

*Carroll*

**PROJECT NORTH SHABA**

**INTERNAL PROJECT REVIEW**

**January 26 - February 4, 1979**

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## I. Introduction

The visit to Project North Shaba was in the form of an internal evaluation. This was combined with:

1. an exposition of project activities for personnel from CIMMYT and from the Department of Plan;
2. a regular visit by Mr. Tony Barclay/DAI, to continue work with the PME subsystem;
3. a TDY study by Mr. and Ms. Blakely (anthropologists) to explore problems in the PME and Farmer Group Development subsystems;
4. Mr. John Morrison, to review the Infrastructure subsystem;
5. Mr. Charles Sweet/DAI, to review the contractor personnel situation and plan for continuity as the initial contract moves into its final stages; and
6. Mr. Tom Armor/DAI, who looked into some of the DAI team operational and personnel interrelationships and procedures.

These visits took place at various intervals between January 26 and o/a February 23, 1979.

The following report is deficient in certain subsystems, pending updates particularly by Tony Barclay and John Morrison. The report in general is rather optimistic and rightfully so. Some very substantive progress has been made during the last six months and the prognosis is for more of the same. As for problem areas, the only one of immediate significance is the status of the zaire budget. In anticipation of a quick solution to this problem, the project is now looking forward to the first formal evaluation in May 1979.

## II. Summary

There is every reason to believe that, barring major catastrophes, the project should continue to proceed towards achieving its objectives, at an increasingly accelerated rate. Sufficient groundwork has been laid in developing a sound understanding of the project and its basic philosophy. Project personnel and inhabitants of the project area are interested in seeing the project succeed.

Near term potential problems include:

1. The possibility that the newly assigned project director, Cit. Mateso, may not be able to handle a project as complicated and complex as PNS.
2. The difficulty of finding satisfactory Zairian technicians to increase the personnel depth in each subsystem.
3. The possible difficulty in finding satisfactory replacements for departing U.S. personnel as well as for positions not yet filled.

Several factors have played a significant role in keeping the project on track and enabled it to reach the degree of success thus far achieved.

Cit. Mukenda's continued support for and assistance to the project has been beyond reproach. The assignment of Cit. Mubenga as interim project director and his tremendous administrative/managerial capabilities enabled the project to turn the critical corner last June. And finally, DAI's continued support and willingness to provide sufficient backstopping whenever needed was instrumental in keeping the project together at crucial times.

*What is status of funding now?*

There is one additional current and very crucial problem--project finances. Due to several and sometimes confusing reasons, funding for the Department of Agriculture has been curtailed. Thus, the 1978 project budget has not yet been released. The project has sufficient funds to carry through until the end of February 1979. At this point, however, it is just a question of how long workers will remain on the job with no pay. Efforts are currently underway between the Secretary of State/Agriculture and the Department of Finance to resolve the problem.

Finally, and on a more positive note, the current atmosphere is one of optimism and progress. The project is anticipating the formal evaluation scheduled for May 1979 with renewed enthusiasm. Given the current activity level, there is no doubt that the evaluation will be positive.

### III. Project Management Unit (PMU)

The PMU has been functioning very well during the last six months. This is reflected both in the general atmosphere and in the operational aspects of the overall project. Cit. Mubenga's quiet but efficient approach to management has turned a near disaster into one of the best run IRD projects in operation. *How do we know this?*

Within this context, the U.S. advisors in the PMU have also begun to <sup>2</sup> function to their fullest capacity, not having to devote their time to management and interpersonal brush fires.

The administrative and financial systems are functioning effectively. The PMU's ability to produce information, data, and reports has improved greatly.

In an effort to tighten this system, several formal and informal procedures between the PMU, USAID, and DOA will be reviewed, rewritten, and resigned. In some cases, these procedures will be put in the form of technical directions between USAID and the contractor.

### IV. Subsystems

#### A. Research and Extension

This subsystem has accomplished a great deal during the June 1978 - January 1979 period.

The research station has gained momentum, both in the field and construction of the station facilities. *What varieties?*

## 1. Activities - Current

- a. Seed Multiplication. Ten hectares have been planted at the research station of which 8.5 are in maize for seed. There are another 2.5 hectares in seed production at 2 other stations. In addition, there are about 16 hectares in village demonstration fields which will be producing seed. About 2 hectares are planted in other crops for research and seed production. These include soybeans, peanuts, rice, beans and sesame.
- b. Seed Distribution. This program utilized seeds purchased from the Belgian project at Kasese (DPKK). Farmers in nineteen villages received a total of 19 T of Kasai I seed. With this, 957 hectares were planted by 1401 participating farmers. These plantings were done mostly on plots in addition to their traditionally planted holdings.
- c. Farmer Participation. Extensionists encountered several problems in their program. Chief among these was the reluctance of many farmers to participate in the on-farm experiments and provide labor for work on the demonstration plots. Despite this, however, it appears that the extension program is off to a good start. Given the anticipated success from the current campaign, next year's program of farmer participation will tax the personnel and material resources of the subsystem.
- d. Seed Handling. Equipment availability and late arrivals will make it difficult to properly handle and care for all the seed expected from the multiplication program. Efforts will be accelerated to ensure that minimal equipment and materials requirements are met. These include a scale, moisture tester, sacks, paper or plastic bags, and storage facilities. Possible sources include DPKK, INERA, PNM, Tissakin, PRONAM.
- e. Personnel. The subsystem is still short of personnel. A minimum of 3-4 agronomists are needed immediately. The Secretary of State/Agriculture is currently attempting to locate and assign personnel. PNM/CIMMYT has indicated its willingness to assign one of its next MS graduates to the project (possibly in July-August 1979). This will enable the project to send Cit. Mamingi for additional training without leaving a critical vacancy. PNM/CIMMYT has also indicated a willingness to assign two returnees from training at CIMMYT/Mexico to the project. This will greatly enhance the ability of the project to expand the farmer participation program.
- f. Training. There are numerous possibilities for short, medium and long term training. These include MS level

*what yields are expected?*

*step 2*

*step 1*

*what incentives?*

*what about stealing?*

*What about Kenya?*

in the U.S., multicropping-farm systems training at IITA, maize production at CIMMYT/Mexico and PNM/Lubumbashi, extension training in West Africa, and others. Decisions regarding this will depend on personnel replacements and technical capability (absorptive capacity). This program should begin soon, possibly post harvest this year.

## 2. Activities - Future

- a. Seed Multiplication. During the second planting season, 4 hectares of new seed corn are being planted. In September, the area for research and multiplication will increase from 15 to 20 hectares. *for what eventual yields?*
- b. Agriculture Centers. As new centers are put into operation, additional demonstration fields will be established. This could amount to as many as 15 new centers by September.
- c. Seed Storage. An effort will be made to construct silos from locally purchased materials (mainly cement). These will be critical to the multiplication and distribution program.

- Who?*
3. General Impressions. The subsystem is making good progress. Mr. Thies has settled into his task with ease and enthusiasm. His accomplishments at the research center have been remarkable in view of the lack of equipment and material to work with.

Cit. Mamingi has matured tremendously as subsystem chief. His enthusiasm with the job is very evident. The rapport that has evolved between him and the extension agents is encouraging.

The coming year should be one of tremendous progress in research and extension. *how many per farmer?*

## 4. Recommended Actions.

- a. Research. Ensure that work accelerates in areas such as intercropping, timing, and spacing. Attempt to avoid duplicating any research being done by PNM or others; rather transfer what they have accomplished.
- b. Fertilizer. Prepare program for fertilizer needs for both research, demonstrations, and the eventual introduction to farmers (in third year of project). *what costs?*
- c. Training. Take immediate steps to initiate short and long term training. Provide names, type of training, location, when, and any other pertinent information. Keep in mind

it takes several months to receive the necessary biodata locally and to process the documentation through the AID system.

- d. Equipment. Mr. Thies should prepare for a TDY in the U.S. within the next two months to ensure that purchases and shipment are facilitated in a timely manner. Further delays will hamper continued progress at the research center. Temporarily, an attempt should be made to borrow/buy essential items in Zaire from DPKK, PNM, et al.

Regarding a tractor, Mr. Thies should make a trip to DPKK and attempt to purchase a tractor from them. If there are none available, then he can continue on to CAKO as an alternative source.

## B. Farmer Group Development

Agricultural Centers have been selected in 17 villages, each center will serve 2-3 satellite villages or more depending on village density. Extensionists have been placed in each center.

### 1. Activities - Current

- a. Agriculture Centers. Progress has been encouraging in developing this program, but has been achieved more painstakingly than initially anticipated. The critical point appears to be the extensionists ability to interact culturally within the existing structure. An effort is currently underway to determine why extensionists have been able to succeed in some agriculture centers and in others the village power structure seems to react negatively. Farmer councils are being selected in some agriculture centers and are beginning to participate actively in village programs and decision-making. Female technicians in agriculture centers have also begun conducting female literacy class as a first step toward future work with women in development.
- b. Personnel. At present there are seven technicians (animators) engaged in the farmer group development activities. The subsystem chief, Cit. Bonani, is actively trying to recruit additional technicians. Of the seven technicians now in the field, four are women, three are men.
- c. Training. This is a continuing process both in the agriculture centers and in Kongolo. The latter is generally more formalized/structured. Serious consideration is being given to bringing in TDY assistance from one of the West African institutes of development to conduct a seminar, discussions, and demonstrations on rural development and "animation" techniques. By doing this in Kongolo, there may be greater participation and practical transfer than sending a few to an institute.

*are they  
same type?*

*how much is credit?*

- d. Cooperatives. The two savings and loan co-ops in Mbulula and Kongolo are continuing to function satisfactorily. Consideration is being given to expanding their activities to include the supply and operation of a canteen. The work envisioned with old and floundering co-ops has begun with four operations. This work is still in the initial stages and will be reported on in greater detail later.

