

**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**



ANNUAL BUDGET SUBMISSION

FY 1978

NIGER

BEST AVAILABLE

**DEPARTMENT
OF
STATE**

JUNE 1976



FY 1978

ANNUAL BUDGET SUBMISSION

NIGER

TABLE OF CONTENTS

FY 1978 ANNUAL BUDGET SUBMISSION-NIGER

	<u>PAGE</u>
I. RDO/Niger Overview - Continuing Validity of DAP Strategy	1
II. Regional and Bilateral Program	
A. Summary Table 1	2-7
B. Summary Table II and Narrative on Deviations in Funding	8
C. Ongoing Grant Activities Narrative Statements and Fiscal Tables	
1. Niger Cereals Production	9-14
2. Entente Food Production	15-17
3. Entente Livestock II	18-19
4. Niger River Development	20
D. FY 1978 New Projects Alternative Funding Levels and Support Narratives for Proposed Levels	21
E. Long Range Projections	22
F. Evaluation Plan	23-24
G. Title II Narratives and Funding Levels	25-28
H. Assistance to PVOs and Cooperatives	29-30
I. AIP (Accelerated Impact Program)	31
J. PL 480 Requirements Projection for Program Planning for Niger	32-37
III. Appendices	
A. PID: INRAN	38-45
B. PID: Peanut Seed Processing and Storage	46-57
C. PID: Gaya Bridge & River Port	58-66
D. PID: Niger Health Sector Support	67-77
E. PID: Say Arrondissement	78-99
F. PID: Regional Rural Water Supply	100-110
G. PID: Regional Human Resources Development	111-122
H. PID: Air Oasis Agricultural Development	123-125

DAP SUMMARY ASSESSMENT

The Mission has reviewed the DAP summaries prepared for Niger, Togo, Benin and Ivory Coast in the Fall of 1974.

The portion of the Togo DAP summary dealing with health needs to be updated, and updating is scheduled to be done by a team of health specialists in July 1976. The 1976-80 five-year development plan for Togo has recently been published. It contains for the first time a comprehensive review of housing and shelter policy. ADO/Niamey proposes to conduct a review of the Togo housing/shelter in the summer of 1976 using expertise available in Abidjan.

The Niger DAP summary review of the Livestock Development situation is considered weak; however, the Mission considers that work on the Range Management and Livestock project will suffice in lieu of a DAP summary revision or update.

The health portions of the Niger DAP/S definitely require revision and updating. It is proposed that this be done as part of the preparation of the project proposal for Niger Health Sector Support.

The Mission is considering the need for a DAP summary revision for Benin, to be conducted during FY 77, to take into account substantial changes which have taken place since the Fall of 1976.

COUNTRY/PROGRAM: RDO/NIGER

SUMMARY TABLE I
(\$000)

Funding Levels for FY 1976, IQ, FY 1977, FY 1978

	<u>FY 1976</u>	<u>Interim Quarter</u>	<u>FY 1977</u>	<u>FY 1978</u>
<u>Food/Nutrition</u>				
<u>Grants</u>				
625-11-150-161 Grain Production & Marketing	700	-	-	-
626-11-130-203 Entente Food Production				
TA	790	-	-	890
Capital Grant	3,000	-	-	2,000
626-11-130-204 Entente Livestock Sector II				
TA	500	-	740	-
Capital Grant	3,000	-	-	-
683-11-130-201 Niger Cereals Production	5,912 ^{1/}	-	3,526	2,764
683-11-130-202 Niger Range & Livestock Dev	-	-	765	690
683-11-130-205 Niamey Dept Dev	-	-	640	1,261
<u>Loans</u>				
Entente Food Production	8,000	-	-	2,000
Entente Livestock Sector II	4,500	-	-	-

^{1/} Funding provided under Foreign Disaster Act 1974

	<u>FY 1976</u>	<u>Interim Quarter</u>	<u>FY 1977</u>	<u>FY 1978</u>
<u>Population/Health</u>				
<u>Grants</u>				
626-0210 Regional/Rural Water Supply	-	-	-	12,000
683-0208 Niger Health Sector Support	-	-	-	2,000
693-0212 Togo Family Health	-	-	400	150
<u>(Population)</u>				
<u>(Grants)</u>				
(693-0212 Togo Family Health)		-	(200)	(100)
<u>(Health)</u>				
<u>(Grants)</u>				
(626-0210 Regional Rural Water Supply)	-	-	-	(2,500)
(683-0208 Niger Health Sector)	-	-		(2,000)
(693-0212 Togo Family Health)	-	-	(200)	(50)
<u>Education</u>				
<u>Grants</u>				
626-0211 Regional Human Resources	-	-	-	2,392

	<u>FY 1976</u>	<u>Interim Quarter</u>	<u>FY 1977</u>	<u>FY 1978</u>
<u>Section 106</u>				
<u>Grants</u>				
625-11-610-180 Regional Road Maintenance	815	-	-	-
625-15-920-717 African Enterprises	510	-	-	-
625-11-755-915 Niger River Development	75	-	1,000	2,262
625-11-995-910 AIP (Accelerated Impact)	-	-	1,200	1,500
683-0205 INRAN	-	-	-	1,065
683-0206 Peanut Seed Processing and Storage	-	-	-	570
683-0207 Gaya Bridge & River Port	-	-	-	11,000
683-0209 Say Arrondissement	-	-	-	2,750
<u>Sub-Total</u>				
Grants				
TA	9,302	-	8,307	31,794
Capital	6,000	-	-	2,000
Loans	12,500	-	-	2,000
<u>Supporting Assistance</u>	-	-	-	-
<u>Grand Total</u>	27,802	-	8,307	34,794
<u>HIGs</u>	-	-	-	-
<u>PL-480</u>				
Title I				
Title II				1,126

1/ Funding provided under Foreign Disaster Act 1974

ABS/CP Summary		1. Transaction Code		2. Document Code		3. Country/Entity	
		A=Add C=Change D>Delete	A	6		RDO NIGER	
4. Document Revision No.		5. Operational Year FY		6. Bureau		7. Geographic Code	
1-ABS 3-CP		2-ABS Revision 4-CP Notification		A. Symbol		1-Project Assistance 2-Program Assistance	
17/1		17/7/1		625, 626, 693		693	
10. Project No.	11. Project Title	12. Qtr for Oblig.	13. Est. FY Ansh/Oblig. Final	14. Appro- priation	15. Prim. Pur- pose Code	16. Budgets (in \$000)	
						AY	IQ CY FY IOP
FOOD & NUT							
683-11-130-202	Niger Range & Livestock	2	78	FN	1102B GN	-	765 690 1455
683-11-130-205	Miamey Dept Dev	2	78	FN	2102B GN	-	640 1261 1901
	Air Oasis Agric Dev (CARE)	1	78	FN	1403B GN	-	- 1500 1500
Stocking							
625-11-150-161	Grain Prod & Mktg		76	FN	1403B GC	700	- - -
625-11-130-201	Niger Cereals *	1/3	78	FN	1201B GC	5912	3526 2764 12,266
626-11-130-203	Entente Feed Prod*	2	78	FN	1403B GC	(790 (3000**	890 200 (1680 (3000**
626-11-130-204	Entente Livestock II	4	77	FN	1103B GC	(500 (3000**	740 - (1240 (3000**
625-xxx	Entente Feed Prod	2	78	FN	1403B L	8000	- 2000 1000
625-T-014	Entente Livestock		76	FN	1103B L	4500	- - 4500
18. Data Document Received MM DD YY							
In AID/V							

NOTE: Rank ordering divided between Regional and bilateral projects. Projects 0205 and 0206 could conceivably be funded under Niger Cereals Project.

Capital Grant

1. Transaction Code		2. Document Code		3. Country/Entity		PAGE 4	
A		6		RDO NIGER			
4. Document Revision No. 1-ABS 2-ABS Revision 3-CP 4-CP Modification		6. Bureau		7. Geographic Code			
1-ABS 2-ABS Revision 3-CP 4-CP Modification		A. Symbol FR B. Code 6		625, 626, 683 693			
10. Project No. 11. Project Title		12. Qtr for Oblig. Final		13. Est. FY		14. Approp. Pri- mation	
		15. Prim. Purpose Code		16. M/C		17. Budgets (in \$000)	
						AY IQ OY BY LOP	
<u>Population/Health</u>							
<u>New</u>							
626-0210	Regional Water Supply (1)	4	78	PH	5103B GN	-	2,500
683-0208	Niger Health Sector (1)	2	82	PH	5303B GN	-	12,500
693-0212	Togo Family Health *	4	79	PH	5303B GN	-	700
	Strengthening Basic Health Services (Africare)	1	79	PH	5303B GN	-	2,818
<u>Education</u>							
<u>New</u>							
626-0211	Regional Human Res. (2)	3	80	EH	660B GN	-	5,982
	Togo Vocat. Trng (OICI)	1	79	EH	6203B GN	-	1,364

18. Date Document Received in \$M/B/W

1. Transaction Code		2. Document Code		3. Country/Entity			
A=Add C=Change D>Delete		6		RDO NIGER			
4. Document Revision No.		6. Bureau		7. Geographic Code			
1=ABS 2=ABS Revision 3=CP 4=CP Notification		A. Symbol AFR B. Code6 Year FY 11/17		625. 6/6. 683 693			
8. Type Data		9. Type Assistance		1-Project Assistance 2-Program Assistance			
11/		1					
10. Project No. 11. Project Title		12. Qtr for Oblig.	13. Est. FY Ansh/Oblig.	14. Appropria-tion	15. Prim- Pur- pose Code	16. T/G	17.
		Oblig. Fiscal					
							Budgets (in \$000)
							AY 10 11 FY 12
Section 106							
New							
625-11-755-915	Niger River Dev.	1/3	79	ST	7701B	GN	75 - 1000 2262 5000
625-11-995-910	AIP	4/2	contin	ST	-	-	- 1200 1500 contin
683-0205	INRAN (3)	2	81	ST	181B	GN	- 1065 2035
683-0206	Peanut Seed (5)	1	78	ST	2001B	GN	- 570 570
683-0207	Gaya Bridge & River(4)	1	78	ST	7001B	GN	- 11,000 11,000
683-0209	Say Arrondissement(2)	4	80	ST	1403B	GN	- 2750 5500
Ongoing							
625-11-610-180	Regional Road	-	76	ST	6001B	GC	815 - 16682
625-15-920-717	African Enterprises	-	76	ST	7201B	GC	510 - 1230

18. Date Document Received MM DD FY
in A/D/W

Summary Table II Annex - Narrative Explanations for Funding Deviations

Project No. & Title: 693-0212-Togo Family Health

As per STATE 31452 (dated 2/9/76), this activity is being carried as a shelf item in FY 1977 CP pending the completion of a health sector analysis and redesign of PP addressing various issues raised at ECPR review of project, viz other donor support, GOT's support of activity and priority given to preventive medical care, etc. In light of progress being made in satisfying concerns raised at ECPR review, ADO is including activity for funding in FY 1977.

Revised Budget (\$000)

	<u>FY 1977</u>	<u>FY 1978</u>
US Contract Personnel - Public Health Advisors, Trng Advisors	80	140
Participants	20	
Construction of Family Health Center	300	
In-country trng seminars	—	<u>10</u>
	400	150

ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Country/Program EDO/NIGER-Niger

PROJECT NAME Niger Cereals Project

INITIAL OBLIGATION FY 76 DATE PROP/REVISION 5/14/75

PROJECT NUMBER 683-11-130-201

FINAL OBLIGATION FY 78 DATE LAST PAR

APPROPRIATION Food and Nutrition

TOTAL COST \$12,266 DATE NEXT PAR 10/76

U.S. DOLLAR COST (IN THOUSANDS)

Actual FY 1976 Estimated Interim Qtr Estimated FY 1977 Proposed FY 1978	FY Obligations (1)	FY Expenditures	Unliquidated (ins. prior year funds) as of:	FY 1977 and FY 1978 Obligations by Cost Component/(M)						
				Cost Component	Direct Aid	Contract	PASA	Total		
	5,912	357	5,555 6/30/76	77	77	78	77	78	77	78
		753	4,802 9/30/76	90	95	1202	1428			1292
	3,526	4,752	3,526 9/30/77			43	47			43
	2,764	3,856	2,484 9/30/78					475		86
				1005	541	1100				2105
				1181	814	2345	1950			3526
										2764

Contract/PASA Funding Periods (\$000)

Name of Contractor	FY 1976		Int Qtr		FY 1977		FY 1978	
	from	to	Obligations	from	Obligations	from	Obligations	
Amount								
CID Insti- tutional								
Contract								
Field Advisor	9/76-11/77			12/77-9/78	10/78-9/79			
	\$85		\$85	\$90				
Assistant Extension Specialist	10/76-9/77			10/77-11/78	12/78-11/79			
	\$75		\$95	\$85				
Plant Breeder	9/76-11/77			12/77-9/78	10/78-10/79			
	\$85		\$85	\$90				

	On Board Personnel					
	6/30	9/30	9/30	9/30	9/30	9/30
Direct Hire					1	1
PASA						
Contract	7	12	20	20	20	20
Participants	6	6	15	15	15	15

(1) Preproject funding (\$64,000) and FY 76 obligation from Drought Funds, Foreign Disaster Assistance Act of 1974.

PROJECT NAME Niger Cereals Project

Name of Contractor	Contract/PASA Funding Periods (\$000)			
	FY 1976	Int Qtr	FY 1977	FY 1978
Obligations	from	to	Obligations	Obligations
	10/76-9/77	10/77-11/78	10/77-11/78	12/78-11/79
Agronomist	\$75		\$95	\$85
Ag Engineer	10/76-9/77	-	10/77-11/78	12/78-11/78
	\$75		\$95	\$85
Cooperatives & Credit	8/76-10/77	-	11/77-7/78	8/78-8/79
	\$85		\$85	\$90
Seed Specialist	10/76-9/77	-	10/77-11/78	12/78-11/79
	\$75		\$95	\$85
Short-term Consultants			20 pm	20 pm
			\$180	\$190
Secretarial Support	40 pm			48 pm
	\$35			\$38
Home Office Prof. Support	10 pm			10 pm
	\$25			\$28
Sec'y Support	7 pm			7 pm
	\$8			\$9
Overhead	\$53		\$81	\$85
G&A	\$62		\$104	\$110

PROJECT NAME Niger Cereals Project

Name of Contractor	Contract/PASA Funding Periods (\$000)		FY 1978 Obligations
	FY 1975	FY 1977	
	Int Qtr		
	Obligations	Obligations	Obligations
	from to	from to	from to
PSC's Siegel	2/76-1/78 \$49		2/78-1/79 \$27
McDuffie	3/76-2/78 \$47		3/78-2/79 \$27
Shuster	4/76-3/78 \$47		4/78-3/79 \$27
Adams	3/76-2/78 \$47		3/78-2/79 \$27
Russell	2/76-1/78 \$47		2/78-1/79 \$27
Heffron	1/76-7/76 \$9		
Panther	4/76-3/78 \$47		4/78-3/79 \$27
Yellott	9/76-8/78 \$47		9/78-8/79 \$27
Civil Eng	9/76-2/78 \$38		3/78-8/79 \$38

NAME OF PROJECT Niger Cereals Project

Name of Contractor	Contract/PASA Funding Periods (\$000)			
	FY 1976	Int Qtr	FY 1977	FY 1978
Obligations	from	to	from	to
Obligations	from	to	from	to
Staff Asst #9		1/77-12/78	1/79-11/79	
		\$49	\$27	
Staff Asst #10		1/77-12/79	1/80-11/80	
		\$49	\$27	
Staff Asst #11		1/77-12/79	1/77-12/79	
		\$49	\$27	
Short-term Consultant	18 pm		7 pm	7 pm
	\$126		\$55	\$50
Local contract hire	110 pm		156 pm	144 pm
	\$32		\$43	\$47

PROJECT NARRATIVES

A. Niger Cereals Production (Proj. No. 683-11-130-201)

1. Schedule. The implementation plan established in the PP called for the first year's funding to be available in January, 1975. The PP itself was not approved until May, 1975. The funds were obligated shortly thereafter, in July, 1975, but the 1975 crop season had been missed.

2. Progress to achieve planned outputs can be quantified as follows:

-professional ag training (9 months) given to 80 coop agents, now in field.

-200 auxiliary extension agents trained (10 days) and in field.

Plan for recycling completed and approved.

-4 seed production specialists in training in Hyderabad, India.

-6 participants in U.S. for university level training in research disciplines.

-18 statistical investigators trained (10 days) and in field.

-bids received on vehicle procurement.

-specifications prepared for laboratory, farm, shop equipment.

-bids received and ready for evaluation on construction of 28 housing units for UNCC-filed representatives and 8 office/warehouses.

-bids requested for construction of one and repair of two young farmer training centers.

-3,000 demonstration plots planted with P-3 Kolo improved millet seed.

-60 hectares planted for seed multiplication.

-CID contract for seven senior technicians signed.

-GON Project Manager's office established and functioning.

3. Funding. Project funding requirements have been revised upward from the \$9,636,130 requested in the Project Paper to \$12.2 million. The upward revision can be attributed in part to the inflationary factor but also in great measure to a miscalculation, at the time of the writing of the PP, of base personnel and construction costs.

Personnel: An institutional contract for seven senior technicians was estimated in the PP to cost \$1.26 million over a three year period. In fact, the contract recently negotiated with the Consortium for International Development (CID) for the first two years totals \$1.7 million. The third year of the contract is expected to cost an additional \$1 million. Moreover, the negotiation contract does not include contractor support costs, i.e. housing, furniture, utilities, etc. These costs are projected to add \$576,000 over the three year life of the contract.

The difference between the PP cost estimates for the senior expatriate staff and the revised cost projections for the CID contract are, then, approximately \$2 million.

Construction: The PP provision of \$1.5 million for construction of facilities required by the project are substantially lower than the present estimate of requirements - \$3 million. The substantial difference is due in part to a misinterpretation of local construction cost estimates by an AID consultant who misread 60,000 FCFA (\$250) for \$60 per m³. The inflation factor and, more specifically, the effect of high petrol prices on the Niger construction industry between the date of the PP preparation (November/December, 1975) and present implementation contributed significantly to the increased prices.

Approximately one-half of the cost overrun for construction will be covered through the use of PL-480 generated counterpart funds. Additional dollar financing of \$1.1 million will be required in FY 77.

4. FY 77 funding requirements: The FY 77 CP requested an additional \$1 million to meet revised personnel and construction costs. The extent of the revisions has only become fully apparent with the negotiation of the CID contract and a reworking of construction and other component costs within the last several months. The present request for FY 77 funding is for \$ 3,526,000.

The implementation schedule established in the PP planned for the first tranche of funds (\$5.9 million) to be obligated in the third quarter of FY 75 and to carry the project for approximately 20 months, into FY 77 and the obligation of the second tranche (\$2.7 million). The delay until FY 76 in obligating the first tranche did not work a like delay on the obligation of the second tranche to FY 78. Without the escalating costs, \$5.9 million made available in September, 1975 would fund the project for 20 months to May, 1977. A requirement for FY 77 funding remains.

5. Revised Project Budget

<u>Technicians</u>	<u>PP Financial Revised Estimate Plan (\$000)</u>	
Asst. Proj. Manager	189	280
CID	1,260	2,808
PSC (11)	831	833
ST consultants	278	231
Local employees	122	122
<u>Participants</u>	506	506
<u>Commodities</u>	3,350	2,883
<u>Other Costs</u>		
Construction	1,532	2,000
Local Project Support	1,570	2,058
CID Support	-	576
TOTAL	<u>9,636</u>	<u>12,297</u>

RDO/Niger **ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION**
Entente Regional

PROJECT NAME Entente Feed Production **INITIAL OBLIGATION** FY 1976 **DATE PROP/REVISION** March 31, 1976
PROJECT NUMBER 626 11-130-203 **FINAL OBLIGATION** FY 1978 **DATE LAST PAR** -
APPROPRIATION Food and Nutrition **TOTAL COST** \$1,680,000 **DATE NEXT PAR** AUGUST 1977

U.S. DOLLAR COST (IN THOUSANDS)

	FY Obligations Expenditures	FY (inc. prior year funds)	FY 1977 and FY 1978 Obligations by Cost Component/DOI						
			Unliquidated	Direct Aid	Contract	PASA	Total		
Actual FY 1976	790	-	790	77	78	77	78	77	78
Estimated	-	-	790	-	-	-	475	-	-
Interim Qtr Estimated	-	-	265	-	-	-	80	-	-
FY 1977 Proposed	--	525	9/30/77	-	-	-	-	-	-
FY 1978	890	741	9/30/78	-	-	-	555	-	-

Contract/PASA Funding Periods (\$000)

Name of Contractor	FY 1976		Int Qtr FY 1977		FY 1978	
	from	to	from	to	from	to
Amount	11/76-4/78		-		5/78-10/79	
Ag Econo-mist	\$105				\$105	
Crop Prod.	11/76-4/78		-		5/75-10/79	
	\$105				\$105	
Rural Dev Specialist	11/76-4/78		-		-	
	\$105					
continued						

	On Board Personnel					
	6/30 1976	9/30 1976	9/30 1977	9/30 1978	No.	No.
Director/Fore	-	-	3	2	-	-
PASA	-	-	-	-	-	-
Contract	-	-	-	-	-	-
Participants	-	-	9	15	-	-

PAGE 2

PROJECT NAME Entente Food Production

Name of Contractor	Contract/PASA Funding Periods (\$000)			
	FY 1976	Int Qtr	FY 1977	FY 1978
Obligations	from	to	from	to
Obligations	from	to	from	to

Short-term advisors

Project Design	21 pm	\$150	14 pm	\$100
Ag/Econ Research	10 pm	\$75	15 pm	\$115
Social Science Re-search & Eval (local-TCN)	15 pm	\$70	18 pm	\$80
Sector Assessment	7 pm	\$50	7 pm	\$50

B. Entente Food Production (Proj. 626-11-130-203).

The project is proceeding according to the implementation schedule established in the Project Paper. The Grant Agreement for both the capital and technical assistance grants were signed in June, 1976. Implementation will begin in the interim quarter. Obligation of Capital Grant funds (\$3 million) was advanced from FY 77 to FY 76.

RDO/NIGER ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Country/Program Entente Regional INITIAL OBLIGATION FY 1976 DATE PROP/REVISION November 27, 1975
 PROJECT NAME Entente Livestock II FINAL OBLIGATION FY 1977 DATE LAST PAR
 PROJECT NUMBER 626-11-130-204 TOTAL COST \$1,240,000 DATE NEXT PAR January 1977
 APPROPRIATION Food and Nutrition

U.S. DOLLAR COST (IN THOUSANDS)

	FY Obligations	FY Expenditures	Unliquidated (inc. prior year funds) as of:	FY 1977 and FY 1978 Obligations by Cost Component/MOJ				
				Cost Component	Direct Aid	Contract	PASA	Total
Actual FY 1976	500	150	350 6/30/76	77	77	77	77	77
Estimated Interim Qtr	46	46	304 9/30/76	-	537	-	-	537
Estimated FY 1977	740	441	603 9/30/77	-	12	-	-	12
Proposed FY 1978	451	451	152 9/30/78	-	-	-	-	-
				191	-	-	-	191
				-	-	-	-	-
				-	-	-	-	-
				191	549	-	-	740

Contract/PASA Funding Periods (\$000)

Name of Contractor	FY 1976		Int Qtr		FY 1977		FY 1978	
	from	to	Obligations	to	Obligations	from	Obligations	to
Amount Project Manager	4/76-10/78	\$120	-	-	11/78-10/79	\$60	-	-
Statistician (TCN)	1/77-12/77	\$12	-	-	12 pm \$12	-	-	-
Short-term consultants	15 pm \$105	-	-	-	25 pm \$175	-	-	-
Prej Design	38 pm \$178	-	-	-	66 pm \$302	-	-	-

	On Board Personnel			
	6/30 1976	9/30 1976	9/30 1977	9/30 1978
Direct Hire	-	-	-	-
PASA	-	-	-	-
Contract	4	4	2	2
Participants	-	-	5	10

C. Entente Livestock II. (Proj. 626-11-130-204)

This project is also proceeding according to the Project Paper implementation schedule. The capital assistance and technical assistance grants were signed in June, 1976.

ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Country/Program RDO/NIGER INITIAL OBLIGATION FY 1976 DATE PROF/REVISION September 1976
 PROJECT NAME Niger River Development FINAL OBLIGATION FY 1979 DATE LAST PAR -
 PROJECT NUMBER 625-11-755-915 TOTAL COST \$5,000,000 DATE NEXT PAR December 1977
 APPROPRIATION Section 106

U.S. DOLLAR COST (IN THOUSANDS)

	FY Obligations	FY Expenditures	Unliquidated (inc. prior year funds) as of:	FY 1977 and FY 1978 Obligations by Cost Component/MOI				
				Cost Component	Direct Aid	Contract	PASA	Total
Actual FY 1976	75	-	75 6/30/76	77	77	78	77	78
Estimated Interim Qtr	-	8	67 9/30/76	-	880	1030	-	880
Estimated FY 1977	1000	568	499 9/30/77	-	95	217	-	95
Proposed FY 1978	2262	1461	1300 9/30/78	-	25	15	-	25
				-	-	1000	-	-
				-	1000	2262	-	1000
				-	-	-	-	1000
				-	-	-	-	2262

Contract/PASA Funding Periods (\$000)

Name of Contractor	FY 1976 Obligations		Int Qtr FY 1977 Obligations		FY 1978 Obligations	
	from	to	from	to	from	to
Amount Joyce	3/77	7/77	-	-	-	-
	\$19					
River Basin Planner	-	-	7/77	7/79	-	-
			\$180			
Short-term consultants	-	-	\$10		\$30	
Planning studies	-	-	\$690		\$1000	

	On Board Personnel					
	6/30 1976	9/30 1976	9/30 1977	9/30 1978	No.	No.
Direct Hire	-	-	-	-	-	-
PASA	-	-	-	-	-	-
Contract	-	-	-	1	1	1
Participants	-	6	6	6	6	15

COUNTRY/PROGRAM: RDO/NIGER

Proposed New Projects - FY 1978 Alternative Funding Levels

	(Alternative A)		(Alternative B)		(Alternative C)	
	Full Funding Level Months from Date of Obligations	Dollars	Forward Funding According to A-368 Dollars	Dollars	Mission Alternative if Grant Resources Curtailed	Months from Date of Obligation
<u>Population/Health</u>						
626-0210-Regional Rural Water Supply	36	12.0	5.0	4.0		18
683-0208-Niger Health Sector	36	7.5	4.45	4.45		21
<u>Education</u>						
Regional Human Res Dev	24	2.3	2.3	1.7		12
<u>Section 105</u>						
625-0205-INRAN	36	1.54	1.06	.66		12
625-0206 Peanut Processing	12	.57	-	-		-
683-0207 Gaya Bridge (Capital grant)	36	11.0	-	-		-
683-0209 Say Arrondissement	24	2.75	2.75	1.5		18

NOTE: See individual PIDs for discussion of cost and benefits.
 Level 3 is the minimum level on which project can operate without compromising important project objective.

