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AGRICULTURAL PLANNING PROJECT  
YEAR 1 AND YEAR 2 REPORT

Contract No. LAC-0061-C-00-1003-00  
ALNA No. 201

Submitted to

Dr. Frank Morris, Deputy Director  
Mr. Cyril Buchanan, Project Manager  
U.S. Agency for International Development  
U.S./AID Mission to Jamaica  
2 Oxford Road  
Kingston 5, Jamaica

Submitted by

A. L. Nellum and Associates, Inc.  
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Contact Persons

Ms. A. Geraldine Brooks, Team Leader  
Mr. Bruce A. Petty, Executive Vice President

December 10, 1982



AGRICULTURAL PLANNING PROJECT  
YEAR 1 AND YEAR 2 REPORT

<u>Section</u>	<u>Contents</u>	<u>Page</u>
1.0	EXECUTIVE SUMMARY .....	1-1
2.0	BACKGROUND .....	2-1
2.1	Agricultural Planning Project Rationale .....	2-1
2.2	The Mission, Goals and Objectives of APP .....	2-3
2.3	The Mission, Goals and Objectives of ALNA's Technical Assistance Contract .....	2-4
2.4	ALNA's Project Organization and Plan of Execution .....	2-6
2.5	Project Staffing .....	2-7
2.5.1	Organization .....	2-8
2.5.2	Personnel .....	2-9
2.5.3	Operating Resources .....	2-11
3.0	PROJECT IMPLEMENTATION .....	3-1
3.1	Introduction .....	3-1
3.2	Team Leader .....	3-1
3.3	Training; Technical Assistance Consultant .....	3-7
3.4	Systems and Programming Advisor .....	3-10
3.5	Survey Methods Specialist .....	3-18
3.6	Evaluation Methods Specialist .....	3-25
3.7	Data and Policy Analyst .....	3-32
3.8	Library Systems Specialist .....	3-35
3.9	Audio-Visual Aids Specialist .....	3-39
4.0	PROJECT MANAGEMENT .....	4-1
4.1	Significant Factors Affecting Project Management in Jamaica .....	4-1
4.1.1	Relationship with Client - US/AID .....	4-1
4.1.2	Relationship with Beneficiary of Services - MOA .....	4-3
4.2	Design and Delivery of Technical Assistance .....	4-3
4.2.1	Common Elements .....	4-3
4.2.2	Relevant Definitions of Technical Assistance and Training .....	4-4
4.2.3	Requirements of Technical Assistance Consultant .....	4-6
4.2.4	Cultivating the Partnership Between Consultants and the MOA .....	4-9
4.3	Approach to Technology Transfer .....	4-12
5.0	CONCEPTUAL APPROACH TO PLANNING THE FINAL 15 MONTHS OF THE PROJECT .....	5-1
5.1	Analysis of Assumptions About the Final Year of the Project .....	5-1
5.1.1	Assumption 1: The Team Leader Can Function in Two Roles .....	5-2



Section

Page

5.1.2	Assumption 2: Turnover in MOA Staff Would Not Impact in a Negative Way Our Ability to Deliver Assistance .....	5-3
5.1.3	Assumption 3: Demand for Technical Assistance Services Would Gradually Decrease During the Life of the APP .....	5-4
5.1.4	Assumption 4: TA Would Be Advisory in Nature ...	5-5
5.2	Project Design Issues to Be Addressed During the Planning Process .....	5-5
5.2.1	Team Leader .....	5-6
5.2.2	Training Technical Assistance Consultant .....	5-6
5.2.3	Systems and Programming Advisor .....	5-7
5.2.4	Survey Methods Specialist .....	5-7
5.2.5	Evaluation Methods Specialist .....	5-8
5.2.6	Data and Policy Analyst .....	5-8
5.2.7	Library Systems Specialist .....	5-9
5.2.8	Audio-Visual Aids Specialist .....	5-11
5.2.9	Technical Assistance Training Strategies .....	5-11

LISTING OF REFERENCE DOCUMENTS (under separate cover)

- Master Training Plan: Part I
- Ministry of Agriculture Data Processing Needs and Requirements: Special Report
- List of Publications by Data Bank and Evaluation Division
- Statistical Survey Methods Specialist: Terminal Report
- Logical Framework: Agricultural Planning Project
- Summary of Management Recommendations: The Second Integrated Rural Development Project (IRDP II)
- Work Plan Presented to Implement a National Food Demand Analysis for the Planning and Policy Review Division, MOA



A. L. NELLUM AND ASSOCIATES

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December 10, 1982

Dr. Frank Morris  
Deputy Director  
U.S. Agency for International Development  
U.S./AID Mission to Jamaica  
2 Oxford Road  
Kingston 5, Jamaica  
Attn: Mr. Cyril Buchanan, Project Director

Re: Agricultural Planning Project  
Contract No. LAC-0061-C-00-1003-00  
ALNA No. 201

Dear Dr. Morris:

A. L. Nellum and Associates, Inc. (ALNA) is pleased to submit ten (10) copies of the Year 1 and Year 2 Report as required in the contract. As indicated in the contract, you are requested to forward three (3) copies to AID/Washington to fulfill the requirement. Under separate cover, we have compiled a number of reference documents which reflect the major products developed in concert with our team's work at the Ministry.

As we are at the end of our second year providing services to the MOA with 15 months remaining in our contract, we wish to capitalize on a unique opportunity for sharing and planning together. We would like to propose a meeting with you in mid-January 1983, after you have had an opportunity to read our Year 1 and Year 2 Report. The purpose of the meeting would be to clarify directions and decisions related to the APP and formulate work plans to guide our team's technical assistance/training services in the coming year.

The meeting would also afford us an opportunity to review the results of the project evaluation conducted recently by the evaluation team. By that time, the Ministry may be prepared to make a decision regarding the data processing/computer system. Thus, we feel that a collaborative approach to the next 15 months will result in work plans and strategies to which we are mutually committed.

Therefore, we will await your affirmative response to a mid-January meeting and suggested dates which are convenient. If, for some reason, you will be traveling to the Washington area in late December or early January, and can meet with us, then that is a possibility also. Please let us know what you prefer.

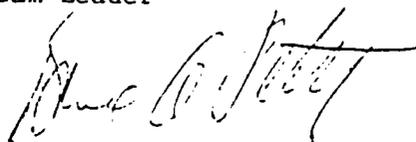
Dr. Frank Morris  
December 10, 1982  
Page 2

On behalf of our entire APP team of specialists, let us express our appreciation to you for the support and guidance over the past two years. We look forward to continuing our work with you in years to come.

