

NORTH SHABA PROJECT

EVALUATION OF FARMERS' GROUPS DEVELOPMENT (DGF) AND OF
MARKETING AND CREDIT (C. + C.) SUB-SYSTEMS

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SUMMARY OF THE MAIN RECOMMENDATIONS

First Option: Cessation of the North Shaba Project within six months

- DGF and C.+C. should phase out their activities immediately.
- DGF must make sure that the legal and financial reports of the two savings cooperatives are in order and on file.
- The content of these reports should be made public in a meeting with all the members who should also discuss the future of the cooperatives.
- PNS should devote major effort to the training of its Zairian employees and to the integration of all its cadres into national employment structures.
- SCAD should stop gathering new data and focus on the analysis and the writing up of the material so far collected.

Second Option: End of PNS in September 1983

- DGF and C.+C. should phase out their activities as smoothly as possible.
- DGF should teach marketing and investment principles to the largest possible number of farmers. All peripheral actions (the construction of spring boxes, the support to savings cooperatives, etc.) should be dropped.
- C.+C. may consider selling some of its commodities (used trucks, tanks, etc.) to local merchants or, otherwise, hand them over to the Dept. of Agriculture.
- SCAD should continue to collect data only inasmuch as they relate to problems of utmost importance. Most of its time should, however, be devoted to the processing and writing up of the existing material.

Third Option: Extension of PNS' Mandate after September 1983

- Farmers' Councils should be kept, provided a group approach is needed by the Extension sub-system. DGF expertise in the matters connected with the creation, gathering and use of the Councils should henceforth be employed for the training of their colleagues.
- DGF and C.+C. should merge and work under one leadership with one coherent set of objectives and priorities.

II.

- The new sub-system should phase out its help to big merchants and polarize its effort on concrete, measurable actions leading up to the alleviation of the work load on the farm and to the increase of small farmers' revenues through marketing.
- A multidisciplinary team should come at once to North Shaba to help SCAD sketch out a picture of the farming situation in the area. The backstopping team should also contribute to the redesign of SCAD methodology which should be more problem oriented.
- A comprehensive training program should urgently be elaborated for all PNS staff-members.
- A promotion and reward system should be implemented for all PNS employees.
- Immediate attention should be paid to the integration of all PNS services and cadres into national structures.

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1. FARMERS' GROUPS DEVELOPMENT -- DEVELOPPMENT DES GROUPEMENTS DE

FERMIERS (DGF)

1.1. PREAMBLE

"Some time back, we reached a level of discouragement which was such that we asked PNS to abolish our own sub-system." We said, "other sub-systems might be willing to have us. If not,...well...we will presumably have to be sacked." (Excerpt of an interview held on 23/04/82 with a small group of animators from the DGF sub-system.)

1.2. BACKGROUND INFORMATION ABOUT DGF

Initial Design: Built-In Difficulties

The first PNS design was based on the assumption that to be self-sustainable, rural development had to be achieved with the active participation of small farmers (DAI 1980: 1). In practice, it meant that each of the extension units of the Project, the Farmers' Centers or centres agricoles, would become the focus of an effective organization and cooperative effort.

In the Project design, 75 Farmers' Councils were planned. As soon as one was established, the idea was that a farmers' group would also be created to carry out simple functions, such as the sale of I.T. tools, the collection of data concerning small farmers' practices and the demonstration of improved husbandry (PP 1976: 3).

As the organization and financial capabilities of the Project expanded, it was envisaged that the farmers' group would turn to more substantial activities

in the field of marketing, for example (idem).

Since little was known of the existing socio-economic and political conditions prevailing in the area, the Project Paper did not specify the exact composition these farmers' groups should have. It was nevertheless stipulated that the development of such groups should be encouraged "within the context of popularly defined needs and opportunities based on existing patterns of cooperation" (idem).

By putting so much responsibility on the shoulders of an unknown quantity and by assuming that groups of an ill-defined nature could efficiently act as intermediaries between the farmers and PNS, while at the same time engaging in economic activities, the Project Paper was already sketching out many of the difficulties that the future DGF sub-system was to meet and try to overcome later.

First Warning: The Blakelys' Report

As Farmers' Centers were delimited, DGF started to build up farmers' groups called Farmers' Councils or conseils de cultivateurs. Such groups were, and still are, made up of members of major patriline, matriline or other family groupings delegated by the different villages of a Farmers' Center.

Right from the outset, the creation of the Farmers' Councils led to several problems.

First, the fact that a single village may shelter more than one patriline or matriline combined with the fact that the members of these kinship groups are often spread out in different villages means that fair representation

excludes the possibility of working with a restricted nucleus of people. In corollary, summoning all the members of a Council can be a burdensome task.

Besides, the formal character of the Council implies that, unless some special effort is made, women are bound to be excluded from it.

Thirdly, it brings together individuals who, otherwise, would not necessarily interact with one another. Mistrust amongst members often prevails, ruling out the possibility of initiating common economic activities.

The focusing of DGF on the Farmers' Councils, at the beginning, also prevented the sub-system from paying sufficient attention to other types of groupings whose members - very close relatives and sometimes neighbors - live at close quarters and occasionally cooperate together in "real life".

As early as 1979, the shortcomings arising from the initial orientation of the Project were clearly foreseen by the Blakelys: ... "Village, or area-wide Farmers' Councils are one kind of Farmers' Group which can play certain roles and serve to benefit farmers in certain ways. The effort to strengthen groupings of farmers should not, however, be limited to the level of the Farmers' Councils..."

"Smaller groups will continue to be an important contact point and focus for many Project activities. Great effort should be made to identify and get to know these smaller groups so that things as I.T. introduction can add to the joint action capabilities of local groupings rather than being the sole focus of activity for a fragile grouping of doubtful longevity" (1979: 15).

Despite the Blakelys' warnings, and although the following year some of the inherent weaknesses of the approach were becoming more and more blatant, the revised Project Paper which followed Dimpex/USAID evaluations, called for patience rather than questioning the capability of the Councils to achieve the tasks that were originally assigned to them.