COUNTRY/PROGRAM: RDO/NIGER

Long Range Program Plan
(whole \$ millions)

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Food/Nutrition					
Grants	8,080	10,000	5,000	6,000	6,000
Loans	-	7,000	-	-	-
Population/Health					
Grants	4,650	4,300	4,350	4,400	4,400
Loans	-	-	-	-	-
(Population)					
(Grants)	(-)	(-)	(1,000)	(1,000)	(1,000)
(Loans)	(-)	(-)	(-)	(-)	(-)
(Health)					
(Grants)	(4,650)	(4,300)	(3,350)	(3,400)	(3,400)
(Loans)	(-)	(-)	(-)	(-)	(-)
Education					
Grants	2,392	1,500	1,090	2,000	2,000
Loans	-	-	-	-	-
Section 106					
Grants	10,540	9,750	4,480	5,540	6,540
Loans	-	-	-	8,000	-
Total					
Grants	25,652	32,550	14,920	17,940	18,940
Loans	-	7,000	-	3,000	-
PL 480 (non-add)					
Title I	-	-	-	-	-
Title II	1,126	2,000	2,100	2,200	1,900
HIGs (non-add)	-	-	3,000	-	-

COUNTRY/PROGRAM: RDO/NIGER

MISSION EVALUATION PLAN FOR FY 1977 & FY 1978

(1) Project Title & Number	(2) Date of Last Evaluation	(3) Number of Last PAR (if applicable)	(4) Date of Submission FY 1977 and/or FY 1978 Evaluation	(5) Period Covered Next Evaluation	(6) Remarks
<u>Grants</u>					
Niger Cereals Production 683-11-130-201	New project	NA	October 1976	Beginning of project thru Sep 1976	
Grain Production & Mktg 625-11-150-161	May 1976		August 1977		Evaluation incorporated in PP dated 5/17/76
Entente Food Production 626-11-130-203	New project	NA	August 1977	Beginning of project thru July 1977	
Entente Livestock 626-11-130-204	New project	NA	January 1977	Beginning of project thru Dec 1976	
Regional Road Maintenance 625-11-610-180	March 1974		October 1976		
African Enterprises 625-15-920-717	March 1976	NA	October 1976		Final evaluation
Niger River Development 625-11-755-915	New project	NA	December 1977	Beginning of project thru Nov 1977.	

(1) Project Title & Number	(2) Date of Last Evaluation	(3) Number of Last PAR (if applicable)	(4) Date of Submission FY 1977 and/or FY 1978 Evaluation	(5) Period Covered Next Evaluation	(6) Remarks
<u>Loans</u>					
Entente Livestock 698-H-011					
African Enterprises 625-T-011	November 1975	NA	December 1977	Beginning of project	Final evaluation
African Enterprises II 625-W-012	NA	NA	December 1977		
Parakou-Malanville Road 625-W-008	NA	NA	NA		Final evalu- ation at end of final disbursement of loan
Dahomey-Gotonou Bridge/Dam 625-W-009	NA	NA	NA		
<u>Loans Authorized but not yet Signed</u>					
Entente Livestock Phase II	New loan	NA			
Entente Food Production	New loan	NA			

PL 480 Title II Narrative CRS/Togo

1. The CRS/Togo program continues to be well administered and regionally dispersed with acceptable cooperation at local distribution levels. The program has lacked central direction from the GOT especially in areas of food logistics, increasing local food inputs and relating Title II assistance to the greater role of nutrition in the planning stages of national development.

2. As set forth in Lome message 0646 , the GOT has now agreed to:
a) relocate its school lunch program from Lome to more needy rural areas,
b) undertake efforts for progressive reduction Title II inputs through school garden programs commencing Sept. '76, c) attempt similar local food inputs for the growing MCH program and d) create an effective interministerial nutritional committee (now functioning).

3. The RDO and RFFPO consider these commitments sine qua non for the continuation of the program at current levels. It is felt that two years will be required to observe GOT progress in establishing a firm foundation for phasing down Title II ration levels. For this reason, only the years FY 78 and FY 79 are projected at this time. It is appropriate that categories continue at the same level during this period, with the exception of the priority category MCH which is foreseen as increasing at a 5% increase per annum. While total quantitative Title II food aid could increase after FY 79, this would be on the basis of reducing progressively FFP per capita ration levels.

4. We consider encouraging high interest placed by GOT on the forthcoming USAID nutrition survey now scheduled for Sept/Oct which will enable CRS programming to be concentrated in regions where supplemental feeding is especially needed to combat malnutrition in Togo.

I. Country RDO/NIGER-Togo

FY 1978

(000)

Sponsor's Name CRS/Togo

A. Maternal and Child Health.....Total Recipients 50.0

No. of Recipients by Commodity	Name of Commodity	MT KGS (Thousands)	Dollars
	WSB	1.16	302.87
	Bulgur	.52	92.70
	Veg Oil	.26	49.86
<u>Total MCH</u>		<u>1.9</u>	<u>445.43</u>

B. School Feeding.....Total Recipients 40.0

No. of Recipients by Commodity	Name of Commodity	MT KGS (Thousands)	Dollars
	WSB	.70	182.61
	Cornmeal	.14	25.74
	Bulgur	.43	77.76
	Veg Oil	.08	15.90
<u>Total School Feeding</u>		<u>1.35</u>	<u>302.01</u>

C. Other Child Feeding.....Total Recipients 2.0

No. of Recipients by Commodity	Name of Commodity	MT KGS (Thousands)	Dollars
	WSB	.07	18.3
	Bulgur	.05	9.9
	Veg Oil	.01	1.1
<u>Total Other Child Feeding</u>		<u>.13</u>	<u>29.3</u>

D. Food for Work.....Total Recipients 17.1

No. of Recipients by Commodity	Commodity	MT KGS (Thousands)	Dollars
	Cornmeal	1.0	184.68
	Veg Oil	.1	21.72
<u>Total FW</u>		<u>1.1</u>	<u>206.40</u>

E. Other (Specify).....Total Recipients _____

No. of Recipients by Commodity	Name of Commodity	KGS (Thousands)	Dollars
_____	_____	_____	_____
_____	_____	_____	_____
<u>Total Other</u>	_____	_____	_____

II. Sponsor's Name _____

I. Country RDO/Niger - Togo

FY 1979
(000)

Sponsor's Name CRS/Togo

A. Maternal and Child Health.....Total Recipients 55.0

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>MT (Thousands)</u> KGS	<u>Dollars</u>
	<u>WSB</u>	<u>1.2</u>	<u>311.8</u>
	<u>Bulgur</u>	<u>.5</u>	<u>96.5</u>
	<u>Vegoil</u>	<u>.3</u>	<u>52.4</u>
<u>Total MCH</u>		<u>2.0</u>	<u>460.7</u>

B. School Feeding.....Total Recipients 40.0

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>MT (Thousands)</u> KGS	<u>Dollars</u>
	<u>WSB</u>	<u>.7</u>	<u>182.6</u>
	<u>Cornmeal</u>	<u>.1</u>	<u>25.7</u>
	<u>Bulgur</u>	<u>.4</u>	<u>77.8</u>
	<u>Vegoil</u>	<u>.1</u>	<u>15.8</u>
<u>Total School Feeding</u>		<u>1.3</u>	<u>302.0</u>

C. Other Child Feeding.....Total Recipients 2.0

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>MT (Thousands)</u> KGS	<u>Dollars</u>
	<u>WSB</u>	<u>.07</u>	<u>18.3</u>
	<u>Bulgur</u>	<u>.05</u>	<u>9.9</u>
	<u>Vegoil</u>	<u>.005</u>	<u>1.1</u>
<u>Total Other Child Feeding</u>		<u>.13</u>	<u>29.3</u>

D. Food for Work.....Total Recipients _____

<u>No. of Recipients by Commodity</u>	<u>Commodity</u>	<u>MT (Thousands)</u> KGS	<u>Dollars</u>
	<u>Cornmeal</u>	<u>1.0</u>	<u>194.4</u>
	<u>Vegoil</u>	<u>.1</u>	<u>22.6</u>
<u>Total FIW</u>		<u>1.1</u>	<u>217.0</u>

E. Other (Specify).....Total Recipients _____

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>(Thousands)</u> <u>KGS</u>	<u>Dollars</u>
_____	_____	_____	_____
_____	_____	_____	_____
<u>Total Other</u>		_____	_____

II. Sponsor's Name _____

I. Country RDO/NIGER-Benin

FY 1978

Sponsor's Name CRS/Cotonou

(000)

A. Maternal and Child Health.....Total Recipients 22.0

No. of Recipients by Commodity	Name of Commodity	MT KGS	(Thousands)	Dollars
	Bulgur	.26		47.52
	WSB	.26		69.17
<u>Total MCH</u>		<u>.52</u>		<u>116.69</u>

B. School Feeding.....Total Recipients _____

No. of Recipients by Commodity	Name of Commodity	MT KGS	(Thousands)	Dollars
	Bulgur	.02		3.24
	WSB	.02		4.72
	Cornmeal	.02		3.49
<u>Total School Feeding</u>		<u>.06</u>		<u>11.45</u>

C. Other Child Feeding.....Total Recipients _____

No. of Recipients by Commodity	Name of Commodity	MT KGS	(Thousands)	Dollars
	Bulgur	.02		3.24
	WSB	.02		4.72
	Cornmeal	.02		3.49
<u>Total Other Child Feeding</u>		<u>.06</u>		<u>11.45</u>

D. Food for Work.....Total Recipients _____

No. of Recipients by Commodity	Commodity	MT KGS	(Thousands)	Dollars
	Bulgur	.01		1.62
	Cornmeal	.01		1.75
<u>Total FW</u>		<u>.02</u>		<u>3.37</u>

E. Other (Specify).....Total Recipients _____

No. of Recipients by Commodity	Name of Commodity	KGS	(Thousands)	Dollars
<u>Total Other</u>				

II. Sponsor's Name _____

COUNTRY/PROGRAM: RDO/NIGER

Support to Private Voluntary Organizations and Developing Country Cooperatives

	<u>FY 1977^{1/}</u> <u>(\$000)</u>	<u>FY 1978^{1/}</u> <u>(\$000)</u>	<u>Functional</u> <u>Account</u>
<u>ONGOING</u>			
A. Ongoing OPGs			
Subtotal of which technical assistance to cooperatives (non-add) (-)	(-)	(-)	(-)
B. Non-OPGs			
Subtotal of which technical assistance to cooperatives (non-add) (-)	(-)	(-)	(-)
<u>NEW</u>			
A. OPGs			
Air Oasis Agriculture Development (CWS)		1,500	FN
Togo Agricultural Training (OICI)	336	406	FN
Strengthening Basic Health Services (Africare)	1,524	744	PH
Subtotal of which technical assistance to co- operatives (non-add) (-)	1 860	2,650	(-)

^{1/} Totals taken from PPs submitted for RDO comments.

	<u>FY 1977</u> (\$000)	<u>FY 1978</u> (\$000)	<u>Functional</u> <u>Account</u>
B. Non-OPGs			
Sand Dune Development (CARE)	70		
Rural Works (CARE)	300		
Subtotal	370		
of which technical assistance to co- operatives (non-add)	(-)	(-)	(-)

LOANS

Subtotal			
of which technical assistance to cooperatives (non-add)	(-)	(-)	(-)

ACCELERATED IMPACT PROGRAM

Ref: STATE 134507

As the Accelerated Impact Program in Niger is only beginning to be inaugurated the RDO/Niamey has not yet been able to establish a shelf of activity proposals which can be used for long-term programming. However, it is borne in mind that the AIP program has been specifically designed to provide a response mechanism for the programming of short-term, small-scale intervention opportunities as they arise. As such, the RDO/Niamey does not feel that long-term planning for short-term activities of this type can prove to be a useful exercise. Although the RDO could provide an illustrative list of ideas, the probability of new proposals, and changed priorities between alternatives, emerging during the 15 month period preceding the availability of funds is such that the likelihood of the ultimate program corresponding to the original proposal cannot be guaranteed.

As the AIP program in Niger becomes operative and the GON becomes more aware of the various assistance mechanisms available to them the RDO fully expects to be in receipt of GON proposals which will allow the compilation of shelf activities for future year programming.

The following budget request is therefore proposed for FY-78 programming for Niger, Togo and Benin:

NIGER:

(1) Marshland Development ^{1/}	\$400,000	
(2) Village Graneries	200,000	
(3) Unspecified	<u>400,000</u>	
Sub-total		\$1,000,000

TOGO:

(1) Rural Animation ^{2/}	<u>\$250,000</u>	
Sub-total		250,000

BENIN:

(1) Unspecified	<u>\$250,000</u>	
Sub-total		<u>250,000</u>

GRAND TOTAL \$1,500,000

1/ Construction of surface water development schemes following upon the FY-76 Marshland Survey.

2/ Assistance to the GOT Ministry of Rural Development in various rural, community development activities.

PL-480 Requirements Project and Programming Plan for Niger

A projection of Niger's food needs and the requirements for concessional grain imports over the next several years is hereby submitted but with the caveat that the relatively low level of data collection on food production in Niger and the many unpredictable variables affecting production preclude meaningful projections of future year availabilities of domestically produced cereal grains, either immediate or long term.

The semi-arid nature of Niger is dependent on a single-peak rainfall, the duration and intensity of the rainy season being the probable cause of variation in crop yields. Climatic uncertainty in agriculture production has been a major determinant in millet and sorghum production for Niger (see Graph A). A drop in rainfall forces production to follow its course. (Note: The drop in production in 1975, counter to the increased rainfall, is generally attributed to spotty, inadequate rainfall in some traditional production zones and to an unusually heavy attack of plant pests and diseases.) The unprecedented migration of population from overcrowded fertile farming areas into the marginal farming zone, coupled with the recent reduction in rainfall has dragged per capita production down to an all-time low. Lacking technical skill and capital, these farmers are unable to combat climatic obstacles nor raise the productivity of their land more than marginally.

In addition to climatic constraints the supply of food crops, harvested at one season of each year, may vary greatly according to the farmers' expectations of prices, storage problems, crop pests and disease (as witnessed during the 1975-76 harvest), or the need for cash. Nevertheless, given the present traditional patterns of cultivation and lack of technical innovation, weather continues to be the principal handicap to improved production and alternative use of labor. Combined with inefficient methods of production and population growth, drought has contributed to an increase in cultivation of less fertile, marginal plots and subsequent drops in yield per hectare.

Niger has traditionally been a subsistence producer of sufficient grains in normal climatic years to supply its basic internal needs. As such, a negative disruption in the environmental factors effecting yields produces deficits whereas a year of beneficent factors produces surpluses.

In the past decade, there has been a clear trend to declining soil fertility as available farm land has been increasingly put under cultivation and a smaller proportion of land has been kept in fallow. There was also, until recent drought years, a trend to increasing acreages and production of cash crops--peanuts and cotton, to the detriment of cereal plantings, and this in some of the best farm lands (in Zinder and Maradi departments especially). The food problems are aggravated by the difficulties and costs of transporting cereals and of storing them.

An attempt to project area under cultivation, production and consumption has been made for the next three years (see Graph B). However, these projections ^{assume} "normal" environmental conditions throughout all sections of the country. As these conditions cannot be predicted, the annual production generally cannot be determined with sufficient certainty to determine assistance requirements until close to end of the growing season. Given the present state of agriculture in Niger these harvests will be variable and unpredictable from year to year.

The major features of the system of production are uncertainty of crop production and variation in yield from year to year. Graph C shows that, although the yield per hectare of millet, sorghum and cowpeas has increased sporadically, the over-all per capita production has considerably deteriorated since the 1960-61 harvest (for millet and sorghum a decrease from 310 kgs/capita to 240 kgs/capita in 1975).

Commercial food imports can be expected to have only marginal effect on the future over-all availability of food for consumption. In 1973 the last for which data is available, total commercial food imports of whole cereals milk products and milled grain totaled approximately 33,000 tons. This total cannot be expected to increase substantially to the benefit of the average Nigerien consumer given the quantum jump in transport costs over the past three years. In the same year, 1973, 33,000 MT exports (primarily cattle on the hoof) totaled 67,000 MT, more than offsetting the commercial food imports.

The Government has placed very high priority on increasing food production. The main reliance is on increasing cereal production and production of cowpeas in rainfed agriculture. The approach is via introduction of modern and intensive food production techniques through regional productivity programs. Such programs are in process in Zinder (FED) in Badeguichiri in Tahoua (FED), and about to get underway in Dosso (FAC) and in Maradi (IBRD). The Niamey Productivity Program should start in FY 77 with USAID help. These programs are supported by the National Cereals Program (USAID) and the National Plant Protection Program (CIDA). They will also be supported by the regional agrometeorological program. One should note that the regional productivity programs are also meant to insure that food production is not sacrificed to cash-crop production in particular areas. Expectations are that these efforts should increase average annual food production sufficiently to cover the needs of the population within five years.

The GON also hopes to develop irrigation as a means of guaranteeing a minimum food production in years of poor rainfall patterns. The current effort is to develop about 1,000 hectares of irrigated land per year. Irrigation resources should be developed but cannot hope to replace primary reliance on dryland farming which now provides employment (such as it is) for 95% of the sedentary population.

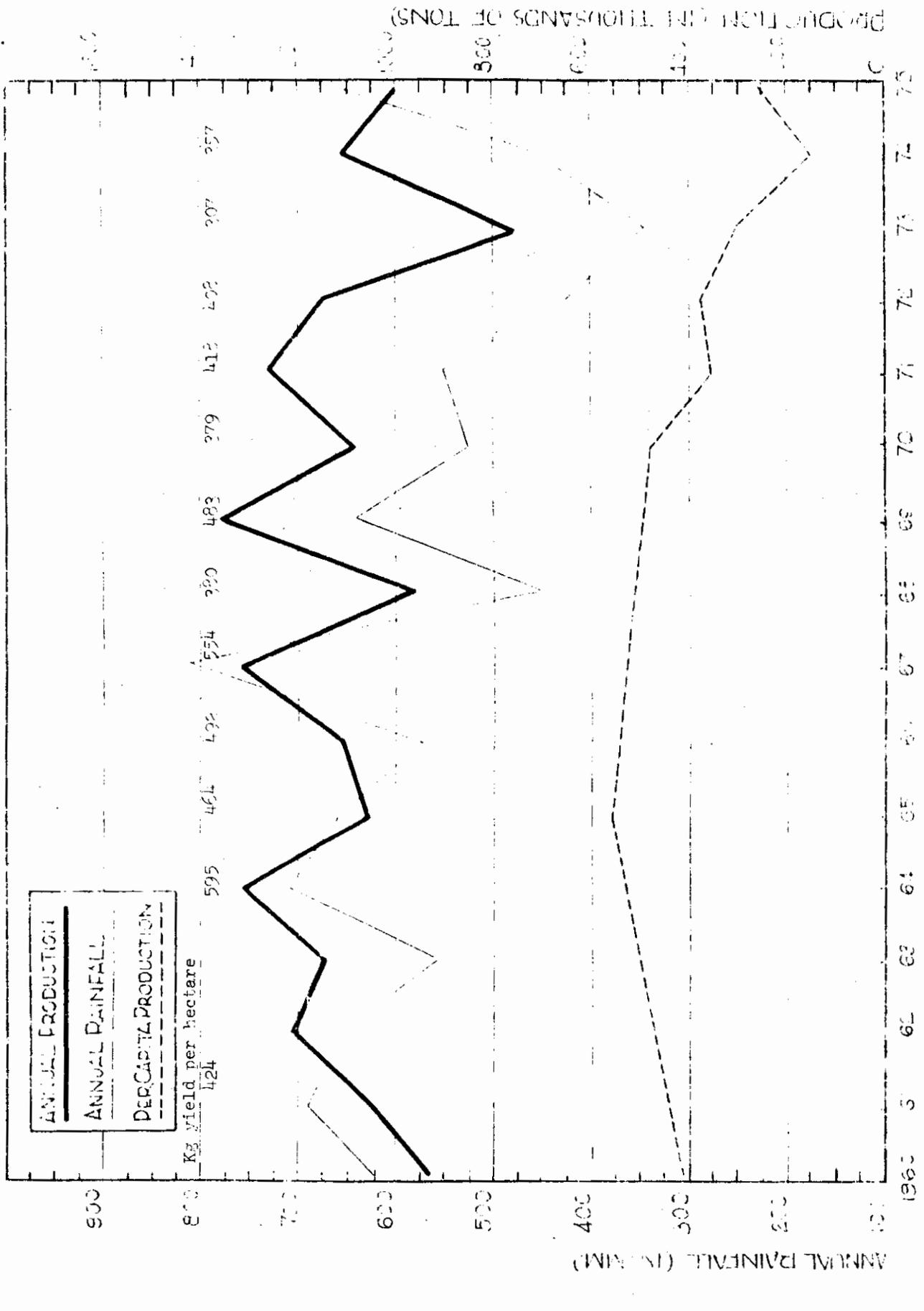
The introduction of improved seeds, cultural practices, plant protection, etc., are not expected to play a significant role in increasing food production over the next several years.

The conclusions of our present assessment are that, given projected levels of production of millet and sorghum combined with rice, manioc and other assorted crop production, and given normal rainfall patterns and barring unusual disease/insect/rat attacks on crops, Niger can produce sufficient food to maintain a subsistence living standard for its populace. This conclusion is subject to severe distortion if quantities and patterns of rainfall are inadequate.

The projections and conclusions presented by this paper do not discuss the requirement or justification for a buffer or reserve stock.

Should food imports be required after the 1976 harvest, it is our opinion that Food-for-Work and child nutrition programs, while valuable programs in and of themselves and should be used where appropriate, can only play a limited role in meeting relief requirements of the magnitude experienced by Niger over the past several years. For example: 1,000 metric tons of grains would be sufficient to feed approximately 5,000 workers for one year. While this is a small amount of grain, in relation to past requirements, it would constitute a very large FFW program in terms of the administrative capabilities of the GON. Therefore, only a minor amount of grain can be absorbed by Niger through FFW activities. Secondly, while Child Nutrition programs are commendable, and should be encouraged it is doubtful if they would actually decrease the amount of grain distributed per family during a year of relief requirements. Since grains are distributed on a basis of family members it would be almost impossible administratively to keep records on each child receiving assistance through special programs for purposes of making reductions in the amount of distribution to the family group. It is thus likely that special programs, in years of relief requirements, would actually increase the amounts of donor contributions.

MILLET AND SORGHUM PRODUCTION FOR NIGER-1960-75



GRAPH B

NIGER

PRODUCTION OF SORGHUM & MILLET

<u>Year</u>	<u>Area</u> (000 ha)	<u>Production</u> (000 MT)	<u>Yield/ha</u> (kg/ha)	<u>Population</u> (000)	<u>Consumption</u> (000 MT)
1964	2230	1328	595		
1965	2275	1055	464		
1966	2273	1119	492		
1967	2421	1342	554		
1968	2491	948	380		
1969	2867	1384	483		
1970	2903	1101	379		
1971	2935	1226	418		
1972	2761	1126	408		
1973	2456	753	307		
1974	2772	1100	394		
1975	2800	1000	357	4600	1150
Estimates					
1976	2850	1140	400	4712	1178
1977	2900	1160	400	4829	1201
1978	2900	1232	425	4949	1237

- NOTES: 1. Population projections are made on the basis of an annual growth rate of 2.5%.
2. Consumption figures use a per capita requirement of 250 kgs. This is a conservative estimate of total utilization, including consumption, average 15% loss at harvest and during storage, seed requirement and farm animal feeding estimated at 22 kgs/farm.

PRODUCTION OF IMPORTANT FOOD CROPS IN NIGER 1960-75

Year	Wheat		Sorghum		Millet		Rice		Cotton		Soybeans	
	Production (Metric Tons)	Area (Hectares)										
1960	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1961	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1962	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1963	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1964	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1965	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1966	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1967	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1968	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1969	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1970	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1971	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1972	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1973	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1974	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14
1975	2,025	71	401	34	1,151	11	74	14	1,151	11	74	14

* Source: Population Figures - Bureau des Services de la Statistique, Niger
 Production Figures - FAO, Head, and
 The Ministry of Rural Development

- 23 -
June 22 1976

Mr. Dave Shear
Director
AFR/EFWA
AID/Washington

Dear Dave:

We are submitting two PID's--Ag Statistics and Research/INRAN and Peanut Seed Processing and Storage--for FY 78 funding. Our thought is that there may be alternative sources of funding (other than through the new project route) for each.

a. INRAN. This PID grows out of the investigations that the Carl Eicher team did here and in fact, the PID was completed by Carl. Given our involvement with INRAN under Niger Cereals, we should consider including the proposal within the cadre of the Niger Cereals project. We would want it managed in our office by the NCP project manager.

b. Peanut Seed Processing and Storage. This PID reflects a GOM request for this assistance. Again we might consider integrating this proposal into the NCP and make maximum use of the storage/processing facilities being provided under the NCP, some of which are located in peanut country. A second alternative is to propose it for financing under the 1977 AIP program.

However we go on each, we would appreciate the opportunity of having the project concepts put into the PID approval process.

Yours very truly,

Albert R. Baron
Regional Development Officer

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT (FACE SHEET)

PIO

3 COUNTRY ENTITY
Niger

4 DOCUMENT REVISION NUMBER

5 PROJECT NUMBER (7 digits)
683-0205

6 BUREAU/OFFICE
A Symbol AFR B Code 06

7 PROJECT TITLE (maximum 40 characters)
INRAN/Applied Research & Statistics

8. PROPOSED NEXT DOCUMENT
A. 2 - PRP
3 - PP
B DATE 11/76

10. ESTIMATED COSTS
(\$000 or equivalent, \$1 = 2625)

FUNDING SOURCE	Life of Project
a. AID Appropriated 2625	4 yrs.
b. OTHER 1	
US 2	
c. Host Country	
d. Other Donor(s)	
TOTAL	2625

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
a. INITIAL FY 78 b. FINAL FY 82

II. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE		E. FIRST FY 78		LIFE OF PROJECT	
		C Grant	D Loan	F Grant	G Loan	H. Grant	I. Loan
(1) SD	281B	080		1065		2625	
(2)							
(3)							
(4)							
TOTAL				1065		2625	

12 SECONDARY TECHNICAL CODES (maximum six codes of three positions each)
312 052

13. SPECIAL CONCERNS CODES (maximum six codes of four positions each)
R/AG BR xii RDEV

14 SECONDARY PURPOSE CODE

15. PROJECT GOAL (maximum 240 characters)
To assist the Government of Niger to develop its capacity to conduct policy-relevant applied research - primarily in the areas of agricultural production and marketing - and its capacity to collect useful recurrent ag statistics.

16. PROJECT PURPOSE (maximum 480 characters)
Develop the applied research and operational capabilities of the rural economy division of Niger's INRAN and maintain advisory/collaborative liaison with the Niger Agricultural Statistics Office.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)
3 man design team to prepare PRP - 1 man month, approx. \$10,000.
3 man design team to prepare PP - 1 man month, approx. \$10,000.

18. ORIGINATING OFFICE CLEARANCE
Signature: Albert M. Baron
Title: _____ Date Signed: _____

19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution

Project Identification Document - Niger

INRAN/Rural Economy Applied Research and Statistics Program

I. Summary of the Problem to be Assessed and Proposed Response to the Problem

A. The Problem

Niger, an overwhelmingly agricultural economy, must marshal its scarce trained manpower and foreign assistances in order to increase the productivity of the rural sector as a necessary first step in the development process. A major problem is the lack of current Nigerien capacity to conduct policy-relevant, reasonably short-term applied research studies and evaluation of on-going and proposed programs. This situation is further complicated by the absence of reliable recurrent agricultural and rural statistics which can be used to monitor, plan, and evaluate national and departmental development programs.

The importance of a relevant, responsive applied research capability is tied to the need to build institutions which are appropriate to the environment and resources of Niger. Such institutions must make maximum use of scarce capital and human resources. For example, the small but growing cadre of university trained Nigeriens should be provided institutional opportunities to work on the pressing rural development problems of the country.

Planners must know whether various agricultural production packages, judged to be technically sound, are economically and socially sound. A country which has made a commitment to some degree of market intervention in food and cash crops must have some basic data on the composition and performance of market channels and the response of farmers to alternate price policies. Applied field research can serve as one of the key integrating links between current farm practice and national development policies aimed at promoting improved practices. Many of these linkages can only be articulated once there is some systematic understanding of the current situation; practical base line studies can be the source of this knowledge. For instance, the introduction of new grain production technology is greatly facilitated through an understanding of the costs and returns of traditional production systems.

B. The Response

The Niger Government is aware of its need to be able to provide policy makers with relevant information for evaluation and planning and it has begun to take

the first steps to fill this need. In 1975 INRAN, the National Institute of Nigerien Agricultural Research, was set up to create a national applied research facility responsive to national needs. It has replaced the former French agronomic research facility, a branch of IRAT, and added additional components to it.