Sincerely,



A. Geraldine Brooks  
Team Leader



Bruce A. Petty  
Executive Vice President

Enclosures

## 1.0 EXECUTIVE SUMMARY

On December 1, 1980, A. L. Nellum and Associates, Inc. (ALNA) was contracted by the United States Agency for International Development (US/AID) for assistance in expanding the capability of the Jamaican Ministry of Agriculture (MOA) to manage the training of its personnel in data collection, analysis and and management and to use this expanded capacity to plan for increased agricultural production and productivity. This project, familiarly called the Agricultural Planning Project (APP), was a part of a five year agricultural and economic development effort aimed at greater capacity building for the Government of Jamaica (GOJ).

ALNA's role in the APP is designed to provide training and technical assistance services to MOA personnel in systems and data processing, survey and statistical methods, training methodology, data and policy systems, evaluation methods, library systems, and audio-visual aids technology and installation, ultimately resulting in 90 person months of service over a 3-1/2 year period which ends May 30, 1984.

This report highlights the accomplishments and experiences of our technical assistance team during the first two years of the project, satisfying ALNA's contractual requirement to report on an annual basis by evaluating the project progress and contractor performance. More importantly, our report is designed to pinpoint successes as well as areas which need to be strengthened. It is ALNA's belief that by recognizing pitfalls, we are better able to assist US/AID and the Ministry of Agriculture in resolving the difficulties and in more effectively utilizing the resources required to achieve the objectives of the project. We are presenting not only major accomplishments and areas needing improvement, but also a series of



strategies which we believe are feasible approaches for US/AID and the MOA to consider as we collaborate in partnership over the remaining 15 months of the contract. Thus, our Year 1 and Year 2 Report reflects objectives which we feel were successfully accomplished, barriers which impeded progress, and strategies which we used or recommend using to ensure the ultimate success of the Agricultural Planning Project.

The report is divided into four distinct sections which follow. Under separate cover, we have included a number of the major reference reports, documents and project deliverables which are products of our technical assistance efforts with the divisions and units of the Ministry of Agriculture.

Section 2.0 provides the setting and background for the contract by discussing and analyzing the origin, goals, and evolution of the APP. It presents ALNA's appraisal of the impact of various organizational and environmental factors on the successful implementation of our technical assistance contract, and sets the stage for a detailed account of our team's work.

Section 3.0 provides a substantive description of Project Implementation methods employed by each member of ALNA's team, beginning with the Team Leader. In addition to the accomplishments, we present the tasks performed beyond the scope of work, and discuss strategies used by the team to achieve positive results, despite implementation barriers which were encountered.

Section 4.0 discusses four significant factors which affect the way in which ALNA administers and manages the project. Included in this section are ALNA's relationship with US/AID and with the Ministry of



Agriculture personnel, ALNA's design and delivery of technical assistance and training, and our approach to technology transfer.

Finally, in Section 5.0, we present our conceptual approach to planning the final 15 months of the project. While this section is not intended to offer the work plan, it is designed to share lessons learned during the two-year period, and to outline some of the issues and suggestions which we feel are important guideposts in the development of the 1983-84 plan of work.

The partnership represented by US/AID, the Ministry, and ALNA over the two years has had a positive influence on the project's accomplishments to date. All of the plans made have not been executed. All of the efforts attempted have not been resounding successes. What is important is the way in which ALNA's team members have been received in Jamaica, supported in their efforts to deliver technical assistance, and encouraged through the extension of their expertise beyond the original requirements in the scope of work. If in two years this partnership is able to produce such results, then we are enthusiastic about the accomplishments over the next 15 months, and optimistic that our contractual commitments will be more than fulfilled.



## 2.0 BACKGROUND

### 2.1 Agricultural Planning Project Rationale

This section of the report presents a discussion and analysis of the origin, goals, and evolution of the Agricultural Planning Project. We also present our assessment of the impact of the various organizational and environmental contexts in which the project has functioned. Finally, we discuss the implications of those contexts on ALNA's approach to successful completion of contract requirements.

Throughout the decade the deteriorating effects of Jamaica's economy have been evident: the declining investment and spending in tourism and mining; the increasing costs of petroleum and imported goods; the downturn in employment and the building trades; and the rising patterns of criminal and violent acts. Agricultural work programs and fiscal strategies did not result in solutions to the balance of payments deficits. In fact, Jamaica suffered a negative net reserve position, lacked investment capital, and experienced great fiscal deficits; not to mention decreased agricultural and industrial production, compounded by a reduced gross domestic product (GDP).

The lack of growth in the agricultural sector over the past decade has been a major cause of Jamaica's increasing unemployment, high inflation rates, foreign exchange shortages, high rural to urban migration, lower living standards, and emerging nutritional problems, according to the Ministry of Agriculture (MOA). These findings were substantiated by the World Bank as well as subsequent MOA studies.

One of the most blatant marks of an underdeveloped economy is low productivity, and Jamaica has shown all of the qualifying signs. Jamaica,



for example, has experienced a dynamic shift politically which has caused a rippling wave of impact throughout its culture and economy. Many strengths are observable but many problems are also caused by the state of affairs. Chief among the problems which has directly affected the economy is the earlier great wave of "out" migration by professional and skilled manpower. Consequently, a dire economic situation exists, one which has been characterized by inflation and a lack of foreign exchange. The agricultural sector has probably been impacted negatively more drastically than other sectors. More specifically, efforts to reduce poverty, increase the supply of basic food and the necessary raw materials, and to utilize a massive number of the island's people in the growth process have begun.

In response to the obvious problems which stem from the depressed economy, the Government of Jamaica (GOJ) has through its Ministries made commitments to programs which address the continued economic, social, educational, and agricultural development of the country. Initiatives have been developed that address basic needs of the communities of Jamaica at-large. The Agricultural Planning Project (APP) is one such effort undertaken by the Government of Jamaica to turn the devastated agricultural economy around. Under the leadership of the Agency for International Development (AID), the United States' bilateral development and security supporting assistance has been administered to less developed countries, and in this instance to Jamaica. The ultimate end desired is the improvement of the human and economic resources, the productive capacities, and the quality of life for a significant percentage of the Jamaican people, in such a way that political and economic stability is the result.

