the Kankan BTGR. The Gacual-Koundara lot will be the responsibility of the Labe BTGR. Financing plans for these BTGRs are necessary so that DNGR can defray their operational costs and provide the equipment necessary to carry out their task, particularly topographical instruments and computer equipment.

DNGR and IDA plan to fill any BTGR resource gaps left by other donors that may affect PNIR operations. USAID will need to assure itself that the necessary resources will be in place at each BTGR when road maintenance operations are due.

C. Role of the Environment and Rural Development Prefectoral Department (DPDRE)

The mandate of the prefectoral technical departments is defined in the decree on the organization of prefectoral administration, signed in January, 1989 (See Document # 19). Under the official authority of the Prefect and the technical supervision of the central administration, these departments promote, coordinate, and supervise all the activities carried out by the governmental administration in their sector. They are responsible for assisting and advising the technical offices of the central administration in the field, particularly NGOs and village groups. There are six prefectoral technical departments: Rural Development and Environment, Economy and Finance, Urban Affairs, Housing and Public Works, Health and Social Affairs, Education, and Youth, Culture, Arts and Sports.

DPDRE's mandate related to rural infrastructure is the following (See Document # 20):

- to coordinate and monitor rural infrastructure development activities;
- to promote the coherence of rural production activities at the prefectoral level;
- to initiate local population in maintenance of rural infrastructure;

- to provide central administration with information needed for its rural development programs.

DPDRE includes six sections of which the Rural Engineering Section is one.

Rural Engineering Prefectoral Sections (SPGR)

The SPGRs' mandate is to monitor the implementation of all rural infrastructure works in the prefecture. Each SPGR's authorized staff was reduced from 15 to 7 by the reform. It includes two engineers, four assistant engineers and one technician in topography (See Document # 21). Since they are still to be officially nominated from among those who have passed the tests, they are now working without knowing where their formal assignment will be.

As rural engineering agents at the prefectoral level, SPGR employees act as a liaison between DNGR and the local population. They represent both the people and DNGR before the prefectoral administration. With the technical support of the BTGRs, they participate in DNGR planning by communicating the needs expressed by the local population. They also have a special role to play in training and assisting local communities in needs assessment, planning, and works execution.

However, SPGRs have very limited resources to do their job. In most cases, staff is poorly trained and they have no means of transportation. For prefectures covered by the project, PNIR includes some equipment, office rehabilitation and training activities, but nothing has started yet.

D. Links between Rural Engineering and Agricultural Production

DNGR plays a determining role in the agricultural development of the country. In addition to the improvement of rural roads, DNGR is responsible for hydro-agricultural development, agricultural machinery development, and the protection and development of water resources for agricultural purposes. This role is affirmed by the weight given in the Master Plan to the agricultural variable in the choice of roads to rehabilitate. Here not only are actual production estimates taken into consideration, but also each area's production potential.

At the BTGRs' level, a multi-disciplinary team is to be established, consisting of a rural engineer, an agronomist, a sociologist and a soil scientist, all of them being already included in the authorized positions. Each team will identify bottomlands presently in use by farmers, examine the sites, determine the farming systems, discuss their utilization with the farmers in order to establish their needs, assess the land tenure status, and make recommendations for improving productivity, based on simple technology.

At the prefectoral level, DPDREs and SPGRs occupy a strategic position. These structures allow DNGR to be in constant contact with MARA's other

technical departments. DNGR's smooth operation is essential, not only in order to assure the participation of local communities in the protection and maintenance of roads, but also so that the needs of the agricultural sector are addressed when there are choices to be made. But the success of the PNIR at the local level depends to a great extent on the efficient operation of a structure which, far from being thought of as efficient, is rather widely criticized for the ambiguity it has produced. In addition, at a seminar organized recently by the Ministry of Administrative Reform and Public Affairs (February, 1991), seminar participants emphasized the delays being experienced in putting the new units into place and advised the Minister to speed up the application and enforcement of the new administrative texts and the transfer of regional resources to the prefectures.

The inclusion in the PNIR of a special component for the work to be done on 250 km of Standard C roads, where village organizations are called upon to play an active role, exemplifies the DNGR's desire to have a significant impact on agricultural production. These roads, by definition, link isolated villages to the national network, and by so doing, provide new opportunities to these villages for commercialized agricultural production. However, the source of donor assistance for this component has not yet been determined; USAID turned it down for the Rural Roads project as being beyond its scope and finantial means.

One of the PNIR's main components is bottomland drainage and agricultural infrastructure development. Bottomlands are natural depressions which result in woodlands which themselves are characterized by a relatively shallow valley with a flat floor. They are among the potentially more productive lands in Guinea when properly utilized. Their development is of particular interest because they are well suited for simple water management techniques and their small size makes them manageable by local communities. The project focuses on the development of about 2,100 ha of small bottomlands, giving priority to those in which exploitation has already started. To fully exploit these bottomlands, a combination of agronomic and infrastructure improvements are considered necessary. Agronomic improvements will include water management techniques, improved land preparation methods, improved varieties suited to existing conditions, improved seed, timely planting activities to facilitate multiple cropping, and selective use of fertilizers and agro-chemicals for crop protection.

V. INSTITUTIONAL IMPACTS OF THE PROJECT

PNIR's impact on the capacity of MARA and DNGR's staff to manage rural infrastructure development programs is to come mainly from its institutional support component.

The USAID-financed component is expected to have a high indirect institutional impact. With USAID's participation comprising about 40 percent of the $80.3 million total investment budget funded by donors, activities to be implemented with USAID funds are crucial for the development of a sustained management

capacity for DNGR's staff. Without such a large investment component, there would be a high risk of building an empty shell.

The USAID project will have a direct institutional impact on the DNGR's capacity to monitor and evaluate its rural infrastructure program, and to gain a thorough understanding of the impact of rural roads improvement on rural development (See the monitoring and evaluation plan, Section IV-C of the main text).

VI. REMAINING ISSUES

A. Institutional Issues

One of the main risks observed in past rural road projects is the weakness of the institutional structure responsible for the implementation of rural road works. Actually, DNGR's administrative and managerial responsibilities are increasing rapidly with the expansion of its mandate in the Government reorganization and with the starting of PNIR. Up to now, these responsibilities have been addressed by an undertrained and underpaid staff operating under very poor physical conditions. As a result, financial and management procedures are slow and cumbersome and the capacity to monitor and evaluate its rural road program is very low. PNIR was designed so as to minimize such a risk through training, technical assistance and a minimal use of force account in carrying out the works for the first years.

Up to now, a number of factors lead one to believe that PNIR has gotten off to a good start and that the government is taking the development of the rural road network seriously. All the new structures are in place and DNGR was allocated a budget for maintenance by the Ministry of Finance for the first time this year. This money was used for road maintenance work carried out by two private enterprises and a unit expected to become a private enterprise. The administrative and financial relationship between MARA and MTTP has been elaborated. A three-year training program was developed for DNGR agents, in which emphasis during the first year is put on the training of executives in management and a review of basic knowledge for technicians. The facilities in which the DME is to be installed have been obtained by the DNGR, and a contract has been signed with the consulting firm which will be responsible for the installation of equipment and the execution of the training program for both private and public sector individuals. Finally, the strong motivation and availability of the DNGR executives show the will to succeed in meeting the challenge which the PNIR represents for the rural development of the country.

Institutional problems remain, though, which will need to be carefully monitored during the implementation of the USAID project. There is a need to evaluate DNGR's capacity to carry on its tasks, mainly for programming road maintenance and for training private contractors for road rehabilitation and maintenance works.

Major institutional constraints are the following:

(1) Some of the key staff required for the PNIR to get off the ground are not yet in place. The designation of personnel persuant to the new organizational framework was delayed following the naming of the new Minister in January, 1991. As a consequence, the BTGR Section Chiefs and a number of BTGR and DNGR technicians have not yet been assigned. Hence, competent multi-disciplinary teams required in BTGRs for the success of the project are not yet on duty. Moreover, without all these staff being approved, the training program planned for 1991 as part of the institutional support component cannot begin. Similarly, final assignments have not yet been approved for all of the staff of DNGR at the prefectoral level (within SPGRs).

(2) Among the eight BTGRs, four were programmed to receive support from IDA to fulfill their mandate, although these units were created only recently and are not yet operational. It was expected that the BTGRs of Kankan, Labe, Kindia, and Gueckedou would receive support through existing projects in their respective zones -- the FED (KBC) in Kankan and Kindia, IFAD in Labe, and the World Bank in Gueckedou. However, no agreement has yet been reached with FED and IFAD; those with the World Bank are underway. Four of the prefectures covered by USAID financing (Gacual, Koundara, Kercuane and Macenta) are in the zones of the Labe, Kankan and Gueckedou BTGRs. The project director has stated that PNIR funds will fill any gaps in support required by these BTGRs to handle project responsibilities.

(3) Administrative delays also slow down the establishment of the institutional support component of the PNIR. Bids received for the rehabilitation of DNGR's new offices have not been analyzed yet, the bid packaging for equipment has not been completed, and the contract for the rehabilitation of roads in the prefectures of Coyah and Dubreka, signed by the ILO in August, 1990, has not yet been signed by the GOG. On the other hand, three service contracts appear to have been processed without undue delay. (See also Section III.F., Administrative Analysis, in the basic PP text.)

(4) SPGR agents have neither the resources nor the necessary training to carry out their mandate with regard to DNGR and local populations. Training and support for SPGR personnel are planned under PNIR.

(5) DNGR's capacity to develop and put into place an efficient system for follow-up and project impact evaluation is insufficient.

These constraints will be addressed in the Rural Roads project either through direct AID involvement, as in the case of monitoring/evaluation assistance, or through close monitoring by USAID and the project manager, supported by conditions precedent and covenants (see Section V.).

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B. GOG's Commitment to Rural Road Rehabilitation and Maintenance

Past experience with USAID-sponsored rural roads projects has shown that even when money becomes available, institutional constraints, such as unavailability of sufficiently skilled and organized staff, and lack of adequate incentives to ensure a major change in orientation towards maintenance still must be addressed, in order to ensure long-term sustainability of the project.

The GOG has demonstrated that it considers the development of rural roads a priority. The PP design team finds the results at administrative and institutional levels encouraging so far.

- The Government of Guinea has made rural infrastructure an immediate priority. Investment in rural infrastructure amounts to about 62% of the total investment budget of the country planned for 1989 to 1991.

- MARA's structure and activities now largely recognize its new role of setting the incentives environment for the private sector in addition to planning its own activities.

- Government's response to the challenge posed by the implementation of the PNIR has been positive: (1) new structures have been created and their authorized positions have been approved at the central level; these structures are in accordance with Government's policy to leave force account works to the private sector and to decentralize public services at the prefectoral level; (2) MTTP has transferred its authority over regional roads to DNGR, for a better cohesion in programming (See Section IV-A); (3) the national budget for road maintenance works has increased significantly in the past two years (See Social Soundness Analysis and Administrative Analysis).

  All the managerial staff members interviewed by the PP design team have shown a high degree of comprehension of PNIR's philosophy to concentrate DNGR's resources on programming and coordinating rural road work and on supporting private sector operators in implementing the work. They are highly motivated and anxious to work in a transparent manner.

However, today's DNGR capacity to program, supervise, control and monitor the implementation of maintenance work on the 2,000 km of feeder roads to be rehabilitated by PNIR is negligible. The Department will be in a position to handle this difficult task only if all the staff are quickly designated to their positions, if central and regional offices are rehabilitated and equipment delivered as planned, and if technical assistance and training achieve their objective.

Therefore, with the success of the IDA assistance being a major assumption, it will be necessary for USAID to monitor closely the implementation of the

institutional support component of the PNIR and to undertake an evaluation after Year 2.

C. Evaluation of Environmental Impact

According to a study carried out recently by a consultant,[1] present circumstances in Guinea appear very favorable for implementing a procedure to study the environmental impact of development projects while they are in the preparatory stage, for three reasons:

(1) the increasing awareness of authorities of environmental issues in general;

(2) the evolution of legislation during the past few years, including the proclamation of an Environmental Code in 1987, followed by a decree codifying environmental impact studies in November, 1989, and a ministerial order defining the content, methodology, and procedure for such studies;

(3) support from the majority of donors.

The ministerial authority with responsibility for the environment is the Ministry of National Resources and the Environment (MRNE). By the order of September 12, 1988, the responsibility for issues related to impact evaluations, and particularly to the definition of terms of reference, was given to the Development Projects Monitoring and Evaluation Section (SESPD) in the Division of General Studies and Synthesis, at the National Department for Environment (DNE).

The November 1989 decree specifies a list of nine types of major work which require an environmental impact study at the time of their preparation. Roads in rural zones are included, but they are mentioned only under the general heading of "road construction", and the decree specifies that "maintenance and major repair work do not apply".

According to the ministerial decree of March, 1990, the parameters to be addressed in the impact studies are the following:

- geology and pedology
- hydrogeology
- hydrology
- natural setting (fauna and flora)
- landscape and settings
- noise, smells, and atmospheric pollution,

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[1]Study financed by the World Bank, related to the putting into effect of a procedure for studying the environmental impact of new RTTP roads projects. See Gallner J. Cl. Etude d'impact sur l'environnement des nouveaux projets routiers - Mission préparatoire et proposition de termes de références type. (Draft) Report to the World Bank # 3068/1-Août 1990. 58 p.

- traffic and infrastructure
- socio-economic activities (customs, ways of life, behavior of the local people)

The studies should include measures developed by the implementing agency to compensate for the detrimental effects of the project. However, although these measures are clearly laid out in the texts, there is actually little DNE can do to make sure that they are carried out as no penalties have been determined.

This procedure is not yet operational. Although the number of projects registered which should involve an environmental impact evaluation was estimated in early 1990 as over 300, SESPD has only three civil servants on its staff, and they have received almost no specific training up to now. In addition, the technical ministries concerned (including MARA) have no technical advisors with specific training in environmental matters.

The importance of having access to reliable data on the environment is emphasized in the ministerial order establishing the responsibilities and the organization of DNE. Its responsibilities include "environmental data collection". In this area, the consultant recommended increasing efforts to collect environmental data on a nationwide scale, and particularly requiring implementing agencies to provide detailed descriptions of the circumstances of the specific areas in which they are working.

Therefore DNGR is called upon to play an important role for DNE, in view of the vastness of the area covered by the rural road network. The baseline data collected under the Master Plan, which should be updated regularly, appear that much more useful in light of the fact that MTTP has almost no data of this kind on its road network. Contact was established between DNGR and DNE in March of this year, so that MRNE could assign a professional to DNGR to participate in the environmental assessment which was supposed to be conducted for the preparation of the present project. This professional was also to deal with all environmental issues. The head of SESPD was named to this position.

Four problems remain to be solved in order for DNGR to play a positive role in this area:

(1) The decree pertaining to environmental assessments is vague when it comes to road construction and excludes major repair and maintenance work from this requirement, which can lead one to believe that PNIR has no legal obligation as far as environmental matters are concerned.

(2) The legal texts do not provide for any type of arbitration procedure.

(3) Just as the implementing agency is generally responsible for the technical decisions made during project execution, it is also responsible for making any changes which might lead to the reduction of environmental impact. But the involvement of those in positions of responsibility is still rather hesitant at this time. The environment is not yet widely perceived as something which belongs to everyone and

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for which everyone is responsible. A certain amount of patience is still necessary. DNGR will need assistance in taking charge of the environment, especially in developing a regulatory framework and the means to address the issue effectively.

(4) In industrial countries, the most important environmental impact of certain major projects can often be a predominating direct impact (because of the imposing dimensions of the work), linked with a fairly limited indirect impact, sometimes even nonexistent in very developed areas. On the opposite end, in developing countries, it is most often the indirect impact that is the most important, especially the impact on people (movement of the population, new accessibility of certain areas, etc.), linked with a limited direct impact (due to the limited size of work). For the PNIR, it will be necessary, therefore, to carry out a serious research exercise to show the potential indirect effects on the environment.

Based on the above, USAID will:

(1) include environmental data as part of the impact monitoring and evaluation system to be designed at the DNGR;

(2) provide short-term overseas training in environment for the Chief of the DNGR's Technical Support Service (STA), through the USAID Human Resources Development Assistance Project. This will give DNGR one managerial staff person capable of dealing with environmental issues. The Chief of STA appears to be in the best position for this responsibility: she is a member of the DNGR executive committee, and her position makes it possible for her to have a practical impact on DNGR's activities. She graduated as an engineer in 1977 in Conakry and since then has attended several technical training sessions abroad: 9 months in Italy, 2 months in France, 3 months in Senegal, and 2 weeks in Sierra Leone.

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ANNEX F

ENVIRONMENTAL ASSESSMENT

GUINEA RURAL ROADS PROJECT (675-0216)

ENVIRONMENTAL ASSESSMENT APPROVAL

Concurrence,
Bureau Environmental Officer: _____

Approved: ✓

Disapproved: _____

Date: 8/8/91

Clearance,
GC/AFR:PJohnson _____

Date: 8/8/91

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1.0 SUMMARY

1.1 Goals and Objectives Of the Guinea Rural Roads Project

The primary goal of the Guinea Rural Roads project (675-0216) is to increase sustainable agricultural production and productivity in rural areas throughout the Republic of Guinea. Subsequent to this primary goal is the improvement of market access for rural producers, reduction of overall transportation costs and greater accessibility for primary services, such as health, education, etc.

1.2 Background Requirement for this Environmental Assessment

The U.S. Agency for International Development (A.I.D.) Environmental Regulations 22 CFR 216 (popularly known as REG 16) provides the procedures for an environmental review of A.I.D. projects. The regulations define a class of actions which are normally considered to have a significant negative effect on the environment and therefore require the preparation of an environmental assessment (EA).

A road improvement project is one such action which requires an EA, except when the originator of the action believes that the project will not have a significant effect on the environment. The Guinea Rural Roads Project intends to support road improvement in each of the proposed three years of the project life.

The Regional Environmental Officer, Robert Hanchett, visited the three major regions of the project area from the 17th of February to the 24th, 1991, to ascertain if an IEE would be sufficient or whether an EA would be warranted. The conclusions were that:

1) road improvement is intended;
2) the proposed road segments appear to pass through area of relatively undisturbed tropical forest; and
3) an EA is the appropriate level of environmental review.

In addition, an EA is warranted in order to satisfy section 118.66 (B) of the Foreign Assistance Act (FFA) which states the necessity to show significant contribution to improving the livelihood of the rural poor when "relatively undegraded forest lands" will be impacted prior to any intervention.

2.0 PURPOSE

2.1 Specific objective of this Environmental Assessment

The objective of this EA is to determine whether or not each road segment under the proposed project should be approved for

reconstruction. The EA will evaluate each proposed project road segment and associated issues in order to make this determination.
This EA will determine:

1) potential significant negative and unmitigatable project impacts to the physical environment; and
2) the potential for the proposed project to improve the livelihood of the rural poor.

3.0 ALTERNATIVES INCLUDING PROPOSED ACTION

There exist only three main alternatives with respect to the construction aimed at improving the selected rural road segments. The primary alternative is to proceed with the construction as outlined in the project paper. The recommendation that construction proceed, made by this environmental assessment team, assumes that the work will be carried out according to the engineering standards stated and that all normal construction mitigation measures will be completed including: appropriate sized water passage structures at wetland crossings, ditches of appropriate size and placement to provide appropriate water diversion, proper elevation and crowning of the roadbed, and proper abandonment of diversion roads, access roads and quarry sites.

The second alternative is to not proceed with the construction due to findings by the EA team that there will be unmitigatable environmental degradation with respect to the issues in the scoping statement. This decision would be taken only after considering the level of environmental risk and the offsetting benefits to the rural poor served by the road.

The last alternative is to recommend construction but with additional mitigation measures specific to conditions along the road segment.

4.0 AFFECTED ENVIRONMENT

The subject affected environment include those elements outlined in detail in the scoping statement reproduced in full in Addendum 1. These elements include: undegraded tropical forest, critical habitats for threatened and endangered wildlife species, the watershed characteristics and disease transmission elements.