One proposed division or cell in the new INRAN structure is Rural Economy. This project is focuses primarily on providing assistance to INRAN to help in the establishment of this division, its initial program of applied research work, its staffing, training and operational capacity. This would be done in the following manner:

1. Three full-time technical assistance positions would be filled in the Rural Economy cell over an initial five year period. These specialists would be experienced researchers in production economics, agricultural marketing and agricultural statistics although, with rotation and replacement, these specializations could be complemented with a rural sociologist, livestock/range management specialist, etc. These full-time personnel would be supplemented by four to six man-months of short-term consulting time per year from the US contractor. The US contractor would also supply three more junior level field researchers who would be located in major research areas such as departmental capitals in the grain belt of Niger. These more junior personnel might initially be recruited in the US to be replaced with US trained Nigeriens funded through complementary programs.

2. These personnel will be charged with the developement of an initial applied research program in consultation with the Director of INRAN and other Nigerien counterparts in as well as with officials of AID and other donor agencies active in the country.

3. Major emphasis would be placed on the identification and training of Nigerien counterparts for all aspects of the planning and execution of the applied research program of the rural economy cell. Particular attention must be given to collaboration with and providing guidance to young Nigerien researchers and technicians who are currently undergoing university or other training programs. Their functional integration into INRAN will be a major program output.

4. Commodity assistance will be provided to INRAN in terms of office and research equipment, vehicles, etc. It is assumed that the GON will support most construction costs, certain operational costs and at least a substantial proportional of all local salaries envisioned to be an eventual part of the institution.

5. A major program element will be the design and implementation of basic micro-level production and marketing research most likely in conjunction with on-going GON/donor experimental or implementation programs. Major possibilities of collaboration exist with substantial AID-funded activities such as Niger Cereals and the Niamey Productivity Project. For this purpose a field research staff would be developed and supported by the project over its life-span. The field staff would initially concentrate on the collection of baseline information such as the costs and returns of traditional and improved production packages in major grain producing regions such as Maradi and Zinder. Micro-level marketing work on the channels for collection and transfer of export crops, such as cowpeas, need to be pursued while attempting to assess the strength of macro-level export demand and the "depth" of important market outlets such as those for cowpeas in Nigeria. The emphasis in these studies would be on quick "turn around time" consistent with minimal methodological soundness and policy application. A Government/INRAN/contractor research advisory group could provide appropriate institutional linkages and the selection of research topics.

6. Specific working linkages would be developed with the Agricultural Statistics Office to provide technical and methodological assistance, evaluation and planning services. Emphasis would be placed on integrating agricultural statistics and short-term applied research into an over-all system of rural development research, evaluation, planning and program implementation. For example, the recurrent statistics collection program should be able to benefit from methodological advances achieved in the course of related micro-level survey design and execution. It is, however, important to stress that INRAN's role should focus on policy analysis research and not on the nationwide collection per se of basic data on national accounts, prices, population etc.

7. Assistance will be given to the director of INRAN in the initiation of useful institutional activities such as a publication series, staff training and seminars, linkages with social science researchers in other parts of Africa and liaison with international research institutes and with US universities which are increasing their capacity to work in the Sahel.

C. Consideration

1. A major factor which must be carefully analyzed is the emerging structure and mission of INRAN. This needs to be elaborated and explored substantially in the future.

2. Part of this process is the identification of links to other national

institutions and field projects in Niger such as the University, UNCC, and GON ministries which will have an interest in collaboration with INRAN. A careful inventory of these "users" of INRAN research needs to be undertaken at an early date.

3. In order to develop Nigerien capacity as rapidly as possible it would be desirable that this proposed project be coordinated with a program for training 20 or so Nigerien rural social scientists over the life of the project. Steps should be taken early in 1977 to launch such a complementary overseas training program in order that some current government officers as well as current students can join the Rural Economy Program in 1978/79.

4. The above would hopefully be supplemented by INRAN/Rural Economy seminars and workshops on such topics as project appraisal and design and agriculture sector planning - as an integral part of the US contractor's program of work.

II. The precise definition of the budget below will depend heavily on the answers to some of the issues raised in Section IV. Of major concern will be the amount of research costs supported by action programs such as Niger Cereals, Niamey Productivity, and Niger Range and Livestock. Further, the nature of the collaboration with the Agricultural Statistics Program will have a significant impact on the proposed budget which follows.

III. Development of the Project

It is proposed that this project be developed according to the following approximate time table:

A. PRP: To be undertaken in a month in the fall of 1976 by a 3 man team at an estimated cost of \$10,000. This document would be submitted for AID/W review during winter and spring of 1977.

B. PP: To be completed in the summer or fall of 1977 at an estimated cost of \$15,000.

C. If possible the contract should be awarded in January of 1978 in order for the US contractor to have adequate time to recruit qualified personnel, to develop a detailed research plan in cooperation with INRAN staff and to install equipment, secure housing, etc.

IV. Issues

A. What role is INRAN to play in the evolving development strategy of

Niger? What links are there to other governmental institutions and actual field programs? The current "organigram" and available information on INRAN sheds very little light on these questions.

B. What other external assistance of a bilateral or multilateral nature is foreseen for INRAN and what coordinating relationships would there be with this proposed AID effort?

C. The funding of local personnel is an issue which must be resolved at an early point. If we wish to build a viable, independent institution the GON should be able to cover most recurrent costs. In a similar vein how much scarce human capital is the GON willing to allocate to this institution by releasing personnel from current responsibilities?

D. What type of data processing capability is necessary to conduct the type of research program which will make timely, relevant results quickly available to decision makers and planners? Can existing computer facilities be used on a time-sharing basis or would it make more sense to invest in the purchase of relatively small ("table top") model, recent generation computer for the Institute itself? Here again the relationship to other GON institutions is critical; if major data processing jobs such as census processing can be avoided then a small machine may be adequate to supplement an emphasis on substantial hand tabulation.

E. Would assistance to INRAN be better channeled through the existing mechanism of the Niger Cereals Production Project?

INRAN EXTRA ECONOMIC PROPOSED BUDGET
FY 78-82 (In \$U.S. 000)

	78	79	80	81	82	Total
Technical Assistants			255	255	255	1,305
Agricultural Economists/Statisticians	540 (7.2 mm)		45	45	45	225
Short Term Consultants	--		40	40	40	160
Inflation (= 7%/yr.)	530		340	360	390	1,710
Expatriates						
(Research Field Staff)						
Supervisors (6,000/yr.)	60 (10 mm)		30	30	30	150
Enumerators (3,000/yr.)	120 (40 mm)		60	60	60	300
Inflation	--		10	15	20	45
	180		100	105	110	495
Commodities						
6 vehicles @ 15,000	60	--	--	30	--	90
Office Equipment	100	--	--	--	--	100
Field Equipment	40	--	--	--	--	40
Training Equipment	20	--	--	--	--	20
Supplies	20	--	10	10	10	50
	240		10	40	10	300
Other Costs						
Data Processings	10		20	25	30	85
Publications	5		10	10	10	35
	15		30	35	40	120
TOTALS	1,065		490	540	540	2,635

Total costs for Technicians: Assistants (Travel, Fringe, institutional overhead, etc.) includes some provision for field staff expenses (overnight allowances, etc.) includes key punching, coding, programming, machine time, etc.

June 22, 1976

Mr. David Shear, Director
AFR/SFWA
Agency for International Development
Washington, D.C. 20523

SUBJECT: Peanut Seed Processing & Storage

Dear Dave:

You will recall that during our bilateral talks with Niger last April in Washington, Minister of Development Amou asked if it would be possible for AID to help Niger on its peanut seed problem. (This year Niger had to spend two billion CFA procuring some 10,000 tons of seed. The same problem occurred two years ago.) During that meeting, the United States delegation indicated we would be sympathetic to a request for assistance in this area, having very much in mind the importance of crop rotation schemes in peanut growing areas where the rotation would help solve the problem of soil fertility and fertilization for cereal growing.

Subsequently, the Minister of Rural Development Mr. Boulama Manga (also CILSS Coordinator) submitted to us the attached project proposal for peanut seed processing and storage. Our review suggests that the proposal appears feasible and should be pursued further. I note that Niger already has a peanut seed multiplication program in process, and that we are being asked to provide help for storage and processing - an area where U.S. has particular expertise. Jim Livingston informs me that our notion of moving toward rotation schemes with grain following peanuts is being built into the cereals program as an essential element of the demonstration program and that the peanut storage/processing component should be built into it too.

This brings me to my main point, which is that although we are submitting this as a separate PID, ADO/Niamay feels a better way of proceeding would be to amend our cereals PP and handle this as part of that program. This gets us into congressional notification, but we will have to notify Congress anyway of budget revisions needed in FY 77 to carry forward the project successfully. Incidentally, the same considerations apply to the PID we are submitting for agricultural economics in INRAN.

Sincerely,

Albert R. Baron
RDO/Niamay

attachment

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT IDENTIFICATION DOCUMENT FACESHEET <i>To Be Completed By Originating Office</i>	1 TRANSACTION CODE <input checked="" type="checkbox"/> A Add <input type="checkbox"/> C Change <input type="checkbox"/> D Delete	PID 2 DOCUMENT CODE 1
--	---	-----------------------------

3 COUNTRY ENTITY Niger - RDO/Hinney	4 DOCUMENT REVISION NUMBER <input type="checkbox"/>
5 PROJECT NUMBER (7 digits) 683-0206	6 BUREAU/OFFICE A Symbol AFR B Code <input type="checkbox"/> 06
7 PROJECT TITLE (maximum 40 characters) Peanut Seed Processing and Storage	

8 PROPOSED NEXT DOCUMENT A <input type="checkbox"/> 2 PRP B DATE 01 77 <input type="checkbox"/> 3 PP	10 ESTIMATED COSTS (\$000 or equivalent, \$1 =) FUNDING SOURCE Life of Project
---	--

9 ESTIMATED FY OF AUTHORIZATION/OBLIGATION A INITIAL FY 78 B FINAL FY 78	a AID Appropriated b OTHER U.S. 1 0.570 2 c Host Country d Other Donor(s) TOTAL 0.570
--	--

II PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A APPRO PRIATION	B PRIMARY PURPOSE CODE	PRIMARY TECH CODE		F FIRST FY 78		LIFE OF PROJECT	
		C Grant	D Loan	E Grant	G Loan	H Grant	I Loan
(1) FN	201B	010		0.570		0.570	
(2)							
(3)							
(4)							
TOTAL				0.570		0.570	

12 SECONDARY TECHNICAL CODES (maximum six codes of three positions each)
 076

13 SPECIAL CONCERNS CODES (maximum six codes of four positions each)
 HR RF

14 SECONDARY PURPOSE CODE

15 PROJECT GOAL (maximum 240 characters)
 Increase the income and productivity of Niger's small farmers through the introduction of new technology.

16 PROJECT PURPOSE (maximum 480 characters)
 Prevent loss of quantity and quality in peanut seeds and assure the delivery of quality-controlled peanut seeds to small farmers in Niger through the introduction of new processing and storage techniques including the use of controlled atmosphere warehouses.

17 PLANNING RESOURCE REQUIREMENTS (staff funds) (Contract) One technician with experience in peanut seed processing and storage - \$12,000. (Staff) Project Coordinator - \$10,000. Officer, Area Ag. Advisor - ADO/Hinney.

18 ORIGINATING OFFICE CLEARANCE
 Signature: *Collette M. Brown*
 Title: Regional Development Officer/Hinney
 Date Signed: _____

19 Date Document Prepared: _____
 Date Document Last Revised: _____

ADO/Niaméy
June 23, 1976

Peanut Seed Processing and Storage
Niger - PID

The Project.

To assist the Government of Niger and in particular the peanut producing areas of Niger with a program of handling, storage and quality control of peanut seeds. The PID represents a GON request for US assistance in the introduction of new processing and storage techniques including the use of controlled atmosphere warehouses to reduce the incidence of non-germinating peanut seeds through the prevention of spoilage and breakage.

Summary of the Problem

Generally, the southeastern region is considered to be Niger's major area of peanut production. Due to their economic value, peanuts and peanut products are one of Niger's more important export commodities. Presently, peanuts used for seed in Niger are stored unshelled during the dry season and are not shelled until just before planting. One reason for this is that with present technology the purity and quality can be best controlled through visual observation of the shell form. Also, when left in the open and untreated, the pods act as a natural barrier against parasites and infestation by fungi and bacteria. The problem arises with the arrival of the dry-season when temperatures may reach 45 degrees C. and the humidity drops to only 2-2.5%. The overall result is devastating to those peanuts in storage as such conditions cause rapid loss of germination and weakening of the seminal tegument which acts as a protective coating for the seed. With moisture content being so low the tendency for the peanut to crack and break increases.

The use of mechanical shelling devices during this state of dryness increases incidence of seed loss due to breaking, stripping and superficial wounds and the gauge sorter which later separates the seeds according to size and form may also cause damage to the dry seeds by stripping the seed coat thus increasing susceptibility to attack by bacteria and fungi as well as increasing even further rate of broken seed.

The overall result is a reduction in the quantity and quality of usable seed peanuts which further results in a lesser quantity and quality of the subsequent peanut harvest.

Summary of Response

The germination rate of peanuts remains stable if the seeds are stored in low temperature, controlled humidity warehouses where the moisture content of the seeds remain at approximately 8-10%. If the peanuts are shelled and sorted with the above moisture content, loss of peanuts due to breakage and damage during the mechanical processing is reduced. Once processed, the selected seed peanuts can be treated continually throughout the storage period with fungicide and/or insecticide without fear of breaking or stripping the seed coat.

Besides reduction of seed loss, the controlled atmosphere warehouses and related equipment would facilitate storage, provide long-term preservation void of parasites and improve the quality and quantity of available peanut seed. This technique has an additional economic benefit as the peanuts which are sorted out due to their small size or damaged condition are not treated with insecticide and thus can be processed for consumption.

In realizing the above described techniques of peanut seed processing and handling this project would provide two controlled atmosphere warehouses totalling 700 MT of storage space, shelling, handling and treating equipment, a small laboratory for research and control of peanut seed quality, and miscellaneous equipment and short-term technical assistance.

The budget proposal prepared by the GON for presentation to USAID/Niamey is outlined as follows:

Commodities:

1. Controlled Atmosphere Warehouses	\$297,872
2. Shelling and handling equipment	130,638
3. Laboratory	57,447
4. Vehicles	17,447
5. Small equipment and miscellaneous	42,553

Technical Assistance:

1. 2 M/M technical assistance	<u>21,276</u>
Total	\$567,233

Project Development

The United States is one of the two peanut producing countries (Australia

being the other) where seeds are shelled and stored in controlled atmosphere warehouses. It is proposed that a US technician experienced in the preparation, handling and storage of peanut seed under controlled atmosphere condition be contracted for a one-month study and consultation in Niger during September or October 1976. Given the results of his feasibility study and the relative simplicity of this proposal a PRP could easily be prepared by existing ADO/Niamey staff, with possible assistance from REDSO, for submission to AID/W by January 1977. The results of his consultancy would also assist ADO/Niamey in determining if the proposal would be more amenable for inclusion as an amendment to the Niger National Cereals Program or as a separate AIP activity as indicated in the issues section below). If approved for inclusion in the ADO/Niamey's FY-78 program, a PP would be written in May/June 1977 and a Project Agreement signed with the GON at the beginning of FY-78.

Issues:

1. Is the technology developed for temperate climates in fact adaptable to the climatic conditions of Niger?
2. What will be the total impact of this activity, i.e., will all of the peanut producing areas throughout the country have access to the quality-controlled seeds?
3. Are the economies and efficiencies of this project, as compared to present methods, as well as the overall benefits to be realized by the peanut industry and export trade in Niger of sufficient magnitude to justify this expenditure?
4. Will the GON, through SONARA, be able to provide sufficient technical personnel to ensure adequate maintenance and operation of the system?
5. Would the project be amenable to inclusion within the Niger National Cereals Program thereby taking advantage of existing technical inputs and projected seed handling machinery? Under the same rationale, and assuming a concomitant reduction in budget requirements, would utilization of the AIP mechanism be more appropriate?

Annex:

GON request "Conservation de Sciences d'Arachides en Magasins Refrigeres."

REQUETE A L'UE-AID

CONSERVATION DE SEMENCES D'ARACHIDE EN MARIASINS REFRIGERES

I JUSTIFICATION DE L'OPERATION

I - 1 INTRODUCTION

Jusqu'à ce jour toutes les semences d'arachides utilisées au Niger ont été conservées en coque durant la saison sèche, le décorticage n'intervenant que peu de temps avant le semis et étant généralement exécuté à la main par le cultivateur lui-même.

Une série de raisons plus ou moins impératives conduisent à retenir ce mode de conservation dans la majorité des cas :

1) C'est seulement sur la forme des gousses que peut s'exercer le contrôle de pureté variétale, il est donc nécessaire si l'on ne peut procéder immédiatement à celui-ci de conserver les stocks sous cette forme tant que l'on^{n'}est pas sûr de leur qualité ;

2) Le stockage sous forme coque, bien qu'entraînant une masse à manipuler plus importante, voit cet inconvénient largement compensé par la rusticité de tels stockages (mise en vrac en tas extérieurs, traitement de surface avec des produits toxiques permettant une bonne protection, absence de fragilité des coques qui peuvent être réensachées sans perte, etc...) ;

3) Les coques présentent une barrière naturelle à l'attaque des parasites et assurent ainsi une conservation efficace à la graine qui ne subit pas de surcroît l'agression des autres éléments extérieurs tels que variation de température et d'humidité, infestation fongique ou bactérienne entraînant l'accélération du processus enzymatique de la décomposition des constituants essentiels des cotylédons.

4) Sous le climat soudano-Sahélien le stockage en graines nu en avril-mai se trouvent portées à des températures élevées (38 à 45°) et à un degré de dessiccation extrêmement important (2-2,5° d'humidité) ^{une perte} provoque/rapide de la valeur germinative des semences et une fragilité de leur tégument séminal entraînant un dépelliculage. Les graines deviennent rapidement impropres à la semence ;

5) Le décortilage mécanique quel que soit le moment où il est pratiqué entraîne une perte importante de graines par brisure, dépelliculage ou blessures superficielles. En laissant au cultivateur le soin de pratiquer ce décortilage tardif à la main on évite les pertes d'un produit toujours très précieux en début de campagne;

6) La nécessité absolue de traiter directement les graines décortiquées en une seule fois pour assurer leur conservation en cours de stockage et leur protection à la germination, rend tout lot ainsi traité impropre à la consommation. Sa non utilisation au moment du semis entraîne une perte sèche puisque cette arachide ne pourra pas être employée même en huilerie. Au contraire, le stockage en coque permet à l'extrême une utilisation industrielle des amandes quelque soit le mode de traitement des gousses.

Remarque : Si importantes qu'elles paraissent, ces raisons n'ont pas empêché certains états producteurs d'envisager un stockage et une livraison des semences en décortiquées. La situation climatique et économique des États où sont pratiquées ces méthodes rend la chose possible et même parfois indispensable.

Il convient donc d'examiner à la lumière de ces expériences ce qu'il est transposable au Niger et qui justifierait éventuellement l'adoption progressive de telles techniques.

12. SOLUTION PRECONISEE

Les grands pays producteurs d'arachide qui conservent leur stock de semence sous forme décortiquée et dont les cultivateurs n'utilisent que ce type de produit sont presque exclusivement les U.S.A et l'Australie. Ces deux pays ne pratiquant le stockage de semence sous forme coques que très partiellement seulement.

.../...

Des expériences vont donc à entreprendre au Niger pour tenter de diminuer les pertes au décortiquage par brisure ou blessure, problèmes n'ayant jamais été abordés par les industriels qui livrent à l'huilerie ou à l'exportation.

Après décortiquage ou livraison en décortiqué les graines doivent être triées et calibrées comme cela se pratique pour l'arachide de consommation. Le travail se fait sur trieur calibreur suivi d'un "pickine" à la main sur bande transporteuse.

On éliminera en particulier :

- Les grosses graines qui proviennent d'une gousse ou d'une ovule avorté et qui présentent l'inconvénient par leur taille de boucher les alvéoles de semoir.

- Les graines ridées, malformées ou avariées (pourriture ou attaque d'insecte).

- Les graines brisées ou depelliculées.

On procédera ensuite au traitement qui selon le cas sera un traitement fongicide-insecticide ou si l'on veut réserver le stock pour une autre utilisation éventuelle un traitement insecticide seul (par fumigation)

Selon le processus retenu, il y a lieu de disposer d'un appareil de traitement continu qui brasse les graines sans les briser et les depelliculer. On peut pour des appareils à grande capacité utiliser des procédés très efficaces d'application tels que poudrage électrostatique ou atomisation de solutions huileuses dont l'avantage sur les procédés traditionnels est de consommer beaucoup moins de produit, d'obtenir une adhésivité bien supérieure des pesticides et de favoriser une répartition homogène et une couverture totale des graines.

Si l'on doit stocker sans traiter aux fongicides, le mieux est de mettre en sac, de constituer les pyramides, et pratiquer le plus rapidement possible une fumigation au bromure de méthyle à raison de 30 à 30 gr au m³ pendant 48 heures. La surface des sacs extérieurs sera régulièrement poudrée tous les 15 jours ou toutes les 3 semaines, en alternant les produits : Iardane à 2 % et Malathion à 2 % afin d'éviter

Les arachides après traitement seront placées dans un lieu aéré le plus frais possible et seront manipulées avec soin en évitant que les manoeuvres marchent sur les sacs et que les pyramides soient trop élevées.

Cette solution est un pis aller car sous cette forme et en climat sahélien les pertes à la germination ne manqueront pas d'atteindre 20 à 30 % en supposant que lors de la distribution le transport se fasse dans de bonnes conditions et que le cultivateur prenne un maximum de soin pour amener les graines au village puis sur le champ.

Ces pertes bien moins conséquentes en zone climatique plus tempérée, ont cependant amené les négociants à étudier un conditionnement particulier des semences décortiquées. Des études actuelles sont en cours pour déterminer le meilleur emballage qui permette à la fois un empilage suffisant et une manipulation efficace liée à un volume raisonnable de graine. Il semblerait que l'on se soit orienté vers le baril en carton plastifié de 25 à 35 livres (12 à 15 kg) déjà en usage dans le conditionnement des lessives et produits chimiques destinés à l'agriculture. Cet emballage permet le transport sans déformation du "container" donc sans brisure ni dépelliculage des graines et son poids restreint permet une manipulation aisée.

Il est opportun que dans une optique à long terme d'une agriculture plus évoluée des expériences de conditionnement de graines de semences sous cette forme aient réalisées avec stockage en magasin climatisé là ou la présence d'énergie électrique en permanence le permet

Remarque : 1) Cette idée a fait maintenant son chemin en Afrique de l'ouest puisque le Sénégal a passé commande, dans le cadre des aides extérieures, de 2 magasins réfrigérés, l'un d'une capacité de 200 tonnes avec possibilité d'obtention d'une température de conservation comprise entre 0 et 2°, et l'autre d'une capacité de 500 tonnes avec conservation à une température comprise entre 4 et 6°.

Ces installations ont le grand avantage de permettre le maintien d'un stock dans un parfait état de conservation, à l'abri des parasites et pour une longue durée.

Les graines non traitées aux insecticides mais triées et calibrées peuvent en cas de non utilisation comme semences être livrées à la consommation sur le marché de l'arachide de bouche à la période la plus ~~plus~~ favorable. On peut même envisager pour ce qui est du stockage à la plus basse température un report d'une année sur l'autre, ce qui solutionne le problème des réserves de semences.

Comme il s'agit là de techniques très nouvelles, qui ont fait seulement pour la première fois en 1974 leur apparition en Afrique, il convient de suivre de très près l'évolution des produits et de mettre progressivement au point les différentes méthodes de traitements, de conservation, et de conditionnement. C'est dans cette optique que le Sénégal conserve pour l'instant dans le cadre de son service semencier national 4 Conseillers Techniques de l'I.R.H.O. pour la partie arachide.

2) Les résultats préliminaires obtenus avec ces techniques au Niger sont très encourageants puisque des essais en cours à Maradi réalisés avec des moyens de fortune (frigorifère...) permettent déjà de mesurer l'efficacité de ce mode de conservation sur les produits pourtant médiocres récoltés en 1973.

X X X

Il ne fait aucun doute que l'utilisation de bonnes techniques de conservation allant du système le plus simple de magasin pourvu de chambre de fumigation au système le plus complexe avec réfrigération sont de nature à modifier complètement le problème des semences au Niger et permettront de contrôler de façon plus rationnelle la production tant en qualité qu'en quantité.

*

x x

II ASPECT FINANCIER

II - 1 MAGASINS REFRIGERES

II - 1 - 1 Investissements

Ils concernent le stockage réfrigéré de 700 tonnes de
semence en 2 magasins :

- un de 200 tonnes à 0 - 2° permettant un stockage de longue
durée ;
- un de 500 tonnes à 4 - 6° permettant le stockage de
moyenne durée.

Ces deux magasins correspondent à une capacité de 1.400 m³
ils sont estimés à 70.000.000 de F.CFA.

II - 2 MATERIEL POUR DECORTICAGE, MANUTENTIONS TRAITEMENTS

1 unité de décorticage, triage, calibrage d'une capacité à
l'entrée de 3 T/heure de

coque.....	13.000.000
1 chambre double fumigation	7.000.000
8 tarares à moteurs.....	8.000.000
Chargement, manutention, pesage (sauterelles, bascules)	1.100.000
Pulvérisateurs et pondreuses.....	<u>1.600.000</u>
	30.700.000

II - 3 LABORATOIRE MAGASIN

1 bâtiment laboratoire - magasin avec équipement et ma-
tériel de contrôle..... 13.500.000

II - 4 VEHICULES

1 véhicule de liaison chef de centre..... 1.600.000
1 camion 5 T..... 2.500.000

II - S O U R C E S O F F U N D S

Production of dairy products 10,000,000

Residual total

2

Margin on sales of products 70,300,000

Value added 30,700,000

Labour cost 13,500,000

Value added 4,100,000

Interest on loans 20,000,000

118,300,000

Manufacture of products 100,000,000

Manufacture of products 2,300,000

102,300,000

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT IDENTIFICATION DOCUMENT FACESHEET <i>To Be Completed By Originating Office</i>	1 TRANSACTION CODE <input checked="" type="checkbox"/> A - Add <input type="checkbox"/> C - Change <input type="checkbox"/> D - Delete	PID 2 DOCUMENT CODE 1
--	---	-----------------------------

3 COUNTRY ENTITY Niger	4 DOCUMENT REVISION NUMBER <input type="checkbox"/>
5 PROJECT NUMBER (7 digits) 683-0207	6 BUREAU/OFFICE A Symbol: AFR, B Code: 06
7 PROJECT TITLE (maximum 40 characters) Niger Gaya Bridge & River Port Facility	

8. PROPOSED NEXT DOCUMENT A. <input checked="" type="checkbox"/> 2 - PRP <input type="checkbox"/> 3 - PP	B DATE MM YY 10 76	10. ESTIMATED COSTS (\$000 or equivalent, \$1 = 11000)
--	--------------------------	---

FUNDING SOURCE		Life of Project
a. AID Appropriated	11000	3 yrs.
b. OTHER U.S.	1. 2.	
c. Host Country		
d. Other Donor(s)		
TOTAL		11000

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY 78 b. FINAL FY 78

II PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPRO PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE		E FIRST FY 78		LIFE OF PROJECT	
		C Grant	D Loan	F Grant	G Loan	H Grant	I Loan
(1) SD	700B	823		11000		11000	
(2)							
(3)							
(4)							
TOTAL				11000		11000	

12 SECONDARY TECHNICAL CODES (maximum six codes of three positions each) 140

13 SPECIAL CONCERNS CODES (maximum six codes of four positions each) BR BU	14. SECONDARY PURPOSE CODE
---	----------------------------

15 PROJECT GOAL (maximum 240 characters) Reduce high costs of transportation for Niger goods and services.

16 PROJECT PURPOSE (maximum 480 characters) Help develop inexpensive river transportation from Niger to the sea by the construction of river port facilities and the elevation of the Gaya bridge.

17 PLANNING RESOURCE REQUIREMENTS (staff/funds) A civil engineer and economist for three weeks each to prepare the PRP and a design officer, engineer and economist for four weeks each to prepare the present the PP. \$15,000 for the PRP; \$21,000, PP.

