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S H A B A R E F U G E E R O A D S P R O J E C T

USAID PROJECT 660-0115

E V A L U A T I O N R E P O R T

April 1988

American ORT Federation

A. TAMIR
B. SIMS

Lubumbashi
22 April 1988

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SHABA REFUGEE ROAD PROJECT

USAID PROJECT 660 - 0115

EVALUATION REPORT

I. INTRODUCTION

This evaluation report will review the objectives of the Project Paper and the validity of its initial assumptions. Through the analysis of the productivity of the first period of the life of the project, we have established a new strategy and presented work plans for the years 1988, 89, 90 and make recommendations for better implementation of the project.

The present project envisaged the rehabilitation of rural roads in the Lualaba sub-region of Southwestern Shaba. It consisted the repair and the reconstruction of 3200 KM of first priority roads, regional roads and feeders roads, the repair and reconstruction of 600 ML of bridges and the construction of 1825 ML of culverts in a period of five years. The project components consisted of:
two resurfacing units, one leveling unit, one unit for culverts and one unit for bridges.

After the first year of work on the project we evaluate the productivity in 1987, and calculate the actual capacities of production for each activity.

From the updated capacities, based on actual performances and constraints, and assuming the reception of new equipment, we propose a new plan: including an inventory of roads and bridges to rehabilitate, specifying appropriate standards for the roads, redeploying the actual and future plant, reorganising the manpower and restructuring the teams to carry out the works outlined.

We scheduled the work to coincide with the priorities of the Health Infrastructure Project, 660 - 0114 , and the Water Supply Project, 660 - 0116 , in the region.

We conclude with suggestions to improve and maximize the effects of the work.

II. SUMMARY

In practical terms, the actual conditions, performances and constraints in the prior year, July - December 1987, have been carefully studied to produce a set of activity performance criteria with the means at the project's disposal.

These have been projected to establish quantitatively, what can be expected up until the additional equipment is available on site.

Priorities have been drastically changed and these same priorities apply, as from the commissioning date on site of the additional plant.

✓ The emphasis is on drainage - side drainage as a part of regrading - and the most important aspects on which the project will apply itself, the side turn-out channels and culvert crossings.

This way deterioration through rains will be reduced, thus preserving existing stretches of acceptable road and protecting new works.

Introducing regrading and side drain maintenance on all the sections of road in the project, at least once a year, will train OR personnel as how to systematically and practically carry out maintenance, without lowering the level of the road.

Resurfacing will be carried out on stretches where the road level is lower than the adjacent terrain and where practical, but the activity will also include point à temps.

Regarding bridges, repair and reconstruction works are to be done on those on the roads selected and, to afford access to heavily populated areas and where the other two USAID projects have an interest.

The original scope of work has been reduced to conform with the quantities of work achievable with the rates of productivity available.

In this way is hoped to maximize the work of the project and to make effective use of the investment.

III. Evaluation of work carried out in 1987.

Start date taken as May 87, and the USAID O115 equipment and plant first arrived in site.

Initial period.

A certain amount of regrading was done on the Kolwezi to Kasaji road, mainly each side of Mutshatsha. This section of 165 km was not included in the initial project paper.

There were two graders, but down-time caused by mechanics break-downs, reduced the capacity of work done. Further, the sections worked on have been done to a higher standard.

Although the equipment arrived in Lubumbashi earlier, physical checking was done by the guarantee representative and official reception of the equipment, meant that the trucks and loader's arrived on site in July, the mobile workshops did not arrive till later. The bulldozer DH6 did not arrive from Kinshasa until late in the year and no compaction equipment has been available to date.

The second period covers July 87 and of December 87.

During this stage, the following crews were established with the plant available :

- One Regrading crew , composing one grader with an average capacity close to OR performance of 3.2 km per day per grader.
- Two Resurfacing crews, composing:

Crew 1	Crew 2
4 trucks 12T AND 2 x 9 T	4 trucks 12 T and 1 x 9 T
1 grader	No grader
1/2 Bull DH6	1/2 Bull DH6
1 Loader 950 B	1 Loader 950 B
No roller	No roller
1 Tractor (non-operational till February 88)	
1 Water Tanker (Water pump non-operational)	1 Water Tanker (Water pump non-operational about September)

It should be pointed out that there were two crews and only one grader was available. Considerable down-time was experienced with the three HINO trucks and one of the two graders that arrived late in the year from Kamina to the project. The second grader is still awaited.

