

PJ-BAC-199

Project 660-0055

ZAIRE

Nutrition Planning

Project Evaluation

Summary

FY 80

055

2-Way Memo

Subject: Project Evaluation Summary - Nutrition Planning

DATE OF MESSAGE
October 6, 1979
DATE OF REPLY
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Zaire Desk Officer
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From:

Leroy Jackson
Capital Projects Design and Evaluation Office
USAID/Kinshasa
APO NY 09662

1. TO BE RETAINED BY ADDRESSEE

PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

<p>1. PROJECT TITLE</p> <p align="center">NUTRITION PLANNING</p>	<p>2. PROJECT NUMBER</p> <p align="center">660-0055</p>	<p>3. MISSION/AID/W OFFICE</p> <p align="center">USAID KINSHASA</p>
<p>4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY)</p> <p align="center"><input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION</p>		

<p>5. KEY PROJECT IMPLEMENTATION DATES</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;">A. Start O-AG or Equipment FY <u>78</u></td> <td style="width:33%;">B. Final Obligation Expected FY <u>79</u></td> <td style="width:33%;">C. Final Input Delivery FY <u>81</u></td> </tr> </table>	A. Start O-AG or Equipment FY <u>78</u>	B. Final Obligation Expected FY <u>79</u>	C. Final Input Delivery FY <u>81</u>	<p>6. ESTIMATED PROJECT FUNDING</p> <table style="width:100%; border: none;"> <tr> <td style="width:50%;">A. Total</td> <td style="width:50%; text-align: right;">\$ <u>2,744,000</u></td> </tr> <tr> <td>B. U.S.</td> <td style="text-align: right;">\$ <u>1,623,000</u></td> </tr> </table>	A. Total	\$ <u>2,744,000</u>	B. U.S.	\$ <u>1,623,000</u>	<p>7. PERIOD COVERED BY EVALUATION</p> <p>From (month/yr.) <u>Jan 1978</u></p> <p>To (month/yr.) <u>June 1979</u></p> <p>Date of Evaluation Review <u>June 20, 1979</u></p>
A. Start O-AG or Equipment FY <u>78</u>	B. Final Obligation Expected FY <u>79</u>	C. Final Input Delivery FY <u>81</u>							
A. Total	\$ <u>2,744,000</u>								
B. U.S.	\$ <u>1,623,000</u>								

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

<p>A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)</p>	<p>B. NAME OF OFFICER RESPONSIBLE FOR ACTION</p>	<p>C. DATE ACTION TO BE COMPLETED</p>
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1. The purpose originally outlined in the project Logical Framework was revised to agree with USAID policy to develop pilot nutrition interventions in two areas of Zaire, i.e. at the same time that information is collected for analysis and future action the target group(s) is benefitting from assistance in the short-term.

L Jackson

July 11, 1979

2. The project should be completed per the new completion date of April 15, 1980.

USAID/Tulane

April 15, 1980

<p>9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;"><input type="checkbox"/> Project Paper</td> <td style="width:33%;"><input type="checkbox"/> Implementation Plan US, CPI Network</td> <td style="width:33%;"><input type="checkbox"/> Other (Specify)</td> </tr> <tr> <td><input type="checkbox"/> Financial Plan</td> <td><input type="checkbox"/> PIO/T</td> <td>_____</td> </tr> <tr> <td><input checked="" type="checkbox"/> Logical Framework</td> <td><input type="checkbox"/> PI(D)/C</td> <td><input type="checkbox"/> Other (Specify)</td> </tr> <tr> <td><input type="checkbox"/> Project Agreement</td> <td><input type="checkbox"/> PIO/P</td> <td>_____</td> </tr> </table>	<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan US, CPI Network	<input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____	<input checked="" type="checkbox"/> Logical Framework	<input type="checkbox"/> PI(D)/C	<input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____	<p>10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT</p> <p>A. <input type="checkbox"/> Continue Project Without Change</p> <p>B. <input type="checkbox"/> Change Project Design and/or <input checked="" type="checkbox"/> Change Implementation Plan</p> <p>C. <input type="checkbox"/> Discontinue Project</p>
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan US, CPI Network	<input type="checkbox"/> Other (Specify)											
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____											
<input checked="" type="checkbox"/> Logical Framework	<input type="checkbox"/> PI(D)/C	<input type="checkbox"/> Other (Specify)											
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____											

<p>11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)</p> <p>Robert Robertson, Public Health Officer</p> <p>Ann McDonald, Design & Eval Officer</p>	<p>12. Mission/AID/W Office Director Approval</p> <p>Signature <i>Norman L Sweet</i></p> <p>Typed Name Norman L Sweet:DIR</p> <p>Date <u>10/5/79</u></p>
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13. A. Summary

The USAID/GOZ Nutrition Planning Project (660-0055) activities began in January 1978 with the arrival in Zaire of the two Tulane long-term technicians. The Tulane contract was to have terminated January 1980 but because of an emergency drought investigation in Bas Zaire which diverted Contractor and GOZ staff time, the contract was extended to April 15, 1980. Progress in relation to the Project design has been steady and highly satisfactory and it is fully anticipated that the Project purposes will be achieved by April 15, 1980. The environment within which the Project activities have been ongoing has been generally deteriorating with respect to economic conditions, basic community services and GOZ organizational effectiveness. This Project which has focused on institution building, including training, and planning has provided valuable information and raised serious questions as to the direction of USAID/Zaire nutrition initiatives considering the current conditions facing the Zairian people. In addition to measuring progress of the Nutrition Project towards purpose and goal accomplishment, the evaluation provides substantive guidance for future implementation of the subject Project and recommendations for development of a future nutrition project. The PID design is to begin as soon as feasible to take advantage of available personnel and momentum generated by the evaluation and to ensure continuity in AID support to the Zaire Nutrition Planning Center and its activities.

13. B. History and Background

As originally planned, implementation of the Nutrition Planning Project was to have begun in FY 75 and would have continued for five years through FY 79. Project implementation did not begin until January 1978; therefore, the original rationale and timing for an evaluation and PP revision became inapplicable. In addition, changing circumstances within Zaire increased GOZ interest in nutrition problems and the Department of Health (DOH) requested changes in the Project as originally designed, and USAID/Zaire agreed to revise the Project. The major elements of the changes were as follows:

1. Earlier emphasis on interventions designed to produce demonstrable improvements in nutrition, although analysis of nutrition problems remains an integral and significant element of the project.
2. Implementation period compressed to two years, but retains certain activities from each of the five years as originally planned.
3. Significant changes in the inputs and some changes in the outputs, particularly as to degree, due to shortened implementation period and changes in emphasis.
4. Major emphasis was put on establishing and strengthening the institutional capabilities of the GOZ for nutrition planning and project implementations through the Zaire National Nutrition Planning Center.

The Mission therefore revised the implementation and financial plans and prepared a new logical framework to reflect the changes cited

above. AID contribution was originally \$3,277,000 and the GOZ was to provide \$690,000 of in-kind services and \$450,000 of budget support from its counterpart resources, or up to \$1,140,000. Total cost was \$4,417,000. Under the present proposal AID contribution is \$1,623,000; GOZ contribution is \$1,151,000, of which \$1,220,000 is from counterpart funds. Total cost of the Project is \$2,744,000.

The contract signed by Tulane University November 18, 1977 was based on the revised Project plans. The Tulane team prepared an Inception Report (April 1978) shortly after arriving, which outlines the plan of action for this Project.

The current evaluation will measure progress primarily against the revised log frame and other documents, but will look at assumptions and achievements within the framework of project evaluation.