5.0 ENVIRONMENTAL CONSEQUENCES

5.1 Approach

In order to ascertain the environmental consequences pertinent to each issue in the scoping statement it was determined necessary to standardize the survey process. A principal element in this process was the development of an adequate field data collection sheet and it's application in the field. This part of the report addresses the development of the data sheet, how it was applied in the field and the results obtained.

5.2 Field Data Collection Sheet

The objectives behind the creation of the field data sheet included: 1) a necessity to standardize the manner in which the observations were recorded; 2) to provide insurance that the same data was collected for each and every segment; 3) the means to provide a hard copy document for the file to act as a data base for future monitoring activities; and 4) a hard copy data basis for the discussion leading to the preliminary recommendation.

The field data sheet was constructed to contain three main information areas: locational data, presently observed conditions and potential impacts. The first two categories were derived from direct on-site observations. The last section was completed using a combination of those conditions directly observed and individual team members estimates based on their own professional experience and thus is the most subjective aspect of the analysis.

5.2.1 Locational data

The front page of the ground data collection sheet was devoted entirely to precisely identifying the location of the segment and the position of significant features or conditions along the route. The top line of information included: 1) the Prefecture and/or the sous-Prefecture in which the segment was located; 2) the identifying code number; 3) the length of segment as planned; and 4) the standard (A, Ba, Bf or C). The second line of information showed the actual start and end points of the segment studied. Due to a lack of IGN topographic maps the UTM coordinates were not available during the field missions so great care was taken to find and verify the identifying landmark for the start and finish points. The start points were in every case those indicated in the supporting documents available at the time of the missions and were recorded as such. However, there were times when road conditions forced an early termination of the segment study (as in the case of segment 8207 which had to be terminated one kilometer short of the programmed point, the village of Gueasso, due to a washed out bridge) and the kilometer distance was recorded as the terminal point. There were several

instances where the actual distance traveled was longer that indicated in the documentation and the actual distance was recorded along with the end point landmark.

The third compartment contains a schematic diagram of the route and scaled locations of the significant features and conditions noted along the segment. The scale was indicated by the hashmarks at the center of the diagram. For shorter segments each mark usually represented 500 meters, for medium lengths one kilometer and for longer routes two kilometers.

5.2.2 Observations of Present Conditions

The reverse side of the data sheet contained the categories of information considered directly observable and pertinent to the issues put forth in the scoping statement. The categories included observations regarding the present condition of: 1) the structure and condition of the vegetation cover; 2) the structure and condition of the habitat for identified wildlife species of interest; 3) soils conditions specific to erosion hazard; 4) existence and density of water courses; and 5) observations pertinent to the level of human occupation and activity.

5.2.2.1 Structure and Condition of Vegetation Cover

Of primary concern to USAID, as referenced in section 118 of the Foreign Assistance Act (FAA), is to identify significant areas of undegraded tropical forest and to consider all alternative measures to insure conservation of these zones, including not conducting the road improvement activities proposed. At issue were two components of what constituted an undisturbed tropical forest: what constituted a area large enough to be considered and what constitutes a condition sufficiently undegraded enough to be considered as a candidate for alternatives to construction.

With respect to the aspect of size of the stand (where a stand is defined as being an area covered by a relatively homogenous and continuous vegetation) two categories were included in the field data sheet. The first was an indication of the stand fragmentation which characterized the conditions along the route. Fragmentation is here defined as how broken up into individual smaller stands is the forest along the route. There were three identified levels of fragmentation: high, medium and low. A high degree of fragmentation indicated that the forest vegetation was highly dissected into many small, and widely spaced patches, of forest vegetation. At the other end of the scale a low level of fragmentation indicated a more or less continuous forest stand. This category, one requiring some subjectivity, was supplemented by another category, that of the presence of slash and burn agriculture. The responses in this category were again a range, with the presence being high, medium or low. If the response in

this category indicated an elevated presence of slash and burn activity the fragmentation would also have to be high and the likelihood of a stand of significant extent to be considered a "forest" existing along the route was low. On the other hand if there was little or no indication of slash and burn activity and fragmentation was also low than consideration was given to whether there was an adequate extent and other conditions than included. A driving element of consideration as to whether there was enough unbroken extent of forest vegetation to be relative to what would be considered undegraded, or "virgin" tropical forest. It was determined that the best indicator would be the relative maturity of the stand with respect to classical niche theory in plant ecology. Briefly, a mature tropical forest will have most of it's niches open to non-vegetation elements by having a large number of species throughout it's entire available growing space. If there is a reduction in the number of species anywhere in the growing space than fewer niches are available for ecological diversification. The objective was to look at a particular stand of vegetation and compare it to what would be a full niche situation, i.e., a mature ecosystem. Two categories were created to indicate the relative maturity of the stand. The first was a pure structural assessment. Mature forests are always multilayered or present a continuous presence of species from the ground to the top of the canopy. For this study the number of identifiable canopy layers were recorded (1 to 5 distinct canopy layers or a continuum). The respective heights of the layers are presented in the descriptive key which is part of the field data sheet presented in Addendum 2. It was observed that mature and relatively undegraded forest stands (observations made in the classified forests at Mount Nimba and Ziama) showed generally a continuous structure and most surely had all five canopy layers filled with different and several species. If observed forest stands showed definite lack of one, or more, canopy layers than it was a good indication of a degraded condition. The second category integrated a rough estimate of the number of species occupying each canopy layer. If all layers were occupied by a large number of species, than the stand could be considered mature.

5.2.2.2 Wildlife Habitat

Background

Specific information regarding each threatened and endangered species was consistently obtained from the Guinean Department of Forests and Hunting regional offices, local farmers and hunters, and other appropriate individuals within each region.

In addition, information was obtained regarding the presence of protected or sensitive areas near the proposed road segments. In some instances, a road segment would be located in a degradated

forest, but would be within a few miles of a forest reserve or wilderness. In such a situation, the potential direct impact of the road segment on wildlife would be low but the potential indirect impact would be high.

Observations of Present Conditions and Potential Impacts

The assessment of potential project impacts on threatened and endangered wildlife was integrated into the overall field assessment. wildlife data was collected for each road segment regarding:

(a) wildlife habitat structure (complex, medium, simple);
(b) threatened or endangered species observed;
(c) game ranching activities observed; and
(d) general wildlife species observed

The wildlife information collected overlapped well with information collected on forest structure (e.g. , canopy layers and species, amount of fragmentation, feeder roads and the presence of slash and burn agriculture).

Wildlife species are often limited to one habitat type or structure. For example, the Spotted Owl and Red Cockeded Woodpecker in the United States are said to require old growth forest habitat. other wildlife species may have the ability to utilize more than one type of habitat, or may actually increase in numbers following habitat degradation.

The general wildlife habitat structure (complex, medium, simple) was estimated for each road segment. In combination with other important information, this habitat structure rating was used to determine the potential direct and indirect impacts of the road segment on threatened and endangered wildlife. A description of each habitat structure is indicated below:

Simple Structure: A continuous degradated secondary forest. The habitat would have indicators of continuous use by villagers (e.g., slash and burn agriculture). The habitat would not provide unique wildlife habitat which is not found elsewhere in the region.

Medium Structure: An area which does not have primary forest, but does maintain sections of both moderately intact forest and degradated forests. The habitat would not provide unique wildlife habitat which is not found elsewhere in the region.

High: A primary forest which has a fully developed forest canopy system and low level of degradation by villagers. The habitat would potentially provide unique wildlife habitat which is not found elsewhere in the region.

5.2.2.3 Erosion Hazard Conditions

A category was created to enable recording of conditions relative to susceptibility of the sites characterizing the segment to erosion. Erosion hazard ratings are classically determined by considering four elements and are usually backed up by observations of eroded and erosions resistant sites in the field. The four classical considerations are: 1) the nature of the soil itself and primarily the structure in terms of resistance, or susceptibility, to detachment by the action of water; 2) the predominant slopes in the study area; 3) the vegetation cover; and 4) the intensity and amount of rainfall. The rating was given a high, medium or low category based on field assessment of the four components and examination of specific sites which showed present erosion or resistance to erosion.

5.2.2.4 Density of Watercourses

A category was included to indicated how dense the watercourses were relative to the information required to consider the aspects presented in Issues 4 (Wetland conversion) and 7 (Disease transmission) . The watercourses, including linear and broad wet areas were counted (and indicated on the schematic diagram) and the total number compared with the total length to indicate a dense, medium number or sparse level of watercourse crossings.

5.2.2.5 Level of Present Human Impact and Activity

Several categories were placed on the field sheet to indicate the observed present level of human activity and impact characterizing the studied segment. The specific information categorized included: 1) number of feeder roads; 2) number of villages; 3) number of natural and developed water points; 4) numbers of domestic animals observed; and 5) the level of hunting indicated. Actual counts were kept for those categories where counts could be made, (e.g., categories 1, 2, and 3,) and categorical level estimates made from direct observation and talking with local people (for categories 4 and 5) for the others. These categories were included to give an indication of how intensively the land along the studied segments were being presently used and to give a firm basis for assessing potential impacts resulting from changes in human activity as a result of the proposed intervention.

5.2.3 Potential Impacts

The second part of the backside of the data sheet is dedicated to a subjective analysis of the potential impacts relative to several of the scoping statement issues. Three primary subject

areas were addressed: 1) the affects on wetlands; 2) the effect on the present vegetation structure and composition; and 3) the effect on critical habitat for identified rare and endangered species.

5.2.3.1 Potential Effects on Wetlands

Of critical importance is the impact the proposed construction will have on the hydrological structure of the area and any changes in the availability of water for the present vegetation that would result from such a change. The prime issue is really, with proper ditching would there be a significant redistribution of water as a result of the activity. A general evaluation was made as to whether I for each category of watercourse, there would be more water concentrated, water removed or no change. The appropriate category was checked based on the evaluation:

5.2.3.2 Vegetation Dynamics

Of perhaps central importance is the question whether the proposed road improvement construction activities will produce any significant changes in the vegetation adjacent to the studied segment. Two principal elements were identified and included as categories on the field data sheet: the creation of open sites where pioneer types of vegetation can invade, and the change in water availability necessary to support the present vegetation.

If large areas of open sites are created, generally associated with large road cuts, quarry sites, etc., there is generally an invasion by pioneer species which are more suitable to the bare sites and out compete other species in the area. Some of the species in this category can be considered undesirable. If large areas of this type are created a large seed source for undesirable species can be created. With such a seed source there can be pressure on other marginal site in the established vegetation type and potential changes could occur in species composition and vegetation structure in general. The field data sheet calls for an assessment of the potential for creating these "pioneer niches" and indicating the potential for creating large, medium or small areas of the type.

The other element is whether the activity, through changing the pattern of water flow, will effectively make wetter, or dryer, adjacent sites, thus creating a change in the vegetation. This aspect was keyed to a change in the availability of water to the surrounding vegetation and required and categorical response indicating: the increase in water availability, decrease, or no change.

5.3. Application of the data sheet in the field

The procedure for using the data sheet in the field was straight forward. To further facilitate the participation and understanding of the Guinean professional the field sheets were reproduced with both english and french titles for the categories and responses. Using the maps generated during the initial studies for segment selection (1) the start point was located and verified and documented on the data sheet. The odometer/trip meter was set to zero and the study of the segment was initiated.

Along the route each individual recorded conditions/observations pertinent to his own area of expertise: Mr. Booth those pertaining to wildlife and habitat, Mr. Sidibe those for human activity and hydrology and Dr. Daus pertinent to the vegetation structure and condition. Where observations were made of significant events or conditions the distance (in kilometers) from the start point was recorded. Upon reaching the terminal point of the particular segment (whether it be the point as initially planned or another due to a problem) the locational information was verified and recorded.

The next step was to fill out the information on the back of the sheet polling each member of the team for his contribution and arriving at a consensus entry. The last action was to identify a preliminary recommendation regarding the construction of the route based on the combination of the observations just made along the route and the categorical responses on the sheet. In general only one road was completed (one road often made up of several numbered segments) per day due to the length of the road, the generally very poor condition of the road requiring slow progress, and the necessity to return by the same route as they usually ended where there were no connecting roads.

5.4 General Conclusions Based on Field Observations

5.4.1 ISSUE 1: Road Construction Through Undegraded Tropical Forest

In general no road segments were characterized by what is defined in this report as an undegraded tropical forest. The Prefectures studied in the forested zone of Guinea, Nizerekoure and Lola, were characterized by two predominant conditions. This zone is heavily impacted by slash and burn agriculture and subsequent fallow periods. These areas are characterized by removal of all cover except a few of the large individuals in the fourth and fifth canopy layers. In the subsequent fallow periods, usually in the third year after initial clearing, approximately 10 to 15 years, the cut trees and shrubs sprouted and densely populated the first and second canopy layers. The second condition was one of the appearance of a well-developed forest cover but under

closer inspection was actually a plantation situation. Canopy layers one and two contained coffee, cocoa and cola trees, canopy layers three and four oil palms and some intermediate natural species, and canopy layer five was generally intact with large individuals of native species retained to provide shade for the understory plantation species.

In the prefectures of Faranah, Telimele, Pita, Gaoual and Koundara all segments were characterized by degraded forest conditions resulting from removal of the native forest vegetation for conversion to agriculture. Two distinct categories of conversion were noted: 1) a short-term fallow period where complete vegetation removal occurs every five to eight years; and 2) a longer rotation where the removal of the vegetation for field preparation occurs every 15 to 20 years. Only the second condition resulted in reappearance of a forest canopy, however, there was generally a low total number of different species and only the first three canopy layers showed native species present consistently.

5.4.2 ISSUE 2: Tropical Forest Conversion

In general the proposed road construction activities will not accelerate tropical forest conversion. Direct observation showed the vegetation along all the road segments studied has already been altered, primarily due to agricultural activity, either slash and burn or plantation culture. At the present time fuelwood is being made available as a by-product of clearing for field preparation. Observations indicated that the supply that is presently available exceeds demand as a large quantity of wood is burned in place rather than being extracted and brought to market.

With respect to accelerating conversion due to commercial harvesting very few stands containing an adequate volume for economic extraction were noted adjacent to the segments studied.

If such exploitation were to accelerate in areas at a greater distance from the road this would have to be supported by vehicular transport along feeder roads and this can be controlled as a part of policy and regulation in the forestry sector, i.e., development of harvesting plans and operations.

Several cut banks and quarries were examined from the standpoint of their role in being potential start points for evolution of the adjacent vegetation. Pioneer species established themselves immediately, especially where micro-climatic variation was provided in the course of normal construction mitigation measures, e.g., placement of ditches or rills to counteract erosion by water flow. The species noted in these pioneer sites appeared to be naturally occurring, eg. Musonga sp. being a

commonly observed example. Due to the rapidity of the occupation of the bare sites and this occupation by species observed in the adjacent vegetation it was concluded that, in general, the creation of these areas by new construction would not introduce an element accelerating vegetation change.

5.4.3 ISSUE 3: Soil Degradation or Loss

Assuming that normal mitigation measures will be a part of the construction activity, ie., side ditches will be properly designed and executed, cut banks will be properly sloped or terraced with appropriately placed water diversion structures and water course crossing structures will have openings properly calculated to handle peak flows. At the present time a majority of the roads are basically channels, with the road bed lower than the shoulders. Water is concentrated in the road bed and erosion is a problem. Proper road construction will ameliorate the road zone erosion. Due to the observed rapid occupation of denuded sites by native vegetation, long-term soil erosion or loss is not seen as a problem. No extraordinary mitigation measures are recommended at this time over and above normal construction procedures.

Acceleration of erosion and soil loss due to increased agricultural activity was not observed to be a problem. A majority of the road segments proposed traversed flat or slightly sloped ground, and the combination of this condition and the extraordinary revegetation capacity would indicate very little risk of erosion and soil loss. Even where steep slopes were encountered indications were that the soils were not susceptible to erosion. Several instances were observed where vegetation had been completely removed from slopes of 50-70% yet no erosion was evident.

5.4.4 ISSUE 4: Wetland Conversion

The present road design of the segments studied has in actuality created a de-evolution of the hydrographic system. The present wetland crossings, of both linear stream channels and broader basins, consist primarily of fill material with very restrictive water passages. The propcsed crossing structures, properly designed to handle peak flows, will restore the situation to a more normal flow pattern.

5.4.5 ISSUE 5: Species and Habitat Loss

Background

Guinea maintains some important wildlife resources. However,

there have been few scientific surveys, analyses, or texts on the wildlife of Guinea (Arid lands Information Center, 1983). Further, there are presently very few non-governmental organizations in Guinea working in the area of wildlife or protected area management.

The consultants routinely contacted national authorities, regional officials and local village people regarding wildlife utilization in the regions visited. Information was obtained from these sources regarding wildlife species present, protected areas and hunting practices.

A complete list of the U.S. Fish and Wildlife Service (USFWS) and International Union for the Conservation of Nature (IUCN) threatened and endangered wildlife species can be found in Table 1. Addendum 4 contains a list of the wildlife species that the consultants observed in each of the three regions visited.

Potential Impacts on Wildlife From Road Improvement

There are certain potential direct impacts that road improvement may have on wildlife species and their associated habitat. For example, the widening and re-alignment of roads may modify wildlife habitat. In addition, road improvement may negatively impact wildlife by establishing a barrier which could potentially:

(1) fragment habitat;
(2) inhibit wildlife migration;
(3) reduce access to food; or
(4) reduce access to water resources.

There are also certain potential indirect impacts that road improvement may have on wildlife species and their associated habitat. The potential increase in human population as a result of road improvement may further confine wildlife into areas which may not be viable habitat communities. In addition, an increase in human population is often associated with an increase in agricultural and hunting activities. Since slash and burn agriculture is widespread in Guinea, and an increase in human population could potentially alter vegetation within an area.

Threatened and Endangered Species

The consultants did not find any road segments which were near undegradated tropical forests, important wildlife habitat, or wildlife corridor. All of the forest areas encountered have been intensively farmed--often through slash and burn activities. Consequently, none of the road segments posed a direct threat to important wildlife habitat or wildlife species.

Improvement to only one road segment could potentially cause

indirect impacts to potentially undisturbed forests beyond the road segment: Road Segment 4304 (Upper Guinea Region-Farana) . None of the other road segments are anywhere near what could be considered potentially important habitat for threatened and endangered wildlife species.

According to villagers at the end of Road Segment 4304, there may be a relatively undisturbed forest beyond the road segment. While the subject area is not officially classified for protection, the villagers indicated that there the forest area beyond the road segment which maintains numerous wildlife species. The species mentioned by the villagers include:

--Chimpanzee (Pan troglodytes)
--Red Colobus Monkey (Colobus badius)
--Black and White Colobus Monkey (Colobus Polykomos)
--African Elephants (Loxodonta africana) (occasional sights of animals crossing the border from Sierra Leone).
--Antelope (numerous species)

The improvement of this road segment could potentially cause indirect impacts to the forest area associated with an increase in the human population.

It is recommended that the subject Road Segment 4304 be approved for improvement. The potential benefits from the improved out weigh any potential indirect negative impacts on the unclassified forests beyond the road segment. However, the area should be carefully monitored for indirect impacts as part of the overall project environmental monitoring component. This is not to say that threatened and endangered wildlife species are not present in other areas within the three regions examined.

Consultants often observed what appeared to be troops of Red Colobus Monkeys (Colobus badius) (an IUCN endangered species) crossing the road segments. On another occasion, the consultants heard a troop of Chimpanzees (Pan troglodytes) (an IUCN and USFWS threatened species) in a riverine forest gallery adjacent to Road Segment 6406 (Middle Region-Fouta Djallon). While Road Segment 6406 transects this riverine forest, improvement of the road will not cause significant impact. This judgement is based on:

(1) The habitat is not unique--there are numerous riverine forests in the immediate area; and

(2) Improvement of a road through the stream bed may actually reduce negative impacts to the environment. For example, the consultants observed that faulty bridges or roads through a stream bed often resulted in the creation of additional alternative routes.

