

DRAFT/5-24-85

PROJECT NORTH SHABA:
A CASE STUDY

Eric Belsky

Prepared for the Development Studies Program

TABLE OF CONTENTS

	<u>Page</u>
Introduction and Summary.....	1
Chapter One: Project Approval and Design.....	4
Project Identification and Goal Setting.....	4
Contextual Factors.....	6
Project Strategy and Design.....	8
Overall Management and Institutional Design.....	12
Chapter Two: Project Implementation.....	17
Contextual Constraints: Problems and Response.....	17
Recruitment and Personnel.....	17
Logistics and Communications.....	20
Distrust of Government Sponsored Activities.....	20
Socio-Cultural Tradition.....	22
Administration in Zaire.....	23
Project Design-Related Problems and Response.....	24
Coordination Among Components.....	24
Decision-making.....	25
Financial and Administrative Management.....	26
Creation of a New Project Organization.....	27
Unforeseen Implementation Problems.....	27
Delays and Cutbacks in GOZ Support.....	28
Personnel Problems.....	29
Chapter Three: Evaluation and Monitoring.....	34
Factors Contributing to Variation in Findings.....	35
Design Changes.....	37
Special Issues.....	38
Working with Local Elites.....	39
Production Strategy.....	40
Macroeconomic Constraints.....	40
Participation, Institutional Development and Sustainability.....	41
Clarity of Project Objectives.....	42
Measuring Project Impacts and Costs.....	42
BIBLIOGRAPHY.....	53

LIST OF TABLES

	<u>Page</u>
1. Project North Shaba: Original Goal, Purpose, Components, Funding, and Timeframe.....	14
2. Project North Shaba Goal Setting: GOZ and AID Positions.....	15
3. Summary of Relevant Contextual Characteristics: Zaire and North Shaba.....	16
4. Summary of Significant Project Events.....	30
5. Context: Implementation Problems, Response, and Consequences.....	32
6. Project Design: Implementation Problems, Responses, and Consequences.....	33
7. Summary of Dimpex Evaluation.....	44
8. Summary of DAI Internal Mid-Term Evaluation.....	45
9. Summary of Redding Evaluation.....	46
10. Summary of DAI Second Internal Evaluation.....	47
11. Summary of Project Evaluation Summary.....	49
12. Summary of PPC Evaluation.....	50
13. Indicators of Project Achievements.....	52

SUMMARY AND INTRODUCTION

Project North Shaba (PNS) provides a rich illustration of the complexities of designing, managing, implementing, and evaluating development projects and provides a point of departure for a discussion of a range of issues related to planned development interventions.

PNS was originally a \$23.0 million project (13.4, AID and 9.6, Government of Zaire) conducted over six years in the North Shaba province or eastern Zaire, a poor remote region. In 1982, and again in 1983, the project was amended. PNS is now scheduled to terminate in September 1986 and to expend a total of \$31.9 million. The main goal of the project was to increase the volume of maize produced and marketed in North Shaba. Another purpose was to create a rural development "process" that could be replicated in other parts of Zaire. Through an integrated package of interventions, PNS activities were to benefit some 19,000 farm households by increasing their agricultural production and their marketing opportunities. While PNS has occasionally been interpreted in terms of integrated rural development objectives, it was essentially an agricultural production project.

The most important problems affecting project design identified at the outset were the following: a) extreme weakness of national development agencies; b) lack of skilled managers and technicians; c) isolation of the project region from, and lack of communications to, the capital; d) insufficient in-depth knowledge of local socio-economic conditions; e) a socio-cultural heritage of lack of cooperation among lineage groups and distrust of government activities. There were a number of other contextual difficulties, including floods, inappropriate macro-policies, and frequent political strife in Shaba.

The design team concluded that there were four specific constraints to increased maize production in Shaba: a) lack of an effective method for testing and disseminating improved technical packages; b) lack of reliable grain marketing systems; c) lack of production inputs and outputs for marketing; and d) lack of economic infrastructure, especially roads.

In the original project design, PNS had six sub-systems: a) agricultural research and extension; b) development of farmer cooperatives; c) production of agricultural tools; d) improvement of marketing systems; e) improved farm-to-market roads; and f) monitoring and evaluation of project performance.

To date, PNS has generated a number of quantifiable outputs. PNS produced and distributed over 33,000 small tools, 400% of the original target. In addition, 732 km of roads (101% of goal) and 119 overpasses (165% of goal) were either built or repaired. Over 14,000 households adopted new varieties of maize. PNS surpassed its original goal for maize output by 250% and its original goal for maize marketed by 180%. Production of a number of other crops also increased dramatically over the ten year period.

PNS has been subjected to several internal and external evaluations at various stages in its progression. This case study draws heavily on these evaluations, permitting an ex-post retrospective view of various stages of the project. A comparison of the evaluations also reveals differences in how PNS has been viewed. As most projects, North Shaba is a mixture of accomplishments and disappointments. Taken together, the balance tends to be favorable.

The history of Project North Shaba brings out underlying issues common in development intervention: goal setting for the project consisted of a balancing act between AID's agenda and objectives and those of the host government; the project was designed under severe time constraints; attempting to satisfy a number of institutional actors in a changing environment; and project management had to make adjustments at various stages. Like other donor-funded projects, the challenge of PNS was to achieve a positive and lasting impact on development in the region in the face of onerous internal and external constraints.

This case is presented in three parts: Chapter One, "Project Approval and Design," begins with a summary of how the project was identified and its goals established. After presenting some relevant information on Zaire and on the region, the project design is examined. Chapter Two, "Project Implementation," consists of a brief history of the project, highlighting management problems, mid-course corrections, and the interactions between individuals and institutions. Chapter Three, "Monitoring and Evaluation," summarizes the findings of six evaluation reports, supplemented by interviews with key observers. Much of the basic information on the project history and on the different evaluations has been placed in table form after each chapter.

CHAPTER ONE

PROJECT APPROVAL AND DESIGN

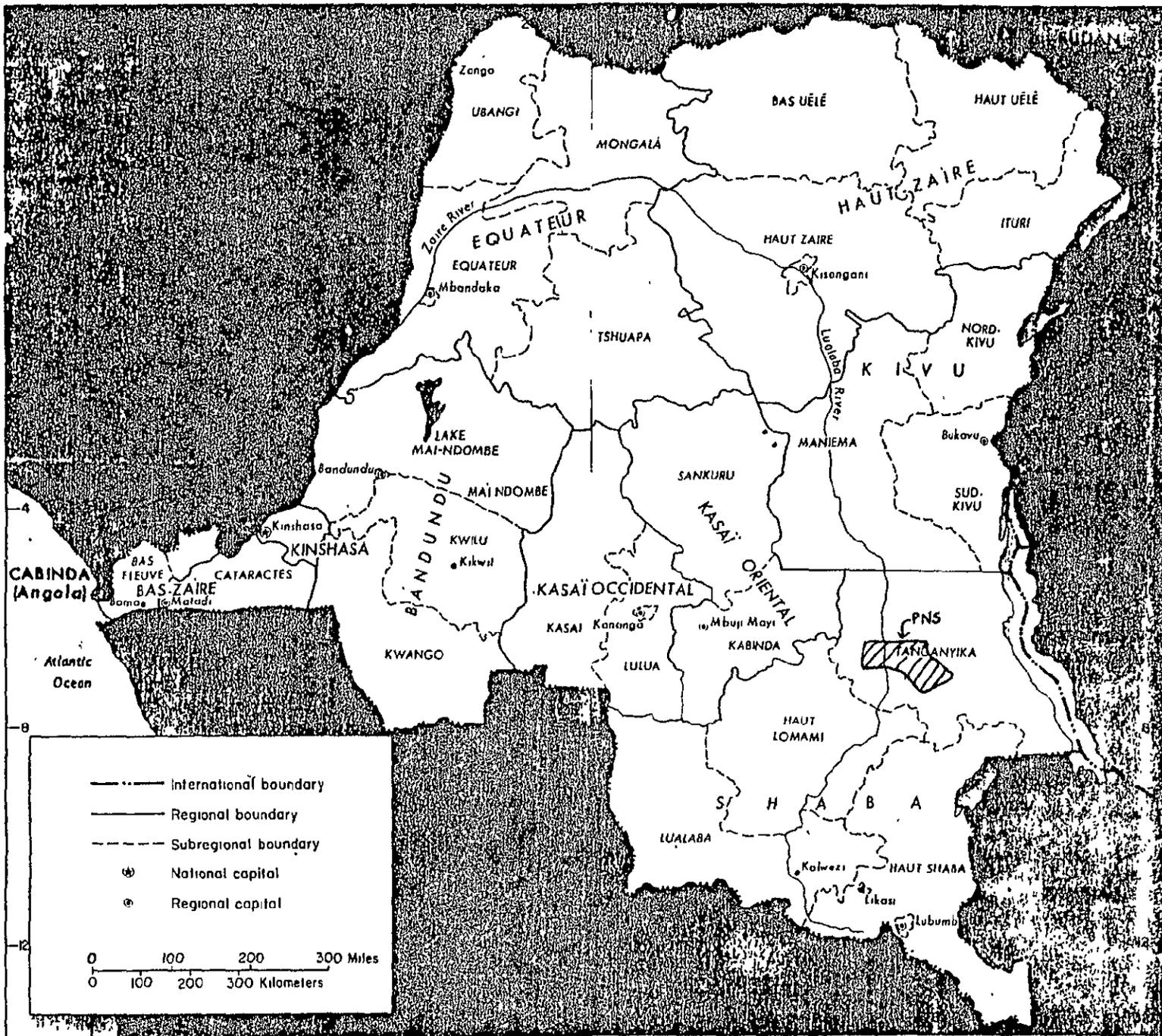
Project Identification and Goal Setting

In 1976, the U.S. Agency for International Development (AID) and the Government of Zaire (GOZ) signed an agreement to initiate a project in the North Shaba region of Zaire (see Map, p. 5). The GOZ committed \$9.6 million to the project in budgetary support and counterpart funds and AID made a commitment of \$9.7 million (see Table 1) (Tables are at the end of the chapter). The project was the largest rural development intervention in Zaire and one of the largest in the AID portfolio.