In order to bring about this effect in the agricultural sector, the Agricultural Planning Project was initiated in 1979. A number of



important outgrowths for Jamaica were expected: the capacity to supply basic chemical and mechanical technology and information to the agricultural sector in forms and ways that farmers understand most; development of a basic infrastructure designed to make the greatest progress in marketing goods; and the establishment of work for its people.

Certain barriers existed in the country which needed to be overcome for the ultimate success of the GOJ's Agricultural Sector Strategies and the Five-Year Development Plan (1978-1982). The most important of which were transfer of technology in the agricultural sector; trained personnel; equipment and resources; a system for planning, analyzing, and forecasting events and results--leading to a balanced economy with timely crop, livestock, marketing, and extension information. The intent of the Agricultural Planning Project was to correct these deficiencies and lead the way to increased agricultural production for domestic consumption and for export.

## 2.2 The Mission, Goals and Objectives of APP

Less than a decade ago, the GOJ established several agricultural development goals which were cited in a Green Paper:

- To increase rural incomes and improve rural amenities and social infrastructure as a basis for raising the standard of living of the rural population;
- To ensure that all agricultural land is retained and used in as efficient a manner as possible;
- To create agro-industrial and small enterprise opportunities in rural areas to reduce the unequal distribution of capital and economic activity between rural and urban areas;
- To produce as much food and raw materials as is economically feasible to meet domestic food and nutrient requirements, to increase exports of traditional crops, and to develop new crop exports; and
- To structure agricultural production to reverse the growing reliance on imported commodities.



The GOJ agricultural sector goals, contained in the GOJ's Five-Year Plan, were to

- Produce food and raw materials to meet requirements for domestic food consumption at satisfactory nutritional levels;
- Increase the number of agro-industries; and
- Expand exports while reducing dependence on imports.

The Agricultural Planning Project was designed specifically to help the Government of Jamaica and Ministry of Agriculture to achieve the aforementioned goals by providing hardware and effectuating appropriate technology transfer. Even in the remaining years, US/AID plans to assist the GOJ in analyzing and responding to changing problems of the small farmer, in maintaining gains made in productivity, and in developing technological responses and policies in the rural sector. Recognition has been given to shortages in skills, personnel, management, and business acumen, in addition to recognizing shortcomings in the GOJ's ability to prepare and implement projects.

2.3 The Mission, Goals, and Objectives of ALNA's Technical Assistance Contract

A. L. Nellum and Associates, Inc. was specifically contracted in December 1980 to provide in 3 1/2 years a total of 90 person months of technical assistance to the Ministry of Agriculture in the following specific areas:

- Training Technical Assistance
- Computer Systems and Programming Training and Technical Assistance
- Data and Policy Analysis



- Statistical Survey Methods\*
- Evaluation Methods
- Library Systems Installation
- Audio-Visual Aids Installation.

The Project Paper detailing the Jamaican Agricultural Planning framework identified the project goal and purpose as

- "Provide increased MOA technical, planning, administrative and logistical support for the Jamaican rural/agricultural sector effort to improve production and incomes at all sector levels, especially the small farmer.
- The purpose of the project is to increase the institutional capability of the MOA to collect, organize and analyze relevant data; upgrade its level of personnel, both quantitatively and qualitatively; improve its administration and management; identify and satisfy its ongoing training requirements; and utilize these factors effectively to meet the stated project goals."

The ultimate result of Technical Assistance in the APP was also projected to include the outcomes listed below:

- The MOA will have absorbed additional trained permanent staff professionals and satisfactorially upgraded the capabilities of other existing professionals.
- The MOA will have increased its permanent data handling capacity through computer availability, data storage and retrieval capacity, and trained personnel on board.
- The MOA will have significantly augmented its general management and specialized training systems capacities.
- The MOA will be using the information from the equipment, personnel, and systems improvements made under the project in designing sound plans and policies to benefit the rural/agricultural sector in general and small farmers in particular.
- The MOA will have increased capacity to conduct needed agricultural surveys.

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\* The Statistical Survey Methods Specialist function was added to the technical assistance contract in a modification, resulting in twelve months of service, for the period August 1981 - August 1982.



## 2.4 ALNA's Project Organization and Plan of Execution

The technical assistance team from ALNA consisting of a Team Leader, five specialists, and a Senior Technical Consultant embarked on the mission to help the MOA:

- Collect, organize, and analyze relevant data,
- Improve the professional skills of current personnel,
- Improve the administration and management of select division, and
- Identify, prioritize, and meet both MOA and relevant public sector training needs.

In implementing this project, ALNA's team amassed its experience, skills, and knowledge to deliver services to MOA personnel in three specific ways:

- Through structured training;
- On-the-job training; and
- Technical assistance.

In our initial proposal, ALNA suggested that all other team members (except the Team Leader) perform the required technical assistance by providing short-term service in several trips to Jamaica over the life of the project (3 1/2 years). After project implementation had begun, it was felt that the two specialists with assignments requesting twelve months of service be stationed in Jamaica for the full term of one year. Thus, The Systems and Programming Advisor is serving 12 continuous months in-country, and it is the intent that the Data and Policy Analyst do the same. The Survey Methods Specialist position, added in the second year of the ALNA contract, required 12 continuous months of service.

Therefore, ALNA's technical assistance delivery pattern consisted of both the long-term, hands-on, day-to-day work directly in the mainstream



of the MOA, as well as the short-term deliveries carried out in intervals throughout the life of the contract, with a range of duration from 6 days to 8 weeks. On a number of occasions, two or more team members delivered technical assistance at the same time, enabling on-site collaboration and coordination to take place with several team functions and with several divisions within the MOA.

Exhibits 2-1 and 2-2 show the actual number of days expended by all personnel associated with the project. Only one position, that of the Technical Consultant, has remained inactive due to the fact that a need for his assistance to ALNA's team has not existed over the two years. In several instances, the demand and great need for services exceeded the provisions initially contracted in the project. Such was the case with the Senior Project Consultant, Evaluation Methods Specialist, Library Systems Specialist, Survey Methods Specialist, ALNA's Project Manager, Corporate Support, and Clerical Support.

## 2.5 Project Staffing

The 1,313 days expended during the first two years of ALNA's technical assistance in the APP have been delivered amidst a unique set of conditions and circumstances in Jamaica. From the outset, the framework for the APP as set forth in the Project Paper has never become reality. There have been political changes in the election of a new Prime Minister and his administration; the organizational structure of the Ministry of Agriculture has not been established as the Project designers had envisioned; and the resources which were assumed to be available to facilitate the implementation of this Project have not all materialized.