## 2. Activities - Future

- a. Agriculture Centers. It is envisioned that the number of centers will double by the end of the year to 34 each. There may have to be some realignment of center locations so that some of the early ones are not too isolated. This makes visits very difficult given road conditions and moto/velo shortages.
- b. Village Development. In established centers, efforts will be made to rehabilitate or create small enterprises; to demonstrate and encourage the construction and rise of small family size grain storage silos, and to encourage and assist in the construction of protective casings for water sources.
- c. Cooperatives. Conduct further studies on old existing co-ops and attempt to revive and/or restructure them into viable operations. There will also be a knowledge transfer in attempting to establish farmer groups in the agriculture centers.

3. General Impressions. Cit. Bonani has grasped the basic idea of farmer group development in a rural milieu. His approach to the program is very enthusiastic and controlled. His rapport with and the technical advice received from Mr. Gross further facilitates the progress being exhibited.

The current study of a specific problem mentioned earlier, should result in some concrete ideas leading to its resolution. This in turn should help to accelerate the establishment of new agriculture centers and their functioning.

## 4. Recommended Actions

- a. Training. Steps be taken immediately to initiate planning for and scheduling of training programs, both in-country and third country as necessary.
- b. Agriculture Center Development. Continue to develop existing and new centers with the same regard for quality of organization that has existed to date. Do not attempt to meet schedules at the expense of quality.

This subsystem is probably the most fully functioning and has been so longer than any other. The progress made to date is encouraging. The overall operation is functioning well enough so that plans are being made to expand the scope of operations.

### 1. Activities - Current

- All interesting*
- a. Hand Tools. In excess of 10,000 individual tools have been sold to farmers. Sales are being made in large part through the extensionists at the agriculture centers.
  - b. Village Blacksmiths. A survey is currently being conducted to determine the number, location, and situation of blacksmiths in the project area. A program of training and supervisory follow-up will be initiated during the first and second quarters of 1979. Assistance will also be provided by supplying (at cost) raw materials for tool and machinery fabrication.
  - c. Foundry. Work has begun on rehabilitating the foundry. The lack of a few parts has been resolved and hopefully it will be operational within a month or two. This will facilitate the fabrication of small agricultural processing machinery.
  - d. Agricultural Machinery. Work is progressing very well in the fabrication of processing machinery. At present the subsystem is producing palm nut presses (25 each); peanut shellers (5 each); and corn shellers (20 each). A total of thirty machines have been sold to individuals or small groups of farm families. It is anticipated that the demand for these will exceed supply during the coming months.
  - e. Village Pumps. Numerous requests have been received regarding the possibility of repairing existing but inoperable hand pumps. Should this be possible, not too expensive, and not require a lot of odd ball spare parts, this may develop into another IT operation. Apparently there are a number of villages with Belgian made pumps dating from pre-independence. Such a program could go a long way toward improving village sanitary and health conditions, and increasing the time women have available for other activities.
  - f. Grain Silos. Another operation envisioned for the IT subsystem was the fabrication and demonstration of silos for grain storage using local materials. This will be given greater attention in the near future, possibly through short term technical assistance. This will become increasingly important as production increases in the project area.
  - g. Soap Making. Recently, the IT section has begun looking into the possibility of producing soap, on the village

level, using locally available items. The initial trials using wood ashes, water, and palm oil have been very encouraging and the hopes are to be able to introduce a reliable procedure into the villages in the near future.

2. Activities - Future. These have been outlined in a previous section. In summary these include: grain silos; village pump repair; foundry; village blacksmith program; continued fabrication and sales of processing machinery and hand tools; village level soap production.
3. Problems.
  - a. Loss of Sheet Metal. The original contractual arrangement with SNCZ did not clearly specify the naval sheet metal as part of the materials purchased by the project. SNCZ has decided they want these for their shipyard operation on Lake Tanganyika. Despite PNS pleas to leave them to the project, they are legally SNCZ's and they need them. The project will try to bargain for a few of them, but even so, the loss will adversely affect some tool making such as hoes. Through experience, it is known that the metal from the old boats is not thick enough to make satisfactory hoes. In any case, solutions are being sought by subsystem personnel.
4. Recommended Actions
  - a. Sheet Metal. Attempt to purchase a stock of these from SNCZ and concurrently look for other supply sources in Zaire.
  - b. Grain Silos. Take immediate steps to begin making plans for an overall program. Coordinate with the R/E, M/C and FGD subsystems in the planning. Prepare a scope of work for a grain storage (village-level) expert to come out on TDY to help initiate the program.
  - c. Village Pumps. Pursue this activity, keeping in mind the possibility of incorporating this into the proposed Public Health/Peace Corps program. This kind of operation can also be expanded into other appropriate technology activities with assistance and funding from a new AID program in this subject area.
  - d. Equipment/Materials. Prepare a list of things needed so that action can be taken prior to the end of the current fiscal year (30/9/79).
  - e. Training. Prepare a list and schedule for any in-country or third country training requirements you may have this year. This should be done as soon as possible.

## D. Marketing and Credit Subsystem

Activities in this area have been slow to materialize. Initially, ONACER was supposed to be active in the commercialization of agricultural products in the project area. With the elimination of the ONACER program, there was a gap created in getting this subsystem on track again. However, as the project gears up with personnel and is able to acquire counterpart funds, subsystem intervention will increase.

### 1. Activities - Current

- being out for CS92*
- a. Market Intervention - 1978. The project attempted to exert some influence during the July-September period. Success was marginal given available resources, but at least a start was made. Sacks were purchased from Tarica Freres and sold to local merchants (about 20,000). Diesel was also sold to merchants (about 40,000L). In addition, a survey was taken to determine the tonnage of maize exported out of the project area (about 12,000 tons).
  - b. Personnel. Two Zairian technicians were assigned to the project by DOA. One as chief of the subsystem and the other as assistant. They arrived in July and were active in the survey work mentioned above. Since then two more assistants have been recruited. They have been in the process of preparing for project intervention in the coming marketing campaign.
  - c. USAID Agriculture Marketing Loan. The project was hoping to obtain support under this program for its efforts during the 1979 marketing campaign. However, since first initiated in July 1978, progress has been disappointing. It doesn't appear that anything will materialize during this current campaign.

### 2. Activities - Future

- a. Market Survey. Extensive and coordinated efforts will be made to record the harvest and marketing results of this year's crop.
- b. Personnel. Additional personnel will be recruited on a temporary basis (about 6 each). These people will be used in the survey work for this year's production and marketing campaign. One to two additional full time assistants are being recruited.
- c. Marketing Assistance. The project has reserved one wagon of fuel for sale to commercants (about 40,000 L). An attempt will be made to purchase sacks for resale to merchants also.

- d. ONPV. A representative of this ex-ONACER organization arrived in Kongolo to discuss his new marketing program and how he could cooperate with the project. Mention was made of numerous trucks enroute from Japan, sizable amounts of money for purchases, sacks, etc. Further discussions will be necessary. The USAID project manager will seek further clarification and elaboration from ONPV/Kinshasa.

### 3. Recommendations

- a. Market Survey. Consider this one of the most important activities over the next six months. The aim should be to arrive at some very statistically reliable figures on corn marketed.
- b. Personnel. Begin immediately to recruit an expatriate to fill the advisory position in this subsystem. This could be on a full or part time shared basis.
- c. Funds. Make application for counterpart funds for sacks, trucks, buying/credit, etc.
- d. Future Activities. Don't be lulled into half efforts while waiting for the Ag. Marketing Loan or ONPV. Chart out a program based on what is available and what you can realistically acquire.

### E. Infrastructure

This subsystem is very close to full scale initiation of roads and bridges construction and rehabilitation activities. This internal evaluation/review did not focus in detail on the past and forthcoming INF activities. Because John Morrison of M/M was coming in for a two week in depth review, it was decided that he and I would put together a review paper upon his return from Kongolo.

In anticipation of this, some general comments concerning current activities are in order.

#### 1. Activities - Current

- a. Roads. Several crews are currently at work preparing materials for roadwork. Earth, rock and gravel are being placed along roads which will be worked on initially (Kongolo-Sole).

The Zairian chief of this subsystem, Cit. Shukulu, exhibits a great deal of knowledge about how the road work will be carried out. Even more impressive is his understanding of overall project objectives vis-a-vis interactions with farmers. This sensitivity is a tribute to the long hours of interchange between the subsystem chiefs and expatriate staff members regarding project philosophy.

b. Bridges. Some work has begun on stockpiling materials in anticipation of initiating bridge work. The lack of sufficient trucks has greatly hampered progress in both bridge and road work. One to two pickups have been available and are simply insufficient to carry out the required work.

c. Buildings

(1) Kongolo. The rehabilitation of housing is just about complete. Clean-up/repair work is continuing. The conversion of the SNCZ ice house into a grain warehouse will get underway soon.

(2) Mbulula. Most of the house rehabilitation work is complete. Work is progressing on the Research Center rehab and new building construction. It is anticipated that most buildings will be in use by September 1979.

(3) Nyunzu. Work on constructing offices, houses, maintenance shops and warehouses is just beginning. It is anticipated that sufficient construction will be completed by year's end to have the sector operational. The current Zairian staff of 2-3 is working out of temporary rented quarters.

d. Equipment. Heavy equipment and construction materials ordered from the U.S. are about 70% on site. Still missing are the heavy duty trucks and pickups for the road work and construction. Most of these are on ships and expected in Kongolo in late March. These are critical to all activities in the project area.

2. Summary. The delays in equipment arrivals have meant that a great deal of technical expertise has been wasted during almost two years since the project began. With the coming of the dry season, it is anticipated that road and bridge work will really begin to take off. Critical questions still need to be resolved regarding the status of INF personnel whose contracts expire during the next 4-5 months. John Morrison is expected to have answers to these questions as well as an updated inventory review, summary of accomplishments to date, and a schedule of coming activities.