14 Evaluation Methodology

The primary objective of the evaluation is to provide the Government of Zaire and its Department of Health and USAID with substantive guidance for future implementation and planning of the subject Project, including recommendations as to whether, how and when to proceed with subsequent phases involving actual nutrition interventions. In addition, the evaluation should provide the GOZ and USAID with useful insights for other nutrition projects and nutrition components of related projects.

The Project Paper calls for two levels of evaluation: Process and Impact. The process evaluation consists of monthly progress reports by the Contractor to the GOZ and to USAID/Zaire and use of the performance tracking network chart. The impact of the Project is evaluated by first measuring institutional performance in training Zairian counterparts as evidenced by training plans and resulting level of functioning achieved by the GOZ Nutrition Planning staff. Secondly, the Project is designed to measure actual impact on nutritional status of the target groups through collection and analysis of baseline data during the first few months of Project activity and through ongoing monitoring of changes as evidenced by anthropometric, clinical and laboratory examinations of the target population. The Contract team through the Nutrition Center will carry out an overall evaluation upon completion of the Project to assess the impact of pilot interventions.

The evaluation team consisted of M. Tanamly and A. McDonald, USAID/Zaire and M. Duffy, REDSO/WA. Tulane technicians R. Franklin, J. Pico-Velosco and N. Mock, and Zairian staff of the Center, Dr. Kabamba Nkamany, Director; Dr. Makwala ma Mavambu ye Beda, Assistant Director, Technical Division; Cit. Tshinko Ilungu, Assistant Director for Administration; and others provided assistance in obtaining information with which to assess progress and insights into the development climate and prospects for effective nutrition interventions. The team reviewed relevant Project documentation, prepared a Scope of Work for the evaluation (attached) which included a list of issues requiring special attention within the evaluation and assessed the adequacy of the original and revised design, changes in

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the Project setting since the initial design, progress of the Project against the original and revised plans of action, ProAgs and logical frameworks. The draft PES was reviewed internally by USAID on June 15, 1979 and submitted to the Evaluation Review Committee (ERC) for discussion of findings, issues and recommendations for further Project implementation and development of the proposed FY 1980 Area Nutrition Improvement Project (079).

15. External Factors

Since the original design of the Project many conditions in Zaire have changed. These changes required a reassessment of the appropriate role of the Zaire National Nutrition Planning Center in any future collaboration between the USAID and GOZ.

The changing conditions influencing the nutritional problems in the country include substantially increased cost of food products relative to salary levels and decreased means of transportation for food distribution.

The Nutrition Center reports indicated that in Kinshasa food prices increased 640% for the period 1970 to 1978. (Accurate data on increases in salary levels not available.) In terms of nutritional status the Center studied inpatient records of the General Pediatric Service of Mama Yemo Hospital for the years 1971, 1973 and 1977. The percentage of cases with the primary diagnosis of malnutrition increased during this period from 5.1% in 1971 to 9.3% in 1973 and to 18.7% in 1977.

In February 1979 the Center's food consumption team calculated the minimum recommended diet on the basis of FAO Recommended Dietary Allowances for a family of four in Kinshasa, with no animal products included because of their high cost. The diet cost Z241 a month, which is more than double the average wage earner's salary of about Z100 a month.

Because of the economic situation and the inability of the GOZ to combat health and nutritional problems the role of non-governmental organizations has evolved and has become a very essential part in the ongoing effort to alleviate the problem.

The Nutrition Planning Center was occupied full-time with the evaluation of the famine in Bas Zaire from November 10, 1978 to January 10, 1979. Implementation delays resulting from this two-month special intervention call for a revised time table for Project activities. (See PIC/T 660-655-3-96003.)

The leader of the food consumption study was removed from her post for personal reasons and this put the food consumption study behind schedule. (The Center adjusted for this by using a smaller sample and relying on qualitative data rather than extremely difficult to obtain quantitative data and not computerizing the data before writing the reports.)

The GOZ insisted on an earlier emphasis on interventions designed to produce demonstrable improvements in nutrition, although it still accepts the importance of analysis of nutrition problems as a significant element of the Project.

Continuity of Assumptions

Although the state of the economy has been deteriorating in the last few years the GOZ has supported the Center and meets its financial obligations and commitments by making available the funds, personnel and logistical support needed to permit smooth functioning of the Project.

However, some unforeseen circumstances have made it necessary for the staff to make major efforts to minimize adverse impact on the Project. For example: an adequate supply of gasoline cannot be guaranteed because of fuel shortages within the country, the counterpart funds were insufficient as a result of the devaluation of the zaire, the drought in Bas Zaire made it necessary for the GOZ to make available Z127,000 for a survey of the emergency situation, difficulties arose with the use of the local computer as a result of lack of maintenance and also some computer output sheets were lost. The Project also encountered minor personnel problems related to misuse of authority, and the Project management had to terminate five field employees.

The above problems are not considered sufficiently serious to require change in the Project's assumptions.

16. Inputs

I. USAID

1. Technical Assistance: The original contract was to provide 48 person-months of long-term technical assistance and 25 person-months of short-term consultancy. The contract with Tulane University was changed to incorporate a three-month extension as a result of the emergency nutrition intervention in Bas Zaire. As a result of the contract revision, Tulane will provide up to 54 pm of long-term and 40 pm of short-term technical assistance.

2. Commodities: Generally the delivery of commodities was on time according to the PIO/Cs, except for the delivery of vehicles.

3. Training: Training plans for high, middle and low level personnel were clearly delineated in the Center's Reports No. III, IV and VI. These plans included sending personnel to the U.S. and other African countries for training, bringing technical consultants to Zaire to train personnel, and the ongoing training of low and middle level personnel. Much of this training has been completed as scheduled.

II. GOZ

The GOZ personnel and in-kind contributions to the Project were

five staff members (three high level and two middle level Zairian employees), the building where the Center is functioning and office equipment.

It was planned that the GOZ will contribute Z100,000 in-kind. Since the team is unable to appraise the GOZ in-kind contribution and since the above-mentioned contributions are adequate, the team considers the GOZ has fulfilled its obligations in this area.

It was planned that the GOZ would contribute \$455,000. However, during 1978 Calendar Year GOZ made \$427,715 (Z342,181) available from counterpart funds. As of December 31, 1978 the Project spent Z226,900, reserving Z115,808 for building maintenance.

For the Calendar Year 1979 the Project estimated its needs from the counterpart funds as the equivalent amount of \$546,000, which the GOZ made available to the Project on April 19, 1979 (Z818,000). Through April 1979 the Project spent Z163,559.

It is anticipated that the counterpart funds for 1979 will not accommodate salary increases and the increase in costs of supplies resulting from inflation. Additional counterpart funds will have to be forthcoming this calendar year.

Gasoline requirements have been filled by agreement with MOBIL. The Center is pressing MOBIL for installation of a gas storage tank.

17. Outputs

In summary, according to the means of verification stipulated in the revised log frame, progress toward achievement of revised outputs is on schedule. The seven outputs which were listed in the original PP were revised to four by the Mission to reflect the current emphasis of the Project on institution building and strengthening and the shortened implementation period devoted primarily to planning, in addition to the more realistic assessment of immediate possibilities for universal intersectoral planning within the GOZ. It is felt that an evaluation of progress towards achievement of the original outputs is not possible given the substantial changes that have been made in the PP, the Tulane contract, and the ProAg.

The first output, "Establishment of National Nutrition Planning Unit (Zaire)", has been achieved through creation of the National Nutrition Center within the Department of Health (GOZ) by Presidential Ordinance. The ordinance cites five areas of activities for the Center which include coordination, nutrition programming, information collection, advisory functions and nutrition surveying. The plan of action presented in the Inception Report for the first 24 months describes the site selection process and data collection schedules and intervention implementation plans that the nutrition program intended to follow. The 24-month plan was developed according to the revised PP and log frame along with the Tulane contract and has been adhered to in sequence, with timing adjustments for

the Bas Zaire investigation. With the exception of the complete Kinshasa data analysis and intervention plan (Report XI), which will be five weeks late, all reports and activities have been completed on schedule (see PIO/T dated April 6, 1979 for latest contractual agreements).