Thus, when ALNA's technical assistance team, led by the Team Leader, Geraldine Brooks, arrived in Jamaica in January 1981, they noted





A. L. NELLUM AND ASSOCIATES

EXHIBIT 2-1

CONTRACT YEAR 1  
TEAM AND STAFF UTILIZATION  
DECEMBER 1, 1980 - NOVEMBER 30, 1981

	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	TOTAL
Team Leader	12	20	20	20	22	20	22	22	21	18	22	19	238
Senior Project Consultant			5	5					2				12
Systems and Programming Adv.			1				16	23	2				42
Data and Policy Analyst			1				10	13	9				33
Evaluation Methods Specialist			4.5	3			16	23	8				54.5
Library Systems Specialist			1						2		15		18
Audiovisual Specialist			1						2			10	13
Survey Methods Specialist*									3	20	22	19	64
Technical Consultant													
ALNA Project Manager		4.5	4.25	3	3	4	5	5	5	4.75	2.5	3.5	44.5
Corporate Support													
Clerical/Administrative	.125	4.75	12.75	2.75	3	3.5	1.75	4.5	4.5	7.5	5	2	52.125
TOTAL	12.125	29.25	50.50	33.75	28	27.5	70.75	90.5	58.25	50.25	66.5	53.5	571.125

\* 12 month assignment only

## EXHIBIT 2-2

CONTRACT YEAR 2  
 TEAM AND STAFF UTILIZATION  
 DECEMBER 1, 1981 - NOVEMBER 30, 1982

	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	TOTAL	2 YEAR TOTALS
Team Leader	22	20	20	23	22	20	8	21	8	22	20	20	226	464
Senior Project Consultant		6								11			17	29
Systems and Programming Adv.			13					.75	15	14	20	20	82.75	124.75
Data and Policy Analyst														33
Evaluation Methods Specialist		13						20	7				40	94.5
Library Systems Specialist								.75	16	19	16	17	68.75	86.75
Audiovisual Specialist								.75	15				15.75	28.75
Survey Methods Specialist*	22	20	20	23	22	20	22	21	20				190	254
Technical Consultant														
ALMA Project Manager	2	4	2	3.75	4.5	4	3	4	4	13	4	4	44	88.5
Corporate Support		6							9			4	19	19
Clerical/Administrative	2.5	1	1.5	1.5	2		.5	4	3	16.25	3	3	38.25	90.375
TOTAL	48.5	70	56.5	51	50.5	44	33.5	72.25	77	95.25	63	68	237.5	1,312.625

\* 12 month assignment only



A. L. NELLUM AND ASSOCIATES

14

several important observations which were associated with the work that the ALNA team was expected to perform. The areas of greatest note may be categorized as

- organization
- personnel
- operating resources.

#### 2.5.1 Organization

One of the most notable points of interest was the political setting in which the project found itself. The original Jamaica Agricultural Project Paper had been prepared during the administration of Prime Minister Michael Manley. Indeed, it was during that administration under the Permanent Secretary of Agriculture, Derrick Stone, that ALNA's project had been launched. The political setting, of course, changed and ALNA's project has moved forward since that time under Prime Minister Edward Seaga, and under Minister of Agriculture, Dr. Percival Broderick and Permanent Secretary Derrick Dyer. A chart showing APP reporting relationships in the MOA is shown in Exhibit 2-3.

The Jamaica Government was not the only organization in which changes were taking place. US/AID had its share of administrative changes, including the Rural Development Office personnel assigned to oversee the APP, and including top changes from the Ambassador to the Mission Director. ALNA's project has moved forward in Jamaica under US/AID Director, Lewis Reade, Deputy Director, Dr. Frank Morris, and Rural Development Officer Cyril Buchanan.

The most impactful changes in organization were present in the Ministry of Agriculture where three divisions were established to perform the work: the Training Division, Data Bank and Evaluation Division, and the