F. Project Monitoring and Evaluation (PME)

This subsystem is carrying out planned activities as scheduled, but certain broader problems have come to the attention of the PMU. Mr. Tony Barclay from DAI/Washington is currently in the project area. His visits every 3-4 months have enabled the subsystem to move forward at an up to now satisfactory pace.

However, now that practically all subsystems are moving along at an encouraging pace, the interaction envisioned between the PME and each of the other subsystems becomes critical.

The current subsystem chief, Cit. Mampaka, has been capably carrying out schedules and activities worked out during each of Mr. Barclay's visits. However, it is becoming increasingly clear that more advisor backstopping and assistance is going to be needed to make the PME program effective.

Mr. Barclay will be preparing a more detailed report on past and future activities, changes required in the program, and recommendations regarding personnel.

**Annex I**

**Project Monitoring and Evaluation (PME)**

**Activities (Tony Barclay)**

- A. Development of the PNS Communication Subsystem.**
- B. Summary of Major Work to be Accomplished between February and June 1979.**
- C. Current and Future Work Related to the Fiches des Villages.**
- D. Current and Future Work Related to the Fiches Agricoles.**

**A. Development of PNS Communications Subsystem**

During the past year I have worked for three months, during three separate visits, as a short-term advisor to the communication subsystem. In that time we have begun several important activities that the subsystem is expected to perform over the life of the project. Village-level and farm-level data collection has begun, and the subsystem is monitoring trends in consumer prices within the project area. Recently arrangements were made to monitor the volume of traffic on project area roads at several key points. Most of this work has been assigned to three rapporteurs who are based in the sectors of Kongolo, Mbulula and Nyumzu. A statistician, Cit. Nysgasnende, has been recruited to work in the subsystem office.

The emphasis during this early period has been on establishing a strong base in the collection of data. We have tended to concentrate on the quality of the data being gathered, which requires building trust and confidence among the population of small farmers in North Shaba. With this foundation, we believe, the quantity of data can be increased fairly rapidly as the project develops. Thus it has been our intention to gradually build up the capacity of the subsystem as field-level experience is gained.

In this report I would like to comment on four areas within the work of the subsystem that will need continuing attention, and discuss their requirements:

1. Field-level Collection: We have begun to learn some important "do's" and "don'ts" from the experience with the village-level documents (Fiches des Villages), and individual farm records (Fiches Agricoles) during the past several months. Perhaps the most crucial and obvious point is the need to distribute and use versions of these documents in a form of Swahili that is used and understood locally. Overall, I believe that this work has gotten off to a fairly good start. The contributions that Tom and Pam Blakely are currently making should be of considerable help in correcting some early problems. For the future, it will be important to review the progress of this work on a periodic basis. I would be interested in doing so as a regular assignment in my trips two or three times a year to work with the project. Additional assistance from Tom and/or Pam Blakely, or other specialists, could be requested as you see fit.
2. Data Processing, Analysis and Reporting: This is an area in which demands on the communication subsystem are beginning to increase very rapidly. I think we

*Kibaruwa*

have all come to the conclusion that short-term specialist assistance is not adequate for the needs of the subsystem in this area. Project activities are expanding too fast, along with the demand for information by USAID and the Department of Agriculture, in relation to the staff capabilities we now possess. For this reason I am in agreement with the decision to recruit a long-term advisor who would divide his/her time between the communication subsystem and the marketing and credit subsystem. In the search for this person, I will personally ensure that we find someone who is in harmony with the data collection approach we have taken, and who has actual field-level experience in socio-economic research. As a further observation, I would emphasize that with this type of expertise we can begin to apply (and possibly modify) the set of indicators that I drew up for project monitoring and evaluation during my October 1978 assignment with the project.

3. Internal Coordination and Information Flow: We have all become increasingly aware of the difficulties that exist in this area. Cit. Mampaka's position, as chief of the communication subsystem, gives him important responsibilities but very little clear-cut authority. Recently some steps have been taken to correct problems encountered at the field level--within ag. centers and their surrounding villages--when personnel of different subsystems did not coordinate their work. But much more needs to be done. I think that in the future, the PMU will have to take the lead in defining its own information needs: this, in turn, should help the various subsystems clarify their own needs, and formalize the reporting procedures that are needed. Without stronger guidance from the PMU these questions will be difficult (if not impossible) to resolve.
  
4. Zairois Staffing Needs: This last point is an obvious one. We have recognized from the beginning that the subsystem is seriously understaffed, and the situation becomes more and more serious as expectations and demands for information grow, both inside and outside the project. I intend to pursue this matter with Bob Resseguié and the DOA in Kinshasa. Cit. Mampaka will also try to locate university graduates (at least two are needed) if he is able to reach Kinshasa during his annual leave. Any additional help from the PMU would be valuable, too. With the anticipated arrival of a long-term advisor to the subsystem, concentrating on data processing, analysis and reporting, there would be an excellent opportunity for on-the-job training within the project.

**B. Summary of Major Work to be Accomplished Between February and June 1979**

One task listed in the scopes of work prepared for myself and Tom and Pam Blakely was the preparation of a six-month work plan, in collaboration with both of you, for the communication subsystem. Due to a shortage of time on my part, and Cit. Mampaka's forthcoming annual leave, it may not be possible to collaborate directly on this work, as originally foreseen. Therefore I have prepared a brief summary of my thoughts on the major items of work to be done in the subsystem during the coming months. These are offered as suggestions, and not as requirements. However, I suggest that a work plan should definitely be agreed upon before Cit. Mampaka departs on his vacation: it will help to define responsibilities during the period when he is away from the project area.

There appear to be four main categories of work to be done between now and the end of June:

- work involving the Fiches des Villages;
- work involving the individual farmers' Fiches Agricoles;
- preparation of reports to PMU, DOA and USAID on production and marketing in the project area; and
- ongoing work involving monitoring of consumer price trends and traffic counts on project area roads.

Of these four, I have been able to give some attention to the first three during the past several weeks. I have also written a brief paper on reporting requirements, covering the third category of work. Since I have not had a chance to review the subsystem's work in the fourth category (prices and traffic counts), I hope that you (Ken and Mampaka) will be able to do so fairly soon.

I will quickly summarize the main tasks, as I see them, under each category:

**1. Fiches des Villages:**

- results from initial data collection (Oct-Dec 1978) distributed according to requests from PMU and other subsystems;
- data collection in Ag. Centers and neighboring villages to continue during the second ("Kipwa") season, including estimations of field sizes for each crop (for maize, broken down thus: (a) local seed, traditional methods; (b) improved seed, traditional methods; and (c) improved seed, recommended methods).

**2. Fiches Agricoles:**

- Much closer collaboration needs to be established, as soon as possible, with the research and extension subsystem. This should clarify questions on several data points in the Fiche, and both Cit. Mamingi and Zeke Thies need to be consulted. This was not done

before the Fiches Agricoles were distributed to extensionists--a serious oversight.

--Together with Cits. Mampaka and Nyagamende, I have worked out a provisional coding scheme for the data currently contained in the Fiches Agricoles. When this has been discussed and cleared with the Research and Extension subsystem, code sheets can be distributed to the rapporteurs and data from the first season (August-December 1978) can be extracted.

--For the moment, the most important item of information to be extracted is the yield per hectare, based on sample areas of 10 m<sup>2</sup>. Counts of maize plants and ears were made; if scales can be obtained, samples of weight should be taken to allow conversion from # ears to kg.

*Do they really speak Swahili?*

Tom and Pam Blakely's suggestions re Swahili translation should be helpful. Together with technical contributions from Cit. Mamingi and Zeke Thies, we should have the basis for an acceptable, standardized Fiche Agricole (in Swahili) for the 1979/80 agricultural cycle. This should be printed; I can arrange it sent to me at DAI/Washington.

--Data for the second ("Kipwa") season should be extracted on code sheets when the second maize harvest is ready.

3. Major Reporting Requirements:

--I have outlined, with Cit. Mampaka, a method of calculating overall maize production within the project area. This needs to be discussed with Cits. Mamingi and Mpunga, as well as the PMU. Cit. Mampaka has distributed this as a "Note de Service", dated 8 February 1979. It may need to be modified as a result of these discussions. Once a method has been agreed upon, it should be applied to the data available from the first ("Masika") season of August-December 1978. When data from the second ("Kipwa") harvest are available, the same method should be used. Then total production for the 1978/79 year can be estimated.

--I recommend that the Fiches Agricoles be used as a means of generating quantitative data on household consumption of maize, storage techniques and the magnitude of losses, and "informal" sales before the official marketing campaign begins.

--Qualitative data on these questions can also be gathered by the rapporteurs and the FGD subsystem staff. At present we lack even a basis for guessing at the proportions of maize output that are consumed, lost in storage, or sold locally.

3.

—Data gathering during the formal marketing season will be the responsibility of the marketing and credit subsystem. However, Cit. Mampaka and Ken should work closely with Cit. Mpunga in defining the strategy and methods of collection.

—These suggestions should provide a means for estimating overall production for the year by the end of June, and a means of reporting the results of the marketing campaign when it terminates in July/August.

4. Monitoring of Prices and Traffic: As I explained above, I have not had time to review this work, and hope that Ken and Cit. Mampaka will do so in the near future.

**C. Current and Future Work Related to the Fiches des Villages**

I would like to leave you some ideas on the work that has been done so far on the Fiches des Villages, and on the work that needs to be done during the next four to six months. As part of their consulting assignment with the project, Tom and Pam Blakely will prepare a set of detailed recommendations covering the following points:

- The initial response of farmers and village leaders to the collection of data for the Fiche du Village;
- minor changes and additions that could be adopted in the current year (1978/79);
- Any major revisions of the Fiche proposed for the next year (1979/80); and
- improvements in the Swahili translation of the Fiche.