These major problems reduced the productivity and the efficiency of the activity to a capacity of 0.34 km per day.

- One Culvert crew consisted partly workers from the resurfacing crew, and partly workers used in the construction crew of the Kasaji base. Their total production being therefore of only 67 ml or 9 crossings. Lack of tools and delay in supply of the ARMCO culvert sections were also principal constraints.
- One bridge crew, almost inexistant, as all the workers programmed for the rehabilitation and the reconstruction of bridges were used in the construction of the base. Little work has been done and only 3 simple bridges were replaced in timber.

The Base

During the second period, attempts were made to progress the work on the Kasaji Base, namely Office Block and two housing units, plus external works. The boundary wall has basically completed but small tool shortages and lack of building materials until September meant little was achieved. Once timber for trusses and the galvanised roof sheeting was on site good progress at a high quality of workmanship was achieved.

The quantity of work performed during the first year of the project is represented in Table 1, and capacities calculated on the base of working days.

IV. Analyse and Reorganization of the Work

During the period to March 1988, the main constraints that affects the productivity to less than was potentially available, were:

Late supply of spare parts, tools and materials.

Trucks and equipment suffered minor damage and were repaired generally in Lubumbashi, SGMTP.

Water-pumps on the water tankers were non-operational and with no availability of spare parts.

Shortages in supply of fuel (gazoil)

No liaison vehicle for any site foreman of any crew to supervise the work.

With the purchase, at the end of April 1988, of the hangar for the garage, workshop and store, plant repair and maintenance can be immediately implemented at the Kasaji base. The two fuel storage tanks once delivered and installed on site (May 88) to receive fuel directs from USAID by rail wagon to Kasaji, will give more autonomy and reliability to the project.

✓ But the major constraint seems to be the total lack of compaction equipment in resurfacing works and in the backfilling to culvert crossings.

That facilitate the decision to concentrate more on general drainage works and to aim our work strategy at maximazing drainage works, in particular side turn out runs plus culverts. This will reduce deterioration in the rainy season, preserve existing sections of passable roads and protecting new works.

The crews will be reoarganized and the equipment deployed to conform and maintain throughout the live of the project this general policy and strategies.

V. ORGANIZATION OF CREWS AND DEPLOYMENT OF PLANT

For the year 1988 until the new equipment arrives on site, and July '88 has been given for availability on site. (Annex 10) The attached schedules indicates deployment for the two periods.

1. Up to date of arrival on site (Table A)

Regrading

In order to concentrate efforts on drainage, the regrading crew is strengthened by grader priority, water tanker if necessary plus a truck. This should progress regrading and the side drains, at a rate of 3 KM/Day/Grader.

Resurfacing

✓ The resurfacing potential has been considerably reduced to benefit drainage works and apart from some resurfacing, the crew will concentrate on point à temps. The serious lack of compacting equipment makes resurfacing impractical.

Drainage |

For the turn-out channels, the crew will have some heavy equipment, bull and part loader plus truck.

Culvert

Similarly, for the culvert crew there will be available 1/2 bull (sharing with resurfacing crew), 1/2 loader (sharing with turn-out channel crew) plus 2 trucks. The unit will be reinforced with workers from the resurfacing crew.

Bridges

Two trucks will be at the disposal of the bridge crew. To enable this crew to function there should also be concreting vibratory equipment plus small mobile concrete mixers.

2. Arrival on site of new equipment (Table B)

With the arrival of the equipment, the deployment will be as shown. Again, the emphasis for the rest of the year 1988 is on drainage; side and turn-out channels and culverts.

The regrading crew is further strengthened with additional plant.

Resurfacing crew will continue in part resurfacing but with ongoing point à temps. Though the two bull DH6's arrive October, they will not be able to start work seriously on site until say April 1989.

The bridge crew will be strengthened with a water tanker plus a further two trucks.

The following schedule (Table C) gives the overall plant availability and deployment for the total period 1989 through to 1990.