There are other indicators for the presence of threatened and endangered species in the three regions visited. For example, villagers in the Upper Region-Farana keep as pets what appear to be the Olive Colobus (Colobus verus) (an IUCN threatenned species) and Chimpanzees (Pan troglodytes) (an IUCN and USFWS threatened species).

The African Elephant Conservation Coordinating Group has identified two areas in Guinea as priorities for protection:

(1) Ourekaba Village; and

(2) the Massif du Ziama National Park. However, none of the African elephant areas in Guinea (nor in Liberia or Sierra Leone) are anywhere near the road segments.

Given the low potential impact of the proposed project road segments on wildlife, mitigation measures are recommended for the Road Segment 4304. However, it is suggested that all road improvement construction be carefully monitored to assure road improvement construction is performed in the standard environmentally sound manner.

Wildlife Hunting

Until the colonial era, hunting was the principle livelihood of many people in Guinea. Hunting was particularly important in the Forest Region before the introduction of cash crops such as caco and coffee (Arid Lands Information Center, 1983). However, hunting now appears to be a minor activity in all three regions visited. Much of the hunting is done only to reduce pests (e.g., Porcupines).

For example, the people in one village near Faranah indicated that people in the region obtain only five-percent of their protein from game meat. The villagers indicated that Muslims do not hunt or eat primates for religious reasons. This is significant, as eighty percent of Guinea's population is Muslim.

Some of the villagers in each region visited were aware of which species are protected by the Government of Guinea. In addition, hunting in all three regions visited appeared to be regulated. For example, a permit is required for both a gun and to hunt. A government tax is also changed for hunting.

The consultants were told by numerous sources that formal wildlife game ranching does not exist in Guinea. However, people from different villages apparently join forces occasionally for organized game meat hunts. An ongoing USAID/Guinea poultry project in Farana could be modified to provide alternatives to game meat if such an alternative were needed in the future.

Suggested Mitigation Measures

1) Road Segment 4304: A mitigation measure to restrict human migration into the unclassified forest beyond Road Segment 4304 should be implemented.

2) Other Project Road Segments: Given the low potential impact of the proposed project road segments on wildlife, no additional mitigation measures are recommended. However, it is suggested that the road improvement construction be carefully monitored to assure road improvement construction is performed in a standard environmentally sound manner.

5.4.6 ISSUE 6: Loss of Biodiversity

There are certain potential impacts that road improvement may have on the biodiversity of a region. Unique and fragile ecosystems can be lost directly through conversion of tropical forests or indirectly due to increases in human populations and associated farming and hunting activities. It is the view of the consultants that the potential negative impacts of the project on biodiversity will be minimal because:

a) the project is not designed to establish new roads, but will only improve existing roads;

b) none of the project roads transect protected areas or areas which should be protected; and

c) many of the areas near the project roads are secondary forests which have been intensively cultivated by farmers. If an area near a project road was not used intensively by farmers, it was rated low in biological importance.

The proposed project road segments are located within two bio-geographical units in Afro-tropical Realm (Mackinnon, 1986). They are: (1) Guineo-Congolian unit; and (2) Guinea-Cogolia/Sudania Regional Transition Zone Unit.

Guineo-congolian Unit

The tropical forests in Guinea's Forest Region are located in the Guineo-Congolian unit. These forests are part of the West African rainforest belt separated from the main Congolian forest of central Africa by the savanna "Dohomey gap." The Guinean forests are less species rich than the forests to the east of the Dahomey Gap. However, they do support a number of endemic, threatenned and endangered species. Information the biodiversity of Guinea and the status of individual species is very limited (IUCN, 1988).

Two of Guinea's three protected areas are located in the Forest Region: Mount Nimba Biosphere Reserve, and Massif du Ziama. The Mount Nimba Biosphere Reserve was designated as a World Heritage site in 1981 (IUCN, 1988). The Mount Nimba reserve is particularly important as a world resource because it is contiguous with tropical forests in both Liberia and Ivory Coast. According to wildlife authorities in Labe, Guinea, no efforts are being made to manage this resource on a regional multi-national level.

Guinea-Congolia/Sudania Regional Transition Unit

The unit consists of a belt of terrain separating the Guineo-Congolian and Sudanian Units. It extends from the Senegal coast to western Uganda for an east-west length of 5,000 kilometers. it reaches the coast where the Dahomey gap separates the rain forest blocks of the Guinea-Congolian unit.

The Guinea-Congolia/Sudania Regional Transition Zone Unit was formerly mostly woodland. However, almost all the original vegetation has been destroyed by fire and cultivation. The unit is now a mosaic of secondary grassland and secondary wooded grassland. (MacKinnon, 1986).

Potential Impacts on Biodiversity From Road Improvement

The consultants believe there will be no direct impacts on biodiversity associated with the improvement of the specific roads under the project. None of the road segments are anywhere near undisturbed forests. Most of the areas have been used extensively by farmers for many years.

As indicated in Issue 5 (Species and Habitat Loss), only one of the road segments examined is anywhere near what could be considered potentially important habitat for threatened and endangered wildlife species (Segment 4304 in Farana Region). The potential impacts to this area would be indirect only.

Suggested Mitigation Measures

Given the low potential impact of the proposed project road segments on biodiversity, no mitigation measures are recommended beyond the one discussed for Road Segment 4303 in Issue 5 above (Species and Habitat Loss). However, it is suggested that the road improvement construction be carefully monitored to assure construction is performed in the standard environmentally sound manner.

5.4.7 ISSUE 7: Disease Transmission

The assessment team believes that diseases associated with water ponding will decrease as more efficient stream crossing structures reduce water impoundments (see Issue 4). Proper design and placement of barrow pits and the use of proper abandonment procedures can mitigate water ponding problems. The risk of providing a more efficient corridor for the spread of disease will be more than offset by the existence of a road permitting better and more consistent access to health and education services.

5.5 Special Cases or Activities

In the course of the field work three segments required special decisions or consideration. In the Gaoual prefecture the single segment turned out to be a problem. In arriving at the origin village, the sous-prefecture Touba, Malanta, marked on the map did not presently exist, and had not for a very long time. We were told that a new route had been established and were shown it's position on the map. By chance, we had met with two consulting engineers with Rural Engineering: Rene Verguth and Philip Fossa, in Gaoual and had planned to do the transect together because of the pre-indications of the problem. The EA team and the two consultants decided to conduct the studies along the presently used route even though it was not that marked on the map. The rational of both the EA team and the two engineers was that, in all likelihood, the present route would be that improved and, since we were all on site, we should have the basic studies for this route. In the summary sheet presented in Section 5.7 this section has the issue responses in place as a result of the study but it is lacking a formal segment code, length and rehabilitation standard.

The other two cases involved studies done along the improper route. Road segments 6411 in the prefecture of Telimele and 8405 in N'Zerekore were missed due to navigation errors or road changes. In both cases the routes studied were within one mile of the correct road and it was the combined opinion of the EA team that conditions pertinent to the scoping statement issues would not change significantly and the routes were recommended for improvement.

5.6 Summary Table

A summary of the responses for the seven identified in the scoping statement for all road segments evaluated are presently in Table 2. For the issues there were two responses: "N" signifying no significant unmitegatable adverse environmental impact, and "PI" indicating the possibility of future indirect negative impacts from conditions resulting from road improvement.

SUMMARY SHEET OF FINDINGS BY SCOPING STATEMENT ISSUE

Prefecture	Segment	Stand	Vegetation Type	Issue Number 1	2	3	4	5	6	7
Faranah	4301	A	WS	N	N	N	N	N	N	N
	4302	A	WS	N	N	N	N	N	N	N
	4303	B	WS/GF	N	N	N	N	N	N	N
	4304	Bf	MF	N	PI	N	N	PI	N	N
	4308	Bf	WS/D	N	N	N	N	PI	N	N
	4309	B	WS	N	N	N	N	N	N	N
	4310	B	WS/BL	N	N	N	N	N	N	N
	4313	B	WS/P/BL	N	PI	N	N	N	N	N
	4316	B	WS/P/BL	N	N	N	N	N	N	N
Lola	8205	A	P1/SB	N	N	N	N	N	N	N
	8207	B	P1/SF	N	N	N	N	N	N	N
	8208	A	P1/SB	PI	PI	N	N	PI	PI	N
	8210	B	PL/SB/P	N	N	N	N	N	N	N
	8211	B	S/A/F	N	N	N	N	N	N	N
	8212	Bf	SF/P1/GF	N	PI	N	N	N	N	N
N'Zerekore	8404	Bf	SF/GF/SB	N	N	N	N	N	N	N
	8405	B	F/A/P1	N	N	N	N	N	N	N
	8406	B	P1/SF	N	N	N	N	N	N	N
	8407	A	P1/SB	N	N	N	N	N	N	N
	8410	Bf	P1/SB/F	N	N	N	N	N	N	N
	8411	Bf	P1/GS	N	N	N	N	N	N	N
	8412	A	P1/SF/SB	N	N	N	N	N	N	N
	8413	Bf	P1/SF	N	N	N	N	N	N	N
Telimele	6406	B	SB/F	N	N	N	N	N	N	N
	6407	Bf	LP/F/SB	N	N	N	N	N	N	N
	6410	Bf	SB/F	N	N	N	N	N	N	N
	6411	--	-------	(SEE TEXT)						
Pita	7501	A	P/WS	N	N	N	N	N	N	N
	7502	A	P	N	N	N	N	N	N	N
	7506	A	P	N	N	N	N	N	N	N
	7507	A	P/LW	N	N	N	N	N	N	N
	7508	A	RU/F/SB	N	N	N	N	N	N	N
	7512	A	SB/LP/P	N	N	N	N	N	N	N
	7514	A	LW/F/P	N	N	N	N	N	N	N
Koundara	1401	A	LW/WS/P	N	N	N	N	N	N	N
	1403	B	F/LW/P	N	N	N	N	N	N	N
	1404	Bf	LW/SB/F	N	N	N	N	N	N	N
	1407		P/WS/F	N	N	N	N	N	N	N
Gaoul	----	--	-------	(SEE TEXT)						

Table Code:

BL - Bottom lands
DI - Direct adverse impact
F - Fallow
GF - Gallery forest
GS - Grassy savanna
LP - Laterite plain
LW - Laterite woodland
MF - Mountain forest
N - No adverse impact
P - Plain
P1 - Plantation
PI - Potential adverse impact
SB - Slash & burn agriculture
SF - Secondary forest
RU - Rocky upland
WS - Wooded savanna

5.7 Mitigation Measures in the Context of the Guinea Rural Roads Project

From the standpoint of the scoping statement issues mitigation alternatives must be considered for two primary categories: 1) direct impacts of the road construction; and 2) indirect impacts occurring as a result of conditions of increased accessibility.

5.7.1 Direct Impacts and Mitigation Measures

With respect to direct impacts the road construction will be, in itself, a mitigation measure, given that normal construction procedures are followed. As previously discussed the upgrading of wet area crossings will move hydrographic conditions towards a more normal condition, in general will reduce water ponding, and the subsequent associated disease problem. From the point of view of direct impact on the vegetation the road construction can also have and overall positive effect. The primary impact will be the creation of denuded zones through quarrying activities and the cuts and fills necessary for the construction. However, what will be avoided with the existence of a good road bed and stable wetland crossings will be the present pattern of "deviation". At the present time drivers of bush taxis and commercial heavy vehicles will find one or more alternative routes around an obstacle or difficult terrain. Two examples will illustrate the point. In situations where bridges were down or culverts washed out, it was observed on several occasions that the gallery forest was bisected by four or five alternative routes, impacting a large zone. The construction of a permanent stream crossing structure will eliminate the need for these alternative routes and the resulting negative impacts. over flatter terrain, especially where laterized material (cuirasse) is present, alternative routes were often evident. Driving over this material is very uncomfortable and highly destructive to transportation equipment at any speed. An improved road bed would again reduce the need for alternative routes and resulting negative impacts on the surrounding environment.

5.7.2 Indirect Impacts and Mitigation Measures

5.7.2.1 Indirect Impacts on the Vegetation Resources

For the lands and the corridors directly observed along the road segments studied the level of indirect effects would not change significantly unless there was a rapid and significant increase in human population. At the present time nearly 100% of the zone studied was under one form of agricultural system or another. The length of fallow period for the slash-and-burn and continuous (or intensive) cultural systems is being set by either local population requirements or soil capability. If fallow periods are shortened, due either to increased economic advantage or

increased food requirements of the local populations, the present structure, or species composition, of the vegetation cover will not be altered significantly. Increased pressure over the long term, in combination with a lack of appropriate vegetation management activities, will result in de-evolution of the botanical resource and may result in potential loss of soil capacity to support more advanced vegetation formations.

Mention must be made of possible indirect effects associated with four of the segments studied: 1) segment 1407, in the Koundara prefecture, running from Sareboido to Madina-Badiar; 2) segment 4313, in the Faranah prefecture, running from Faranah to Beindougou; 3) segment 4304, also in the Franah prefecture, running from Kobikoro to Forokoniah; and 4) segment 8208, in the Lola prefecture, running from an intersection with the national route right across from the boundary of Mount Nimba National Park to Tounkarata.

All of these segments are near presently established national parks and classified forests or proposed national parks or forest reserves. The point to be made here is that proper planning and initiation of buffer zone management will be the only form of mitigation available. Zones must be identified and delineated on appropriate map bases, permitted uses identified and strictly controlled and local populations informed. For example, road segment 4313 ends approximately 30 kilometers from the Mafou Classified Forest, apparently an important forest and wildlife area. At the present time an Italian group is conducting studies with the goal being to develop a buffer zone management plan for the area southwest of the Forest. The limited time available to the assessment team for research did not allow follow-up on the status of this project. It would be of value to do so from the standpoint of a possible model for an approach to the other three segments identified, if appropriate.

A final point would be that, if a problem relative to indirect impacts to the forested environment is created by the upgrading of the road, the mitgations would also be only possible with the road. The road would be the conduit for initiation of a better management infrastructure, and could have an overall positive long term effect on the botanical resource.

5.8 Monitoring and Evaluation

5.8.1 Monitoring indicators

The Africa Bureau has developed tentative natural resources management (NRM) indicators for measuring success at the field level. The impact indicators will measure increases in income, agricultural productivity and management of important wildlife habitats. These indicators are presently being field tested and

integrated into the design of bilateral projects throughout Africa (e.g., Kenya, Uganda, Gambia). The Africa Bureau's NRM indicators should be used as the basis for developing a Rural Roads environmental monitoring system. Not all of these indicators will apply to the Rural Roads project. To summarize, the five NRM data gathering levels are:

(1) income/productivity increases through better management of natural resources (e.g., increases in national or household income over time);

(2) biophysical changes that produce increases in productivity (e.g., soil fertility, vegetative cover, biodiversity maintained).

(3) adoption of practices that produce biophysical changes (e.g., number of community/individual initiatives, areas under management, number of voluntary users of improved practices);

(4) conditions that lead to adoption of improved practices (e.g., public policy revisions providing incentives for more sustainable resource management); and

(5) actions that establish conditions (e.g., credit systems revised, technologies identified and extended).

5.8.2 Recommendations

1. A natural resources advisor should be procured by USAID/Conakry to develop an environmental impact system for the Rural Roads Project. The consultant must be familiar with the Africa Bureau NRM indicators process as it relates to biodiversity and tropical forest management. (See Monitoring and Evaluation Plan, Section IV.C.4., main PP text). The consultant will:

(a) develop an appropriate monitoring system which includes an initial biological baseline survey (and sociological baseline survey as appropriate) of all project road segments (using Landsat Imagery and/or site inspection); and

(b) identity or develop an environmental monitoring and data storage system.

2. It is the consultants opinion that none of the road segments should have a direct impact on primary tropical forests. However, three road segments have been identified which have a potential for indirect impacts from road improvement. Closer examination of all road segments as part of the baseline survey may indicate other areas which could receive indirect impacts. For example, three of the project road segments have the potential to indirectly impact what are said to be important wildlife habitats. The consultants recommend that biological

baseline surveys be carried out to determine the importance of these areas. Based on the results of this survey, appropriate actions can be taken to reduce indirect impacts and to monitor long-term project impacts.

ADDENDUM 1: GLOSSARY OF TERMS

Direct Impacts: Any impact to the subject environment(s) directly attributable to the road improvement construction activities.

Edget Effect: In plant community ecology those influences found on the margins of large stands of vegetation. The ecological processes in this zone are controlled by a combination of influences found near the center of the stand and those completely outside of the sand.

Indirect Impacts: Any impacts to the subject environment(s) attributable to conditions resulting from the improvement of the road.

Mitigation: To cause to become less harsh or hostile, or to make less severe or harmful.

Niche: Literally an opportunity to live for any living organism. Perhaps best defined by describing a lack thereof. If all soil is washed off of a hill side leaving only bare rock, those plant species requiring such a soil layer will no longer grow there. The niche for these plants, in this location, is no longer open.

Road Impact Zone: For this study two concepts were considered depending of the types of impacts discussed. For direct impacts the road impact zone (RIZ) was only the zone where actual construction activities would alter the present conditions. This zone included the road bed itself, side ditching, cut and fill perimeters, deviation zones due to construction and feeder roads and quarries.

For indirect impacts the RIZ was considered to be the average distance an individual can walk, with a burden, in one day. This figure seems to be generally established at approximately 8 kilometers.

Road Improvement Activity: Construction, primarily along an existing route, using normal and accepted practices of construction, with the objectives being: increasing the maximum speed of travel, increasing the potential for all-weather use, increasing travel safety and reducing road damage-related maintenance costs. Normal and accepted practices include: proper road bed compaction and design, proper road surface pitching, proper curve geometry, proper cut and fill procedures, proper design and placement of water diversion ditches, proper design and construction of culverts and bridges, and proper design, location and application of abandonment procedures for detour roads, feeder roads and quarry sites.

Stand: A patch of forest vegetation which is identifiable by its uniformity of structure, species composition and site which it occupies.

Undegraded Tropical Forest: A forest stand of sufficient size so that edge effects are a very minor influence on the ecological processes within the stand and having a number of available niches close to the theoretical maximum of a mature undegraded tropical forest.

--Wet Tropical Type A forest stand of five distinct canopy layers with height categories as indicated:

Layer 1	less than 1 meter
Layer 2	1 to 3 meters
Layer 3	3 to 25 meters
Layer 4	25 to 50 meters
Layer 5	more than 60 meters

and a species diversity defined by at least 25 species per canopy layer per hectare.

--Woodland-Savanna Type A forest stand consisting of canopy layers 1 through 4 (above) with a species diversity defined by at least 15 species per canopy layer per hectare.

Un-mitigatable Environmental Impact: An action for which there are no mitigating measures which cause either, or both, the physical or biological environment to degrade in it's ability to support niches.

Vegetable Dynamics: Change in a vegetation's species composition or structure caused by an outside influence, either artificial or natural, short-term or long-term.

ADDENDUM 2: SCOPING STATEMENT

ADDENDUM 3: LIST OF WILDLIFE SPECIES OBSERVED

ADDENDUM 4: DESCRIPTION OF INDIVIDUAL ROAD SEGMENTS

ADDENDUM 5: FIELD DATA SHEET AND ASSOCIATED KEYS

This Addendum presents the provisional ground data sheet which was developed specific to the issues in the scoping statement shown in Addendum 3. Because of the lack of precedential documentation relative to the process of making an environmental assessment for a rural roads project this must be looked at as an initial effort. The data sheet must be further evaluated from the standpoint of efficiency of it's use and the value of the data collected.

The data sheet was developed in both french and english due to the participation of Guinean professionals and well as the english speaking members of the team. The responses are often given in either french or english, depending on the person actually filling out the sheet.

The responses are either self evident, as in the case where boxes are simply checked or the response is a number. However, there are several categories where the response is indication of a level of present activity or potential impact. In these cases the responses are as follows:

NA	not applicable in the context
B = L	indication of a low level of activity or impact
M	indication of a medium level of activity or impact
E = H	indication of a high level of activity or impact
TE = VH	indication of a very high level of activity or impact

Again, it must be stressed that this sheet, to the knowledge of the EA team members, is the first of it's kind in the context. Added study of the methodology will be necessary to refine the data sheet, and the method in general, to benefit as much as possible in the future.