The Blakelys' work will be finished by the end of February. As soon as Cit. Mampaka returns from his vacation in mid-March, he and Ken should review their recommendations and decide whether to apply them, and how to apply them.

In the meantime, I would like to record a few of my own observations on the progress of the work so far:

1. The rapporteurs in the three sectors have made a good start, and have been able to collect data on most of the questions posed in the Fiche du Village, with the aid of the extensionists.
2. From discussions with the Blakelys, it appears that the accuracy of the data gathered may vary widely, from one village to another, and also from one question to another on the Fiche itself. This indicates that more attention must be paid to the following issues and problems:
  - (a) Careful explanation of the content and the purpose of the Fiche. This job must rest with the rapporteur; it cannot be left to the extensionist alone, since he has many other responsibilities. An improved Swahili translation is essential. I also recommend that the communication subsystem prepare, in Swahili, a one-page document explaining the Fiche, which can be distributed in several copies at each village. I believe this would help in building confidence and reducing suspicion.
  - (b) Each rapporteur must ensure that at least one Swahili copy of the Fiche is in the hands of a village spokesman, either the kapita or someone nominated by residents of the village. It appears that some of the extensionists have not yet filled

out Swahili copies in collaboration with people in the villages.

(c) The rapporteurs need to give more attention to the methods of gathering data for the Fiche:

- (i) how to phrase questions;
- (ii) whom to ask - individuals, small groups, large groups; and
- (iii) making sure that everyone (every group) understands that an information exchange is taking place, and has a chance to participate.

3. I believe that the above steps, (a), (b) and (c) will be helpful during the next several months, in two ways: filling in blanks and adding to information already gathered, and also in correcting errors. Please note that we can only learn to recognize errors if we have the confidence and cooperation of farmers themselves.

4. The remarks I have made under 1, 2 and 3 refer to data collection with Fiches in the Agricultural Centers already served by the project. However, during the coming months PNS is likely to add new Centers, and all subsystems need to learn more about areas in each sector not yet served: for example, Nkulula in Kongolo sector, and many others cited in the Project Paper. There are two ways of proceeding, as far as data collection is concerned:

--either wait until new Ag. Centers have been selected, and begin introducing the Fiche du Village after extensionists have been assigned there; or

--using the rapporteur in each sector, begin exploring possible new areas during March/April, with the Fiche du Village as a "tool" to break new ground and provide data before new Centers are chosen. In this way the rapporteur's work with the Fiche in new areas would be similar to the reconnaissance work that was done in February-April 1978.

I would recommend the second option, i.e. using the Fiche to gather data in several potential new areas. Since no extensionists would be assigned there yet, this work would have to be done by the rapporteurs, possibly assisted by Cits. Mampaka and Nyagashende. We would have to realize that some questions on the Fiche could not be completely answered. Because of

time limitations, it would probably be necessary to limit this work to the proposed "Centers" rather than including several surrounding villages as well (they could be added later, each being covered with its own Niche, if a new Center were created).

- 5. Recently Cit. Mampaka notified each of the other subsystem chiefs and the PMU that preliminary results were available from the Fiches des Villages. The Communications subsystem should be able to respond rapidly to requests for these results. This will be in the hands of Cit. Nyagashende during the period of Cit. Mampaka's absence on vacation. To strengthen links between the subsystems, these requests should be answered promptly as they come in: in other words, they should be a high priority. For present purposes, I believe that the summary sheets already prepared by Cit. Nyagashende and the rapporteurs are adequate, and can be reproduced with a brief note of explanation attached to each one, if requested.

These ideas are intended to complement the contributions made by the Blakelys, as well as the appraisals made by Ken and Cit. Mampaka. The one point I would like to stress is the importance of understanding and confidence in this system at the village level. This is the core of the rapporteurs' work; indeed, it is the core of the entire subsystem and the project as a whole. I think that all three rapporteurs will need continuous training and support from Cit. Mampaka, Ken, and Ron Gross. The division according to sectors that I suggested in October (Ken: Kongolo; Ron: Mbelula; Mampaka: Nyanzu) still seems to make sense as a way of ensuring this training and support.

**D. Current and Future Work Related to the Fiches Agricoles**

This report deals with work now in progress, or remaining to be done in the next four to six months, with the farm records introduced in October-November 1978, known as Fiches Agricoles. These were introduced on an experimental basis, relatively late in the first ("Masika") season of the 1978/79 agricultural cycle. We are now examining the results of this first attempt: as part of their consulting assignment with the project, Tom and Pam Biakely will prepare a set of detailed recommendations covering the following points:

- the initial response of farmers in each Ag. Center sample of approximately 15 to the collection of data in the Fiches Agricoles;
- minor changes and additions that can be adopted for the second ("Kipwa") season of the 1978/79 cycle;
- any major revisions proposed for the next year (1979/80); and
- improvements in the Swahili translation of the Fiche.

The Biakelys' work will be finished by the end of February. When Cit. Mampata returns from his annual leave, he and Ken should review their recommendations and decide whether and how to apply them.

Here I would like to record a few of my own thoughts on some major points affecting the work done so far and the work remaining to be done:

1. We have already discussed among ourselves, and with Cit. Mamingi, the need for much closer collaboration with the Research and Extension subsystem. In our haste to start this experiment last October, this was neglected, with unfortunate results. From Cit. Mamingi and from Zeke Thies, I believe we can get two types of very useful technical inputs:
  - additional data points can be identified (one that has been omitted so far is the classification of soil type in each field); and
  - clarification of sampling techniques for field observations (e.g. sample areas for measuring plant density, weighing maize at harvest time).
2. The need for a good functional Swahili translation of the Fiche Agricole is now obvious. I also suggest that we prepare a sheet (in Swahili) explaining what the Fiche is and what it is for: This could be distributed to participating farmers and to anyone else who is interested or curious.

3. We also need to give greater attention to the way that the Fiche Agricole is used in the collection of data. The rapporteurs must follow up with the extensionists to ensure that the Fiche stays in the hands of the farmer, and that the extensionist goes to the farmer (instead of "calling" the farmer to his house) and patiently discusses the weekly observations that are made before writing them in the notebook.
  
4. I have worked with Cits. Mampaka and Nyagashende to prepare a coding scheme for the material that is contained in the Fiches Agricoles thus far. This should be reviewed and finalized before Cit. Mampaka departs for his annual leave. Instructions and code sheets can then be reproduced on stencils and distributed to the rapporteurs, who will do the actual work of transferring data from the Fiches onto the code sheets. A system for protecting privacy was outlined last October: it involves using a series of letters and numbers to indicate sector, Ag. Center, and a farmer's number in the sample. Thus there is no need to record farmer names on the sheets that the rapporteurs will use.
  
5. The code sheets will be brought back to the PNS/Kongolo office. When the full sample is complete (approximately 220-240) Cit. Nyagashende will be in charge of processing and analyzing the results. I believe he will need some assistance from Ken and/or Ron Grosz, at least until the arrival of the long-term marketing/communication advisor who is to be recruited.
  
6. At this stage the critical item of data in the Fiches Agricoles involves the estimation of yields/ha. The extensionists have counted the number of maize plants in sample areas of 10 m<sup>2</sup>, and also the number of ears. This was done not long before the harvest from the first ("Masika") season. A critical need now is for scales which can be used to weigh sample amounts (no. of ears, etc.) of maize. These measures could then be used to estimate the weight of maize harvested from 10m<sup>2</sup> areas. This is an item of high priority: both USAID and PNM might be able to supply scales or balances.
  
7. When yield estimates are available from the Fiches Agricoles, they should be broken down into the following categories:
  - maize produced with local seed and traditional methods;
  - maize produced with improved (PNS) seed and traditional methods; and
  - maize produced with improved (PNS) seed and methods recommended by the project.

8. These data on yields can then be used in projections and calculations of the total amount of maize produced in each sector within the project area. Cit. Mampaka has already circulated a "Note de Service" proposing a method for these calculations. This needs to be discussed and finalized as soon as possible.
9. I also recommend that the Fiches Agricoles, having already been introduced among a sample of farmers at each Ag. Center, be used for monitoring and gathering some quantitative data on the following difficult issues:
  - household level consumption of maize (perhaps other staple foods, too);
  - storage techniques and magnitude of losses; and
  - "local" marketing activities within the project area before the start of the official season: we have all recognized that these are extensive, and difficult to follow.
10. One final point: we should also begin to think about the potential of the Fiche Agricole (in Swahili) as an extension tool in its own right. It could be a very valuable document, kept by the farmer, which the farmer and extensionists could use and review from time to time, to judge the outcome of techniques and practices, plan future rotations, crop and field selection, etc. This brings me back to point 1 above, namely, the importance of much closer coordination between the two subsystems, Communication and Research and Extension.

**Annex 2**

**Infrastructure Report and Activities**

**(John Morrison)**

- A. Revised Road/Bridge Construction Schedule and Expatriate Staffing.**
- B. Facility Construction and Rehabilitation.**
- C. Foreign Exchange Procurement Infrastructure**
  - 1. Attachment A - Immediate Procurement Actions
  - 2. Attachment B - Shortages GSA Tool Order
  - 3. Attachment C - Shortages Snap-On Tool Order
  - 4. Attachment D - Status of Special Brigade YFB #1
  - 5. Attachment E - Status of Procurement Under MM L/C
  - 6. Attachment F - Shortages - GSA Building Materials
- D. Fuel Projections.**
- E.\* Financial Status - Loan**

*Sud had story*

**\*To be sent from U.S.**

**A. Revised Road/Bridge Construction Schedule and Proposed Expatriate Staffing**

**1. Project Paper Road/Bridge Construction Schedule**

The Project Paper schedule called for construction on the roads and bridges to start with the estimated arrival of equipment in October 1978 and be complete in 30 months or April 1981.