The training plan records (Reports III, IV AND VI) indicate that three high level, 18 middle level and 73 community level Zairian technical personnel are being trained as per output 2. Training has essentially been of two types: formal and on-the-job. The formal training has taken place with the exception of the two top level people, one of whom will study for the MPH in Nutrition starting in July and the other will leave the following July to obtain an MPH in Epidemiology.

The effectiveness of the training is demonstrated in the good quality and satisfactory timing of the work produced by these Zairians. Report X was written while the Chief of Party of the Tulane team was out of country and is of the same high standard as previous reports. In addition, Dr. Kabamba Nkamany was the sole author of Report XII which is an informative collection of regional dietary pattern information. The administrative mechanism is functioning smoothly, all employees have good attendance records and logistics are adequately handled (all Project vehicles are maintained, working and have fuel). The Bas Zaire investigation provided the evidence that the Center functions well in the field, can mobilize itself at very short notice, and can work collaboratively with other organizational entities. (For details of the Bas Zaire evaluation see Section 21.) The investigation was quickly and competently performed and the recommendations made for relief efforts, longer term interventions, monitoring and evaluation plans were accepted and acted upon by USAID and relief agencies.

The community level personnel participated in the baseline studies in Kinshasa and Popokabaka as "enqueteurs" after receiving one week of training. These auxiliary nurses, who are graduates of a three-year nursing program, were selected and trained by Drs. Makwala and Rico. Their work has been very satisfactory and the data they have generated through the six studies appear to be reliable. These auxiliary nurses are now adapting to changing roles as nutrition educators at the primary health care level and/or data collectors for ongoing surveillance and evaluation. The laboratory technicians and food consumption study assistants have also been producing consistently high quality work. Of the 73 auxiliary nurses and other personnel and 16 supervisors originally selected and trained, 72 and 12 respectively are still employed by the Center.

Evaluations of the nutrition status for populations of three zones in Kinshasa representative of urban poor and Popokabaka, representative of a rural area with poor soil quality (per output 3), were conducted and the data are now being analyzed in order to determine the causality of malnutrition; they suggest alternative remedial interventions for choosing the most effective ones within each of the two areas. In each site,

Baseline studies were conducted which included the following parameters: census data, anthropometric data, socioeconomic data, clinical examinations, biochemical laboratory profiles and food consumption studies. The study findings are presented in Reports X and XI (Report XI is currently being written and an additional report on Popokabaka is to be issued in July). These studies had six purposes: 1) to generate data for planning interventions and choosing between alternatives, 2) to provide detailed data to determine how to best design and implement interventions, 3) to develop the capability of the Center as an institution and the individual staff members to conduct nutrition studies, 4) to provide baseline data for monitoring and evaluating the effectiveness of interventions, 5) to provide information with which to encourage action or exert pressure on all organizations concerned with nutritional status of people, and 6) to research questions which will be available for others.

Since the causality of malnutrition is generally complex, studies had to be done on various interrelating factors affecting nutrition status of the high-risk groups within the target populations. For example, clinical studies yield information about overall health problems and presence of any nutritional diseases caused by lack of vitamins or minerals, and their relationship to malnutrition. Various socioeconomic factors that appear to be associated with malnutrition need to be identified, i.e. presence of severe PCM is often correlated with disrupted family life. Ecological studies give planners information about environmental sanitation, availability of potable water, educational levels, markets, roads, and electricity which all factor into the causality of malnutrition. Often, and this is the case with these baseline studies, certain factors appear to be important, but further analysis is required. In Popokabaka the low availability of foods in the public market and private household as determined by the food consumption surveys indicated that insufficient agricultural production is one contributing factor. The Center is now engaged in further analysis of the possibilities of impacting on nutrition status through improving quality and quantity of food produced by the community.

The fourth output of the Project requires demonstration of a declining trend of levels of malnutrition in the target areas as a result of Project interventions. Progress on this output cannot be assessed at this time since only minor interventional activities have begun (i.e. awareness building among mothers of children examined in studies, also medical treatment of disease encountered and some radio, TV broadcasts.) This is, however, a very important aspect of the Project and perhaps the most critical in terms of justification for ongoing and future programs. Currently, the Project is operating in a situation in which the rates of chronic malnutrition are increasing, or remaining at very high levels (see Reports X and XI). The final evaluation to be conducted in April 1980 should focus on this question.

18. Purpose

The Project purpose as stated in the original PP was "to formulate a National Nutrition strategy which involves the planning and implementation of programs to reduce malnutrition at both community and national levels". After assessing the possibilities for such sophisticated planning, involving close inter-departmental, inter-sectoral cooperation in the Zairian milieu and starting from scratch to develop a Nutrition Unit out of which to operate, the purpose was revised. The current Project purpose is more realistic: "To develop pilot nutrition interventions in two areas of Zaire and develop GOZ institutional capability for nutrition planning". Because of the rapidly changing conditions in Zaire, it was decided by the Nutrition Planning Center with the agreement of USAID/Kinshasa that pilot intervention programs would be more appropriate at this time rather than larger scale model programs. The Center would therefore try several intervention approaches simultaneously and monitor the effectiveness of each of them. In the follow-on project, Area Nutrition Improvement, those interventions found to be most effective could be more fully developed into model programs for various parts of the country including the first two sites. It was also felt that the role of the Nutrition Planning Center should be more that of a consultant on nutritional matters to both the GOZ and other organizations with long-term commitments to the area, rather than implementing programs itself. In this way the Center could work with other organizations to help them to develop new projects and strengthen old ones, rather than have the Center develop parallel programs that compete with those of other departments of the GOZ and other organizations. The evaluation team feels it was appropriate to emphasize development of GOZ institutional capabilities through planning and realising more limited, discrete activities first, because this will have a more lasting impact on the country than the original strategy which called for several expatriate nutrition planners to attempt to develop and obtain approval for a complex national strategy themselves while at the same time implementing nutrition interventions and training Zairians.

The National Nutrition Planning Center has indeed been established and is staffed with trained Zairian personnel. The evaluation of causes of malnutrition in one urban and one rural area is in the final stages of completion, and implementation of interventions in two areas will be fully underway in late July. Therefore, it appears that the conditions that indicate the purpose has been achieved have been partially fulfilled. It is the opinion of the evaluation team that the Project progress so far gives every indication that all End of Project Status (EOPS) conditions will have been more than satisfactorily met by April 15, 1980 which is the new Project Assistance Completion Date.

The revised set of EOPS conditions remains a valid description of what will exist when the purpose is achieved and the accomplishments of the four outputs on a timely basis, as discussed in Section 17, will ensure this.

A question arises as to what extent the National Nutrition Planning Center should become involved in actual implementation of interventions. Nutrition planning is an ongoing process that involves several steps: identification of problems and affected populations, determining causality of malnutrition, identifying alternative solutions, choosing cost-effective interventions, implementing interventions and evaluation for future planning. To make most effective use of the Center's resources, the staff should assume an advisory role to implementing organizations and concern themselves primarily with nutrition planning and surveillance of the overall situation. There are many other governmental and

non-governmental agencies that are involved in nutrition-related activities that can be called upon to implement programs (see Section 21). For example, the first interventions being planned for Kinshasa described in "Expansion of Outpatient Rehabilitation Programs in Kinshasa", envision employing this operational method. The Center will assist in designing the programs, training the personnel, trouble shooting program management, coordinating inputs from donors, monitoring activities and

evaluating their impact. Thus, interventions will be implemented which can continue while the Center's staff focuses their attention on developing additional interventions in the same or other areas. The Nutrition Center staff, including the Tulane technicians, see their role as a planning and catalytic one, and wish to limit their direct involvement in interventions in order to make best use of the currently existing health care systems and to reach the greatest number within the target population with their limited resources. The evaluators feel this operational method makes sense and should be employed for the follow-on project, Area Nutrition Improvement.