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TABLE A : ORGANISATION and DEPLOYMENT of PLANT TO JULY 1988

LOCATION	No of CREWS	GRADER	WATER TANK	BULL	LOADER	TRUCKS	ROLLER
REGRAIDING AND SIDE DRAINS	2	2.5	0.5	-	-	1	-
RESURFACING AND POINT & TEMPS	1	0.5	1	0.5	1	4	NA
TURNOUT CHANNELS	1	-	-	1	0.5	1	
CULVERTS and BRIDGES	1	-	-	0.5	0.5	4	NA
BASE	1		0.5				
TOTAL	1	3	2	2	2	10	NA

TABLE B : ORGANISATION and DEPLOYMENT of PLANT FROM AUGUST 1988

LOCATION	No of CREWS	GRADER	WATER TANK	BULL	LOADER	TRUCKS	ROLLER
REGRAIDING AND SIDE DRAINS	2	5.5	1	-	-	2	-
RESURFACING AND POINT & TEMPS	2	1	2	0.5	2	12	NA
TURNOUT CHANNELS	1	-	-	1	1	-	
CULVERTS and BRIDGES	3	-	1	0.5	1	4	NA
TOTAL		6.5	4	2	4	18	NA

TABLE C : ORGANISATION and DEPLOYMENT of PLANT FOR 1989 - 1990

LOCATION	No of CREWS	GRADER	WATER TANK	BULL	LOADER	TRUCKS	ROLLER
REGRAIDING AND SIDE DRAINS	2	3.5	-	-	-	2	-
RESURFACING AND POINT a TEMPS	2	3	3	2.5	2	14	NA
TURNOUT CHANNELS	1	-	-	1	1	-	-
CULVERTS and BRIDGES	3	-	1	0.5	1	2	NA
TOTAL		6.5	4	4	4	18	NA

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VI. Project Performance

Work performance plan is presented for each year of the rest of the life of the project in table 2, 3, 4 and summarized in table 5.

The original Project Paper has been revised and the Scope of Work reduced to the repair and rehabilitation of the main roads and bridges to conform with the quantity of work achievable with the rate of productivity available. (Table 6)

The principal objective is to facilitate access to areas heavily inhabited (RN 39) and where there is involvements by the two other USAID Projects, Health and Water Supply.

1428 KM of Feeder Road (RIL) were rejected as these roads will not be under the maintenance of OR. The main road retained being the RN 39 from Kolwezi to limit Kasai via Sandoa and the Kasaji - Dilolo Sandoa road totalizing 1023 Km.

The work plan for the year 1988, presented in Table 7 and for years 1989 - 1990 presented in Table 8, applies to the roads selected and to the following activities:

1. Regrading

Shaping and side drains will be performed on the selected road network at least once a year, before or after the rainy season. The total work will be 3800 KM at the average rate of 1300 KM/per year.

2. Resurfacing

Resurfacing will be performed on road sections that are lower than the adjacent ground level, and mostly as "point à temps" on difficult portions that appears during the life of the project. The units will resurface 90 KM/per year (150.000 m³)

3. Turn Out Channels

Emphasis will be put on this activity. The opening of ditches and trenches on the side of the road, as 2 per KM of road will be performed mechanically.

The performance of work estimated at 50 KM of road per year.

4. Culvert and Bridges

Culverts will be built at a rate of 3 road crossings per month.

Two bridges on the Sandoa - Kapanga road, the Luvwa and the Luandu are scheduled for construction in 1988.

Two other bridges, the Kasameji and the Kasongeshi, east and west of Kapanga, with span over 27 KM will be designed and ordered in 1988 to be constructed in 1989 and coincide the schedule of the USAID projects in the area.

In 1990 repair of minor bridges can be done in other primary regional roads to be selected.

VII. SUGGESTIONS

In order to conduct the work properly and to execute it according to the planning, the following points are raised:

1. It is essential for each foreman to have a pick-up truck to enable site supervision and general liaison coverage.
2. It is essential that the culvert and bridge crews have basic equipment as concrete mixers, small compressors, and vibratory equipment.
- Additional person* 3. There is a need for a senior site foreman permanently on site following and organizing day to day work: road drainage works, checking lines and levels.
The Engineer will be responsible for all technical and management aspects of work. He will be in charge for all bridges works from site evaluation, design through tender or direct purchasing, ordering, and supervision during fabrication. Follow-up of all supplies, transport, and liaison with all levels will be under his control.