18 ORIGINATING OFFICE CLEARANCE Signature: Albert R. Baron Title: Regional Development Officer/Niamey Date Signed: MM DD YY 06 22 76	19 Date Document Received in AID/W, or for AID/W Documents, Date of Distribution MM DD YY
---	--

PID

NIGER GAYA BRIDGE AND RIVER PORT FACILITIES

I. **Project Goal** - To reduce high costs of transportation for Niger goods and services.

II. **Project Purpose** - To help develop inexpensive river transportation from Niger to the sea by the construction of river port facilities and the elevation of the Gaya bridge.

III. **Project Background and Summary** - A Canadian effort has been underway for the past four years to develop inexpensive barge transportation to and from Port Harcourt. CIDA is preparing to provide further assistance to expand the fleet of barges and pushers in the near future. AID under loan 625-N-003 also agreed circa 1972 to carry out studies for river port facilities and to finance costs of raising the Gaya bridge to permit barge passage upstream to Niamey and Tillabery. Loan implementation delays and doubts about the feasibility of river navigation in this decade led to a revision of the loan to cover only the engineering studies for the bridge elevation and the Gaya port. The Sanders and Thomas consultants engineering studies, now virtually completed, provide cost data for the required facilities and the bridge and provides data that a large volume of traffic upstream and down at inexpensive rates can be projected. This PID proposes that the AID associate itself with a review of the feasibility of river navigation with CIDA which has been planned for this fall, September/October 1976, to determine more clearly what are prospects for river navigation. Based on this review, which will be buttressed by an economic analysis scheduled by ADO/Niamey in July/August, the issues of the feasibility of river navigation should be settled. The PID proposes preparation of the PRP in October/November and the PP the following year. ADO/Niamey recognizes that this type of project would not normally be funded under regular AID allocations and is proposing the project for inclusion in the Congressional:

a. Given our expectation of substantial resource flows into the Sahel for long term development and the desirability of building up on the shelf ready-to-finance worthwhile fundable projects with major impact on long range development potential.

b. Given the view that if in fact the project proposed can contribute to open the Niger River to traffic to and from the sea, the economic impact on agricultural and food production possibilities and rural development is such that the project would warrant funding from regularly appropriated US development assistance.

IV. Problem to be Addressed

1. Niger's development is hampered by high costs of transport, both internal and to the sea and as a landlocked country, Niger's nearest port is 1038 kms from the capital. Currently it costs about 22,000 CFA (about \$100)* to move a ton of food or other goods from Cotonou to Niamey. These transport costs raise the local costs of POL, vehicles, spare parts, farm equipment and other farm production requisites to very high levels in Niger. The high cost of imported goods also works to raise the cost of internal transportation which currently ranges from 8.6 CFA per ton/kilometer on the Niamey-Zinder route to 15 CFA per ton-km on the Zinder-Agades route. [6 to 10.5 cents per ton-mile.] Most of the electrical power in Niger is generated in thermal stations, using the imported POL and imported equipment. As a result, electricity prices in Niger are also very high, close to 20¢ per kWh, and this also works to increase costs and inhibit development of local production, including small and medium-sized industry and irrigation. The high costs of moving freight to the sea also works against the development of exports, which, in the agricultural field, presently include peanuts and cowpeas, livestock and meat.

2. From a political as well as an economic point of view, the Niger Government attaches high priority to the development of alternate access to the sea. Traditionally, access has been via the Maradi/Zinder-Kano-Nigeria port and via the Niamey/Dosso-Gaya-Parakou-Cotonou port routes. Currently Niger is also working to develop the Niamey-Upper Volta-Lome port and the trans-saharan Algiers-Arlit-Agades-Tahoua/Zinder routes.

3. Niger has also attached high priority to development of Niger River freight traffic to the sea. With the construction in the 1960's of the Kainji lock and dam and the Awuru lock in the middle reaches of the river in Nigeria, the rapids which had prevented navigation were submerged or circumvented. The Canadians have demonstrated the technical feasibility of barge traffic during a seven month period annually to Port Harcourt. As noted in AID original loan paper, while the distance is long some 1710 kms from Niamey, the relatively low capital investment and low km-ton costs anticipated for river freight traffic make this an attractive mode of transport for many products. In fact, freight costs via the river are expected to be less than one-half of those via Cotonou. If so, and the economics have to be sorted out, the costs of moving a ton of goods into the country from the sea (and to the sea from Niger) would be reduced from a present minimum of about \$100 to under \$50. Sanders and Thomas provide some confirmation of large freight cost savings in estimating (p. 3-39, Ref D) savings on imported POL alone at \$1.3 million per year in 1975 prices. The economic impact of greatly reduced costs of transportation of imported bulk goods, and for bulk exports, would be very substantial.

*Including freight forwarding charges.

4. The development of this navigation is expected to require the construction of port facilities at Gays and at Niamey, and the elevation of the bridge at Gays which, constructed in 1938, now prevents the passage of barge traffic up-river towards Niamey and Tillabery.

5. The problem to which this activity is directed therefore is the provision of essential port facilities and the elevation or reconstruction of the Gays-Malanville bridge to permit increased river freight traffic from Niamey and Gays to Nigeria and to the sea.

6. It should be noted that the June 1-4 meeting of the Niger River Commission, attended by Nigeria, Niger, Upper Volta, Ivory Coast, Cameroon and Mali confirmed the determination of the participating countries of the Commission to "improve and develop water transportation, considering that

a. Water transportation is by far the most economic amongst other means.

b. The River Niger can contribute to a great extent in the promotion of trade between the various states of the region.

c. The river is an important outlet for landlocked countries like Mali and Niger.

d. An important high-tide is expected to develop beyond 1985. It is of vital importance to make sure that the over-all cost of transportation within the sub-region is reduced as far as possible."

V. The Response

1. The Niger Government established in 1972 a National Company for River and Maritime Commerce (Société Nationale des Transports Fluviaux et Maritimes). This company has been operating three barges and a pusher provided by the Canadian aid program, and has demonstrated feasibility in conducting commercial barge traffic to the sea in each of the past three years, despite the Sahel drought which reduced water levels in the Niger to a historic recorded low in July 1974. However, the company has been losing money.

2. During this first phase, 1500 cubic meters of rock were removed from the river between Niamey and Dale and preliminary understandings were reached with Nigeria for the placement of navigational aids, for the use of locks, for custom clearances and for standardized system of fees for water transport.

3. The Canadian Government agreed recently, in bilateral talks with Niger in April 1976, to proceed with Phase II of the river navigation program, namely to increase the SNTM fleet to 12 barges and

to 3 pushers. This is subject to a further navigational feasibility study to be carried out in 1976/77 covering issues including those noted in the next section of this document.

4. In January 1973 a loan agreement was signed by Niger and AID providing funds for studies of port facilities at Gaya and for elevating or otherwise modifying the Gaya-Malanville bridge, and for the construction costs for raising the bridge. For various reasons implementation of this loan was delayed and because of doubts about the feasibility of river navigation now and doubts about the CIBA position, AID decided to deobligate the loan. During Mr. Parker's visit to Niger in 1974 President Koumtche and other top GON officials indicated to him the great importance they attached to the project. Mr. Parker agreed to review the situation. And in 1975 AID agreed to continue with the engineering design services under the loan and to deobligate the balance.

5. The engineering design services were contracted out to Sanders and Thomas in 1975. These studies include: (a) port facilities at Gaya (b) preliminary bridge design, (c) analysis of economic factors, including potential for barge traffic. The draft final report of Sanders and Thomas was submitted to the Niger Government in February 1976.

6. During 1975, the Niger Government also contracted with Sanders-Thomas, using its own funds for a parallel study of port facilities required for Niamey.

7. Sanders and Thomas estimates the current river barge fleet capacity (based on four round trips of three barges) at 7,200 tons down and 7 200 tons up. The projected barge capacity (4 round trips - 12 barges) is 28,800 tons down stream and the same back. The S-T economic analysis suggests that with the exception of cereals for emergency supplies, the main item of import by river barge would be petroleum. All POL to Niger is imported. Imports in 1974 amounted to about 100,000 tons and are projected to grow to over 200,000 tons (conservative estimate) by 1990. Sanders Thomas projects potential river barge transport of POL into Niger of up to 28,800 tons per year. In addition, it notes a potential for significant imports of sulfur (loose bulk for uranium mining), agricultural chemicals and wood for both firewood and construction.

8. Potential Niger exports by river according to Sanders-Thomas are currently mainly cowpeas, for which S-T projects a potential volume, in a range of 20,000 to 30,000 tons. Other potential exports which they cite as possibly providing significant tonnages are preserved meat, fish, agricultural products, and eventually phosphate ore.

9. The Sanders-Thomas report recommends operational port facilities at Gaya including a wharf, apron next to the wharf to permit vehicles to approach the barges for loading/unloading, covered storage, open storage, petroleum storage, cargo handling equipment, port administration, police and customs buildings, maintenance shop utilities. The cost of these port facilities are estimated at about \$4 million. The Sanders-Thomas study of port facilities needs for Niassy is not yet in hand.

10. The cost of elevating the bridge to permit passage of barges is estimated by Sanders-Thomas at 1.08 billion CFA (\$4.5 million), assuming construction will start in 1978.

11. The response proposed in this preliminary project proposal (PID) is (following the necessary feasibility reviews) financial and technical assistance in 1978 to help the Niger Government construct necessary port facilities and modify the bridge to permit upriver barge traffic.

V. Issues (to be taken up and resolved in the PRP and PP)

1. Confirmation is needed that river navigation really is technically feasible. Doubts persist in various quarters as to the technical feasibility of barge traffic through the rapids upriver from Kainji dam.* Doubts also exist in the same quarters about the availability of sufficient water in Kainji dam to permit Nigerian authorities to provide sufficient water to allow operation of the Kainji locks, considering alternative requirements for water for irrigation and hydroelectric power. The construction of a new dam on the Niger in Nigeria at Jebba is planned, and its impact on river navigation feasibility also needs to be taken into account.

a. The dam will submerge the rapids at Bajiko and eliminate or reduce dependence of barge traffic on releases of large quantities of water from Kainji;

b. The dam should also decrease the time required for passage in the reach between the Kainji locks and Jebba, and decrease the size of the tugs required to navigate the Bajiko rapids.

* For example, the 19 May 1976 issue of the "Bulletin de l'Afrique Noire (page 16894) notes the IBRD report on Problems of Transportation in the Sahel and comments: "Regular river service from Niassy to the sea has been undertaken but commercial exploitation of this route does not appear promising because of difficulties in exploitation, and the cost of passage at the Kainji locks as well as at the rapids which are located north of Kainji." In fairness to the GON's position it must be noted that those who raise doubts have not at the same time, adduced hard facts to support their position.

c. The impact of the dam's construction on river transport during the period of construction also needs to be taken into account--will the construction of this dam require a diversion dam and channel and will this channel be constructed so as to permit projected barge traffic from Niger? FAC is beginning studies of a large storage/regulatory dam upriver from Niamey at Kaïndaji. The question also needs to be examined: Would this dam have a positive impact on river transport, or would it decrease river flow during the navigation season (September-April)?

2. Additional analysis is required of the commercial feasibility of river navigation in the near and medium term. For example, is the import of petroleum by river barge really feasible, and if so what would be the effects on the future feasibility of the Cotonou-Gaya-Dosso-Niamey route, which must remain an important transport link for Niger to the sea? What about sulfur imports? Wood? Is there really a market for upwards to thirty thousand tons of cowpeas from Niger to Nigeria,* or to overseas markets? What are the medium and long term prospects for export of Park W phosphate ore?

3. More analysis is needed of the economic feasibility of river navigation in the near and medium term. What will be the total costs for navigation equipment and aids? What will be operating costs? What would a cash flow analysis based on 20/25 years operations of the SNIN--now operating at a loss--show? Are Sanders-Thomas projections of potential barge traffic capacity realistic? Should not the average cargo for barge of 600 tons be calculated at a higher figure, given the technical possibilities for increasing this figure (which is based on the log of the first round trip in 1972/73)? Similarly Sanders-Thomas calculate an average of four round trips a season. The possibility of reductions of transit time and an increase in the number of round trips per season per convoy needs to be taken into account.

4. Impact of River Navigation on Other Traffic Routes. The Niger and Benin Governments have proposed an extension of the Cotonou-Parakou RR to Dosso. While the World Bank, and many other donors, question seriously the economics of railroad transportation as opposed to road (and possible river) transport, the impact of such a RR extension, which is said to be under study by FAC (French aid) needs to be considered. If a RR were to be built to Dosso, the design of the bridge at Gaya-Malanville would need to take this into account.

*We are informed by the GON that a study of cowpea marketing is in preparation.

5. Sanders-Thomas propose as an engineering solution to raise the bridge rather than to use a drawbridge or turnbridge or similar solution. The PRP and PP should examine the question of such alternative modes of construction. *

6. The question of Nigerian agreement for setting standard fees for river traffic, and for marking the river needs clarification.

7. The question of the feasibility of two port facilities at Niamey and at Gaya needs to be reviewed during the PRP and PP stages.

8. The question of the limiting the project to a port in Niger just below the bridge should be examined.

VI. Proposed Budget and Time Schedule

1. The tentative budget is \$11 million, based on S-T's estimate of \$4.5 million for raising the bridge, and approximately \$6.5 million for port facilities at Niamey and at Gaya.

2. AID should propose a joint AID/CIDA evaluation of the various questions involved in moving forward with the CIDA project and this project. This study would be carried out in the fall of 1976 with the collaboration of the Niger Government.

3. The following implementation schedule is proposed:

Oct/Nov 1976	Preparation of PRP
Apr/May 1977	Preparation of PP
Sep/Oct 1977	Negotiation Pro Ag
Nov 1977	Sign Pro Ag
Nov 1981	Est. completion of project

4. Resources required for development of the project would be a civil engineer and economist for three weeks each to prepare the PRP and a design officer, an engineer and an economist for four weeks to prepare and present the PP.

*In fact S-T have examined these alternatives and report that the elevation solution appears most practical. AID engineers will need to review their analysis and findings.

VII. References

There is abundant background data, including:

- a. AID Loan Paper for the Malanville-Gaya Bridge/Port Loan, 1972.
- b. AID Loan Agreement 625-H-005, dated January 4, 1973.
- c. Action Memorandum for the Deputy Administrator concerning the extension of loan dates for Loan 625-H-005 dated July 9, 1975.
- d. Feasibility study for raising the bridge at Gaya and the construction of the port at Gaya, Draft Final Report, Sanders-Thomas, Inc., February 1976.
- e. Report prepared (in French) for the Bilateral Mixed Commission Meeting of Canada and Niger in April 1976 concerning Phase II of River Navigation, April 1976 (Commission Mixte Nigero-Canadienne, Section B. Projets en Planification - Daja Proposes à l'ACDI: 6. Navigation Fluvial Phase II).

ADO/Niamey
June 19, 1976

June 22, 1976

Mr. David Shear, Director
AFR/SFWA
Agency for International Development
Washington, D.C. 20523

SUBJECT: PID for Niger Rural Health Sector

Dear Dave:

During our bilateral talks last April in Washington, it was noted that Niger has a reasonable policy and program for delivering health care to the rural population, based in large part on use and continued training of village health volunteers with in-field supervision by MOH health personnel. It appeared, however, that Niger lacked sufficient resources to move this program forward adequately. We concluded at that time that the health sector warranted further attention, and that we should consider our FY 78 PID which would propose an analysis of the health sector in Niger and sector assistance.*

I am happy to note that our preliminary impressions have been borne out by further talks with Niger's planning and health authorities which have taken place with the visit of the PID design team of Drs. Poulsen, French and Public Health Advisor Mr. Montague. In a nutshell, the PID Health Team found that Niger has a well-founded strategy and plan for extending rural health services to the villages of the country which is strongly supported by WHO and follows closely the strategy for strengthening rural health delivery services which A.I.D. has been endorsing. In brief, Niger's strategy and plan appears to be one of the soundest among the African countries participating in the WHO/Brazzaville regional grouping.

Under these circumstances, the PID team has endorsed a proposal for health sector support. U.S. support would be provided to augment global resources available to the MOH to augment its effort to develop rural health services and reach a greater proportion of the villages of Niger effectively. Besides expanding considerably the capability of the GON to respond to the health needs of its rural poor, this project would,

*See the briefing paper for proposed new projects for FY78 funding dated 3/22/76.

**Niger's program is an outgrowth of a ten year perspective health plan carried out with WHO assistance in 1964/65 and financed by AID, and by the experience gained in the period 1965-75.

significantly, provide a framework by which Niger could gradually achieve a much needed coordinated program of donor support.

I would like to note that during the PID preparation, it became evident that the Niger DAP's health section was in need of substantial revision and updating. This is proposed to be done as part of the health sector analysis called for in the PRP design stage.

I would also note that Niger has expressed an interest in helping to strengthen its management capabilities in the health field. During the next year or two, it will call on the services of Dr. French and the regional Rural Health Delivery Services project. At the same time, we would expect during the design stage to formulate a management improvement budgeting/accounting and information system for MOH. We would also expect to adopt the system of annual review used for the Niger Cereals project in which once a year a high-level joint review would evaluate progress and problems in the preceding year and pass on the work plan and objectives for the following year.

The proposal contained in this PID have been discussed with the Minister of Health, Moussa Sala, with the Secretary-General of Health, Dr. Wright (a key figure), and with Dr. Sani Ouzarou, Director of Plans, MOD. All have strongly endorsed the proposal. I am confident that we have here a proposal which can contribute significantly to the delivery of health services for the rural poor of Niger in coming years, and make a lasting contribution to the effectiveness of the MOH.

Sincerely,

Albert R. Baron
RDO/Niamey

attachment: Niger Health PID

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT IDENTIFICATION DOCUMENT FACESHEET <i>To be Completed By Originating Office</i>	1 TRANSACTION CODE <input checked="" type="checkbox"/> A Add <input type="checkbox"/> C Change <input type="checkbox"/> D Delete	PID 2 DOCUMENT CODE 1
--	---	-----------------------------

3 COUNTRY ENTRY Niger	4 DOCUMENT REVISION NUMBER []
5 PROJECT NUMBER (7 digits) [683-0208]	6 BUREAU/OFFICE A Symbol AFR B Code [06]
7 PROJECT TITLE (maximum 40 characters) [Niger Rural Health]	

8 PROPOSED NEXT DOCUMENT 2 PRP A [2] 3 PP B DATE MM YY [1 1 7 6]	10. ESTIMATED COSTS (\$000 or equivalent, \$) [] FUNDING SOURCE a. AID Appropriated 12500 b. OTHER 1 U.S. 2 c. Host Country d. Other Donor(s) TOTAL 12500
--	--

9 ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY [7 8] b. FINAL FY [8 2]	
--	--

II PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A. APPRO PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE		E FIRST FY 78		LIFE OF PROJECT	
		C Grant	D Loan	F Grant	G Loan	H Grant	I Loan
(1) PH	530	510		2000		12500	
(2)							
(3)							
(4)							
		TOTAL					

12 SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

13 SPECIAL CONCERNS CODES (maximum six codes of four positions each) BR TNG	14 SECONDARY PURPOSE CODE
---	---------------------------

15 PROJECT GOAL (maximum 240 characters)
 [To provide basic health services to the population of Niger, particularly in rural areas.]

16 PROJECT PURPOSE (maximum 480 characters)
 [To help Niger implement its national health policy which emphasizes preventative services and to provide more effective donor support thereto.]

17 PLANNING RESOURCE REQUIREMENTS (staff/funds)
 2mm TDY services (2 public health advisors, 1 mm each) to do a health sector analysis, \$16,000; 1 mm TDY services to prepare a PRP, \$8,000.

18 ORIGINATING OFFICE CLEARANCE Signature <i>Albert M. Bann</i>	19 Date Document Received in AID/W or for AID/W Documents, Date of Distribution
--	---

PROJECT IDENTIFICATION DOCUMENT

Niger Rural Health Sector Support

Purpose: To assist the Government of Niger to carry out its national health plan which is aimed at providing minimum basic preventive and some curative services to its rural population (approximately 90 percent of population). A second purpose is to provide more effective and better coordinated donor support to carry out the Government's health plan. A major endorsement and involvement of the WHO as a facilitator and coordinator will assist in this aspect.

I. Problems to be Addressed

A. Disease incidence and case mortality are exceptionally high in Niger. The principal diseases in Niger are endemic to Africa particularly the Sahel-Sudan countries: malaria, measles, trachoma, infectious hepatitis, amoebic and bacillary dysentery, tuberculosis, venereal disease, intestinal parasites sickle cell anemia. Infant mortality is high. In rural Niger, rates range from 250 to 300 per 1 000 live births and out of 10 live births, only four live to be five years of age. Children under four comprise only 19.4 percent of the total population, yet 35 percent of all consultations in the health centers are for children in that bracket. Infant malnutrition is widespread particularly towards ages 8-10 months. Pregnancy is high risk. The virulence of some of these infectious diseases is accentuated by nutritional deficiency and the vicious cycle of infectious disease and malnutrition is pervasive.

B. Health resources, both financial and manpower, are very limited. Health management needs to be improved. Of the 94 doctors in Niger, 20 are Nigerians. Nigerian health personnel in other categories are even more limited: 5 pharmacists, 3 dentists, 50 midwives, 317 MBs and 563 nurses' aides. The total number of medical personnel serving a population of 4.6 million is inadequate.

Since coming into power in April 1974, the new government has increased the national health budget by about 75 percent from about 1.1 billion CFA (\$4.2 million) or 7.8 percent of its total budget in 1974. However even with this increase in the 1976 national budget of 1.7 billion CFA per year (\$7.6 million) the GOV is only able to meet a small fraction of health costs (medical supplies, transport, fuel (see DAP)) needed for its program of expanded basic health services to the rural populace. The major constraints in this sector have been identified as (1) lack of financial resources and (2) lack of health personnel, (3) inadequately trained and supervised personnel.

C. GON is well aware of these constraints and in response to these problems has created a health infrastructure system which relies heavily on paramedical and volunteer health personnel to augment its small cadre of health professionals for the delivery of basic health services to its rural populace (MNH Ten Year Prospects 1965-1974, WHO/AID financed) and subsequent quadrennial plans 1965-1968 and 1971-1974). The recently approved GON/MNH Triannual Health Plan 1973-1978 has endorsed as a response to these problems a strategy involving the increased expansion throughout the country of a low cost basic health services delivery system for the rural population based on preventive medicine, health education, environmental sanitation involving village level voluntary health workers and traditional health practitioners such as traditional birth attendants. This program focusses on the most vulnerable groups; pregnant and lactating mothers.

D. MNH realizes that to carry out its policy it has to strengthen the base of its health delivery system and to do such requires:

1. A permanent program of training retraining and regular control and supervision of health personnel on all levels;
2. the retraining or reorientation of existing health personnel towards public health, preventive medicine, health education maternal and child health including nutrition education;
3. Capability to maintain vehicles and medical equipment to enable health workers to function.

E. In order to carry out its policy GON/MNH needs to:

1. install a responsive management information and evaluation system capable of identifying management problems;
2. improve epidemiological surveillance;
3. improve health statistics.

With the above points as background, the key problem addressed in this proposal (PID) is the extension of basic health services to the rural population (about 85-90% population) through the expansion of village health teams--in about 5% of the country's 9,000 villages--and via the supporting services of rural dispensaries, arrondissement medical services and departmental mobile health teams.

II. Response

A. The new government which came to power in April 1974 recognized immediately that there was no way the introduction of a western system of health care and preventive medicine could be achieved in Niger. And this both because of the irreconcilable long-term constraint on the supply of doctors, registered nurses and other health professionals and because of the high cost of a western-type system.

B. The government concluded that in the interest of developing a system of health capable of meeting the most immediate health needs of its population--85-90% rural--the national health policy would henceforth 1) direct health activities to the rural populace; 2) continue the establishment and training of village level health teams 3) involve a firm commitment by all health personnel to health education and preventive medicine, 4) stress training and retraining and continuous supervision at all levels. In the 18 months since this policy was enunciated⁴ the Government has continued to adhere firmly to the strategy.

C. The Government has also taken steps in the last 18 months to 1) place all line responsibility in the hands of Nigerian nationals; 2) regroup all doctors to assignments in national and departmental level, including departmental level mobile teams; 3) restrict expatriate personnel to departmental level and national assignments and rely on nationals to run health facilities at the arrondissement and village level dispensaries (some exceptions, such as the use of FV's in MNAs, are made). With other donor support the Government has introduced the new public health oriented curriculum in its National School of Public Health in Niamey (nursing-midwifery school) and increased the numbers of school graduates. 4) Opened a second public health school in Zinder for training of certified nurses and assistant social aides; 5) begin the intensive implementation of a MNM-nutrition-health education program which according to recent GON statistics has already reached a substantial percentage of pregnant women in the population with some level of care. 6) establish a school of medical sciences (or public health) at the University of Niamey under the Ministry of Education. (The objectives of the school appear sound and attainable and are substantially different from the DAP description of the establishment of a "western type" medical school. The focus of the

⁴Policy enunciated in a decree issued by MNH, October 22, 1974.

school is on community medicine and emphasizes team training, field experience with local pathology and cooperation with traditional medical practitioners. The school is patterned on CUSS in the Cameroons. In its three year plan 1975-1978 the Government has proposed the establishment of a Family Health Center (Niamey) which will carry out population and demographic studies, institute sex education in secondary schools and hopefully provide for the establishment of a population division within the MOH and the basis for the development of a population policy. The Three Year Plan also notes the need for strengthening the over-all health management/planning system. The Ministry of Health has expressed its interest in discussing appropriate support for activities in this area under project 904-Strengthening Health Delivery Systems (SHDS). Indeed the SHDS project would be a highly appropriate mechanism for the provision of advisory services in health planning/management and provision of training. Such support would assist in strengthening the Government's capability in these fields before the implementation of programs to be proposed later on in this document and thus insure the Government to more effectively utilize health resources.

III. Proposal for AID Support to Niger's Health Sector

A. The Government's health policy and strategy are precisely those which WHO has been encouraging over the years and are in conformity with current AID policy and strategy.

B. Since the Niger Government's health sector strategy and plan appear to be soundly conceived in the only possible way to provide basic health care services to the population, and since resources available to the Government from its own sources and from other donors appear inadequate to cover the needs of funds, materials, equipment and training, this document proposes as a response to the problem a program of health sector support. In view of the Government's accomplishments made thus far under the plan and its firm adherence to its goals and realizing the need for simultaneous implementation and coordination of the different components of the plan, this PID proposes US bilateral sector support to the Government to assist in the implementation of the national health plan. It envisages that the agreement providing for this support would provide a framework for other donors, most particularly the WHO, to assist on a similar basis. A major objective is to achieve gradually a coordinated program of donor support for Niger's global health efforts.

The Mission believes the Government's health policy is sound and that it will ultimately succeed if continued support is given to the health field--with or without US support. However, meeting the Government's objectives is both more timely and likely to be realized more quickly with a coordinated sector support program.

(1) This support would be provided via an annual grant to cover partial local costs of the national program, and via annual provision of material and equipment and necessary technical assistance to support the program. The program proposed in this document would extend over a five-year period, CY 1978-1982. It would support the national effort to extend basic health services from something like 5% to around 25% to the villages of the country and to strengthen the departmental mobile health teams, arrondissement health center services, and rural dispensaries.

C. The justification for choosing a program of health sector support rather than the alternate possibility of supporting a special part of the National Health Plan through a Health Project has already been mentioned. The Mission is convinced that health sector support offers several advantages. This approach will be in accordance with the GON's long term development plan, and the high priority given to improvement of the health and socio-economic status of the disadvantaged rural population. The health sector support approach will enable the Government to carry out what appears to be a sound and far-sighted health plan in full measure rather than be dependent on a number of different projects with different, and possibly at times, opposing objectives.

D. The method of providing the support through an annual grant, the size of which will be determined by last year's performance and the plans and objectives for the coming year will enhance the Government's capability for continued planning and evaluation and for setting realistic goals and objectives for each year. It will also give the Government more flexibility in providing for needed changes in the plan, and for better coordination of other donor inputs.

E. The execution of this proposal will involve:

1. The institution of a management/budgeting/accounting system which clearly will relate the US inputs to the expected outputs of extended rural health services.