The AID Mission in Kinshasa (USAID/Z) entered into discussions with the GOZ in late 1975 to determine appropriate methods for increasing agricultural production and appropriate sites for development interventions. At that time, AID was attempting to implement its "New Directions" mandate by supporting projects that would involve and benefit small farmers and initiate a self-sustaining rural development process.

The GOZ expressed an interest in increasing domestic maize production in order to reduce the amount of foreign exchange expended on purchasing imported grain. At a time when a balance of payments crisis was threatening, Zaire was importing 175,000 MT of maize. The GOZ favored North Shaba as a project site for increasing maize production because the Shaba province had a rich production potential and mining centers in South Shaba had historically depended on maize produced in North Shaba to meet their food requirements. These mining centers had been the sites of labor unrest several times and the GOZ looked to the northern parts of the province to provide an adequate and continuous flow of food to the mines. The Shaba region as a whole has had a long history of political unrest. In the years just preceding the project (in 1977 and 1978), government troops were dispatched to the region to maintain civil order. The GOZ was therefore interested in demonstrating that it was actively committed to the region's development. The GOZ hoped to make quick and observable progress in the region's economic development (see Table 2).

Although the Mission was willing to concentrate its efforts and resources on maize production, the U.S. Embassy in Zaire expressed concern over selecting the Shaba region because of logistical difficulties in reaching the project



MAP OF ZAIRE

area and because of possible risks to American personnel (just weeks before expatriate advisors were to arrive in the field U.S. papers carried stories of whites being killed in Shaba). For their part, the GOZ took issue with AID's suggestion that the project adopt a small farmer strategy. In the Zairian context, focusing on small farmers to increase agricultural production represented a radical departure from the conventional approach. Zairian officials equated increasing agricultural production with large scale mechanized agri-business operations or regroupement (relocation) into collective production schemes. The GOZ, therefore, wanted a highly controlled, capital intensive collective farm type project. Given the urgency to increase maize production, it was difficult for the Mission to convince the GOZ to collaborate on a project seeking to raise production through assistance to small farmers.

After involved negotiation, the North Shaba Maize Production Project emerged from the dialogue between USAID:Z and the GOZ (their respective positions are summarized in Table 2). The GOZ agreed to pursue a project design that targeted assistance on small farmers and fit with the traditional farming systems in the area as the Mission wanted, while the Mission agreed to concentrate its resources in North Shaba on maize as the GOZ wanted. The two objectives agreed upon by both parties in the Project North Shaba (PNS) project paper were to (1) achieve self-sufficiency in maize production (goal) and (2) identify and test an effective rural development process for improving small farmer production and income (purpose).

Contextual Factors

A number of characteristics of the Zairian and North Shaba context influenced the design and direction of PNS. These characteristics related to development administration, government policy, agricultural techniques practiced in Shaba, the historical experience and the ethnicity of the target population, and the level of infrastructure in the project zone (see Table 3).

Administration in Zaire is highly centralized. This centralization creates difficulties in administering development activities in Zaire because of the enormity of the country and the dispersion of its population. Zaire has an ethnically diverse population comprised of literally thousands of distinct clans. The population is distributed in 70,000 villages over an area of roughly a million square miles. Administration in Zaire is also notoriously

corrupt. Politico-administrative positions are often used for personal or clan profit. Priorities for the allocation of resources more often than not reflect political and personal interests. More significantly, administration in Zaire is constrained by lack of trained and skilled technicians and managers. After Zaire became independent and after many industries were nationalized in the early 1970's, Zaire experienced a massive flight of Belgian and other expatriate personnel. Much of Zaire's economic activities depended on these personnel for technical and administrative skills.

At the time PNS was being planned, the GOZ lacked a consistent rural development policy and assigned a relatively low priority to agricultural development. In 1976, roughly three fourths of the population was involved in agriculture. Yet the government devoted only about 10% of its annual budget to agricultural investment (actual expenditures tended to be even less) and established prices that discriminated against producers.

The level of infrastructure supporting agricultural development activities nationwide, and particularly in the North Shaba region, was extremely low. Established transportation routes connecting the project region to Kinshasa (1500 km from North Shaba) and the coast were insufficient for development purposes. There was no functioning cable, mail or telephone contact between the project site and the capital. As a result of the region's isolation (as the Mission and U.S. Embassy pointed out in project negotiations), the cost of transporting essential inputs for increasing agricultural production and marketing (fertilizers, tools, fuel, trucks, sacks for marketing, etc.) were high and supplies were scarce and unreliable.

In trips to the project region, the project design team found that the rural population of Shaba had a deep seated and well founded distrust and hostility towards the central government. The region's first contact with a central government came in the eighteenth and nineteenth centuries when the region was ravaged by the slave trade. In the early 1900's the north began to be heavily exploited for agricultural produce to support mining activities in the south. In the 1950's, to increase food production and ensure its continuous flow to the south, the Belgians forced the rural population in North Shaba to relocate into collective farming villages along roadsides (the Paysannat system). Treatment by the government after independence was not much better. Extension agents in the region before PNS had a reputation for harsh treatment of farmers, ordering

them to grow specific crops against their will and stealing money and produce. As one report put it, the extension agents had degenerated into a "force of petty harassers." Cooperation with the government in Shaba was something to be avoided, not sought after.

There are two principal ethnic groups in the area: the Hemba and the Luba-speaking. The Hemba inhabit the Kongolo zone adjacent to the forested areas along the east bank of the Lualaba River (see Map, p. 5). The Hemba are acephalous: they do not have village leaders that rule over independent lineages, but rather authority is organized around each independent lineage group. Attempts in the 1900's to invest tribal chiefs with authority to lead groups of independent Hemba lineages were not well received. The Luba live mainly in the Nyunzu zone in a savannah grasslands ecology (see Map, p. 5). The Luba-speaking tribes must move frequently to maintain soil fertility, and hence have no permanent year-round villages. Traditional organization of the Luba is hierarchical. Tribes in North Shaba have traditionally been factionalized and ethnic tensions have often erupted into violence. Because of these socio-cultural characteristics, the people of North Shaba in the past have only infrequently cooperated together for development purposes.

When PNS was being designed, the major crops grown in Shaba were maize, manioc, peanuts, rice, beans, and cotton. Cotton was commercially cultivated by Estagrigo, a private Belgian/Zairian company. Traditional cultivation was practiced in the area, with a high labor input and very little use of fertilizers and mechanized techniques. Yield increases were possible under the traditional system by using better seed, increasing density and weeding, and timely planting to coincide with the growing season. Increasing the density of seeds and the number of weedings, however, requires additional labor, and under the existing cultivation systems, household labor was already overtaxed, especially during planting and harvesting. Many households hired Pygmic labor during these peak work periods to supplement household labor capacity. Availability of women's labor was an especially important bottleneck because women had to assist in planting, weeding, and harvesting maize and were solely responsible for grinding it. The amount of time that women could devote to each of these tasks had a critical impact on productivity.

At the time PNS was initiated, marketing in the project region was dominated by a few large merchants and by a large marketing parastatal called ONACER (ONACER subsequently went

bankrupt). Smaller merchants in the area lacked credit and trucks. All marketing was constrained by the inadequate and physically deteriorating road network. Virtually no producer cooperatives performing marketing functions existed. Minimum prices for maize were established by the government just prior to the harvest season so that at the time of planting farmers had no idea of the future worth of their crop. Minimum prices were usually also treated as maximum prices and were always well below what actual demand could bear. Hence, marketing conditions were stacked against small farmers and against small merchants by the monopsony of ONACER and the few other large merchants.

The Department of Agriculture (DOA) was responsible for extension, research, institutional development, and grain marketing in Shaba but was ineffective in all four areas. As noted, DOA's extension practices were harsh and its capacity to administer rural development programs (especially in remote Shaba) was constrained by lack of financial and human resources.

Project Strategy and Design

The PNS design was based on a constraints analysis. Based on discussions with local farmers and government officials and on careful analysis, the design team found that the three major constraints on maize production were: a) lack of an effective system for testing and disseminating improved technical packages compatible with the production system of small farmers (high yield maize varieties had been developed at the national level, but had not been modified for, or tested in, the Shaba region); b) lack of an adequate transportation network for delivering inputs and marketing outputs; and c) lack of a reliable and equitable grain marketing system.

The project design rested on the conviction that increases in maize production could be achieved through a small farmer orientation if these constraints were relieved and that a focus on maize was the best way to raise incomes in the region (it was the principal cash crop). The project paper stated that: "The basic strategy of the project will be to initiate and develop a process that enables small farmers to improve their production and incomes so that benefits become self-sustaining."

This strategy was to be accomplished through a coordinated set of project activities organized into six project components (see Table 1). Each component had its own rationale, objectives, and intended outputs:

1. Research and Extension (R&V)- The objectives of this component were: a) to design, test, and introduce maize technologies (and, to a lesser extent, for other crops) tailored to existing farm systems; b) to develop an institutional base in North Shaba capable of carrying out an adaptive research program and disseminating improved technologies to farmers; and c) the creation of a system fostering on-going communications among extension agents, farmers, and researchers. The project paper asserted that maximum farmer involvement would be sought and that efforts would be made to train local people in extension. The outputs of this component were to be: 75 Agricultural Centers for the diffusion of information to 19,000 households; increased maize production from 30,000 MT to 49,000 MT; and production and diffusion of seed adapted to Shaba farms. The component was budgeted at \$2.7 million.

2. Infrastructure (INFRA)- Lack of adequate transportation was one of the three principal constraints to increased maize production recognized by the project paper. Therefore an important component was designed to improve infrastructure by rehabilitating or constructing 724 km of local and village-to-market roads and by building 55 permanent bridge structures. This activity was budgeted at \$7.3 million.

3. Farmer Group Development (DGF)- To help ensure that project benefits reached small farmers, to facilitate their participation, and to establish the basis upon which producers' cooperatives could be built, the project included a farmer group development component. These farmer groups, or "pre-cooperatives" as they are also referred to, were to: a) help identify and solve local problems by facilitating a dialogue between farmers and the project; b) encourage the adoption of recommended agricultural practices through group training; c) assume responsibility for providing critical services such as marketing, input supply, and storage facilities; d) promote agricultural processing by financing and using intermediate technology; e) plan and channel assistance to rural infrastructure development; and f) help ensure that project benefits reach farmers with less than average size holdings. As project outputs, the project paper specified the creation of 40 pre-cooperative farmer groups and the organization of farmer groups into 25 farmer councils. \$0.80 million was budgeted for this component.

