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IMPROVING THE COLLECTION AND USE OF PROGRAM PERFORMANCE DATA

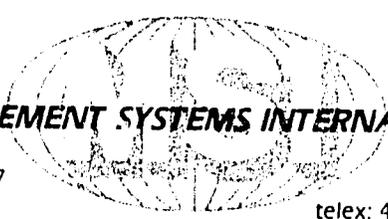
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I. SCOPE OF WORK, METHODOLOGY, AND RATIONALE

A. Scope of Work and Methodology

Following the USAID/Ghana - Africa Bureau program review week, the Center for Development Information and Evaluation (CDIE) in cooperation with Management Systems International (MSI) facilitated a program performance evaluation pilot with the Mission between March 5 and March 23, 1990. CDIE was represented by Dr. John Mason, while MSI was represented by Mr. Richmond Allen and Dr. Roger Popper, the latter of whom served as team leader.

During the program review, USAID developed an objective tree which served as the starting point for the CDIE/MSI consultancy. That consultancy was directed in assisting USAID in the following manner:

- (1) Developing progress indicators for individual project components;
- (2) Integrating project indicators into a coherent system centered on program (as opposed to individual project) objectives; and
- (3) Elaborating the overall program performance evaluation pilot and finalizing the consultancy report.

B. Rationale

AFR/DP's effort to establish program objectives for tracking USAID performance stems from a "contract" made between the U.S. Congress and senior bureau management. The requirements of the contract are spelled out in the Development Fund for Africa (DFA) legislation. One of the requirements was that the Bureau would provide information on impact level indicators in the short term and evidence of USAID contribution to significant socio-economic improvements in the long term.

DFA requirements are summarized in Figure 1, while the Africa Bureau's framework for how it will meet those requirements is presented in Figure 2. The Bureau framework can be thought of as a program level logical framework, conceptually identical to the original logical framework which operates at the project level. As in the case of the project level logical framework, the program level has columns of objectives and indicators and levels of logically dependent objectives and indicators.

The key to designing a system for tracking mission performance is the strategic objective. The strategic objective plays the same role in the program logical framework as the purpose level in the project level framework. Essential characteristics of Strategic Objectives are: 1) impact level in terms of benefits to people and 2) plausible attribution of results to USAID assistance.

FIGURE 1
DEVELOPMENT FUND FOR AFRICA CONDITIONS

Results:

Emphasis on “people level impact”

Focus:

Attention on those problems where assistance can make a difference & lead to results

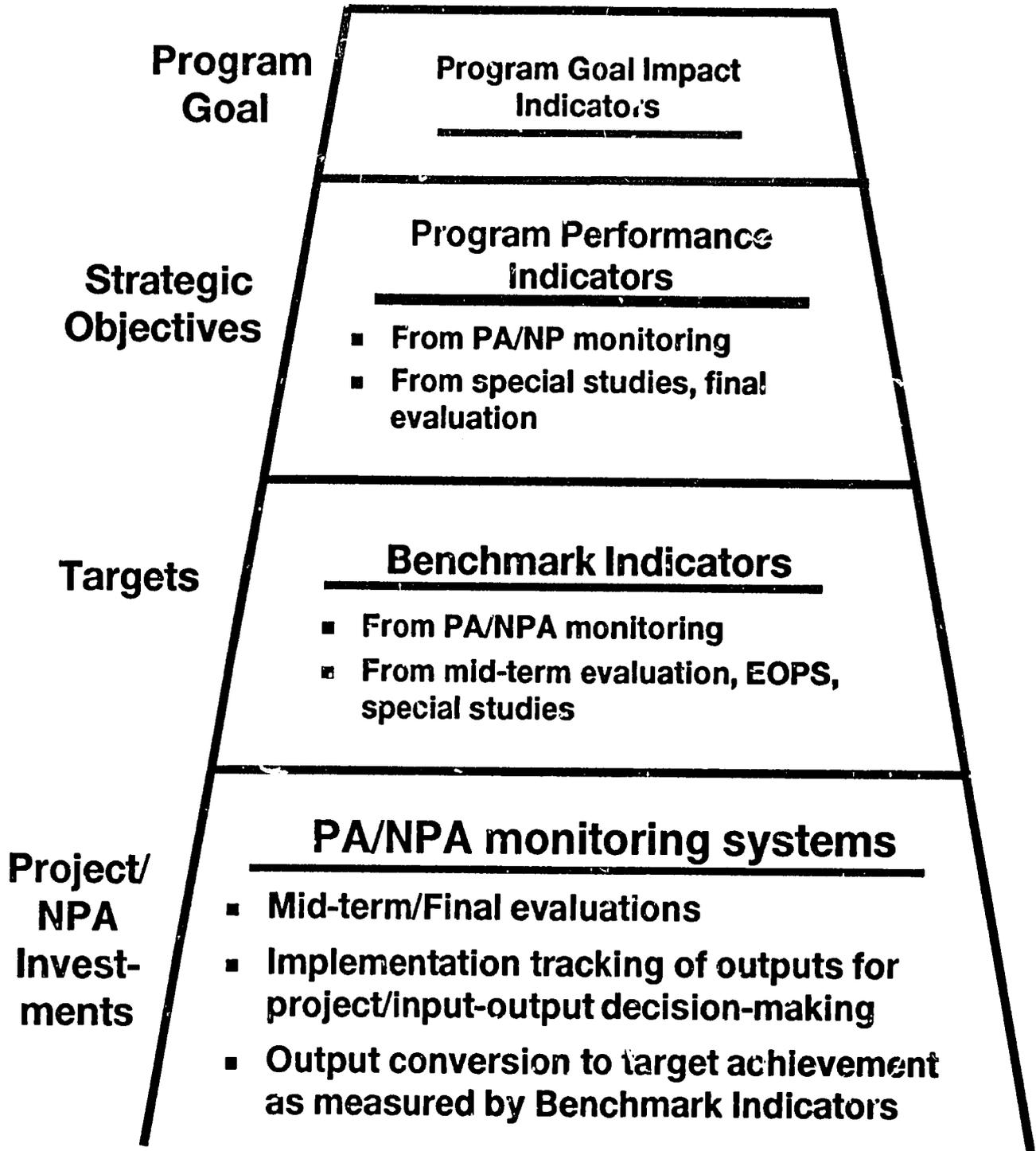
Concentrate:

Resources on fewer problems in order to increase likelihood of achieving results

Tracking:

Both to increase impact/results of assistance by improved management decision-making & reporting to Congress

FIGURE 2
AFRICA BUREAU PROGRAM PERFORMANCE
EVALUATION FRAMEWORK



1. Attribution of Impact Level Results to USAID Assistance¹

Traditionally, USAID's have operated with a project-based system, where resources and timeframes are limited in contrast to those of programs. In thinking through program performance, the following observations are useful:

1. Attribution is not causal on a one-to-one basis. All that is asked for is plausible evidence that USAID has contributed to important socio-economic results.
2. Programs are both broader in scope and longer in duration than projects, and can therefore aspire to higher levels of accomplishment. Programs can consist of a portfolio both of projects and non-project activities.
3. In projects, socio-economic impact often does not occur due to the failure of what the logical framework system labels "assumptions." In a program, assumptions are broader and therefore less binding.

¹ See Annex 1 for additional notes on the attribution issue.

II. USAID/GHANA ASSISTANCE PROGRAM: A BRIEF SUMMARY

A brief summary of the USAID/Ghana Program and the USAID is provided below. Its aim is to give context to the USAID/Ghana program performance evaluation pilot -- the object of the CDIE/MSI team consultation. It is not intended to be a thorough review of the USAID program.

A. Profile

USAID has tailored its development assistance program to support Ghana's need to stabilize its economy through structural adjustment. The goal selected by USAID to most effectively assist the country's economic recovery is to contribute to an increase in Ghanaian per capita income growth.

To that end, the USAID program will focus on three areas (or Sub-Goals): increasing rural incomes through agriculture and agri-business development; continued assistance to the national family planning effort; and contributing to Ghana's education effort through a policy-based program aimed in part to educate the country's primary school population for more highly qualified and productive jobs.