(All original ground data sheets are on file at USAID/Conakry).

ANNEX G

STATUTORY CHECKLIST

5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable to the eligibility of countries to receive the following categories of assistance: (A) both Development Assistance and Economic Support Funds; (B) Development Assistance funds only; or (C) Economic Support Funds only.

A. COUNTRY ELIGIBILITY CRITERIA APPLICABLE TO BOTH DEVELOPMENT ASSISTANCE AND ECONOMIC SUPPORT FUND ASSISTANCE

1. Narcotics

a. Negative certification (FY 1991 Appropriations Act Sec. 559(b)): Has the President certified to the Congress that the government of the recipient country is failing to take adequate measures to prevent narcotic drugs or other controlled substances which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully? NO

b. Positive certification (FAA Sec. 481(h)). (This provision applies to assistance of any kind provided by grant, sale, loan, lease, credit, guaranty, or insurance, except assistance from the Child Survival Fund or relating to international narcotics control, disaster and refugee relief, narcotics education and awareness, or the provision of food or medicine.) If the recipient is a "major illicit drug producing country" (defined as a country producing during a fiscal year at least five metric tons of opium or 500 metric tons of coca or marijuana) or a "major drug-transit country" (defined as a country that is a significant direct NO

source of illicit drugs significantly affecting the United States, through which such drugs are transported, or through which significant sums of drug-related profits are laundered with the knowledge or complicity of the government):

(1) does the country have in place a bilateral narcotics agreement with the United States, or a multilateral narcotics agreement? NO

(2) has the President in the March 1 International Narcotics Control Strategy Report (INSCR) determined and certified to the Congress (without Congressional enactment, within 45 days of continuous session, of a resolution disapproving such a certification), or has the President determined and certified to the Congress on any other date (with enactment by Congress of a resolution approving such certification), that (a) during the previous year the country has cooperated fully with the United States or taken adequate steps on its own to satisfy the goals agreed to in a bilateral narcotics agreement with the United States or in a multilateral agreement, to prevent illicit drugs produced or processed in or transported through such country from being transported into the United States, to prevent and punish drug profit laundering in the country, and to prevent and punish bribery and other forms of public corruption which facilitate production or shipment of illicit drugs or discourage prosecution of such acts, or that (b) the vital national interests of the United States require the provision of such assistance? NO

c. Government Policy (1986 Anti-Drug Abuse Act of 1986 Sec. 2013(b)). (This section applies to the same categories of assistance subject to the restrictions in FAA Sec. 481(h), above.) If recipient country is a "major illicit drug producing country" or "major drug-transit country" (as defined for the purpose of FAA Sec 481(h)), has the President submitted a report to Congress

listing such country as one: (a) which, as a matter of government policy, encourages or facilitates the production or distribution of illicit drugs; (b) in which any senior official of the government engages in, encourages, or facilitates the production or distribution of illegal drugs; (c) in which any member of a U.S. Government agency has suffered or been threatened with violence inflicted by or with the complicity of any government officer; or (d) which fails to provide reasonable cooperation to lawful activities of U.S. drug enforcement agents, unless the President has provided the required certification to Congress pertaining to U.S. national interests and the drug control and criminal prosecution efforts of that country?

2. **Indebtedness to U.S. citizens** (FAA Sec. 620(c): If assistance is to a government, is the government indebted to any U.S. citizen for goods or services furnished or ordered where: (a) such citizen has exhausted available legal remedies, (b) the debt is not denied or contested by such government, or (c) the indebtedness arises under an unconditional guaranty of payment given by such government or controlled entity? NO

3. **Seizure of U.S. Property** (FAA Sec. 620(e)(1)): If assistance is to a government, has it (including any 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. **Communist countries** (FAA Secs. 620(a), 620(f), 620D; FY 1991 Appropriations Act Secs. 512, 545): Is recipient country a Communist country? If so, has the President: (a) determined that assistance to the country is vital to the security of the United States, that the recipient country is not controlled by NO

the international Communist conspiracy, and that such assistance will further promote the independence of the recipient country from international communism, or (b) removed a country from applicable restrictions on assistance to communist countries upon a determination and report to Congress that such action is important to the national interest of the United States? Will assistance be provided either directly or indirectly to Angola, Cambodia, Cuba, Iraq, Libya, Vietnam, Iran or Syria? Will assistance be provided to Afghanistan without a certification, or will assistance be provided inside Afghanistan through the Soviet-controlled government of Afghanistan?

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

6. **OPIC Investment Guaranty (FAA Sec. 620(l)):** Has the country failed to enter into an investment guaranty agreement with OPIC? NO

7. **Seizure of U.S. Fishing Vessels (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 vessel because of fishing activities in international waters? NO (b) If so, has any deduction required by the Fishermen's Protective Act been made?

8. **Loan Default (FAA Sec. 620(q); FY 1991 Appropriations Act Sec. 518 (Brooke Amendment)):** (a) Has the government of the recipient country been in default for more than six months on interest or principal of any loan to the country under the FAA? NO (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 FY 1990 Appropriations Act appropriates funds?

9. **Military Equipment** (FAA Sec. 620(s)): If contemplated assistance is development loan or to come from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget and amount of the country's foreign exchange or other resources spent on military equipment? (Reference may be made to the annual "Taking Into 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.) — N/A

10. **Diplomatic Relations with U.S.** (FAA Sec. 620(t)): Has the country severed diplomatic relations with the United States? If so, have relations been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? — NO

11. **U.N. Obligations** (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 A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? (Reference may be made to the "Taking into Consideration" memo.) — NO

12. **International Terrorism**

a. **Sanctuary and support** (FY 1991 Appropriations Act Sec. 556; FAA Sec. 620A): Has the country been determined by the President to: (a) grant sanctuary from prosecution to any individual or group which has committed an act of international terrorism, or (b) otherwise support international terrorism, unless the President has waived this restriction on grounds of national security or for humanitarian reasons? — NO

b. **Airport Security** (ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures? NO

13. **Discrimination** (FAA Sec. 666(b)): 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? NO

14. **Nuclear Technology** (FAA Secs. 669, 670): Has the country, after August 3, 1977, delivered to any other country or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards, and without special certification by the President? 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? If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported (or attempted to export) illegally from the United States any material, equipment, or technology which would contribute significantly to the ability of a country to manufacture a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.) NO

15. **Algiers Meeting** (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 Assembly of the U.N. on Sept. 25 and 28, 1981, and did it fail 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.) NO

16. **Military Coup** (FY 1991 Appropriations Act Sec. 513): Has the duly elected Head of Government of the country been deposed by military coup or decree? If assistance has been terminated, has the President notified Congress that a democratically elected government has taken office prior to the resumption of assistance? NO

17. **Refugee Cooperation** (FY 1991 Appropriations Act Sec. 539): Does the recipient country fully cooperate with the international refugee assistance organizations, the United States, and other governments in facilitating lasting solutions to refugee situations, including resettlement without respect to race, sex, religion, or national origin? YES

18. **Exploitation of Children** (FY 1991 Appropriations Act Sec. 599D, amending FAA Sec. 116): Does the recipient government fail to take appropriate and adequate measures, within its means, to protect children from exploitation, abuse or forced conscription into military or paramilitary services? NO

B. COUNTRY ELIGIBILITY CRITERIA APPLICABLE ONLY TO DEVELOPMENT ASSISTANCE ("DA")

1. **Human Rights Violations** (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. **Abortions** (FY 1991 Appropriations Act Sec. 535): Has the President certified that use of DA funds by this country would violate any of the prohibitions against use of funds to pay for the performance of abortions as a method of family planning, to motivate or coerce any person to practice abortions, to pay for the performance of involuntary NO

sterilization as a method of family planning, to coerce or provide any financial incentive to any person to undergo sterilizations, to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

C. COUNTRY ELIGIBILITY CRITERIA APPLICABLE ONLY TO ECONOMIC SUPPORT FUNDS ("ESF")

Human Rights Violations (FAA Sec. 502B): 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 President found that the country made such significant improvement in its human rights record that furnishing such assistance is in the U.S. national interest? NO

5C(2) - ASSISTANCE CHECKLIST

Listed below are statutory criteria applicable to the assistance resources themselves, rather than to the eligibility of a country to receive assistance. This section is divided into three parts. Part A includes criteria applicable to both Development Assistance and Economic Support Fund resources. Part B includes criteria applicable only to Development Assistance resources. Part C includes criteria applicable only to Economic Support Funds.

CROSS REFERENCE: IS COUNTRY CHECKLIST UP TO DATE? YES

A. CRITERIA APPLICABLE TO BOTH DEVELOPMENT ASSISTANCE AND ECONOMIC SUPPORT FUNDS

1. **Host Country Development Efforts** (FAA Sec. 601(a)): Information and conclusions on whether assistance will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, 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. YES

2. **U.S. Private Trade and Investment** (FAA Sec. 601(b)): Information and conclusions on how assistance 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). YES

3. **Congressional Notification**

a. **General requirement** (FY 1991 Appropriations Act Secs. 523 and 591; FAA Sec. 634A): If money is to be obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified (unless the notification requirement has been waived because of substantial risk to human health or welfare)? YES

b. **Notice of new account obligation** (FY 1991 Appropriations Act Sec. 514): If funds are being obligated under an appropriation account to which they were not appropriated, has the President consulted with and provided a written justification to the House and Senate Appropriations Committees and has such obligation been subject to regular notification procedures? N/A

c. **Cash transfers and nonproject sector assistance** (FY 1991 Appropriations Act Sec. 575(b)(3)): If funds are to be made available in the form of cash transfer or nonproject sector assistance, has the Congressional notice included a detailed description of how the funds will be used, with a discussion of U.S. interests to be served and a description of any economic poolicy reforms to be promoted? no

4. **Engineering and Financial Plans** (FAA Sec. 611(a)): Prior to an obligation in excess of $500,000, will there be: (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? YES

5. **Legislative Action** (FAA Sec. 611(a)(2)): If legislative action is required within recipient country with respect to an obligation in excess of $500,000, what is the basis for a reasonable expectation that such action NO

will be completed in time to permit orderly accomplishment of the purpose of the assistance?

6. **Water Resources** (FAA Sec. 611(b); FY 1991 Appropriations Act Sec. 501): If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.) — N/A

7. **Cash Transfer and Sector Assistance** (FY 1991 Appropriations Act Sec. 575(b)): Will cash transfer or nonproject sector assistance be maintained in a separate account and not commingled with other funds (unless such requirements are waived by Congressional notice for nonproject sector assistance)? — N/A

8. **Capital Assistance** (FAA Sec. 611(e)): If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively? — YES

9. **Multiple Country Objectives** (FAA Sec. 601(a)): Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, 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. — YES

10. **U.S. Private Trade (FAA Sec. 601(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).	YES
11. **Local Currencies**	
a. **Recipient Contributions** (FAA Secs. 612(b), 636(h)): 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.	HC Contribution: approx. 30% of cost.
b. **U.S.-Owned Currency (FAA Sec. 612(d)):** Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	NO
c. **Separate Account** (FY 1991 Appropriations Act Sec. 575). If assistance is furnished to a foreign government under arrangements which result in the generation of local currencies:	NO
(1) Has A.I.D. (a) required that local currencies be deposited in a separate account established by the recipient government, (b) entered into an agreement with that government providing the amount of local currencies to be generated and the terms and conditions under which the currencies so deposited may be utilized, and (c) established by agreement the responsibilities of A.I.D. and that government to monitor and account for deposits into and disbursements from the separate account?	N/A

(2) Will such local currencies, or an equivalent amount of local currencies, be used only to carry out the purposes of the DA or ESF chapters of the FAA (depending on which chapter is the source of the assistance) or for the administrative requirements of the United States Government? N/A

(3) Has A.I.D. taken all appropriate steps to ensure that the equivalent of local currencies disbursed from the separate account are used for the agreed purposes? N/A

(4) If assistance is terminated to a country, will any unencumbered balances of funds remaining in a separate account be disposed of for purposes agreed to by the recipient government and the United States Government? N/A

12. **Trade Restrictions**

a. **Surplus Commodities** (FY 1991 Appropriations Act Sec. 521(a)): 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

b. **Textiles (Lautenberg Amendment)** (FY 1991 Appropriations Act Sec. 521(c)): Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of NO

textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?

13. **Tropical Forests** (FY 1991 Appropriations Act Sec. 533(c)(3)): Will funds be used for any program, project or activity which would (a) result in any significant loss of tropical forests, or (b) involve industrial timber extraction in primary tropical forest areas? NO

14. **PVO Assistance**

a. **Auditing and registration** (FY 1991 Appropriations Act Sec. 537): If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? N/A

b. **Funding sources** (FY 1991 Appropriations Act, Title II, under heading "Private and Voluntary Organizations"): If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? N/A

15. **Project Agreement Documentation** (State Authorization Sec. 139 (as interpreted by conference report)): Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). Will be done.

16. **Metric System** (Omnibus Trade and Competitiveness Act of 1988 Sec. 5164, as interpreted by conference report, amending Metric Conversion Act of 1975 Sec. 2, and as implemented through A.I.D. policy): Does the assistance activity use the metric system of measurement in its procurements, grants, and other business-related activities, except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms? Are bulk purchases usually to be made in metric, and are components, subassemblies, and semi-fabricated materials to be specified in metric units when economically available and technically adequate? Will A.I.D. specifications use metric units of measure from the earliest programmatic stages, and from the earliest documentation of the assistance processes (for example, project papers) involving quantifiable measurements (length, area, volume, capacity, mass and weight), through the implementation stage? — YES

17. **Women in Development** (FY 1991 Appropriations Act, Title II, under heading "Women in Development"): Will assistance be designed so that the percentage of women participants will be demonstrably increased? — N/A

18. **Regional and Multilateral Assistance** (FAA Sec. 209): Is assistance more efficiently and effectively provided through regional or multilateral organizations? If so, why is assistance not so provided? Information and conclusions on whether assistance will encourage developing countries to cooperate in regional development programs. — YES

19. **Abortions** (FY 1991 Appropriations Act, Title II, under heading "Population, DA," and Sec. 525):

a. Will assistance be made available to any organization or program which, as determined by the President, supports or participates in the management of a program of coercive abortion or involuntary sterilization? NO

b. Will any funds be used to lobby for abortion? NO

20. **Cooperatives** (FAA Sec. 111): Will assistance help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life? NO

21. **U.S.-Owned Foreign Currencies**

a. **Use of currencies** (FAA Secs. 612(b), 636(h); FY 1991 Appropriations Act Secs. 507, 509): Describe steps taken to assure that, to the maximum extent possible, foreign currencies owned by the U.S. are utilized in lieu of dollars to meet the cost of contractual and other services. N/A

b. **Release of currencies** (FAA Sec. 612(d)): Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release? N/A

22. **Procurement**

a. **Small business** (FAA Sec. 602(a)): Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? N/A

b. **U.S. procurement** (FAA Sec. 604(a)): Will all procurement be from the U.S. except as otherwise determined by the President or determined under delegation from him? YES

c. Marine insurance (FAA Sec. 604(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
d. Non-U.S. agricultural procurement (FAA Sec. 604(e)): If non-U.S. procurement of agricultural commodity or product thereof is to be 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.)	N/A
e. Construction or engineering services (FAA Sec. 604(g)): Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.)	YES
f. Cargo preference shipping (FAA Sec. 603)): Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent 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 such vessels are available at fair and reasonable rates?	YES
g. Technical assistance (FAA Sec. 621(a)): If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? Will the	YES

facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? YES

h. U.S. air carriers (International Air Transportation 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

i. Termination for convenience of U.S. Government (FY 1991 Appropriations 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? YES

j. Consulting services (FY 1991 Appropriations Act Sec. 524): If assistance is for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order)? YES

k. Metric conversion (Omnibus Trade and Competitiveness Act of 1988, as interpreted by conference report, amending Metric Conversion Act of 1975 Sec. 2, and as implemented through A.I.D. policy): Does the assistance program use the metric system of measurement in its procurements, grants, and other business-related activities, except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms? Are bulk purchases usually to be made in metric, and are components, subassemblies, and semi-fabricated materials to be specified in metric units when economically available and technically adequate? Will A.I.D. specifications use metric units of measure from the earliest programmatic stages, and from the earliest YES

documentation of the assistance processes (for example, project papers) involving quantifiable measurements (length, area, volume, capacity, mass and weight), through the implementation stage?

l. Competitive Selection Procedures (FAA Sec. 601(e)): Will the assistance utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	YES
23. Construction	
a. Capital project (FAA Sec. 601(d)): If capital (e.g., construction) project, will U.S. engineering and professional services be used?	NO
b. Construction contract (FAA Sec. 611(c)): If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?	YES
c. Large projects, Congressional approval (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 Congressional Presentation), or does assistance have the express approval of Congress?	N/A
24. U.S. Audit Rights (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?	N/A
25. Communist Assistance (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

26. **Narcotics**

a. **Cash reimbursements (FAA Sec. 483):** Will arrangements preclude use of financing to make reimbursements, in the form of cash payments, to persons whose illicit drug crops are eradicated? YES

b. **Assistance to narcotics traffickers (FAA Sec. 487):** Will arrangements take "all reasonable steps" to preclude use of financing to or through individuals or entities which we know or have reason to believe have either: (1) been convicted of a violation of any law or regulation of the United States or a foreign country relating to narcotics (or other controlled substances); or (2) been an illicit trafficker in, or otherwise involved in the illicit trafficking of, any such controlled substance? YES

27. **Expropriation and Land Reform (FAA Sec. 620(g)):** Will assistance preclude use of financing to compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President? YES

28. **Police and Prisons (FAA Sec. 660):** Will assistance preclude use of financing to provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? YES

29. **CIA Activities (FAA Sec. 662):** Will assistance preclude use of financing for CIA activities? YES

30. **Motor Vehicles (FAA Sec. 636(i)):** Will assistance preclude use of financing 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

31. Military Personnel (FY 1991 Appropriations Act Sec. 503): Will assistance preclude use of financing to pay pensions, annuities, retirement pay, or adjusted service compensation for prior or current military personnel?	YES
32. Payment of U.N. Assessments (FY 1991 Appropriations Act Sec. 505): Will assistance preclude use of financing to pay U.N. assessments, arrearages or dues?	YES
33. Multilateral Organization Lending (FY 1991 Appropriations Act Sec. 506): Will assistance preclude use of financing to carry out provisions of FAA section 209(d) (transfer of FAA funds to multilateral organizations for lending)?	YES
34. Export of Nuclear Resources (FY 1991 Appropriations Act Sec. 510): Will assistance preclude use of financing to finance the export of nuclear equipment, fuel, or technology?	YES
35. Repression of Population (FY 1991 Appropriations Act Sec. 511): Will assistance preclude use of financing 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?	YES
36. Publicity or Propoganda (FY 1991 Appropriations Act Sec. 516): Will assistance be used for publicity or propaganda purposes designed to support or defeat legislation pending before Congress, to influence in any way the outcome of a political election in the United States, or for any publicity or propaganda purposes not authorized by Congress?	NO

37. **Marine Insurance (FY 1991 Appropriations Act Sec. 563):** Will any A.I.D. contract and solicitation, and subcontract entered into under such contract, include a clause requiring that U.S. marine insurance companies have a fair opportunity to bid for marine insurance when such insurance is necessary or appropriate? YES

38. **Exchange for Prohibited Act (FY 1991 Appropriations Act Sec. 569):** Will any assistance be provided to any foreign government (including any instrumentality or agency thereof), foreign person, or United States person in exchange for that foreign government or person undertaking any action which is, if carried out by the United States Government, a United States official or employee, expressly prohibited by a provision of United States law? NO

B. CRITERIA APPLICABLE TO DEVELOPMENT ASSISTANCE ONLY

1. **Agricultural Exports (Bumpers Amendment) (FY 1991 Appropriations Act Sec. 521(b), as interpreted by conference report for original enactment):** If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities: (1) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (2) in support of research that is intended primarily to benefit U.S. producers?