4. Marketing and Credit (CAC)- The basic objective of the component was to promote a strong and competitive maize market ("to facilitate the development of an expanded, more competitive private market sector role in the project area grain marketing"). An assumption that underlies this constraint is that competitive markets result in better farmgate prices for food grains and hence increase the incentives of small farmers to produce. This component was to provide: a) credit to small grain merchants to enable them to buy trucks and spare parts; b) improved and expanded loading facilities at key railheads; c) training programs for small commercants; d) assistance to small merchants in marketing communication; and e) assistance to ONACER. The established outputs for this component were: a) the provision of access to means of marketing such as credit, trucks, and gasoline; and b) an increase in maize marketed from 12,000 to 25,000 MT. The component was budgeted at \$3.5 million.

5. Intermediate Technology (IT)- This component was included to facilitate expanded production by alleviating critical labor constraints on small farms during peak work periods. The project design team believed that intermediate technology could provide techniques to small farmers that were at once labor-saving and fit with local production systems. An Intermediate Technology Center in Kongolo was to produce tools and train blacksmiths. The expected outputs of this component were the training of 80 blacksmiths and production of 8,000 tools. This was budgeted at \$1.0 million.

6. Monitoring and Evaluation (SCAD)- The designers of the project sensed a strong need for PNS to establish an information system in the project region and to provide a monitoring mechanism of project progress and problems. Thus, this component was to serve as a management information system to inform project management decisions. The project paper stated that the entire project was to be flexible and that midcourse corrections based on accurate information were to be expected and encouraged. Specifically, this component was to: a) provide project management with progress indicators for each of the project components; b) monitor the project impact on maize production levels and on the lives of people in the project region; and c) act as intermediary agent for the multi-directional flow of information among and between farmers, project personnel, and government officials. Outputs were established as: a) the collection of agricultural production and marketing data; and b) the analysis of data in special

reports written to aid management decisions. The budget was \$1.2 million.

Overall Management and Institutional Design

Overall management responsibility for PNS was vested in the Project Management Unit (PMU). The PMU was to be comprised of a Project Director (Zairian), a Deputy Project Director (American), a Deputy Director for Administration and Finance (American), and two Assistant Project Directors (Zairian). The PMU was to direct the overall project, but authority for operations of individual components was delegated to middle management. The linkages from the PMU to the various components and to the farmers, however, in terms of decision-making inputs, were not clearly stated in the project paper.

The designers of PNS decided that it was more desirable to create a new institution with broad autonomy than to work directly through an existing one. Thus, the PMU was created as a largely autonomous entity with broad authority and financial and logistical independence. It was given authority to act as the DOA's representative in the Shaba region, while its actual accountability to DOA was minimal. The project paper did provide for a Project Steering Committee, chaired by the Commissioner of State for Agriculture and composed of twelve members from various GOZ agencies and USAID/Z. A second body, the Project Liaison Staff Committee was to be established to backstop the project and was to consist of the AID Project Manager and his counterparts in five GOZ agencies. In practice, however, neither steering committee played an active role in the project's implementation.

There were three reasons for creating a new, autonomous institution. First, an expatriate presence in an independent organization was to ensure that project resources would not be diverted by corruption. Second, the great isolation of the Shaba region required that project management have the authority to make on site decisions. It was believed that autonomy would minimize the administrative burden of the project and maximize the potential of small farmers to participate in project operations. Third, creating a new institution opened up the possibility to recruit qualified personnel from a number of existing institutions and to provide the incentives necessary to attract these qualified individuals to such a forbidding place as North Shaba.

The PMU's direct responsibilities included: a) developing a functional information system; b) developing an integrated program in DOA for post-project operations (including training of Zairians); and c) developing a replicable organizational structure model for the DOA to effect rural development.

Table 1

PROJECT NORTH SHABA:
Original Goal, Purpose, Components, Funding, and Timeframe

Goal- To achieve self-sufficiency in maize production.

Purpose- To identify an effective rural development process for improving small farmer income which is replicable in other parts of Zaire.

Project Components-

1. Research and Extension
2. Infrastructure Development
3. Farmer Group Development
4. Marketing and Credit
5. Intermediate Technology
6. Monitoring and Evaluation

Funding- GOZ Budgetary Support: \$ 9.7 million
AID Funding Level: 9.7 million
\$19.4 million - Total

Timeframe- Project Initiation: FY 1976
Project Completion: FY 1982
Project Life: Six Years

Table 2

PROJECT NORTH SHABA GOAL SETTING:
GOZ and AID Positions

Government of Zaire

Goal: To increase maize production and maize marketed in the North Shaba Region.

- Reasons:
- Reduce foreign exchange expenditures on imported maize; attain self-sufficiency in maize production.
 - Ensure a continuous and adequate flow of maize to mining centers in South Shaba.
 - Demonstrate a political commitment to development of the Shaba Region.

Differences

- With AID:
- Reluctant to target development assistance on small farmers.
 - Not concerned with initiating a rural development "process."

AID

Goal: To initiate a rural development process focused on and benefiting small farmers.

- Reasons:
- To respond to "New Directions" mandate.
 - To increase small farmer incomes and strengthen rural economies.

Differences

- With GOZ:
- Reluctant to conduct project in Shaba region because of security risks to American personnel.
 - Reluctant to focus exclusively on one crop; seek a project which initiates a rural development process that extends beyond maize.

Compromise

The goal of the project corresponds to the goals of the GOZ and the purpose of the project corresponds to the goals of AID.

Table 3

SUMMARY OF RELEVANT CONTEXTUAL CHARACTERISTICS
-Zaire and North Shaba

Zaire

- Administration: - Governs an ethnically diverse and widely dispersed population.
- Lacks skilled managers and technical staff.
- Notoriously corrupt.
- Agriculture: - GOZ level of investment low.
- Deterioration of rural services in post colonial period.
- Low level of rural infrastructure.
- Poor extension services.
- Artificially low maize pricing policies.

North Shaba

- Project region isolated and remote from capital.
- Deep-seated distrust and hostility towards government based on historical experience.
- Negative experience with extension agents.
- Tensions among ethnic groups.
- Cultural heritage discourages cooperation outside of lineage lines.
- Monopsony maize marketing conditions.
- Ineffectual government rural development activities.
- Lack of credit.
- Lack of transportation infrastructure and trucks.
- Low yield seed varieties in use.
- Seasonal labor shortages in agriculture.
- Constraints on amount of women's labor time that can be devoted to agriculture.

CHAPTER TWO

PROJECT IMPLEMENTATION

Over the course of PNS's implementation, a number of significant design changes were made (see Table 4) (Tables 4-6 are located at the end of this chapter). The project paper was amended twice. Goal statements were changed. The project was extended by four years. The organization of project management was restructured. Some components were eliminated, some were folded into other components, and others were reformulated. The reasons for these changes will become apparent in the chapter on evaluation (Chapter Three, pp. 34-52).

Contextual Constraints: Related Problems and Responses

North Shaba's extreme isolation from Kinshasa created a number of implementation problems. Among these were poor communications, input/delivery logistics and recruitment/personnel difficulties. PNS was able to cope with these problems because PMU's autonomous authority reduced the need for communications with the capital, increased the ability to make decisions on the spot, and allowed the project to pursue its own personnel and recruitment policies.

Recruitment and Personnel

Problems with recruiting both qualified expatriate and Zairian staff were encountered early in the project and persisted throughout. DAI, the American firm contracted to provide expatriate consultants, was confronted with the difficult task of recruiting French and Swahili speaking experts to fill the following long-term technical assistance positions: an agronomist/extension specialist to direct the R&V component; an engineering advisor to direct the INFRA component and a mechanical technician to assist him; a rural development cooperative specialist to direct the DGF; an agricultural economist to direct the SCAD component, to act as Chief-of-Party, and to act as Deputy Project Director; and an accountant to serve as Deputy Director of Administration and Finance. To complicate the job of attracting such highly specialized individuals to such a remote region, in the weeks just preceding the project, latent secessionist frustrations erupted into violence against whites in Shaba.

As a result, several essential positions were either filled sporadically or inadequately. The position of chief of the Research and Extension component was filled for three of five years (1977-1982), but not satisfactorily. Early evaluators criticized the agricultural research activities of the project and placed the blame for their failure largely on the lack of qualified technical assistance. In 1983, DAI succeeded in fielding an excellent advisor to the position so that the final phase of the project saw a marked improvement in the component. DAI was also unable to fill the Director of Administration and Finance position with a competent expatriate. The original person (1977-1979) was a good trouble shooter, but a poor administrator. His successor started off doing an adequate job but, in his later tenure (1981-1983), the activities under his supervision went very poorly. It was not until the appointment of a competent Zairian to this position four years into the project, that the financial and administrative systems of the project ran smoothly and efficiently. In addition, it was not until 1979 that an advisor was fielded to the Monitoring and Evaluation component. Finally, DAI was unable to convince USAID:Z to approve a full time post for the Marketing and Credit Component so it suffered as well.

DAI attempted to cope with these recruitment problems creatively (see Table 5). The firm made an active effort to assure that most short-term consultants sent to the project to substitute for a longer-term presence were able to return at periodic intervals. Therefore, although consultants often were not resident in the region for great lengths of time, there was continuity in those sent to the field. This effort to promote continuity was furthered by such actions as assigning the individual who acted as the American Chief-of-Party for the first three years of the project to the position of DAI Project Manager when he returned to Washington.

Obtaining and retaining qualified Zairian staff was also a problem. Human resource development in Zaire as a whole was low so that the pool of qualified and experienced Zairians from which to draw was small. Furthermore, the isolation of the project region from Kinshasa was a disincentive. Yet, PNS succeeded in attracting and maintaining a competent staff. This was not accomplished without careful thought and appropriate action by the GOZ, AID, and DAI (see Table 5). The GOZ seconded some top flight people from other agencies to the project. This had the advantage not only of securing some competent and

experienced staff, but of establishing the impression that posting to PNS was a priority of the government. This is significant in a country like Zaire where career advancement decisions are entirely made in the capital and where positions in outlying areas are viewed as undesirable. To help ensure that those posted to the project remained, PNS was permitted to offer Zairian cadre higher than normal salaries. To enable PNS to attract other qualified staff, the GOZ permitted PNS to establish its own salary scales for non-cadre staff. Finally, the management established liberal leave and health care policies and decided to create a Personnel Service Unit and a post for Director of Personnel.