USAID's goal of increasing Ghana's per capita growth rate will generally be pursued through the framework of the country's Economic Recovery Program (ERP). Pursuit of that goal is divided into six main elements which are as follows:

- fast-disbursing program assistance through the foreign exchange auction, under USAID's Agricultural Productivity Promotion Program (APPP), and other non-project assistance;
- local currency generations from program aid and from the forthcoming Food for Progress Program in support of activities in the agriculture and agri-business areas;
- continued assistance in family planning and child survival geared to private sector participation;
- support for primary education through a new \$35 million Education Project;
- support of short term training in human resources development; and
- provision of long term training under AFRAD III.

Although the foreign exchange provided to the Auction System under the APPP and other program assistance is (will not be) tracked as to use, a significant portion of the funds supplied can be assumed to result in productive imports (additional to the imports that would otherwise have occurred), contributing in turn to Ghana's economic growth.

Local currencies generated from APPP disbursements are currently applied to a variety of Government of Ghana-budgeted activities, the purpose of which is to raise productivity in non-cocoa food crops. Concurrently, policy dialogue is directed to policy reform in the agricultural area, notably privatization and revitalization of the fertilizer and seed sectors. Within the near future, the APPP will be augmented and eventually replaced as a source of local currency generation by new forms of non-project assistance, and by a new Food for Progress Program, comprising PL 480 Title II Section 206, and Section 416 food aid. As funding permits, the existing portfolio of local currency-funded activities will then be expanded to include activities in the agri-business area.

USAID/Ghana support of primary education will complement a large effort by World Bank and other donors to improve Ghana's overall education system which has deteriorated dramatically since 1975. To date, efforts by other donors have ignored primary education; therefore the Congressionally mandated investment by USAID/Ghana in primary education is a valuable addition to the portfolio, especially since literacy and numeracy are important contributors to productivity and income.

USAID support of population and health activities occurs through the Contraceptive Supply Project, the Africa Child Survival Initiative/Combatting Communicable Childhood Diseases and several HIV-AIDS prevention and control activities.

Short term training through Africa Bureau's Human Resources Development Assistance is intended to stimulate, facilitate and support national and regional training programs. Such programs are intended to provide qualified technical, scientific and managerial personnel and policy planners who will support Ghanaian development institutions, enhance growth of the private sector, and increase participation of women in development.

USAID support of long term training occurs under AFGRAD III in support of filling Ghana's continuing need for trained manpower. The fit of long term participant training of Ghanaians in the U.S. in the USAID program is presently under review.

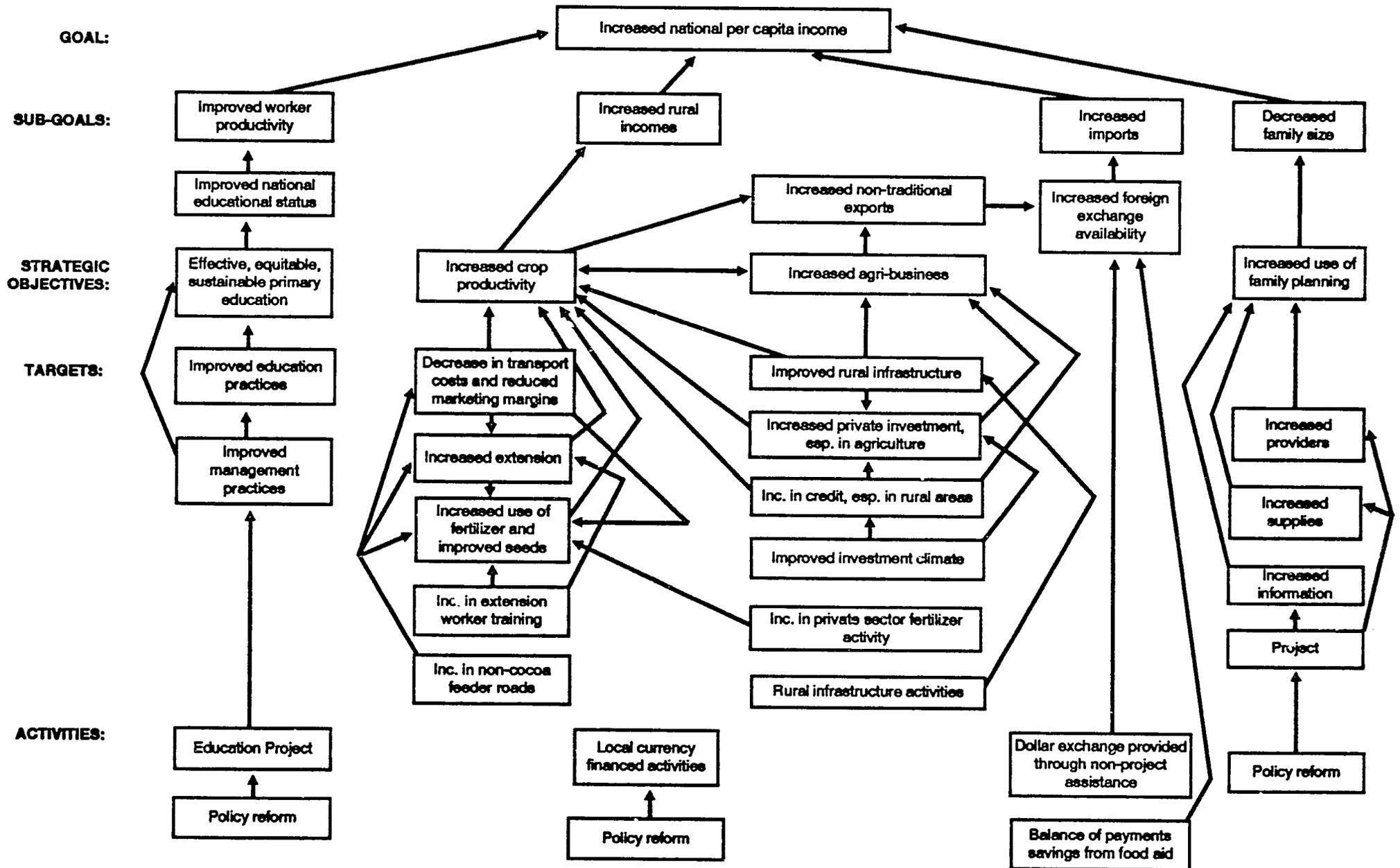
B. USAID/Ghana's Program Strategy

1. A Program Objective Tree

The basis for the "Program Performance Tracking System" described in this report is the "Program Objective Trees" in Figures 3 and 4. Figure 3 represents the program as it stood at the beginning of the MSI/CDIE consultancy, and Figure 4 represents it as it stood at the end. Differences between the trees is due to insights gained during development of program performance objectives and indicators.

The second tree differs from the first in that it is more focused, has fewer strategic objectives, contains more linkages, and possesses a synergy among program components.

FIGURE 4
USAID/GHANA PROGRAM PERFORMANCE TREE



2. Program Strategy vs. Project Design

The logic of Figure 4 divides along two lines: 1) program strategy which covers the strategic objectives and the levels above it and 2) project design which covers the strategic objectives, and the levels below it. Strategic objectives are part of both program strategy and project design, and are the link between projects and strategy.

The statements for goal, sub-goal and strategic objectives within the program strategy are very ambitious. It is important to keep in mind that:

The goal and sub-goals are long term, ambitious objectives tied, not to specific projects, but to the overall, long-term USAID/Ghana program.

The goal and sub-goals describe the results that will be attained through sustained effort by USAID/Ghana in concert with the Government of Ghana, and other donors, some of whose assistance is greater than that of USAID.

3. Program Strategy

As depicted in Figure 4, the objective tree is based on the following (albeit simplified) principles:

1. Increased national per capita income is the result of raised worker productivity throughout the economy, increased rural incomes, increased imports, and decreased family size.
2. Raised worker productivity throughout the economy is the result of improved educational status, which is the result of effective, equitable, sustainable primary education.
3. Increased rural income is the result of increased crop productivity, increased agri-business, and increased non-traditional exports.
4. Increased imports are the result of increased foreign exchange availability, which is the result of increased non-traditional exports, which is, in turn, the result of the dollar exchange provided to the auction system under the APPP, and other program initiatives, and the balance of payments savings enabled by food aid. Increased foreign exchange is also the result of increased non-traditional exports.
5. Increased non-traditional exports are the result of increases in crop productivity and agri-business activity.
6. Decreased family size is the result of increased use of family planning.