The PP estimated 29 bridges would be completed per year, and the roads at a rate of 360 km per year.

The PP phased out the Road and Bridge Specialists in April 1981, the Director in December 1981, and the Maintenance Specialist in September 1982, the end of the six year project.

**2. Revised Road/Bridge Construction Schedule**

Work on the roads and bridges has been negligible, and limited to hand work on the Mbulula-Makatano and Kongolo-Sola-Makatano roads. Some stockpiling of bridge materials and culvert materials has been done.

Major work on the roads and bridges is scheduled to start on the above two roads not later than May 1 when most of the trucks and heavy equipment will be on site and serviced.

Based on the Infrastructure's team evaluation of project conditions, and the productivity of local technicians as demonstrated by the progress on building/facility construction, approximately three years will be required to complete the road and bridge rehabilitation.

The rainy season, based on research done by the Road Rehab Counterpart, is defined as about October 1 through April 30. During this period there are an average of 115 days of rain. Scheduling is based on using a 100% productivity factor during the dry season and 35% during the rainy season.

The projected schedule for Roads and Bridges is:

**Revised Road/Bridge Rehabilitation Schedule**

<u>Period</u>	<u>KM Roads Completed</u>	<u>Number of Bridges Completed</u>
May 79-Sept 79	150	17
Oct 79-April 80	225	25
May 80-Sept 80	375	42
Oct 80-April 81	450	50
May 81-Sept 81	600	67
Oct 81-April 82	675	72 complete
May 82-June 82	724 complete	

Roads are scheduled for completion at an average rate of 30 km/month during the dry season and about 11 km/month during the rainy season. Bridges are scheduled at about 17 during the dry season and 8 during the rainy season. This means each bridge crew has to complete a bridge every 1.75 months during the dry season and every 5.25 months during the rainy season, for a yearly average of one bridge each 2.88 months.

### 3. Restraints and Assumptions

The above schedule assumes the Local Currency budget problems are resolved to permit adequate funding of labor for six bridge construction crew and the three road re-profiling and resurfacing crews plus hand laborers.

Funding of maintenance workers once the roads/bridges are rehabilitated is also required, as deterioration starts almost immediately. This is vividly illustrated by the Kongolo-Mbulula road, portions of which were rehabilitated in 1977-78, only to have deteriorated rapidly during the current rainy season.

The schedule for the first dry season is optimistic considering:

- (a) The hiring freeze has prevented recruitment of qualified operators and personnel and their training prior to the start of the construction.
- (b) The fuel trucks will not be available for the first month or so.
- (c) GM Overseas/GSA is still processing the order of spare parts which was to have accompanied the vehicles.

The second construction season will represent the highest output as personnel should be trained and equipment will still be in relatively good condition. During the third season, deadlined equipment will occur, which could adversely affect projected schedules.

### 4. Expatriate Staffing

Based on the above schedule, expatriate staffing of all four positions, Director, Equipment Maintenance, Roads and Bridges should be maintained for the next three dry seasons, or through October 1981.

In October 1981, depending on the capability of Zairian staff and progress during the past three years, reduction of the expatriate staff should be considered.

Continuation of an Equipment Specialist to project completion (September 1982 or March 1983) is a must. Recruitment of a new staff in the fall of 1980 is a distinct possibility.

The Director, Road and Bridge positions, again considering progress, could be combined as early as October or November 1981, and then phased

out at the completion of construction in June or July 1982.

The decision to retain two construction positions during the period October 81 - July 82 is desirable considering the number of bridge and road crews involved in the work, and the amount of travel involved in visiting sites.

Staffing is proposed as follows:

- Director - through July 1982
- Equipment Maintenance - through project completion (September 82 or March 83)
- Roads - through July 1982
- Bridges - through October 1981

**B. Facility Construction and Rehabilitation**

**1. General**

The June 1978 Informal Evaluation details the overall facility plan for Kongolo, Mbulula Housing, Ngaba Research Center and Nyumzu.

**2. Plan Revisions - June 78 - February 79**

The following changes have been made in the facility plan:

- (a) Kongolo. Building #28, 2 camphouses, and the old Ice House are not available. PMU plans to negotiate for the rental of one or two units to replace the above units. Renovation of additional units will depend on successful conclusion of the negotiations.

The water tank rehabilitation will be dependent on REGIDSO rerouting some main supply lines.

- (b) Mbulula Housing. Three new houses and six apartment units will be constructed south of the present housing. An office has been rented in town, making Building #4 available for housing. The apartments replace units previously planned for Ngaba.

- (c) Ngaba (Mbulula) Research Center. The worker housing has been turned over to the workers and sentinels to modify and remodel for their use. No additional construction by Infrastructure is programmed.

Two classroom/multipurpose buildings will be constructed.

A combination building similar to the warehouse/shop complex at Nyumzu will be constructed.

Student housing will consist of four clusters of six duplex units for a total of 48 housing units. Sanitary

facilities will be provided for each cluster.

A kitchen/dining hall will be constructed, but it is anticipated most married students will cook in their apartments. Each apartment will consist of one room with a cooking lean-to.

- (d) Nyanzu. No change in complex construction. One 2-unit apartment has been rented in town and is being renovated to provide quarters for two staff members.

3. Planned versus Actual Progress, June 78 - February 79

- (a) Kongolo. In June 1978, it was anticipated construction in Kongolo would be complete in February 79 with the exception of the stand-by generator installation.

In February, work was still continuing on renovation of the Circle (recreation center) and 6 camphouses. The security fencing still remains to be constructed and most fencing materials are still in Kinshasa.

Scheduled completion is the summer of 79 depending on the arrival of the generator and fencing materials.

- (b) Mbulula Housing. Two houses are still being renovated, with completion programmed in March.

- (c) Ngaba Research Center. Rehabilitation of the office and warehouse is essentially complete. Foundations have been started for the Lab/Soils Building and Combination Building. Construction on other facilities have not been started, but will start in March.

Brick is being fabricated on site. (Concrete block originally scheduled for construction was deleted due to shortage of cement and lack of vehicles to transport sand.) The scheduled completion date has been revised from July 79 to September 79.

- (d) Nyunzu. Work on concrete block, which was to start in October or November 1978, will start in March. The delay has been caused by shortage of cement, transportation and project funds. Funds were allocated to keep Kongolo and Mbulula construction proceeding at reduced rates. No funds were available for Nyunzu. The starting date of building construction has been revised from March 79 to September 79, with scheduled completion now April 1980.

4. Project Constraints

Progress on the project during the last six months has been constrained by:

- (a) Materials Availability. Local materials, cement in particular, has been in short supply. Early last summer, when project funds were more plentiful, cement was not available. Cement, while not readily available, is more plentiful due to resumption of production at Kalemie.
- (b) Transportation. Lack of project transportation and inability to rent trucks has limited production and transportation of sand and quarry rock. Lack of rail transportation has affected shipments from the sawmill near Kindu.  
  
Transportation, in particular, has also affected the U.S. procurement programs with six to eight months required to transport supplies from Matadi to Kongolo. While not all the delay has been due to lack of transportation, most of it is due to lack of barges and rolling stock.
- (c) Financial. Project finances have been limited during most of the period resulting in hiring freezes and limiting the procurement of local supplies. This has been true since September 1978 and may continue well into 1979.

5. Revised Schedule

The revised schedule for the completion of the new construction at the Mbulula Housing Area and Ngaba Center in September 1979, and Nyunzu in April 1980 depends on: (a) project funds available to hire the additional workers needed to complete the projects; (b) purchase of local materials is funded; (c) local materials are received as scheduled; and (d) infrastructure vehicles arrive as scheduled (April 79) and no unanticipated fuel problems arise.

Based on almost two years experience, and given the present economic situation in Zaire, the schedule is probably optimistic.

Completion of Mbulula and Ngaba in December 1979 and Nyunzu in July 1980 is probably more realistic.

If project funds continue in short supply, a decision concerning allocation of funds to roads/bridges versus deferring construction will need to be made.

C. Foreign Exchange Procurement Infrastructure

1. Summary of Procurement Prior to June 1, 1978.

A comprehensive review of Special Brigade equipment, building material and project fuel procurement actions which took place prior to June 1, 1978, may be found in "An Informal Evaluation of Project North Shaba Activities to Date and Activity Plans for the Next Six Months" which was prepared by the PNS staff, DAI, M/M and USAID in June 1978.

When the above review was completed, virtually all equipment and building materials were on order, a significant portion had been shipped to U.S. ports, and the remainder was in production or scheduled for production.

Project plans, based on the shipping schedules reported in the June 1978 Evaluation, proved to be optimistic for the reasons discussed below.

2. Actual Versus Planned Progress June 78 - February 79

- (a) Special Brigade IFB #1 Equipment. In June 1978, it was anticipated all IFB #1 equipment with the exception of the 4.5 KW generators would be in Matadi by 15 August, and in Kongolo, serviced and ready for use by 1 December 1978.

In actuality, only the Caterpillar equipment and a portion of the five pieces of equipment being furnished by Rassow International met the 15 August Matadi date. The balance of Rassow's order was shipped on July 22, and was in Matadi September 1.

The Bros Roller was not shipped until 19 December due to Citibank/Zaire losing a request to extend the L/C. The manufacturer refused to ship without a valid L/C, and it was not until December that the combination of a valid L/C and American flag availability permitted shipment. At least one additional L/C extension was required because delays associated with confirming the L/C resulted in missing a scheduled American flag sailing, with the next scheduled sailing being after the L/C expired. Bros American Hoist is not without blame because summer production problems delayed manufacture of the equipment, and the spare parts have not been shipped, requiring another L/C amendment.