2. The institution or implementation of a health statistics and management information system which will enable the Government to provide baseline data on which to base its evaluation and planning process.

3. An annual review with the GON of the program. This review would comprise an evaluation of the work carried out in the preceding year; accomplishments, failures and problems; revisions as necessary in strategy and tactics; and approval of work plans and objectives for the following year as the basis for an agreement on the annual program of assistance. The Niger Ministry of Development strongly supports this notion of an annual review and evaluation and formulation of follow-up on annual work plans.

IV. Proposed Budget and Project Time Schedule

A. Requirements exist for local currency support, for materials, equipment and supplies and for a certain amount of technical assistance.

B. The tentative budget for US assistance is \$12-1/2 million over a minimum of five year period. This includes: 1) annual grant for local currency support of 20-25 percent of the national budget for health to permit help defray costs of expanding health facilities to the rural population up to about \$1.5 million per year; 2) basic medical supplies and equipment for rural health service centers, including support for a multiple antigen vaccine program for children up to about \$0.5 million per year; 3) some vehicle support and technical assistance to meet the problem of inadequate repair and maintenance of vehicles and medical equipment and technical assistance up to \$0.5 million per year. The annual programs would be in the range of \$2-3 million, averaging about 2.5 million per year, depending on absorptive capacity. There is an expectation that in the first year, budget support would be somewhat less than the average, and that assistance for item (3) support for repair and maintenance and additional vehicle support would be greater than the average. (4) A logical source of funds for the project is considered to be the Sahel fund.

C. If this PID is retained for FY 1978 programming, it is proposed to complete the PRP by November 1976 and the PP by summer 1977. Project approval would be sought in the summer/fall 1977. The project agreement would be signed in the fall 1977, permitting the first year's program to coincide with the Government's FY 1978 (October 1977 to September 1978) national budget for health. A health sector analysis of the Niger health system will be required prior to the development of the PRP. An analysis of the health system, its organization operations, strengths, weaknesses does not exist. The development of a sector analysis will require the services of a team of French speaking health consultants for a total of 1-1/2-2 months. The analysis will be incorporated into the PRP. The sector analysis would also require an in-depth assessment of the School of Medical Sciences of the University of Niamey, possibly a cost-benefit type of assessment. It appears that this school which emphasizes public health preventive medical care will be turning out those types of personnel required to implement the National Health Plan. The GOM has requested AID assistance in providing a teaching staff input. Sometime before the preparation of the PRP, the DAP section on the health sector should be revised to more adequately reflect the Government's health policy, strategy, potential capability and stated accomplishments. To prepare the PRP, the project development will require the services of a team of consultants in health planning/management-information systems and training for a total of two months. They should be French speaking and be either contractors or coordinated through SIDS and REDSO.

V. Issues

A. While the basic direction of the Niger health plan appears sound, the issue arises whether this plan is one which warrants sector support. The Mission argues that in the Niger context the most effective way to support Niger's efforts to provide basic health services, and to influence constructively Niger's management and planning is via a sector approach. Furthermore, the Mission is of the view that such an approach will help create a framework in which Niger would seek to coordinate other donor contributions, thus breaking away from the current situation of uncoordinated, disparate effort by many donors.

B. The Niger Health Plan needs more work in detailing objectives and targets, required inputs and expected outputs. Diplomacy and tact will be required as MNH personnel tend to be impatient with and "touchy" about efforts by outside agencies and donors to define Nigerian needs and to dictate necessary action. What will be required is a tactful and collaborative approach involving cooperation with both the Ministry of Development and the Ministry of Health.

C. The assumption is made, and needs to be clarified during the PIP and FP formulation stages, that a National Health Sector Support Grant will provide more effective support to Niger in meeting its health goal than a series of projects in particular health areas or geographical regions.

D. The Mission's basic assumption is that US support in the health field is predicated on support for programs and projects in which the emphasis is on low cost, integrated, primarily preventive basic health services to the rural population, especially to women and children and that Niger's health plan meets this criterion for support.

E. Where governments define sound policies and strategies, and workable plans for development in a given sector, it is AID's policy to consider programs of sector support and this is what the Mission is proposing for the Niger health sector. However, such sector support raises two questions: 1) Is the system being installed and the services being provided, with US assistance such that Niger will not be able to maintain them eventually with its own resources? 2) Probably a sector health program which nearly necessarily involves a measure of budget support has to be considered over an interval longer than five years - probably ten years is a more realistic time span for such support. The Mission is of the view that 1) such support of a ten-year span is sensible in terms of Niger's needs and in terms of 2) current

thinking with respect to long term development planning for the Sahel and that over a period of ten years one can expect development programs to lead to a growth of national and rural incomes in Niger which would permit the country to maintain the sort of low cost rural health delivery system we and the Niger Government are talking about. Another issue that should be addressed is whether this sector approach be entirely or partially loan funded. Mission is of the view that it should be entirely grant funded.

VI. Other Programs and Related Activities

The preparation of the PRP and the PP should take into account other programs and projects having an impact on health, and on related health activities.

It is evident that efforts to increase food production and develop agriculture should have a beneficial impact on nutrition and health. It is clear that agricultural programs should keep in sight nutritional needs via guidance to farm families in crop diversification and on-farm production of vegetables, poultry and livestock.

There are programs in Niger to improve rural water supplies-- via the ONDES program to increase the number of villages with cement lined wells equipped for sanitary water supplies.

It is possible that the AID supported regional productivity project for Niassy Department will include a component to strengthen the rural health services.

AID is currently considering an OAA with Africare for the development of basic health services in Diffa Department, for the establishment of training programs for auxiliary health personnel, and for some assistance for vehicles and medical equipment maintenance and repair. This program is expected to commence in 1976 and extend for three years into 1979. It will therefore overlap and complement this proposed sector support grant program, which would run from 1978 through 1982.

AID is currently cooperating with other donors to control and eradicate onchocerciasis in seven West African states. This program includes the region of Say in southeast Niger (Say). The Mission expects to submit a request for funds to help eradicate trypanosomiasis in the same area. (The UNDP has requested the Mission to assist in the spraying program planned at a cost of about \$180,000.)

Other donors assisting the Government in carrying out its National Health Plan are FED, FAG, UNICEF, and WHO. A more complete summary of other donor contribution and relationship to this proposal will be addressed in sector analysis and PRP.

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT IDENTIFICATION DOCUMENT (PID)

PID

To Be Completed by Originating Agency

3 COUNTRY ENTITY

NIGER-RDO/NIAMEY

5 PROJECT NUMBER (7 digits)

083-0200

B. BUREAU/AGENCY/PROJECT NUMBER (10 digits)

A. Number

B. PROPOSED NEXT DOCUMENT

A. 2 PRP
3 PP

B. DATE

9 ESTIMATED FY OF AUTHORIZATION/OBLIGATION

a. INITIAL FY 78 b. FINAL FY 80

H. PROPOSED BUDGET AND APPROPRIATION

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. Grant	D. ESTIMATED COST
(1) FN	1435	050	
(2)			
(3)			
(4)			

12 SECONDARY TECHNICAL CODES (maximum six)

210

13 SPECIAL CONCERNS CODES (maximum six codes)

BR BS ENV

14 FISCAL YEAR PERIOD CODE

2001

15 PROJECT GOAL (maximum 240 characters)

Increase food production in Niger by facilitating the settlement of agricultural... suitable for exploitation through the application of... increased development of existing...

16 PROJECT PURPOSE (maximum 480 characters)

Provide 100 drilled wells, 350 km. of improved road and develop surface water exploitation schemes for the development and income and employment of 10,000 people of the potentially surplus food...

17. PLANNING RESOURCE REQUIREMENTS (staff/funds) (loan/aid) (DCA with USAID for assistance in preparing PRP and PP. IFS for construction)

Water Development/Soil Conservation... Road Engineer/REDSO; Project Coordinator...

18. ORIGINATING OFFICER'S SIGNATURE

Signature

Title

Regional Development Officer/Planning

MM DD YY

MM DD YY

ADO/Niamey
June 17, 1976

SAY AGRICULTURAL DEVELOPMENT

NIGER - FID

I. Survey of Problem and Background

1. The Say Arrondissement in the Niamey Department is an area of important development potential which has never been realized because of the diseases endemic to the area (principally onchocerciasis and trypanosomiasis). As the disease control/eradication measures of both WHO and the UNDP begin to be felt, the major constraints to resettlement and development of the uninhabited zones of Say become (1) lack of water for human consumption and (2) a very limited secondary transportation network. This project addresses itself to these two constraints.

2. Say Arrondissement is situated on the west of the Niger River (except for the district of Kirtachi which lies south of Kolo on the east side of the river) and shares common borders with Benin and Upper Volta (see map). In the north the arrondissement is bordered by the Sirba River and in the south by the Meerou. A major stream is the Gouroubi which flows through the middle of the area. Villages tend to be located on or near water courses where shallow wells provide them with limited drinking water. Say lies within the Department of Niamey and constitutes its southernmost portion.

3. With 59,000 inhabitants spread over 15,000 sq. km., Say has an especially low population density of less than four persons per sq. km. This compares to 15 to 20 persons per sq. km. in the agricultural areas of most of the country (i.e., compared to the agricultural band which runs east west along the southern border of the country between roughly the 13-1/2 and 14-1/2 N parallels). Say has a soudanian type rainfall of about 600-750 mm annually. By comparison, the agricultural zone in the rest of the country has a Sahelian pattern of rainfall ranging from 350 mm per year or below to about 500 mm. In the other three arrondissements in Niamey Department, rainfall averages about 400 mm per year or from 1/3 to 1/2 less than in Say.

4. Soil conditions in the Say area vary substantially from location to location. However, a survey conducted by Harold Parkinson in April-May 1976 reveals that there are "thousands of hectares of reasonably good tillable land ... that the soil resource is not nearly as great a constraint as the ground water resources." In zone 2 of Say,

an area of about 4200 km², Parkinsen has indicated (subject to further soil survey work) that there are probably at least 250,000 acres of tillable land (see Plate II on Tillable Areas in Zone II). In zone I, a smaller area of about 600 km², field trips suggest soil conditions are probably more favorable than in Zone II. Thus there is a large area of potentially tillable soil, and with favorable rainfall there is an opportunity to provide farmland for a large number of people. The Government's regional development planning body has postulated a potential for settling up to 50,000 persons in the area over the next decade, with as many as 10,000 in an initial three year period.

5. Development of Say thus appears to offer opportunities to settle large numbers of families and herders on better watered farm land and to increase food and livestock production in an area which is less vulnerable to drought than most of Niger.^{1/}

6. From the foregoing, it is clear that Say Arrondissement has not experienced the same degree of growth in land under production as the rest of the country in the past fifty to seventy years. Generally, in the southern farming zone in Niger, the past decades have seen a rapid increase in population with the gradual extension of cultivation to virtually all lands. In recent years, the proportion of lands left in fallow has declined and there has been a noticeable trend toward lower soil fertility.

7. Certainly one major reason for the fact that the Say region has not experienced growth has been the presence of onchocerciasis and trypanosomiasis--even though the areas of infection are localized and even though uninfected areas remain relatively underpopulated.* Obviously other factors have also played a role in holding down land use. Clearly one such factor has been the difficulty of developing adequate sources of water for human and livestock consumption. Geologically Say is constructed on a base of precambrian crystalline rock, which limits ground water availabilities, at least via traditional wells. The third major factor appears to have been the paucity of roads. Two major roads run from Niassy south to Say city and from Niassy southwest to Zoredi and Fada N'Gourma in Upper Volta. However, whereas the population centers

^{1/} During the period of the drought from which Niger is just beginning to recover Say did not show a decrease in crop or livestock production, or loss of livestock.

* Onchocerciasis is centered in two small areas: Tamou in the east and along the Sirba in the northwest. Trypanosomiasis has been present along the Niger and Macrou rivers.

tend to run east-west along water streams, the roads tend to run north and south in patterns established during colonial times. The paucity of roads leads to difficult access to farming areas and villages. This difficulty of access, combined with popular fears about the presence of river blindness and sleeping sickness and the known lack of water, has apparently worked until fairly recently to stop the movement of people into the area.

II. Response

1. The first effort to deal with development constraints in Say was its inclusion in the regional West African program for the control and eradication of onchocerciasis. While the presence of this disease is restricted in Niger, it is critically important that the centers of infection be eliminated so as not to reinfest other areas in neighboring countries. The spraying program is being organized by the UNDP and is scheduled to begin in December 1976.

2. Complementary to the "oncho" program is a program formulated by the UNDP to carry out a two year program to eradicate trypanosomiasis to start in December 1976. Given its current financial difficulties, the UNDP is unable to fund this activity and ADO Niamey is proposing it as an accelerated impact project (AIP) for FY 77 funding.

3. The World Bank/WMO/multi-donor effort to control the onchocerciasis vector helped catalyze GON and other donor thinking about the development of the area and has resulted in a basic proposal for developing Say area entitled "Schéma Directeur d'Aménagement et Mise en Valeur de l'Arrondissement de Say." Pursuant to this "indicative plan," the Niger Government has established, with UNDP help, a regional planning office in the Ministry of Development which is working on Say development planning. As part of this work, UNDP has financed three basic studies of the area: a) photo interpretation; b) a socio-economic study carried out by the Niger Institute of Human Sciences (IRSH)*; and c) the preparation of a regional "master" development plan for the area by a Dutch firm.** All these studies are to be completed by spring 1977.

* An interim report of this study is available.

** Ingenieurs Conseils Duars, Heederik en Verhey bv Amersfoort, Netherlands.

4. Water has been identified as a critical constraint in the area. A problem has been lack of knowledge about the possibilities of obtaining ground water in the underlying crystalline rock. As a result the UNDP undertook to program funds to finance an exploratory drilling program in Zone I (see map). At the same time, Niger and the UNDP asked AID to fund a similar ground water survey program for Zone II. This proposal was forwarded to AID/W in a PID last year. After review there and in the Mission, it was decided to hold off, pending a field survey of the proposal by a US hydrologist and a soil scientist, and to take into account a more comprehensive response to the problem of Bay development (see STATE 195156, August 16, 1975).

5. The field surveys mentioned above were carried out in April and May 1976 by James Jones, USGS hydrologist and by Dr. Harold Parkinson, soil scientist (formerly with SCS and BuRac).

6. Parkinson's work has established that there is good tillable dry land in Zone II of the area in quantities which merit a development effort. Parkinson has recommended an additional field survey of soil conditions in Zone I and a preliminary land capability mapping of the initial settlement zones be carried out in the fall of 1976 by a US soil scientist at an estimated cost of \$18,000. This survey will produce a preliminary report on Zone I similar to that prepared by Parkinson on Zone II. It will also provide a detailed land use capability survey in both zones totalling 8,000 hectares. The areas to be selected for this initial survey will be selected to coincide with exploratory drilling sites proposed by Mr. Jones (see below).

7. Mr. Parkinson also recommends a more comprehensive land use survey--which should be scheduled so that field survey work would begin shortly after harvesting in August/September 1977. This suggests a tentative schedule of contracting in the summer of 1977, and completion of the work by May 31, 1978. The survey would provide a comprehensive reconnaissance land use capability survey for all of zones 1 and 2 which have been identified by the government as areas providing the greatest settlement opportunities. Only that portion of Zone II south of latitude 13°20' (an estimated 3100 km²) would be covered. The cost of this survey is estimated at \$420,000.

8. Mr. Jones has proposed a test drilling program of fifteen holes, five located in Zone I and ten in Zone II. To date no drilling has ever been carried out in the area. The drilling program will test underground water availabilities to 100 meters in depth. Based on the

geology of the area and results achieved in similar areas elsewhere, it is expected that the average yield of a successful well will be about 1 m³ per hour--sufficient for a small village. Mr. Jones states the purpose of the program "to determine whether any units of the scle /pre-cambrian shield of crystalline rock/ are more favorable than others and to indicate probabilities for successful wells." Tentatively it is proposed to schedule the drilling to be carried out in the period March-May 1977--after the detailed land use survey of 8,000 hectares encompassing proposed drilling areas has been completed, and in time to feed information into the project paper.

9. ADO/Niamey is recommending use of design funds to finance the add-on soil study for Zone I, in the fall of 1976. ADO/N also is proposing funding of the drilling and land capability studies--\$650,000--from Sahel planning funds. These studies of soil and water resources will be aimed to coincide with completion of the planning studies financed by UNDP.

10. The studies and programs outlined above will permit the GON to proceed with more assurance on a comprehensive plan for development and settlement of Say starting in FY 78.

11. This document proposes specifically a program to deal with two major constraints to development of the area, namely village access roads and water, which must be addressed if progress is to be made (it being clear that the other major constraint--disease--is being handled separately).

III. Brief Description of the Project

1. The project purpose is to provide the basic infrastructure of access roads and water necessary for agricultural development and settlement of the area.

2. Access Roads - Village access roads are proposed which would be minimum standard but generally all weather quality, one lane laterite surfaces with drainage structures including culverts and concrete fords capable of bearing 10-ton truck traffic. They would provide all-weather, year-round access to the connecting villages, except perhaps during brief periods of torrential showers during the rainy season.

3. Roads would be constructed under force account by the GON Public Works Ministry (TP) with AID funding operating costs including FUL, equipment maintenance and local ^{labor} TP. While TP would provide most of the equipment, some items to be identified in the PRP/PP stages would be provided by project financing. It is estimated that the road construction will average about \$10,000 per kilometer.

4. Roads will be selected by development and technical criteria to be spelled out in the ERP. However, the Niger Government has already listed a number of routes considered to be of high priority:

- Say-Kobadie with a link to Torodi 60 km - #1 priority because the area serviced is one of the most densely populated and isolated areas of the arrondissement.
- Makalondi-Tientienga Foulbe-Diapang-Tyala-Foulbe-Were Soudou-Dantiandou-Tanou, 70 kms - #2 priority because of the agricultural production potential and number of people reached per kilometer of road (100).
- Kolo-Kirtachi, 65 km - 3rd priority, opens up an area on the Niger River on the east bank.
- Roads in Zone I, 50 kms - probably RN 26 to Dyakou and along the river, and Dyakou to Dyanangou.
- Roads in Zone II, 200 kms - with connections among Ouere Sawaba-Tumpena-Mossipaga, or Makou-Tambole-Makalondi, or Kobadie-Bolsi-Kakou, or Bossebangou-Boulkagou or Bossebangou-Namro-Ninsey, or Tambole-Torodi.

5. The project proposal is to provide financing over a 2 to 3 year period for up to 350 to 400 kilometers of road.

6. Water Supply - From the work done to date it appears clear that the question of water supply should not be limited to underground sources, but should include surface water availabilities and development.

7. On the assumption that the test drilling programs establish the feasibility of drilled wells in selected sites, the project proposes an initial program of about 100 production wells. Criteria for the placement of such wells will be defined in the ERP and PP stages, and will be based in part on the results of the test drilling program and on the UNDP studies cited in para II.3 above. We would expect at this stage that some wells would be placed in existing villages where water supply is a problem and the investment can be warranted by existing population and possibilities for increasing agricultural production. We would also expect that some wells would be placed in new settlements to ease an existing water supply problem or to provide for additional settlement.

8. Experience in nearby areas in Upper Volta suggests that possibilities exist for conserving and making more use of surface water both for drinking and minor irrigation. Some work of this sort is being conducted currently in Torodi. The project proposes assistance through the GON Service of Agricultural Engineering (Genie Rural) in the identification and development of catchment basins, marshlands and ponds, river bottom areas plus the introduction of soil conservation techniques such as water spreading. This portion of the project will be given initial impetus through an AEP activity in 1976 to inventory developable marshes and "bas fonds" in various parts of Niger, including Say Arrondissement. Several project dossiers for Zone I have already been prepared by the Genie Rural.

IV. Proposed Budget and Time Table

1. The tentative budget is \$5.5 million over three years, based on estimates for road construction of \$3.5 million, production wells of \$1.4 million and surface water/minor irrigation development of \$0.6 million.

2. The following schedule is proposed:

- a. Soil survey in Zone I in Sep/Oct 1976 (design funded).
- b. Preparation of PRP in Sep/Oct 1976.
- c. Review and approval PRP in Oct/Nov 1976.
- d. Start on oncho and "trypano" spraying programs, Dec 1976.
- e. Test drilling program in March-May 1977 (Sahel planning funds).
- f. Availability of UNDP Master Development Plan and other studies - April/May 1977.
- g. Preparation of PP in May-June 1977.
- h. Land use capability survey - Aug-May 1977/78 (Sahel planning funds).
- i. Say Agricultural Development Project Agreement - Nov/Dec 1977.
- j. Implementation phase Jan 78-Dec 80.

V. Scope of Work for the PRP

The PRP will provide a much more detailed analysis of the economic situation of the arrondissement, including data on crop and livestock production, other economic activity, distribution of population, and location of market towns. It will include a more thorough analysis of the road transport system and of the roads proposed for construction or improvement. It will also include an analysis of existing rural water supply system, via an analysis of available data (via OFIDES inventory of existing wells, the IRSH study, etc.). The PRP will also address the issues cited in Section VII below.

The PRP team should include: design officer, project coordinator (ADO/W), road engineer, agricultural engineer, economist, surface water/irrigation specialist. The PRP would define the scope of work and team composition for the PRP.

VI. Beneficiaries

The project will benefit directly the existing population of about 60,000 persons plus those settlers who are encouraged to move into the area. The project will contribute to a substantial increase in agricultural and food production, and commerce between the area and the city of Niamey. Indirect benefits will accrue to those populations remaining in out migration sections by a reduction in population pressures on marginal lands.

VII. Issues

1. An immediate question is whether the project should be limited to activities to improve access roads and water supply, or whether it should be designed to include other activities for increasing productivity in agriculture and for rural development. (This issue was raised first in the EPRC review of the PID submitted in June 1975). This PID takes the view that over a two-three year period it will be important to address the immediate constraints of access roads and water, as a prelude to other follow-on activities to promote agricultural production and rural development (as the increased provision of advisory, credit and co-op services). Assuming implementation proceeds according to the schedule outlined in Part IV above, ADO/Niamey contemplates a follow-on project to be proposed by a PID submitted in 1977 for FY79 first year funding.

2. It is important to note that say development is being planned to provide not only for development of existing populations, but to provide for settlement of a large number of families from other areas ... just as is the case in the areas in Upper Volta where the Volta river valleys are being cleared of "oncho" to enable their settlement. The area thus provides a welcome opportunity to resettle farmers and herders from northern lands where farming is marginal and from pastoral zones where the numbers of herders may need to be reduced. However, experience in other parts of the world suggests that care needs to be taken by the GON in defining the degree and character of government interventions. A body of experience is being developed in neighboring West African countries (Ghana, Upper Volta) which should be helpful. Certainly, Niger will want to encourage the current in-migration trend by providing better access, water and the standard rural development services which are being developed for the so-called "productivity regions" throughout the country. Probably, Niger will also want to help particular groups--farmers from the marginal Zarmaganda area in northern Niamey Department, destitute herdsmen, etc.--and this could be done by providing immigrating groups with a grubstake. It would, however, appear prudent for Niger to avoid approaches involving GON provision of ready-made communities. Such efforts tend to be high risk ventures requiring a great deal of administrative talent, which is Niger's scarcest resource. We view this question as an issue which is likely to be raised within the GON with the submission of the UNDP financed master plan next April, and which will need to be addressed more fully in follow-on programs for development of the area than in this project.* However, we believe the PP will need to address the point to the extent that the roads and water development are tied into settlement plans.

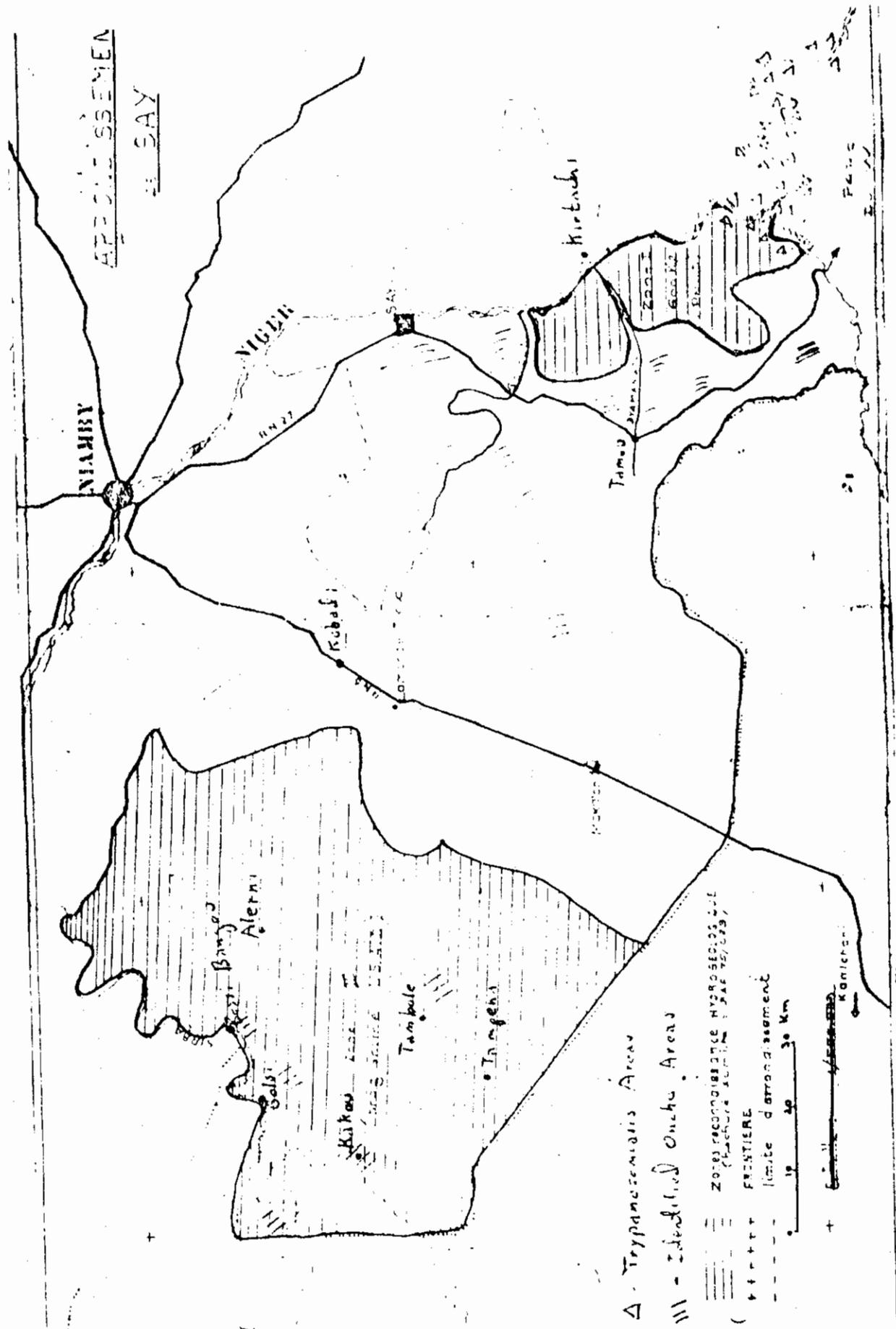
3. An obvious issue presented by this project identification is the estimated cost of water resource development. Present estimates for a cased well, including motorized pump, is about \$13,000 per well. Various GON studies suggest that this magnitude of cost can be justified by the increased production to be expected from the newly developed areas and the surpluses which will be available for entry into the national marketing system. This issue of the cost of drilled water ties into the question of alternatives by better use of surface water resources. Both questions will need to be treated in the PRP and again in the PP.

* It should also be clarified by the IRSH study on "Population, Migration and Settlement."

4. The issue of availability of ground water and of soil adequacy will be treated in the test drilling and land use capability surveys proposed.