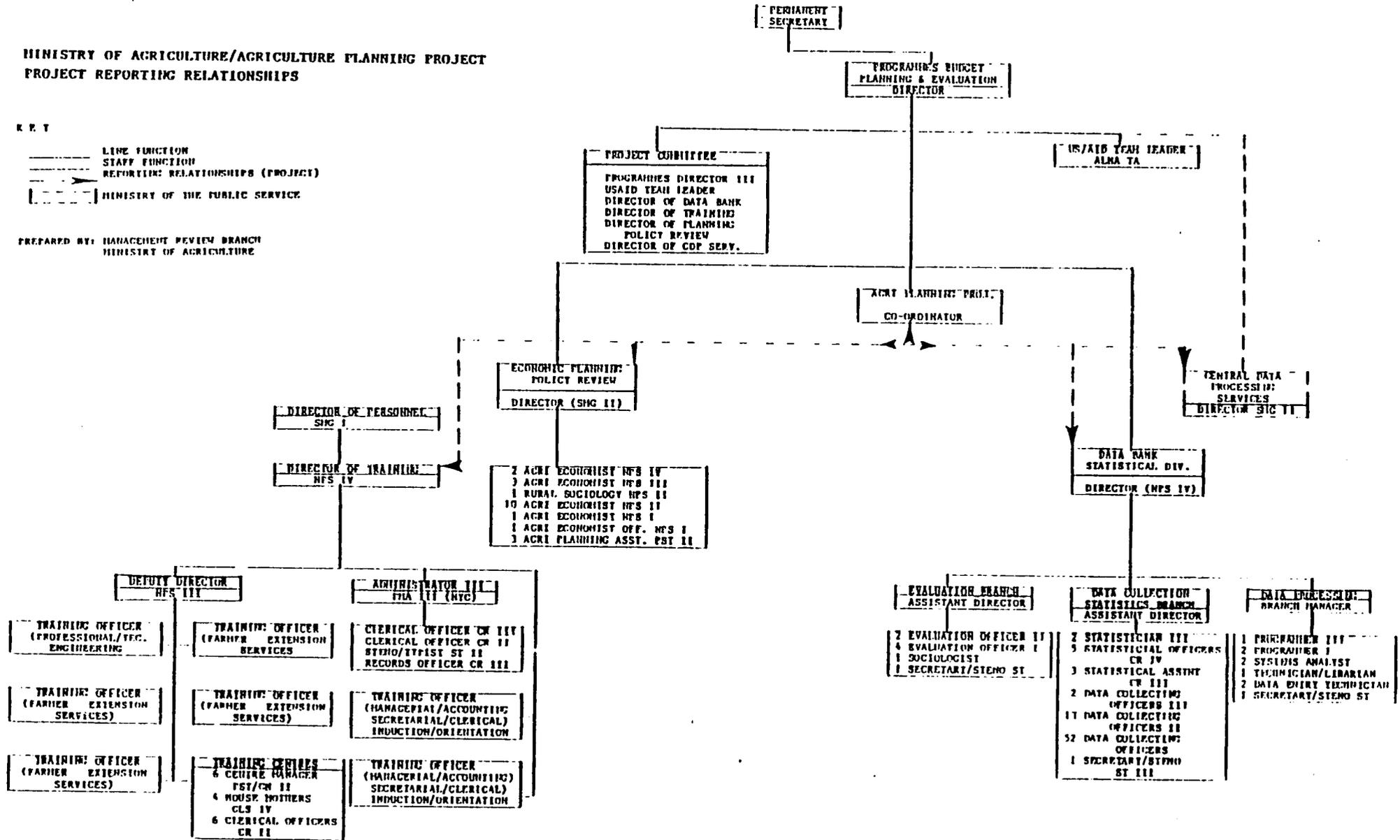


MINISTRY OF AGRICULTURE/AGRICULTURE PLANNING PROJECT  
PROJECT REPORTING RELATIONSHIPS

K. E. T

— LINE FUNCTION  
 - - - STAFF FUNCTION  
 - - - REPORTING RELATIONSHIPS (PROJECT)  
 - - - MINISTRY OF THE PUBLIC SERVICE

PREPARED BY: MANAGEMENT REVIEW BRANCH  
 MINISTRY OF AGRICULTURE



Policy and Planning Division. The Project Paper guiding the implementation of the APP had called for a different structure and administrative organization. At best, some transitional structure encompassing the three divisions listed above was on the chart. The actual flow of direction and protocol consisted of a less formalized means of operating, based to a large degree upon relationships, political clout, and inherent rules.

Since that time, progress has been made in reorganizing the structure of the Ministry to the extent that a combination of divisions and units exist. Currently, the APP is associated with the following divisions and units:

- Data Bank and Evaluation Division
- Personnel Division
- Economic Planning Division
- Financial Planning Division
- Rural Physical Planning Division
- Training Unit
- Rural Development Unit

#### 2.5.2 Personnel

Changes in staffing as a factor was unquestionably the most notable condition which impacted the APP and our team because it was difficult to know to whom one would relate from day to day. In addition to the organizational changes in personnel in the Government of Jamaica and in the United States Embassy previously cited, the staffing changes in the MOA were noteworthy. The Project Manager, Trevor Clarke and the Project Coordinator, Tasmin P.O. Taylor were already assigned and established, though their specific responsibilities were somewhat unfamiliar to a new team such as ALNA's entering the APP. Of the 87 staff positions called for in the design



of the APP, half of them, or approximately 45 were filled. Most significantly, two of the three division directors were changing almost immediately in both the Training Division and the Data Bank and Evaluation Division. Relationships would have to be re-established and/or established with the new designees. The ALNA Team Leader also awaited the assignment of secretarial support to the project for the first four months.

At the same time, other personnel issues affected the APP and ALNA's team, including those cited below:

- high turnover of personnel in the MOA
- the structure of salaries, increases, and project pay which did not seem to be based on a feasible employment system
- shortage of staff in the Data Bank and Evaluation Division and the Training Division particularly
- staff retention problem heightened by the attraction to the private sector
- inability of the MOA with the changing personnel system to be able to attract the levels and types of professionals needed
- the requirements, qualifications, and scheduling of personnel to attend overseas training courses, both long-term and short-term
- the issue of the placement and status of trained personnel who return to the MOA after completing courses of study or attaining additional professional credentials
- the entire performance evaluation and promotion/award system which was being challenged.

Perhaps, the most pressing condition which affected all ALNA project team members was the question of available counterparts with whom technical assistance consultants could work. The MOA desired the assistance from specialists, but did not always have a counterpart available and qualified to receive the technical assistance or training, and become a link in the transfer of technology. Too often the ALNA team member was prepared to



deliver the service without a recipient. This condition exists for the most part because all of the systems needed in the MOA to support adequate personnel services have not been installed at this time. For this reason, resolution of the issues cited above which plague personnel must be made a priority by the Ministry of Agriculture.

### 2.5.3 Operating Resources

One of the devastating conditions found by the team in Jamaica was the lack of resources to operate the project sufficiently, or in some cases, the lack of a workable system to identify and acquire the necessary resources. Assuming adequate finances, ALNA's team discovered that some of the basic resources were not in place for project implementation--the greatest of these was the computer, which did not arrive in Jamaica until the spring of 1981. Even then, the facility to adequately house and store the data processing hardware was not complete.

Appropriate work space for the team members was a lengthy process to facilitate to conclusion, for ALNA's team entered the MOA amidst internal turf issues and conflicts over space which had no bearing on the job to be done. Unfortunately, our team was impacted by it all, and suffice it to say that after almost a year on site, an office with space for the Team Leader and secretarial support was finally provided. Team members who provide technical assistance for short periods of time and in intervals are accommodated close to the divisions in which they are working or close to the Team Leader's office. Long-term team members have also been placed in close proximity to the Data Bank and Evaluation Division to which most of their work interfaces.

Another noticeable condition affecting the outcomes of the APP is the lack of available spare parts for equipment and machinery, and the



simultaneous lack of maintenance and repair facilities and/or technicians. The continuous operation of the Ministry's trailbikes, automobiles, vehicles, and large hardware is minimal due to this condition. In fact, a time loss study to determine the percentage of downtime and lost operating time would undoubtedly show losses amounting to at least thirty to forty percent of the available working time.

ALNA's team found basically the same situation in existence with the Learning Resource Center. Fundamental pieces of equipment and materials assumed to be present were indeed not there or found to have never been purchased. Acquisition of materials and equipment is compounded by both the system and "red tape" procedures of ordering and approving the order, in addition to the length of time it takes to logistically receive the resources from the United States (Miami) or another location.