The Birmingham Trailer was not shipped until 24 September. It was delayed due to the supplier's freight forwarder missing one American flag vessel, cancellation of a scheduled second sailing and the amendment of the L/C to add the 5th wheel. The trailer without the 5th wheel was in U.S. port in late June 1978.

The Jaeger concrete mixers were shipped 15 August and arrived in Matadi in September. An extension of the L/C was required because the mixers were not manufactured until July 1978, too late to be scheduled on an American flag vessel within the validity dates of the L/C.

Three graders, 2 bulldozers without blade and 1 front end loader without bucket arrived Kongolo 29 December. The majority of the Caterpillar spare parts are in Kongolo and the bulldozer blades and Loader bucket are enroute to Kongolo via Kisangani.

The revised date when all IFB equipment is expected to be operational is June 1, 1979. This assumes no major damage or vandalism while the remaining equipment and spare parts are being shipped to Kongolo during the period February - June 79.

- (b) Special Brigade GSA Vehicles and Equipment. GSA vehicles were delayed from the October 1978 "Inspection" date to the spring of 1979 due to "GM plant" difficulties. Information received in February 79 indicates that 9 pickups, 2 flatbeds and 9 dump trucks were shipped in February with an ETA Matadi of 5 March 79. Two pickups and the 3 water/fuel trucks were vandalized in U.S. port and not shipped pending repairs.

By convoying the vehicles from Matadi to Illebo, the March 5 vehicle shipment can be serviced and ready for Project use about 1 May at the earliest, and 1 June at the latest. The 5 vehicles delayed in shipment, assuming they are also convoyed, will probably be ready for Project use by 1 July to 1 August.

The above schedule assumes the spare parts were shipped with the vehicles. If delayed, use of the vehicles by the Project will be limited until they arrive.

In June 1978, it was estimated vehicles would be serviced and in use by 1 May 1979. The four-month slip in "GSA Inspection" is being offset (if all goes according to plan) by the overland convoy.

The majority of hand tools were received in Kongolo in September 1978 and December 1978. Minor amounts of tools continued to arrive in country during the period June 1978-January 1979. Most of these later shipments are enroute to Kongolo in containers shipped in mid-February.

Some pilferage of tools occurred during shipping. Total losses will not be determined until a final inventory is made at Kongolo, probably in May 1979, after the last container shipped in February/March 1979 arrives.

- (c) Building Materials. In June 1978, while some building materials had arrived in country the month before, none had cleared Matadi and been shipped to Kongolo.

During the summer, and through December 1978, additional shipments of building materials were received in country. A considerable amount of difficulty occurred in clearing customs because of non-receipt of original Ocean B/L's and invoices.

The majority of the materials in country last June arrived at Kongolo in October, and shipments continued to be received

until late December 1978. Following receipt of a container in Kongolo 14 February, the building materials remaining in Kinshasa were loaded into two containers and shipped to Kongolo. Upon their arrival, the final inventory of materials received can be completed with an appropriate allowance for materials then in the shipment process (Matadi/Kinshasa or enroute).

The schedule developed in June 1978 anticipated 120 days from Matadi to Kongolo. While this has been achieved for some items (when everything went right), 180 days is more typical.

- (d) M/M Letters of Credit. In June it was decided that remaining spare parts procurement as well as some materials and tools would be done under Letters of Credit issued to Morrison-Maierle.

*Reviewed*

Two L/C's totaling \$228,000 were issued, one dated 7 November 1978, the second 11 December 1978. It took Citibank/New York over 30 days to confirm each L/C, therefore, one was received by M/M in late December and one in late January 1979.

Procurement under the L/C's has been limited to emergency spare parts, tools and electrical wire procured in June-September and airfreighted in September 78. This procurement totaled about \$6,000 and was authorized in anticipation of L/C issuance. The Mbulula research center pump was ordered in July and shipped by M/M in December, after the L/C was formally issued.

Procurement of about \$6,000 of generator spare parts under a pending code 899 waiver has also been started by M/M.

Approximately \$22,000 is involved in the three transactions to date.

Pro-forma invoices have been requested and forwarded to PMU/AID Kinshasa for review for the purchase of tires and Brigade 19 spare parts. This procurement is in a hold status pending receipt of all Project equipment and budget approval of Brigade 19 support.

3. Status of Procurement - February 1979

Attachments A through F summarize the current status of Infrastructure procurement based on an inventory in Kongolo during February 1979. Some of the shortages noted will be eliminated or reduced when the mid-February shipments arrive in Kongolo.

The final inventory and report of losses will be made in May 1979.

#### 4. Summary and Recommendations

The overall procurement process started August 1, 1977 when DAI/MM arrived at Kongolo. On June 1, 1979, 98% of the procurement should be complete, a total of 22 months. Key dates, activities and elapsed times are:

<u>Date</u>	<u>Activity</u>	<u>Elapsed Time From 1 August 1977</u>
1 Aug. 77	Procurement process starts.	0
Nov. 77	Specification for vehicles, equipment, tools approved. GOZ/USAID-GSA order placed. Bids advertised.	3
Jan. 78	Equipment bids approved. Building materials ordered.	5
May 78	Hand tools arrive Matadi (Initial shipments).	10
June 78	Building materials arrive Matadi (initial shipments).	11
July 78	Equipment for Special Brigade arrive Matadi (initial shipments).	12
Sept 78	Hand tools arrive Kongolo (first major shipment).	13
Dec. 78	First equipment and major portion building materials arrive Kongolo.	17
Mar. 79	Vehicles arrive Matadi.	20
1 June 79	Initial procurement complete	22

The Project Paper schedule called for procurement to start in February 1977, estimated off-shore building material procurement would be complete in 5 months (August 77) and equipment procurement complete in 20 months (October 1978).

Major bottlenecks and problems could have been avoided by:

(a) Issuing a single Letter of Credit to the contractor to procure all equipment or supplies. Once approval of bidding documents, equipment lists, and in some cases, bids, were approved by GOZ/USAID, procurement could have proceeded without delay. A minimum of 2 months (up to 6 months in some cases) time could have been saved).

- (b) Budget for additional expatriate procurement personnel in the U.S. and in-country.
- (c) Include in the Project budget (and preferably the contractor's L/C) the local cost of transportation. Use of the OR or SGMTP who have little interest and a lack of resources to transport Special Brigade equipment, has resulted in delays of over 6 months and up to 10 months.
- (d) Authorize partial shipments of supplies on a case by case basis to minimize port/customs formalities.
- (e) Avoid GSA/GM Overseas Corporation vehicle procurement. The total elapsed time, November 77 to February 79, to order, manufacture and deliver to U.S. port 25 vehicles could have been reduced by a minimum of 8 months by bidding the vehicles with the remainder of the Special Brigade Equipment.

IMMEDIATE PROCUREMENT ACTIONS**1. General**

Based on the inventory in Kongolo, and a review of the material in the process of shipment from Matadi to Kongolo, PMU has authorized purchase under the M/M L/C of items considered critical for the Project. These items will be purchased and shipped air freight.

Procurement of spare tires, additional vehicle spare parts and miscellaneous Project supplies is, of course, continuing as an on-going Project requirement.

**2. GSA Hand Tools - Stock Items**

The initial order consisted of 515 Line Items, of which 82 have not been received in Kongolo, or have been received with shortages.

Shortages, with the exception of 2 electric drills (line item 324) are due in some cases to items still being on back order, partial shipments, and damage/vandalism to shipping containers. Line item 324 was stolen prior to export packing, and the USAID North Shaba Project Officer has been advised of the circumstances.

Wheelbarrow wheels, hammers, and selected tools have been ordered under M/M L/C to supplement the initial GSA tool order and provide replacement tools for those expended through normal wear and tear. See PR for these items.

Attachment B summarized the status of the GSA tool order on 15 February 1979.

**3. Snap-On Tools**

The initial order consisted of 87 Line Items, of which 24 have not been received in Kongolo, or have been received with shortages.

All shortages, with the exception of back-ordered items are due to damage and pilferage of the cardboard containers used for shipping.

Twelve items, as listed in PR have been ordered to supplement the initial Snap-on Tool Order, and to provide replacement tools.

Attachment C summarizes the status of the Snap-on Tool Order on 15 February 1979.

**4. Surveying Instruments**

The only shortage which occurred was due to a packing error as Line Item #5 Hand Levels were not packed.

Line Item #10 was over 6-100 ft. tapes, which were purchased by M/M, and Line Item #11 was short 5 reels, which were furnished by M/M under their L/C. The adjustments in Line Items 10 and 11 were required due to misinterpretation of suppliers catalogue numbers.

5. IFB Equipment, Vehicles and Shop Equipment

Attachment D summarizes the status of Special Brigade equipment, vehicle and maintenance shop equipment.

6. M/M L/C

Attachment E summarizes the status of the procurement under the M/M Letters of Credit.

7. Building Materials

Attachment F summarizes the status of the GSA building material order as of 15 February 1979.

The majority of the building supplies on hand were received in Kongolo in December and February.

A small number of items are still in transit from Matadi to Kongolo. Of concern are the following items which are short and not in transit to Kengolo.