19. Goal/Subgoal

The Nutrition Planning Project has been designed to contribute to improvement of the health status of the population of Zaire through nutritional interventions. The logic that improvement in nutrition status will contribute to health status is valid since malnutrition now seems to be the most prevalent serious health problem among young children and infants of the target populations. In addition, adequate nutrition status is the foundation for good health and essential for optimum growth and development of the individual.

At this point in implementation the Project cannot be expected to demonstrate actual improvement in nutrition status since it has been primarily involved in planning, training and baseline studies. It appears that subsequent evaluations of progress toward goal achievement (the final evaluation of this Project and evaluations within the follow-on project) will have to take into consideration, and perhaps calculate adjustments for, the negative trends such as increasing rates of malnutrition, decreasing food availability and the worsening transportation situation with which the Project must contend. It may be necessary to adjust the Project goal to working towards preventing health and nutrition status of high-risk groups from becoming worse or keeping rates of severe malnutrition at a minimum.

The multiple etiology of malnutrition, rooted in socioeconomic causes, does not lend itself to quick, narrowly-focused, technical solutions. Similarly, methods for measuring changes in nutrition status are not always precise (food consumption data for example) and results are not fully understood because of lack of knowledge about underlying functional relationships. Therefore one must expect that an evaluation will not always prove or disprove conclusively to what degree health/nutrition status has been affected by these Project activities.

The team attempted to assess the probability of achieving actual improvement in nutrition status in target populations through Project activities. The Nutrition Center is systematically planning its activities to ensure that interventions follow logically from all available information and after complete analysis of various alternatives and selected interventions are evaluated and adjusted when necessary. This methodology provides the best chances of success in actually making an impact on the population since it takes into consideration varied factors

affecting nutrition status and attempts to intervene in the most cost effective ways.

The nutrition program is one element of AID's integrated strategy to improve the quality of life of Zaire's poor. Because malnutrition is inseparable from the poverty that accompanies underdevelopment, a dual approach is needed: a long-term attack on the deep-rooted causes of poverty through development planning and immediate technical interventions for temporary alleviation of the worst malnutrition. One objective of agriculture and rural development projects is to increase food production and make food more widely available. But, more food by itself is not the answer. Lack of knowledge of the best foods for different age groups may be responsible for poor eating habits, intra-family food distribution patterns which discriminate against children and women of AID's target group, and weaning practices which result in poor nutrient intakes of young children. Within the health sector, all USAID/Zaire's projects are complementary to the Nutrition Project. Because of their synergistic effects, combined measures to attack both infection and poor dietary intakes achieve the greatest success. For example, the Endemic and Communicable Disease Control Project is improving the immunization coverage for measles, which is particularly important in West and Central Africa in the causation of kwashiorkor and other forms of malnutrition. In summary, to reduce malnutrition and improve health status, the holistic approach should be utilized.

20. Beneficiaries

Two groups can be identified as beneficiaries of Project activities. First, in the development of institutional capacity, the employees at the Nutrition Center have received formal and on-the-job training (see Section 17). Other beneficiaries of the development of the national planning institution include at least 30 outside organizations whose activities have been enhanced by information, consultant services and nutrition education provided by the Center. For example, CRS, UNDP, IRC and other organizations effecting famine relief efforts in Bas Zaire are utilizing information and recommendations generated by the Center's famine investigation in Bas Zaire (see Appendix).

Results of this investigation as well as other pertinent information obtained by the Center have been communicated to globally-concerned agencies such as WHO, the Africa Bureau of the State Department, CDC and the AID Office of Disaster Assistance through reports, publications and presentations.

The Center is currently designing a monitoring and surveillance system for nutritional status to be used by the dispensary services provided by General Motors and UNTZA/CASOP. The Kimbanguist religious group is utilizing the Center's consultant services in the creation of a network of nutritional rehabilitation centers throughout the country (see Appendix IV page 3).

Educational opportunities are provided to Peace Corps Volunteers and UNAZA students in the form of formal lectures given by high-level Center personnel, and in the form of internships with the Center. Advertisements for nutrition activities and simple nutrition education messages are disseminated through Voix du Zaire and TELEZAIRE.

As a logical extension of the above involvements, benefits of the Center activities to date have reached the general population of Zaire who are the ultimate beneficiaries of the Center's activities. In addition, preliminary interventions in the study zones have begun. Anti-worm medications have already been distributed to all children under six in Popokabaka. As required, the field team has delivered simple medical care and has referred more serious medical problems including severe PCM to health facilities. Large-scale interventions will begin in July; evaluation of their effectiveness on improving the nutritional status of the population will be available before the end of the present contract.

21. Unplanned Effects

In late fall of 1978 USAID/Zaire requested that the Nutrition Planning Center carry out an evaluation of the reported famine in Bas Zaire. There had been numerous reports circulating but no quantitative data concerning geographic areas involved, number of people affected, the severity and type of malnutrition, relationship of the problem with other phenomena such as the presence of refugees and prevalence of diseases affecting manioc production, and efforts already underway to combat the problem.

The Center discontinued its normal Project activities and performed the investigation of the reported famine in Bas Zaire. Six study teams were organized, the data were collected and analyzed. The written report, "Investigation of Nutritional Consequences of the Drought in Bas Zaire, 1978", was available for distribution on January 10, 1979.

The fact that the Center exists as a specialized, semi-autonomous entity within the GOZ made it possible to conduct the survey and publish the findings. The Center then advised the GOZ that based on the findings, they believed that the situation in the zones of Tshela and Lukula of Bas Zaire constituted a state of emergency. Subsequently the American Ambassador determined that an emergency existed of sufficient magnitude to warrant U.S. Government assistance.

International organizations and many other donors became more aware of the Bas Zaire situation because of the Center's prompt and professional investigation. The Center will conduct an evaluation of the impact of the relief efforts on rates of malnutrition in the target population.

The Nutrition Planning Center seems to be in the process of becoming a focal point in the field of nutrition studies and research in Zaire. The team observed that many organizations, public and private, are making contacts with the Center seeking professional advice and technical assistance in nutrition-related areas. For example, missionaries, religious groups, the unions, the University, General Motors of Zaire and other

concerned identities have expressed an interest in working collaboratively and sharing information with the Center. The two unplanned areas of involvement have had and surely will continue to have an advantageous effect on the nutrition situation in Zaire.

22. Lessons Learned

At this stage of the Project implementation it is too early to draw many conclusions and identify numerous lessons learned from the Project. However, the team feels the following lessons are clear enough to be mentioned:

1. The Nutrition Center has learned some lessons with respect to conducting studies on nutrition status in Zaire. Two important ones are: short studies are much easier to conduct than longer-term ones because it is difficult to maintain good logistical support, and year-round data collection is necessary, particularly food availability/consumption information, because seasonal changes in nutrition status are important in rural Zaire and probably in Kinshasa as well.

2. The information generated by various nutrition studies is welcomed by international assistance agencies for use in planning their programs and directing their assistance to the neediest areas. The studies have had their impact with a relatively small investment by drawing attention to a problem and consequently resources are provided to the country.