With the new level of supervision: Engineer, Homologue, Chef Mechanic and new senior site foreman, a better follow-up of all supplies and general liaison in Lubumbashi, can take place in a rotational basis leaving always adequate supervision on site.

TABLE 1 : WORK CARRIED OUT in 1987 and EVALUATION of CAPACITIES

* #	ACTIVITY	UNIT	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	ACTUAL CAPACITY
1	REGRAIDING	Work. days KM Graders	20 1	20 188.60 1	15 1	10 1	5 38 1	0 1	70 226.21 KM 1	3.23 KM/D/GRADER
2	RESURFACING	Work. days KM CREW	20 2	20 18 2	15 2	10 2	5 6 2	0 2	70 24 KM 2	0.34 KM/D
3	DRAINAGE TURNOUT CHANNELS	Work. days KM	20 20	20 17.90 20	10 10	10 10	0 0	0 0	60 17.9 KM 60	0.30 KM/D/CREW
4	SIDE DRAIN CULVERTS	KM ML	 20	378.50 21.96 20	 10	 10	75 44.92 0	 0	453.5 KM 66.88 ML 66.88 ML	7.56 KM/D/CREW 11.15 ML/M/CREW
5	BRIDGES	ML	 20	16 16 20	 10	 10	0 0 0	 0	16 ML 16 ML 66.88 ML	2.67 ML/M/CREW

TABLE 2 : 1988 FORECAST PRODUCTIVITY and ACTIVITY

* #	ACTIVITY	CAP.	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL CAP.
* 1	REGRADING and SIDE-DRAINS	Work. days 3	KM/D/G	0 0 1	0 2 1	10 9 1	10 9 1	20 120 2	20 120 2	20 120 2	20 300 5	15 225 5	10 150 5	5 75 5	0 0 5	130 1130 2.9
* 2	RESURFACING	Work. days 0.35	KM/D/C	0 3 1	0 6 1	10 0 1	10 4 1	20 4 0.5	20 4 0.5	20 4 0.5	20 4 0.5	15 3 0.5	10 2 0.5	5 1 0.5	0 0 0.5	130 32 0.7
* 3	DRAINAGE Turnout Channels	Work. days 0.45	KM/D/C	0 0	0 0	0 0	10 4.5	20 9	20 9	20 9	20 9	10 4.5	10 4.5	0 0	0 0	50
* 4	CULVERTS	22.5	ML/M/C	0 1	15 1	9.7 1	7.5 1	22.5 1	22.5 1	22.5 1	22.5 1	22.5 1	22.5 1	0 1	0 1	167 1.0
* 5	BRIDGES		ML													27

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TABLE 3 : 1989 FORECAST PRODUCTIVITY and ACTIVITY

ACTIVITY	CAP.	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL CAP.
1	REGRADING and SIDE-DRAINS	Work. days 3	0	0	10	10	20	20	20	20	15	10	5	0	130
		Graders	0	0	105	105	210	210	210	210	158	105	53	0	1365 KM
			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
2	RESURFACING	Work. days 0.35	0	0	10	10	20	20	20	20	15	10	5	0	130
		Crew	0	0	7	7	14	14	14	14	11	7	4	0	91 KM
			2	2	2	2	2	2	2	2	2	2	2	2	2.0
3	DRAINAGE	Work. days 0.45	0	0	0	10	20	20	20	20	10	0	0	0	100
		Crew	0	0	0	9	18	18	18	18	9	0	0	0	90 KM
			2	2	2	2	2	2	2	2	2	2	2	2	2.0
4	CULVERTS	22.5	0	0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	0	0	180 ML
			1	1	1	1	1	1	1	1	1	1	1	1	1.0
5	BRIDGES														37 ML
															21 ML

K A O N G E J I
K A S A M A D J I

TABLE 4 : 1990 FORECAST PRODUCTIVITY and ACTIVITY

* #	ACTIVITY	CAP.	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL CAP.
* 1	REGRADING and SIDE-DRAINS	Work. days 3	KM/D/G	0	0	10	10	20	20	20	20	15	10	5	0	130
		Graders		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
* 2	RESURFACING	Work. days 0.35	KM/D/C	0	0	10	10	20	20	20	20	15	10	5	0	130
		Crew		2	2	2	2	2	2	2	2	2	2	2	2	2
* 3	DRAINAGE	Work. days 0.45	KM/D/C	0	0	0	10	20	20	20	20	10	0	0	0	100
		Crew		2	2	2	2	2	2	2	2	2	2	2	2	2
* 4	CULVERTS	22.5	ML/M/C	0	0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	0	0	180
				1	1	1	1	1	1	1	1	1	1	1	1	1.0
* 5	BRIDGES		ML													ML
																ML