III. PROGRAM INDICATORS

A. Agriculture and Agribusiness Development Indicators

Present Mission activities in the agriculture area are carried out through the Agricultural Productivity Promotion Program (APPP), a \$20 million program that provides dollar exchange to the Government Auction System, which in turn generates local currency for agreed rural development activities. Prior to completion of the APPP in 1992, local currency availabilities will be augmented, then replaced, by new forms of non-project assistance, and by a new Food For Progress program. With increased local currency availabilities, the portfolio of activities supported by local currency generations will be expanded to include support for infrastructure development, private investment, agribusiness development and, perhaps, credit expansion. Suggested future activities and related indicators are included in the attached tree and table of indicators for the Agriculture and Agribusiness Development area.

1. Program Performance Objective Tree

The Agriculture and Agribusiness Development segment of the USAID/GHANA objective tree contains the program goal, one subgoal, two strategic objectives, eight targets and four subtargets.

a. Program Goal, Subgoal and Strategic Objectives

The program goal is to increase rural incomes. Achievement of the goal is dependent on achievement of the two strategic objectives, to increase crop productivity (non-cocoa crops) and increase agribusiness, which together should also enable achievement of the subgoal of increasing non-traditional exports (there may also be a discrete activity aimed at promoting non-traditional exports). The subgoal, as well as the strategic objectives, is logically linked to achievement of the program goal, and the two strategic objectives should be mutually reinforcing.

One of the strategic objectives, to increase crop productivity, flows from targets and subtargets related to present activities in agricultural extension, privatization of fertilizer delivery, feeder roads and assistance to the Seed Certification Department of the Ministry of Agriculture. The second strategic objective, increase in agribusiness, will benefit from the feeder roads development, but most of the related targets and subtargets will be based upon the future activities discussed in the opening paragraph.

b. Targets and Subtargets

All of the eight targets will serve the purpose of achieving the first strategic objective, to increase crop productivity. Five of the eight will meet the agribusiness objective. The targets adequately define themselves, except for improved rural infrastructure, the nature of which will depend on the activity, or activities, undertaken (in either storage or marketing). As may be seen from the chart, considerable synergy is expected among the various targets, with lower transportation costs leading to reduced marketing

margins, to increased extension activity and use of improved seeds and fertilizer; increased extension activity itself leading to increased use of improved seeds and fertilizer; both expanded credit and improved rural infrastructure leading to an increase in private investment in agribusiness; and policy dialogue supporting policy reforms to spur private investment, especially in agribusiness areas.

The four subtargets are intermediate accomplishments which lead sequentially to target achievement. Thus, USAID activities in the private investment area will aim at increased investment in agribusiness through the subtarget of an improved investment climate; extension activities will result in an increase in numbers of trained extension workers before the latter is reflected in increased extension activity. Subtargets have been shown only where there is a measurable level of achievement below the target level.

2. Performance Indicators and Benchmarks

Owing to the remoteness of its activities from program goals and subgoals, Missions are not normally held accountable for their achievement. However, since Mission activities are (or should be) logically linked to goals and subgoals, they should be monitored and measured as closely as the data permit. The best available indicator for the Agriculture and Agribusiness goal of increased rural incomes, properly termed a country level indicator, is real per capita household expenditures. The basic expenditure data are available from the Ghana Living Standards Survey (GLSS). Expenditure data are more readily available than income data from the GLSS findings, and are probably more reliable as an indicator of well-being (given the difficulties involved in valuing home-produced food). The GLSS is scheduled to continue to 1992; it is hoped that funding will be provided for follow-on annual surveys after that date. Data on non-traditional exports, to enable monitoring of the subgoal, can be obtained from the Statistical Service.

Each of the strategic objectives, the highest objective level for which missions can be held accountable, is measurable by three performance indicators. As far as crop productivity is concerned, the data to be used are those relating to cereal crops (maize, rice and sorghum/millet). This is both because data on the cereal crops are available on a more current basis than data on plantains, cassava and other non-cocoa crops, and because the cereal crops are known to be more responsive to agricultural inputs and accordingly account for most of the use of fertilizer and improved seed use.

As to the agribusiness strategic objective, investment and sales data are not likely to be available. As next best indicators of progress, data on exports of processed agricultural exports, and data on numbers of firms engaged in agroprocessing and the manufacture of farm implements should be obtainable. Time constraints precluded an actual search for the information, but the table of indicators lists a number of prospective sources.

One, in some cases two, benchmarks are shown for each of the 12 targets and subtargets. For the most part, the benchmarks are not readily obtainable, "off-the-shelf" data. Most will require a certain amount of initial probing until communication channels have been established. In the case of certain activities already partly funded by APPP-generated local currencies, the

FIGURE 3
USAID/GHANA PROGRAM REVIEW WEEK OBJECTIVE TREE

GOAL:

IMPROVE WELLBEING OF GHANAIANS

SUB-GOAL:

RAISE REAL INCOME

IMPROVE HEALTH STATUS

INCREASE EDUCATIONAL STATUS OF GHANAIANS

STRATEGIC OBJECTIVES:

LOWER FOOD COST

RAISE INCOME OF RURAL PRODUCERS (MAINLY CROPS)

INCREASE USE OF FAMILY PLANNING

DECREASE MORTALITY AND MORBIDITY FROM SPECIFIC CAUSES

INCREASE (IF EFFECTIVE) HOUSABLE, SUSTAINABLE PRIMARY EDUCATION

TARGETS:

LOWER TRANSACTION COSTS

RAISE PRODUCTIVITY

INCREASE MARKET DEMAND FOR SOME TRADITIONAL EXPORTS

INCREASE PROVIDERS

INCREASE SUPPLIES

INCREASE INFORMATION

MATERIAL CHILD HEALTH

DECREASE MORTALITY

INCREASE MEAN TEST SCORE P-6 LEVEL

INCREASE PRIMARY SCHOOL ENROLLMENT RATE

DECREASE DROP-OUT RATE, ESPECIALLY NORTHWEST REGION

DECREASE GENDER REGIONAL DISPARITIES

NATIONALIZE BUDGETARY EXPENDITURES

DECREASE TRANSPORT COSTS

INCREASE COMPETITIVENESS

EXTENSION

INPUTS

TECHNOLOGY

CREDIT

FEEDER ROADS

SEED/FERTILIZER STORAGE

INCREASE COMMERCIALIZATION OF TECHNOLOGY TRANSFER

INCREASE AGRO PROCESSING

INCREASE EXPORTS OF UNPROCESSED FOOD

INCREASE PRIVATE INVESTMENT

POLICIES AND PROCEDURES

POLICY DIALOGUES

INSTITUTIONAL SUPPORT TA

APPROVE THE DISTRIBUTION SYSTEM

DOMESTIC POLICIES

INCREASE CRI SUPPLIES

FIGURE 5
AGRICULTURE & AGRIBUSINESS DEVELOPMENT

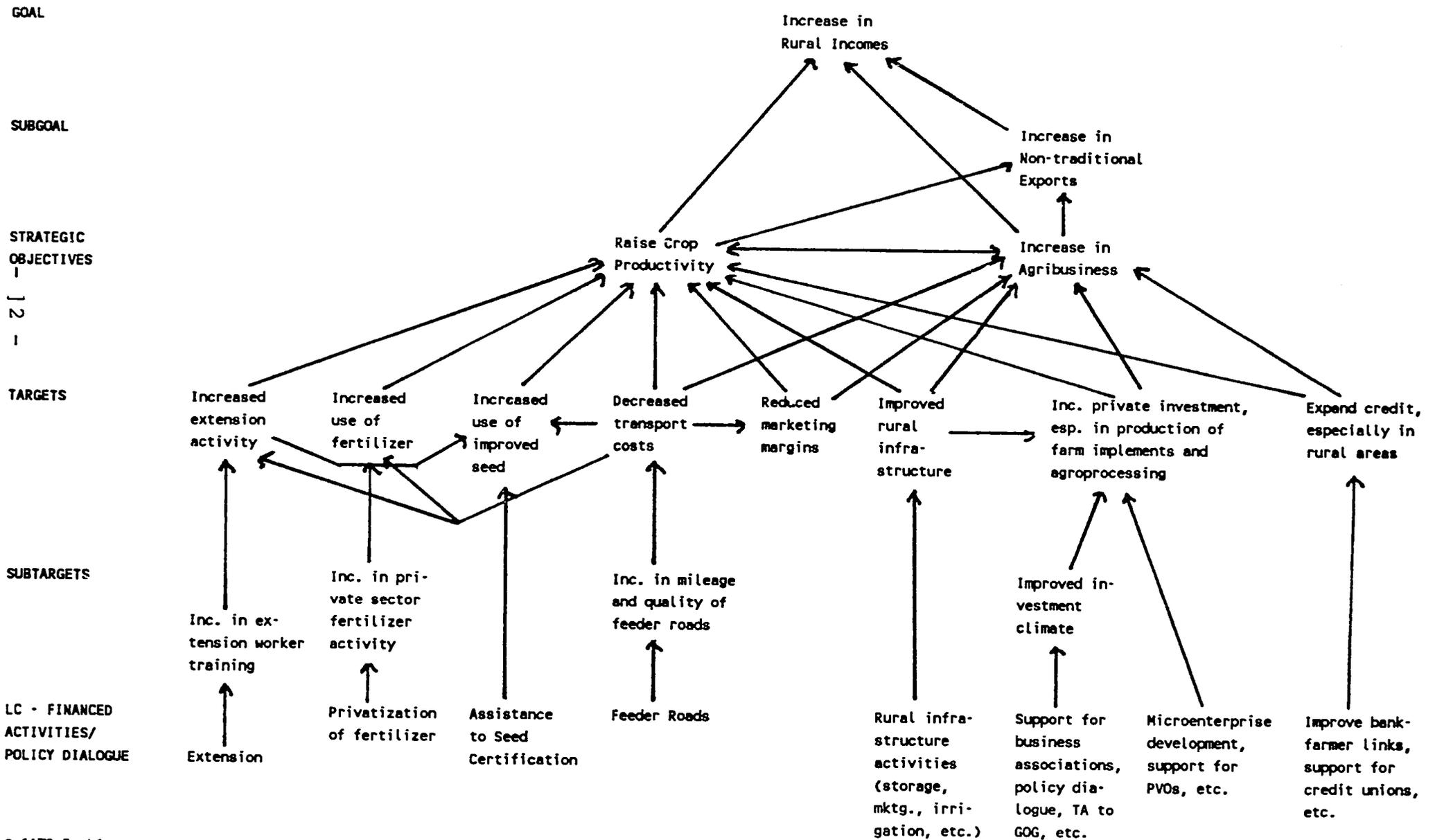


Table 1
AGRICULTURE & AGRIBUSINESS DEVELOPMENT INDICATORS

	Goal/Strategic Objectives/ Targets	Indicators/Benchmarks	Sources	Responsibility	Timing	
GOAL	Increase in rural incomes	Rural per capita household expenditures	a. GLSS	a. Economist	a. Annually	
SUBGOAL	Increase in non-traditional exports	Non-traditional exports	a. Export Promotion Council	a. Economist	a. Semi-annually	
STRATEGIC OBJECTIVES	1. Increase productivity in food crop production	a. Output per ha. of cereal crops under intensive cultivation	a. MOA; Ghana Grains Dev. Council (GGDP)	a. Economist	a. Annually	
		b. Output per ha. of cereal crops (all types of cultivation)	b. MOA	b. Economist	b. Annually	
		c. Inc. in marketed surplus of rice and maize	c. MOA estimates	c. Economist	c. Annually	
	2. Increase in agribusiness	a. No. of firms making farm implements	a & b. Investment Center; Registrar General; Min. of Science & Industry	a & b. Econ.	a & b. Semi-annually	
		b. No. of agroprocessing firms				
		c. Exports of processed agricultural products	c. Export Promotion Council; Customs, Exports & Preventive Service	c. Economist	c. Semi-annually	
TARGETS	1. Inc. in extension activity	a. No. of extension visits per farmer	a. MOA, Extension Service	a. Economist	a. Annually	
	2. Increased use of fertilizer	a. Cropped area under fertilizer cultivation: (1) No. of has. (2) As percent of total cropped area		a. MOA; GGDP	a. Economist	a. Annually
		b. Fertilizer deliveries: (1) Total (2) Per ha.		b. MOA	b. Economist	b. Annually
	3. Increased use of improved seed	a. Sales of improved seed	a. MOA; GLSS	a. Economist	a. Annually	
		b. Has. under improved seed: (1) Total (2) As percent total cropped area	b. MOA; GLSS; GGDP	b. Economist	b. Annually	

	Targets/Subtargets	Benchmarks	Sources	Responsibility	Timing	
TARGETS (cont.)	4. Decrease in transportation costs	a. Transportation costs per ton mile	a. GPRTU; Min. of Transport; MOA, Mktg Div	a. Economist	a. Quarterly	
	5. Reduce marketing margins	a. Marketing costs as percent of retail price (cereal products)	a. MOA, Mktg Div.	a. Economist	a. Quarterly	
	6. Improve rural infrastructure	a. To be determined (depending on nature of program)	NA	a. Economist	a. Annually	
	7. Inc. private investment, esp. in production of farm implements and agroprocessing	a. Inc. in private investment: (1) Total, in real terms (2) As percent of GDP	a. Quar. Digest of Statistics (national accounts)	a. Economist	a. Annually	
	8. Expand credit, especially to rural areas	a. Inc. in credit to private sector b. Inc. in credit to agriculture sector	a. Quar. Digest of Statistics	a. Economist	a. Quarterly	
	SUBTARGETS	1. Inc. in extension worker training	a. No. of agents trained b. No. of sessions attended per agent	a. MOA, Extension Service b. MOA, Extension Service	a. Economist b. Economist	a. Quarterly b. Quarterly
		2. Inc. in private sector fertilizer activity	a. No. of private sector fertilizer dealers	a. MOA	a. Economist	a. Semi-annually
		3. Inc. in mileage and quality of privately contracted non-cocoa feeder roads	a. Miles of privately contracted non-cocoa feeder roads: (1) Maintained (2) Upgraded	a. MRH, Dept. of Feeder Roads	a. Economist	a. Semi-annually
4. Improved investment climate		a. No. of days required to obtain an investment license b. No. of days required to clear goods through Customs	a. Investment Center; private sector b. Investment Center; private	a. Economist a. Economist	a. Annually b. Annually	

channels already have been established, and data collection will be a matter of seeing that data are generated on a timely basis.

3. Monitoring and Evaluation System

The Mission Economist is the logical person to direct the data collection and monitoring activities of the Agriculture and Agribusiness segment, if not the entire Mission program. Since the dimensions of the Agriculture and Agribusiness program are not precisely known at this time, and since the program will in any case be evolving over time, the extent of the task is hard to assess. At this point, it would appear that a week or two of nearly full-time work might be required to establish information sources and a monitoring system, and perhaps a third of the Economist's time to maintain the system thereafter.

B. Primary Education Program Performance Objectives and Indicators

The Ghana Primary Education Program (PREP) is made up of a large program component, and a smaller project component. The following two paragraphs describing USAID/Ghana's primary education effort are excerpted from the PAIP document.

The Ghana Primary Education Program (PREP) is a US\$35 million initiative designed to significantly strengthen the policy and institutional framework required to assure a quality, equitable and financially sustainable primary education system in Ghana. Of the \$35 million project total, \$32 million in foreign exchange will be provided to the auction system and local currency generations used for local purchase of materials and equipment. The project component of PREP consists of \$3.0 million support to implementation monitoring, impact monitoring, evaluation, special studies, specialized and third-country training, technical assistance, audits and evaluations.

At the end of the PREP, the following education system improvements are anticipated: (1) a proportional stabilization of the primary education budget; (2) equivalent expenditures on books and materials; (3) a decentralized basic education system with improved central and field level management; (4) ninety percent of primary school teachers qualified to teach; (5) ninety percent of primary schools using basic pedagogical materials; (6) a standardized student achievement testing program publishing accurate results; and (7) an institutionalized and operational equity improvement program.