<u>Item No.</u>	<u>Description</u>	<u>Status</u>
53 - 54	#12 Conductor - 86 250 ft. coil packages	No record of receipt at Matadi
55 - 68	Paint - various quantities	No record of receipt at Matadi
72	Insect Screen 50 ea. 100 ft. x 48" rolls	No record of receipt at Matadi
74	#2/Cu. 600 V wire, 6,000 ft. short	Short landed 6,000 ft. of wire
92	3 Phase Electrical Panel w/Breakers	Lost - check status of insurance claim
93 - 94	12.5 and 150 KW Generators	In Matadi for customs clearance. Generators were sent to GSA/Rin- shasa

## ATTACHMENT B

SHORTAGES - G S A TOOL ORDER - 15 FEB 1979

ITEM #	DESCRIPTION	STOCK #	UNIT PRICE	ORDERED	ON HAND	SHORTAGE
6	Bar, Pry	5120 - 00 - 180 - 0873	5.15	12	7	5
26	Pliers, 6"	5120 - 00 - 247 - 5777	1.70	12	0	12
30	Pliers, Diag, 6"	5110 - 00 - 806 - 1532	3.00	18	0	18
39	Pliers, Internal, 90°	5120 - 00 - 024 - 9531	1.87	12	1	11
40	Pliers, " "	5120 - 00 - 602 - 1885	3.60	6	0	6
44	Pliers, External, 90°	5120 - 00 - 024 - 9528	2.25	12	4	8
45 #	Lifter, valve Spring	5120 - 00 - 529 - 2283	18.10	5	0	5
62	Wrench, chain 50"	5120 - 00 - 277 - 3685	74.00	2	0	2
64	Wrench, Pipe Strap, 18"	5120 - 00 - 262 - 8491	4.55	6	0	6
75	Wrench Set, Open End	5120 - 00 - 935 - 7310	22.10	5	0	5
83	Wrench Set, Socket 3/4" Dr	5120 - 00 - 595 - 9151	93.00	4	0	4
89	Socket 3/4" Dr, 1 3/8"	5120 - 00 - 261 - 2819	4.50	6	4	2
94	Socket 3/4" Dr, 1 7/8"	5120 - 00 - 261 - 2827	12.40	6	12	*6 over
95	Socket, 3/4" Dr, 2"	5120 - 00 - 261 - 2828	10.10	6	0	6
102 #	Wrench Set, Socket, 1" Dr	5120 - 00 - 081 - 2309	245.00	2	0	2
108	Wrench, Open End, 3/8"	5120 - 00 - 224 - 3155	2.00	6	0	6
122	Wrench, Open End, 5/8 x 11/16"	5120 - 00 - 277 - 2327	1.30	12	6	6
130 #	Chisel, Cape	5110 - 00 - 273 - 8474	2.88	12	0	12
139	Chisel, Cold	5110 - 00 - 236 - 3272	1.00	12	0	12
157	File, Hand, Flat	5110 - 00 - 249 - 2850	1.60	12	0	12
167	File, Hand, Half Round	5110 - 00 - 241 - 9156	2.85	12	7	5
168	File, Hand, Regular	5110 - 00 - 156 - 0049	0.85	12	0	12
174	File, Hand, Knife	5110 - 00 - 234 - 6563	1.05	12	0	12
175	File, Hand, Knife	5110 - 00 - 234 - 6569	1.45	12	0	12
177	File, Hand, Knife	5110 - 00 - 234 - 6567	1.70	12	0	12

\* Will continue to stock overage

ITEM #	DESCRIPTION	STOCK #	UNIT PRICE	ORDERED	ON HAND	SHORTAGE
178	File, Hand, Knife	5110 - 00 - 234 - 6570	2.25	12	0	12
188	File, Hand, mill	5110 - 00 - 203 - 4645	1.65	12	0	12
203	File, Hand, square	5110 - 00 - 203 - 9811	1.85	12	3	9
220	File, Hand, Three Square	5110 - 00 - 241 - 9165	2.35	12	6	6
225	File, Hand, Curved Teeth	5110 - 00 - 245 - 3014	4.10	12	0	12
230	Replacement Blades	5110 - 00 - 045 - 6213	0.88	96	0	96
236	Wrench, Socket, Tire #10	5120 - 00 - 203 - 4766	15.60	4	0	4
237	Tool, Tire, Probing	5120 - 00 - 449 - 8047	1.15	6	2	4
241	Jack, Lift, Bumper	5120 - 00 - 596 - 9712	36.00	4	3	1**
248	Punch, aligning	5120 - 00 - 240 - 8894	0.97	12	6	6
269	Tire, Iron	5120 - 00 - 359 - 6552	3.45	18	0	18
274	Tire, Iron	5120 - 00 - 449 - 7073	9.10	6	0	6
292	Soldering Gun kit	3439 - 00 - 930 - 1638	20.50	6	0	6
296	Cloth, abrasive, Roll	5350 - 00 - 184 - 6290	7.50	10	0	10
316	Dispensing Pump Hand	4930 - 00 - 294 - 5110	53.50	4	0	4
319	Grease Gun, Hand	4930 - 00 - 965 - 0288	6.70	6	0	6
324	Drill, Electric, Portable	5130 - 00 - 293 - 1849	55.00	4	2	2*
330	Bar, Pinch	5120 - 00 - 224 - 1384	4.50	6	0	6
331 #	Wheel, Abrasive	3460 - 00 - 882 - 1215	2.50	24	0	24
332 #	" "	3460 - 00 - 882 - 1213	1.85	24	0	24
333 #	" "	" " " - 1230	3.50	18	0	18
334 #	" "	" " " - 1228	3.40	18	0	18
335 #	" "	5130 - 00 - 393 - 0567	2.70	30	0	30
387	Screwdriver, Flat Tip	5120 - 00 - 764 - 8060	1.05	18	0	18
397	Goggles, Chipper Grinder	4240 - 00 - 269 - 7911	2.00	10	14	4 over

\*\* Empty Box Packed for export

\* Ser # 5844 & 6088 missing from standard pack of 4 - Empty boxes packed for export.

ITEM #	DESCRIPTION	STOCK #	UNIT PRICE	ORDERED	ON HAND	SHORTAGE
398	Cover, Goggles	4240 - 00 - 269 - 7912	2.50	4	0	4
399	Goggles, Welders	4240 - 00 - 268 - 9739	2.50	10	0	10
400	Goggles, Cover	4240 - 00 - 203 - 3804	2.75	4	14	10 over
402	Shield, Face	4240 - 00 - 542 - 2048	2.55	25	0	25
404	Hammer, Hand, DF 6#	4240 - 00 - 264 - 7462	7.10	12	0	12
405	" " " 8#	" " - 251 - 4489	7.90	12	0	12
406	" " " 10#	" " - 243 - 2957	10.55	12	0	12
407	" " Cross pcen 3#	" " - 242 - 3915	4.10	12	0	12
408	" " " " 6#	" " - 224 - 4127	9.10	12	0	12
409	" " " " 8#	" " - 224 - 4128	9.60	12	0	12
410	" " Carpenter 7 oz	" " - 892 - 6263	3.15	12	0	12
411	" " " 1 #	" " - 892 - 5485	3.45	36	0	36
412	" " " 1 #	" " - 900 - 6113	3.90	36	0	36
413	" " " 1 #	" " - 243 - 2959	9.00	18	0	18
414	" " " 20 oz	" " - 892 - 5744	3.70	18	0	18
415	" " Ball Peen 2 oz	" " - 250 - 3911	2.65	6	0	6
416	" " " " 2 1/2 oz	" " - 187 - 1033	9.50	18	0	18
417	" " " " 32 oz	" " - 187 - 1034	10.60	18	0	18
419 #	Ax, Doublebit	5110 - 00 - 845 - 4675	5.90	72	0	72
425	Chisel, Firmer. 2"	5110 - 00 - 640 - 5424	6.50	6	0	6
457 #	Saw, Cross Cut, 2 - man	5110 - 00 - 263 - 8836	13.60	12	0	12
476	Pencils, Carpenters	7510 - 00 - 275 - 7213	0.95	24 dz	0	24 dz
490	Tamper, Hand	5120 - 00 - 269 - 7970	15.40	24	0	24
495	Level & Plumb	5210 - 00 - 278 - 9857	4.55	12	0	12
496 #	Auger, Pesthole	5120 - 00 - 223 - 8554	16.80	4	0	4
498	Wheel Barrow	3920 - 00 - 640 - 9189	46.00	24	24 Without wheels	
499	Chain Assembly, 5/16"	4010 - 00 - 171 - 4426	8.10	8	0	8

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ITEM	DESCRIPTION	STOCK #	UNIT	ORDERED	ON HAND	SHORTAGE
			PRICE			
502	Wise assembly 3/4"	4720 - 00 - 585 - 2289	18.00	12	0	12
507	Bar, Digging	5120 - 00 - 516 - 3802	15.80	12	0	12
508 #	Bar, Wrecking	5120 - 00 - 283 - 7218	1.55	12	0	12
511 #	Spoon, Telegraph	5120 - 00 - 224 - 9323	17.90	6	0	6
512 #	Wise, Pipe	5120 - 00 - 180 - 0647	52.00	2	0	2

# Items enroute to Kongolo from Kinshasa

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ATTACHMENT C

SHORTAGE = SNAP ON TOOLS ORDER = 15 FEB 1979

ITEM No.	DESCRIPTION	STOCK #	ORDERED	ON HAND	SHORTAGE
002	Plier	PR - 2	6	0	6
* 004	C Clamp	VP 18 R	3	0	3
010	Boxochet Set	CX 605	6	0	6
* 014	Flare Set	TF 528 C	2	0	2
015	Flare Set	TFM 5	2	1	1
017	Pliers	HL 120 P	6	3	3
* 018	Plier	597 C	6	4	2
* 020	Diag Cutter	H L 9	6	1	5
026	Drill Bit	CSE 425 A	2	1	1
* 028	Drill Bit	CSE 465 A	2	0	2
034	Drill Bit	CSE 645 A	2	1	1
037	Wheel	WC 6326 OR	3	1	2
045	Tap Die Set	TD 9902	2	0	2
046	Tap Die Set	TDM 117	2	0	2
* 042	Caliper	CM 206	4	0	4
* 043	Cyl bore Ga	CM 257	2	0	2
* 044	Dial Caliper	CM 210	2	0	2
* 063	Hat Set	2007 BSB	2	0	2
* 064	Hose	GA 4729	3	0	3
* 065	Hose	GA 4723	3	0	3
* 066	Pipe	GA 4721	3	0	3
* 071	Hook	3313	2	1	1
* 079	Spring	ESD 76	3	0	3
* 080	Wr. Set	RB 606 B	4	0	4

\* ITEMS BACK = ORDERED (INITIAL SHIPMENT).