TABLE 5 : TOTAL PRODUCTIVITY of WORK from 1988 to 1990

#	ACTIVITY	TOTAL CAPACITY			
		1988	1989	1990	88 -- 90
1	REGRADING and SIDE-DRAINS	1130	1365	1365	3860 KM
2	RESURFACING	32	91	91	214 KM
3	DRAINAGE	50	90	90	230 KM
4	CULVERTS	167	180	180	527 ML
5	BRIDGES	27	58		85 ML

TABLE 6 : INVENTORY OF PROJECT ROADS AND BRIDGES TO REHABILITATE

TYPE of ROADS	INVENTORY of ROADS	KM	REGRAIDING SIDE DRAINS KM	REGRAIDING maintenance KM	RESURFACING KM	DRAINAGE turn-out channel KM	CULVERTS ML	BRIDGES
RN 39	KOLREZI - MUTSHATSHA	160	DONE	480	20	40	DONE	--
	MUTSHATSHA - KASAJI	140	DONE	420	60	30	150	--
RR 607	KASAJI - SANDOA	130	30	390	25	20	75	LUVVA
RN 39	SANDOA - KAPANGA	212	212	636	65	40	105	LUANDU
	KAPANGA - LIMIT KASAI	86	86	258	20	15	45	
	SUB-TOTAL 1	728	328	2184	190	145	375	
RN 39	KASAJI - DILOLO	150	150	450	40	30	75	
	DILOLO - SANDOA	145	145	435	30	60	105	
	SUB-TOTAL 2	295	295	885	70	90	180	
	TOTAL	1023	623	3069	260	235	555	
	<i>Revised Total</i>							KASAMAJI KASONGESHI

TABLE 7 : WORK PLAN for 1988

#	ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1	REGRADING and SIDE DRAINS													

	KOLNEZI - KASAJI					*****	300							
	KASAJI - SANDOA						*****	130						
	SANDOA - KAPANGA							*****	212					
	KAPANGA - LIMIT KASAI								*****	86				
	SANDOA - KASAJI									*****	130			
	KASAJI - KOLNEZI										*****	192		1050 KM
2	RESURFACING - POINT a TEMPS													

	KOLNEZI - KASAJI					*****	*****	16						
	KASAJI - SANDOA									*****	*****			22 KM
3	DRAINAGE : turn-out channels													

	KOLNEZI - KASAJI					*****	*****			*****				
	KASAJI - SANDOA								*****					45 KM
4	CULVERTS													

	KOLNEZI - KASAJI					*****	*****	90						
	KASAJI - SANDOA								*****	45				135 ML
5	BRIDGES													

	SANDOA - KAPANGA													
	LOVHA							*****						
	LUANDU										*****			

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TABLE 8 : WORK PLAN for 1989 - 1990