1. Program Performance Objective Tree

a. Program Goal, Sub-Goal, and Strategic Objectives

The top three levels (one goal and two sub-goals) illustrate the Primary Education project's relation to USAID's overall program goal of "increased per capita income". Common sense and compelling data from the developing world show that people who are literate and numerate are more productive, and therefore earn more money. Only under extraordinary circumstances would the top two levels receive measurement attention by USAID.

The strategic objective for the primary education sector is an effective, equitable, and sustainable primary education.

The three parts of the objective: 1) effective 2) equitable, and 3) sustainable are elaborated in Section 2 below.

b. Targets and Sub-Targets

Below the strategic objectives in Figure 6 the target and sub-target levels represent project contributions necessary for achieving the strategic objectives. Targets and sub-targets consist of:

- 1) Sound educational and management practices; and
- 2) Development of educational capacity.

Sound educational practices include: curriculum use, use of books and materials, preparation of lesson plans, pedagogical practices. Sound management practices might include: decentralized planning and decision making and inclusion of parents in decision making.

Development of educational capacity consists primarily of: books and materials provided, teachers trained and retrained, and establishment of decentralized management systems. Full detail on targets and sub-targets should be spelled out in the primary education project paper, and at the purpose level of the logical framework.

c. Policy Reform and Local Currency

Below the Target level, as seen in Figure 6, are the policy reform and the local currency funds which make the entire Primary Education effort possible. Disbursal of funds to the Primary Education project is contingent on policy reform, primarily in the areas of budget allocation and disbursal, and decentralized management.

2. Performance Indicators and Benchmarks

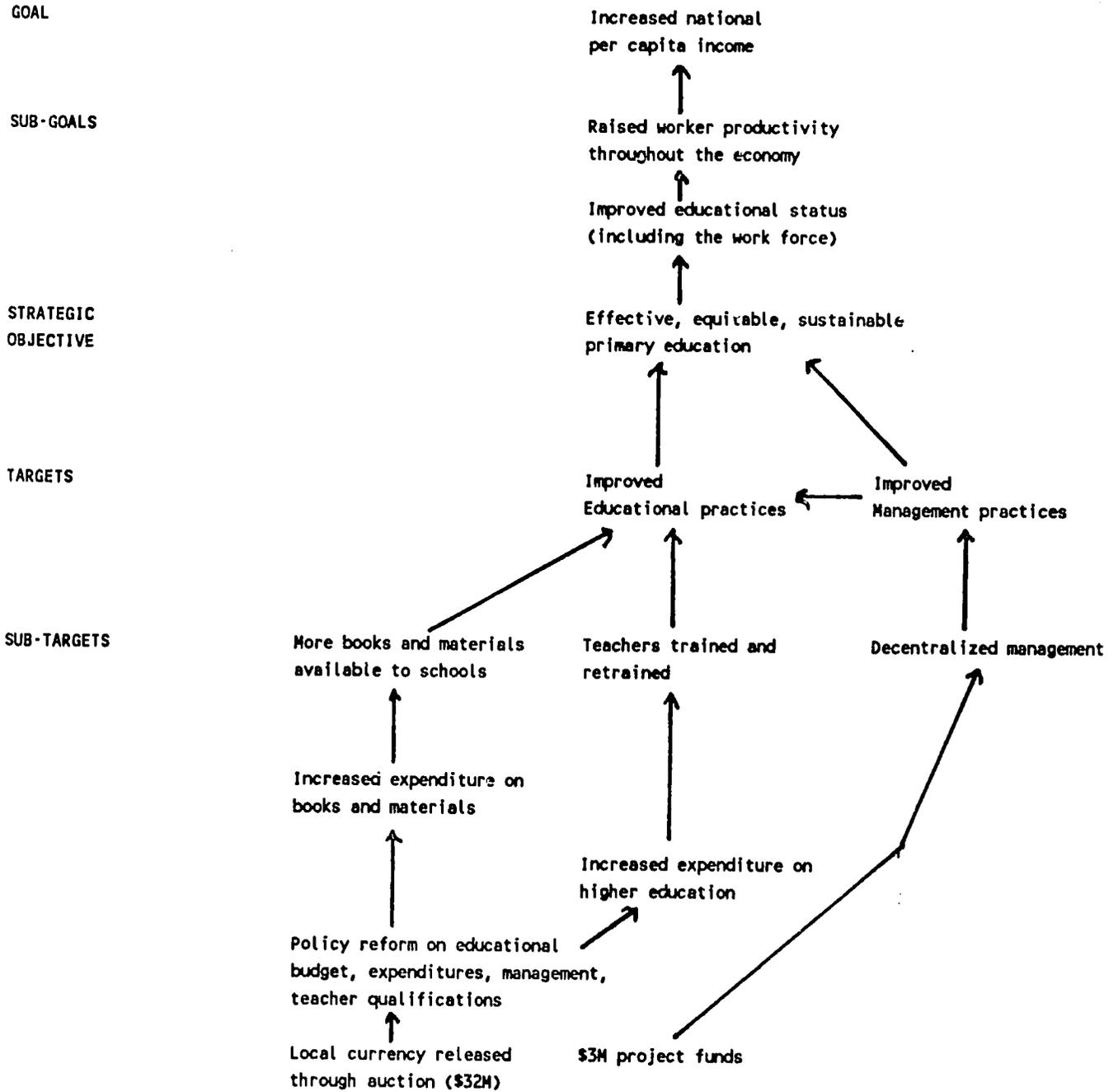
a. Indicators for Measuring Accomplishment of Strategic Objectives

The effectiveness, equity, and sustainability components of Primary Education's Strategic Objective are presented separately in Table 2, and are measured by different types of indicators.

- Effectiveness is measured by testing knowledge acquired, and by tracking attendance and graduation of primary school students. The central instrument for measuring primary school effectiveness will be test scores from a standardized test developed with support of USAID.
- Equity is measured by comparing students by sex, region and perhaps economic class on the effectiveness measures. If primary education is equitably distributed, then disparities among groups are small. Data on sex and region are easy to collect, while data on economic class may be difficult. Equity

FIGURE 6

PROGRAM OBJECTIVES FOR PRIMARY EDUCATION



might also include measurement of disparities in resources available to schools in advantaged and disadvantaged neighborhoods.

- Sustainability is measured by several financial indicators, including 1) cost coverage and savings through consolidation of schools, 2) increase and maintenance of expenditure levels for primary education as a whole, and 3) increase and maintenance of expenditure for education materials in particular.
- Financial sustainability is measured by the achievement and maintenance of expenditure levels for 1) primary education as a whole and 2) the portion of primary education expenditures spent on materials.

b. Indicators for Measuring Accomplishment of the Sub-Goal

The Ghana Living Standards Survey (GLSS) undertaken by the Government of Ghana in 1987-1988 collected data on literacy and numeracy throughout Ghana. Figures for young people should improve, and the improvement will cover the older categories as time passes.

c. Success Criteria

Wherever possible, indicators are presented in the form of success criteria, such as decreased drop-out rate by 50%. The success criteria come directly from the Primary Education design documents. The success criteria give valuable information on what the Primary Education project proposes to accomplish.

d. Timing and Responsibility for Data Collection

Data collection at the strategic objectives level will occur as a matter of course through systems established by the Project Management Unit in the Ministry of Education. An Education Advisor contracted by the Mission will support this effort.

Data collection at the sub-goal level is currently being carried out by the GLSS. The validity of the GLSS approach to data on literacy and numeracy needs examination. People were more than likely only asked whether they could read and write rather than actually being tested.

Data collection at the target level, which consists of educational and management practices, will require special effort. Some resources within the project component are reserved for special studies. Consideration should be given to using the special studies to track educational and management practices on a focused, problem-oriented basis. Management and data collection within the Primary Education project must not assume that policy change will automatically result in improvements in primary education effectiveness.

Data at the sub-targets level, involving books and materials, teacher training, and decentralized management systems, can easily be collected as a matter of course by the Project Management Unit.