As with other challenges, ALNA's team has adjusted to the lack or delay in resources, to the changes and styles in personnel practices, and to the informal and formal structures organizations most closely associated with the Agricultural Planning Project. We have found these restraints to be far more numerous than originally anticipated. Despite these shortcomings, the high level of commitment and support for the Agricultural Planning Project evidenced by the staff of the Ministry of Agriculture, US/AID, and the ALNA team resulted in the genesis of a dynamic partnership. There have been substantial accomplishments, which are discussed in the subsequent section of this report, Section 3.0. These achievements have moved the APP toward considerable attainment of project goals.



## 3.0 PROJECT IMPLEMENTATION

### 3.1 Introduction

Within this section, we provide a substantive description of the scope of work and accomplishments of each member of ALNA's contract team. In addition, we address the expertise and technical assistance delivered by team members which transcended MOA requirements. Finally, in this section, we present barriers to effective implementation encountered by the team; but more importantly, we outline the strategies utilized to achieve positive results.

The contents of Section 3.0 provide the foundation for a series of suggested strategies which we believe will result in continued enhancement of the efficiency and effectiveness of the APP. Such issues as staffing patterns, project organization, and resource acquisition and utilization are addressed. A discussion of these strategies may be found in Section 5.0 of this report.

### 3.2 Team Leader

The US/AID Scope of Work required that the overall management and administration of the contract be conducted by the Team Leader. The work scope further required that the Team Leader carry the additional responsibilities of Technical Consultant to the MOA's Training Division. These dual roles were assumed by Ms. Geraldine Brooks, and are discussed separately within this report. Section 3.2 discusses her Team Leader role. Section 3.3 discusses her Training Technical Assistance role.

#### 3.2.1 Scope of Work

The Team Leader's overall responsibility was to facilitate the administration, organization and monitoring of TA activities to ensure



that relevant project tasks were achieved effectively. The Team Leader position was required for the entire 3-1/2 years of the contract.

Ms. Brooks' original responsibilities, as stated in the US/AID

Scope of Work included:

- serving as liaison with the project manager designated by the MOA;
- establishing a reporting/coordinating role with the Rural Development Office (RDO), USAID/Jamaica;
- assisting the MOA to keep the USAID fully informed of project activities;
- assisting the MOA to coordinate with USAID;
- establishing the necessary relationships with the various sections of the Central Ministry of Agriculture and other Ministries involved in implementation, as well as the units of the project itself--Training Division, Policy and Planning Review Division, and Data Bank and Evaluation Division;
- supervising and coordinating the activities of all members of the Technical Assistance Team to achieve maximum results; and
- participating in the identification and scheduling of short-term assistance as required.

As the contract entered implementation, a number of additional responsibilities were assumed by Ms. Brooks in order to facilitate the effective operation of the project. These included:

- community liaison and public information activities to promote awareness and acceptance of the APP;
- assuming the role of APP Project Coordinator in the MOA in his absence;
- conducting the research and negotiations necessary to provide the ALNA team with office space, equipment and supplies;
- renegotiation of TA activities and staffing patterns based on a later start than anticipated;
- assuming a leadership/catalyst role in organizing and guiding APP project staff to address project goals and issues; and



- provision of on-site TA in the absence of designated consultants.

### 3.2.2 Accomplishments Within the Scope of Work

Completion of Ms. Brooks' Scope of Work resulted in a variety of activities in a range of areas. During the initial months of the contract, the Team Leader's focus was on organizational and operational accomplishments necessary to effectively get the contract functioning smoothly. In operating in this area, Ms. Brooks:

- conducted meetings necessary for the day-to-day operation of the project and for team business related to the implementation of the project;
- assured that the necessary support for implementation of project tasks was provided; coordinated the work of support personnel in-country;
- provided for constant flow of information on all project activities, including internal and external documents, reports, memoranda, and maintained telephone communications with corporate project manager on a frequent basis; and
- determined staffing needs on a short-term and long-term basis to accomplish goals.

We should add that the TA Team has been fortunate in having a highly competent, hardworking and reliable Project Secretary/Assistant, provided by the MOA.

Ms. Brooks also assumed other tasks in the area of project management. In this category, her accomplishments involve the planning and documentation of contract tasks, the supervision of contract staff and coordination with US/AID and the MOA. In her project management capacity, Ms. Brooks:

- developed a technical assistance implementation plan with timetables;
- implemented the approved project work plan on a monthly basis;



- developed work schedules that included project short-term team utilization and training and technical assistance schedule;
- prepared and submitted progress reports and regular communiques;
- developed and implemented evaluation measures that allowed for project changes, modifications, and reallocation of resources;
- administered the arrangements necessary for the successful implementation of the project, including logistics and in-country resources;
- detected potential problems and took corrective action;
- implemented two project review meetings and led the team in analysis and review of the project resulting in rewrite and restructure of project based on reorganization of MOA;
- established a relationship with the RDO in-country that permitted knowledge of US/AID's plans, needs, ideas and thinking on matters related to the project; kept the Project Officer informed of progress on the project, and established and maintained other open relationships that fostered the execution of the project; and
- remained alert to new contract requirements, government regulations and directives that affected the work, cost, and management of the project.

Ms. Brooks' final area of activity within the original scope of work focused on the coordination of technical assistance activities. The goal of this undertaking was to ensure the effectiveness, efficiency and timeliness of the assistance provided under the contract. To that end, she:

- led short-term specialists in the implementation of their assigned tasks;
- led and motivated all personnel assigned to the project to maximize project team effort and enhance the quality of work and increased productivity;
- assured that short-term specialists were oriented to their tasks prior to working on-site, that they met expectations during on-site work, that they fulfilled follow-up and



24/1

reporting requirements during the post tour phase, and that continuing support was provided to them;

- arranged for short-term specialists to live and work in-country with minimum upset of normal work flow;
- identified staff development needs and provided training when appropriate;
- as needed, recommended the hiring of specialists to provide services on the project; and
- assured that short-term specialists and other personnel associated with the project accomplished assigned project tasks within costs, schedule, and other specifications.

It should be noted that many of these accomplishments were achieved within the context of formal and informal meetings and conferences. Exhibit 3-1 documents the formal meetings in which the Team Leader participated during the first 24 months of the Project. Ms. Brooks also conducted or participated in literally hundreds of informal meetings during this time period.