Personnel issues also included maintaining staff, coping with individual problems as they arose, and creating an environment conducive to job satisfaction. Indications of the PMU's concern for the satisfaction of its personnel are many. The leave policy established for the project was liberal so that staff could take off on a regular basis to meet the many family obligations that Zairian extended families demand. Free health care at the local hospital was also provided for the life of the project for staff and their families. When a health problem was severe, the project would pay for transportation to Lubumbashi, the largest town in the region. In addition to leave and health policies, the PMU helped set up and pay for a "social club." Finally, a plane was bought for PNS and regular trips to Kinshasa brought mail and urban goods to project staff. Although these last mentioned attempts to increase personnel satisfaction may seem minor, they were actually rather significant and were a creative use of project resources.

The decentralized style of project management pursued by the PMU fostered a sense of project "ownership" in middle and lower management. With decentralized management went the sense of authority and responsibility for project operations that contributed to job satisfaction. On the other hand, the decentralized style of management may actually have created personnel problems early in the project and reduced job satisfaction. Zairian institutions are highly centralized and it appears that at first the Zairian staff were confused and frustrated by the new experience of decentralized management. At the project's mid-term evaluation, several complaints were made by staff about the uncertainty of who was responsible for making decisions and where one person's authority began and another's ended.

Logistics and Communications Problems

To cope with the isolation of the project region, PNS project management took a number of actions (see Table 5). Radio communications were established almost immediately with Kinshasa and among Kongolo, Nyunzu, and Mbulula. At first this was done by borrowing the Air Zaire radio, but within the first year special base stations had been installed. The purchase of a small plane for the project and hiring a pilot/mechanic to fly and maintain it permitted routine trips to the capital to be made and contributed to a "sense" among the project staff that they were but a plane's flight away from Kinshasa.

The lack of established road, rail, or air routes made it difficult and costly to procure and transport supplies to the area in a timely fashion. This problem was further compounded by the security risks and the military presence in the area and by frequent fuel shortages precipitated by the high cost and foreign exchange requirements of fuel. PNS therefore budgeted a larger than normal share of project resources to logistical support. Logistics units were established in Kinshasa (with a staff of 12), in Kongolo (4), in Mbulula (2), and in Nyunzu (2). In order to cope with fuel shortages, the project established a large fuel depot in Kongolo and established direct lines of credit with oil companies.

Unforeseen events (see Table 4) intensified logistical problems in the project's early stages. These events resulted in a slow start for the Infrastructure component. Since all project components depended on the Infrastructure component for better roads, for transportation equipment (trucks, spare parts, etc.), and for the construction of project facilities (training and agricultural research centers), PNS as a whole suffered from delays in the arrival of project inputs. By the project's mid-term, however, PNS had smoothed over initial logistical difficulties.

Distrust of Government Sponsored Activities

The people of Shaba's ingrained distrust of government posed a significant threat to successfully organizing small farmer groups. It also posed obvious problems for effective extension efforts and required establishing the legitimacy of PNS in the eyes of the project's intended beneficiaries--the small farmers.

PNS took at least four conscious steps to help assure that small farmers would respond to project initiatives and would begin to view the project as in their own interests (see Table 5). Each measure taken demonstrated a sensitivity to the historical experience of the region's population.

First, the project management made a decision early on, not to collect baseline data on small farmer income and production at least until the project got well underway. According to USAID/Zaire: "When PNS began implementation of its farmer oriented development activities, it was perceived that any farm family revenue survey would not only meet with considerable village-level resistance but could also raise undesirable suspicions about the roles of PNS extension agents and staff (because prior arbitrary confiscation of possessions and agricultural produce had made farm families extremely sensitive to and wary of state agents)." It should be noted that while deciding not to collect baseline data increased the chances that PNS would achieve the confidence of small farmers, it had a negative effect on the ability of internal and external evaluators to monitor and evaluate project success. Thus, a decision to deal with one implementation problem created another one downstream.

The second positive step that PNS took to gain the confidence of small farmers was to opt for a creative approach to extension that in the early stages of the project could only be viewed as non-threatening. Rather than pursue the traditional form of extension in which agents go from village to village attempting to persuade farmers to accept new seed varieties, PNS chose to "extend by example." PNS selected a limited number of demonstration farmers to plant new seeds and guaranteed these farmers against loss. Other farmers were encouraged to independently choose whether or not to adopt the new seed variety. As one observer remarked: "Villagers have warmed to the cooperative, persuasive attitudes of PNS agents as opposed to the coercive tactics of former governmental and private sector extension agents, who forced small farmers to grow certain crops and extracted unsanctioned payments from them." This approach to extension turned out to be quite successful, for by 1984 over 14,000 households had adopted the new seed.

A third concrete step taken by PNS to help facilitate its acceptance among the target population was to hire local farmers as extension agents and for other PNS jobs. During most of the project, over 500 local people were employed by the project at any given time. Many of the extension agents therefore were known locally.

Also, the project staff attempted to respond directly to the needs of small farmers as they themselves expressed them. Although the original design of PNS had not earmarked any funds for providing health-related activities, USAID arranged with the Peace Corps and PNS to establish Village Health Posts and to build spring boxes to collect safe water. In addition, project management allowed project vehicles to be used to transport the sick to the hospital and hooked its electrical generator up to the Kongolo hospital to provide back-up power. By reaching beyond the project design to respond to the health needs of the small farmer, the PMU fostered the impression that the PNS was actively working to benefit small farmers.

Finally, project legitimacy was enhanced in the early years by provision of tools to small farmers through the Intermediate Technology component. Farmers themselves stated that the tools produced by the component benefited them.

Socio-Cultural Tradition of Non-Cooperation.

The PMU inherited a project design that placed unrealistic expectations on the Farmer Group Development component given that the levels of economic cooperation among and between the Hamba and the Luba had a tradition of being low and the socio-cultural tradition of the Luba and Hamba mitigated against strong cooperation in the near future. The PNS project paper proposed that Farmer Councils and Farmer Groups be formed. The councils were expected to be an integral part of the extension activities of PNS. They were to be the organizations through which extension information was to be conveyed both upward, from the farmers to project management, and downward, from the project to the farmers. The Farmer Groups were expected to articulate group demands, provide services and infrastructure, and, eventually, perform marketing and production functions. The project paper, however, was vague on exactly how these institutions were to be organized. This vagueness was permitted because the designers of the project knew that they had an incomplete understanding of local organization and institutions in the project zone. They wanted PNS activities to correspond to existing forms of cooperation,

but had to await PNS's implementation to conduct more in-depth studies to determine what these forms were.

Preliminary studies of the existing patterns of interaction and cooperation in the project region were conducted by an anthropologist couple during the design phase. It was not until they returned in 1979, however, that they concluded that the Farmers Councils established by the project covered too great a geographical area and included too many matrilineal and patrilineal units to be effective. They argued that the organization of farmers for cooperative ventures had to take place at the level of family groupings and cover very small geographical units to be successful. The project management responded to this recommendation by focusing increasing attention on smaller organizations (see Table 5). However, by about 1981, it became clear that organizing North Shabans into economic cooperatives was extremely difficult. Although Farmers Councils and Farmer Groups were established and functioning, their activities, except in a very few special cases, were limited to delivering extension services and distributing tools produced by the intermediate technology component.

Because of these and other problems, the Mission decided, over GOZ protests, to terminate the Farmer Group Development component. The Mission perceived the constraints imposed by highly individualistic farmers and a socio-cultural tradition of distrusting other families as insurmountable.

Administration in Zaire

The establishment of the Project Management Unit as a largely autonomous institution in which DAI was placed in a "watch dog" position relieved the corruption constraints imposed by Zairian administration. However, as evaluators later pointed out, it posed a number of serious issues for the project's long term sustainability (these are discussed under "Project Design Related Constraints" below).

The project paper provided for a range of training programs to upgrade the technical and managerial skills of project personnel, but in actuality, training efforts were quite weak and suffered from insufficient funding. By 1984 only 30 Zairians had received intensive professional training (this figure does not include training of extension agents). Only \$100,000 was spent on personnel development.

However, the decentralized style of management in the project encouraged Zairian staff to assume management and leadership roles early on so that although the staff never received formal training, they had, by 1984, years of working experience as middle managers. The delays in the recruitment of certain expatriate advisors further presented challenges for Zairian cadre to assume greater technical and managerial responsibilities.

Project Design-Related Problems and Project Response

Coordination Among Components

According to the design, activities conducted under one component needed the support of activities conducted in another in order to function properly: (1) The extension effort was to depend for its success on the establishment of Farmers Councils. It was believed that without these councils, seeds and advice could not be made readily accessible to the target population. In practice, however, DAI was able to achieve adoption by demonstration without effective farmer groups. (2) Marketing and Credit and Extension components depended on the Infrastructure component to build roads to those areas with the highest maize production and the highest maize-marketing potential; (3) Infrastructure was responsible for the construction of a training center in Ngaba, upon which all components depended; (4) Intermediate Technology was responsible for the project's machine shop upon which both the Infrastructure and Marketing and Credit components depended for maintenance of their machines; (5) the tools produced by Intermediate Technology component were to be sold and distributed through small farmer group related activities; (6) the Small Farmer groups depended on the Marketing and Credit component for provision of credit. The most intricate web of relationships existed between the Monitoring and Evaluation component and all the others. Monitoring and Evaluation depended on the other components to provide it with indicators of progress and had to coordinate with them the various data collection tasks assigned to each.

During implementation, project components were not well coordinated (see Table 6). Classic bureaucratic rivalries set in. The staff of each component pictured itself more as an independent unit making demands on a central management structure for scarce project resources than as part of a functionally and conceptually integrated project aspiring to project-wide (and not just component specific) goals.