VIII. References

1. Say Arrondissement Development. PID, June 30 1975.
2. Schema Directeur de Say [Say Indicative Plan], Niger Ministry of Plan, 1974.
3. Rapport de la Mission I de Consultants Pour l'Assistance à la Planification de l'Arrondissement de Say [Report of Mission #1 of Consultants for Assistance on Say Arrondissement Planning], UNDP and Niger Ministry of Plan, April 1976.
4. Field Trip Report on Say Arrondissement, Zone 2 Niger, Harold Parkinson, US Soil Scientist, May 17, 1976.
5. Ground Water Exploration Program in Say Arrondissement, Zone 2 Niger, James Jones, USGS Hydrologist, May 15, 1976.
6. Plan de Développement de l'Arrondissement de Say - Besoins en Infrastructure et Estimations des Coûts - [Say Arrondissement Development Plan - Needs and Estimated Costs of Infrastructure], Note of the Ministry of Plan May 1976.
7. Note on the Need for Access Roads in Say Arrondissement, Fred Bergier, RESSO/WA.



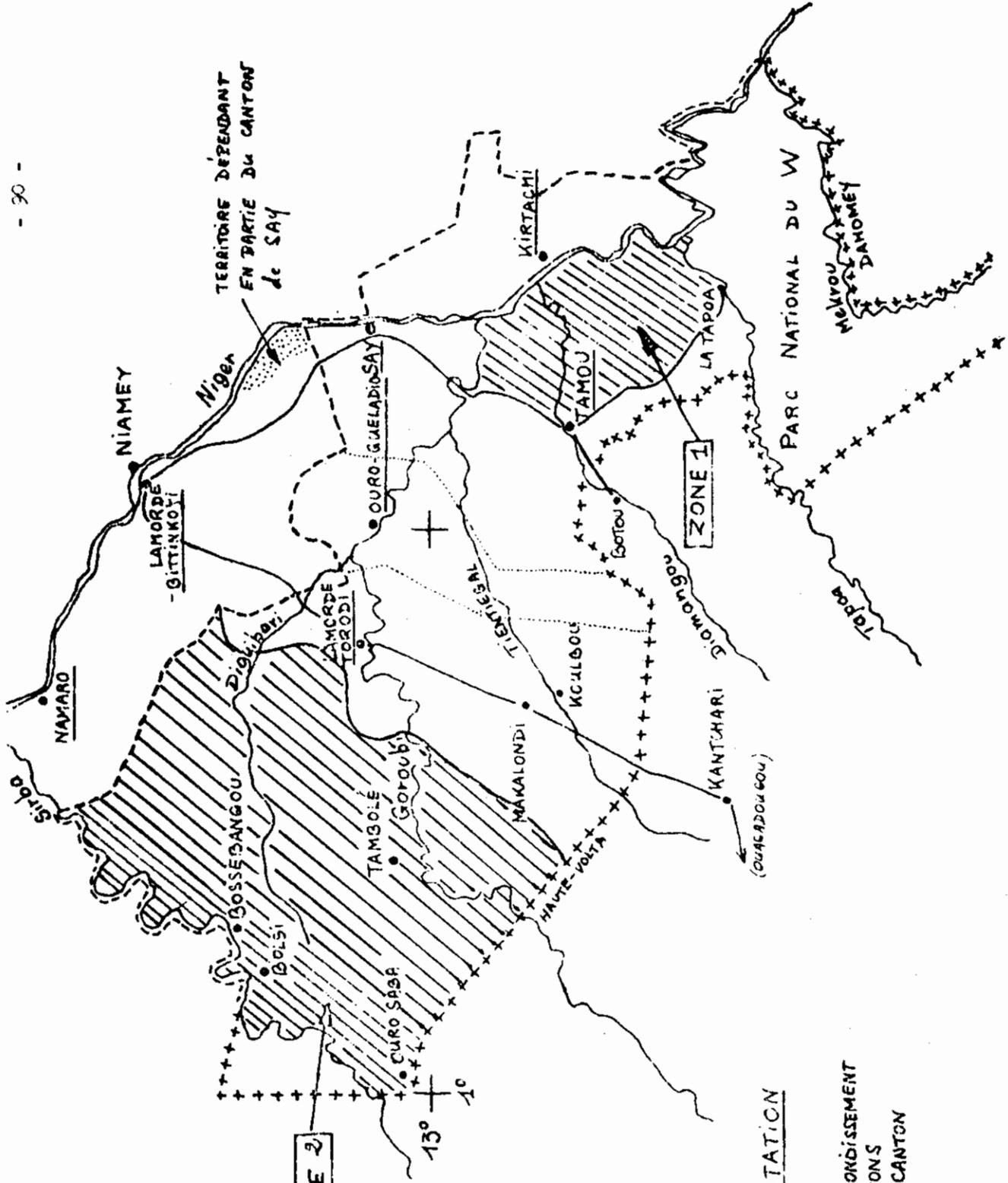
Δ - Trypanosomiasis Areas
 ▨ - Identified Onchocerca Areas

Zone de résistance à Trypanosomiasis
 (Schistosoma sp. 1948-1953)
 FRONTIÈRE
 limite d'aménagement

0 10 20 30 Km

+

Kaniera



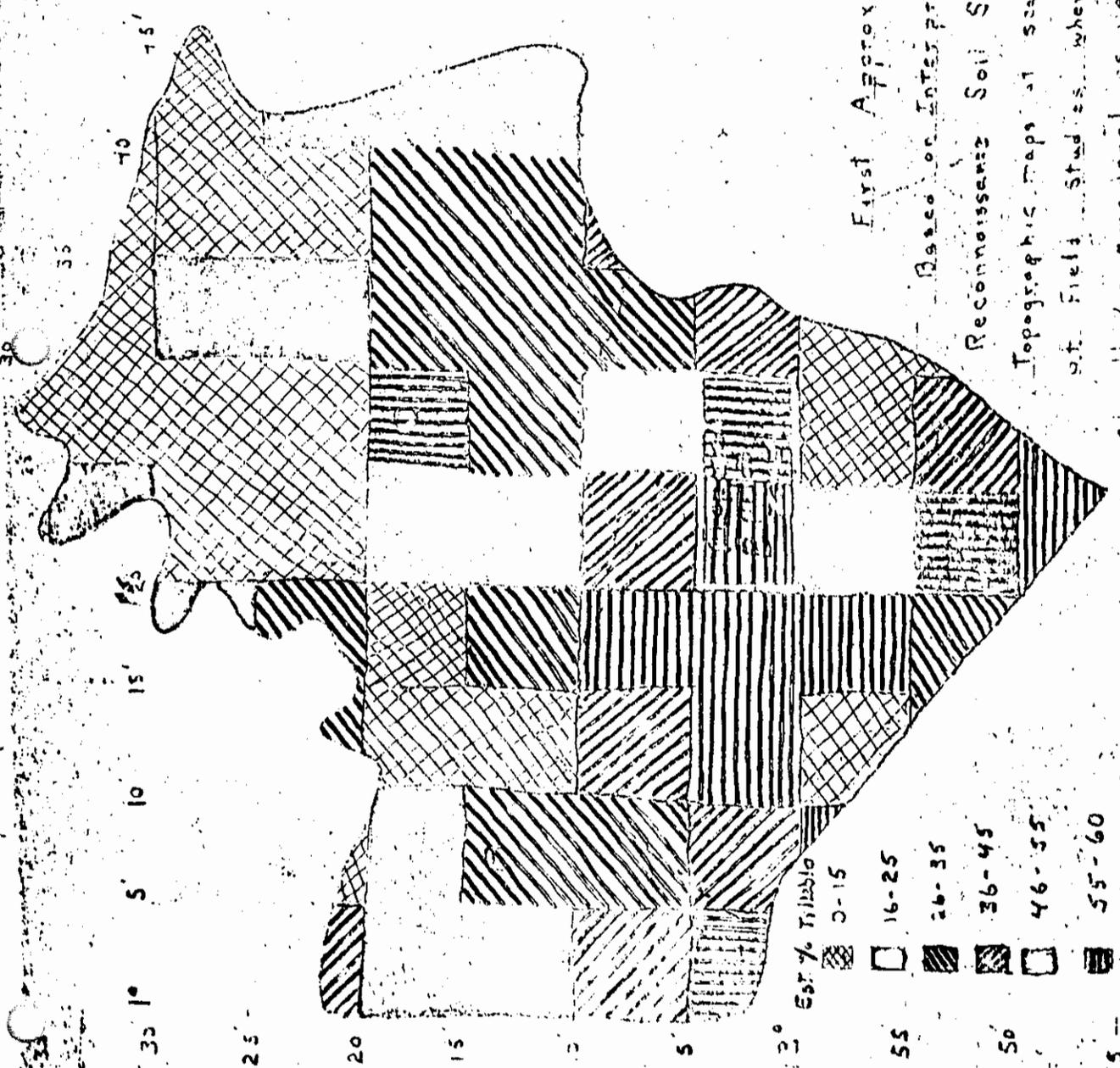
ARRONDISSEMENT
DE NIAMEY

1

MODALITES DE PRESENTATION

- FRONTIERE
- LIMITE DE L'ARRONDISSEMENT
- LIMITE DE CANTONS
- CHEF-LIEU DE CANTON

1/1.000.000
1 cm = 10 km



ZONE 2 (Area 2)

SAY ARRONDISSEMENT

First Approximations on Tillable Areas

Based on Interpretation of ORSTOM

Reconnaissance Soil Survey at Scale 1:500,000,

Topographic maps at scale 1:200,000 and 3 days

of field studies where accessible information

should be considered as very rough. Land Use Capability

study of area needed to develop reliable data for planning

- 0-15
- 16-25
- 26-35
- 36-45
- 46-55
- 55-60

Scale 1:500,000

PLATE II

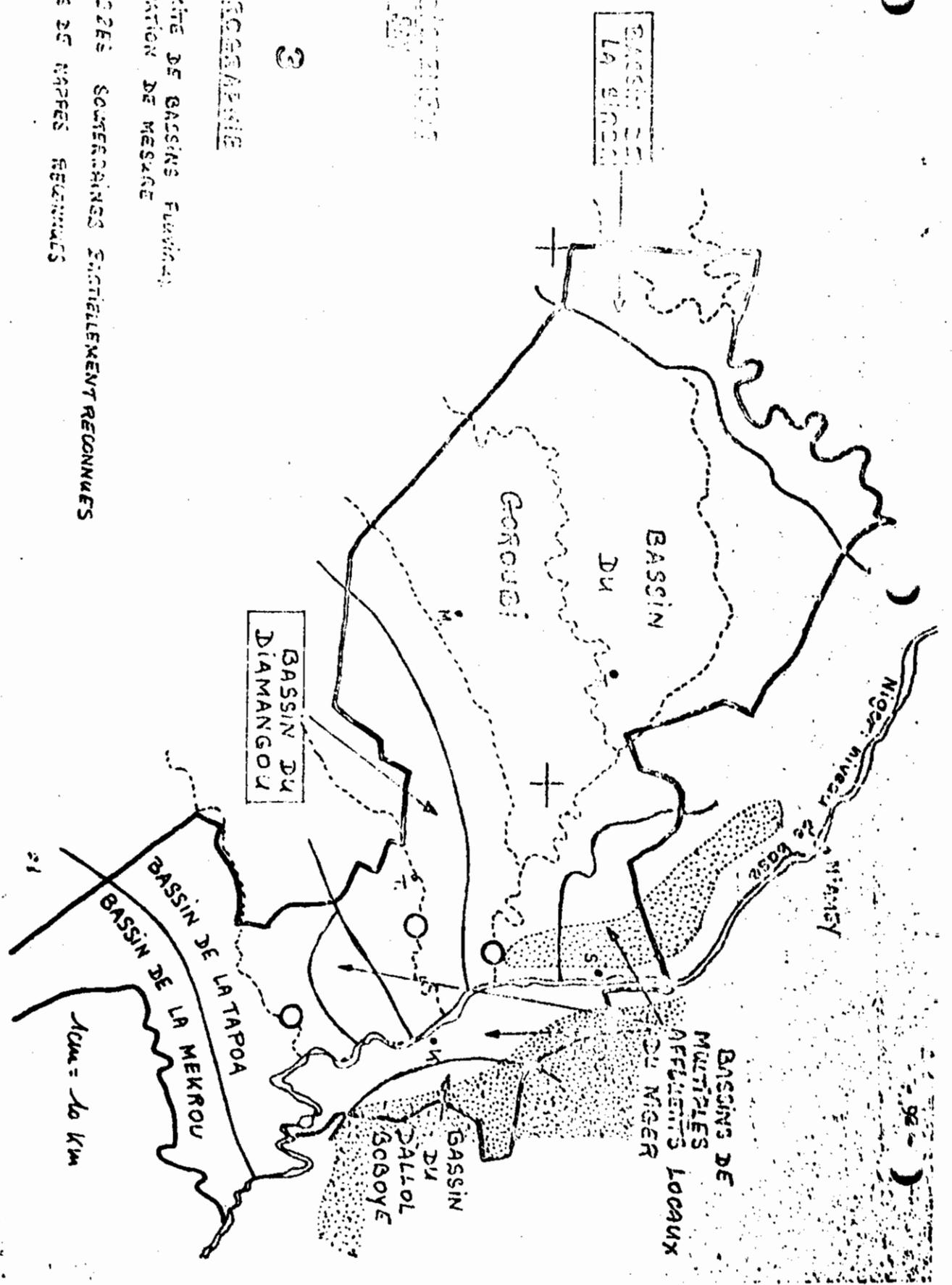
PLATE III

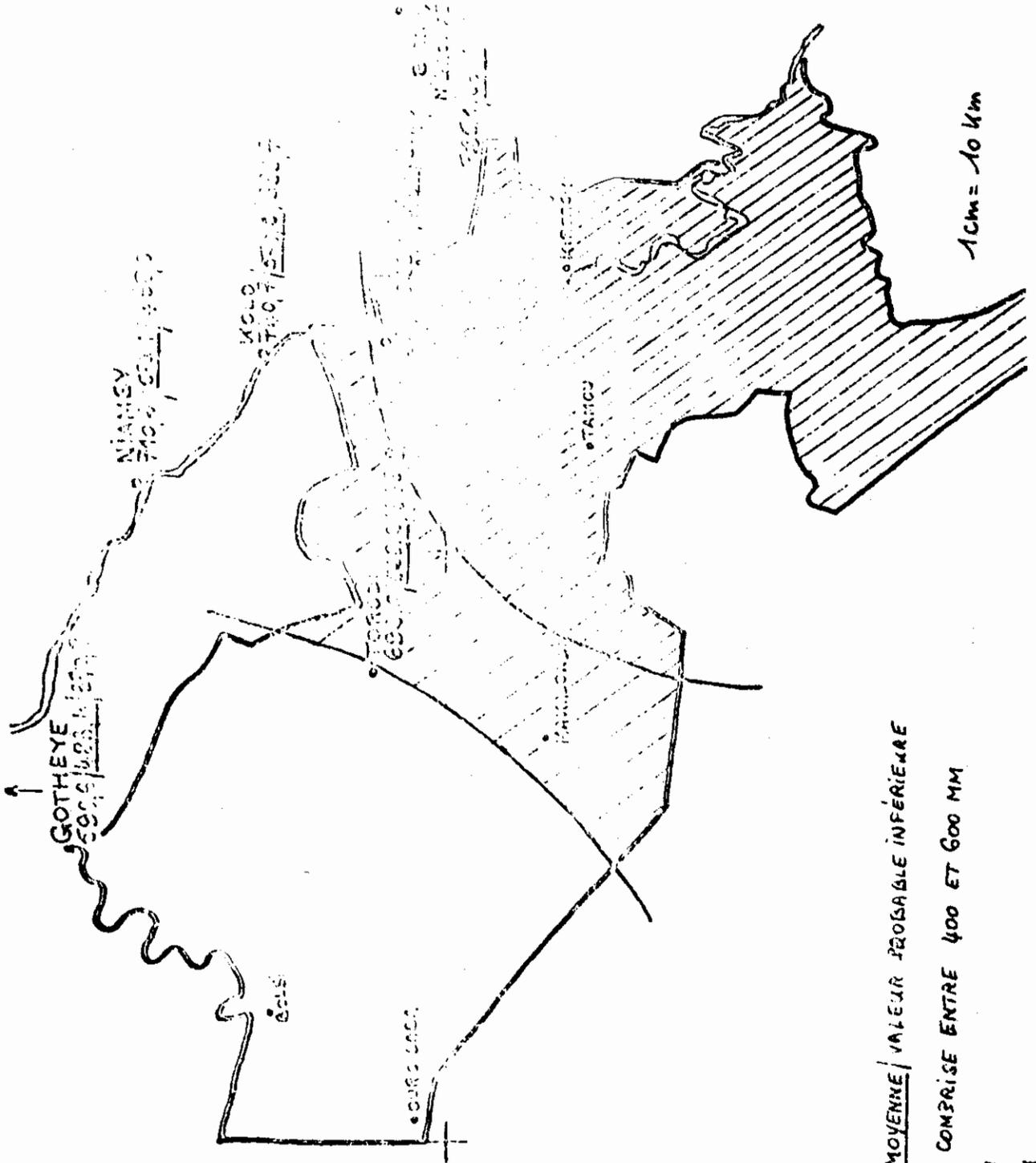
-  LIMITE DE BASSINS FLUVIAUX
-  STATION DE MESURE
-  ZONES SOUTERRAINES ENTIÈREMENT RECONNUES
-  PAS DE ZONES RECONNUES

HYDROGRAPHIE

3

ARRONDISSEMENT DE NIAMEY





ARRONDISSEMENT DE SAY

4

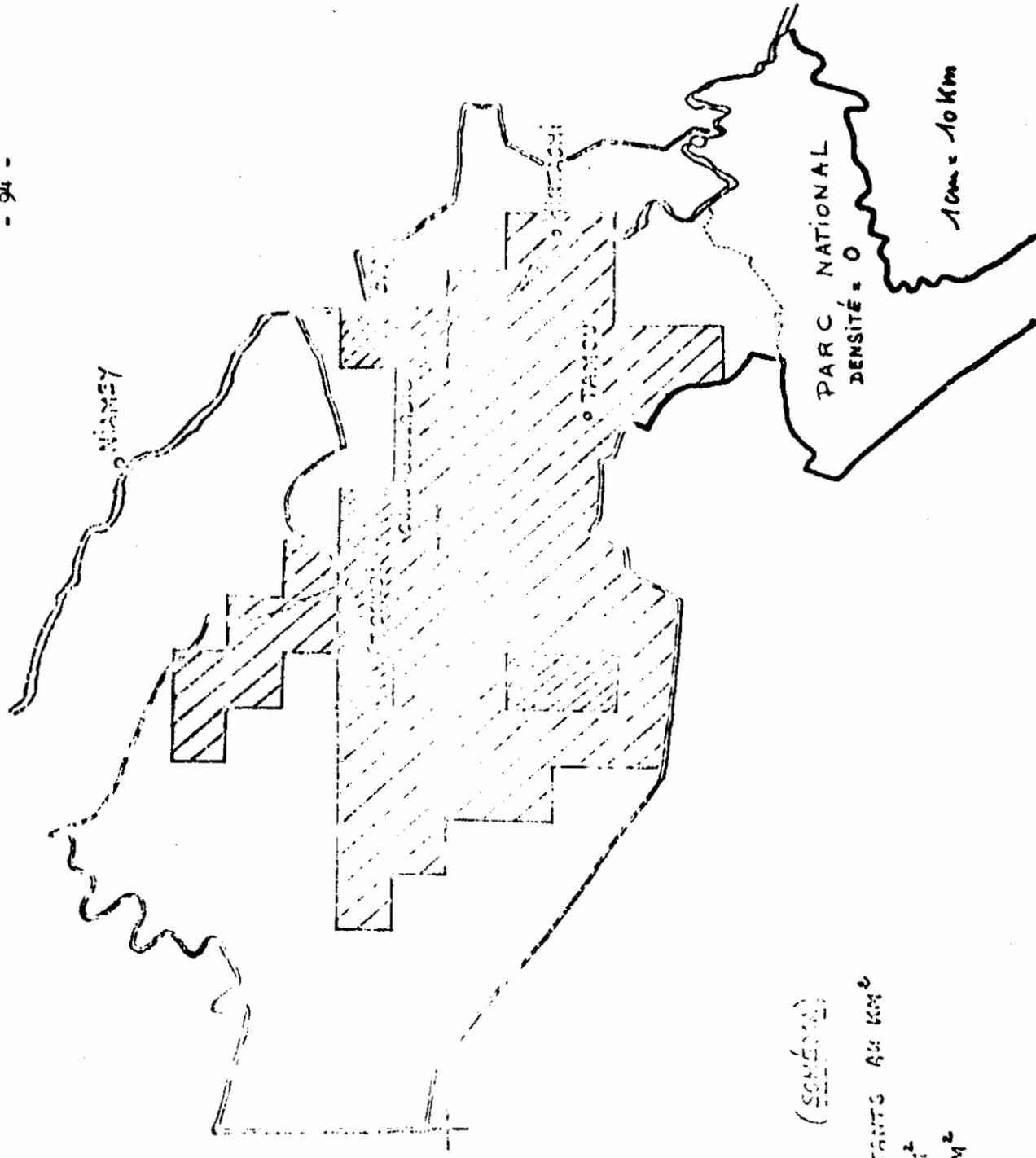
PLUVIOMÉTRIE

HAUTEURS DE RUIE EN MM:
 VALEUR PROBABLE SUPÉRIEURE / MOYENNE / VALEUR PROBABLE INFÉRIEURE



PLUVIOMÉTRIE ANNUELLE COMPRISE ENTRE 400 ET 600 MM
 ENTRE 500 ET 700 MM
 ENTRE 600 ET 800 MM

1cm = 10 km



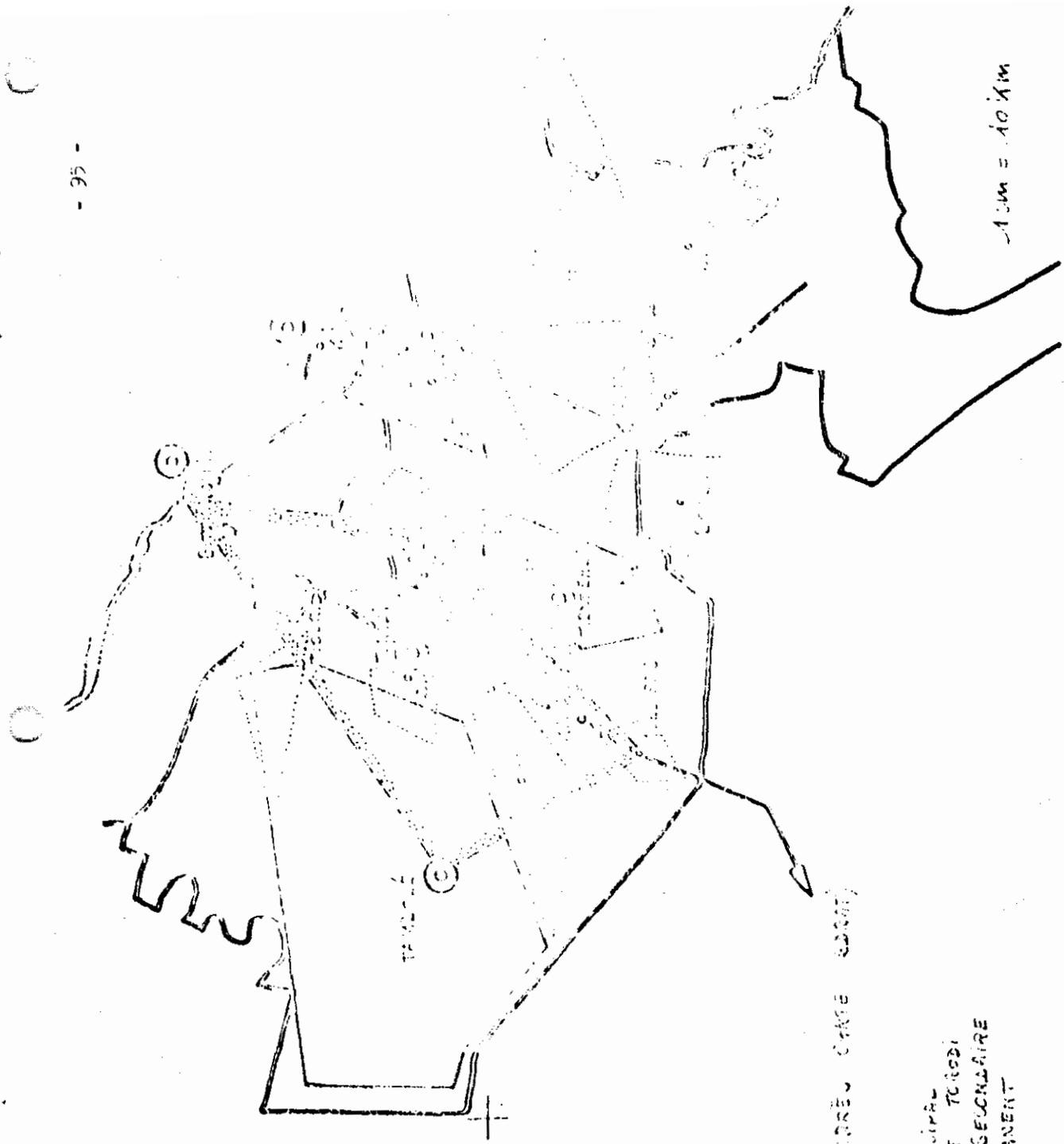
ASSEMBLÉE NATIONALE
DE NIAMEY

5

DENSITÉ DE POPULATION (SOUS-ENSEMBLE)

-  DE 10 À 30 INDIVIDUS AU KM²
-  DE 5 À 10 H/KM²
-  MOINS DE 5 H/KM²

IRSM - NIAMEY - 1976



ARRONDISSEMENT
DE ...