ATTACHMENT DSTATUS OF SPECIAL BRIGADE IFB #1 EQUIPMENTGSA VEHICLE ORDER AND GSA SHOP EQUIPMENT ORDER

15 FEBRUARY 1979

<u>PROCUREMENT DOCUMENT</u>	<u>DESCRIPTION</u>	<u>STATUS</u>
IFB #1	2 Caterpillar D-6 Bulldozers	In Kongolo less blade. Blade, yoke and ripper in transit. Rec'd. with minor damage and some pilferage.
IFB #1	3 Caterpillar 120-G Graders	In Kongolo -- rec'd with minor damage and some pilferage.
IFB #1	1 Caterpillar 930 Loader	In Kongolo less bucket. Bucket in transit. Rec'd with minor damage and some pilferage.
IFB #1	Spare Parts for above	61 cases (short landed 6), 36 cases, and 7 cases rec'd. Matadi. All but last 7 cases plus missing 6 cases from 1st shipment reported in Kongolo by SCMP.
IFB #1	1 Bros Roller	In Kinshasa -- L/C extended to allow for shipment of parts.
IFB #1 Amd.	1 Birmingham Trailer and 5th wheel	Birmingham Trailer in Kinshasa. 5th wheel enroute to Kongolo.
IFB #1	2 Jaeger Concrete Mixers	In Kinshasa -- 1/2 spare parts rec'd. @Kongolo 15 February. Mixers damaged in shipment.
IFB #1	2 Water Pumps	Enroute to Kongolo, some tools rec'd. In Kongolo 15 February.
IFB #1	2 Hobart Welders	Enroute to Kongolo, some accessories rec'd. @ Kongolo 15 February

PROCUREMENT  
DOCUMENT

DESCRIPTION

STATUS

IFB #1	3 Oxygen/Acetylene	Rec'd. @ Kongolo 15 February.
Amendment	3 Acetylene Generators 30 Oxygen Cylinders 500 # Carbide	Rec'd. @ Kongolo, 15 February Rec'd. @ Kongolo, 15 February Enroute to Kongolo
IFB #1	1 IR Air Compressor	Enroute to Kongolo. Some accessories rec'd.
IFB #1	3 Onan Generators	Enroute to Kongolo. Some spare parts rec'd.
PA/PR 066-16	9 Pickup Trucks 2 Flatbed Trucks 9 Dump Trucks	Shipped on Austral Pilgrim W/ETA Matadi - 5 March 79
	2 Pickup Trucks 1 Water Truck 2 Fuel Trucks	Booked on African Sun W/ETA U.S. Port 23 February 79
	Shop Tools - 3 Line items consisting of:	
	2 Chain Hoists 2 Air Compressor 1 Lathe, Engine - 13"	Enroute to Kongolo Enroute to Kongolo Check status by cable

ATTACHMENT B

STATUS OF PROCUREMENT UNDER MM L/C 4263 AND 4332

- 1. L/C 4263 dated 7 November 1978 in the amount of \$148,000 was received by MM on 21 December 1979.
- 2. L/C 4332 dated 7 December 1978 in the amount of \$80,000 was received by MM on 21 January 1979.

The following has been procured or is being procured under the L/C:

<u>SHIPPING DOCUMENT OR PR NO.</u>	<u>DESCRIPTION</u>	<u>STATUS</u>
AMB 012-7198-6191 (September 78)	Pickup Spare Parts, Misc. Tools, Hand Pump, etc.	Received Kongolo 17 October
AMB 012-7198-6283 (September 78)	Pipe Dies	Received Kongolo 27 December
N/A	Bear Pump for Ngaba Research Center	Shipped from U.S. Port February
PR 074,075,076	Spare parts for Generators	Waiver requested for procurement from UK- Parts have been ordered by MM

D. Fuel Projections

1. Project Fuel Requirements

(a) Received and on Order. The Project in FY 77, 78 and 79 received, or has on order, the following amounts of fuel:

<u>Description</u>	<u>FY 77 &amp; 78</u>	<u>FY 79</u>	<u>Totals</u>
Diesel	160,000	539,000	699,000
Gasoline	120,000	154,000	274,000
Kerosene	<u>40,000</u>	<u>38,500</u>	<u>78,500</u>
Total - Vehicles & Equipment	320,000 1	731,500 1	1,051,500 1
Aviation Gas (300 drums)	-	60,000 1	60,000 1

(b) Fuel Requirements - FY 80 through 82. The estimated fuel required for the next three fiscal years has been estimated as follows:

<u>Description</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>Total</u>
Diesel	700,000	700,000	700,000	2,100,000
Gasoline	250,000	250,000	250,000	750,000
Kerosene	40,000	40,000	40,000	120,000
Total - Vehicles & Equipment	990,000 1	990,000 1	990,000 1	2,970,000 1
Aviation Gas (480 drums)	96,000 1	96,000 1	96,000 1	288,000 1

2. Estimated Fuel Costs

(a) Overview. The fuel received to date has been paid for in a combination of U.S. dollars and zaires. The Foreign Exchange (FX) cost has been allocated from the 1,346,000 Loan Letter of Commitment for Fuel (L/Comm 02).

The local currency cost has been paid for from either GOZ Project funds, or USAID Counterpart Funds made available to the Project.

The Project Paper, program agreement and loan budget do not contain a local currency item for fuel. Aviation gas was also not included in the PP.

The Loan Agreement does not allocate any of the \$1,346,000 for fuel Local Currency costs, and in fact, the loan prohibits the use of FX funds to pay LC fuel costs.

(b) Expenses Through FY 79. Fuel expenses estimated through September 30, 1979 are:

	<u>U.S. Dollars</u>	<u>Zaires</u>
FY 78 Vehicle & Equipment Fuel	78,706	33,000
FY 79 Vehicle & Equipment Fuel	143,861	124,335
FY 79 Aviation Gas	<u>33,408</u>	<u>—</u>
	\$258,975	Z.157,335

The balance of L/Comm 02 is \$1,090,025

(c) Fuel Costs FY 80 Through 81. Using August 1978 FX price for fuel purchased in Zambia and delivered to Sakanja, and the current (February 1979) Zaire controlled price of fuel, the estimated cost for one year of fuel is:

	<u>1979 U.S. Dollar Cost</u>	
Diesel	700 M <sup>3</sup> @ \$168.00	= \$117,600
Gasoline (regular)	250 M <sup>3</sup> @ 284.00	= 71,000
Kerosene	40 M <sup>3</sup> 248.65	= <u>9,946</u>
Vehicle & Equipment Fuel		\$198,546
U.S. Dollar Cost		<u>53,453</u>
Aviation Gas (480 drums)		<u>\$251,909</u>
<b>Total</b>		

	<u>1979 Zaire Cost</u>	
Diesel	700,000 liters @ Z.0.24	= Z.168,000
Gasoline (regular)	250,000 liters @ 1.37	= 342,500
Kerosene	40,000 liters @ 0.20	= 8,000
Aviation Gas	480 drums	none
		<u>Z.518,500</u>

Less FX Cost - \$198,546 x 1.54 = Z.305,761

Local Currency Cost Z.212,739

Using 15% per year fuel cost inflation, the cost in FY 80 through 82 is estimated as follows:

	<u>Fuel Costs - FY 1980 thru FY 1982</u>			
	<u>FY 1980</u>	<u>FY 1981</u>	<u>FY 1982</u>	<u>Total</u>
U.S. Dollar	289,695	333,150	383,122	1,005,967
Zaires (@1.54/\$1.00)	244,650	281,347	323,549	849,546
Zairen (20% devaluation per year plus fuel inflation @15%)	293,580	405,140	559,094	1,257,814

Since L/Comm 02 will have a balance of about \$1,090,025 at the end of FY 79, the projected balance of about \$85,000 at the end of the project in 1982 represents about 8% for contingencies.

### 3. Use of L/Comm 02 to Pay Local Costs

The use of L/Comm 02 to pay local costs has been raised several times. Using the above examples and fuel projections, the following results:

	<u>Zaire Cost</u>	
Diesel	700,000 liters @ 0.24 =	Z. 168,000
Gasoline	250,000 liters @ 1.37 =	341,500
Kerosene	40,000 liters @ 0.20 =	8,000
Aviation Gas	480 drums	none
		<u>Z. 518,500</u>
Equivalent U.S. Dollars (\$18,500 x 1.54 x 3 yrs.)		\$ 1,010,065
3 years inflation @ 15% yr.		512,061
Less balance L/Comm 02		<u>1,090,025</u>
Projected deficit (		(\$ 432,101)

If the dollars are converted to zaires, the projected short fall with 15% per year inflation is \$432,101.

This alternative, if legal under the loan agreement, does not appear desirable unless grant funds are to be made available to make up the funding deficit in FY 1980 - 1982.

### 4. Conclusions

- (a) L/Comm 02 contains sufficient funds to pay the FX cost of fuel for vehicles, equipment and aircraft purchased in Zambia at world prices with a small allowance for contingencies based on the latest estimate of Project fuel requirements.
- (b) Z.849,546 plus an unknown amount for devaluation will be required to purchase the fuel unless the Project is exempted from paying the GOZ control price.

Since local currency fuel costs were not included in the original LC Project budget, additional counterpart or GOZ funds are required.

- (c) Use of L/Comm 02 to pay local currency costs will result in a shortfall of funds available to purchase fuel.

### 5. Recommendations

- (a) Budget counterpart funds for the local currency cost of fuel.

- (b) Consider including aviation fuel in the FY 1980-82 Grant to provide additional contingencies in the fuel budget.
- (c) Obtain "exempt" status from GOZ controlled fuel prices.