Coordination for the collection of monitoring information was particularly weak. Component managers were reluctant to work with the Monitoring and Evaluation component because they viewed this component as a "watch-dog" unit. They balked at providing progress reports and indicators of progress.

Early in the project, and especially from 1980 to 1983, the components acted with a great degree of autonomy. It is difficult to say how much the project's success would have been enhanced had all the project components been functionally and conceptually better integrated.

Decision-Making

The Project Management Unit chose to pursue a decentralized approach to management and vested a great deal of authority for decision-making in the middle-levels directing the individual components. This approach had advantages. It ultimately strengthened the lower management levels and built the capacity of Zairians to make their own decisions. It also provided a challenging opportunity for the staff, who were accustomed to the centralized decision-making that is characteristic of Zairian institution.

However, the decentralized approach created a number of problems as well. First, it created confusion among middle managers. Roles and objectives were never clearly defined by the PMU and those to whom authority and responsibility were offered were unwilling, and too inexperienced, to define these roles and objectives themselves. In 1982, project evaluators reported that: "The Research and Extension Sub-System wasn't sure until recently whether it was to do pure or adaptive research; it still isn't sure what the ultimate disposition of Ngaba [a research and training] Station should be. SCAD [the Monitoring and Evaluation component] had numerous competing demands on it...Decentralized decision-making in this atmosphere thus focused on very short term (i.e. one-to-three) months operational needs; the broader picture, particularly during the first 3 or 4 years of the Project, was ambiguous at best."

Within the Project Management Unit itself, an unresolved management issue was the extent to which control of the project was in the hands of the Zairian cadre or in the hands of the American contractor. Many staff members were concerned about this. In an effort to increase the sense of indigenous control of the project, the Zairian/American balance in the PMU was shifted from 2

Americans and 1 Zairian to 2 Zairians and 1 American (the American Director of Administration and Finance was replaced by a Zairian). Nevertheless, even in 1984 the contractor's role in the project was still central and the American Chief-of-Party still had to sign off on dollar expenditures.

Financial and Administrative Management

Financial and administrative management was made more difficult by the inability to fill the Directorship of Administration and Finance with a competent expert for many years of the project and by delays and cutbacks (20% of the projected total) in GOZ budgetary support. By all accounts, financial and administrative management was deficient between 1980 and 1983. Financial management systems and documentation of financial and other decisions during this period were virtually non-existent. There were no records such as journals, ledgers, balance sheets, and reconciliations.

Perhaps, greater flexibility was at first achieved by the lack of rigid controls. But there were costs as well. The most frequently cited problem was the confusion surrounding the construction of the Ngaba Training Center. Until 1983, there was no consensus concerning who was going to be trained at the center or how much of the project's budget was actually going to go to training activities. Nevertheless, the construction of the center continued at a very high cost. As a result, there were times when the construction work on roads and bridges was sharply curtailed. Yet, despite the importance of the decision to continue building a large facility, there is no documentation as to how this decision was made.

The lack of effective financial and administrative management also took its toll on the otherwise sterling performance of the project's logistical operations. As recent evaluators explain: "Although logistics operations were quite successful in getting things to the Project site, there was inadequate inventory and control systems in the warehouse and fuel depot at Project headquarters in Kongolo. During most of the Project's life there was no tracking of purchase requests, no periodic warehouse inventories, no monitoring of fuel use, and no logical physical arrangement for items stored in the warehouse. This lack of physical arrangements made it difficult for French speaking Zairian warehouse workers to find specific parts, since almost everything in the warehouse was American-made and labelled in English." Hence, poor administrative

management of project commodities resulted in inefficiencies and delays in delivering project inputs.

Creation of a New and Autonomous Project Organization

Although the issue of sustainability will be discussed in greater detail in the next chapter, it is worth noting here that throughout most of the implementation of the first phase of PNS (through 1983), little was done to increase the chances for project sustainability. The focus was on getting things done in the short run. Training of Zairian staff, as discussed above, was lacking. The U.S. contractors maintained a great deal of control over the project in order to assure that it continued to function well as long as they had responsibility for doing so. It was not until 1982, when DAI's internal evaluation raised the issue of sustainability, that DAI and USAID/Z took action on formulating a plan for the smooth and orderly transition of project activities to established institutions operating in Shaba.

Even though the DAI staff, for the most part, enjoyed excellent working and social relationships with their Zairian counterparts, sensitivity to their control of the project endured. According to a recent PPC evaluation: "Dominated by Americans by design as a means of avoiding the common graft and corruption problems in Zaire, it didn't fit well within the informal--but critical--social networking that was being established. Especially when the Zairian Director was away, both Sub-System Chiefs and local staff felt that "they" were not represented in the PMU. It must be stressed that this perception in no way detracts from the ability of American personnel to communicate or work well with the Zairians; they were simply too much the outsiders to handle some of the problems that would crop up."

Unforeseen Implementation Problems

In 1979, floods inundated the Kongolo zone of North Shaba. The floods disrupted all flows of project inputs into the region and washed out many of the few roads that were passable in the project region. The combined effects of the floods set the project back. These flood were one of what might be categorized as "unforeseen events" (see Table 4).

Delays and Cutbacks in GOZ Budgetary Support

Overvaluation of the Zaire, high levels of inflation during the early years of the project, and unrealistic GOZ national budgets all combined to make the flow of Zairian resources to the project uneven and less than planned. Erratic funding created severe implementation problems. Salaries to Zairian staff were sometimes paid late, creating formidable morale problems. Road construction equipment often lay idle because local currency was unavailable for fuel purchases and spare parts.

The entire project had to adjust for a shortfall of as much of 20% of the total expected Zairian contribution. Because the fiscal monitoring the project was poorly handled, it is difficult to assess what the impact of such a serious shortfall was on project activities. However, at the very least, it made advance planning for project activities difficult and placed greater demands on the PMU and, at worst, it caused many project activities to be cancelled or restricted.

Personnel Problems

Individual personality problems and inter-personal issues occurred early on in the project at the highest level of project management and had ramifications for project start-up and management. The first Zairian project director and the DAI contractors (the Chief of Party/Deputy Director and the Director of Administration and Finance) disagreed on how the project should be administered. The American staff insisted on a participatory style of project management and decision-making. The Project Director, on the other hand, felt that authority should remain essentially in his hands and that all responsibility should be devolved hierarchically from him downward. Further, the Director saw the project as essentially a maize production project and de-emphasized farmer group participation, while the DAI contractors argued strongly for the involvement of small farmer groups as called for in the PNS project paper. Although no overt accusations were made, the Americans felt that the Director was too controlling, while the Director felt the Americans were difficult to work with and chauvinistic. Resolving personnel matters at such a high level obviously presents significant problems. As a result, from September 1977 to April 1978, the PMU was ineffective and unable to rally staff support.

Finally, in May of 1978 an Interim Director was appointed to replace the original director. During the Interim Director's tenure (5/78 - 2/79), decisions were made that determined the new project management structure and the management style that would continue throughout the project. A triumvirate consisting of the Project Director, Deputy Project Director (whose title was changed to Advisor to the Project Director), and Deputy Director of Administration and Finance replaced the more hierarchical structure. Below this directorate were three sector chiefs for each of three project areas (Kongolo, Mbulula, Nyunzu) and chiefs of each project component. The new set-up also reflected the Zairians' sensitivity to the authority assigned to expatriates during the early stages of the project. Except for the infrastructure component, which was headed by a DAI contractor until 1980, all other expatriate positions were redefined and relabelled as "advisory."

Table 4
SUMMARY OF SIGNIFICANT PROJECT EVENTS

Amendments to Project Paper:

1976. Original Project Paper

Funding : \$19.4 million
Years : 6 - - through 9/82
Goal : Self-sufficiency in maize production.
Purpose : To identify an effective rural development process for improving small farmer production and income.

1981. First Project Amendment

Funding : \$3.6 million
Extension : 1 year - - through 9/83
Goal : Same as original.
Purpose : Increase small farmer income by 75% as a result of raising maize production; develop a rural development process that is replicable in other parts of Zaire.

1982. Second Project Amendment

Funding : \$7.9 million
Extension : 3 years - - through 9/86
Goal : Self-sufficiency in food crops.
Purpose : Develop institutions that can sustain increased production and marketing of agricultural produce.

History of Project Components

1. Research and Extension- Research activities terminated after second project amendment. Extension activities continued for life of the project extending seed developed previously by national level research station. Achieved 76% of project goal (reached 14,000 households).
2. Infrastructure Development- Road and overpass construction and maintenance continued for life of project. Currently, plans for transfer of this activity to an existing institution under consideration. Achieved over 100% of project goal.
3. Farmer Group Development- Terminated after second project amendment, but some activities "inherited" by Extension component. Some farmers groups and councils organized.
4. Intermediate Technology- After producing 33,525 tools and training 80 blacksmiths, component terminated by second project amendment.
5. Marketing and Credit- Seen by Mission as unnecessary, continues, but without AID funding and with reduced staff.
6. Monitoring and Evaluation- Certain activities folded into Research and Extension component for (1983-1986) phase.

Table 4 (continued)

Implementation Problems

* Recruitment problems

- Research and Extension Component filled for three out of first five years (1977-1982), but not satisfactorily.
- Finance and Administration under poor administrator from 1977-1979 and successor did poor job from 1981-1983.
- Monitoring and Evaluation Advisor not fielded until 1979.

* Personnel Problems

- Bureaucratic rivalry among middle management.
- Intractable and authoritarian Project Director first years of the project.

* Unforeseen Events

- Record floods in 1979.
- Guerrilla activities in South Shaba
- Massive devaluation of Zairian currency
- Fuel shortages.