Indeed, one reads in the summary of the DGF sub-system activities: "Farmers Group Development, in the sense of achieving some economic viability among groups, will take longer than anticipated. Within the given timeframe, a reduced number of farmer groups or farm centers will reach the pre-cooperative stage. Based on the beginnings that have been made, one can envision a solid foundation being laid upon which additional groups can build to achieve economic viability and social benefits beyond the Project life" (RPP 1980: 5).

The report then specifies that: "Resources must be concentrated on the production and marketing activities for which the Project was designed... The potential of success appears to be greatest in the domain of marketing... There is a possibility that groups in several localities may rent grain trucks from the Project to market grain directly at the Kongolo or Nyunzu railhead" (idem).

That only 11 of the Farmers' Centers had a Council by June 1980 and that the Councils had so far hardly ever accomplished anything besides the dispatch of information, apparently did not undermine the confidence of the authors concerning the ability of the DGF personnel to reorient the Councils towards production and commercialization activities.

The report did not show any worry either about the use of trucks - a means of transport small farmers could never rent unless PNS was directly helping them - to lay the foundation of a more active and sustainable involvement of the producers themselves in the marketing of their maize.

1.3. DGF TODAY

The most significant change that occurred since the publication of the revised Project Paper has to do with the acknowledgement that the Farmers' Councils cannot, at present, carry out economic activities of a communal nature.

In the field of collective production, marketing and investment DGF is now, rather, working mainly with smaller groups, the Farmers' Groups or groupements de fermiers, who closely correspond to the smaller units the Blakelys had pointed out as potential groupings, to which PNS should pay more attention

This shift of emphasis indicates that the personnel of DGF are able to analyse past experience and draw useful lessons from them, a flexible approach to work which is, in the context of a project like PNS, a major and rare asset.

In terms of overall tangible achievements, however, DGF realisations have been, as of the end of December 1981, very modest. Up to that time, DGF had:

- created 14 Farmers' Councils;
- helped 38 Farmers' Groups to get organized and engage in economic activities;

- provided assistance to two savings cooperatives, and
- cooperated with Peace Corps Volunteers in the construction of seven spring boxes.

If one looks beyond this simple enumeration and examines the content of DGF main activities, the limited impact of the global effort is even more evident.

At the moment, the Farmers' Councils mainly transmit information on behalf of SCAD, I.T. and the Extension sub-systems. In theory, they should also provide some feedback to the Project, although, in practice, very few of the farmers' comments ever reach PNS. Besides, when they occasionally do, they are rarely taken into consideration.

The lines of action of the new offspring of DGF, the Farmers' Groups (27 made up of men and 11 of women), vary according to sex. The male groups mainly engage in the collective marketing of maize, while their feminine counterparts are busy growing crops in communal fields.

During the 1980-81 agricultural season, 55 men belonging to seven Farmers' Groups rented PNS trucks and marketed 108 tons of maize in Kongolo. They thus made Z18,500 more than they would have if they had waited for merchants to buy their production at the farmgate (cf. Panorama 1982: 11-12).

An even smaller number of women actively take part in the operations sponsored by DGF (see Sylvia Watts' evaluation for a detailed analysis of women's activities). (Also see Annex I and II of this report for a concise picture of the situation.)

To worsen this already dim state of affairs, very few of the groups function except on an ephemeral basis, and virtually none of them has accepted to reinvest its profit into further income-generating activities that would benefit the whole group.

Even if one takes into account the fact that last year three groups of farmers initiated collective bargaining to obtain fairer weighing procedures from the merchants, and even if some women have managed to purchase salt and soap in bulk to be resold in their villages, it is difficult not to be struck by the slimness of the achievements.

DGF also spends some time and energy backstopping the two incipient savings cooperatives of Kongolo and Mbulula, although neither of them is at present in a position to effectively attend the needs of small farmers.

Indeed, the membership of both cooperatives (slightly over 400) is almost entirely made up of PNS personnel, and the few loans (ranging from Z300 to Z1,000) that the Kongolo Cooperative has recently granted have all been for social or commercial motives. In any event, with savings that amount to less than 250,000, it is hard to conceive how these cooperatives could offer sufficient credit facilities for the development of agriculture in the area.

1.4. SUSTAINABILITY PROSPECTS

In a nutshell, despite the willingness and the concern of DGF personnel, the activities of this sub-system have so far been very scattered and their impact extremely limited. The prospects for any of the actions to be sustainable, were PNS to pull out in 1983, or were PNS going to continue as it is now in terms of design, approach, and personnel, are virtually nil.

2. CREDIT AND MARKETING -- CREDIT ET COMMERCIALISATION (C.+C.)

2.1. PREAMBLE

"PNS has done a lot in the area by opening new roads. It would have been even better, though, if it had focused its effort on the secondary roads of the Nyunzu sector, instead of working first around Kongolo. For example, there are very good maize farmers near Kaobe and north of Butanto, but the roads to reach them are terribly bad."

"Yes, you are right, the most worn-out of my 22 trucks do go there, anyway."

"(Not the trucks I just bought from PNS? Their ground clearance is not good enough!)"

"It is, however, very difficult and I have to face constant breakdowns"

(Excerpts of an interview held on 20/04/82 with the largest maize merchant in the PNS area).

.....

"PNS is mainly helping the big merchants. It is true that I was able to rent a truck from the Project last year. But after PNS departure, who is going to rent me a truck and how am I going to get my sacks?"

"I cannot, at present, buy one of the vehicles sold by the Project. It is out of the question, because the bank refuses to lend me the money."

"If the conditions for obtaining a loan were relaxed, I might just be able to make it."

"Then, what I would really like to do is try to monopolize the palm oil market!" (Excerpts of an interview held on 22/04/82 with one of the small merchants of Kongolo.)

2.2. BACKGROUND INFORMATION

The primary task assigned to the Marketing/Credit sub-system in the initial Project Paper was to "promote a strong, competitive market system by increasing the number of viable grain merchants" (RPP 1980: 17).

Difficulties linked with the dismantling of ONACER incited the authors of the RPP to recommend a reduction of the sub-system involvement to:

"1) assisting area merchants in the procurement of fuel and sacks, 2) aiding in carrying out the 025 loan, 3)...[renting] trucks and [offering] other possible assistance to smaller merchants and farmer groups, 4) studying the needs for farmer production credit, and 5) monitoring the sale, movement and shipment of agricultural products from the Project area and formulating desired changes in policy marketing system" (idem).