3. The Bas Zaire investigation allowed the Center to develop and refine a multisectoral methodology for assessing a famine situation. Through testing this methodology it was learned one could accomplish the investigation with 40-45% fewer people on each study team. To avoid disruptions of ongoing activities in the future for such emergency evaluations, the Center plans to designate individuals assigned to various teams to form the emergency team when necessary and then rejoin their regular team at the completion of the investigation.

4. It is evident from continuous verbal reports (with varying amounts of data) received from throughout the country that there will be many crises or emergency situations developing in various parts of Zaire. The Center is interested in developing their capability to monitor community nutrition status throughout the country (see Section 23).

5. The GOZ in general and the Nutrition Center in particular cannot reach all malnourished individuals throughout the country at this time. It is clear that various non-governmental health and nutrition entities are assuming, and will continue to assume, important roles in dealing with health and nutrition problems where GOZ infrastructural services are lacking.

6. The team feels that in order to achieve the Project goal it is important to establish an institutional structure staffed with skilled technicians, trained and supervised personnel, and with adequate supplies (see Section 18).

23. Special Comments or Remarks

A. Implications for Future Project Implementation (up to April 15, 1980)

The implementation plan for the final months of the Project needs a few additions but basically should remain as planned. The first recommendation is that the Center prepare supplementary analyses for the Popokabaka Report (X) and Kinshasa Report (XI) that describe the planning process that resulted in choosing to focus in the respective areas of intervention. These analyses should be written in layperson's language to enable the non-medical person to understand the logic involved in selecting interventions from the range of alternatives suggested by the demonstrated causality. An interpretation of the data produced in the baseline studies that discusses correlations that appear to be important would assist USAID in understanding the suggestions for future activities.

Secondly, it would be useful to bring data for hospital admissions for severe malnutrition at Mama Yemo up to date (1978 and 1979). This update could be accompanied by a fuller discussion of the increase in child hospital deaths from malnutrition between 73 and 77. It is suggested that a more in-depth discussion of the rationale for pregnant and lactating women as a high-risk target group and an indication of studies that have been done or that can be done on their nutrition status, be prepared.

The evaluation team has encouraged the Nutrition Center to orient the services being developed in Kinshasa (see Proposal for the Expansion of Out-patient Nutritional Rehabilitation Programs in Kinshasa, submitted May 28, 1979) to prevention of severe malnutrition as much as possible. The various forms of childhood malnutrition are all potentially preventable. Cure alone is economically unsound and illogical, and will in no way prevent the child or others in the family from becoming malnourished again on return to the home environment. This will mean some outreach activity by centers and coordination with mass media campaigns developed by Radio Zaire.

The evaluation at the completion of this Project should attempt to measure performance by three main types of indicators: biological cost-effectiveness measures (cost reduction in infant mortality rate or cost/reduction in degree of malnutrition, etc.), delivery systems cost effectiveness measures (cost/target group recipient, cost/nutrition deficit reduction, etc.), and operating effectiveness measures (% target group participating, % target group changing behavior, permanency of change, personnel/target group ratio). (These measures can be more easily used than cost benefit analysis where benefits, along with costs, must be converted into economic terms in order to achieve comparability. This exercise is fraught with problems because the benefits in terms of enhanced productivity or worker supply or earning power or reduced health costs do not manifest themselves until the child is much older.) Only after these indicators have been applied, can one begin to objectively determine whether the long-term cost of a large-scale intervention program (in GOZ and AID resources) would be justified in likely returns in reduced morbidity and mortality.

B. Issues to be resolved

The evaluation team was concerned with the extent to which the Nutrition Center is able to adequately accomplish multisectoral nutrition planning from within the Department of Health and to what extent the GOZ is interested in or ready for such comprehensive planning. The first question to be looked at is the types of expertise available within the Center and the possibilities for recruiting persons with complementary skills. The Center staff will include, at the completion of training, individuals skilled in epidemiological investigation, health and nutrition education, health manpower training, nutrition surveying techniques including food consumption surveys, anthropometric measurement, clinical and biochemical assessment, sociological and anthropological analysis, public health care, and administration of preventive health services. With the commencement of Kinshasa interventions, the Center is recruiting an individual skilled in demographics and statistics. They lack expertise primarily in the agricultural sector, including agricultural economics, and in mass media. The GOZ Department of Agriculture has provided a technician on an as-needed basis, and has committed itself to providing a full-time agricultural economist when the Center requests him. Information specialists are available through Tulane to work on design of mass media campaigns carried out through Voice of Zaire with technical consultation by Center personnel. It appears at this point in its development that the Center is adequately and appropriately staffed to plan and coordinate with other agencies.

The question of whether national-level multisectoral planning and policy making, which require close interdepartmental cooperation and influence with the Department of Plan, should be a realistic goal of the Center, has been studied. It is the opinion of the team that the GOZ is not ready for such comprehensive, long-term planning at this time. The Council of Health and Well Being was appointed in 1974 to coordinate efforts to provide basic needs to the population and was, in fact, to be the grantee for the original ProAg. Its membership includes the President of the Republic as the Council President, the Minister of Public Health as Vice President and the Ministers of Education, Social Welfare and Director General of FOMECO, Director of Medical Services of the Office of the Presidency, Dean of the Faculty of Medicine of the National University of Zaire. The Council has never met and it appears this is an indication of lack of interest at this time in interdepartmental governmental collaborative activity. The Center is attempting to coordinate with as many governmental and non-governmental agencies as possible, including missions and PVOs working in the health sector and international assistance organizations as well, to collect and share information and to work effectively (see Sections 21 and 18 and Appendix IV). The Center can and does orient itself to preventive measures as much as possible, but inevitably it will become involved in crisis management since this appears to be the modus operandi for the GOZ and many aid organizations. It is evident to all that the bulk of health care delivered in Zaire is assumed by non-governmental agencies.

The second significant policy issue that requires careful discussion at this time is whether the nutritional needs of the target group should be

met by short-term emergency assistance or through medium- and longer-term solutions or a combination of these alternatives. Reports by the Nutrition Center and discussions elsewhere in this evaluation describe the desperateness of the situation in Zaire at this time. (Rates of PCM are much higher than levels termed "emergency" in other parts of the world.) The strategy developed by the Nutrition Center for providing supplementary foods to only the most severely malnourished is only one alternative. Other possibilities should be discussed, since the decision on this question will affect the Nutrition Center's plans.

The third issue requiring attention is whether to continue interventions in Kinshasa or focus efforts exclusively in the rural areas. It would be easier to design interventions for the rural areas where people have the capability to help themselves by growing more and better foods and where village leaders can encourage community cooperation. However, recent data obtained by the Nutrition Center indicate that rates of chronic malnutrition in Kinshasa are increasing dramatically and the proportion of the most severe malnutrition (less than 60% weight/age) is in fact higher in Kinshasa than in the rural area studied. In a large city that has very little ability to increase its own food supply, designing effective interventions that are not based on massive food distribution requires much creativity. Ultimately the decision may be made on political expediency and accessibility to potential project sites.

C. Recommendations for development of Area Nutrition Improvement Project

1. The Nutrition Center is interested in developing a system to monitor and evaluate nutritional conditions throughout Zaire and assist with mobilization of resources for relief. This system is a response to the increasing evidence that there are nutrition crises developing throughout the country that are not always realized or acted upon on a timely basis. The monitoring system is described in the "Suggestions for Area Nutrition Improvement Project" submitted May 28, 1979. It is recommended that this monitoring system be developed along the lines described, but that it be eventually expanded into a full nutrition surveillance system for the country which can provide information for policy making, health, agriculture and other sector program planning, management and evaluation. The ultimate objective, probably beyond the life of this project, would be to integrate this system into the overall disease surveillance and health data collection system of the country or regions.