Table 5
CONTEXT: IMPLEMENTATION PROBLEMS, RESPONSE, AND CONSEQUENCES

Problem	Response	Consequences
Recruitment of Personnel	<ul style="list-style-type: none">-Continuity of short-term technical ass't.-Top Zairian staff seconded from other agencies.-Higher salaries.-Liberal leave and health care policy.-Social clubs and amenities.	<ul style="list-style-type: none">-Succeed in attracting and maintaining competent Zairian staff.-Fail to fill, or keep filled, many expat. posts.-Failure to fill expat posts with competent staff in first years led to poor early project performance.
Logistics and Communications	<ul style="list-style-type: none">-Large budget programmed to logistics.-Advanced planning.	<ul style="list-style-type: none">-Succeed in accomplishing smooth flow of project inputs.-Only minor initial problems.
Project Legitimacy	<ul style="list-style-type: none">-Sensitive to local fears of government.-Do not collect baseline data.-Non-threatening extension approach.-Hire local farmers.-Respond directly to expressed needs.	<ul style="list-style-type: none">-Succeed, in a difficult context, in achieving project legitimacy.-Failure to collect baseline data makes later evaluation difficult.-Tools provided to small farmers.
Socio-Cultural Heritage of Non-Cooperation	<ul style="list-style-type: none">-Attempt to respond to 1979 study by forming smaller farm groups.	<ul style="list-style-type: none">-Mission perceives response as inadequate and decides to terminate Small Farmer Group Comp't.
National Gov't. Administration	<ul style="list-style-type: none">-Create a new and autonomous institution.-Provide limited training.	<ul style="list-style-type: none">-Overcome constraints but pose sustainability problems.-Training inadequate.

Table 6

PROJECT DESIGN:
IMPLEMENTATION PROBLEMS, RESPONSES, AND CONSEQUENCES

Problem	Responses	Consequences
Coordination Among Components	-Bureaucratic rivalries. -Decentralized style of management.	-Poor coordination, resulting in sub-optimal performance.
Decision-Making	-Decentralized style of management.	-Provides challenging environment for staff. -Contributes to sense of project ownership among staff. -Poor definition of roles results in confusion among middle management.
Financial and Administrative Management	-Poor financial management system established in first years of project. -Lack of documentation of project decisions in first years of project.	-Inability to conduct effective formative evaluation. -Inefficiencies in commodity management.
Creation of Autonomous	-No plan for transfer of project activities. -Contractor maintains strong role in PMU.	-Question of sustaining project activities not well-addressed until 1983.

CHAPTER THREE

EVALUATION AND MONITORING

Many evaluations of PNS have been conducted. These evaluations bring to light a number of issues related to various phases and aspects of PNS, including the evaluation process itself. Evaluations were conducted at different times throughout the project by five different groups. In 1979, Dimpex Associates was contracted by USAID/Z to conduct a mid-term evaluation. Because of the project's late start, the evaluation was premature as a mid-term evaluation. Nevertheless, the Dimpex team made a thorough assessment of the project. In 1980, DAI conducted an internal evaluation, and also subjected the project to close scrutiny. The Mission commissioned another external evaluation in 1982. This was conducted by a team of twelve headed by A. David Redding. In 1982, DAI conducted a second internal evaluation at the end of the project's first phase. The Mission, drawing especially upon DAI's second internal evaluation, drafted a Project Evaluation Summary (PES) in 1982. The Mission's PES led to a decision to extend PNS from 9/83 to 9/86. A final external evaluation of PNS was conducted in 1984 by a team from AID's Bureau of Policy and Program Coordination (PPC). The PPC evaluation was conducted as part of a series of project impact evaluations focusing on development management. It therefore brought a different emphasis and perspective to assessing PNS.

There were significant differences between the findings contained in the six evaluations of the project (see subheading "Principal Findings," Tables 7-12) (Tables 7-13 are located at the end of this chapter). In some cases, PNS's several evaluators identified the same issues as bearing on project success (management, macroeconomic constraints, unforeseen implementation problems, quality of technical assistance, project design) or as being particularly germane (sustainability, participation). However, the evaluators differed in their interpretation of the relative importance of these issues and reached very different conclusions as to whether these issues were dealt with effectively. Part of the richness of the PNS case derives precisely from the many different opinions expressed in these six evaluations. Factors Contributing to Variation in Evaluation Findings

In 1979, Dimpex Associates concluded that PNS stood a reasonable chance of achieving its targeted objectives. The Dimpex team, however, also criticized the project and its

design for not more explicitly focusing on crops other than maize nor on a range of development activities that could contribute to a rural development process (such as the provision of fertilizers, of basic services, and credit to small producers). One year later, DAI's internal evaluation found that the original project paper, in light of unavoidable macroeconomic obstacles confronting the project, was overambitious in its original targets (see Table 8). Two years after DAI's first evaluation, the Redding team concluded that: a) PNS was poorly designed from the start; b) nothing could, and little was, done to improve the project at that late date; and c) PNS had failed to achieve its targeted outputs for maize production and marketing. Redding recommended PNS be phased out as quickly as possible. Yet, in that very same year, DAI's second internal evaluation concluded that PNS was a rare success in the Zairian context and had achieved its targeted outputs. The DAI team recognized some problems with PNS, but did not feel that they were intractable. DAI recommended that the project be extended after certain organizational changes were made. The Mission's PES concurred with DAI's findings and also recommended that the project be extended. When PPC arrived in 1984 to assess development administration specifically, they found that although management of PNS had not been perfect, PNS was a "success story." They pointed to the rather impressive and indisputable achievement of project targets as evidence for their position (see Table 13).

One of the reasons for these significant differences in principal findings and impressions is that each evaluation was conducted at a different point during PNS's project life. Dimpex was dispatched to the area prematurely. DAI's first evaluation could not have guessed the spectacular gains in maize production and marketing that would be made over PNS's 10 year life and hence was cautious in predicting what PNS might achieve. Redding examined the project in 1982 and was led to believe by questionable data that, after 5 years, the amount of maize produced and marketed in Shaba had not increased significantly. Hence, Redding judged the project a failure and argued that the Mission should terminate the project and minimize its losses. Also in 1982, DAI (in its second evaluation) and the Mission (in its PES) concluded that more accurate data indicated that, after 5 years, PNS had achieved considerable success. PPC arrived in Zaire in 1984, three years after an extremely effective technical assistance team had been established. PPC therefore concluded that the project was relatively well and creatively managed. PPC also witnessed the results of a full seven years of PNS's work in the region. But timing is

not sufficient to explain many of the differences between evaluators.

Differences among evaluators were also related to how each team perceived the intention of the basic design and strategy. The project paper was rather explicit that, from the outset, PNS was designed to increase the incomes of small farmers by increasing maize production and marketing through a coordinated, "integrated" set of activities. The Dimpex and Redding evaluations attempted to judge PNS against broader criteria. To them, the terms "integrated," and "process" conjured up certain images of an "integrated rural development project." This impression was furthered by the design of the Farmer Group Development component, which spoke ambitiously of cooperatives. These evaluators criticized the project for not having been a more comprehensive integrated rural development project.

The Dimpex team concluded that the constraints to achieving the project goal and purpose identified in the project paper were not the only ones that should have been considered. Specifically, they questioned the wisdom of investing so much of the project's resources in the infrastructure component. They suggested that such an emphasis was unwarranted and that two major constraints to increased maize production-- maize pricing policies and the availability of fertilizer-- should have been, but were not, addressed by the project design. All evaluators saw maize pricing policies as a key constraint to success. However, only Dimpex held PNS responsible for not addressing the issue head on. The Dimpex team also felt that there was a tension, or at least an inconsistency, between the project goal and the project purpose. They argued that the project purpose might best be achieved by increasing the production of various crops grown in the region instead of emphasizing maize and targeting project resources on it. According to the Redding evaluation: "PNS has not gone beyond an inadequate project design, to think through its major purpose: Is it maize production and marketing, as one would judge from a review of accomplishments? Or is it, as stated in the amended Project Paper, to raise incomes of participating farmers and develop a rural development process which is (not only self-sustaining but also) replicable in other parts of Zaire (p. 11)?" The evaluators suggested that because of this lack of clarity, opportunities to increase production of other, perhaps more relevant, crops were missed and project management gave insufficient attention to fulfilling the condition that farmers be free to sell their products to any recognized buyer. The PPC evaluation identified "lack of clear

priorities among project objectives" as a problem, although the PPC team did not stress this point.

This basic difference in interpretation, especially in the Redding case, led some project evaluators to perceive endemic deep-rooted problems in PNS. DAI and the Mission both saw the construction of roads and the development and extension of maize production packages as the cornerstones of the project. Both held that maize was the most important crop to focus on. DAI also considered Farmer Group Development as important, although the Mission became increasingly skeptical of its importance.

Differences in findings also reflect who the evaluators were. Outside evaluations tend to be very critical. Insiders (or those associated with the project in some way) such as DAI, the Mission, and PPC tend to be more positive and stress problem-solving.

Management Performance

The extent to which project management was effective and a critical factor in project performance was also judged differently by each evaluator. DAI's second evaluation, the PES, and the PPC evaluation dealt with these issues extensively (see subheading "Principal Findings," Tables 8, 10, 11, 12). All three recognized that management suffered because certain key posts were only filled by competent expatriate staff sporadically, especially early in the project. They also recognized that management, in the project's first years, was forced into crisis management. The PPC evaluation took the most positive view because from 1981 on, a capable expatriate team had been put in place. But all three felt that management responded creatively and ably to a range of difficult constraints presented by the Zairian context (refer to Chapter Two of this report). Additionally, in DAI's second evaluation, the PMU was commended as an effective management organization. Its collegial triumvirate leadership structure was seen to contribute to effective sharing of responsibilities, multi-disciplinary decision-making, and greater effectiveness in dealing with two sets of cultures and institutional realities (host and donor). The decentralized style of management was also seen as a plus (both by PPC and DAI), albeit with a certain cost paid in confusion among the middle management as to how responsibility or authority in certain instances was delegated.

The Redding evaluation challenged the above view. According to Redding, project management was so oriented to crisis management, that it failed to carefully coordinate components and failed to monitor or respond to the needs of the various components (see subheading "Principal Findings," Table 11). Although not nearly as critical, Dimpex also faulted poor management for poor performance of some components (see Table 7).

Design Changes

The first and second project amendments extended PNS by four years and resulted in significant reorganization and streamlining of PNS (see Table 4, Chapter Two). The Research and Extension component was extended to include some of the data collection activities previously subsumed under Monitoring and Evaluation and some farmer group development activities from the Farmer Group Development component. Intermediate Technology, Small Farmer Group Development, and Monitoring and Evaluation were phased out. The Marketing and Credit component continued, but AID withdrew its support for it.