Table 2

EDUCATION INDICATORS

	Subgoals/Strategic Objective/Targets	Indicators	Sources	Responsibility	Timing
SUBGOALS	1. Improved Worker Productivity	a. Inc. in per capita GDP	a. Statistical Survey	a. Economist	a. Annually
	2. Improved National Education Status	a. Inc. in literacy rate: (1) Nationwide (2) By sex (3) By region b. Inc. in primary school enrollment (from 60 percent to 90 percent): (1) Nationwide (2) By sex (3) By region c. Inc. in average number of years of schooling: (1) Nationwide (2) By sex (3) By region	a. GLSS b. GLSS b. GLSS	a. Education Officer b. Education Officer b. Education Officer	a. Annually b. Annually b. Annually
STRATEGIC OBJECTIVE	Improve effectiveness, equitability and sustainability of primary education	a. Inc. in literacy rates of primary school graduates b. Inc. in percent of school-age children completing primary school: (1) Nationwide (2) By sex (3) By region c. Inc. in percent of children entering who complete primary school: (1) Nationwide (2) By sex (3) By region d. Decreased disparities among sexes and regions based on data from (b) and (c)	a. Mean P-6 test scores b. MOE c. MOE d. (b) and (c)	a. Education Officer b. Education Officer c. Education Officer d. Education Officer	a. Annually b. Annually c. Annually d. Annually

Strategic Objectives/ Targets		Indicators/Benchmarks	Sources	Responsibility	Timing
STRATEGIC OBJECTIVE (cont.)		e. Maintain present ratio of spending on primary education to GDP (3.5 %)	e. Statistical Survey and MOE	e. Education Officer	e. Annually
		f. Maintain present ratios of spending on: (1) primary to secondary education (2) school materials to total exps. on primary education	f. MOE	f. Education Officer	f. Annually
		g. Decrease in no. of primary schools per thousands of students (as result of consolidations)	g. MOE	g. Education Officer	g. Annually
TARGETS	1. Improved education practices	a. Primary school achievement tests prepared and tested	a. MOE	a. Education Officer	a. As available
		b. Improved test results	b. MOE	b. Ed. Off.	b. As avail.
		c. Other, to be spelled out in the PP	c. MOE	c. Ed. Off.	c. As avail.
	2. Improved management practices	a. Teacher qualifications test prepared and tested	a. MOE	a. Education Officer	a. As available
		b. Improvement in teacher qualification test results	b. MOE	b. Education Officer	b. As available
		c. Other, to be spelled out in the PP	c. MOE	c. Education Officer	c. As available

C. Population and Health Program Performance Objectives and Indicators

The present USAID population and health program consists of two major activities: the Contraceptive Supply Project and targets of opportunity including AIDS and communicable childhood diseases prevention. Since these project-level activities are concluding in the near future and because new, related activities are coming on-line to supplant them, what follows will reflect the new activities.

1. Program Performance Objective Tree

The population and health segment of the overall USAID/Ghana objective tree includes most of the levels of the more comprehensive tree, diagrammed earlier. Thus the population and health program includes one sub-goal, one strategic objective, and several targets and sub-targets.

a. Program Sub-goal and Strategic Objective

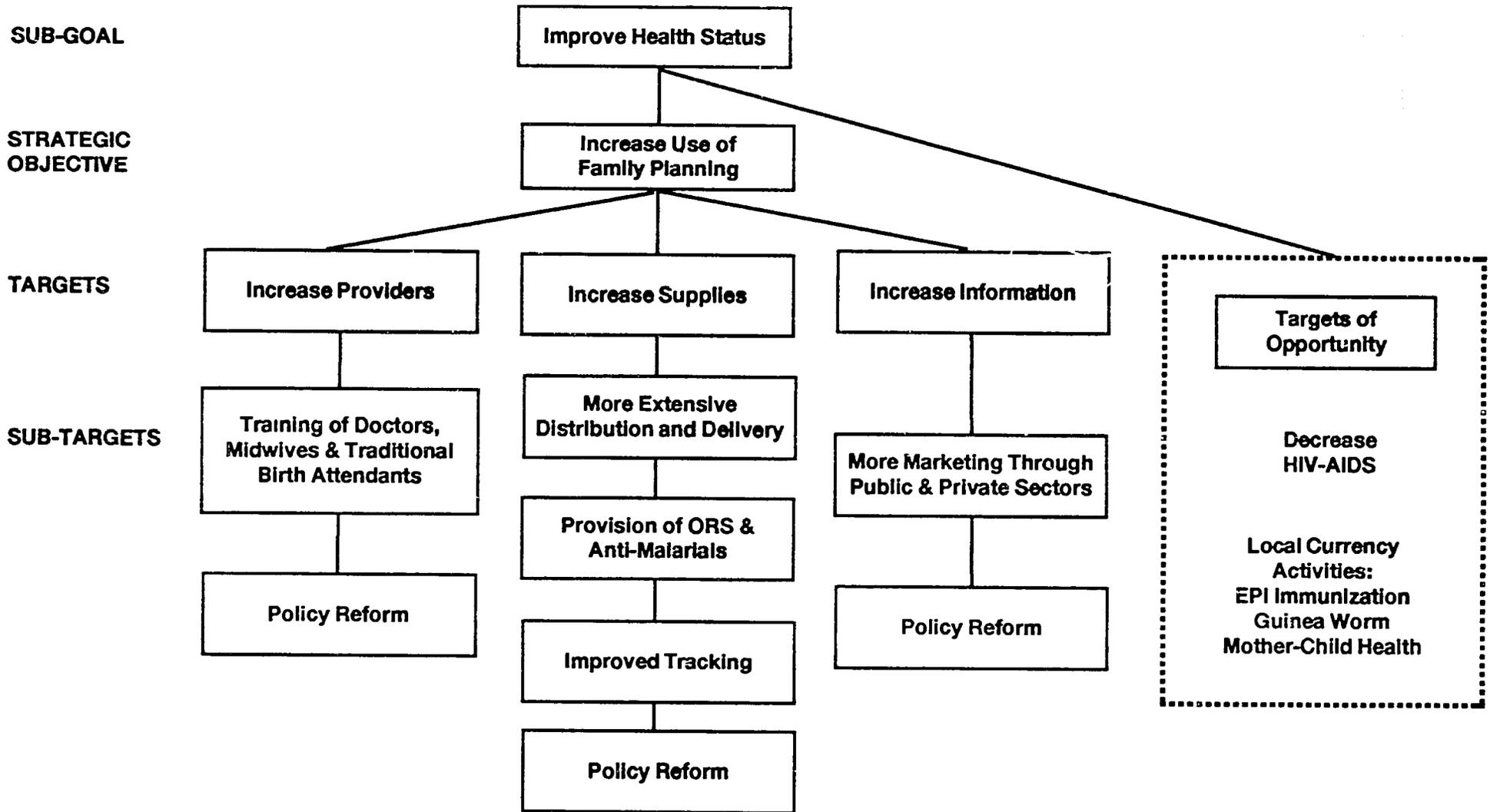
The sub-goal in population and health (see Figure 7 on the following page) is to improve health status. It embodies the strategic objective to increase the use of family planning services. This objective specifically links the ultimate intention of reducing fertility to health benefits. These benefits are presumed to be delivered as part-and-parcel of the family planning activity. In light of the Government of Ghana policy to directly link family planning to health benefits, USAID has developed a new activity-- the Family Planning and Health Project. The contribution of that project to the strategic objective is briefly outlined in the section on targets which follows.

b. Targets, Sub-targets and Targets of Opportunity

Three targets were fixed for the purpose of reaching the strategic objective to increase use of family planning. These targets are: to increase family planning providers, increase family planning supplies, and increase family planning information. They are critical to achieving an increase in the use of family planning services.

Sub-targets comprise sequential prerequisite activities which lead to achievement of their respective targets. In the case of the "increase providers" target, for example, training traditional birth attendants and midwives is an essential sub-target. More retail and wholesale distribution of contraceptives is a prerequisite to the target of increasing supplies. To meet the target of increased information, more marketing through public and private sectors must first be achieved. Finally, each of the three targets has a policy component or sub-target, as well, which is tailored to achievement of the respective targets.