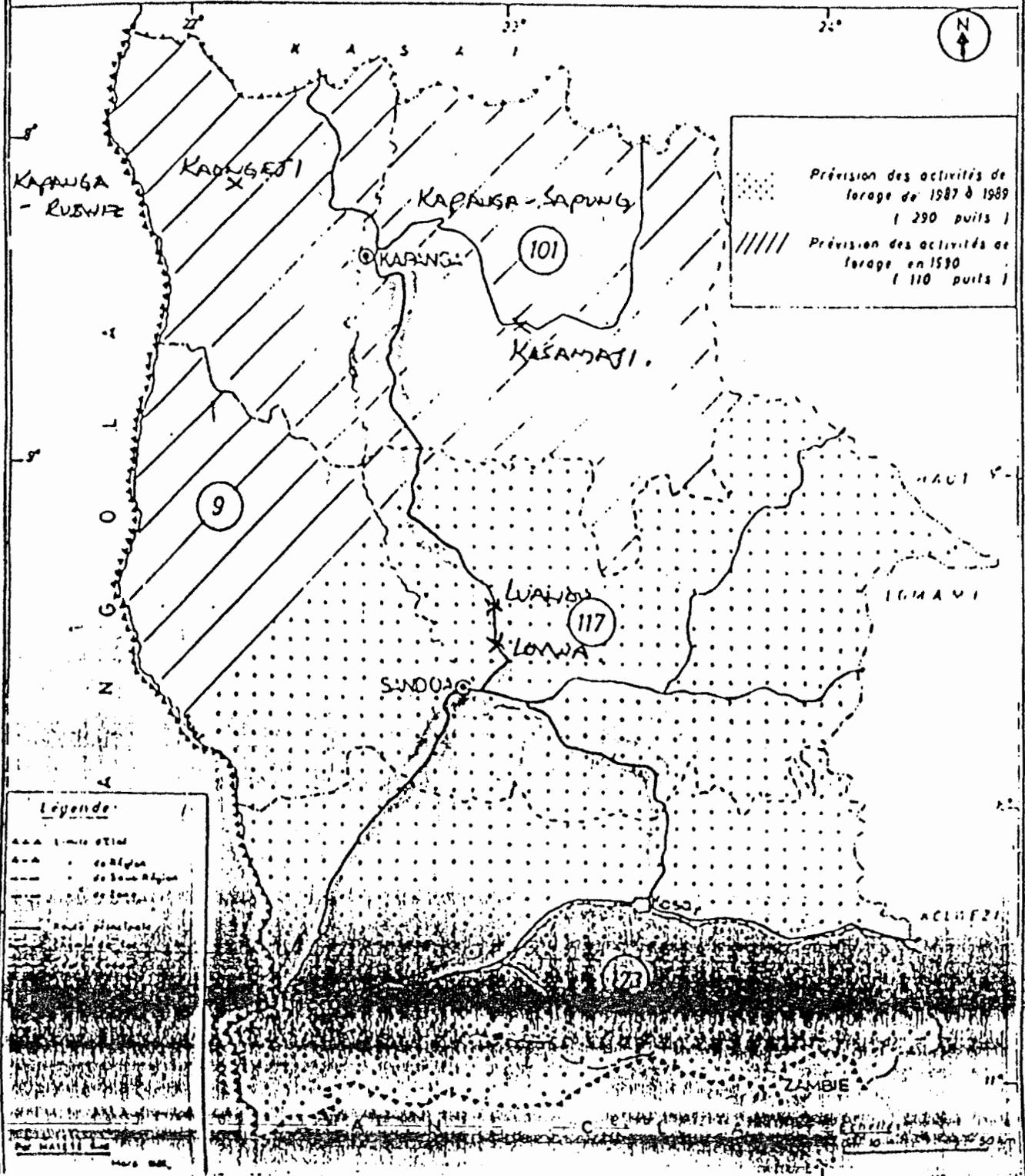
↓	ACTIVITY	1989												1990												TOTAL
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
1	REGRAIDING and SIDE DRAINS																								2700 KM	
	-----																								-----	
	KOLNEZI - KASAJI		***						***											*****					900	
	KASAJI - SANDOA		**						**					**						**					390	
	SANDOA - KAPANGA			**										**						****					636	
	KAPANGA - LIMIT KASAI				**										**										184	
	SANDOA - DILOLO					**										**									290	
	KASAJI - DILOLO						**										**								300	
2	RESURFACING - POINT a TEMPS																								182 KM	
	-----																								-----	
	SANDOA - KAPANGA - LIMIT KASAI		*****						*****											*****					91	
	KASAJI - DILOLO - SANDOA								*****						*****					**					91	
3	DRAINAGE : Turn-out channels																								180 KM	
	-----																								-----	
	KOLNEZI - KASAJI - SANDOA		*****	*																					90	
	SANDOA - KAPANGA - LIMIT KASAI								*****																90	
	KASAJI - DILOLO - SANDOA														*****										90	
4	CULVERTS																								360 ML	
	-----																								-----	
	KOLNEZI - KASAJI - SANDOA		*****																						60	
	SANDOA - KAPANGA - LIMIT KASAI								*****						*****										180	
	KASAJI - DILOLO - SANDOA															***		*****							120	
5	BRIDGES																									
	-----																								-----	
	KASAMEJI		*****	**																						
	KaONGESHI				*				*****																	