2.3. ACHIEVEMENTS TO DATE

At present, the basic philosophy backing C.+C.'s actions is that the maize production of small farmers should increase gradually, provided there is a sufficient price incentive. Logistical support to small merchants, who could help in breaking the monopoly of big ones, pressures at the Provincial level for the farmgate price of maize to become more attractive and the encouragement of collective negotiations between producers and buyers have all been part of the strategy used by the sub-system to stimulate farmers to produce more.

Everybody agrees that in the PNS area, business is much more flourishing now than it was five years ago. During the same period, the volume of maize commercialized has reportedly risen steadily.

Paradoxically, the Marketing and Credit sub-system's activities are said "to have remained limited in scope during the Project's life" (Sargent 1981: 21).

Higher Floor Price at the Farmgate?

As the following table indicates, the impact of PNS in the setting up of a higher official price for maize at the farmgate is very questionable.

Official Prices for Agricultural Products (per kilo)

<u>Product</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Maize	Z.10	.22	.35	.45	.60	1.00
Rice	Z.12	.15	.50	1.00	1.00	1.50
Groundnuts	Z.09	.075	.50	.80	1.50	3.00
Shelled Groundnuts	Z.16	.155	.80	1.00	2.00	5.00
Manioc	Z.10	.10	.35	.45	.60	1.00
Beans	Z.15	---	.75	1.00	1.50	5.00
Cotton (1st)	Z.60	.60	.90	.90	1.15	1.80
Cotton (2nd)	Z.40	.40	.60	.60	.90	1.60

Source: C.+C., April '82 (on request)

Indeed, even if between 1977 and 1982 the price of maize has been multiplied by ten, the price of all the other agricultural products (except for cotton) has increased at least as much or even more in relative terms.

Collective Negotiations Between Producers and Buyers?

DGF's attempts to induce collective negotiations between producers and buyers has already been mentioned. In 1980-81, three Farmers' Groups managed to

convince the largest merchant of Kongolo to use regulated scales at the farmgate and to replace unscrupulous agents. (It is common practice in the area for the buyers to extort extra maize from the farmers).

Instead of sending his truck unloaded to the farms, the same merchant has, in principle, agreed this year to bring empty drums and corrugated sheets of metal to some Farmers' Groups, on the condition that the farmers give him in advance a list of the items they want to buy. Other merchants already sell salt, soap and other small commodities while buying agricultural products.

However, such response to the small farmers' needs on the part of the merchants remains very limited in scale and still is very much monitored by PNS personnel, rather than by the farmers themselves.

Collective bargaining for obtaining better prices at the farmgate is, at present, little short of a wish.

Better Maize Price Through Competition

Both farmgate and railhead price of all major agricultural products (except for palm oil) are set every year by the Governor of Shaba Province, just before the opening of the new agricultural season. In theory, thus, increased competition does not lead to higher prices, although competition may enable the producer to sell his crop to the merchant who cheats him less. This in itself may represent a "gain" or, rather, a "non-loss" of 10-15%.

In practice, prices do fluctuate considerably in the course of a year (see Annex III a + b, and Annex IV). The problem is that the logistics of marketing are such that small farmers are only exceptionally in a position to benefit from these fluctuations.

Typically, the merchants sift the countryside as soon as the roads are practicable for vehicles, and leave empty sacks with farmers. Even if no formal contract is signed linking a producer to a given merchant, the acceptance of one merchant's sacks is, in fact, the equivalent of a promise to later sell him the maize.

The simultaneous ownership of a large fleet of trucks and of a good supply of both sacks and fuel, combined with enough cash to purchase maize as quickly as it can be transported, are capital factors for the success of a merchant. They are also determinant in the evacuation of maize during the period of the year where the price is lowest.

The following comment made by DGF technical advisor well describes the situation: "Farmers are pushed into making an early decision as to whether they should sell to an unwanted, but guaranteed merchant, or take their chances that some other merchant will eventually come by to purchase their corn at a higher price. Most farmers facing high costs associated with the increasing risk, select the first option."

The only alternative which is at present open to small farmers is that they may now sell their maize at the "buying counters" of Kongolo, Nyunzu and Lumanisha. The price offered at the counter is very attractive in comparison with that at the farmgate (this year, Z1.50 per kilo as against Z1.00).

The big fly in the ointment, however, is that without a vehicle, one cannot take advantage of the system.

During 1981, PNS tried to alleviate this problem by renting trucks on a priority basis to Farmers' Groups and to small traders who did not own trucks. Of the 2,000 tons of maize sold at the counter last year, however, hardly more than 100 tons were taken into town by the farmers themselves.

Late confirmation of the availability of a vehicle and delays in announcing the cost of rental only partly explain why small farmers did not bring much of their maize to the counter, instead of selling it at the farmgate to the local merchants. In fact, the rental of trucks to farmers is also deliberately tempered by C.+C. and PMU who see this opportunity as a threat to the emergence of small merchants.

Which Merchants is PNS Really Helping?

The rental of trucks constitutes only one step amongst many others to promote a strong competitive market system by increasing the number of small merchants likely to break the monopoly of the big ones.

The sale of empty sacks and fuel at official prices represents another important measure that C.+C. views as a way to stimulate competition.

According to the PNS ex-chief of party, this activity has been C.+C.'s major market intervention (Sargent: 22).

In 1981, the Project has sold 100,000 sacks and roughly 30,000 liters of fuel. This quantity represents less than 10% of what the merchants use each year. Curiously enough, though, 60,000 of the sacks went to Tarica Frères, a miller from Lubumbashi who buys most of the North Shaba maize, and 10,000 were purchased by the biggest merchant of Kongolo (see Rapport Annuel 1980-81: 44). As for fuel, the same year, most of it went to big and very big merchants (see Annex V).

These statistics warrant comment.

In the first place, C.+C.'s activities are often swerved from their basic philosophy because those who need and can afford PNS services are those who are already well-off and because PMU can hardly refuse to assist the big merchants who themselves back up the Project - when it is short of funds, for example.

The sale of the trucks bought with part of the 025 loan will even more seriously undermine C.+C.'s strategy.

To date, the only merchant who has been able to buy two of these vehicles is the most powerful maize buyer of the whole area. He recently purchased two trucks, at 250,000 Zaires each, in cash. His firm has 11 stores and will be in a position to mobilize 22 trucks this marketing season.