FIGURE 7
POPULATION AND HEALTH PROGRAM PERFORMANCE
AND OBJECTIVE TREE



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c. Targets of Opportunity

USAID has already launched and continues to develop several distinctive population and health activities in which it or A.I.D. has a special interest and competence. Labelled "targets of opportunity," these activities, depicted on the righthand side of Figure 7, feed directly into the sub-goal of improved health status. They include such activities as HIV-AIDS prevention and control, child survival, and guinea worm control. While their impact may be less easy to measure at the strategic objective level, they are nevertheless important parts of USAID's program portfolio.

2. Performance Indicators and Benchmarks

Performance indicators and benchmarks provide measures of results of USAID population and health program activities. Indicators represent the highest level at which USAID Ghana can attribute performance results to, in this case, its population and health program. Specifically, they measure the extent to which the mission's strategic objective of that program has been achieved.

At a considerably lower level on the objective tree, benchmarks are designated to measure the degree to which earlier-described population and health targets are being reached. These benchmarks serve to "take the pulse" at distinctive points to determine whether the components are on target. That is, they measure the extent to which the strategic objective of an increase in the Ghanian population's use of family planning services is being achieved. Such pulse-taking points are integral to the program and project management information system (MIS) and monitoring and evaluation (M&E) plan. In effect, these measurement points are one of the bases of the program MIS and M&E plan.

a. Indicators

The number of indicators selected to measure results of the population and health strategic objective -- increasing use of family planning -- is arbitrary. In this case, too few indicators, say, one, may not provide a measure of sufficient breadth or depth to do justice to the overall result. Too many, on the other hand, say, more than five, will probably obscure the significance of that result. Therefore, somewhere between two and five indicators seemed to adequately cover the scope of the stated objective. Here, as seen in the following table, two were selected.

The table is divided into four columns -- first the strategic objective or target; second, performance indicator or benchmark; third, data source or where the information is located; and fourth, the individual or office responsible for providing measurement information, as well as the schedule for measuring and reporting results.

The selected indicators used to measure the strategic objective are intended to reflect two distinct areas of family planning. The first is simply a statistical measure of the prevalence rate of contraception. Certain techniques listed under the "data source" column of the table are proposed for verifying actual use of contraception. The major projected

Table 3
POPULATION AND HEALTH INDICATORS

Strategic Objective/ Targets	Indicators/Benchmarks	Sources	Responsibility	Timing	
SUBGOAL	Improve the health status of Ghanaians	1. Inc. in lifespan of average Ghanaian 2. Dec. in infant mortality	a. GLSS, MOH	a. Project	a. Every two years
STRATEGIC OBJECTIVE	Increase the use of family planning (FP) services	1. Inc. in contraceptive prevalence rate 2. Inc. in proportion of women favoring fewer and more widely spaced children	a. Demographic Health Survey (DHS) update a. Rapid appraisal; key informant, focus group interviews	a. Project a. Project	a. 1993 a. 1993
TARGETS	1. Inc. in family planning providers	a. Inc. in no. of outlets for distribution and marketing of contraceptives and other family planning services (1) public (2) private b. Inc. in no. of doctors providing FP services c. Inc. in no. of traditional birth attendants and midwives providing contraceptives	a. MOH and cooperating businesses b. MOH; DHS Report c. Sample surveys	a. Project b. Project c. Project	a. Annually b. 1992, 1994 c. 1993
	2. Inc. in family planning supplies	a. Inc. in level of imported, non-subsidized contraceptive commodities b. Inc. wholesale distribution and retail sales of family planning services and commodities c. Inc. provision of oral rehydration salts and anti-malarial commodities	a. MOH/MOF; Chamber of Commerce reports b. DANAFCO and other participating cos.; GRMA; GMA c. Retail and consumer surveys; MOH; mfrs.; distributors	a. Project b. Project c. Project	a. 1992; 1994 b. Annually c. Annually
	3. Inc. in family planning information	a. Improved marketability and increased marketing of family planning information b. Inc. analysis and policy guidance in FP area	a. Spot checks; DHS update; PAS surveys of ad effectiveness b. Population Secretariat	a. Project b. Project	a. Annually b. Proj., 1993; NPA

statistical measure is to increase contraceptive acceptance from the level of 5% in 1990 to 15% in 1995. Second is a gauge of attitudinal change concerning number of children desired and their spacing by Ghanaian families.

b. Target Benchmarks

Target benchmarks listed in the table in their aggregate lead to a measurement of progress towards the strategic objective. Singly, however, they are more relevant to the sub-program or project level of action. Finally, benchmarks are more numerous than indicators. For all of these reasons, as well as that of brevity, further explanation of benchmarks is avoided and the reader is simply referred to the table to see how the benchmarks fit into the overall scheme.

3. Program Performance Evaluation and Management Information System

Population and health programs in A.I.D. have built-in information-generating systems. That makes data retrieval and management somewhat more manageable than for some other programs. While these systems are based on the generation of mostly statistical information--including measurements of the strategic objective and target benchmarks described earlier--that by no means precludes the necessity for some qualitative assessments. For example, a few very short, rapidly done case studies or key informant interviews on family acceptance of contraception might be useful. Those same methods could be equally useful to understand why some vendors are more successful than others and to determine the strengths and weaknesses of both private and public sector distribution systems.

Timing as well as responsibility for reporting on the principal program indicators and target benchmarks is indicated in the fourth column of the tables. Results of sub-program activities, as reported periodically through target benchmarks in addition to further steps defined in the oncoming Family Planning and Health project paper, will serve as the basis for the monitoring part of the M&E system. Monitoring in this sense is a continuous implementation task, a "process verification" which contributes to effective, ongoing program and project management.

In addition to the M&E tasks proposed above, it is suggested that the Family Planning and Health Project include annual in-house reviews and evaluation assessments by an outside team in the second and fourth years. Such reviews and assessments will ensure that certain systems are in place, offer an opportunity to make corrections or adjustments or, if deemed prudent, even curtail the project. It is important to underscore that the program performance evaluation system described here is intended to remove some of the burden and pressure of the need to "be evaluated." That is, since the proposed system generates much of the information on achievements itself as part of the normal management function, there is no need to impose some artificial sort of evaluation from the "outside."

IV. MANAGEMENT OF A SYSTEM FOR TRACKING PROGRAM PERFORMANCE

At a March 20 meeting a management program performance tracking system was discussed. As a starting point, it was observed that any changes imposed by the tracking system should not be seen as part of an overall shift in emphasis within USAID from narrow projects to broader programs. At a more detailed level the following topics were discussed: division of responsibility, timing of reports, methodological matters, additional burden imposed by the system, and the incorporation of new activities into the performance evaluation system.

A. Division of Responsibility

Division of responsibility for managing the program performance tracking system was discussed as follows:

- (a) The Mission Program Officer has overall responsibility for directing, interpreting, and specifying issues, modes of data collection, analysis.
- (b) The Mission Economist will be in charge of monitoring data collection, synthesizing and summarizing data not generated by projects. The Mission Economist reports to the Program Officer with regard to the program performance tracking system.
- (c) The Project Development Officer is responsible for coherence among project monitoring and evaluation designs, and making sure they feed into the overall program system, especially at the strategic objectives level. The major intervention of the Program Development Officer is during the preparation of PAIPs, PPs, and other design and planning documents.

B. Timing of Reports

Data synthesis from projects and other program components to the Mission Economist should occur quarterly. The purpose of quarterly synthesis is quality control and allowing solution to data collection problems in a timely manner. Summary and interpretation of program performance data under the supervision of the Program Officer occurs annually.

C. Methodology

Data collection and assemblage should occur along the following lines:

- All data should be recorded using the Lotus 1-2-3 data program.
- All data should be disaggregated by sex to track progress toward Women in Development objectives.

- Mid-term and Final evaluations are still required for analysis of management and attribution issues.

While USAID/Ghana is responsible for all standard project, sub-program, and program monitoring and evaluation functions, it is envisioned that a Ghanaian firm will be contracted to assist USAID in tracking attribution at the strategic level and above.

To facilitate data analysis it is proposed that USAID compare planned and actual performance at all levels, not just the strategic level, of the objective tree. Such a data analysis could be represented in what is known as a congruence diagram.