### 3.2.3 Accomplishments In Addition to the Scope of Work

As noted earlier, Ms. Brooks assumed a number of responsibilities in addition to her original scope of work. Examples of her accomplishments in this area are listed below:

- provided presentations on the APP to a variety of community based and international organizations;
- participated in fundraising events for the following groups:
  - National Dance Company
  - National Chorale
  - U.S. Embassy, United States Information Service (USIS)
  - U.S. Peace Corps
- in the absence of the Project Coordinator in the MOA, managed the preparation of a major implementation schedule for the entire APP;
- served as Task Force Leader for a special Task Force to prepare and deliver an amendment to the APP which was approved by US/AID;





EXHIBIT 3-1

AGRICULTURAL PLANNING PROJECT  
FORMAL MEETINGS OF ALMA TEAM LEADER

	1981												1982											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
APP-Monitoring Committee	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Training Div. Staff	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trng. Officers Review Mtg.									.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
USAID-Team Leaders	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Technical Assistance Review	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
APP-Site Upgrading Comm. Meetings	.	.	.	.	.	.	.	.	.	.	.	.												
Special Task Force for APP Project Amendment																..	..	..	..					
Puerto Rican Training Task Force													..	..	..	.								
APP Project Retreat		..											..	..										
ALMA Team Project Review In D.C.			..																..				..	
Special APP Project Presentations											x					x	x							

KEY:

- 1/2 Day Meetings
- .. 2-3 Day Meetings
- x Special Presentation

\* Month 1 on this chart reflects the first month the Team Leader was on-site in Jamaica.

2/2

- established an office on-site to initiate project activities;
- maintained project supplies, equipment, and materials in an orderly manner, with a system for identification and inventory on a semi-annual schedule; and
- participated in the selection of major supplies and materials for the project.

#### 3.2.4 Implementation Barriers and Strategies

An immediate and major barrier to the implementation of the contract was the low visibility and priority of the APP as compared to other US/AID projects. This resulted in problems related such issues as work space and staff attrition. The strategies employed to deal with this problem included:

- establishment of an attractive office;
- acquiring high visibility by providing assistance to teams of consultants working with the project;
- affecting introduction of all contract technicians to the top administrators in the MOA;
- initiating meetings to present project accomplishments and resolve project issues; and
- providing direct liaison between the APP and the community.

The second major barrier to implementation was the lack of adequate work space in the first 12 months of the contract. The Team Leader addressed this problem by committing the time necessary to locate and settle into appropriate work space. An important trade-off to this effort has been a comfortable and versatile facility which has been used as a resource and meeting space by staff of all components of the APP.

Finally, as indicated previously, the Team Leader was also responsible for providing technical assistance to the Training Division. This resulted in an extremely busy schedule and sometimes overextension of resources. The major strategies used to address this problem were



combining training and team leader functions in meetings whenever possible and application of an experiential approach to the technology transfer aspect of the project.

### 3.3 Training Technical Assistance Consultant

#### 3.3.1 Scope of Work

The consultant to the Training Division was Ms. Geraldine Brooks, who also served as ALNA's Team Leader on the contract. The requirements of the Scope of Work included working in close collaboration with the Ministry of Agriculture to:

- establish and evaluate the management system and courses appropriate to a central training office in agriculture;
- establish a centralized learning resource center wherein training staff will have access to materials for self-development in their speciality;
- assist in completion of a Skills Inventory and development of a Master Training Plan for the entire Ministry of Agriculture in 1980;
- in consultation with the Director, Training Division, Ministry of Agriculture, rank the required training in order of priority consistent with the goals and objectives of the MOA Five Year Agricultural Plan and the Agricultural Planning Project;
- assist in the development of in-country training schedules and suggest course content and additional sources of instructors;
- advise the MOA on courses in the United States which would achieve the short and/or long-term training objectives set out in the Master Training Plan; and
- design and assist in the planning and implementation of all in-country courses relating to the training of the staff under the purview of the Training Division Center.

Ms. Brooks also assumed responsibility for providing training related assistance to consultants working with the MOA.



20

### 3.3.2 Accomplishments

Ms. Brooks played a key role in the establishment and evaluation of a management system for a central training office in agriculture. In the absence of the Training Director during the first fourteen months of the project, she often represented the Training Division at internal MOA meetings and in contacts with other Ministries. When the new Director assumed her position, the Team Leader provided orientation.

Other accomplishments related to this task include:

- on-schedule completion of the Master Training Plan and delivery of Part One;
- design of the research for the system and training of Training Division staff to conduct it; and
- design of an automated Skills Inventory for the Ministry.

The task of establishing a centralized Learning Resource Center was reassigned to the Audio Visual Consultant. Ms. Brooks provided that person with assistance in implementing the design.

Ms. Brooks also advised the MOA on courses in the U.S. which were consistent with the goals of the Master Training Plan, as well as reviewing in-country training plans and schedules.

She also designed and conducted 2 two-week training courses for MOA training and field extension staff. A number of other courses were designed but remain undelivered due to MOA's severe financial constraints.

Finally, it should be noted that the MOA's Training Director attributes the improved morale of the training staff to ALNA's APP assistance activities.

### 3.3.3 Accomplishments In Addition To the Scope of Work

Ms. Brooks provided support and assistance to a number of consultant teams working within the MOA. This included representing the Ministry



with a team of Puerto Rican consultants working to develop proposals to be submitted to the Prime Minister's Task Force on Training. She also assisted a group from Central Data Processing in a training resource assessment. Finally, she assisted a team of education staff assigned to the development of proposals for the new Jamaica School of Agriculture.

#### 3.3.4 Implementation Barriers and Strategies

Training implementation was a particular problem because the Training Unit does not have enough control in establishing training needs, dates, sessions, and funding requirements. The result is a sporadic pattern in overall training, courses offered, timing, and coordination. Without a change in structure and control and authority, the level of training as laid out in the Master Training Calendar will not be accomplished under the circumstances. There is also concern that the logical framework needs more training components included in it.

Problems in contract implementation also resulted from a series of financial crises within the MOA. Funds were unavailable for the delivery of a number of scheduled training events, rendering training schedules and plans inoperable. The MOA has also been reluctant to allocate extensive funding for overseas training. The Team Leader will facilitate a meeting of the MOA Finance staff with Training staff to address these problems. Project plans are currently being modified to include more local training.

Finally, as the role of the Team Leader evolved and the project expanded in scope, it became increasingly difficult for the Team Leader to effectively perform dual functions. To further compound the dual role, the Team Leader was required to respond to needs at both sites--the MOA and the Training Center. This has been further complicated by the new T/A requests for more individualized assistance for the Training Division. Thus, there



is a strong need to separate the two responsibilities by providing a separate consultant to deliver training technical assistance.