Presumably, three other merchants could buy vehicles for cash, if they wished. One is a major political figure in the region and another one is the largest merchant in Kongolo. He belongs to an extended family of traders who operate stores in different towns of Shaba Province.

In other words, unless the conditions for the acquisition of trucks are modified, only a limited number of already prosperous and well-organized merchants will be financially capable of buying them.

If USAID/Kinshasa should decide to support the national banks with counter-part funds, another group of six or seven merchants may be granted credit to purchase some of the vehicles (see Annex VI for a list of potential buyers).

However lenient USAID decides to be, though, none of the small merchants and none of the farmers will qualify for a loan. Although small farmers and small merchants should receive top priority according to PNS present rhetoric and although C.+C. is indeed offering sporadic help to small traders and to a limited number of farmers, none of them can acquire trucks, the most formidable and indispensable weapon in the commercialization game.

In other words, even if the number of grain merchants has doubled during the last five years, only a few of the latecomers on the marketing scene are likely to survive without PNS assistance.

In contrast, it appears that during PNS mandate, the strength of the four big merchants has been considerably consolidated, while an equal number of middle-sized traders have also been emerging (see Annex VI).

This tendency is not necessarily a bad thing. Given the deterioration of the economic situation in Zaire, the backing up of already strong firms may constitute the best guarantee for the continuation of a dynamic commercial sector after PNS departure. In view of the circumstances, there might be some virtues in making compromises, although this covenant clashes with some of the official policies of PNS.

2.4. SUSTAINABILITY PROSPECTS

The point is, however, that, in overall terms, C.+C.'s achievements have been so far very limited.

The farmgate price of maize appears little influenced - if at all - by PNS' interventions. Collective bargaining between producers and buyers is still

a wish more than a reality. And the promotion of a strong, competitive market system is happening partly with the Project's (unavowed) cooperation but, above all, in spite of it: by definition, merchants are businessmen whose job is to capitalize rapidly and turn any situation to their financial advantage.

The seven or eight strong merchants of the area are therefore very likely to survive whether or not C.+C. helps them. Their survival will, henceforth, be more dependent on a healthy economic situation at the national level, and on the maintenance of a good road system as well as on the increase of crop production in North Shaba.

3. CAUTION

At this juncture, it is important to note that criticism concerning DGF and C.+C. sub-systems is by no means a reflection of the incompetency or the irresponsibility of their personnel.

Rather, these sub-systems have been plagued by major difficulties preventing their adequate working. Focus will now turn to these problems and, whenever possible, suggestions will be made to their potential solution in the eventuality of a PNS prolongation after September 1983.

SHOULD PNS STOP IN SEPTEMBER 1983 OR BEFORE, THE SUB-SYSTEMS SHOULD CONCENTRATE ON THE SMOOTH PHASING OUT OF THEIR ACTIVITIES AND NOT UNDERTAKE ANY MAJOR CHANGE.

4. ANALYSIS OF THE MAIN DIFFICULTIES

4.1. THE FARMERS' COUNCILS

As mentioned earlier, DGF was plagued from the outset by having to channel all its effort through the Farmers' Councils, a body of people well suited to the dissemination of information but poorly adapted to the carrying out of collective economic activities.

Farmers' Councils should be kept, provided a group approach is needed by those - like the extension agents, for example - who have to transmit information. DGF expertise in matters connected with the creation, gathering and use of the Councils should henceforth be employed for the training of their colleagues.

In this respect, it should be stressed that whoever will be dealing with the Farmers' Councils, some improvements will have to take place to maintain the groups' viability and to sustain members' interest. First, the information to be disseminated will have to be more pertinent than before and tools to be sold (if any) will have to be of better quality.

PNS has suffered a loss of credibility by offering second-rate implements and by pushing a technical package that could only exceptionally be accepted.

Put differently, it is now imperative for the Project to stop considering that the rejection of advice or new tools by farmers is mainly due to their ignorance or stubbornness.

Since farmers generally have good reasons to be sceptical, field agents would greatly improve their effectiveness if they were willing to listen and understand why certain innovations are accepted while others are universally unpopular.

Instead of constantly repeating that maize has to be sown in rows, for example, extensionists would have gained a lot if they had understood that, although rows of maize may look nice, they are time consuming to make and they do not necessarily lead to better results, especially in a context where agriculture is not mechanized and where weeding is partly taken care of by rice when it is intercultivated with the main crop.

4.2. FALSE ASSUMPTIONS

DGF actions have also been seriously impaired by a number of false assumptions that have guided some basic options for one type of activity against others. One DGF program for women provides a good illustration.

The women's program in question has always been justified on the grounds that women do 65% of the work in the fields and that most of PNS resources have gone to men to be used in "men's fields" (see DAI 1982: I-9).

The 65% figures comes straight from the original Project Paper and, although it certainly corresponds only to a very rough estimation, it has never been questioned. Recent fieldwork in the context of this evaluation alluded that, quite to the contrary, men probably devote more time to crop production than women. Women are, on the whole, very busy, but for other reasons. These reasons shall be addressed later.

SCAD was consulted to find out evidence in favor or against these findings. Although the data collection unit has been in operation for several years, no data whatsoever were available to support either of the two opposite points of view.

On request, SCAD finally compiled figures they had on maize production and to everybody's surprise, the results indicated that, indeed, men do spend more time than women in maize fields, not vice versa (see Annex VII).

An early verification of the Project Paper assumption would have entitled DGF to focus its effort towards some of the other factors which overload women with work. The sub-system could have, for instance, addressed and implemented a program aimed at reducing the lengthy task of food processing.

A very similar and erroneous basic assumption is the belief that in North Shaba men cultivate by themselves in "men's fields", while women practice agriculture separately in "women's fields" (see DAI 1982: I-9). This assumption has percolated for years, from one report to another. Since all the extension agents of the Project E.+R. sub-system are men who find it easier to work with the masculine half of the farming population, PNS has been keen to have a feminine section in DGF in order to teach improved agricultural practices to women as well. The concern of PNS is supported by the fact that, on the whole, women seem reluctant to adopt the Kasai I package.