2. Tied Aid Credits (FY 1991 Appropriations Act, Title II, under heading "Economic Support Fund"): Will DA funds be used for tied aid credits?	NO
3. Appropriate Technology (FAA Sec. 107): Is special emphasis placed on use of appropriate technology (defined as 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
4. Indigenous Needs and Resources (FAA Sec. 281(b)): Describe extent to which the activity recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.	YES
5. Economic Development (FAA Sec. 101(a)): 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
6. Special Development Emphases (FAA Secs. 102(b), 113, 281(a)): Describe 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, dispersing investment 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 appropriate U.S. institutions; (b) 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	YES

and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

7. **Recipient Country Contribution** (FAA Secs. 110, 124(d)): Will the recipient country provide at least 25 percent 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)? YES

8. **Benefit to Poor Majority** (FAA Sec. 128(b)): If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? YES

9. **Abortions** (FAA Sec. 104(f); FY 1991 Appropriations Act, Title II, under heading "Population, DA," and Sec. 535):

a. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions? NO

b. Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations? NO

c. Are any of the funds to be made available to any organization or program which, as determined by the President, supports or participates in the management of a program of coercive abortion or involuntary sterilization? NO

d. Will funds be made available only to voluntary family planning projects which offer, either directly or through referral to, or information about access to, a broad range of family planning methods and services?	NO
e. In awarding grants for natural family planning, will any applicant be discriminated against because of such applicant's religious or conscientious commitment to offer only natural family planning?	N/A
f. Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?	NO
g. Are any of the funds to be made available to any organization if the President certifies that the use of these funds by such organization would violate any of the above provisions related to abortions and involuntary sterilization?	NO
10. **Contract Awards** (FAA Sec. 601(e)): Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	YES
11. **Disadvantaged Enterprises** (FY 1991 Appropriations Act Sec. 567): What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)?	Approx. 10%

12. **Biological Diversity (FAA Sec. 119(g):** Will the assistance: (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas? NO

13. **Tropical Forests (FAA Sec. 118; FY 1991 Appropriations Act Sec. 533(c)-(e) & (g)):**

a. **A.I.D. Regulation 16:** Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? YES

b. **Conservation:** Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (1) stress the importance of conserving and sustainably managing forest resources; (2) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (3) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (4) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (5) help conserve forests which have not yet been degraded by helping to increase production on lands already cleared or degraded; (6) conserve forested watersheds and rehabilitate those which have been deforested; (7) support training, research, and other actions N/A

which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (8) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (9) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (10) seek to increase the awareness of U.S. Government agencies and other donors of the immediate and long-term value of tropical forests; (11) utilize the resources and abilities of all relevant U.S. government agencies; (12) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land; and (13) take full account of the environmental impacts of the proposed activities on biological diversity?

c. **Forest degradation:** Will assistance be used for: (1) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; (2) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas; (3) activities which would result in the conversion of forest lands to the rearing of livestock; (4) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undergraded

NO

forest lands; (5) the colonization of forest lands; or (6) the construction of dams or other water control structures which flood relatively undergraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development?

d. Sustainable forestry: If assistance relates to tropical forests, will project assist countries in developing a systematic analysis of the appropriate use of their total tropical forest resources, with the goal of developing a national program for sustainable forestry? — N/A

e. Environmental impact statements: Will funds be made available in accordance with provisions of FAA Section 117(c) and applicable A.I.D. regulations requiring an environmental impact statement for activities significantly affecting the environment? — YES

14. Energy (FY 1991 Appropriations Act Sec. 533(c)): If assistance relates to energy, will such assistance focus on: (a) end-use energy efficiency, least-cost energy planning, and renewable energy resources, and (b) the key countries where assistance would have the greatest impact on reducing emissions from greenhouse gases? — N/A

15. Sub-Saharan Africa Assistance (FY 1991 Appropriations Act Sec. 562, adding a new FAA chapter 10 (FAA Sec. 496)): If assistance will come from the Sub-Saharan Africa DA account, is it: (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) to be used to promote sustained economic growth, encourage — YES

17. **Deobligation/Reobligation** (FY 1991 Appropriations Act Sec. 515): If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same region as originally obligated, and have the House and Senate Appropriations Committees been properly notified?	N/A
18. **Loans**	
a. **Repayment capacity** (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. **Long-range plans** (FAA Sec. 122(b)): Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?	YES
c. **Interest rate** (FAA Sec. 122(b)): If development loan is repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter?	N/A
d. **Exports to United States** (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 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest?	N/A
19. **Development Objectives** (FAA Secs. 102(a), 111, 113, 281(a)): Extent to which activity will: (1) effectively involve the poor in development, by expanding access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from	To a great extent.

private sector development, promote individual initiatives, and help to reduce the role of central governments in areas more appropriate for the private sector; (c) to be provided in a manner that takes into account, during the planning process, the local-level perspectives of the rural and urban poor, including women, through close consultation with African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) to be implemented in a manner that requires local people, including women, to be closely consulted and involved, if the assistance has a local focus; (e) being used primarily to promote reform of critical sectoral economic policies, or to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities; and (f) to be provided in a manner that, if policy reforms are to be effected, contains provisions to protect vulnerable groups and the environment from possible negative consequences of the reforms? YES

16. **Debt-for-Nature Exchange (FAA Sec. 463):** If project will finance a debt-for-nature exchange, describe how the exchange will support protection of: (a) the world's oceans and atmosphere, (b) animal and plant species, and (c) parks and reserves; or describe how the exchange will promote: (d) natural resource management, (e) local conservation programs, (f) conservation training programs, (g) public commitment to conservation, (h) land and ecosystem management, and (i) regenerative approaches in farming, forestry, fishing, and watershed management. N/A

c. Food security: Describe extent to which activity increases national food security by improving food policies and management and by strengthening national food reserves, with particular concern for the needs of the poor, through measures encouraging domestic production, building national food reserves, expanding available storage facilities, reducing post harvest food losses, and improving food distribution. N/A

21. Population and Health (FAA Secs. 104(b) and (c)): If assistance is being made available for population or health activities, describe extent to which activity emphasizes low-cost, integrated delivery systems for health, nutrition and family planning for the poorest people, with particular attention to the needs of mothers and young children, using paramedical and auxiliary medical personnel, clinics and health posts, commercial distribution systems, and other modes of community outreach. N/A

22. Education and Human Resources Development (FAA Sec. 105): If assistance is being made available for education, public administration, or human resource development, describe (a) extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, and strengthens management capability of institutions enabling the poor to participate in development; and (b) extent to which assistance provides advanced education and training of people of developing countries in such disciplines as are required for planning and implementation of public and private development activities. N/A

23. Energy, Private Voluntary Organizations, and Selected Development Activities (FAA Sec. 106): If assistance is being made available for energy, private voluntary organizations, and selected development problems, describe extent to which activity is: N/A

a. concerned with data collection and analysis, the training of skilled personnel, research on and development of suitable energy sources, and pilot projects to test new methods of energy production; and facilitative of research on and development and use of small-scale, decentralized, renewable energy sources for rural areas, emphasizing development of energy resources which are environmentally acceptable and require minimum capital investment;	N/A
b. concerned with technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;	N/A
c. research into, and evaluation of, economic development processes and techniques;	N/A
d. reconstruction after natural or manmade disaster and programs of disaster preparedness;	N/A
e. for special development problems, and to enable proper utilization of infrastructure and related projects funded with earlier U.S. assistance;	N/A
f. for urban development, especially small, labor-intensive enterprises, marketing systems for small producers, and financial or other institutions to help urban poor participate in economic and social development.	N/A

C. CRITERIA APPLICABLE TO ECONOMIC SUPPORT FUNDS ONLY

1. **Economic and Political Stability** (FAA Sec. 531(a)): Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?	N/A
2. **Military Purposes** (FAA Sec. 531(e)): Will this assistance be used for military or paramilitary purposes?	N/A
3. **Commodity Grants/Separate Accounts** (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? (For FY 1991, this provision is superseded by the separate account requirements of FY 1991 Appropriations Act Sec. 575(a), see Sec. 575(a)(5).)	N/A
4. **Generation and Use of Local Currencies** (FAA Sec. 531(d)): Will ESF funds made available for commodity import programs or other program assistance be used to generate local currencies? If so, will at least 50 percent of such local currencies be available to support activities consistent with the objectives of FAA sections 103 through 106? (For FY 1991, this provision is superseded by the separate account requirements of FY 1991 Appropriations Act Sec. 575(a), see Sec. 575(a)(5).)	N/A
5. **Cash Transfer Requirements** (FY 1991 Appropriations Act, Title II, under heading "Economic Support Fund," and Sec. 575(b)). If assistance is in the form of a cash transfer:	N/A
a. **Separate account:** Are all such cash payments to be maintained by the country in a separate account and not to be commingled with any other funds?	N/A

b. **Local currencies:** Will all local currencies that may be generated with funds provided as a cash transfer to such a country also be deposited in a special account, and has A.I.D. entered into an agreement with that government setting forth the amount of the local currencies to be generated, the terms and conditions under which they are to be used, and the responsibilities of A.I.D. and that government to monitor and account for deposits and disbursements? N/A

c. **U.S. Government use of local currencies:** Will all such local currencies also be used in accordance with FAA Section 609, which requires such local currencies to be made available to the U.S. government as the U.S. determines necessary for the requirements of the U.S. Government, and which requires the remainder to be used for programs agreed to by the U.S. Government to carry out the purposes for which new funds authorized by the FAA would themselves be available? N/A

d. **Congressional notice:** Has Congress received prior notification providing in detail how the funds will be used, including the U.S. interests that will be served by the assistance, and, as appropriate, the economic policy reforms that will be promoted by the cash transfer assistance? N/A

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ANNEX H

FAA SECTION 611 (e) CERTIFICATION

FAA SECTION 611(e) CERTIFICATION

1. Project

The Guinea Rural Roads project (RRP) (675-0216) will operate within the framework of the multi-donor National Rural Infrastructure Project (PNIR) and provide parallel financing for rehabilitation of rural roads, engineering technical support, and technical assistance in monitoring and evaluation. Of the $33.0 million total AID contribution, $29.0 million will be devoted to the rehabilitation of long-neglected feeder roads that are now essentially impassable to wheeled traffic. At present, the estimated 279,000 people living in the areas served by these roads are deprived of ready access to markets and other urban services, and hence are severely hampered in their efforts to raise their low standard of living. Rehabilitating the roads and keeping them open through regular maintenance will improve conditions of life and market access for the target population, indispensable steps toward the goal of increasing sustainable agricultural production and productivity in rural areas of Guinea.

The PNIR is a $94.8 million program to which the International Development Association (IDA, member of the World Bank Group) is contributing $40.0 million, the German Kreditanstalt fur Wiederaufbau (KfW) $6.8 million, the French Fonds d'Aide et de Cooperation (FAC) $0.5 million, the Government of Guinea (GOG) $13.5 million, and the rural beneficiaries $1.0 million. While the AID contribution will be devoted entirely to feeder roads and related costs, the PNIR also has components for development of bottomlands and water supply, accounting for about 13 percent of the total PNIR budget. IDA funds are budgeted for feeder roads, bottomlands, water supply, equipment, technical assistance, training, operating and road maintenance costs, and pre-project financing; KfW funds for feeder roads and consultants; FAC funds for training; GOG funds for operating and road maintenance costs, project investment, and taxes on investment; and beneficiary resources (labor and cash) for participation in road rehabilitation and maintenance, development of bottomlands, and purchase of handpumps.

A USDH engineer has reviewed the road rehabilitation plans and specifications for the project and has found them to be acceptable and in conformance with standard engineering principles. RRP financing of road rehabilitation will be through the fixed amount reimbursement (FAR) method.

2. Financial and Human Capability of Host Country to Maintain and Utilize the Project

The GOG has undertaken careful planning for this multi-donor project, and has taken major organizational steps to lay the groundwork for road rehabilitation and long-term maintenance of rural roads. The institutional and human resource limitations of the National Rural Engineering Department (DNGR) have been identified and assistance to overcome them is being provided by IDA. The adequacy of this assistance and of GOG execution of plans for the implementation and sustainability of the Rural Roads project will be continually monitored. It will also be evaluated at mid-term, and be subject to conditions precedent designed to protect AID's investment.

The GOG has established a road maintenance fund in the national budget. Allocations to the fund are being made on an annual basis, and GOG, with initial help from IDA, is planning to provide sufficient funds to cover the maintenance needs of all roads rehabilitated under PNIR/RRP. Although RRP will not finance maintenance, the adequacy of plans and funding for maintenance will be carefully monitored and be subject to conditions precedent to disbursement of funds for rehabilitation.

3. Maintenance and Utilization of Similar AID-Funded Activities

This is the first rural infrastructure project for AID in Guinea, although AID's world-wide experience in this area has been significant. The World Bank also has had vast experience in road-building and other infrastructure projects. This experience, and the substantial groundwork laid for this project by the GOG and the donors, lead the Mission to conclude that the GOG will have the ability to maintain and utilize the development assistance to be provided through RRP.

4. Certification

Based on the information contained herein, I certify that the Government of Guinea has both the human and financial resources to effectively maintain and utilize this project, per Section 611(e) of the Foreign Assistance Act of 1961, as amended.

By: Allan E Reed
Allan E. Reed
Acting Director
USAID/Guinea

Date: 7/11/91

ANNEX I

LETTER FROM THE MINISTER OF PLAN AND INTERNATIONAL COOPERATION TO THE USAID/GUINEA MISSION DIRECTOR ◄REQUETE DE FINANCEMENT POUR LE PROJECT NATIONAL D'INFRASTRUCTURE RURALE►

MINISTERE
DU PLAN ET DE LA COOPERATION
INTERNATIONALE

N° 0[illegible]/MPCI/CAB/DNCI/DRB/91

REPUBLIQUE DE GUINEE
TRAVAIL · JUSTICE · SOLIDARITE

Conakry, le 19 JUIN 1991

6/20/91
CT2/4

Objet : Requête de financement pour le projet National d'Infrastructure Rural

USAID-GUINEA
ACTION RDO
DUE 6/21
A TO
INFO MD

Le Ministre

A MONSIEUR LE DIRECTEUR
DE LA MISSION DE L'USAID
EN GUINEE

CONAKRY

Monsieur le Directeur,

Faisant suite à votre lettre du 22 Juin 1990 et aux discussions qui ont eu lieu pendant la préparation du Projet National d'Infrastructure Rurale avec les services du Ministère de l'Agriculture et la Banque Mondiale, j'ai l'honneur de réitérer le souhait du Gouvernement Guinéen de voir l'USAII participer au financement du PNIR, des travaux de réhabilitation des pistes rurales ainsi que des mesures d'accompagnement

Le montant global du financement requis pour la réalisation du projet est de 33 millions de dollars.

Plusieurs pays et institutions participent au financement du projet. A cet égard, je me permets de vous indiquer que les autres Bailleurs de Fonds sollicités pour le projet ont déjà libéré leur financement. C'est ainsi qu'avec l'IDA, un accord de crédit a été signé le 30/04/90 tandis qu'avec la KFW, la convention de financement a été signée le 11/10/90 et la Coopération Française s'est engagée à mettre à la disposition du projet de l'assistance technique et ce depuis septembre 1990.

./...

J'apprécierais l'intérêt et le soutien que vous pourriez apporter à notre Gouvernement pour la réalisation de cet important projet.

Veuillez agréer, Monsieur le Directeur, l'expression de ma considération distinguée.

P. LE MINISTRE P.O.
LE CHEF DE CABINET

M.M. DOUI SOUARE

ANNEX J

ILLUSTRATIVE BUDGETS

ILLUSTRATIVE BUDGET
GUINEA RURAL ROADS PROJECT (675-0216)
PERSONAL SERVICES CONTRACT ENGINEER (PROJECT MANAGER)

COST ELEMENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
1. COMPENSATION (INCL. 3% STEP INCREASE)	$70,000	$72,100	$74,263	$76,491	$78,786	$371,640
CONTINGENCY FOR PAY COMPARABILITY (4.3%)	$3,010	$3,100	$3,193	$3,289	$3,388	$15,980
2. OVERTIME (NOT AUTHORIZED)	$0	$0	$0	$0	$0	$0
3. OVERSEAS DIFFERENTIAL (25%)	$17,500	$18,025	$18,566	$19,123	$19,696	$92,910
CONTINGENCY FOR DIFFERENTIAL ON PAY COMPARABILITY ADJUST.	$753	$776	$799	$823	$848	$3,998
4. ALLOWANCES						
a. COLA (Family of 4; Avg. 10%)	$3,500	$3,605	$3,713	$3,825	$3,939	$18,582
b. UAB (700 lbs @ 2.50/lb)	$3,150	$3,150	$3,150	$3,150	$3,150	$15,750
c. HHE (7200 lbs @ 10,000 1 way)	$10,000	$0	$0	$0	$10,000	$20,000
d. Consumables (2,500 lbs ea 2 yrs)	$6,250	$0	$6,250	$0	$0	$12,500
e. POV shipment ($2,500 one-way)	$2,500	$0	$0	$0	$2,500	$5,000
f. Educational (at post 2 children)	$8,000	$8,000	$8,000	$8,000	$8,000	$40,000
g. Living Quarters Allowance	$24,000	$24,000	$24,000	$24,000	$24,000	$120,000
Utilities ($225/mo.)	$2,700	$2,700	$2,700	$2,700	$2,700	$13,500
Guard ($200/mo.)	$2,400	$2,400	$2,400	$2,400	$2,400	$12,000
Generator Fuel ($325/mo.)	$3,900	$3,900	$3,900	$3,900	$3,900	$19,500
SUBTOTAL ALLOWANCES	$66,400	$67,755	$54,113	$67,975	$60,589	$276,832
5. TRAVEL AND TRANSPORTATION						
a. United States						
Travel to Post (Employee + 3)	$6,800					$6,800
R&R Travel (end of Yrs 1 & 3)	$10,000		$10,000	$10,000		$30,000
Home Leave Travel (end of Yr. 2)		$12,000		$0		$12,000
Return Travel (Employee + 3)				$0	$8,000	$8,000
b. International (N/A)	$0	$0	$0	$0	$0	$0
c. Cooperating and Third Country	$2,500	$2,500	$2,500	$2,500	$0	$10,000
SUBTOTAL TRAVEL AND TRANSPORTATION	$19,300	$14,500	$12,500	$12,500	$8,000	$66,800
6. SUBSISTENCE OR PER DIEM						
a. United States (N/A)	$0	$0	$0	$0	$0	$0
b. International (European Stopovers)	$400	$400	$0	$400	$400	$1,600
c. Cooperating and Third Country	$2,250	$7,020	$7,020	$7,020	$7,020	$30,330
SUBTOTAL SUBSISTENCE OR PER DIEM	$2,650	$7,420	$7,020	$7,420	$7,420	$31,930

7. OTHER DIRECT COSTS						
a. Generator Purchase	$15,000	$0	$0	$0	$0	$15,000
b. Residential Furniture/Appliances	$35,000	$0	$0	$0	$0	$35,000
c. Residential Start-Up and Maintenance	$10,000	$2,400	$2,400	$2,400	$2,400	$19,600
d. Office Space Rental (pro-rated)	$3,600	$3,600	$3,600	$3,600	$3,600	$18,000
e. Office Furniture /Equipment	$10,000	$0	$2,000	$0	$0	$12,000
f. Communications	$1,000	$1,000	$1,000	$1,000	$1,000	$5,000
g. Insurance						
Health (approx. $2,800/family/yr.)	$2,800	$2,800	$2,800	$2,800	$2,800	$14,000
Life (max. $500/yr)	$500	$500	$500	$500	$500	$2,500
Medevac ($300/yr x 4)	$1,200	$1,200	$1,200	$1,200	$1,200	$6,000
h. Precontact Costs (visa, innoc. etc)	$700	$0	$0	$0	$0	$700
i. Physical Examinations (2 @ $300/2 @ $15)	$900	$0	$0	$0	$900	$1,800
SUBTOTAL OTHER DIRECT COSTS	$80,700	$11,500	$13,500	$11,500	$12,400	$129,600
8. FICA COSTS (7.65% of Salary)	$5,355	$5,516	$5,681	$5,852	$6,027	$28,430
TOTALS	$265,668	$180,692	$189,635	$184,972	$197,154	$1,018,120