2. Page seven of the proposed suggestions lists three areas for project initiatives. Nutrition training for personnel in related jobs and sectors should be the fourth area of activity for the project. Center staff already are involved and should expand this involvement in nutrition education for health workers at all levels, including traditional midwives and healers, community development workers, agricultural extension agents, teachers and social welfare workers. Nutrition workshops and/or refresher courses should be developed that stress reliance on local foods and guidelines for nutrition education and demonstrations.

3. There should be an emphasis on preventive community-level care as much as possible in all activities. The objective of health education on

nutrition at the community level is to enhance the quality of life through self-help by preventing the occurrence of severe malnutrition and minimizing mild-moderate malnutrition and nutrition-related disorders and by increasing resistance to infections through environmental improvement. One example would be information for families on how to prepare at home a simple oral rehydration fluid out of readily-available ingredients for their infants with diarrhea.

4. Several other African countries have developed and found widespread acceptance of national weaning foods. The planning project has produced data to demonstrate that weaning practices, including foods given to the infant, are the source of much malnutrition. Therefore, it is recommended that the Area Nutritional Improvement Project look into the feasibility of becoming involved in weaning food development through supply of appropriate simple technology necessary for processing on an artisanal scale to local community groups or missionary health centers. A low-cost, easily-prepared weaning food, composed of locally-grown products such as maize meal, peanuts and beans, can contribute much-needed protein, calories and other nutrients to the diet of the child at this critical stage.

D. Unanswered questions to be addressed by the PID or PF design team

1. To what extent can auxiliary nurses or community-level nutrition outreach workers be incorporated in existing or developing health care delivery systems?

2. What should be the site selection criteria used by the project for choosing intervention areas? Must there be an existing health delivery system in the area with which to integrate efforts?

3. What formula might be worked out for GOZ assumption of financial responsibility for the nutrition improvement program either in full or in combination with independent revenues of the Center?

4. How can the Center improve collaborative ties within the GOZ, especially with other DOH sections?

5. What criteria should be used for choosing the appropriate organization to work with, i.e. their educational experience, their length of service, etc. What will be the Center's role in training, supervising and coordinating their efforts?

6. What are the structural/organization/staffing/financial/programming implications for the Center of doing an "emergency" monitoring and evaluation/investigation-oriented program? Could non-GOZ entities be used to fulfill this need?

7. In the context of adverse trends affecting rates of malnutrition, a realistic project goal may be to work towards preventing health and nutrition status of high-risk groups from becoming worse or keeping rates of severe malnutrition at a minimum. It may be impossible to demonstrate improvement in health status in target groups in the near future, but one could compare de-acceleration of rates of malnutrition after nutrition

interventions with pre-intervention rates of increase in order to evaluate the impact of programs.

8. The question of financing the Center is a very important one, especially after AID funds and, subsequently, counterpart funds are no longer available. This problem should be dealt with in advance to guarantee a flow of funds for Center operation. The following possibilities were raised during our evaluation:

a. Eventually the Center's operating investment costs will have to be met within the budget of the Department of Public Health. In fact, the Center has received 2183,000 in 1979 from the DOH, which is at least a sign that the DOH may be willing to carry over the Center's costs after April 15, 1980.

b. The Project can seek grants from various international organizations and other donors. The Center already has been contacted by the Canadian International Development Agency for collaboration in the field of public health and nutrition.

c. The Center is also searching for means to become self-financing, e.g. by selling laboratory services to hospitals, clinics, institutes, university and others. Another area in which to generate funds is to start experimental farms. The Tulane team feels this idea is worth investigation since the food produced can be used to supply rehabilitation centers, increase the food production in Zaire and introduce to the Zairian the proper food to prevent malnutrition. Also the farms can produce the necessary ingredients for a local weaning food preparation which, if proved popular, can be readily produced on an artisanal scale throughout the country.

Appendix I

USEFUL DEFINITIONS

1. Protein calorie malnutrition (PCM) - Deficiency of protein and energy (calories) which has three severe forms: marasmus, kwashiorkor and marasmic kwashiorkor. The frequency of mild-moderate PCM is generally 5-10 times greater than severe malnutrition and manifests itself in two ways: chronic (slow or long-term) and acute (sudden) malnutrition.
2. Multisectoral nutrition planning - A methodology based on the system's approach which describes the "nutrition system" (food production, food distribution, marketing and storage; food consumption; and food absorption and utilization by the body) and plans and implements a nutrition strategy at the national or regional level.
3. Nutrition surveillance - Includes at a minimum clinical examination, weighing and measuring of children 0-5 years and pregnant women and reporting the findings to a central collection point. Can be done routinely by health centers and hospitals and by periodic community surveys.
4. Anthropometric study - Done to assess nutrition status. Includes age in months, weight, height, head and arm circumference, presence or absence of edema, nutrition classification (age/weight 80% of reference median), perceived morbidity the day before the interview, extent of breast feeding, and immunization record.
5. Census survey - Population profile, including the following demographic variables: number of persons per household, sex, age, birthdate and relationship to head of household for all members, educational level for persons over 7, occupation for people over 15 and marital status for people over 15.
6. Clinical study - Primarily to detect signs of PCM, ocular signs of Vitamin A deficiency and anemia. It is also useful to classify each subject clinically, as adequately nourished, mild-moderate malnutrition or severe PCM.
7. Biochemical study - Includes several blood, urine and stool tests designed to yield information on protein and glucose levels, presence of parasites and degree of anemia.
8. Socioeconomic study - To gather ecology and household information; migration history, head of household and spouse; kinship ties and religion; participation of women within the labor force; pregnancy history; contraception knowledge and use; use of health services for prenatal care, for child delivery and for general morbidity, weaning practices and problems; and some information on income and its influence on food habits and nutrition.

9. Food consumption survey - Study done by 24-hour dietary recall and individual questionnaire to evaluate the quantity and quality of food consumed by the family, intra-family food distribution to determine patterns of breast feeding, bottle feeding and weaning and to determine availability and prices of food items in local markets.

Appendix II

Project Implementation Schedule through April 15, 1980

Kinshasa

- June 15 - baseline study data analyzed and draft report ready, interventions designed
- June 15 - begin implementation of Nutrition Rehabilitation Programs - preparation of training and programming materials for Centers and UNICEF
- July 1 - recommendations to be made to UNICEF for strengthening several ongoing programs
- Aug 1 - recommendations to UNICEF for creation of several new programs and strengthening additional Centers
- Sept 1 - Preparatory work for mass media program completed; broadcasting by Voix de Zaire to begin
- July - Sept - Other educational activities designed and implemented
- Sept 15 - Begin monitoring and data collection for assessment of impact of interventions to be used in February evaluation
- Feb 1 - Begin evaluation of effectiveness of interventions, particularly numbers of target group reached, messages broadcast, personnel needed per intervention, etc.

Popckabaka

- Sept 1 - Analysis of In-Depth Studies and Interventions Designed (date changed because of computer shut-down and Bas Zaire monitoring)
- Begin implementing interventions
- Nov 1 - Begin monitoring and data collection for assessment of impact of interventions to be used in February evaluation
- Feb 1 - Begin evaluation of effectiveness of interventions, particularly numbers of target group reached, cost to Center for each person reached, personnel/intervention, etc.

Bas Zaire

- June 25 - Begin ongoing monitoring of Bas Zaire - to continue up to six months if necessary
- Jan 7 - Second evaluation of nutrition status in Bas Zaire

Overall Project

- March 1 - Final evaluation of Project progress and accomplishments to be conducted by USAID.