In lengthy field discussions with farmers of both sexes, it became obvious that the meaning of men's fields versus women's fields is seriously misunderstood by the Project. Apparently, women's fields designate fields where

crops are mostly grown for home consumption. In the case of a polygamous marriage, each wife will have her own separate field and may well carry out most agricultural tasks required by herself, although this is by no means a strict rule. In the case of a monogamous household, the husband is likely to accompany his spouse and lend a hand as needed.

Conversely, the men's fields refer to fields whose production is not meant for family consumption. Typically, cash crops or crops reserved for occasional visitors are sown there.

The point to be made is that, although such fields are labelled "men's fields", both men and women cultivate them jointly. This means that, while working with their husbands in the "men's fields", women have a chance to use the Kasai I package. If they fail to adopt the package in the "women's fields" - i.e., the home consumption fields - it is not ignorance but some other reasons.

First, the traditional variety of maize is preferred to Kasai I for its taste is considered better and it is easier to grind. It should be emphasized here that maize grinding is already an extremely time consuming activity.

As mentioned before, women are also over-burdened by a multitude of tasks - rearing children, fetching water, processing food, etc. - besides producing crops as such. Sowing in rows, or any husbandry practice which takes extra time is bound to be unwelcome.

If there had been a minimal understanding of the way agriculture is carried out in North Shaba, the futility of teaching women how to "improve" their

agricultural practices by asking them to devote additional time in supplementary fields, the PNS "communal fields", would soon have been obvious (see Annex II for a summary of the results achieved in such fields).

To return to the initial thesis, part of DGF strayings are due to not having received from SCAD some of the pertinent background information essential for the elaboration of a meaningful plan and work program.

Clearly, SCAD is at present incapable of timely processing and analysing most of its data, DGF as well as Extension and Research are seriously suffering from both a lack of periodic benchmarks to assess their progress and from a shortage of feedback to monitor their future action.

SCAD shortcomings will have to be overcome at the shortest possible notice if PNS is to continue after September 1983. It is no longer excusable for a project which has been in actual operation for four years not to have solid information on farming systems, labor force requirements for crops other than maize, the assessment of major constraints preventing the development of small-scale agriculture, the identification of the farmers' best problem-solving devices, etc.

Several steps will have to be undertaken for SCAD to become fully effective. Firstly, a small team made up of an agronomist with considerable interest in extension problems, a rural sociologist/anthropologist with a good understanding of tropical agriculture and an agricultural economist who has previous experience with small farmers in Africa should come out at once to North Shaba to sketch out a picture of the farming situation in the area.

The same team should also help SCAD personnel to redesign their present methodology. The collection of data should be more problem-oriented (What are the main bottlenecks? Why are certain parts of Kasai I package accepted by a few people and not by others?, for example), and it should also be conceived in a way such that the material is processed, analysed, and written up quickly. As non-utilized data tend to give a false sense of security, its accumulation is worse than no data at all

The members of this multidisciplinary team should also briefly work with some of the professionals of the other sub-systems (including PMU) to make sure that they fully understand how they can best use SCAD services. A monitoring and evaluation unit within an agricultural project is of recent introduction in Zaire and some of the key people in PNS admit that they still are puzzled about its exact role.

It would be ideal if at least one member of a SCAD backstopping team could come back to the field from time to time to supervise the work and provide sustained support. Everything possible should also be done to recruit extra Zairian staff to reinforce the sub-system.

4.3. LACK OF MANAGERIAL SKILLS

Besides the difficulties just analysed, several factors account for the limited impact of DGF activities. These factors also apply to C.+C. sub-system.

One has to do with the minimal attention paid to planning, management and evaluation within the sub-systems (see Sylvia Watts' report for a detailed analysis of these problems).

It is true that one cannot expect a specialist in rural development, agricultural economics or any related discipline, to necessarily be a specialist in project management as well. It should be incumbent on PNS, however, to provide some basic training in administration to all the heads of the sub-systems and to all the technical advisers. To argue that lack of managerial skills is a national disease in Zaire for which there is no cure is just not admissible since one raison de'etre of a project like PNS is precisely to transfer skills.

4.4. LACK OF INCENTIVES

Another cause which explains why DGF and C.+C. have thus far achieved so little relates to what could be called "lack of incentives". This, however, is not specific to DGF and C.+C.; it hampers all PNS sub-systems.

There is no reward system whatsoever in the Project. As a consequence, all employees stand on the same footing regardless of how well or poorly they perform. That seniority was not taken into consideration to determine one's salary was another grievance. When the PMU was questioned on this matter, no clear answer was given.

A promotion and reward program would certainly contribute to boosting the low morale of PNS Zairian personnel. The Project should also give top priority to the integration of its cadres into the national employment structure. Should the Project terminate in the near future, these people will suffer because they lack job security and have no recognized experience as civil servants.

4.5. INADEQUATE TRAINING PROGRAM

Training opportunities are an incentive of great importance, yet of severe neglect by the Project.

The elaboration of an adequate training program should be of utmost priority to motivate those who are working for the Project and to attract future candidates if PNS continues after 1983. Although a substantial sum of money was planned for the training of Zairians abroad, only one has been to the United States for advanced studies and only a handful have been outside the country for seminars, workshops or short-term courses.

It was explained that for financial reasons the training of Africans should, whenever possible, be done in Third countries and even better, in Zaire. There is little to argue against, provided pertinent training exists and is made available.

At present, nobody, either from DAI or from USAID/Kinshasa, has an exhaustive and up-to-date list of African Universities, Institutes, or Schools likely to provide courses that could be useful to PNS personnel. Planning any serious program is therefore out of the question.

As an alternative, USAID/Kinshasa has asked the U.S. Department of Agriculture to provide the instruction for some courses to be given in Zaire in the near future. It should be emphasized that this initiative will only partially remedy the problem. Its effectiveness will also be very closely linked to the language ability of the teachers, who should be either native French speakers or people who are perfectly bilingual.

Any compromise on that issue will further exacerbate the feeling of irritation and frustration that is growing among PNS Zairian staff-members, who too often have to guess - rather than understand - what some of the Americans of the Project are talking about.

In-service training only occurs on a limited basis at the moment, for some of the expatriate posts are not filled and also because some of the professionals provided by the contractor are so inexperienced that they themselves need backstopping.