ILLUSTRATIVE BUDGET
GUINEA RURAL ROADS PROJECT (675-0216)
PERSONAL SERVICES CONTRACTOR ENGINEER (FIELD)

COST ELEMENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
1. COMPENSATION (INCL. 3% STEP INCREASE)	$50,000	$51,500	$53,045	$54,636	$56,275	$265,457
CONTINGENCY FOR PAY COMPARABILITY	$2,150	$2,215	$2,281	$2,349	$2,420	$11,415
2. OVERTIME (NOT AUTHORIZED)	$0	$0	$0	$0	$0	$0
3. OVERSEAS DIFFERENTIAL (25%)	$12,500	$12,875	$13,261	$13,659	$14,069	$66,364
CONTINGENCY FOR DIFFERENTIAL ON PAY COMPARABILITY ADJUST.	$538	$554	$571	$588	$606	$2,856
4. ALLOWANCES						
a. COLA (Family of 4; Avg. 10%)	$2,500	$2,575	$2,652	$2,732	$2,814	$13,273
b. UAB (700 lbs @ 2.50/lb)	$3,150	$3,150	$3,150	$3,150	$3,150	$15,750
c. HHE (7200 lbs @ 10,000 1 way)	$10,000	$0	$0	$0	$10,000	$20,000
d. Consumables (2,500 lbs ea 2 yrs)	$6,250	$0	$6,250	$0	$0	$12,500
e. POV shipment ($2,500 one-way)	$2,500	$0	$0	$0	$2,500	$5,000
f. Educational (at post 2 children)	$8,000	$8,000	$8,000	$8,000	$8,000	$40,000
g. Living Quarters Allowance	$24,000	$24,000	$24,000	$24,000	$24,000	$120,000
Utilities ($225/mo.)	$2,700	$2,700	$2,700	$2,700	$2,700	$13,500
Guard ($200/mo.)	$2,400	$2,400	$2,400	$2,400	$2,400	$12,000
Generator Fuel ($325/mo.)	$3,900	$3,900	$3,900	$3,900	$3,900	$19,500
SUBTOTAL ALLOWANCES	$65,400	$66,725	$53,052	$66,882	$59,464	$271,523
5. TRAVEL AND TRANSPORTATION						
a. United States						
Travel to Post (Employee + 3)	$6,800					$6,800
R&R Travel (end of Yrs 1 & 3)	$10,000		$10,000	$10,000		$30,000
Home Leave Travel (end of Yr. 2)		$12,000				$12,000
Return Travel (Employee + 3)					$8,000	$8,000
b. International (N/A)	$0	$0	$0	$0	$0	$0
c. Cooperating and Third Country						
Fuel Official Vehicle (400 l./mo)	$3,936	$3,936	$3,936	$3,936	$0	$15,744
Insurance/Maintenance Vehicle ($200/mo)	$7,500	$7,500	$7,500	$7,500	$0	$30,000
SUBTOTAL TRAVEL AND TRANSPORTATION	$28,236	$23,436	$21,436	$21,436	$8,000	$102,544
6. SUBSISTENCE OR PER DIEM						
a. United States (N/A)	$0	$0	$0	$0	$0	$0
b. International (European Stopovers)	$400	$400	$0	$400	$400	$1,600
c. Cooperating and Third Country	$7,020	$7,020	$7,020	$7,020	$7,020	$35,100
SUBTOTAL SUBSISTENCE OR PER DIEM	$7,420	$7,420	$7,020	$7,420	$7,420	$36,700

7. OTHER DIRECT COSTS						
a. Generator Purchase	$15,000	$0	$0	$0	$0	$15,000
b. Residential Furniture/Appliances	$35,000	$0	$0	$0	$0	$35,000
c. Residential Start-Up and Maintenance	$10,000	$2,400	$2,400	$2,400	$2,400	$19,600
d. Office Space Rental (pre-rated)	$3,600	$3,600	$3,600	$3,600	$3,600	$18,000
e. Office Furniture /Equipment	$10,000	$0	$2,000	$0	$0	$12,000
f. Communications	$1,000	$1,000	$1,000	$1,000	$1,000	$5,000
g. Insurance						
Health (approx. $2,800/family/yr.)	$2,800	$2,800	$2,800	$2,800	$2,800	$14,000
Life (max. $500/yr)	$500	$500	$500	$500	$500	$2,500
Medevac ($300/yr x 4)	$1,200	$1,200	$1,200	$1,200	$1,200	$6,000
h. Precontact Costs (visa, innoc. etc)	$700	$0	$0	$0	$0	$700
i. Physical Examinations (2 @ $300/2 @ $15	$900	$0	$0	$0	$900	$1,800
SUBTOTAL OTHER DIRECT COSTS	$80,700	$11,500	$13,500	$11,500	$12,400	$129,600
8. FICA COSTS (7.65% of Salary)	$3,825	$3,940	$4,058	$4,180	$4,305	$20,307
TOTALS	$250,769	$160,164	$168,224	$162,650	$164,959	$906,766

GUINEA RURAL ROADS PROJECT (675-0216)
MONITORING AND EVALUATION ACTIVITIES

COST ELEMENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	TOTAL
TECHNICAL ASSISTANCE CONTRACT (INSTITUTIONAL)					
1. SALARIES					
A. Home Office Backstopping (2 p/m yr.)	$8,000	$8,000	$8,000	$8,000	$32,000
B. Long-Term Advisor (24 p/m)	$65,000	$68,250	$0	$0	$133,250
C. Short-Term Consultants (6 p/m)	$0	$0	$21,600	$22,680	$44,280
2. FRINGE BENEFITS (28% of Salaries)	$20,440	$21,350	$8,288	$8,590	$58,668
3. OVERHEAD (100% of Salaries & Fringe)	$93,440	$97,600	$37,888	$39,270	$268,198
4. ALLOWANCES					
Long-Term Advisor					
a. Post Differential (25%)	$16,250	$17,063	$0	$0	$33,313
b. COLA (Family of 4; Avg. 10%)	$3,250	$3,413	$0	$0	$0
c. UAB (700 lbs @ $4.50/lb x 2)	$3,150	$3,150	$0	$0	$6,300
d. HHE (7200 lbs @ 10,000 1 way)	$10,000	$10,000	$0	$0	$20,000
e. Consumables (2,500 lbs)	$7,500	$0	$0	$0	$7,500
f. POV shipment ($2,500 one-way)	$2,500	$2,500	$0	$0	$5,000
g. Educational (at post 2 children)	$8,000	$8,000	$0	$0	$16,000
h. Living Quarters Allowance	$24,000	$24,000	$0	$0	$48,000
Utilities ($225/mo.)	$2,700	$2,700	$0	$0	$5,400
Guard ($200/mo.)	$2,400	$2,400	$0	$0	$4,800
Generator Fuel ($325/mo.)	$3,900	$3,900	$0	$0	$7,800
SUBTOTAL ALLOWANCES	$67,400	$60,063	$0	$0	$127,463
5. TRAVEL AND TRANSPORTATION					
a. Long-Term Advisor					
Travel to Post (Employee + 3)	$6,800	$0	$0	$0	$6,800
R&R Travel (end of Yrs 1 & 3)	$10,000	$0	$0	$0	$10,000
Home Leave Travel	$0	$0	$0	$0	$0
Return Travel (Employee + 3)	$0	$7,500	$0	$0	$7,500
In-country Travel	$2,500	$2,500	$0	$0	$5,000
b. Short-term Consultants					
Air Fare (U.S./Conakry RT 2/yr @ $3,3)	$0	$0	$6,600	$6,930	$13,530
Excess Baggage (20 kg/trip X 2 year)	$0	$0	$320	$320	$640
In-Country Travel ($100/day)	$0	$0	$9,000	$9,000	$18,000
SUBTOTAL TRAVEL AND TRANSPORTATION	$19,300	$10,000	$15,920	$16,250	$61,470

6. SUBSISTENCE OR PER DIEM					
a. Long-Term Adviser					
Home Office Consultant (10 days)	$1,270	$0	$0	$0	$1,270
International (European Stopovers)	$700	$700	$0	$0	$1,400
In-country Per Diem	$2,500	$2,500	$0	$0	$5,000
b. Short-term Consultants					
Home Office Consultant (10 days)	$0	$0	$1,016	$1,016	$2,032
International (European Stopovers)	$0	$0	$800	$800	$1,600
In-country Per Diem	$0	$0	$7,350	$7,350	$14,700
SUBTOTAL SUBSISTENCE OR PER DIEM	$4,470	$3,200	$9,166	$9,166	$26,002
7. TRAINING					
a. Offshore (U.S. and 3rd Country)	$5,000	$5,000	$5,000	$5,000	$20,000
b. In-Country	$12,500	$12,500	$12,500	$12,500	$50,000
8. NONEXPENDABLE/EXPENDABLE SUPPLIES AND COCS					
a. Long-Term Advisor					
Generator Purchase	$15,000	$0	$0	$0	$15,000
Residential Furniture/Equipment	$35,000	$0	$0	$0	$35,000
Residential Start-Up and Maintenance	$6,200	$2,400	$0	$0	$8,600
Office Rental and Maintenance	$0	$0	$0	$0	$0
Office Furniture/Equipment	$15,000	$0	$0	$0	$15,000
Communications	$3,600	$3,600	$0	$0	$7,200
Courier/Postage ($150/mo)	$1,800	$1,800	$0	$0	$3,600
Expendable Supplies ($150/mo)	$1,800	$1,800	$0	$0	$3,600
DBA Insurance (Sal. + Diff)	$2,795	$2,955	$0	$0	$5,750
Medevac ($300/yr. X 4)	$1,200	$1,200	$0	$0	$2,400
Visas, Vaccinations, etc.	$400	$0	$0	$0	$400
Physical Exams (2 @ $300/2 @ $150)	$900	$900	$0	$0	$1,800
4 Wheel Drive Vehicle	$30,000	$0	$0	$0	$30,000
Vehicle Ops/Insurance/Maintenance	$3,500	$3,500	$0	$0	$7,000
Chauffeur/Expediter	$3,600	$3,600	$0	$0	$7,200
b. Short-Term Consultants/Home Office					
Communications ($50/mo)	$1,800	$0	$900	$900	$3,600
Courier/Postage ($100/mo)	$1,200	$0	$600	$600	$2,400
Expendable Supplies (Courier/Postage $100/mo)	$1,200	$0	$150	$150	$1,500
DBA Insurance (3.44% of Salaries)	$0	$0	$763	$760	$1,523
Medevac ($45/mo. X 3pm/yr.)	$0	$0	$135	$135	$270
Visa, Vaccinations, etc.	$0	$0	$300	$300	$600
Secretariat/ST support	$1,000	$1,000	$1,000	$1,000	$4,000
Photocopying/Report Reproduction	$1,000	$1,500	$1,500	$1,500	$5,500
Laptop Computer Rental	$0	$0	$825	$825	$1,650
SUBTOTAL OTHER DIRECT COSTS	$126,995	$24,235	$6,153	$6,190	$163,573
			$0	$0	$0

TOTAL DIRECT COSTS	$422,545	$310,198	$124,515	$127,646	$984,904
GENERAL AND ADMINISTRATIVE (10%)	$42,255	$31,020	$12,452	$12,765	$98,490
FIXED FEE (8% OF 9 & 10)	$37,184	$27,297	$10,957	$11,233	$86,672
TOTAL COST PLUS FIXED FEE	$501,983	$368,515	$147,924	$151,643	$1,170,066

Obligation and Disbursement Schedule for RRP
Road Rehabilitation
($000)

	FY 91	92	93	94	95
Obligations	4,100	8,700	7,150	7,300	1,750
Cummulative	4,100	12,800	19,950	27,250	29,000
Disbursements	-	7,219	12,278	7,696	1,807
Cummulative	-	7,219	19,497	29,193	29,000

ANNEX K

1) RRP PID REPORTING CABLES
2) DIRECTOR'S APPROVAL FOR PROCUREMENT EXCEPTION (CABLE)

PAGE 01 OF 02 ABIDJA 10215 00 OF 02 181843Z 6191 043667 AID7271
ACTION AID-00

INFO REDO-01 /001 A8 16/1538Z

ACTION OFFICE AFCW-03
INFO AFMG-03 SAST-01 STAG-02 RELO-01 /010 A4 GB 10/1945Z

INFO LOG-00 AF-00 CIAE-00 EB-00 DODE-00 AMAD-01 TRSE-00
/034 W

241355 181845Z /49 A8

P 181704Z MAY 90
FM AMEMBASSY ABIDJAN
TO SECSTATE WASHDC PRIORITY 7530
INFO AMEMBASSY CONAKRY

UNCLAS ABIDJAN 10215

AIDAC

E.O. 12356: N/A
SUBJECT: GUINEA AGRICULTURAL MARKETING AND SECTORAL MANAGEMENT PROJECT IDENTIFICATION DOCUMENT (PID) 675-0216

REF: CONAKRY 002881 (NOTAL)

1. REDSO PROJECT REVIEW COMMITTEE MET ON MAY 8, 1990 AND REVIEWED SUBJECT PID. THE COMMITTEE'S ISSUES AND CONCERNS ARE PRESENTED BELOW. THE DIRECTOR REDSO/WCA HAS NO OBJECTIONS TO AID/W PROCEEDING WITH ITS REVIEW OF SUBJECT PID.

2. ISSUES:

A. THE PID DOES NOT CONTAIN ANY PLANS FOR DATA COLLECTION WHICH CAN BE USED IN IMPACT MONITORING AND EVALUATIONS. SIMILARLY, THE WORLD BANK'S APPRAISAL REPORT MAKES ONLY FLEETING REFERENCES TO THIS SUBJECT. IT APPEARS THAT THE WORLD BANK PLANS ONLY SHORT TERM TECHNICAL ASSISTANCE (ONE VISIT ANNUALLY) TO STRENGTHEN DNGR'S CAPACITY TO CONDUCT SUPERVISION. THE PROJECT PAPER (PP) SHOULD REFLECT WHETHER THE MISSION OR WORLD BANK WILL BE RESPONSIBLE FOR PROVIDING SHORT TERM TECHNICAL ASSISTANT TO ASSIST HOST GOVERNMENT DEVELOP DATA COLLECTION, IMPACT MONITORING AND EVALUATION CAPABILITIES FOR SUBJECT PROJECT.

B. THE PID DOES NOT CLEARLY INDICATE WHY PRIVATE GUINEAN ROAD CONSTRUCTION CONTRACTORS ARE NOT GIVEN A LARGER SHARE OF THE AID FINANCED ROAD FEEDER ROAD CONTRACTS. THE WORLD BANK'S APPRAISAL REPORT PRESENTS THE PRIVATE GUINEAN ROAD CONSTRUCTION COMPONENT AS A PILOT ACTION (LOTS 13 - 18 COYAH-DUBREKA) TO BE IMPLEMENTED IN PY 2 AND PY 3. IT IS NOT CLEAR WHY THE PILOT ACTION COULD NOT BE IMPLEMENTED IN PY 1 SO PRIVATE GUINEAN CONTRACTORS CAN COMPETE FOR MORE THAN 161 KM OF THE 1,693 KM PROPOSED FOR AID FINANCING. 161 KM OF WORK DOES NOT APPEAR TO PROVIDE SUFFICIENT ECONOMIC INCENTIVES TO ENCOURAGE PRIVATE GUINEAN HOUSING CONSTRUCTION FIRMS TO EXPAND INTO THE ROAD CONSTRUCTION BUSINESS.

C. THE HEAVY EQUIPMENT LEASING ARRANGEMENTS PROPOSED FOR THE SUBJECT PROJECT DO NOT CLEARLY INDICATE THE MAGNITUDE OF EQUIPMENT AVAILABLE AND THE PROSPECTS FOR PRIVATIZATION OF THIS COMPANY. REDSO STAFF CONCLUDED THAT THIS COMPANY WILL BE PRIVATIZED AND THAT IT POSSESSES AND IS PROCURING A SUBSTANTIAL AMOUNT OF HEAVY ROAD EQUIPMENT WITH JAPANESE FOREIGN ASSISTANCE. THE LOCAL AVAILABILITY OF HEAVY ROAD CONSTRUCTION EQUIPMENT FOR LEASING CAN BE EXPECTED TO HAVE A POSITIVE IMPACT ON

THE PRIVATE GUINEAN HOUSING CONSTRUCTION FIRMS' DECISION TO EXPAND THEIR ACTIVITIES TO INCLUDE ROAD REHABILITATION AND MAINTENANCE.

D. THE PID DOES NOT SUGGEST ANY OPTIONS FOR THE PROVISION OF AID FINANCING. AID IS CHANNELLING ITS FUNDS FOR THE CONSTRUCTION OF THE FOURTH HIGHWAY PROJECT IN GUINEA THROUGH THE WORLD BANK. AID FUNDING FOR THIS PROJECT COULD BE HANDLED IN A SIMILAR MANNER I.E., THROUGH THE WORLD BANK. ALTERNATIVELY, AID MIGHT CONSIDER FINANCING THE RURAL FEEDER ROAD REHABILITATION AND MAINTENANCE ACTIVITY USING THE FIXED AMOUNT REIMBURSEMENT METHOD (WITH A MOBILIZATION ADVANCE) UNDER HOST GOVERNMENT CONTRACTS. THIS SUGGESTION IS BASED ON THE ASSUMPTION THAT THE HOST GOVERNMENT WILL CONTINUE TO ENTER INTO ROAD MAINTENANCE CONTRACTS WITH PRIVATE GUINEAN ROAD CONSTRUCTION FIRMS AFTER THE LIFE OF THIS PROJECT. CONSEQUENTLY, AID SHOULD USE EVERY OPPORTUNITY UNDER THIS PROJECT TO STRENGTHEN THE CONTRACTING MECHANISMS THE HOST GOVERNMENT USES TO OBTAIN THE SERVICES OF PRIVATE GUINEAN ROAD CONSTRUCTION FIRMS.

E. THE PID IS SILENT AS TO GREY AMENDMENT CONCERNS. WITH APPROXIMATELY US DOLS 5.4 MILLION IN SHORT AND LONG-TERM TECHNICAL ASSISTANCE, THE SUBJECT PROJECT WILL HAVE TO PROVIDE MINORITY FIRMS AND/OR HBCU(S) WITH AT LEAST US DOLS 540 THOUSAND OF BUSINESS IF IT ADHERES TO THE 10 PERCENT RULE. DURING PREPARATION OF PP, PERHAPS MISSION'S PLANS CAN BE REFINED TO ADDRESS THIS ISSUE TO THE SATISFACTION OF ALL CONCERNED.

3. CONCERNS:

A. SOME OF THE PROJECT COMMITTEE MEMBERS FOUND THE PROJECT'S TITLE MISLEADING. THEY FELT QUOTE RURAL INFRASTRUCTURAL DEVELOPMENT AND AGRICULTURAL MARKETING SUPPORT PROJECT CLOSE QUOTE TO BE MORE APPROPRIATE.

B. THERE IS A MISCONCEPTION THAT RURAL ROAD IMPROVEMENT IS AGRICULTURAL DEVELOPMENT. RURAL ROADS ARE A NECESSARY CONDITION, BUT NOT A SUFFICIENT CONDITION.

C. DESCRIPTION OF THE SECTOR MANAGEMENT COMPONENT (PAGE 18) DOES NOT GIVE ANY DETAILS. SECTOR MANAGEMENT FOR WHAT? IT TALKS SIMPLY OF INPUTS. OUTPUTS AND IMPACTS ARE NOT CLEAR.

D. GIVEN THE WEAK FINANCIAL NATURE OF THE GUINEAN ECONOMY, VERY LITTLE IS SAID AS TO HOW ROAD MAINTENANCE WILL BE FINANCED ON AN ON-GOING BASIS AFTER THE COMPLETION OF THE PROJECT.