SP

SHABA REFUGEE ROADS PROJECT

USAID PROJECT 660-0115

ROAD MAP OF AREA



Légende

- Limite d'étude
- de Région
- de Sous-Région
- de localité
- Route principale
- Route secondaire
- Route tertiaire
- Route quaternaire
- Route quinaire
- Route sextaire
- Route septaire
- Route octaire
- Route nonaire
- Route décimale
- Route onzième
- Route douzième
- Route treizième
- Route quatorzième
- Route quinzième
- Route seizième
- Route dix-septième
- Route dix-huitième
- Route dix-neuvième
- Route vingtième

ANNEX 10

Summary of Contents of Meeting DW/AT, BS - 15.4.88

Additional plant expected from the Japanese loan, plus dates of arrival 1988.

DISCIPLINE		DATE	TOTAL PLANT
<u>1. Regrading - 1 Crew</u>			
2 Nivaleuses MJ 500	x 1	July	2
1 Camion (12 T)	x 1	July	1
<u>2. Resurfacing - 2 Crews</u>			
Bull D6H	2 x 2	October	4
Chargeur 950 B	2 x 2	July	4
Nivaleuse MJ 500	1 x 2	July	2
5 Trucks	5 x 2	July	10
Citerne d'eau	1 x 2	July	2
<u>3. Bridges - 1 Crew</u>			
1 Truck 12 T	1 x 1	July	1
<u>4. Culverts - 1 Crew</u>			
		July	-

N.B. Though Trucks total 12, there will only be 8 available for the 0115.

N.A. Pick-ups available July

5. 60 - tonnes steel decking sheets 10mm thickness; of this say, 20 tonnes available for 0115.

Plant Totals

	Trucks	Citerne	Nivaleuse	Chargeur	Bull	P/U's
	See Note	1 x 2	2	2 x 2	1 x 2	
TOTAL	8	2	4	4	2	?

For liaison and site supervision purposes, each crew foreman (Chef de Chantier) should have a pick-up.

Existing 0115 P/U - only one would be available but is non-operational pending major spare-parts and repair.

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UNITED STATES GOVERNMENT
memorandum

DATE: 10 May 1988

REPLY TO
ATTN OF: Helen Bemis, PDO 

SUBJECT: Shaba Refugee Roads Project 660-0115 Committee Meeting Notes

TO: See Distribution

Members Present: Bemis, Macken, Mulamba, Tauzin, PDO; Utshudi, HPN;
Desmarais, CONT; Mangindula, PRM; Gordon, EXO.

On May 9, 1988 the Project Committee met to discuss the following issues:
(Where appropriate, the action agent is indicated)

1. American ORT Federation's Evaluation Report:

A) ORT's evaluation proposed a reduction in the work to be performed through PACD (Sept. 1990). It was explained to the committee that whereas ORT was perhaps underestimating the quantity of work that could be performed by PACD, given the current situation at Office des Routes (O.R.) a slight underestimation was preferable to a too optimistic scope of work. Additionally, if the production schedule picks up, roads could be added at a latter date. With the roads reduction, some bridges which may have high priority for the related health projects (660-0114 and 660-0116) may have been dropped from the original work plan. Before the work plan is accepted, Cit. Mulamba will meet with Utshudi and McDermott to discuss this matter and propose bridges which should be rehabilitated despite the reduction in the scope of work. The committee agreed that 1) the proposed reduction in roads to be rehabilitated would be accepted, and 2) the HPN project officers for Projects 660-0114 and 660-0116 should be consulted concerning high priority bridges which should be added. A PIL between USAID and O.R. will be issued to reflect this change (HPN project officers will have draft clearance).

B) The ORT evaluation also recommended that a second TA position be added, a senior site foreman (not necessarily a civil engineer but someone with extensive dirt roads construction experience). D. Tauzin said that at this time it would be difficult for O.R. to approve additional TA for the project given that ORT's original COP did an unsatisfactory job.

It was proposed and accepted by the project committee that approval of the additional TA would be examined after the current COP's replacement had been on board for a few months. At that time, if necessary, the Committee will reconsider the issue.

2. RIG Audit: The RIG audit is currently scheduled for early June.

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