In this respect, it was very difficult for all evaluation team members not to feel that the great potential of the Zairian personnel was not sufficiently enhanced. It would have been troublesome enough to find that the blind were leading the blind. But to discover that, at times, the blind were leading the one-eyed person was more than embarrassing.

To close this section on training, it should be mentioned that organized visits to other agricultural projects in Zaire and the establishment of a small collection of the basic literature on rural development in the context of small-scale farming would benefit all those in the field.

4.6. ABSENCE OF CLEAR AND CONSISTENT PRIORITIES

The last and possibly most important problem that both DGF and C.+C. have to face is the absence of clear and common priorities. This in turn has hampered the development of a program of well-defined, concrete and coherent activities.

As far as DGF is concerned, this situation is partly attributable to the open-ended and muddy character of the objectives that were set for the sub-system some time back.

The main change recommended for DGF in the revised Project Paper well illustrates the point. It reads: "A sharper definition of objectives for the sub-system, which will involve closer integration with other sub-systems' efforts in agricultural production, technology generation, and dissemination and marketing will require... [that] emphasis on the economic viability of farmer groups...be reinforced. The sub-system will also attempt to be responsive to social service demands from farmer groups" (1980: 14-15).

In other words, the activities of the sub-system should be refocused on... almost everything!

Another basic reason why DGF experiences difficulties in achieving significant results is related to the fact that in the field of marketing, which has been defined as one of its main spheres of operation, its anticipated activities sometimes clash with those of the commercialization and credit sub-system.

C.+C.'s difficulties in conciliating its basic tenets with PMU's requests and USAID's prerequisites for loans have been broached earlier on.

Conflicts of interest between DGF and C.+C. could be avoided if both sub-systems could merge and work under one leadership with one coherent set of objectives and priorities. A lot militates in favor of the consolidation

of these two sub-systems which are singularly weak, both in terms of personnel (less than 20 employees, in all) and of overall achievements.

The new system should be rebaptized (the sub-system of "Rural Economic Development" was a name suggested) in a way such, that no one gets the impression that he has been cannibalized by the other.

At this point, it should be mentioned again that no such measure should be taken unless PNS mandate is extended beyond September 1983.

5. POTENTIAL ALTERNATIVES

Should a revamped PNS emerge from the ashes of the old one, the new sub-system should phase out its help to big merchants and polarize its effort on concrete, measurable actions leading up to the alleviation of the work load on the farm and to the increase of small farmers' revenues through marketing. Any matter connected with crop production, as such, should remain the province of the Extension unit.

At this time, only provisional suggestions likely to prompt those who might redesign PNS II can be made.

One of these activities would consist of promoting the sale of small hand mills to reduce the lengthy task of maize grinding in the Kongolo and the northernmost part of Mbulula sectors. This enterprise should be undertaken with the active collaboration of the "Condition féminine" Department (see Sylvia Watts' report for a thorough discussion of this proposition).

The private sector might also be interested in taking over such a project or parts of it.

The purchase of bicycles by small farmers' groups might also be worth exploring. Up to last year, there was not much point for farmers to market their maize in town, instead of selling it at the farmgate, since the price everywhere was the same.

The big discrepancy which prevails at present between the farmgate price and the price offered for maize at the counter (50% more) might encourage farmers to come more often to town to market part of their production.

Some may think that the use of bicycles, and not that of trucks, constitutes a step backwards. At the risk of laboring a point already made, it is necessary to repeat at this juncture that the rental of trucks by farmers is a measure which, although it has the appearance of progress and modernism, is in fact no more than a stop-gap which has no chance of sustainability whatsoever after PNS' departure.

An extremely quick series of interviews with men whose job consists of commuting between Kongolo and different villages indicates that, at least in theory, such an undertaking would be technically feasible.

Indeed, the persons interviewed said that it was possible to transport sacks weighing up to 50 kgs or drums containing about 40 liters of liquid over distances exceeding 70 kms on a three to four times a week basis. All these men had had their bicycles for at least eight years and were convinced they could last much longer, provided adequate repairs were regularly done.

Financially, the prospects are good also, since each trip to a maize counter would generate, this year for example, an extra income of Z25, a sum of money that many people take several days to earn in the PNS area. Since the same means of transport could also serve to carry other products (rice, groundnuts, oil, etc.), the initial cost could be rapidly paid off. The use of a bicycle could become even more profitable if some Farmers' Groups could appoint one of their group members to run a shuttle-service and so commercialize most of their production for a small commission.

This activity should also be carried out with the active collaboration of a Zairian agency, probably the Rural Development section of the Department of Agriculture.

As for the case of maize grinders, the private sector might be interested in the promotion of such a project, which should go along with the sale of sacks and drums.

If so, the role of PNS II could be more oriented towards the teaching of marketing, accounting and investment principles and towards maintenance training.

If a sufficient number of farmers are in a position to decide for themselves when, and to whom, they want to sell their crop, collective bargaining may become a reality.

ANNEX I :

Farmer Group Marketing Activities in 1980-1981.

Village	No. of Members	Total Weight(kg)	Wt/Member (kg)	Net Income (.90 Z/kg)	Normal Income (.60 Z/kg)	Income Increase (Z)	% Increase
Malomo-Agri	12	40,604	3,384	2,618	2,031	587	28.9
Majikazo	6	30,732	5,122	3,962	3,073	889	28.9
Ndenga	4	3,605	901	697	541	156	28.8
Tujaribu	10	2,500	250	193	150	43	28.7
Nyanga	4	5,259	1,314	1,016	788	228	28.9
Senga	15	14,412	961	743	576	167	29.0
Apandaki	4	11,813	2,953	2,284	1,772	512	28.9
Average	8	(15,561)	2,126.5	1,645	1,276	369	28.9

Source: DAI 1982: V-5

ANNEX II :

Results of Women's Group Activities in 1980 - 1981.