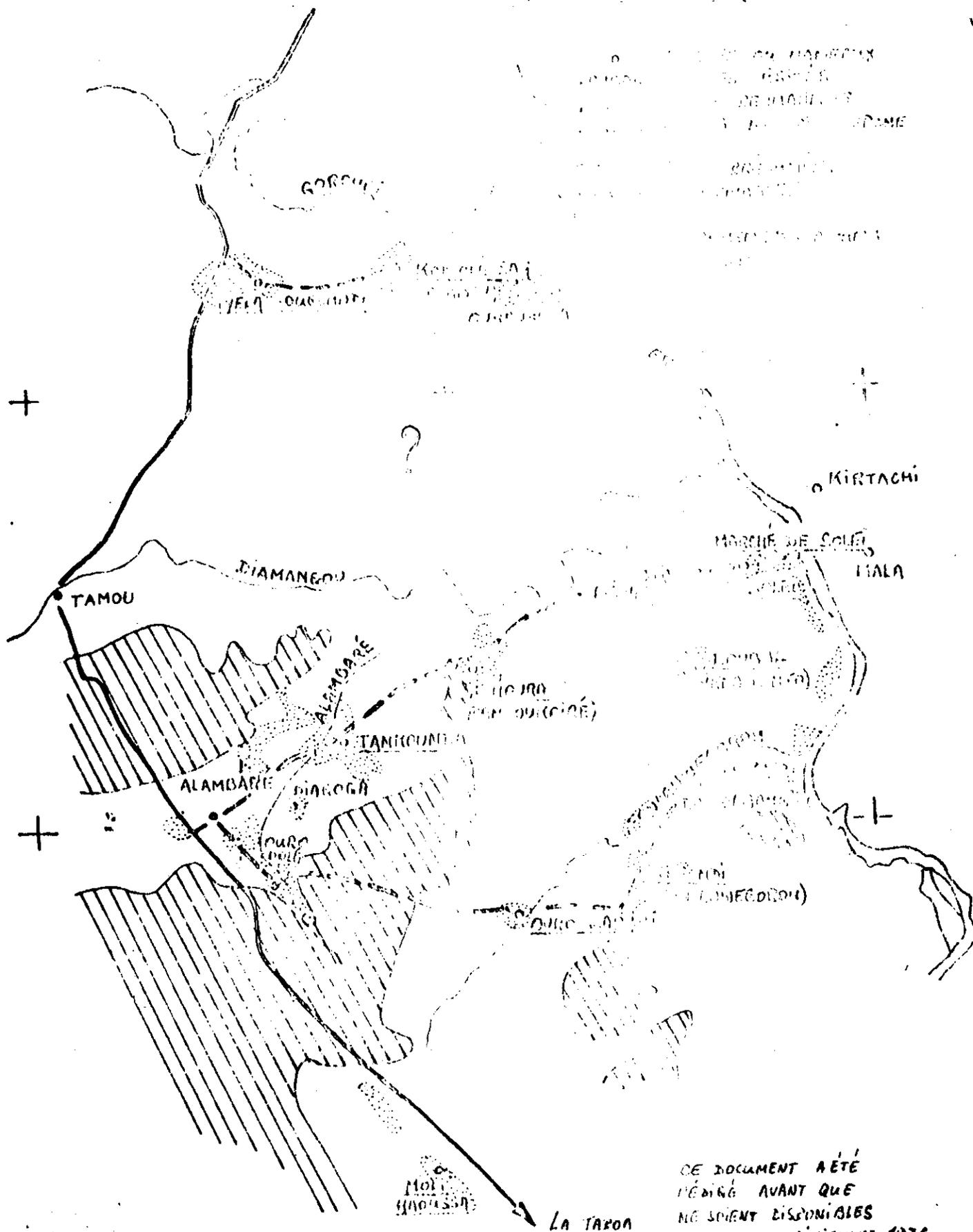
6

MARCHÉS (L'ARRÊT CARRÉ 500M)

- MARCHÉ PRINCIPAL
- MARCHÉ SECONDAIRE
- AIRE DE MARCHÉ PRINCIPAL
- AIRE DE MARCHÉ SECONDAIRE
- AXE ROUTIER PERMANENT

1 cm = 10 km

1/250.000
2 cm = 2 km



CE DOCUMENT A ETÉ
RÉDIGÉ AVANT QUE
NE SOIENT DISPONIBLES
LES PHOTOS AÉRIENNES 1976

I.R.S.H. NIAMEY. 1976

ARRONDISSEMENT DE SAY

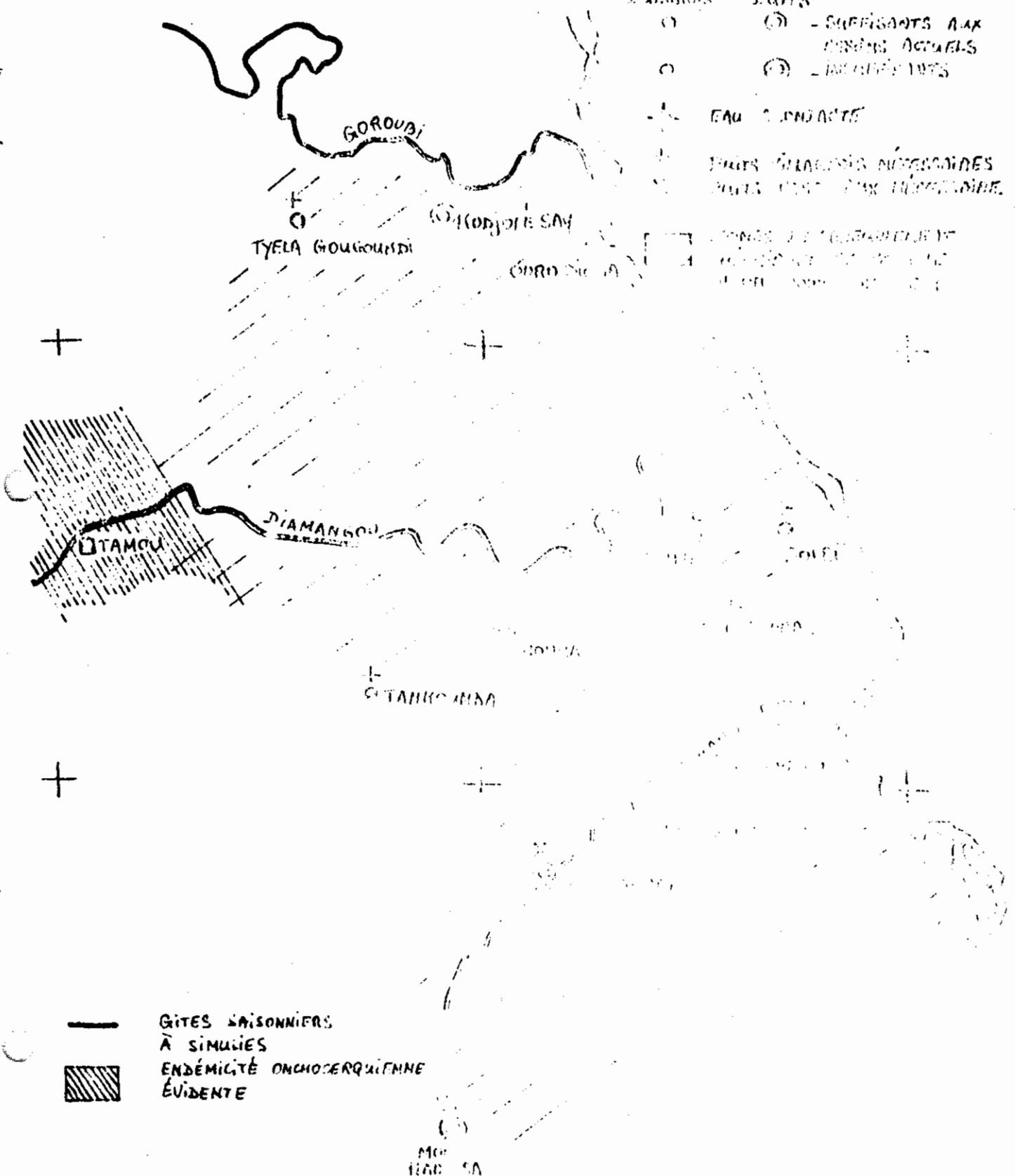
ONF 1

8

TOUTS

1/500.000
1 cm = 2 km

- | | |
|----------|---|
| DAIGARAS | PUIES |
| ○ | ① - SUFFISANTS AUX
BORDS ACTUELS |
| ○ | ② - INSUFFISANTS |
| + | EAU COURANTE |
| + | PUIES GIGANTESques NÉCESSAIRES
PUIES PETITS PAR INSUFFISANCE |
| + | BOIS DE MANGROVE |
| + | BOIS DE MANGROVE |
| + | BOIS DE MANGROVE |

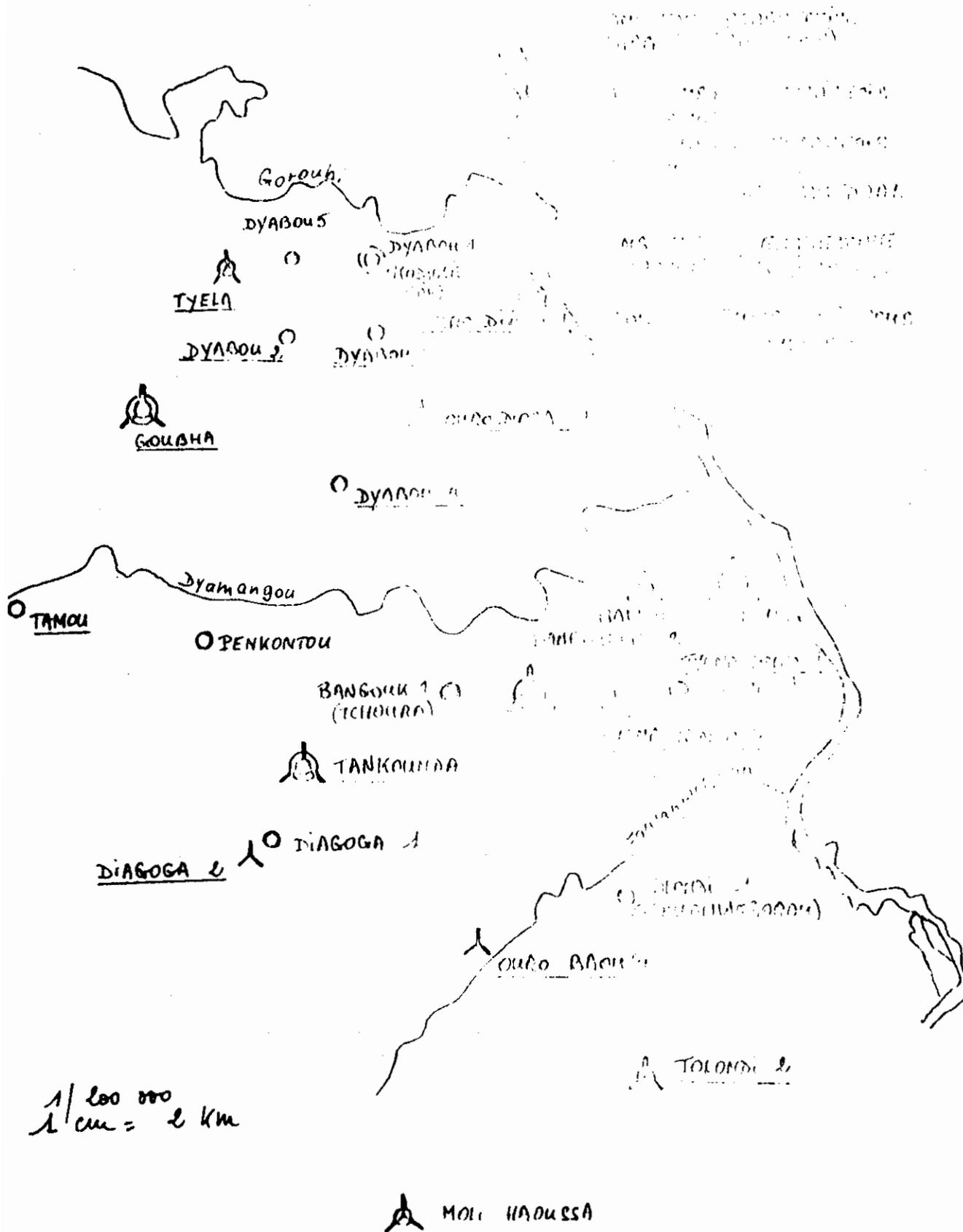


— GITES SAISONNIERS
À SIMULIES

▨ ENDÉMIE ONCHOCERQUIENNE
ÉVIDENTE

ARRONDISSEMENT DE NIAMEY

FIGURE 1. COMPTON



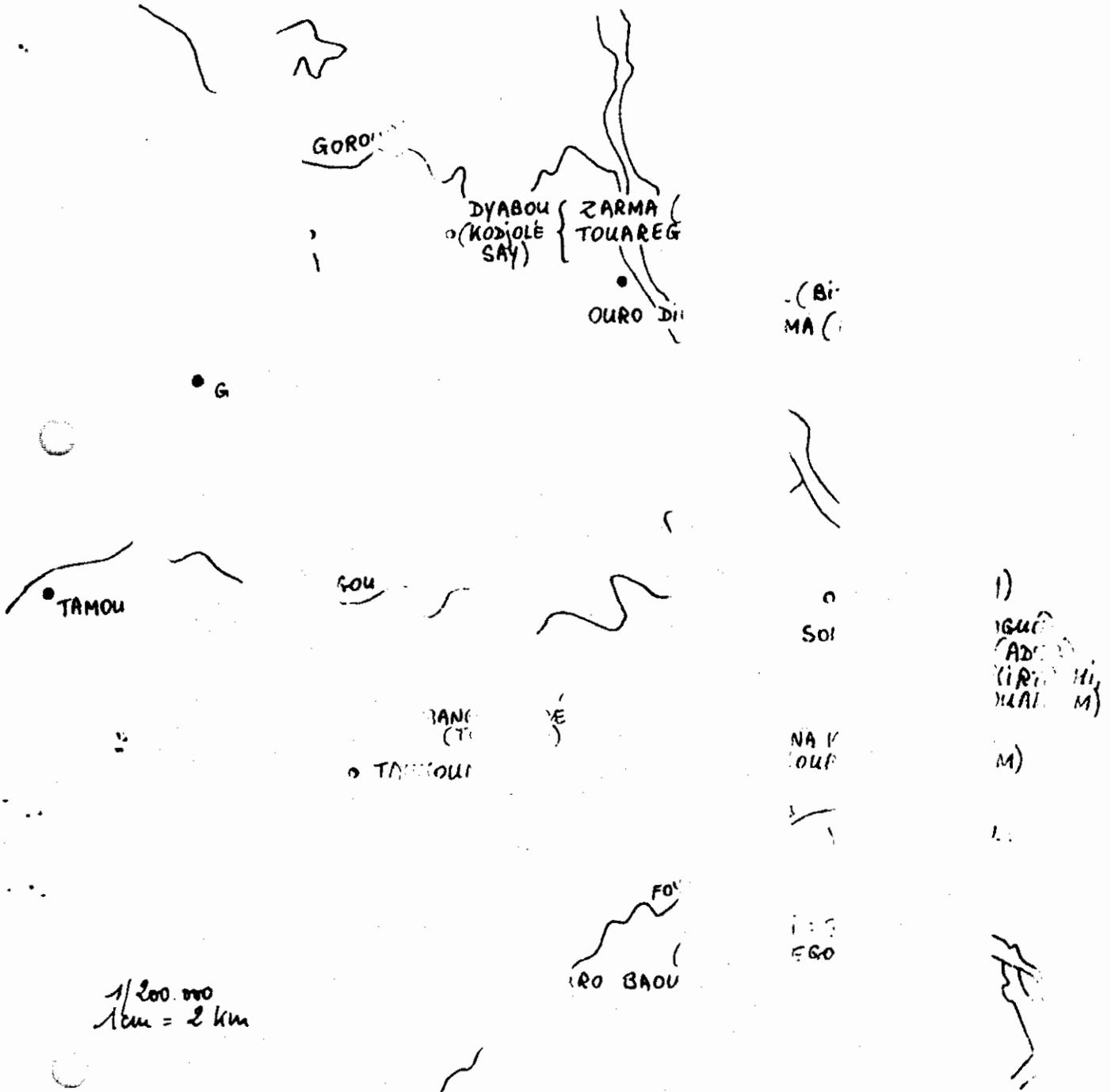
Handwritten notes in French, partially illegible due to fading and bleed-through. Some legible words include 'MOLI HAOUSSA' and 'MOLI HAOUSSA'.

IRSH. NIAMEY
1976

ARRONDISSEMENT DE SAY. ZONE 1

11

ORIGINE DES MIGRANTS RECENTS



June 22, 1976

Mr. David Shear
Director
AFR/SFWA
AID/Washington

Dear Dave:

I am enclosing a project identification document proposing a regional program to deal with the problem of inadequate rural water supply systems in the Entente countries. This PID has been developed by Mr. Steve Singer following consultations in the five countries and with the help of the staff of ADO/Wisney.

The PID clearly addresses a critical development problem. Improved rural water supply systems are essential to improved health and productivity of the rural populations of these countries. Moreover, it is clearly the poorest of the rural poor who stand in greatest need for access to potable water for their daily needs. As the PID notes, this is a problem recognized by all the countries and accorded very high priority in their development planning.

The preliminary survey indicates that there is here a major problem affecting something like 15 to 20 thousand villages and a rural population of the order of 10 million people. It is a problem which will require a concerted effort by the countries and the people concerned for a long period. Probably this is an area which will remain of concern over the next twenty years or so. It is also clear that while high priority is accorded to development efforts in this field, and while many donors are working with the several governments the attack on the problem lacks effectiveness.

The problem seems to be more than just a lack of resources. There is something wrong with the management systems being used to direct resources into improved local water supply systems. For one thing, the cost of putting in wells appears several times higher than in

AGENCY FOR INTERNATIONAL DEVELOPMENT				1 TRANSACTION CODE		PID																	
PROJECT IDENTIFICATION DOCUMENT FACESHEET				<input type="checkbox"/> A Add <input type="checkbox"/> C Change <input type="checkbox"/> D Delete		2 DOCUMENT CODE																	
<i>To Be Completed By Originating Office</i>						1																	
3 COUNTRY/ENTITY RDO Niamey				4 DOCUMENT REVISION NUMBER																			
5 PROJECT NUMBER (7 digits) 626-0210		6 BUREAU/OFFICE A Symbol AFR B Code 06		7 PROJECT TITLE (maximum 40 characters) Regional Rural Water Supply																			
8 PROPOSED NEXT DOCUMENT A. <input type="checkbox"/> 2 - PRP <input checked="" type="checkbox"/> 3 - PP B. DATE MM YY 1 1 7 6				10. ESTIMATED COSTS (\$000 or equivalent, \$) = 12000																			
9 ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY 7 8 b. FINAL FY 7 8				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">FUNDING SOURCE</th> <th rowspan="2">Life of Project</th> </tr> <tr> <td>a. AID Appropriated</td> <td>12000</td> </tr> <tr> <td>b. OTHER</td> <td>1</td> </tr> <tr> <td>US</td> <td>2</td> </tr> <tr> <td>c. Host Country</td> <td></td> </tr> <tr> <td>d. Other Donor(s)</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;">TOTAL</td> <td>12000</td> </tr> </table>				FUNDING SOURCE		Life of Project	a. AID Appropriated	12000	b. OTHER	1	US	2	c. Host Country		d. Other Donor(s)		TOTAL		12000
FUNDING SOURCE		Life of Project																					
a. AID Appropriated	12000																						
b. OTHER	1																						
US	2																						
c. Host Country																							
d. Other Donor(s)																							
TOTAL		12000																					
11 PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)																							
A APPROPRIATION	B PRIMARY PURPOSE CODE	PRIMARY TECH CODE		E FIRST FY 78		LIFE OF PROJECT																	
		C Grant	D Loan	F. Grant	G Loan	H. Grant	I. Loan																
(1) SD	510B	545		12000		12000	2.50																
(2)																							
(3)																							
(4)																							
TOTAL				12000		12000																	
12 SECONDARY TECHNICAL CODES (maximum six codes of three positions each)																							
190																							
13 SPECIAL CONCERNS CODES (maximum six codes of four positions each)						14 SECONDARY PURPOSE CODE																	
BRW		LAB		PART		TECH																	
TNG																							
15 PROJECT GOAL (maximum 240 characters)																							
Improvement of health and general quality of life in the rural area of the Entente States.																							
16 PROJECT PURPOSE (maximum 480 characters)																							
Improve the systems capacity in Niger, Togo, Upper Volta and Benin to provide the rural populace with quantitatively & qualitatively adequate village water supplies.																							
17. PLANNING RESOURCE REQUIREMENTS (staff/funds) PRP - 3 man design team - 5 weeks each \$35 000 PP 2 man design team - 5 weeks each \$35 000																							

Regional Rural Water Supply FID
(Benin, Togo, Upper Volta and Niger)

The Project.

The Regional Rural Water Supply project addresses two priority areas - health of the rural populace and the level of productivity of the rural farm family. The purpose of the project is basic - the provision of quantitatively and qualitatively adequate village water supplies. The mechanism to be used to achieve this purpose are the governmental, quasi-governmental and private systems which are or can be developed to construct and maintain village wells and the education processes required for safe water usage.

The Problem.

It has been estimated that the incidence of disease in Benin, Togo, Upper Volta and Niger would be cut by 50% if potable water were assured to all individuals. Water in the rural areas, where 90% of the inhabitants live and where the poorest segments of the population are found is characterized by any and usually all of the following:

1. The water supply is located at great distances (often up to 10 kilometers) from the village. Gathering the water supply is traditionally women's work and one on which she spends as much as 20% of her working day. It involves hauling water from wells that are 30 meters deep or more and walking to her village carrying 50 pounds on her head and a baby on her back. Obviously, only the minimum water for cooking and drinking is brought home. Personal cleanliness, especially for children, is the last priority.

2. In the rainy season, water is gathered from closer available sources, usually mud holes and bogs in which children are playing and around which cattle are grazing.

3. Well water itself is quickly contaminated, first by the goat skin bladders used as water dips and finally by the incidence of small animals falling into the wells.

Water plays a predominant role in the transmission of such enteric bacterial infections as typhoid, paratyphoid, bacillary dysentery, and cholera. It is also important in the epidemiology of some salmonella and shigella infections, and in amoebiasis. It is indirectly connected with the transmission of

malaria, filariasis, onchocerciasis and schistosomiasis. It is also sometimes associated with undulant fever, tularaemia, hepatitis and various other protozoal and virus infections.

More simply, diarrhoeal diseases are the largest single cause of death in the tropical world and these diseases are largely water-borne. These diseases are proliferate in the estimated 15,000 villages in the project area that are without adequate potable water.

The importance of the water supply system was recognized by the CWR DAP which cites some of the disease problems mentioned above and the important relationships between the availability of potable water and health and nutrition level of the rural poor. The DAP also points out the central role which health plays in economic development. The casual connection between low levels of health and the reduced level of farmer productivity, particularly those suffering from the very parasitical diseases that an improved water supply would alleviate, is well documented.

The scope of the problem is clear. Clean water is essential to good health which is in turn a sine qua non of development and clearly a program to furnish potable water to rural villages is called for throughout the region.

While the separate countries have different local situations, and responses must be somewhat varied, nevertheless there emerges a common pattern. Each country has a rural water deficit far beyond the capabilities of any short-term foreign intervention. In each, the problem is too large to be solved by an expatriate contractor drilling the necessary number of wells over the next few years even if such a program were socially or economically desirable. For each, the local capacity to construct inexpensive wells, and of equal importance to maintain them, must be created.

The Response,

The project proposes to improve the well construction/maintenance systems of the four countries (primarily governmental and quasi-governmental systems) and to encourage local entrepreneurs to enter the field. While assisting the hydraulic systems to be able to produce and maintain water supplies at less cost and more efficiently, the project will construct 2,000 wells in the four countries.

The project will include equipment, expert assistance in both technical and management fields, credit and training components. Limited overseas

training would be undertaken only as and if sophisticated needs, such as for hydrologists, are encountered. It will be carefully coordinated with other donors working in the area. Out of this coordination, an explicit goal of the project, will grow an overall water management plan to assure the absence of future deleterious ecological effects from too many wells in the wrong place or from a polluted aquifer.

Significant direct effects of the provision of adequate water supply systems are calculated to be:

1. Substantial reduction in the incidence of death and sickness due to water borne diseases.
2. Increased productivity and production of the farm family.
3. Substantial savings in time and effort to those women who now bear the brunt of the labor and anguish caused by bad and inadequate water supplies. Time and energy now devoted to the hauling of water for daily use will be reduced substantially and can be used more productively in the raising of livestock and gardens (also traditionally women's work).
4. The reduction of infant mortality due to water borne diseases would make family spacing more acceptable.

The importance of water supply, and particularly rural water supply, has been recognized by the Entente States, and has been adopted by each as a top development priority. All the concerned governments have programs underway, and are actively cooperating with the international donor community. Already realized or anticipated programs have supplied the major population centers with more or less reliable water systems. The more difficult, and, in terms of population, more significant problem of rural water has received more attention in the Sahelian states of Niger and Upper Volta than in coastal Benin and Togo, but needs have scarcely been touched in any of the Entente countries except the Ivory Coast.

The Ivory Coast is far ahead of the other Entente States in resolution of its rural water problems. The Societe pour la Realisation de Forages d'Exploitation en Cote d'Ivoire (FOREXI), a state enterprise which undertakes most well installation in the Ivory Coast, has purchased commercially from the US and Europe \$5 million worth of sophisticated drilling equipment, and has strong technical assistance support from CIDA to assure the equipment's proper use. The Societe Autonome Hydrolique, which is responsible for

determining where to drill, is also well equipped and with a large component of foreign (French) technical assistance. There seems little need for further concessional assistance in this area, hence Ivory Coast has not been included in this PID.

The proposed project would attempt to improve the systems and develop additional capacity within Benin, Togo, Upper Volta and Niger to meet the potable water needs of an important segment of its rural population. To achieve this goal in countries with different needs and resources and at different stages of sophistication in their water resource development calls for programs regionally conceived in so far as funding and sharing of mutual experience, but administered on a country-by-country basis. The project would initially be restricted to selected regions in each country from which replication could later spread.

The proposed project envisions a systems approach to the rural water problems of the Entente States. Rather than simply building up the capacity of the national water agencies described below, the project would also study the possibilities of decentralizing and commercializing drilling. It might be feasible to relieve the burden on the national government, and reduce construction costs by encouraging small entrepreneurs to engage in this activity. African Enterprises Loan could be employed toward this end. In any case, credit possibilities must be investigated.

The maintenance problem is central to the rural water question. It can be finessed to a certain extent by digging large-bore wells with no pumps where one does not have to go too deep - say under 40 meters - but the health costs are considerable. Such a well quickly becomes polluted by the buckets and refuse dropped into it. Although the importation of overly sophisticated technology is a constant danger in foreign assistance, the first step toward mechanization must be taken if health conditions in rural West African are to improve.

The capacity to carry out routine maintenance of a simple hand/foot pump exists in most medium-sized villages in West Africa. With training, whoever fixes the local bicycles can also fix the local pump. The project should include training to instruct local mechanics in basic pump maintenance and repair. A payment mechanism within the village needs to be developed to make it worth the mechanic's while to work on the pump. National and regional repair capacity can then be reserved for major problems.

According to some sources, a large bore well does not have to be completely sealed to give pure water. It is said that if the pump platform covers only part of the well opening, water drawn by buckets through the open portion will be polluted while pump water drawn from several meters down in the aquifer remains pure. This is an important consideration when attempting to satisfy the water needs of several hundred people with one well. If true, water for washing, animals and perhaps cooking can be drawn in the traditional manner while the pump furnishes drinking water. Peace Corps/Niger is experimenting with this system and finds that villagers quickly become cognizant of the difference between pure and polluted water, and of the proper use of each. Thus the introduction of potable water into a village provides an excellent vehicle for basic health education.

A summary of the rural water situation in the individual countries, and other-donor activities is provided as follows:

BENIN

The Direction de 'Hydrolique (DH) is part of the Ministere d'Equipement which now performs the public works functions of the old Ministere des Travaux Publics, Transports, Poste et Telecommunications. Drawing upon the research and assistance furnished by UN and FED, the DH has prepared a preliminary plan outlining a program to create 2400 rural water sources (points d'eau) throughout the country in the 1977-1992 period.

The DH is thinking in terms of large-bore (1.8 meter) wells, 80% of which would be less than 60 meters deep. It is enthusiastic about the Vergnet system, a foot-pump which is easy to use, and theoretically easy to maintain though gasket wear has proved a problem in initial testing in Niger.

This 2400 well program is laid out in 3-year, 500-well tranches, the first of which is costed at \$7.6 million including 5% for studies, 10% for maintenance, and 30% for contingencies. This works out to \$15,000 per well which is several hundred percent above US costs. No attention has been paid to self-help possibilities, nor to the problems of developing a maintenance system.

Other-donor activity in well construction is limited to a Canadian project to drill 250 wells in conjunction with dispensaries as part of a preventive medicine project combined with basic health education. The original project restricted its educational efforts to the rural development aspects of the project and planned for drilling operations to be carried out by a Canadian contractor. That contractor has now gone bankrupt, and CIDA is

studying other alternatives. Obvious scope exists for coordination of efforts.

An AID program might be centered in the Northern part of the country where water needs are most acute.

TOGO

The Togolese plan for the period 1976-1980 places water as the first priority as part of a campaign of agricultural and rural development designed to bring Togo to a take-off point in economic growth. Responsibility for the rural water aspects of this plan are divided between the Ministry of Plan and the Service Hydroligue (SH) in the Ministry of Public Works. Animation Rurale is also interested in capitalizing on the health aspects of the program.

The SH estimates a need for 4,000 wells to be constructed over approximately the next 15 years. Precise information about the type of wells and kind and extent of pumps desired is not presently available, nor was costing.

Although German, Canadian and French aid are heavily involved in water networks for medium-sized cities, only the Peace Corps and some missionary groups are currently engaged in rural water programs. The Peace Corps drills small-bore wells of up to 30 meters using percussion drills hand-powered by the local villagers. The villagers also furnish food and lodging for the drilling crew and contribute about \$100 toward costs. Peace Corps feels that the villagers value and care for the wells, and especially the pumps, more carefully because of their contributions, but characterizes hand-powered percussion drilling in hard country as both heart-and-back breaking. Volunteers have used pumps from the US, Ivory Coast, Nigeria and France, but have not yet settled on one as clearly superior to the others.