D. Additional Burden Imposed by Program Data Collection

Table 4 presents strategic objectives, indicators and data sources for tracking the program performance for USAID/Ghana. The strategic objectives level may be thought of as representing the sum total of data collection responsibilities imposed by the program performance tracking effort. While progress toward sub-goal and goal objectives will not be directly attributed to USAID, all tracking of results at whatever level is understood to be the responsibility of USAID.

In the long term, USAID requirements at the strategic objective level will include not only data collection, but also evidence of impact -- evidence of impact that can be attributed to the USAID/Ghana program.

For Primary Education and Family Planning/Health, much of the data at the strategic objectives level would appear to be forthcoming from standard project monitoring activities. Therefore, for those two areas the level of effort imposed by the program over and above that imposed by the projects would appear to be minimal and consists primarily of summarizing and reporting.

For the Agriculture and Agri-business areas the situation is not so simple. Therefore, in these areas there will be a need for outside consulting help, probably provided by Ghanaian firms or individuals, in the collection and analysis of program performance indicators data.

E. Incorporating New Activities into the USAID/Ghana Program Performance Evaluation System

USAID/Ghana's objective tree has a well-founded logic and is sufficiently flexible to incorporate new sub-program and project activities as they evolve. Whether it is in the agriculture development/agribusiness area, in health and population or in the education area, the sub-goals are defined in such a way that new activities in those areas can be easily incorporated.

Perhaps more critically -- at the level of strategic objectives -- any new activities must be carefully defined and adapted to the overall existing

Table 4
A SYSTEM FOR TRACKING ACHIEVEMENT OF USAID/GHANA PERFORMANCE INDICATORS

Strategic Objectives	Performance Indicators	Sources

AGRICULTURE & AGRIBUSINESS DEVELOPMENT		
1. Increase productivity in food crop production	<ul style="list-style-type: none"> a. Output per ha. of cereal crops under intensive cultivation b. Output per ha. of cereal crops (all types of cultivation) c. Inc. in marketed surplus of rice & maize 	<ul style="list-style-type: none"> a. MOA; Ghana Grains Development Council (GGDP) b. MOA c. MOA estimates
2. Increase in agribusiness	<ul style="list-style-type: none"> a. No. of firms selling farm implements b. No. of agroprocessing firms c. Exports of processed agricultural products 	<ul style="list-style-type: none"> a & b. Investment Center; Registrar General; Min. of Science & Industry c. Export Promotion Council; Customs, Exports & Preventive Service
EDUCATION		
Improve effectiveness, equitability, sustainability of primary education	<ul style="list-style-type: none"> a. Literacy rates of primary school graduates b. Percent of school-age children completing primary school: <ul style="list-style-type: none"> (1) Nationwide (2) By sex (3) By region c. Percent of children entering who complete primary school: <ul style="list-style-type: none"> (1) Nationwide (2) By sex (3) By region d. Decreased disparities among sexes and regions based on data from (b) and (c) e. Maintain present ratio of spending on primary education to GDP (5.5 percent) f. Maintain present ratios of spending on: <ul style="list-style-type: none"> (1) primary to secondary education (2) school materials to total expenditures on primary education g. Decrease in no. of primary schools per thousands of students (as result of consolidations) 	<ul style="list-style-type: none"> a. Mean P-6 test scores b. MOE c. MOE d. (b) and (c) e. Statistical Survey and MOE f. MOE g. MOE
FAMILY PLANNING		
Increase the use of family planning services	<ul style="list-style-type: none"> 1. Inc. in contraceptive prevalence rate 2. Inc. in no. of women favoring fewer and more widely spaced children 	<ul style="list-style-type: none"> a. Demographic Health Survey update a. Rapid appraisal; key informant, focus group interviews

program format. To the extent practicable or feasible, new activities should probably be confined to existing objectives. While the addition of new strategic objectives is possible (and may sometimes be necessary) under USAID/Ghana's program performance evaluation system, it is preferable to limit the number of such objectives in order not to dilute the thrust of the overall program.

While it is important to recognize that new activities should be defined so as to feed into the higher level logic of the program format, other matters must be considered. For USAID/Ghana to maintain and evolve a coherent program thrust, it needs to define and develop new project and sub-program activities which directly contribute to results at the strategic objective level. This means that project and sub-program targets must be defined such that their measurement will flow directly and logically into program-level measurements or indicators. Thus, for all new or oncoming activities, USAID project and program officers must work closely in integrating data collection and analysis tasks.

ADDITIONAL NOTES ON THE ISSUE OF ATTRIBUTION

The strategic objective is the highest objective level for which USAIDs can be held responsible. "Responsible" in this case means being able to take credit for a result due to USAID assistance. Following are some thoughts on the nature of attribution.

1. Attribution can apply to any USAID activity intended to produce a measurable outcome, whether a cash transfer, a project, technical assistance, activities funded by local currency generations, self-help measures under P.L. 480 programs, or policy dialogue.
2. Attribution is a matter of degree. Whatever the level - strategic objective, target, or subtarget - it is sufficient to demonstrate a strong logical linkage between the USAID activity and the program objective(s), and a meaningful AID input, to establish attribution.
3. The extent of the USAID input, both in itself and relative to that of other donors, is of obvious relevance. Whatever else may be said of USAID/Ghana's influence on the feeder roads subtarget (increase in feeder roads), for example, the fact that USAID provides 32 percent of the combined USAID/World Bank funding means that, at most, roughly one-third of the outcome at the subtarget level can be attributable to USAID.
4. The degree of attribution weakens as one moves up the objective tree. In the feeder roads example, the degree of attribution to USAID (and World Bank) funding at the subtarget level may be quite high. Linkage from the subtarget to the targets of reduced transport costs and lower marketing margins is also clear enough, but since other factors than just feeder roads are involved in reduced transport costs and lower marketing margins, the degree of attribution is less than at the subtarget level. The linkage between the feeder roads targets and the strategic objective of increased crop productivity, being based on the notion that a farmer finding himself able to retain a higher share of the retail price of his output will invest more is also logical. However, not all farmers will respond in this way, and some will only respond to a limited degree. Attribution to the original USAID-funded activity is accordingly less than at the target level.
5. Attribution of a strategic objective to a single related activity may appear remote, but will seem less so when the attribution is to a number of targets, each attributable in turn to one or more USAID-supported activities. The strategic objective of increased crop productivity, by way of example, supported by eight targets, is a case in point.
6. Attribution normally need not be "proven" per se. The nature of the linkage should be sufficiently obvious, or tested by experience, such that "formal" proof is not required. That use of improved seed will lead to increased crop productivity, other factors remaining equal, seems both obvious and sufficiently tested by experience. However, gray areas do exist. Increased extension visits to farmers should lead to increased crop

productivity, but this seems less certain than the improved seed-productivity relationship; and whether training, seminars for businessmen, and management courses will lead to more productive private sector enterprises is even less certain. At some point, or points, proof of linkage will be desirable, at least by some project designers/critics/evaluators. One way to prove, even measure, attribution is through special surveys. For example, as a follow-up to a private investment promotion program, businessmen may be asked to identify the factors that led them to invest in, or expand, a business. The businessman would then have an array of possible responses to select from to identify one or more USAID-supported activities, such as a credit program or a management training course, as factors influencing his decision to invest.

7. Whether or not the degree of linkage between activity and target/strategic objective is deemed to be logically strong or weak, the degree of responsibility for an actual outcome is a matter of judgement. Obviously, unfavorable exogenous developments, such as bad weather in the case of crop outcomes, can outweigh all efforts of aid donors. Exogenous factors are ordinarily less significant with respect to subtargets and targets, which underscores the importance of measuring outcomes at those levels. It may not be possible to "blame" USAID/Ghana when crop productivity does not increase, but something is probably wrong if its efforts to privatize the fertilizer trade do not lead to the target of increased use of fertilizer; and something is even more likely to be wrong if progress is not made on the subtarget of increased number of fertilizer dealers. In the final analysis, it is the function of an effective management information and monitoring and evaluation system to sort out and weigh the various factors bearing on an outcome, and to determine, if necessarily in a judgmental way, the degree of attribution to an A.I.D.-supported activity.