Village	Season A		Season B		
	Members	Activity	Result	Activity	Result
Kateba I	5	Soybeans	Not Harvested	-----	-----
Kateba II	12	Soybeans	Some kept, rest sold for Z 52	Peanuts	Harvested later, half sack unsold
Kateba III	4	Soybeans	Not harvested	Soybeans	Harvest sold for Z 12
Mbulula	5	Vegetables	Shared among members	Soybeans and Peanuts	Shared among members
Kilumba	5	Soybeans and Peanuts	Not harvested	Soybeans and Peanuts	Eaten by antelopes
Murangananga	8	Peanuts	55 kgs (20 bags) sold for Z 50	Peanuts and Cotton	Field untended poor harvest

Source: DAI 1982: VI-8

ANNEX III a:

KONGOLO SECTOR

PRODUCERS' PRICES 1980 (in Zaires)

LOCATION	PRODUCTS	UNIT OF MEASURE	JAN	FEB	MARCH	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
KONGOLO	Maize Gr.	100 kgs	50	50	45	40	45	45	50	50	65	75	75	92,50
	Maize Fl.	100 kgs	100	100	100	100	100	100	100	-	-	-	-	116,50
	Groundnts	100 kgs	143	143	128,50	243	243	243	243	243	228,50	228,50	228,50	286
	Shelled groundnts	100 kgs	250	250	225	250	150	150	-	-	-	-	-	-
	Rice	100 kgs	120	120	120	120	120	120	120	120	145	160	180	230
	Palm oil	200 ltrs	350	450	450	450	450	500	600	600	550	540	650	650
SOLA	Maize Gr.	100 kgs	45	45	42,50	45	45	45	45	50	60	65	65	75
	Maize Fl.	100 kgs	100	100	100	100	100	100	100	-	-	-	-	-
	Groundnts	100 kgs	120	120	95	100	-	-	-	-	220	240	-	-
	Shelled groundnts	100 kgs	100	100	86	86	145	145	145	145	160	200	200	245
	Rice	100 kgs	80	80	100	100	100	100	120	100	120	120	140	150
	Palm oil	200 ltrs	210	180	360	360	300	410	450	410	360	420	450	450
MBULULA	Maize Gr.	100 kgs	40	40	40	45	45	45	45	45	50	50	65	75
	Maize Fl.	100 kgs	-	-	-	-	-	-	-	-	-	-	-	-
	Groundnts	100 kgs	-	-	-	-	-	-	-	-	-	-	-	-
	Shelled groundnts	100 kgs	-	-	86	86	-	-	-	-	-	-	-	-
	Rice	100 kgs	76	76	100	100	100	100	100	90	120	120	160	200
	Palm oil	200 ltrs	195	150	400	400	300	350	450	410	420	450	450	450

Source: C.+ C., April 1982 (on request)

PRODUCERS' PRICES 1980 (in Zaires)

LOCATION	PRODUCT	UNIT OF MEASURE	JAN	FEB	MARCH	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NYUNZU	Maize Gr.	100 kgs	-	-	-	40	45	45	45	80	90	120	110	120
	Palm oil	200 ltrs	-	-	-	750	750	750	750	750	750	900	900	900
	Groundnts	100 kgs	-	-	-	125	103	120	120	150	180	-	-	-
	Shelled groundnts	100 kgs	-	-	-	250	-	230	250	300	300	350	350	350
	Rice	100 kgs	-	-	-	100	80	200	200	200	240	300	320	320
LENGWE	Maize Gr.	100 kgs	-	-	-	40	40	45	45	45	45	48	-	-
	Groundnts	100 kgs	-	-	-	90	100	120	120	150	150	-	-	-
	Shelled groundnts	100 kgs	-	-	-	125	-	250	250	250	250	250	250	250
	Rice	100 kgs	-	-	-	100	80	100	100	145	145	120	120	200
	Palm oil	200 ltrs	-	-	-	300	300	425	450	300	300	375	450	450
LUIZI	Maize Gr.	100 kgs	-	-	-	40	45	45	45	45	45	45	-	-
	Groundnts	100 kgs	-	-	-	120	106	120	120	150	150	-	-	-
	Shelled groundnts	100 kgs	-	-	-	-	-	250	250	250	250	250	250	250
	Rice	100 kgs	-	-	-	200	120	200	200	200	250	-	-	200
	Palm oil	200 ltrs	-	-	-	750	750	700	900	900	900	750	900	900

Source: C. + C., April 82 (on request)

ANNEX IV:

CONSUMERS' PRICES 1980 (in Zaires)

LOCATION	PRODUCT	UNIT OF MEASURE	JAN	FEB	MARCH	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LUBUMBASHI	Maize Gr.	100 kgs	100	150	130	130	90	90	90	95	120	145	220	220
	Maize Fl.	100 kgs	150	180	170	160	200	200	200	165	180	180	220	220
	Groundnts	100 kgs	-	-	-	-	345	345	428,50	428,50	-	-	-	-
	Shelled groundnts	100 kgs	300	250	265	300	300	350	450	400	380	425	650	750
	Rice	100 kgs	145	180	220	260	240	225	280	320	320	320	265	335
	Palm oil	200 ltrs	875	725	1200	1500	900	1100	1000	750	900	950	1000	1050
KAMINA	Maize Gr.	100 kgs	120	110	100	95	80	85	85	90	130	150	200	250
	Maize Fl.	100 kgs	150	130	140	135	165	165	200	200	200	225	-	-
	Groundnts	100 kgs	400	265	250	230	-	-	-	-	-	-	-	-
	Shelled groundnts	100 kgs	250	200	225	250	250	280	350	325	350	375	400	425
	Rice	100 kgs	145	145	150	200	200	240	240	220	225	260	280	340
	Palm oil	200 ltrs	800	550	675	900	850	900	900	875	850	900	950	950
KALEMIE	Maize Gr.	100 kgs	80	100	100	110	75	85	90	85	95	110	150	175
	Maize Fl.	100 kgs	130	120	140	135	165	165	200	185	200	200	180	180
	Groundnts	100 kgs	400	285	230	-	-	-	-	-	-	-	-	-
	Shelled groundnts	100 kgs	280	250	225	250	200	250	350	325	300	300	400	425
	Rice	100 kgs	160	145	150	175	145	160	240	190	200	260	360	380
	Palm oil	200 ltrs	800	625	675	1250	750	900	850	850	800	850	950	900

Source: C + C, April 1982 (on request)