E. THE PID DID NOT INCLUDE TRADERS AND TRANSPORTERS AS BENEFICIARIES. THIS OVERSIGHT SHOULD NOT BE REPLICATED IN THE PP.

F. IT IS ASSUMED THAT OUTPUTS AND ASSUMPTIONS WILL LEAD TO GOAL AND PURPOSE ACHIEVEMENT. THE PP TEAM SHOULD ELABORATE ON THE OTHER AGRICULTURAL DEVELOPMENT ACTIVITIES THAT ARE BEING UNDERTAKEN BY OTHER DONORS WHICH WILL FACILITATE GOAL AND PURPOSE ACHIEVEMENT.

G. THE AVAILABILITY OF VEHICLES AND THE REGULATORY ENVIRONMENT IN WHICH TRADERS/TRANSPORTERS ARE OPERATING SHOULD BE INVESTIGATED THOROUGHLY TO ENSURE THERE ARE NO CONSTRAINTS TO THEIR OPERATION AT THE FARM, VILLAGE, AND TOWN LEVELS.

H. THE REDUCTION OF THE PRICE SPREAD BETWEEN THE FARMGATE AND THE RURAL MARKET IS ONE PURPOSE OF THE

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PROJECT. ONE SIDE EFFECT IS LIKELY TO BE A REDUCTION IN
THE INCOME OF RURAL MARKET WOMEN WHO ARE NOT PRODUCERS.
THE PP NEEDS TO ADRESS THIS ISSUE. BROWN

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ORIGIN OFFICE AFPO-04
INFO AFCW-03 AFDP-06 AFCO-02 AFTR-05 AAAF-03 AFPE-07 BIFA-01
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DRAFTED BY: AID/AFR/PD/CCWAP:SLAFOY:SAM (8333K)
APPROVED BY: AID/A-AA/AFR:WBOLLINGER
DAA/AFR:ELSAIERS AFR/PD:TBORK
AFR/CCWA:MGOLDEN AFR/MDI:KSWANBERG (DFT)
AFR/TR/ANR/FS:AHOGAN (DFT) AFR/TR/ANR/PA:THERLEHY (DFT)
AFR/DP/PPE:DNESS (DFT) PPC/PB:LMARSHALL
GC/AFR:PJOHNSON, AFR/CCQA:MMEARES (DRAFT)
AFR/PD/CCWAP:AGETSON (DRAFT)

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INFO AMEMBASSY ABIDJAN

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AIDAC ABIDJAN FOR REDSO/WCA

E.O. 12356: N/A

SUBJECT: ECPR GUIDANCE GUINEA AGRICULTURAL MARKETING MANAGEMENT PROJECT (675-0216)

REF: ABIDJAN 10215

1. THE ECPR MET ON 7 JUNE 1990 AND APPROVED THE PID FOR SUBJECT PROJECT AT A LEVEL OF DOLS. 33.0 MILLION. OFFICES REPRESENTED AT THE ECPR INCLUDED AFR/DP/PPE, AFR/CCWA, AFR/PD/CCWAP, AFR/TR/ARD, AFR/MDI, PPC/PB, GC/AFR AND FUTURE MISSION REPRESENTATIVES (KASCHAK, REED AND YEBOAH). ECPR WAS CHAIRED BY AFR/PD BORK. THE FOLLOWING GUIDANCE IS PROVIDED FOR MISSION ACTION DURING THE PP DESIGN.

2. PROJECT GOAL AND PURPOSE.. AT THE PROJECT LEVEL, THE PC WAS CONCERNED ABOUT THE GOAL AND PURPOSE LEVEL STATEMENTS, FROM THE PERSPECTIVE BOTH OF LOGICAL LINKAGE AND OF MANAGEABLE INTEREST. WHILE ROAD REHABILITATION AND MAINTENANCE CLEARLY CONTRIBUTE TO INCREASED AGRICULTURAL MARKETING, FOR INSTANCE, THE LINK BETWEEN INSTITUTIONAL STRENGTHENING OF MARA AND AGRICULTURAL MARKETING IS LESS CLEAR. THE ECPR SUGGESTED THAT THE

TITLE, GOAL AND PURPOSE BE ADJUSTED TO REFLECT MORE ACCURATELY WHAT THE PROJECT INTENDS TO ACCOMPLISH. THE PP WILL ALSO HAVE TO PROVIDE EVIDENCE THAT OTHER NECESSARY INTERVENTIONS, SUCH AS PRIVATE SECTOR PROMOTION, WILL TAKE PLACE OUTSIDE THIS PROJECT IN ORDER TO DEMONSTRATE THAT THIS PROJECT IS NOT ONLY NECESSARY BUT SUFFICIENT TO ACHIEVE ITS OBJECTIVES.

3. AGRICULTURAL STRATEGY. THE ECPR ACKNOWLEDGED THAT THERE ARE STILL GAPS IN THE ANALYSIS AND STRATEGY OF THE AGRICULTURAL SECTOR. THE COMMITTEE RECOMMENDS THAT THE MISSION IMMEDIATELY BEGIN TO WORK ON AN AGRICULTURAL SECTOR ANALYSIS AND STRATEGY, FOLLOWING UP ON THE AGRICULTURAL SECTOR ASSESSMENT, SO THAT A.I.D. HAS A COMPREHENSIVE UNDERSTANDING OF THE SECTOR. THE PROJECT COMMITTEE ALSO REQUESTED MISSION TO SUBMIT THE FINAL

VERSION OF THE AGRICULTURAL ASSESSMENT FOR AFR BUREAU REVIEW.

4. POLICY ENVIRONMENT. THERE WAS CONSIDERABLE CONCERN ABOUT WHETHER THE POLICY ENVIRONMENT SUPPORTS AND ENCOURAGES IMPROVED AGRICULTURAL MARKETING AND ROAD MAINTENANCE. BUILDING ON THE RESULTS OF THE AGRICULTURAL ANALYSIS RECOMMENDED ABOVE, THE MISSION SHOULD VERY CAREFULLY CONSIDER WHAT POLICY CONSIDERATIONS ARE A PREREQUISITE TO ATTAINING THE GOAL OF THIS PROJECT. THE CONDITIONALITY ADOPTED CAN EITHER BE PROCESS-ORIENTED OR BASED ON TRANCHED DISBURSEMENTS. ONE APPROACH WHICH WAS SUGGESTED WAS TO DESIGN THE PROJECT AND THE CONDITIONALITY USING A PHASED APPROACH WHICH WOULD ALLOW GO/NO-GO DECISIONS AT LOGICAL POINTS WHERE DISCRETE PORTIONS OF THE PROJECT WOULD NOT BE DISRUPTED BY DELAYS UNTIL THE GOG HAD MADE ACCEPTABLE PROGRESS ON CONDITIONALITY. GENERALLY SPEAKING, THE POLICY CONSTRAINTS SHOULD BE ADDRESSED MUCH MORE THOROUGHLY IN THE PP. IF THE MISSION NARROWS THE FOCUS OF THE PROJECT, THE POLICY FRAMEWORK ADOPTED FOR THE PROJECT MIGHT ALSO BE MORE CONTAINED, PRIMARILY ON ROADS, TRANSPORT AND/OR ROAD MAINTENANCE.

5. APPROPRIATENESS OF INCLUDING THE MARA INSTITUTIONAL DEVELOPMENT COMPONENT. AS THE MISSION RETHINKS THE GOAL AND PURPOSE OF THE PROJECT, THE LINKAGES, AND THE MANAGEABILITY OF THE PROJECT, IT SHOULD CONSIDER THE LOGIC AND APPROPRIATENESS OF THE COMPONENT TO PROVIDE TECHNICAL ASSISTANCE AND TRAINING TO MARA'S OFFICES WHICH ARE NOT DIRECTLY INVOLVED IN RURAL ROADS. IF THIS COMPONENT IS NOT ESSENTIAL TO PROJECT SUCCESS, IT SHOULD

BE DELETED.

6. OPTIONS FOR SIMPLIFYING MANAGEMENT OF THE PROJECT. THE ECPR WAS UNANIMOUS IN COMMENTS THAT THIS PROJECT WILL BE EXTREMELY MANAGEMENT-INTENSIVE AND THAT ALL EFFORTS SHOULD BE MADE TO LIMIT THE BURDEN ON THE MISSION AS MUCH AS POSSIBLE. THE ECPR DEBATED THE ADVISABILITY AND FEASIBILITY OF HAVING THE CONSTRUCTION TURNED OVER TO THE WORLD BANK FOR IMPLEMENTATION UNDER A JOINT FINANCING ARRANGEMENT SIMILAR TO THAT OF THE GUINEA AGRICULTURE INFRASTRUCTURE PROJECT. HOWEVER, SINCE WE WOULD BE A MAJOR DONOR THIS TIME, IT WAS DECIDED THAT THIS WAS NOT AN ACCEPTABLE OPTION. IN ORDER TO ENHANCE GOG CAPACITY, HOST COUNTRY CONTRACTING WAS ALSO CONSIDERED BUT THE ECPR THOUGHT THAT A THOROUGH ANALYSIS OF THE TRADE-OFF BETWEEN THE POTENTIAL LOSS OF ACCOUNTABILITY AND CONTROL, AND CAPACITY BUILDING WOULD HAVE TO BE DONE BEFORE MAKING SUCH A DECISION. SUBSEQUENTLY WE HAVE BEEN ADVISED THAT A.I.D. WILL BE TIGHTENING UP REQUIREMENTS FOR APPROVING HOST COUNTRY CONTRACTS BECAUSE OF ACCOUNTABILITY QUESTIONS AND THAT GUIDANCE TO THIS EFFECT WILL BE FORTHCOMING. PLEASE REFER TO THAT GUIDANCE DURING THE FINAL DESIGN PROCESS. THE ECPR RECOMMENDED THAT THE MISSION ALSO RETHINK THE POSSIBILITY OF PROVIDING THE ASSISTANCE UNDER A NON-PROJECT MECHANISM, EITHER FOCUSSING PRIMARILY ON THE POLICY CONSTRAINTS TO INCREASED CIRCULATION AND COMMERCE THROUGHOUT THE COUNTRY, OR LINKING ASSISTANCE TO THE GOG'S PERFORMANCE IN IMPLEMENTING THE PROGRAM OF ROAD REHABILITATION AND MAINTENANCE. THIS LAST WOULD ALSO BE MORE IN LINE WITH CURRENT EMPHASIS ON CAPACITY BUILDING AND HAVING GOG RETAIN PRIMARY RESPONSIBILITY FOR INSURING IMPLEMENTATION OF THE PROJECT.

7. ROAD MAINTENANCE. THE ECPR AGREED THAT THE ISSUE OF ROAD MAINTENANCE WAS CRITICAL, AT THE SAME TIME EMPHASIZING THAT IT IS AN EXTREMELY DIFFICULT ISSUE, ONE

DONORS HAVE HAD PROBLEMS IN DEALING WITH SUCCESSFULLY. THE PP MUST ADDRESS THIS ISSUE IN DEPTH. SINCE AN ESSENTIAL PART OF THE PROBLEM IS RESOURCE-BASED, THE PP SHOULD REVIEW NOT JUST THE PROBABILITY OF ADEQUATE NATIONAL-LEVEL GOG ALLOCATIONS, BUT ALSO THE FEASIBILITY OF ATTRACTING LOCAL AND COMMUNITY LEVEL COMMITMENT, EITHER IN KIND OR IN LOCAL REVENUES. THE MISSION MIGHT STUDY THE AUDIT OF THE BANGLADESH FEEDER ROAD PROJECT, AND THE REVIEW OF THE KAFUE-LUSAKA ROAD PROJECT. WILL ATTEMPT TO FIND COPIES AND FORWARD TO MISSION.

8. TIMING OF PROJECT. DESPITE THE HIGH QUALITY OF THE PID, GIVEN THE SUBSTANTIVE WORK THAT NEEDS TO BE DONE BOTH PRIOR TO AND AS PART OF THE PP DESIGN, THE ECPR DECIDED THAT THIS PROJECT SHOULD BE RESCHEDULED AS A FY91 START.

9. AUTHORIZATION VENUE. GIVEN THE IMPORTANCE OF THE ISSUES RAISED WITH THE PROPOSED PID, IT IS LIKELY THAT THE FINAL DESIGN WILL DIFFER SIGNIFICANTLY FROM THE PID. IN ADDITION, THE PROPOSED PROJECT WILL NEED TO BE REVIEWED IN LIGHT OF OUR EVOLVING DEVELOPMENT STRATEGY FOR GUINEA. FOR THESE REASONS, THE ECPR BELIEVES THE PP SHOULD BE REVIEWED AND AUTHORIZED IN AID/W.

10. OTHER DESIGN CONSIDERATIONS.

A. ENVIRONMENTAL ASSESSMENT. A COMPLETE ENVIRONMENTAL ASSESSMENT SHOULD BE SUBMITTED WITH THE PP. AFR/TR/ANR/NR CAN ASSIST IN PREPARING SCOPING PROCESS AND IN ARRANGING FOR CONTRACTOR ASSISTANCE THROUGH EXISTING IQC'S.

B. THE QUESTION OF LAND TENURE AND THE EFFECT OF ROAD CONSTRUCTION ON LAND TENURE SHOULD BE ADDRESSED.

C. TRAINING. THE PP SHOULD ADDRESS CURRENT SKILL LEVELS AND TRAINING NEEDED TO ACHIEVE END-OF-PROJECT GOALS FULLY. THE TRAINING PLAN SHOULD ALSO INCLUDE PRIVATE SECTOR REQUIREMENTS.

D. FAA SECTIONS 611(A) AND 611(E) NEED TO BE ADDRESSED IN THE PP.

E. THE PP SHOULD CONTAIN A PROCUREMENT PLAN. THE PP DESIGN TEAM SHOULD BE REMINDED OF THE APPLICATION OF THE SPECIAL RULES UNDER THE OFA FOR CONSTRUCTION PROCUREMENT.

F. GREY AMENDMENT: THE PID DID NOT CONTAIN THE REQUIRED DISCUSSION CONCERNING THE POTENTIAL FOR INVOLVING DISADVANTAGED ENTERPRISES IN THE DESIGN AND/OR IMPLEMENTATION OF THIS ACTIVITY. SINCE FUNDS UNDER THIS ACTIVITY WILL BE USED TO PROCURE TECHNICAL ASSISTANCE, TRAINING AND POSSIBLY COMMODITIES, MISSION IS REQUIRED TO DISCUSS IN THE PP ITS PLANS FOR INVOLVING DISADVANTAGED ENTERPRISES IN THE IMPLEMENTATION OF THESE ACTIVITIES.

G. GIVEN MARA'S PIVOTAL ROLE IN THE IMPLEMENTATION OF THIS PROJECT, THE PP SHOULD INCLUDE A WELL PREPARED INSTITUTIONAL ANALYSIS. THIS INSTITUTIONAL ANALYSIS WOULD ALSO ADDRESS THE ISSUES IN 2.A. ABOVE CONCERNING GOG COMMITMENT, AND 2.E. RE MAINTENANCE.

H. TO THE EXTENT THAT IMPROVED INFRASTRUCTURE AND INCREASED MARKETING PERMIT GREATER ACCESS TO EXPORT MARKETS, SUCH USG RESTRICTIONS AS PD-71 AND THE BUMPERS

AMENDMENT MUST BE ADDRESSED.

I. THE SOCIAL SOUNDNESS ANALYSIS SHOULD INCLUDE AN ANALYSIS OF THE EXTENT TO WHICH LOCAL COMMUNITIES ARE WILLING TO COMMIT THEIR TIME OR OTHER RESOURCES TO MAINTAINING ROADS, OR BUILDING/REHABILITATING ROADS. IT SHOULD ALSO ANALYZE THE EFFECT ON RURAL MARKET WOMEN OF THE EXPECTED REDUCTION IN PRICE SPREAD BETWEEN FARMGATE AND RURAL MARKET.

J. THE PP SHOULD CONTAIN PLANS FOR DATA COLLECTION TO BE USED IN IMPACT MONITORING AND EVALUATIONS AND SHOULD INDICATE WHO WILL BE RESPONSIBLE FOR SHORT-TERM TECHNICAL ASSISTANCE TO ASSIST THE HOST GOVERNMENT DEVELOP DATA COLLECTION, IMPACT MONITORING AND EVALUATION CAPABILITIES FOR THE PROJECT.

K. IN ADDITION TO THE BENEFICIARIES NOTED IN THE PID, THE PP SHOULD ALSO INCLUDE TRADERS AND TRANSPORTERS AS BENEFICIAIRES. BAKER

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AIDAC

AFR/PD FOR R.HELLEYER, AFR/TR FOR C.MORGAN

EO 12356: N/A
SUBJECT: GUINEA RURAL ROADS PROJECT (675-0216)

REF: TELCON MORGAN/KASCHAK 9/4/91

1. USAID HAS BEEN ADVISED OF THREE ISSUES RAISED BY AFR/GC IN THE COURSE OF PROJECT AUTHORIZATION. THE FOLLOWING INFORMATION IS PROVIDED TO CLARIFY THESE ISSUES.

A. ISSUE: MODE OF PAYMENT:

RURAL ROADS PROJECT (RRP) WILL ENTER INTO FIXED-AMOUNT REIMBURSEMENT (FAR) AGREEMENTS WITH THE GOG WHEREBY AID WILL REIMBURSE THE COST OF PROPERLY PRODUCED REHABILITATION OUTPUT SEGMENTS ACCORDING TO PRE-DETERMINED SPECIFICATIONS AND COSTS (PP PAGE 5 PROJECT IMPLEMENTATION). THUS, PAYMENTS WILL BE MADE TO THE GOG IN US DOLLARS. REHABILITATION CONTRACTS WILL BE BETWEEN THE GOG AND THE SELECTED CONTRACTORS (INTERNATIONAL FIRMS IN THE EARLY YEARS AND PERHAPS A COMBINATION OF INTERNATIONAL AND LOCAL FIRMS IN THE LATTER YEARS). GOG PAYS THE CONTRACTORS DIRECTLY EITHER IN THE FORM OF FX OR LC PER TERMS OF CONTRACT. USAID WILL NOT BE INVOLVED IN DIRECT PAYMENT TO THE CONTRACTOR, AS A.I.D WILL ONLY BE FINANCING THE GOG AND WILL NOT BE A PARTY TO THE CONTRACT.
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2. ISSUE: SMALL AND MEDIUM SCALE (SMCS) CONTRACTOR CAPABILITY:

THE PURPOSE OF THE PROJECT IS TO IMPROVE MARKET ACCESS FOR RURAL PRODUCERS AND THE PRINCIPAL OUTPUT IS 1265 KM OF REHABILITATED ROADS. A SECONDARY OUTPUT IS THE DEVELOPMENT OF SMCS. HOWEVER THE MISSION AND THE DESIGNERS OF BOTH THE RRP AND THE LARGER MULTI-DONOR PNIR PROJECT WERE FULLY AWARE OF THE LACK OF CAPACITY WITH THE INADEQUATELY TRAINED AND ILL-EQUIPPED GUINEAN SMCS TO BID ON LARGE REHABILITATION CONTRACTS. THIS IS DISCUSSED IN VARIOUS PLACES IN THE PP. THEREFORE THE REHABILITATION WORK, IN PROJECT YEARS 1 AND 2, AS DESCRIBED IN THE PP WILL BE OPEN TO INTERNATIONAL CONTRACTORS WHICH WILL ALLOW REHABILITATION WORK TO PROCEED PENDING THE UPGRADING OF THE SMCS. THUS PROJECT IMPLEMENTATION, ESPECIALLY THE REHABILITATION OF ROADS, WILL NOT BE COMPROMISED BY THE INITIAL LACK OF SMC CAPACITY TO BID ON LARGE SCALE ROAD REHABILITATION CONTRACTS.