APPENDIX III

Personnel Categorized by Number, Title of Position, Qualifications & Training

- 1 Director, M.D.
1. Master of Public Health Degree Program, Tulane University, 1 year 1979 - 1981
 2. International Visitor's Program, U.S., 30 days November/December 1978
 3. Training in specialized areas by expert consultants, Kinshasa, several years
 4. English language training, Kinshasa, 6 months January/June 1979
 5. International conferences as appropriate; dates to be determined
- Nutrition Education Workshop with emphasis on mass media, Yaounde. Cameroon, June 17 - 22, 1979
- 1 Chief of Technical Division, Dr. of Social Sciences
1. Master of Public Health Degree Program in Epidemiology and Health Measurement Sciences, Tulane University, one year, 1980-81
 2. Training in specialized areas by expert consultants, Kinshasa, several years
 3. English language training, Kinshasa, 1 - 2 years, 1978-79
 4. International conferences as appropriate, dates to be determined
- Nutrition Education Workshop with emphasis on mass media, Yaounde, Cameroon, June 17 - 22, 1979
- 1 Chief of Administrative Division, MPH Public Health Administration
1. International conferences as appropriate; dates to be determined, e.g. Meharry Medical College Nutrition Planning Course, Nashville, 3 weeks July/August 1978
 2. Possible local training in specialized areas, Kinshasa. as appropriate
- 1 Acting Chief of Intervention Design and Implementation, M.D. (Public Health Intern)
1. Possible advanced training, U.S., as appropriate
 2. International conferences as appropriate
 3. English language training, Kinshasa, as appropriate
- 1 Assistant Manager, University degree (2 years)
1. Training in English language, Kinshasa, 1-2 years, 1978/79
 2. Possible short courses in management training, as appropriate
- 1 Interpreter, University degree (3 years)
1. Training in English language. Kinshasa, 1-2 years 1978/1979

- 3 Investigation Team Leaders, University degree (3 years)
 1. Intensive training in specialized areas, Kinshasa:
3 weeks August 1978 (Biochemical),
6 months July/October 1978, January/March 1979
(Food Consumption)
2 months October 1978 (Clinical)
 2. International conferences as appropriate
Women in Management, U.S. June/July 1979

- 13 Investigation Team Members and Laboratory Technicians, appropriate university degrees
 1. Intensive short courses by expert consultants, Kinshasa, 3 weeks to 6 months, 1978

- 1 Part-Time Computer Programmer, University degree
 1. Possible short course in latest programming techniques, as appropriate

- 11 Nurse Supervisors
Qualifications:
 1. Diploma in auxiliary nursing at least one year university
 2. Recommendation, local officials
 3. Examination
 4. Fluency French and Lingala
 5. Interview
 6. Residence in a study zone or adjacent area
 1. Orientation - project goals, data collection, supervision and simple medical interventions, Kinshasa, July 1978

- 68 Auxiliary Nurses
Qualifications:
 1. Diploma in auxiliary nursing
 2. Recommendation local officials
 3. Examination
 4. Fluency French and Lingala
 5. Interview
 6. Residence in study zone or adjacent area
 1. Orientation project goals, data collection, simple medical intervention, one week, Kinshasa

- 1 Financial Manager, University degree (Finance)

- 3 Secretaries, Secondary School Diploma

- 2 Other office personnel, Secondary School Diploma

- 7 Drivers, Sentinels

APPENDIX IV

Outside Organizations Categorized by Type of Organization and Actual and Potential Relationship to the Center:

Zairian

FOMECO (Fonds Médical de Coordination)

Potential Resources: 1. Inpatient and outpatient facilities (2 hospitals, 2 clinics, 1 hospital boat)
2. Hospital records (source of data)
3. Medical personnel
4. Research

Inputs to Center's Effectiveness : 1. Data provided by hospital records from Mama Yemo Hospital
2. Consultations with chief pediatricians:
1. Dr. Davachi
2. Dr. Ngwala
3. Dr. Miatudila

Center's inputs to Organization's Efforts in Nutrition: 1. Collection, analysis and distribution of all data and findings pertinent to nutrition situation including specific investigations by the Center
2. Evaluation and feedback on hospital records
3. Consultation on design of surveillance systems for nutritional status to be used in facilities

UNAZA (National University of Zaire)

Potential Resources : 1. Educational facilities
2. Zairian manpower, e.g. nutritionists, doctors, nurses
3. University clinic

Inputs to Center's Effectiveness : 1. Documentation on resources of Zaire
2. Nutritionists trained in University's nutrition program (summer 1979 - first graduates)
3. Public Health resident
4. Consultation with faculty

Center's Inputs to Organization's Efforts in Nutrition: 1. As above
2. Nutrition education
a. Formal lectures
b. Practicums in nutrition planning

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Department of Agriculture

Potential Resources: 1. Research facilities
2. Data source
3. Consultation

Inputs to Center's Effectiveness: 1. Agricultural information on Bas Zaire and Popokabaka
2. Part-time specialist consultant services

Center's Inputs to Organization's Efforts in Nutrition: 1. Distribution of data and reports relating to agriculture in Zaire including the Center's own investigations in Bas Zaire and Popokabaka

Department of Rural Development

Potential Resources: 1. Research facilities
2. Data sources
3. Consultations

Inputs to Center's Effectiveness: 1. Documentation and verbal communication of development activities and the situation in Bas Zaire and Popokabaka

Center's Inputs to Organization's Efforts in Nutrition: 1. Distribution of data and reports generated by investigations in Bas Zaire and Popokabaka

Voix du Zaire

Potential Resources 1. Radio broadcasting services

Inputs to Center's Effectiveness 1. Broadcasting
a. Nutrition education programs prepared by the Center (e.g. the importance of nutrition, weaning, importance of breast feeding)
b. Advertisements for nutrition activities (dates for studies, locations of rehabilitation centers, etc.)

Center's Inputs to Organization's Efforts in Nutrition 1. Above
2. Public service
a. Development and delivery nutrition education programs
b. Communications central of nutrition-related activities

Telezaire - Same as Voix du Zaire

UNTZA/CASOP (Labor organization)

Potential Resources 1. Medical facility for members and their families

Inputs to Center's Effectiveness 1. Proposed nutrition rehabilitation center

Center's Inputs to Organization's Efforts in Nutrition 1. Consulting services for the establishment of a nutrition component in medical services provided specifically development of nutrition surveillance system to nutrition rehabilitation unit

RELIGIOUS GROUPS

Eglise du Christ (Protestant Churches)

- | | |
|--|---|
| Potential Resources | <ol style="list-style-type: none">1. Health care facilities throughout Zaire (hospitals, clinics, dispensaries, maternity centers, etc.)2. Medical personnel and supplies3. Educational manpower and facilities4. General information on practicalities of work in Zaire5. Data source: institution records |
| Inputs to Center's Effectiveness | <ol style="list-style-type: none">1. Medical facilities, personnel and supplies for assistance in Bas Zaire2. Reports by medical personnel on nutrition conditions throughout Zaire and particularly in Kinshasa, Popokabaka and Bas Zaire |
| Center's Inputs to Organization's Efforts in Nutrition | <ol style="list-style-type: none">1. Same as FOMECCO2. Analysis of nutritional situation in Bas Zaire and recommendations for design, implementation and monitoring of relief efforts3. Ongoing monitoring of implementation and impact of relief efforts in Bas Zaire4. Consultation, development of nutrition surveillance systems for health programs |

Catholic Church

- | | |
|--|---|
| Potential Resources | Same as Protestant Churches |
| Inputs to Center's Effectiveness | Same as Protestant Churches, also health care facilities, manpower and facilities for support of investigations and interventions in Popokabaka |
| Center's Inputs to Organization's Efforts in Nutrition | Same as Protestant Churches |