ANNEX V:P.N.S. ASSISTANCE TO TRADERS

TYPE OF TRADER	TRUCK RENTAL			SALE OF FUEL			SALE OF SACKS		
	79	80	81	79	80	81	79	80	81
TARICA	-	-	-	-	-	-	-	-	60,000
BIG MERCHANTS	4	1	1	14,200	7,800	13000	-	-	13,746
MIDDLE-SIZED MERCHANTS	3	4	9	16,240	12,000	11000	19	-	-
SMALL MERCHANTS	16	29	24	51,460*	10,400	6260	-	-	841
FARMER TRADERS	54	9	76	-	-	200	2925		216

Source: C. + C., April '82 (or request)

*This figure seems exaggeratedly high according to one of the ex-chiefs of P.N.S. Party

ANNEX VI:

TRUCKS AVAILABLE IN P.N.S. AREA DURING MARKETING SEASON

TRADERS	SECTOR	1979	1980	1981	1982	REMARKS
	<u>Nyunzu</u>				Expected during marketing season	
S.B.S.	"	11	10	10	22	Already bought 2 trucks from PNS
NYEMBO AMISI	"	6	4	3	4	Could get credit
ALI SALIM	"	0	3	7	12	Could buy cash
KOSTOGLIOU	"	11	0	0	0	
KYUNGU NGOY	"	0	1	1	2	Could get credit
LUHUNGA NGOY	"	1	1	1	1	
KITAMBALA KAGELA	"	1	1	1	1	
KANKOLE MAKONGOLO	"	1	1	1	1	
KAHITE SENG	"	0	0	0	1	
COMMERCIALE SHAB.	"	0	6	6	9	Could get credit
NYEMBO MWARABU	"	0	1	1	1	
SALEH SAID M.	"	0	0	1	1	
GENERALE DE TANGANYIKA	"	0	0	1	1	Could get credit
KIPEKEPEKE	"	0	0	0	4	Could get credit
	<u>Kongolo</u>					
KIBWE SAKINA	"	5	3	6	12	Could buy cash
P.N.S.	"	3	4	5	6	
UMBA LENGE	"	0	2	4	5	Could buy cash
MALI YA BUTOTO	"	1	0	1	1	Could get credit
LUALABA	"	0	4	2	2	

TRADERS	SECTOR	1979	1980	1981	1982	REMARKS
	<u>KONGOLO</u>					
MULAMBA MUYOLOLO	"	0	0	2	2	
REHANI JUMAINI	"	0	1	1	1	
OMARI TAMBWE	"	0	1	0	2	
TWENDE MBELE	"	0	0	1	1	
MISSION CATHOLIQUE	"	0	0	1	1	
MUMBUNGA	"	0	0	0	1	
MBAYO IDI	"	1	1	0	0	
KULOLEKO	"	0	0	1	0	
KABEBE	"	1	0	0	0	
TASABU	"	2	0	0	0	
TWITE KATEMBWE	"	0	1	0	0	
HGDOLF TAMBWE	"	1	0	0	0	
YUMA SHAOZI	"	1	0	0	0	
TOTAL		46	44	57	90	

Source: C. + C., April '82 (on request)

LABOUR INPUT FOR MAIZE PRODUCTION1980-1981

<u>1. KONGOLO SECTOR</u>		<u>MAN-DAY OF WORK PER HECTARE</u>		
<u>OPERATION</u>	<u>MAN</u>	<u>WOMAN</u>	<u>CHILD</u>	
1) Preparation	17,46	11,36	0,48	
2) Planting	3,88	3,62	0,45	
3) Weeding	14,42	12,23	0,45	
4) Harvesting	3,36	5,66	0,34	
5) Post-Harvest	3,66	4,36	0,33	
Total	42,78	37,23	2,06	
%	50,7	44,1	2,4	
<u>2. MBULULA SECTOR</u>				
1) Preparation	20,58	10,80	0,96	
2) Planting	4,81	4,44	0,66	
3) Weeding	24,08	21,65	2,04	
4) Harvesting	9,01	12,42	0,87	
5) Post-Harvest	3,82	5,39	0,57	
Total	62,30	54,70	5,10	
%	50,2	44,1	4,1	
<u>3. NYUNZU SECTOR</u>				
1) Preparation	15,46	8,21	0,36	
2) Planting	7,55	7,41	0,36	
3) Weeding	7,64	6,42	0,36	
4) Harvesting	10,67	8,15	0,40	
5) Post-Harvest	11,88	8,70	0,40	
Total	53,20	38,89	1,88	
%	48,7	35,6	1,7	
Great Total	158,28	130,82	9,04	
%	49,8	41,2	2,8	

Source : SCAD, April '82 (on request)

REFERENCES

- AID
1976
- Project Paper: North Shaba Maize Production
n.p.
- AID
1980
- Revised Project Paper: North Shaba Maize
Production, 54 pp. annexes.
- BLAKELY, Pamela
and Thomas
1979
- Working Toward Self-Sustaining Increases in
Small Farmer Maize Production and Real Income,
Kongolo, Zaire, Feb., 135 pp.
- DAI
1982
- Five years later: Progress and Sustainability
in Project North Shaba, March, 8 sections.
- PNS
1982
- Projet Nord Shaba: Rapport annuel 1980-1981,
Kongolo, Zaire, 59 pp.
- PNS
1982
- Panorama des activités du sous-système de
développement des groupements de fermiers
"D.G.F. pour les années 1980-81-82, Kongolo
Zaire, 20 pp.
- SARGENT, Merrit
1981
- Project North Shaba 1980-1981: End of Tour
Report, Dec. 31, 55 pp.
- WATTS, Sylvia
1982
- Evaluation of "WID" in North Shaba Project.
- (forthcoming)

EVALUATION REPORT OF THE INTERMEDIATE
TECHNOLOGY PROGRAM OF THE NORTH SHABA
RURAL DEVELOPMENT PROGRAM (660-0059)

by

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May, 1982

The statement of work for the Evaluation team describes my responsibility as follows:

"The Intermediate Technology Specialist shall, through observations of current Project tool-production activities and visits to a number of farms throughout North Shaba evaluate the appropriateness of tool production. He shall evaluate the technology in terms of increasing the productivity of farm labor, the timeliness of operations, time savings and the efficiency of farm operations generally. He shall also identify likely future needs for intermediate technology beyond basic hand tools and assess the adequacy of current efforts to meet these needs.