There are a number of reasons why these components were phased out and certain activities transferred to others. Dimpex and, especially, Redding concluded that many components did not have clear objectives, were underfunded, understaffed, and mismanaged. Dimpex and Redding both placed the Farmer Group Development component in this category. They also criticized it for failing to field a competent woman to treat women's issues. They felt that half the target population was being effectively ignored. The PPC evaluation asserted that Farmer Group Development had no chance for success given the "socio-cultural" heritage of the Hema and Luba. On the other hand, DAI's second mid-term evaluation found that this component was beginning to achieve success (farmer groups were even selling maize collectively to large buyers) and saw the component as important. Although DAI faulted an overly ambitious project design for expectations being raised about the component's contribution that it could not fulfill, DAI by no means saw it as a failure. With still another view, the Mission reported that cooperatives were failing to contribute to project goals and did not warrant continuation as a separate component. Under protests from the GOZ, the Mission shed the Farmer Group Development as a distinct component. However, the Mission did feel that farmer groups had a role in extension and so some resources under Research and Extension continued to flow to developing these groups.

Intermediate Technology work was terminated because the Mission and the PMU found that the component could not support itself. This decision was made despite the fact that the Dimpex team in 1979 identified it as the project's most successful component. Indeed, it produced a quantity of tools and trained a number of blacksmiths far above intended levels in just four years (see Table 13). In addition, Dimpex and PPC found that it contributed to project legitimacy among farmers, and, at least in theory, it helped relieve critical labor bottlenecks in maize production.

Marketing and Credit was criticized by all PNS evaluators. Reasons for this criticism varied. Dimpex singled it out for failing to provide credit to small farmers. DAI's empirical study, however, had found that producer credit was not an immediate need. Dimpex and Redding both faulted the PMU of providing greater support to large than to small merchants (discussed further below). Redding felt the component was mismanaged. By 1982, DAI had decided that the information gathering and marketing activities overlapped with other components. It recommended that information activities be transferred to Monitoring and Evaluation and marketing activities to Farmer Group Development.

As a result of the streamlining of the project, Monitoring and Evaluation and the Farmer Group Development components were folded into Research and Extension.

Special Issues

(See subheading "Special Issues," Tables 7-12).

Working With Local Elites

The Redding and Dimpex evaluations asked whether or not PNS should work with, and through, existing institutions and local "elites." Both teams argued that significant project resources under Marketing and Credit were flowing primarily to large merchants. Redding noted that the establishment of farmer groups at the village-level increased the likelihood that these groups would reinforce the position of existing elites. These interventions were seen to contradict one of PNS's basic objectives, namely increasing competition in maize marketing. The PPC evaluation also addressed this issue, but arrived at very different conclusions. The PPC team found that it was necessary for PNS to work through

local elites to: a) gain legitimacy in Shaba, b) be an effective agent for change, and c) succeed in its logistical operations. Although the PPC team noted that collaboration with elites was to be handled delicately, it stressed that it must be done. DAI, while not addressing the issue directly, pointed to a number of instances in which collaborating with the powerful members of the private sector resulted in greater benefits to the farmers. The most notable of these is the reopening of an agro-processing facility by a company that paid railhead prices directly to producers.

Production Strategy

Dimpex raised the issues of credit to small farmers, fertilizer use, and PNS's focus on maize. DAI, in its two evaluations, found that neither producer credit nor fertilizers were immediately necessary to raise maize production. Although the use of fertilizers was seen as desirable, micro-economic analysis suggested that fertilizers would not be adopted unless maize prices were allowed to greatly increase. As for the single crop issue, DAI believed that while it would be desirable to consider other crops, maize was the logical crop to receive primary focus because of the great demand for maize. Although PNS was originally designed to develop new seed varieties specifically suited to the climate and production systems in Shaba, during the first six years of the project an already existing seed was disseminated. This seed was not ideally suited to the Shaban context and required inputs, such as fertilizers, that many farmers did or could not adopt as part of their production package. Although it can now be seen that great production increases were nevertheless possible (see Table 13), DAI was convinced that a greater impact could have been achieved at a relatively low cost if more money had been devoted to adaptive research.

Macroeconomic Constraints

As discussed in Chapter Two, the main macroeconomic constraints were: a) maize pricing policies that discriminated against producers in favor of consumers and large merchants; b) irregular and often restricted flow of host resources to the project due to fiscal austerity measures; c) shortages of essential inputs (e.g., fuel, spare parts for trucks, and cement) due to lack of foreign exchange; and d) a lack of commitment to rural development. Most of these were, by their very nature, beyond the project's control. They represented "givens" in which the project had to operate. All negatively affected the ability

of PNS to achieve maximum impact. It was to PNS's great benefit that the GOZ (perhaps as a result of policy dialogue with AID) raised maize prices, albeit not as high as demand could bear.

Participation, Institutional Development,
and Sustainability

The Dimpex, Redding, and PES evaluations judged the level of "participation" in PNS to be lacking. Dimpex and Redding based their conclusion on the poor performance of the Farmer Group Development component. At the time, few farmer groups existed and those that had been formed were failing to serve broad based economic and social functions. On the other hand, DAI and PPC judged the level of PNS project participation as satisfactory. They focused not so much on groups but on the interaction of farmers with the project. They stressed that over 14,000 farm households had voluntarily adopted the new maize seed variety and availed themselves of various project services.

All evaluators argued that project activities could not be sustained after donor funding ceased could be found. Dimpex (1979), Redding (1982), and the Mission (1982) argued that because plans had not been drawn up for the transfer of project activities, and because the formal training of Zairian staff had been extremely limited, project impacts were not sustainable. By 1984, the Mission, which had called for direct attention to this issue in the second project amendment, had drafted a plan to transfer the infrastructure and research and extension activities to Estagrico, a large cotton parastatal.

DAI felt that some elements of sustainability did not require ongoing institutions. They stressed that 14,000 households have learned how to secure resources to enhance their production and no longer needed extension services and that diffusion by example would continue. PNS had also trained 88 blacksmiths, many of whom continued independently to fabricate and sell rough tools. DAI also felt that the change in attitude by GOZ officials might have an impact on small farmers throughout the country. PPC recognized many of these impacts, but did not characterize them as being related to the sustainability issue.

Clarity of Project Objectives

Throughout the evaluations there was controversy over the formulation and perceptions of PNS objectives. The question was raised whether a consensus on project objectives is really necessary or desirable. DAI makes the case that in a large project like PNS fluidity, autonomy, and simultaneous pursuit of different objectives can be beneficial. They argue that an implicit recognition by the project's managers of the differing agendas of principal actors (host government, donor, contractor) has been a creative element and that the management process that has evolved within PNS accommodates these different agendas quite successfully. DAI concludes that an insistence on having a rigid consensus among all the interested parties was neither realistic nor desirable.

Measuring Project Impacts and Costs

It is not entirely clear who has benefited from PNS activities, how, or at what cost.

The common view is that small farmers gained most from PNS in four ways: a) from greater general mobility made possible by improved roads; b) from greater amounts of maize produced and marketed; c) from rising incomes and increased purchasing power and; d) from spontaneous private sector provision of more goods and services. The magnitude of these benefits and to whom they have accrued is less clear. Early in the project a decision was made not to collect data on income, so as not to jeopardize PNS's legitimacy by asking farmers sensitive questions. Informed, but imprecise, judgements suggest that average income has increased. No attempt has been made to disaggregate these estimates for specific groups (i.e. local elites vs. other small farmers), making it difficult to determine principal beneficiaries. The problem of determining the magnitude and nature of PNS's impact on small farmers has been compounded by the difficulties of estimating the rapid rate of inflation in Zaire.

Evaluators have suggested that small and large merchants have also benefited from the project through increased opportunities to market greater volumes of maize. Although it has been conclusively determined that the volume of maize marketed under PNS has increased substantially, it is again difficult to assess whether it is the small or the large merchants who have gained more from PNS.

In a limited sense, PNS may have had a favorable impact on the government itself. By reducing the import requirements of maize, the government has been able to apply its limited foreign exchange to the purchase of other commodities it deems either more necessary or more desirable. As for achieving its political ends, it is not clear whether or not the GOZ has made progress. The region is still rife with political tensions and it appears unlikely that providing food to the mines and demonstrating a willingness to invest in the region will defuse these deep-rooted tensions.

Only one attempt at a cost-benefit analysis of PNS project impacts has been made. This was done by Redding in 1982. Using crude methods, he attempted to derive a per metric ton figure for the amount of investment necessary to bring about a given increase in marketed maize and maize production. DAI has expressed its reservations about trying to derive a cost-benefit ratio in a project as complex as PNS.

Table 7

SUMMARY OF DIMPEX EVALUATION

- DATE : 1979
- PURPOSE : - Assess project performance against logframe.
- Reassess project environment.
- Reassess project goal, purpose, and outputs.
- PRINCIPAL FINDINGS : - Unwarranted emphasis on infrastructure as key constraint to maize production; too large a portion of budget allocated to the task.
- Goal and purpose inconsistent; purpose better achieved by not focusing exclusively on maize.
- Coordination among components weak.
- Several components underfunded and understaffed.
- Need for greater expatriate technical assistance.
- Marketing and Credit component weak because no provisions made for credit to small farmers.
- Small farmer groups raising expectations that cannot be met through original project design.
- SPECIAL ISSUES : - Impact on Poor and Small Farmers: (a) direct benefit through extension and improved roads; (b) indirect benefits through bringing salaried incomes into area both as wages to 150 small farmers and as wages to PNS staff; (c) negative impact on poor created by using project resources to support local elites and large merchants, not to support small farmers and merchants.
- Sustainability: (a) lack of consistent GOZ policy or commitment to rural development make support of PNS after U.S. funding ceases unlikely; (b) Zairian staff not receiving adequate training to assume project operations after departure of expatriate technical assistance; (c) autonomy of PMU makes transition to Zairian institutions especially problematic.
- LESSONS LEARNED : - Conscious effort to avoid disrupting local production systems inconsistent with increased production.
- Procurement and delivery of inputs essential to project success.
- In enlisting support of local elites, care should be taken not to compromise goals.