Kimbanguists

- | | |
|--|---|
| Potential Resources | Same as Protestant Churches |
| Inputs to Center's Effectiveness | Same as Protestant Churches |
| Center's Inputs to Organization's Efforts in Nutrition | <ol style="list-style-type: none">1.)2.) Same as Protestant Churches3.)4. Consulting service - especially for creation of nutrition rehabilitation units in their network of health facilities - in progress |

PRIVATE VOLUNTARY ORGANIZATIONS

CRS (Catholic Relief Services)

- | | |
|--|---|
| Potential Resources | 1. Manpower for relief activities
2. Information on logistics and methodology for famine relief |
| Inputs to Center's Effectiveness | 1. Distribution of major food relief in Bas Zaire |
| Center's Inputs to Organization's Efforts in Nutrition | 1. Analysis of nutritional situation in Bas Zaire and recommendations for design, implementation and monitoring of relief efforts
2. Ongoing monitoring of implementation and impact of relief efforts
3. Consulting services - acceptability test of soy-bulgar mix in Bas Zaire |

IRC (International Rescue Committee)

- | | |
|--|---|
| Potential Resources | 1. Medical supplies and placement of French physicians for relief campaigns |
| Inputs to Center's Effectiveness | 1. Medical supplies and manpower for famine relief in Bas Zaire |
| Center's Inputs to Organization's Efforts in Nutrition | 1. Consulting service
a. Conditions and needs in Bas Zaire
b. Approval of physician activities, health education programs and distribution of supplies and equipment in Bas Zaire |

Red Cross

- | | |
|--|---|
| Potential Resources | 1. Relief manpower and supplies
2. Relief information on methodology and logistics |
| Inputs to Center's Effectiveness | ----- |
| Center's Inputs to Organization's Efforts in Nutrition | 1. Analysis of nutritional situation in Bas Zaire and recommendations for design, implementation and monitoring of relief efforts |

MULTILATERAL AID

World Food Program

- | | |
|--|--|
| Potential Resources | 1. Food for relief activities |
| Inputs to Center's Effectiveness | 1. Food supplies and food distribution in Bas Zaire |
| Center's Inputs to Organization's Efforts in Nutrition | 1. Same as Red Cross
2. Consulting service, especially on methodology and logistics for relief efforts in Bas Zaire |

UNICEF

- Potential Resources
1. Food programs for high risk populations
 2. Information on food distribution programs (types of food and types of programs)
 3. Teaching materials
- Inputs to Center's Effectiveness
1. Agreement to deliver some 200 tons of food to be distributed through rehabilitation units in Kinshasa, to be selected by the Center
- Center's Inputs to Organization's Efforts in Nutrition
1. Specific data on nutritional status of refugees in Bas Zaire and Bandundu

U.N. High Commission on Refugees

- Potential Resources
1. Data source - nutritional status of refugees
 2. Technical expertise on relief methodology
- Inputs to Center's Effectiveness
1. Information on past and existing relief activities for refugees in Bas Zaire and Bandundu
- Center's Inputs to Organization's Efforts in Nutrition
1. Specific data on nutritional status of refugees in Bas Zaire and Bandundu

United Nation University, Tokyo

- Potential Resources
1. Educational opportunities
 2. Educational materials
- Inputs to Center's Effectiveness
1. Assistance with procurement of fellowships for Center high-level personnel
- Center's Inputs to Organization's Efforts in Nutrition
1. Update of Center activities
 2. Provision specific examples of survey instruments designed by Center

WHO

- Potential Resources
1. Expert consultants
 2. Educational materials
- Inputs to Center's Effectiveness
1. Expert consulting by Regional Nutrition Expert, Dr. Bailey and in-country Nutrition Expert Dr. Raba concerning evaluation studies to plans for interventions
- Center's Inputs to Organization's Efforts in Nutrition
1. Collection, analysis and distribution of all data and findings pertinent to nutrition situation in Zaire including specific investigations and reports prepared by the Center
 2. Consulting services - data processing and analysis for studies, e.g. weaning practices in Gabon

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U. S. GOVERNMENT

Department of Agriculture

- Potential Resources 1. Expert consultants
 - Inputs to Center's Effectiveness 1. Consultant for Bas Zaire investigation
 - Center's Inputs to Organization's Efforts in Nutrition -----
- Coordinated efforts in Bas Zaire and possibly Popokabaka

CDC

- Potential resources 1. Expert consultants for methodology
2. Comparative data and newly-developed survey instruments
- Inputs to Center's Effectiveness 1. Consultant for Bas Zaire investigation
- Center's Inputs to Organization's Efforts in Nutrition 1. Reports and presentations on activities and data collected in Bas Zaire
2. Logistic support and consultation for technicians in Zaire

OFDA

- Potential Resources 1. Disaster assistance resources
2. Consulting service
- Inputs to Center's Effectiveness 1. Information on disaster assistance
- Center's Inputs to Organization's Efforts in Nutrition 1. Reports on Bas Zaire investigation and ongoing reports on relief activities in Bas Zaire
2. Formal presentation on multisectoral methodology for investigating famine disasters

USICA

- Potential Resources 1. Cultural exchange programs
- Inputs to Center's Effectiveness 1. 30-day Visitor Program to U.S. for Director of Center
- Center's Inputs to Organization's Efforts in Nutrition -----

PEACE CORPS

- Potential Resources 1. Manpower
2. Data collected in field
- Inputs to Center's Effectiveness 1. Possible Volunteer to work in Center
2. Information gathered from Peace Corps programs
3. Possible consultation on fish farming
- Center's Inputs to Organization's Efforts in Nutrition 1. Nutrition education - formal lectures, intensive 2-week course in public health for new Volunteers
2. Public Health consultation to Public Health staff

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PRIVATE COMPANIES

General Motors

- Potential Resources 1. Medical care facilities for employees and families.
- Inputs to Center's Effectiveness 1. Nutrition component to become part of their medical services
- Center's Inputs to Organization's Efforts in Nutrition 1. Consulting services - design of nutrition surveillance system for their dispensary

Nestle Company

- Potential Resources 1. Research facilities (on-site in southern Bandundu)
2. Financial resources
3. Food resources
- Inputs to Center's Effectiveness 1. Possible procurement of food for low-level Center employees
- Center's Inputs to Organization's Efforts in Nutrition 1. Information on activities and findings of Center
2. Possible participation in Nestle cross-cultural study in infant feeding practices

U.S. Universities (e.g. UC/Berkeley, Michigan)

- Potential Resources 1. Research facilities and specialists
2. Data source
- Inputs to Center's Effectiveness 1. Possible research on nutrition and physiology by UC/Berkeley in Kinshasa
2. Data sharing, U. Michigan
- Center's Inputs to Organization's Efforts in Nutrition 1. Provide information and consultation to universities interested in starting programs in Zaire

OTHER

Norwegian Government

- Potential Resources 1. Food resources
- Inputs to Center's Effectiveness 1. Donation of up to 200 tons Fish Protein Concentrate for Center nutrition interventions in Kinshasa
- Center's Inputs to Organization's Efforts in Nutrition 1. Pertinent reports and analyses of the nutrition situation in Zaire

CEMURAC (Belgian)

- Potential Resources
1. Current research in two regions of Zaire (Kivu and Gemena)
 2. Documentation of past research in Zaire available in Brussels
- Inputs to Center's Effectiveness
1. Access to and explanation of all research efforts and publications at the disposal of this organization (courtesy Dr. Henri Uis)
- Center's Inputs to Organization's Efforts in Nutrition
1. Ongoing communication of Center activities and findings
 2. Coordination of goiter study in Kinshasa

Comparison of research findings

International Tropical Agriculture Institute

- Potential Resources
1. Agriculture research facilities and exports

Coordinated studies in Bas Zaire
Possible coordinated research in Pcpokabaka

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