The Canadians will be leaving behind a certain amount of equipment from the exploratory drilling they have done for the Lome water supply. They would consider applying this equipment to a rural water supply program, and perhaps to the creation of a national well-digging corporation. Clearly coordination with CIDA is called for in Togo as well.

An AID program could be run in the North of just below the extreme north, an area where resettlement is taking place.

UPPER VOLTA

The rural water supply organizational structure in Upper Volta is more complex than elsewhere. There is a centralized agency concerned with rural water, the Direction Hydroligue et de l'Amenagement de l'Espace Rural (HAER), but most of the eleven Organismes Regionaux de Developpement (ORD) have their own rural water activities, and a recent reorganization has put HAER under the office responsible for coordinating the various ORD's. The Government is in the process of developing an overall water policy (due June 30, 1976) which will include a five-year goal of five liters of water for each villager to be increased to 25 liters in ten years. To achieve the latter, approximately 5500 water sources will be necessary. HAER is also discussing local manufacture of a pump: pump manufacture or at least assembly should be investigated in each of the countries under this project.

HAER has been thinking in terms of large-bore, cement-lined wells which it would execute in conjunction with ORD's. The Director of HAER favors large-bore wells because of the greater self-help possibilities. The self-help initiative would be a new one for HAER, but has been applied by Peace Corps and other donors.

The Canadians, Dutch, Germans, FED, UN, and World Bank are all involved in well-digging operations in Upper Volta as are numerous voluntary organizations. The ILO is running a well-digging training program with AID funding. The World Bank program is the only one which is national and sizeable - 20 small-bore and 250 large-bore wells to date and 250 small-bore and 400 large-bore wells anticipated. The wells are done by the Fond du Developpement Rural, an IBRD-financed institution engaged in broad-scale rural development programs which include wells. The FED has put in 41 small-bore wells since 1974, most of which are no longer functional due to lack of pump maintenance. The UNDP is giving technical assistance to HAER. The Peace Corps has had success with a program of deepening already existing wells that have been dug as deep as possible by hand, and need the services of a compressor team with power tools and a small crane only to work down a few meters into the aquifer.

CDO/Cuaga may wish to incorporate a wells program into its Eastern C/D efforts.

NIGER

While planning and siting of wells in Niger is done by the Ministry of Plan,

execution is under the Office des Eaux du Sous-Sols (OFEDS). The former estimates that 5,000 additional wells are required in Niger to supply minimal water needs of the rural population. OFEDS does large-bore wells without pumps for human consumption, and small-bore wells with power-driven pumps usually for irrigation and livestock. There is a sense that it is time to move on to a more sophisticated, more sanitary rural water supply system, and OFEDS is now experimenting with hand and foot pumps.

While the French, Germans, Canadian, Danes and UN organizations all have well programs of between 100 and 350 units, the most important program is that of the FED which has already funded 1100 wells and has projected 680 more. Many of these include a self-help component aided by WFP food for work. The magnitude of other-donor involvement necessitates a more selective AID involvement than, for example, in Togo or Benin. In the latter two countries, AID could virtually create a rural water supply capacity. Clearly this has already been partially done by the FED in Niger, and AID input might better be restricted to progressing to sanitary wells, that is, to pumped wells and an organized capacity to maintain them. Church World Service is bringing in 140 pumps to use on existing well sites. The result of this test program should be useful in development of a full-scale project by AID.

AID involvement in Niger makes most sense in the Niamey Department where it would fit in with Integrated Rural Development, and other projects.

Financial Requirements and Plans.

In order for a rural water supply and maintenance system to be institutionalized, approximately 500 wells should be constructed in each country over a three-year period during which materials and machinery are imported, a system created, training given, and the foreign technical assistance component performs its function and phases out. The costs of such a program will vary depending upon the sophistication of machinery used, the self-help component, the amount of training, type of pumps, proportion of small and large-bore wells and other factors.

One thing, however, is clear: Wells currently being constructed in the Entente States are costing too much.

Taking the cost projections from Benin - the most complete we have - as an example, the initial 500 well tranche involves the excavation of about 20,000 meters of wells at a projected cost of \$5.5 million for the digging

alone plus the cost of pumps, studies and contingencies. A rule of thumb, somewhat on the liberal side, for well construction in the US is \$2 per vertical foot and inch of bore. Thus a five-inch well - an acceptable size for hand pumps - in the US would cost \$10 per vertical foot. The drilling of these 20,000 meters (65,600 feet) would then cost \$656,000 in the US rather than the \$5.5 million projected for the same number of vertical meters in Benin. Expensive wells are not restricted to Benin. OPEDES in Niger charges FCFA 60,000 per vertical meter. This works out to \$76.22 per foot, or well over seven times the US cost. If the well is dug to water level by the villagers, the cost is cut to FCFA 30,000-35,000 per meter: still four times the US cost.

It may be argued that we are comparing apples and oranges, that hand-dug large-bore wells cannot compete with small-bore wells dug by machines. Since the ultimate product, however, is in both cases water, the cost effectiveness of these alternative technologies must be compared. Self-help construction of large-bore wells is attractive, particularly if the well can be used with traditional buckets at the same time it yields pure water at the pump, but it is doubtful that this luxury is worth reducing the number of wells by three-quarters for a given investment of resources.

Assuming a reasonable mix of technological alternatives is adopted (the determination of this mix will be a task of the PRP team) we believe that 2,000 wells can be dug, and the technical assistance imported and training given to sufficiently improve the hydrolique systems of the four countries for \$3 million per country, \$12 million for the entire project. Host country costs would include all local personnel, and all infrastructure currently in country. Ultimately, all project activities must be integrated into the national budget. A financial plan to accomplish this should be developed in the PRP. The possibility of developing a payment mechanism by the villagers themselves must also be explored.

Development of Project.

The next step in project implementation is the PRP. A PRP team should spend approximately one week in each of the countries beginning in late September. If this schedule is adhered to, the PRP could be written in the first part of November, and submitted by November 15, 1976.

The PRP team should consist of technicians experienced not only in water drilling operations but also in the organization of water services, the application of intermediate technology and systems analysis. French language capacity and experience in the West African milieu are desirable. We would suggest that the team include a water engineer, a hydrologist, a public health expert, an economist, and a management/systems expert.

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 To Be Completed By Originating Office

1. HARRIS/TYPE CODE
 A Add
 C Change
 D Delete
 A

PID
 DOCUMENT CODE
 1

3. COUNTRY ENTRY
 ADO Niamey

5. PROJECT NUMBER (7 digits)
 [626-0211]

6. BUREAU OFFICE
 A Symbol B Code
 AFR [06]

4. DOCUMENT OCCASION NUMBER

7. PROJECT TITLE (maximum 40 characters)
 Regional Human Resources Development

8. PROPOSED NEXT DOCUMENT
 1 PRP
 A [2]
 3 PP
 B DATE [10/7/6]

10. ESTIMATED COSTS
 (\$5000 or equivalent \$1 9527)

FUNDING SOURCE		Life Cycle
a. AID Appropriated	5982	3 yrs.
b. OTHER	70	
U.S.	0	
Host Country	1505	
d. Other Donors	2000	
TOTAL		9527

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 a. INITIAL FY [78] b. FINAL FY [80]

11. PROPOSED BUDGET AND APPROPRIATED FUNDS (\$5000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE		F. FISCAL YEAR 78		LIFE OF PROJECT	
		C. Grant	D. Loan	E. Grant	G. Loan	H. Grant	I. Loan
(1) EH	600R	721		2392		3590	
(2)							
(3)							
(4)							
TOTAL				2392		5982	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)
 730

13. SPECIAL CONCERN CODES (maximum six codes of four positions each)
 BR [] PS [] PART [] TECH [] TNC []

14. SECONDARY PURPOSE CODE
 180

15. PROJECT GOAL (maximum 240 characters)
 Institutional self-sufficiency of Niger, Ivory Coast, Benin and Togo in the training of adequate numbers of competent personnel at all levels in the rural agricultural and livestock sectors by 1986.

16. PROJECT PURPOSE (maximum 480 characters)
 (1) Comprehensive agriculture/livestock manpower survey of the four target countries by Jan 1980; (2) Increased competence of mid-level rural economy technicians in planning and management by Dec 1980; (3) 100% increase in number of participants in relevant mid & lower level agriculture and livestock institutional training in Niger by Dec 1980 and an indigenization of the teaching staff.

17. PLANNING RESOURCES AND REQUIREMENTS (staff/funds)
 PRP: Agricultural Manpower Devt. Specialist, Sociologist/Demographer, International Educational Specialist, Design Officer, Engineer, for 6 mos, \$70,000.

18. ORIGINATING OFFICE CLEARANCE
 Signature: *Albert R. Berman*
 Title: Regional Development Officer/Niamey
 Date Signed: MM [06] DD [22] YY [76]

19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution
 MM [] DD [] YY []

WEST AFRICAN REGION AG SECTOR
HUMAN RESOURCE DEVT PLANNING AND IMPLEMENTATION
(PHASE ONE)

1. Summary of the Problem and Proposed Response

Narrative: Through the intervention of UNDP, IBRD, FAC, USAID and other donors, the need for massive reorganization of Human Resources Devt in Niger, Ivory Coast, Benin and Togo has repeatedly been expressed; not only for the agricultural sector, but in the health, entrepreneurial, education, mining and other industries sectors as well.

Bilateral and multi-lateral donor responses have been largely fragmented, uncoordinated and often inappropriate in terms of the target countries' abilities to keep pace with the demands for trained technicians to implement foreign donor activities.

It is equally clear that unless certain pre conditions for further development efforts are established, the target countries' abilities to implement and capably indigenize donor projects will continue to decline.

The most significant target sector in all four countries for involvement of the rural population in development activity is Agriculture and Animal Industries; and the need for research, coordination of donor activities and integrated national planning is greatest in this sector. Phase one of this project will, therefore, address the Agriculture and Livestock sector but it is recognized and emphasized that an integrated comprehensive human resource devt strategy involving all sectors is indicated as an ultimate goal.

There are several constraints and systemic obstacles that must be addressed prior to the commencement of such a comprehensive human resource strategy; and, at the same time, village level agricultural development and the indigenization of institutions training rural agricultural technicians must continue to take place.

The general purpose of Phase One of this project will be to address these constraints and obstacles, while at the same time, as indicated in the USAID Niger DAP, continue to develop and indigenize a prototype practical agricultural institution, in collaboration with UNDP, to at least partially meet the ever increasing demand for mid and lower level agricultural technicians. This prototype institution will have great impact upon the development of functional agricultural technology for Niger, and will serve as a model, if successful upon evaluation, for implementation in other countries.

The constraints and systemic obstacles that inhibit the development of a coherent ag sector human resources strategy for the Entente countries (each country to a greater or lesser degree) are as follows:

I. Lack of Accurate Data Base - Although several brief attempts have been made to survey projected technical and professional agricultural manpower needs, as they relate to the existing human resources status, none have been serious, comprehensive efforts that consider not only the Governments' short and long term planning, but the intentions of donor activities and the Governments' receptivity to such activities. There is a need to relate the results of the oft postponed population census, available information as to migratory patterns and recent developments in Sahelian and coastal agricultural technology, with the present and projected technical and professional manpower needs situation. Without this kind of data, attempts to implement ag sector institutional development and non-formal education programs are reduced to speculation and guesswork.

II. Lack of Mid-level Management and Resource Utilization Expertise - Each of the target countries maintains intermediate level agricultural institutions and has developed programs for the training of village level extension agents. Apart from consideration of the quality of such programs and the quantity of graduates, it is clear on the basis of previous studies,* that mid level agricultural technicians, particularly extension agents, are less effective than they could be, due to a lack of training in practical management methods and techniques. This problem compounds the difficulty of developing a human resource strategy since the most technically qualified personnel often find themselves physically removed from, and unable to render assistance to the target population of rural farmers due to their own inability to mobilize available resources.

III. The Systemic Institutional Fragmentation of Ag and Livestock Training Resources - The American concept of integrated resource sharing in the ag and livestock training sector is alien to Niger and to a lesser extent in Benin, Togo and Ivory Coast. This results both from a francophone tendency toward specialized institutions and a series of donor fiefdoms having been created over a period of years combined with the natural Weberian tendency of organizational bureaucracies to establish credibility and perpetuate themselves.

This fragmentation of physical and human resources manifests itself in two ways: a) There is a clear-cut distinction between Research and Academic institutions resulting in a competition for scarce expertise and a desire to duplicate facilities for research and practical application.

b) Separate institutions have been developed for the training of levels of personnel within a given sector. These institutions frequently fall under the jurisdiction of separate ministries. For example in Niger, at least five institutions deal with the preparation of personnel in the livestock sector; and a sixth can be included if one considers that veterinarians need to be trained abroad. One institution offers short term training to low level farmers another prepares veterinary nurses, another prepares ag extension workers in aspects of veterinary practices, another prepares mid level professional technicians and a fifth is to conduct livestock research.

The separation of institutions tends to inhibit the upward career mobility of agricultural field personnel due to the inherent significance of academic preparation; tends to prevent the integration of curriculum in the livestock sector and inhibits the sharing of physical facilities resulting in wastage and duplication of efforts.

Given the magnitude of these constraints combined with USAID's desire to coordinate and integrate its activities with those of other donors, a two-phased project is foreseen the first phase of which is herein proposed, and whose purpose is three-fold: *

1. To achieve an in-depth comprehensive analysis of the present status and projected manpower needs in the agricultural and livestock sectors of Benin, Ivory Coast, Niger and Togo by January 1980.

* In the design of regionally focused projects, one can attack problems that are common to all of the target countries while allowing for differences in institutional organization and levels of development. The third purpose of this project has particular relevance for the COM, but can serve as a prototype for similar institutions in the other target countries. This project could, indeed, have been submitted as two, or even three separate PID's, but it is felt that the sharing of short term and long term consultant personnel serving all three purposes would result in a significant cost savings and will foster an integrated approach toward the solution of ag sector problems.

2. To significantly increase the competence of mid-level agricultural technicians in project management, planning and human resource mobilization; and to indigenize institutional capability to transmit management and planning expertise by December 1980.

3. To expand the Nigerian institutional capability for the practical application and transmittal of relevant village level agricultural and livestock technology; and to increase the number of participants by 100% by December 1980.

a) The achievement of these three purposes will lead to a sub-sector goal within a three year time frame, which is the development of a formal and non-formal human resources strategy in the agricultural and livestock sector that would be implemented over a five year time frame and which would relate toward the accomplishment of the sectoral goal which is the institutional self-sufficiency of each of the four target countries in the training of adequate numbers of competent personnel at all levels for rural agricultural and livestock production by 1984.

b) 1. Outputs

A) Ag and Livestock Sector Manpower Analysis. This output which is perhaps self-explanatory envisions a team of two experts; one an agronomist with experience and training in LDC agricultural manpower development and the other a statistician/demographer, who will spend a total of 24 months in the field (six months in each country) who will study and analyze the following among others:

- (1) The present status of ag and livestock training.
- (2) The present status of ag sector manpower.
- (3) Ongoing agricultural and livestock projects (national and donor subsidized).
- (4) Projected agricultural and livestock projects (short term and long term)
- (5) Projected agricultural and livestock manpower needs based upon a) nature of crops and environmental variables; b) relevance of standard formulas for manpower needs projections; c) migratory patterns of population; d) detailed social analysis of population.

The results of their investigation should be available EIT January 1980 for the use of a design/evaluation team which will formulate the PRP for the phase two comprehensive agricultural sector human resources development project. This manpower survey team will be based in Niamey with frequent extended travel to the other target countries.

B) In-Service Training of Mid Level Ag and Livestock Technicians in Project Management, Planning and Human Resource Mobilization.

This output envisions the financing of intensive international seminars in agricultural management and planning to be conducted yearly for three years in each of three of the target countries, involving participants from each country who are engaged in positions of mid-level agricultural leadership and who will be identified by the target country governments. The costs of these seminars should be shared by USAID and the participating countries who will contribute transportation and per diem. It is estimated that each country would send 15 participants each year for three years, each seminar, therefore, addressing 60 participants.

C) Indigenization of Agricultural Training Institutions.

A total of four scholarships per country per year will be furnished to graduates of the highest level of national agricultural institutions to receive one year of post-graduate specialized training, preferably in Agricultural Economics or Range Management, in the US or other USAID approved third country institutions with the proviso that participants return to accept teaching positions in agricultural training institutions. This output is essential to the success of this project in that the agricultural institutions in each country depend heavily upon expatriate faculty who provide neither continuity nor long range research capability.

D) The Establishment of a Third Cycle (the 3th and 6th years of study post BAC) at the Ecole Nationale Supérieure d'Agriculture of Ivory Coast, Specializing in Agricultural Economics.

This output will create a regional institutional capability in a key specialization not presently available in West Africa. It could ultimately lead to other post graduate agricultural specializations in agronomy (crop breeding, crop production and soils) and in animal science which is practically unknown in the French system. The establishment of a third cycle would require financing four professors under a contract to a US land-grant institution for a period of two years with a yearly renewal option.

E) The UNDP has for a period of 10 years supported the development of the Practical Institute for Rural Development (IPDR) at Kolo, Niger. While continuing to support Kolo, the UNDP and the GON have solicited assistance from USAID to:

(1) Expand upon the practical application of the theoretical program by assisting in the construction of a demonstration/research/extension farm facility with appropriate equipment.

(2) Assist in the development of a functional and relevant curriculum for training in appropriate village level agricultural and animal science technology.

(3) Contribute to the establishment of an additional IFDR facility at Maradi that would be appropriate to a different ecological zone.

In addition to serving as a practical training site for mid-level agricultural students and peasant farmers, this output would contribute largely toward the reconciliation of the third systemic constraint relating to the fragmentation and duplication of resources, by encouraging the shared use of these facilities for research and for university level training, involving three and possibly four institutions. The need for increasing the quantity of rural extension agents is clear, but the need for qualitative improvement in the appropriateness and scope of the curriculum is even greater. This output, therefore, will require not only capital development but the inclusion of a counterpart USAID project manager to 1) analyze the effectiveness of the existing program;

- 2) assist in curriculum development;
- 3) advise in project management;
- 4) supervise physical construction;
- 5) assist in procurement of supplies and equipment;
- 6) make recommendations for phase two expansion and potential for spreadability;
- 7) encourage shared use of the facility;
- 8) encourage multi donor cooperation;
- 9) develop effective programs for transmittal of information to rural farmers.

2. Technical and Physical Resources Required:

Output A) Manpower Survey -

- 24 mm Agronomist/Ag Manpower Specialist
- 24 mm Statistician Demographer
- 3 mm Short term contract sociologist

Two four-wheel drive vehicles, supplies, equipment, commodities and air transportation.

Output B) Management Seminars

- 18 mm - Four short term consultants
for 3 annual visits of 6 weeks

Conference space, hotel space, supplies, equipment, vehicle rental.

Output C) Participant Training

Four scholarships per country per year for three years to US or third country institution, total of 48 scholarships.

Output D) Third Cycle ENSA Ivory Coast.

Contract for four full-time professors over three year period (Ag Economics) to a US land grant agricultural institution.

One four-wheel drive vehicle.

Output E) IPDR - Niger

36 mm Project Manager (educational administration)

6 mm short-term curriculum development (Agronomy, Animal Science).

One four-wheel drive vehicle.

Capital Development

1. Expansion Kolo

Complete development of 60 hectare practical demonstration farm including livestock feeding station, poultry station and fencing.

2. Construction of additional IPDR at Maradi

Including, four dormitories, 2 dining halls, one conference room, 12 classrooms (30 students), faculty room, toilet and shower facility, 5 laboratories recreation field, 2 audio-visual classrooms, 1 library 3 administrative offices, one reception office, 5 faculty offices 1 stable, 3 warehouses, 2 workshops and one demonstration farm for practical field work.

3. Three years.

c) Major Assumptions

1. That the Governments involved will continue to fund national aspects of this project as USAID withdraws its input.

2. That the Governments involved will identify participants to take part in management seminars.

3. That the governments involved will identify candidates to participate in scholarship programs.

4. That UNDP will continue its support of the Kolo IPDR program.

5. That the GOIC will furnish space, materials, equipment and students for the triennial cycle.

d) In Niger the UNDP and the Fonds European de Developpement (FED) has long supported both the agricultural and livestock sectors through a wide variety of sectoral programs. The French FAC has also developed a series of agricultural and livestock projects in Niger most of which are ongoing, with others projected. USAID is now implementing a comprehensive cereals production program and is developing a livestock project. All of these projects, as well as others in Ivory Coast, Benin and Togo will be carefully documented in the PRP, but the significant issue to be raised here is that the donor projects are largely uncoordinated within the government, in a sense that they place excessive demands upon the GOE's ability to train agricultural and livestock technicians in an effective and timely manner. There is an immediate need to collaborate with the UNDP in their planned expansion of the IPDR at Kib and to contribute toward the development of an additional facility for the training of the lower level ag extension workers at Maradi. USAID has contributed, and is continuing to contribute toward the Development of Young Farmer Training Centers throughout the country, offering programs geared toward largely illiterate peasant farmers, but the need for lower intermediate level ag extension personnel is nonetheless acute.

e) All of the elements of this project are specifically addressed in the country MAP's.

f) The direct and indirect beneficiaries of this project will differ as per sectoral outputs. The indirect, and in some cases, direct beneficiaries will be the rural peasant farmer. The ease for lower and intermediate level institution building and indigenization has been frequently documented and the beneficiaries thereof are self-evident in the case of institutions that teach agricultural rural development.

g) The purpose of the indigenization of institutions is to create a long term credible resource for the transmittal of information. The specific projects at Kolo and at Maradi are to serve as prototypes for possible implementation in other countries and within Niger. The village relevant curricula and technology that will be developed at Kolo serving a variety of ecological zones can have relevance and practicability in a number of Sahelian and coastal countries. The training of mid-level agricultural technicians in management and planning will multiply itself many times as these technicians work and advance within their systems.

2. Financial Requirements and Plans:

a) Costs

Output A) 51 mm @ 6,000 =	306,000
Two 4-wheel drive vehicles	24,000
Air transportation	10,000
Supplies and equipment	5,000
Output B) 18 mm @ 6,000	108,000
Conference space, car rentals, supplies and equipment	4,000
Output C) 48 scholarships @ 8,000	384,000
Output D) Land-grant institutional contract for 4 ag Ec professors per year for 3 years and 6 mm of consulting from US	1,235,000 <u>36,000</u> 1,271,000
One 4-wheel drive vehicle	12,000
Output E) 36 mm @ 6,000	216,000
6 mm @ 6,000	36,000
One 4-wheel drive vehicle	12,000
Supplies and equipment	10,000

Capital Development

1. Expansion of IPDR-Kolo
Dev'l of Demonstration Farm 421,000
(Estimate of cost given by
architects Ferrulle and Lalet,
under contract to UNDP, FAO)
2. Construction of IPDR at Maradi
(GON, UNDP and other donors to
furnish staff housing, equipment,
furnishing, utilities etc).

4 dormitories 253,000
2 dining halls 126,000
conference room 253,000
12 classrooms 658,000
Faculty room 67,000
Sanitary facilities 42,000

contd

contd

Five laboratories	125,000
Recreation field	63,000
2 audio-visual classrooms	30,000
1 library	29,000
Admin & other offices	299,000
1 stable & barn	21,000
3 warehouses	126,000
2 workshops	67,000
1 demonstration farm (complete)	421,000
	<u>\$ 2,610,000</u>

Totals:

Output A)	345,000
Output B)	112,000
Output C)	384,000
Output D)	1,283,000
Output E)	<u>2,305,000</u>
Margin of inflation 10%	<u>230,500</u>
TOTAL	<u>5,962,500</u>

*Cost of FRP and FP design teams not included.

b) It is anticipated that the entire program will be funded in grant terms.

c) It is anticipated that UNDP/FAO in collaboration with other donors will furnish at least 50% of the remaining costs at IFDR-Maradi and that the GOIC will furnish all institutional support costs for the 3rd cycle at NEBA. Host country governments will fund air transportation and per diem for seminar participants and air transportation for overseas scholars.

3. Development of the Project

This project is being submitted for inclusion in the FY 78 cycle. The FRP will be submitted NLT 31 October 1976 and the FP will be submitted by June 30, 1977.

It is requested that AID/W issue an Indefinite Quantity Contract authorizing a team of three consultants to do appropriate analysis and design of the FRP. The team should consist of:

- An Agricultural Manpower Devt Specialist
- A sociologist/demographer
- An International Education Specialist

We request that R.D.S.O. furnish a project officer to head the team and an engineer to evaluate the capital construction component. All members of the PRP design team should be fluent in French and all should have had relevant African experience.

The PRP design team should be prepared to arrive in Niger MLT September 1, 1976 for a period of six weeks, with an additional week prior to and subsequent to the design for pre-project and post-project briefing in AID/W. Thus, a total of 8 weeks or 6 months excluding the R.D.S.O. component. The team contract should include funds for travel to Benin, Togo and Ivory Coast, secretarial costs, car rental and per diem.

4. Issues of a Programmatic Nature

Due to the regional aspect of this project, and the absolute necessity of short term manpower back-up to ongoing and projected USAID projects in the agricultural and livestock sectors in Niger, we request and urge AID/W to give this PID priority status in terms of expeditious review. We anticipate a prolonged time period for the collection and analysis of geographically widespread data, dealing with several ministries within each of four countries in the preparation of the PRP. A timely submission of the PRP will ensure adequate preparation time for the project paper.

For two years, Church World Service (CWS), with financial assistance from the AID Recovery and Rehabilitation Program, has been working with Tuaregs in the Tabelot Kori within an oasis valley of the Air Mountains northeast of Agadez. The area of the Tabelot Kori is typical of several such valleys in this region. The sparse annual rains drain into the valleys, and recharge water tables which have served for centuries to support irrigate gardens, notably of date palms. Several thousand Tuaregs have settled in these valleys, and taken up agricultural activities, in preference to nomadic animal herding which is their traditional way of life. About 2000 gardens have been cultivated in recent times, but half of these dried up and were abandoned during the Sahel drought in the early 1970s. Weekend date palms in the gardens which survived the drought were badly infested with an insect scale which killed many of the trees and greatly reduced the major income of the sedentarized Tuaregs.

CWS assistance has been a pilot effort with one community to determine whether and how these Air oases could be restored to productivity and the lives of the inhabitants improved. Improved wells and irrigation systems have been built or rehabilitated. Draft animals for irrigation have been imported to replace those lost during the drought. Biological techniques for controlling the scale infestation of the date palms have been employed, using an imported beetle (Ladybugs) which feeds on plant lice. Technical and support assistance has helped to improve agricultural techniques, including crop diversification, and to facilitate commercialization of agricultural products. Conservation and erosion control measures have been instituted and youth activities in school gardens have begun.

These pilot project efforts have been financed through \$150,000 in CWS resources, and \$125,000 in AID assistance through the R & R program. Results to date have proven the technical feasibility and the cultural acceptability of program approach and assistance activities. Local inhabitants and the Prefet of Agadez voiced their appreciation for the assistance and their desire for its continuation and expansion. GON support is excellent and the government supported Cooperative (UNCC) is involved in the commercialization aspects.

CWS is proposing to expand its activities under this project, and to extend them to other communities and oases in the Air Mountains. An enlarged program of three years duration is currently being designed for which CWS plans to request AID assistance through an Operational Program Grant (OPG). A detailed budget will not be available until the OPG proposal is

7
further along. However, it appears that the activities contemplated will require about \$400,000 to \$500,000 per year of AID assistance, additional to CWS and GON inputs.

The RDO recommends assistance to CWS for this project. It addresses the needs of a very poor and relatively isolated population which has suffered greatly from the Sahelian drought. The potential for increasing agricultural production has been proven to be very good in these oases, provided more assistance can be given in water resources development, agricultural diversification, cultivation techniques, and product marketing. With assured assistance measures, it is estimated that the current 1000 gardens could be increased four-fold in the Air valleys. The lot of the Air Tuaregs would be vastly improved and the valleys would be able to support a larger population of cultivators. The proposed project would be an important developmental effort in addressing the GON goal of self sufficiency in food production in the Agadez Department.