Table 8

Summary of DAI Internal Mid-Term Evaluation

- DATE : 1980
- PURPOSE : - To enhance institutional learning on aspects of the development process.
- To provide a formative influence on PNS by identifying basic issues that should be addressed.
- PRINCIPAL FINDINGS : - Original project paper design overambitious.
- Zaire's worsening macroeconomic situation leading to shortfalls of commodities; Infrastructure, Marketing and Credit, and Research and Extension negatively affected.
- Lack of dependable budgetary support from GOZ results in slow progress in Infrastructure and morale problems with staff due to difficulties in paying salaries.
- Inadequacies in development of new maize production techniques, including overemphasis on proving existing maize package rather than developing new package specifically for Shaba.
- Micro-economic analysis finds there is no substantial need to provide credit to producers.
- Shortcomings in technical assistance need to be rectified; better team building needed.
- Maize should remain as central to project because of high market demand for it.
- SPECIAL ISSUES : - Policy Dialogue: (a) low maize prices significant obstacle to achieving full project impact; (b) Mission must engage in policy dialogue on maize pricing policies so that they better reflect actual supply and demand.
- Adaptive Research: (a) PNS has paid insufficient attention to developing new maize packages for Shaba that fit local production systems and require low commitment of external resources; (b) Such research would advance project achievements significantly.
- Fertilizer Use: (a) price of maize far too low to reasonably expect farmers will adopt it; (b) unless maize prices raised sufficiently, seeds should be developed with low fertilizer requirements.

Table 9

SUMMARY OF REDDING EVALUATION

DATE : 1982

PURPOSE: : Same as Dimpex

PRINCIPAL FINDINGS

- : - Project should be phased out immediately.
- Technical and Management performance of PNS inadequate.
- Problems mainly created by poor project design, especially lack of consistency between goal and purpose.
- Exclusive focus on maize reduces potential fulfillment of project purpose.
- Poor management characterized by crisis management, not by purposeful planning.
- Roads opened without planned priorities.
- Fail to identify and study local farming systems.
- Small Farmer Group component underfunded and understaffed.
- Marketing and Credit Component benefiting large merchants, not small as originally intended.
- Lack of clear objectives for and lack of coordination between Marketing and Credit and Small Farmer components.
- Lack of adequate financial management reporting system.
- Fail to provide adequate training for staff.
- Fail to consider issues of sustainability.

SPECIAL ISSUES

- : - Lack of Clarity in Project Design and Failure to Rectify During Implementation: (a) project design fails to specify, and project management fails to accomplish, clear statement of purpose, systematic planning, establishment of priorities, and well programmed operations; (b) at root of all problems with project performance.
- Sustainability: (a) lack of attention to training Zairian staff makes project sustainability unlikely; (b) failure to draft transition plan makes sustainability unlikely.

Table 10

SUMMARY OF DAI SECOND INTERNAL EVALUATION

- DATE : 1982
- PURPOSE : Same as DAI Mid-Term Evaluation (see Table 9)
- PRINCIPAL FINDINGS :
- PNS surpassed maize production and marketing targets.
 - Many indicators suggest PNS encouraged increased flow of private resources into maize production and marketing.
 - Just beginning to achieve success in organizing Farmers Groups that market directly to buyers.
 - More direct lines between buyers and producers established so that many producers receiving railhead prices instead of farmgate prices.
 - Agroprocessing plant reopened by a private firm in Kongolo as result of PNS activities.
 - Marketing and Credit component weak and should be dissolved, with information gathering activities transferred to Monitoring and Evaluation.
 - Farmer Group Development beginning to register successes and is valuable project component.
 - Research and Extension should begin to develop other crop packages besides maize for Shaba.
 - PMU a good organizational device, despite some problems.
- SPECIAL ISSUES :
- Sustainability- (a) a distinction between institutional capacity and beneficiary capacity to sustain project impacts must be made; (b) beneficiary capacity to sustain impacts already greatly enhanced by knowledge of new production techniques and willingness to purchase better seeds; (c) PNS has had little or no impact on institutional capacity of DOA to sustain impacts, in fact DOA has offered little support to PNS; (d) must begin to consider plans for transfer of project activities to other institutions, but even more importantly, must address issues of financial sustainability; (e) must strengthen small farmer groups so their interests are taken into account after AID departs.

Table 10 (continued)

SPECIAL
ISSUES

- : - Macroeconomic Context: (a) many attributes of the macroeconomic context beyond project control negatively affecting PNS fuller achievement of objectives; (b) exchange crisis makes it difficult to purchase needed commodities; (c) erratic flow of GOZ resources due to fiscal austerity also has negative impacts on PNS; (d) pricing policies for maize, while improving, still artificially low; (e) policy dialogue on pricing is needed; (f) attempts must and have been made to minimize imported supply requirements of PNS activities; (g) self-sustaining revenue generation arrangement in Shaba must be sought to reduce dependence on central budget.
- Causes of Project Success: (a) while Shaba has seen dramatic increases in maize marketed and produced, cause for this increase cannot be determined with certainty; (b) however, likely PNS has much to do with these increases because most external factors (see Macroeconomic context immediately above) have been negative obstacles to achieving project goals; (c) a possible competing explanation for increases are increased maize prices; (d) however, this was probably a contributing, but not sufficient, cause of maize increases.

LESSONS
LEARNED

- : - The PMU is an effective organizational structure for: (a) multi-disciplinary approach to decision-making; (b) greater information-sharing among project components; (c) more effective leadership; and (d) collaboration between host and donor institutions.
- Policy changes (especially pricing) are necessary to realize full project benefits.

Table 11

SUMMARY OF PROJECT EVALUATION SUMMARY

- DATE : 1982
- PURPOSE : - To review progress made by PNS
- To suggest Mission's future course of action on PNS.
- PRINCIPAL FINDINGS : - PNS unique success in Zairian context.
- Maize production and marketing targets surpassed.
- PNS should be streamlined in light of implementation experience.
- Funding for a newly designed and streamlined project should be extended.
- Management and technical assistance performance, while not perfect, above average for development activities in Zaire.
- Activities that have failed to contribute to project success should be phased out of project.
- SPECIAL ISSUES : - Sustainability: (a) action must be taken quickly to begin transfer of project activities to Zairian institutions; (b) issues of sustainability and a transition plan should be a focus of activities in project extension.
- LESSONS LEARNED : - Logistical problems can be overcome by advance planning.
- 10 year timeframe more realistic for a PNS-type project than usual AID 3-5 year timeframe.

Table 12

SUMMARY OF PPC EVALUATION

- DATE : 1985
- PURPOSE : - To examine development management in PNS.
- PRINCIPAL FINDINGS : - Number of new and rebuilt roads and bridges achieved design targets.
- Maize production and marketing exceeded design targets
- General conditions of beneficiary population improved as a result of project.
- Increase in maize prices probably contributed to project success.
- Consensus on priority of project objectives never achieved, leading to shifting project design and uncertain project direction.
- An effective PMU under Zairian supervision was put in place.
- An effective brigade was created to build and repair roads and bridges.
- High level of project involvement as a citizen of local community secured local cooperation.
- SPECIAL ISSUES : - Beneficiary Participation: (a) Farmers continued to purchase new seed varieties even after price was raised to approximate market value; (b) contractor's commitment to small farmer involvement and sensitivity to small farmers was exemplary, as evidenced by the selection of extension style and by use of project resources to meet small farmers' needs; (c) AID succeeded in convincing the GOZ of utility of small farmer production strategy, as evidenced by GOZ desire to extend Small Farmer Component even after AID decided it should be terminated.
- Impact on Beneficiaries: (a) To determine impact in absence of baseline income data, team asked small farmers; (b) small farmers responded that they perceived themselves as better off as a result of PNS; (c) beneficiaries directly benefited from increased maize production and greater ease of transporting maize to market; (d) beneficiaries indirectly benefited through wages paid to PNS staff in project area.

Table 12 (continued)

- Sustainability: Insufficient attention given to project sustainability after USAID assistance terminated, particularly in regard to maintaining institutional, personnel, and financial interventions established by PNS.

LESSONS
LEARNED

- : - In-depth understanding of socio-economic and technical environment is a sine qua non to successful project design and effective project management.
- Development projects are most successful when design is administratively simple, and minimal, phased, and integrated changes are made to local social and production systems.
- More complicated projects require a long timeframe and that large amounts of money be spent on management considerations.
- It may be more appropriate to design a project that works around, or is independent of, the established government and institutional system.
- Local personnel should be trained and encouraged to carry out project activities as soon as possible; projects should not depend on expatriate technical assistance for a long period of time.

Table 13

INDICATORS OF PROJECT ACHIEVEMENTS

	<u>Number</u>	<u>Percent of Goal</u>
Produce Maize	122,137 MT	250%
Market Maize	45,000 MT	180%
Produce Small Tools	33,525	400%
Train Blacksmiths	80	100%
Improve Overpasses	119 km	165%
Improve and Build Roads	732 km	101%
Reach Farm Households	14,445	76%
Establish Farm Groups	38	95%
Establish Agricultural Centers	60	76%

BIBLIOGRAPHY

- Barclay, Tony. "North Shaba Project Evaluation." Memo to Russell Anderson, AID, July 26, 1982.
- Development Alternatives, Inc. Five Years Later: Progress and Sustainability in Project North Shaba. March 1982.
- . Internal Evaluation of Project North Shaba. November 1980.
- DIMPEX Associates, Inc. Evaluation of the North Shaba Integrated Rural Development Project. 1981.
- Gran, Guy. "The Project Process and Conflicting Reality: AID Zaire," pp. 59- 82, in Development By People: Citizen Construction of a Just World.
- Redding, D.A. Evaluation of the North Shaba Rural Development Project. May 1982.
- USAID. "PNS Aids in Increasing Agricultural Production and Sales, But More Can Be Accomplished." Audit Report No. 3-666-83-17. May 1983.
- USAID. North Shaba Maize Production: Project Paper. August 1976 and Amendment, February 1983.
- USAID/PPC. "Development Management in Africa: The Case of the North Shaba Rural Development Project in Zaire." AID Project Impact Evaluation No. XX. January 1985 Draft.
- USAID/Zaire. North Shaba Rural Development: Project Evaluation Summary. June 1982.