THE RRP, AND THE LARGER PNIR PROJECT (OF WHICH RRP IS A PART), HAVE BUILT IN VARIOUS MECHANISMS TO UPGRADE, TRAIN, AND IMPROVE THE CAPACITY OF SMCS TO BID ON REHABILITATION CONTRACTS POSSIBLY IN YEAR 2, MORE PROBABLY IN YEAR 3. THESE MECHANISMS INCLUDE IDA FINANCED TRAINING IN TECHNICAL AND BUSINESS MANAGEMENT SKILLS, DNGR PROGRAM " DISPOSITIF D' APPUI" (DAP) DESIGNED TO SUPPORT SMCS, THE MOBILE TRAINING SCHOOL (UME), AND THE ILO TRAINING OF SMCS IN LABOR INTENSIVE METHODS OF ROAD REHABILITATION AND MAINTENANCE (PP P.21 AND 43).

IT SHOULD ALSO BE NOTED THAT THE GOG ALREADY CONTRACTS DIRECTLY WITH QUALIFIED SMCS TO CARRY OUT ROAD MAINTENANCE (PP P.22). FURTHER, IT IS ONLY IN YEARS 2 OR 3, WHEN SMCS GRADUATE FROM TRAINING PROGRAMS AND PRE-QUALIFY FOR REHABILITATION CONTRACTS, THAT INVITATION FOR BIDS (IFBS) RESTRICTED TO SMCS WILL BE ISSUED (PP P.64). THUS THE DEGREE TO WHICH SMCS WILL BE INVOLVED IN PROJECT IMPLEMENTATION WILL BE DIRECTLY RELATED TO THEIR QUALIFICATIONS.
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C. ISSUE: PARTICIPATION OF U.S FIRMS IN CONSTRUCTION ACTIVITIES IN EXCESS OF USDOLS 5.0 MILLION (GLADSON MEMO OF 4/4/88).

REHABILITATION OF EIGHT ROAD LOTS, WILL BE FINANCED BY THE PROJECT. ESTIMATED COST OF THE REHABILITATION OF THREE LOTS EXCEEDS USDOLS 5.0 MILLION (USDOLS 5.23 MILLION TO USDOLS 5.97 MILLION). THE REMAINING FIVE LOTS ARE SIGNIFICANTLY BELOW USDOLS 5.0 MILLION RANGING FROM USDOLS 1.74 MILLION TO USDOLS 4.43 MILLION.

EVEN FOR THE THREE LOTS FOR WHICH THE AVERAGE COST OF REHABILITATION IS USDOLS 5.65 MILLION, IT IS UNLIKELY THAT ANY U.S FIRMS WILL BE INTERESTED IN BIDDING AS NO U.S.CONSTRUCTION FIRMS HAVE OFFICES IN GUINEA NOR HAVE THEY UNDERTAKEN ANY CONSTRUCTION PROJECTS HERE. REHABILITATION CONTRACTS UNDER THE RRP WILL BE ON THE BASIS OF INTERNATIONAL COMPETITIVE BIDDING. EXPERIENCE TO DATE SHOWS THAT NO U.S FIRMS HAD BID ON OR EXPRESSED AN INTEREST IN INFRASTRUCTURAL CONSTRUCTION PROJECTS IN GUINEA. THEREFORE, THE AID PRINCIPAL OFFICER CERTIFIES THAT TO DATE U.S. FIRMS HAVE NOT BEEN INTERESTED IN GUINEA AND WOULD NOT PROVIDE ADEQUATE COMPETITION FOR THESE CONSTRUCTION ACTIVITIES.

2. MISSION REQUESTS THE ASSISTANCE OF ADDRESSEE OFFICES IN THE EARLY APPROVAL AND AUTHORIZATION OF THE SUBJECT PROJECT.
LATIMER ##

ANNEX L

SCOPE OF WORK
FOR PROJECT TECHNICIANS

SCOPE OF WORK

GENERAL STATEMENT OF WORK

METHODOLOGY:

The design team members will work with the staff of the Genie Rural in Conakry who will receive hands-on assistance in developing the Monitoring and Evaluation system methodology. The design team members will also visit the routes planned for rehabilitation as necessary. They will:

1. Review the Project Paper and other relevant documents, especially those sections relating to the Monitoring and Evaluation component and requirements of the project.

2. Interview the staff of the Genie Rural to become familiar with the World Bank's rural infrastructure project (PNIR).

3. Contact other ministries as necessary.

4. Make field trips as necessary in the zone of impact of the segments of the Rural Roads Project.

5. Discuss with Genie Rural, the set of socio-economic and environmental impact indicators, methods for data collection and analysis and institutionalization of the Monitoring and Evaluation system.

6. Develop manpower and training recommendations for the implementation phase.

7. Establish a working methodology for collecting field baseline data and for all the follow-on surveys to come during the life of the project.

8. Establish a computerized data storage and retrieval system.

9. Assist and train the Genie Rural staff to implement the program and make periodic revisions in the methodology, manpower, budget and training needs.

STATEMENT OF WORK FOR INDIVIDUAL TEAM MEMBERS

A. TRANSPORTATION ECONOMIST:

1. Tasks and responsibilities:

The Transport Economist will work with the other team members to verify the existing transport cost analyses. He/she will analyze the impact of the Project on the agricultural sector transport tariffs, the transport industry, and overall economic activity in the Project zone of influence.

He/she will assist Genie Rural staff in the analysis of potential economic and social impacts and develop criteria to evaluate social and economic benefits.

He/she will review, identify and verify vehicle-operating costs and travel times applicable to the road segments.

He/she will work with Genie Rural to undertake a brief review of the transport industry and help set up a system to evaluate the impact of the road on the transport industry. For this purpose he/she will set up a system for collecting data and continuous monitoring and evaluation based on the following indicators:

- Number and type of individual companies and enterprises;
- Number of trips, average length per trip;
- Quantity and types of goods transported;
- Origin and destination of trips;
- Cost/kilometer of transportation including vehicle operating and maintenance costs.
- Profitability of enterprises; and
- Reduction of travel times and potential savings in operating and maintenance costs.
- Changes/improvements in intra-regional and inter-regional traffic flows.
- New points of exchange for goods (markets) which appear and become regularized.

2. Qualifications:

(a) University graduate degree in transportation Economics, Engineering or related field with emphasis on development and economic studies, and at least 7 years of experience in monitoring and evaluation.

(b) Experience in agriculture sector preferred including survey field work in the LDC's, preferably Africa.

(c) French language level of S-3, R-3 of FSI standard.

B. SOCIAL ANALYST/IMPACT MONITORING SPECIALIST

1. Tasks and responsibilities

The Social Scientist will be responsible for identifying the major social and institutional feasibility issues and monitoring and evaluation needs associated with the Project. She/He will collaborate with the other team members in identifying indicators and setting up a system for monitoring and measuring the social impact of the Project. In addition, She/He will design in coordination with other members of the team, the data collection methodology for tracking impact of the Project. She/He will develop the Project's Monitoring/Evaluation Plan. The following impacts may be anticipated:

- Changes in incomes (expenditures may be proxy);
- Changes in access to social services and economic activities;
- Potential displacement of individuals or families, residing within the road's zone of influence,
- Changes in the rate of rural out-migration and its consequent impact on social relationships and household economic status and strategies;
- Differential access of population groups (e.g. ethnic, male-female; different income levels, etc.) to benefits arising from the construction of the proposed road; and
- Impact of the project on women.
- Changes in household labor/investment strategies

2. Qualifications

a) Post Graduate degree (Ph.D level preferred) in rural sociology or cultural anthropology, with at least 7 years experience with emphasis on rural development and socio-economic studies;

b) Experience in agriculture sector preferred, including field survey work in the LDC's;

c) Knowledge of traditional and modern political, economic and social institutions in West Africa;

d) Proven capacity to perform policy-oriented analysis; and

e) French language capability at the FSI S-3, R-3 level.

C. ENVIRONMENTAL IMPACT SPECIALIST

1. Tasks and responsibilities:

The Environmental Impact Specialist will be responsible for identifying the major environmental issues and monitoring/evaluation needs associated with the project. He will collaborate with the other team members in identifying indicators and setting up a system for monitoring and measuring the environmental impact of the project. In addition, he will design, in coordination with the other team members, the data collection methodology for tracking environmental impacts of the project. He will assist in the establishment of the project's Monitoring/Evaluation Plan. He will work with the staff of the Genie Rural and familiarize them with the methodology for measuring environmental impacts.

2. Qualifications

a) University degree in environmental sciences or related field with at least five years experience.

b) Experience in developing environmental impact plans in Africa preferred.

c) French and language at FSI level of S-3, R-3 required.

D. COMPUTER DATA BASE MANAGEMENT SPECIALIST

1. Tasks and responsibilities:

The Data Base Management Specialist will work with other team members and the staff of Genie Rural to develop a computerized data base and Monitoring and Evaluation system to manage and analyze transport, (origin-destination etc.) socio-economic and environmental data.

The Data Base Management Specialist will:

(1) assist the Genie Rural staff to organize the data collected so far, into a computerized data base and monitoring and evaluation system,

(2) train the Genie Rural staff in data entry and analysis

(3) Establish a computerized data storage and retrieval system.

(4) train the Genie Rural staff to produce quarterly and annual reports in a format and on a schedule acceptable to USAID and to operate and utilize the monitoring and evaluation system to measure the socio-economic and environmental impacts of the project.

2. Qualifications

(a) At least a Master's degree in Social Sciences with at least 10 years experience with impact survey design and analysis.

(b) Experience in data base design and training required.

(c) French language at FSI level of S-3, R-3 required.

Attachment 2

SCOPE OF WORK

I. Position: PSC Project Manager, Rural Roads Rehabilitation and Maintenance Project (No. 675-0216)

II. Duration of Services: Four years

III. Background:

The National Rural Infrastructure Project (PNIR) undertaken by the World Bank and the Government of Guinea aims to strengthen the government's ability to implement policies in the rural infrastructure sub-sector. The project involves institutional support to various government agencies, a specific rural infrastructure investment program, and test new methods of rehabilitation and maintenance of the rural infrastructure, particularly involving grassroots participation. The project concentrates on three major components of the rural infrastructure: Rehabilitating 2,600 km of rural roads, developing 2100 hectares of bottomlands and providing permanent water supplies to about 140 villages. Several donors are financing different parts of the project, namely KFW, (German aid), Caisse Centrale (French aid), IDA (International Development Agence) and USAID.

USAID has narrowed its focus to the rehabilitation of rural roads. It plans to finance the rehabilitation of approximately 1250 km of farm to market and market to administrative center roads in nine prefectures in various parts of the country. AID's purposes are to improve market access for rural producers and to strengthen the Guinean private sector capacity to perform rural road maintenance. AID will work with the National Rural Engineering Directorate (DNGR) of the Ministry of Agriculture and Animal Resources (MARA). The DNRG will plan, program, design, prepare bid documents, contract for and control the rehabilitation and maintenance of the roads which AID is financing.

Project activities will be in both Conakry and the various rehabilitation and maintenance sites in the nine prefectures. AID project personnel will coordinate the implementation of the rehabilitation program with the DNGR. They will coordinate project activities with DNGR, the World Bank and donors. They will make site visits to assure that the rehabilitation and maintenance work is being performed correctly and that DNGR personnel are adequately controlling the work. They will observe whether other important parts of the PNIR financed by other donors or the Government of Guinea (GOG) are being implemented in a timely manner. They will certify that all conditions for the disbursement of AID funds have been met.

The program produce approximately 1250 km of improved rural roads and a strengthened local contracting industry.

IV. Scope of Work:

The PSC Project Manager will be responsible for the overall direction and control of the approximately $33 million project. She/he will be supervised by the USAID Program and Project Design Director (PPD) in Conakry. She/he will be aided by one resident ex-patriate engineer/contracting specialist, one short-term monitoring and evaluation specialist and up to three part time local-hire engineers/technicians. The Project Manager will perform all administratives, financial and personnel duties involved in managing the project. This will include:

- supervise the ex-patriate engineer
- prepare progress and other reports,
- provide information to help with AID evaluations and duties,
- supervise the short-term monitoring and evaluation specialist,
- prepare and revise PIO/Ts.

She/he will be responsible for maintaining good working relationship with the GOG, the World Bank and other donor agencies. The Project Manager will coordinate with the GOG, the World Bank and other donor agencies in the implementation of other PNIR project components. She/he will assure that those components on which the success of this project depends are making satisfactory progress. In the event that satisfactory progress is not occuring, the Project Manager will make appropriate comments to the PPD.

The Project Manager will be responsible for the technical aspects of the project, as well. She/he will:

- Coordinate the preparation of bid comments by DNGR personnel for rehabilitation and maintenance on AID funded roads,
- participate in the pre-qualification of local and international bidders,
- monitor the bid process.
- review the bids for responsiveness and compliance to requirements,

- participate in the adjustment in scope of rehabilitation packages,
- approve bid results,

The other responsibilities may include the following:

- monitor and coordinate the rehabilitation and maintenance of roads, including:
  - monitor quality control process,
  - perform periodic inspections to assure that work is performed according to specifications,
- participate in project acceptance process,
- participate in developing and implementing the project monitoring and evaluation procedures,
- assure that periodic site visits are made, and
- perform other technical duties assigned by PPD.

V. Qualifications:

1. A Master's degree (or Bachelor's degree plus considerable experience) in Civil Engineering.
2. Extensive project management experience on rural road construction, rehabilitation and/or maintenance projects.
3. Minimum two years Africa experience.
4. Knowledge of construction project management software and/or maintenance management software/procedures will be helpful.
5. French FSI S-3, W-3 level.

VI. Reporting Requirements:

The PSC Project Manager will submit semi-annual Project Implementation Reports to the PPD. On a quarterly basis she/he

will meet with the Project Committee to discuss progress, evaluate problems and identify potential new activities. In addition she/he will provide:

- a list of current and planned activities,
- a quarterly report on all costs incurred under the project including costs incurred by the Engineer/contracting specialist, the local-hire engineers/technicians and the short-term Monitoring/evaluation specialist and their support staff,
- quarterly on obligation amounts, earmarked amounts through PIO's committed amounts through contracts, expenditure amounts and pipeline amounts giving the amount available for each budget line item,
- quarterly inputs on accrual worksheets to furnished to REDSO/WCA, and
- other reports as requested by the PPD

EVALUATION CRITERIA

Academic Qualifications	25
Project Management Experience	30
African Experience	10
Knowledge of Project Management/ Maintenance Management Software	20
Language Capabilities	15
TOTAL	100

ILLUSTRATIVE BUDGET

1.	Salary	$ 70,000
2.	FICA (7.35%)	5,145
3.	COLA (5%)	3,500
4.	Housing	25,000
5.	Housing start-up cost	30,000
6.	Children's education	10,000
7.	Travel:	
	a. International Travel	4,000
	b. In-country travel	1,000
8.	Miscellaneous	3,750
	TOTAL	$152,395

Attachment 2.1

SCOPE OF WORK

I. Position: PSC Engineer, Rural Roads Rehabilitation and Maintenance Project (No. 675-0216)

II. Duration of Services: Four years

III. Background:

The National Rural Infrastructure Project (PNIR) undertaken by the World Bank and the Government of Guinea aims to strengthen the government's ability to implement policies in the rural infrastructure sub-sector. The project involves institutional support to various government agencies, a specific rural infrastructure investment program, and test new methods of rehabilitation and maintenance of the rural infrastructure, particularly involving grassroots participation. The project concentrates on three major components of the rural infrastructure: Rehabilitating 2,600 km of rural roads, developing 2100 hectares of bottomlands and providing permanent water supplies to about 140 villages. Several donors are financing different parts of the project, namely KFW, (German aid), Caisse Centrale (French aid), IDA (International Development Agence) and USAID.

USAID has narrowed its focus to the rehabilitation of rural roads. It plans to finance the rehabilitation of approximately 1250 km of farm to market and market to administrative center roads in nine prefectures in various parts of the country. AID's purposes are to improve market access for rural producers and to strengthen the Guinean private sector capacity to perform rural road maintenance. AID will work with the National Rural Engineering Directorate (DNGR) of the Ministry of Agriculture and Animal Resources (MARA). The DNRG will plan, program, design, prepare bid documents, contract for and control the rehabilitation and maintenance of the roads which AID is financing.

Project activities will be in both Conakry and the various rehabilitation and maintenance sites in the nine prefectures. AID project personnel will coordinate the implementation of the rehabilitation program with the DNGR. The will coordinate other project activities with DNGR, the World Bank and other donors. They will make site visits to assure that the rehabilitation and maintenance work is being performed correctly and that DNGR personnel are adequately controlling the work. They will observe whether other important parts of the PNIR financed by other donors or the Government of Guinea (GOG) are being implemented in a timely manner. They will certify that all conditions for the disbursement of AID funds have been met.

The program produce approximately 1250 km of improved rural roads and a strengthened local contracting industry.

IV. Scope of Work:

The PSC Engineer/Contracting Specialist will be responsible for engineering and contracting aspects of the approximately $33 million project. She/he will be supervised by the PSC Project in Conakry. She/he will be aided by the PSC Project Manager and up to three part time local-hire Engineers/Technicians. She/he will work with the short-term monitoring and evaluation Specialist. The Engineering/Contracting Specialist will advise the DNGR's personnel in correct contract preparation and will review the contracts prepared by them. She/he will perform site visits to verify that the rehabilitation, constructing and maintenance of roads financed by USAID is being carried out correctly and according to specifications. She/he will aide the PSC Project Manger in the administration aspects of the project. This will include:

- supervise the local engineers/technicians,
- help prepare progress and other reports,
- provide information to help with AID evaluations and duties,
- Coordinate with the short-term monitoring and evaluation specialist.

She/he will maintain good working relationships with the GOG, the World Bank and other donor agencies. The Engineer/Contracting Specialist will help the PSC Project Manager coordinate with the GOG, the World Bank and other donor agencies in the implementation of other PNIR project components. She/he will monitor other PNIR project areas to assure that those components on which the success of this project depends are making satisfactory progress. In the event that satisfactory progress is not occuring, the Engineering/Contracting Specialist will make appropriate comments to the Project Manager.

The Engineering/Contracting Specialist will have primary responsibility for the technical aspects of the project. She/he will:

- visit all ongoing rehabilitation, construction and maintenance sites financed by AID on a regular basis to assure the correct inspection and control of the works,
- aid in the preparation of bid documents by DNGR personnel for rehabilitation and maintenance on AID funded roads,

- participate in the pre-qualification of local and international bidders,
- monitor the bid process,
- review the bids for responsiveness and compliance to requirements,
- participate in the adjustment in scope of rehabilitation packages,
- recommand appropriate action on bid results to the Project Manager,
- participate in project acceptance process,
- aid in developing and implementing the project monitoring and evaluation procedures,
- perform other technical duties assigned by Project Manager.

The Engineering/Contracting Specialist will spend a significant amount of time travelling to visit the worksites scattered throughout Guinea. She/he will be provided with an appropriate vehicle to accomplish these visits.

V. Qualifications:

1. A Bachelor's degree in Civil Engineering.
2. Extensive hands-on construction supervision/inspection experience on rural road construction, rehabilitation and/or maintenance projects.
3. Bid package preparation and review experience.
4. Minimum two years Africa experience.
5. Knowledge of construction project management software and/or maintenance management software/procedures will be helpful.
6. French FSI S-3, W-3 level highly desirable, FSI 2/2 required.

VI. Reporting Requirements:

The Engineering/Contracting Specialist will aid the PSC Project Manager in the preparation of semi-annual Project Implementation Reports to the Program and Project Design office (PPD). On a quarterly basis she/he will meet with the Project Committee to discuss progress, evaluate problems and identify potential new activities. In addition she/he will provide:

- a list of current and planned activities, including progress reports on actual activities implemented vs. planned milestones.
- other reports as requested by the PPD.

EVALUATION CRITERIA

Academic Qualifications	20
Construction Supervision/ Inspection Experience	30
Bid package Preparation Experience	20
African experience	10
Knowledge of Project Management/ Maintenance Management Software	10
Language Capabilities	15
Total	100

ILLUSTRATIVE BUDGET

1.	Salary	$ 50,000
2.	FICA (7.35%)	3,750
3.	COLA (5%)	2,500
4.	Housing	25,000
5.	Housing start-up cost	30,000
6.	Children's education	10,000
7.	Travel:	
	a. International Travel	4,000
	b. In-country travel	1,000
8.	Miscellaneous	3,750
	TOTAL	$130,000