3.4 Systems and Programming Advisor

3.4.1 Scope of Work

The Project required the services of a Systems and Programming Advisor for one year to provide on-the-job training for

- Systems Analysts and Programmers in:
  - systems design and development:
    - feasibility studies in order to establish technical economic and environmental feasibilities of potential computer systems applications;
    - documentation of proposals for the efficient and economical methods of meeting the information requirements of users;
  - systems design and development of modifications to existing system to maximize efficiency;
  - design of conversion and implementation procedures;
  - development and maintenance of an information storage and retrieval system; and
  - development of training programs for users.
- Programmers in:
  - the development, writing and testing of computer program and operating instructions;
  - the development of test procedures and program revisions in accordance with establishment of programming procedures;
  - the writing of instructions for machine operations; and
  - the writing of documentation, e.g., program manuals, operations manual and user guides for a system.



The statement of work also required this advisor to assist the Data Bank and Evaluation Division in identifying the long-term training needs and in designing relevant management information systems.

However, as the tempo of the planning activities increased at the MOA and its needs for collecting, processing, and analyzing data also increased, the Scope of Work for the Systems and Programming Advisor expanded. As the management of information resources to support the MOA's decision-making, policy development, evaluation, training, and related support functions became known, it was clear that the Systems and Programming Advisor would assume a lead role in upgrading the MOA's information processing capabilities. In addition, the following functions were included in the work tasks: developing control systems to effectively monitor the performance of over 40 local and 20 internationally funded programs; develop and implement relevant Management Information Systems covering all activities and communications throughout the Ministry; develop and implement a skills inventory/needs assessment system; select and install a Data Base Management System to facilitate the management and utilization of the MOA's information resources; and provide advice and technical assistance to the MOA on related problems and issues.

#### 3.4.2 Accomplishments

Dr. Salim Hammoud, ALNA Systems and Programming Advisor is currently stationed in Jamaica for one year providing technical assistance and advice to the MOA. Prior to his current assignment, Dr. Hammoud served on the team as a short term advisor, and in three visits to Jamaica, he:

- (1) assisted the MOA in preparing for the installation of its first computer IBM System 34;
- (2) conducted training sessions for the data processing staff;
- (3) briefed MOA management on the management and utilization of its



computer resources; and (4) performed studies of the current and potential requirements of the computer resources and related cost effective options for providing these resources.

During his first visit in the summer of 1981, Dr. Hammoud conducted a needs assessment and skills inventory of the various MOA divisions, in which he coordinated efforts with other ALNA team members. He also developed and administered a series of briefings and training programs for MOA personnel in anticipation of the installation of IBM System 34. These activities included:

- Delivered a series of lectures on the following topics:
  - System Development
  - Operating Systems
  - Data Base Management Systems
  - Project Development Cycle
  - Programming Language and Standard
- A 3-day course in Fortran for Data Bank and Central Data Processing Unit staffs.
- A number of informal briefings to the Agricultural Planning Project staff on the application of Information Processing technology to their needs.

Dr. Hammoud provided advice and technical assistance to the Data Bank and Evaluation Division in the facility preparation for the installation of IBM System 34. At the request of the MOA, he also prepared staff papers and workplans for the

- application of computer technology to project planning and control;
- planning and implementation of an Agricultural Management Information System; and
- software development standards for the MOA Data Processing Branch.



Dr. Hammoud also conducted initial discussions on the analysis and design of an automated monitoring and evaluation system for tracking the performance of the MOA program, both locally as well as internationally funded.

During his second visit to Jamaica in January-February 1982, Dr. Hammoud initiated work on the feasibility, analysis, and design specifications for a number of computer-based management systems, including:

- Monitoring and evaluation system for MOA projects;
- Management Information System; and
- Automatic-interactive system for Needs Assessment and Skills Inventory System.

The programs for staffing and training to meet the growing needs of the Ministry for data processing services were reviewed, updated, and upgraded. The System 34, which had been in operation only a few months, was proving to be inadequate to meet the needs of MOA. Dr. Hammoud, therefore, developed recommendations for upgrading its capabilities together with cost estimates.

The Ministry's requirements for data processing have grown faster than the capabilities of the System 34. In addition to plans for upgrading the capacity of System 34 multiple requests for micro-computers emerged. Concerned by these developments, US/AID and the MOA Permanent Secretary asked Dr. Hammoud in September 1982 to undertake a comprehensive in-depth study of the MOA's computer and data processing needs, and to recommend hardware, software, staffing and training which satisfied those needs. Specifically, the study attempted to: (1) provide computer system(s) configuration to meet the overwhelming growth of the MOA's current and projected data processing workloads, requirements and needs; (2) examine the



costs associated with obtaining the necessary computer system(s) immediately or consolidate the processing workloads of the MOA and CDPU computers in the future; (3) develop a Master Plan to improve and increase the capacity of computer facilities, and ensure that resource demands would be balanced by resource availability and capability; (4) consolidate the MOA data processing activities in order to provide the framework to develop the MIS System that would permit cross reference--when authorized--between various divisions of the MOA; and (5) show the cost savings associated with consolidation of computer(s), as well as, the costs incurred for conversions in the future.

A survey of computer utilization and needs in the MOA was conducted. This survey included structured interviews with managers, operators and users and used questionnaires to document computer configuration, costs and utilization information. Every division and department in the MOA was contacted and their needs were assessed and analyzed.

Currently, several divisions and departments are developing fragmented and, to some extent, duplicated data processing applications. Divisions are unaware of other division's requests and often duplicate them. Little communication and coordination exists among divisions. Each department is operating in relative isolation and individually grappling with data processing problems. The flow of information is too diffused and information is not available to the persons who need it. This fragmentation is the result of the absence of centralized planning of data processing activities.

The study conducted by Mr. Hammoud considered three options to meet the data processing requirements of the MOA:

1. Purchase/rental of new hardware model to match the data processing workloads and the operating environment. Suggested Systems are IBM 38 and IBM 4331 computers.



2. Fully utilize the capabilities of the combination of MOA upgraded IBM System 34 and CDPU IBM 370 through the linkage, under a contract of services suitable to handle the growing needs of the MOA data processing. Suggested contract of services would include 4-6 hours per day - prime time.
3. Utilize the MOA upgraded IBM 34 as a standalone computer with occasional usage of the linkage with CDPU Computer IBM 370.

Based upon an in-depth cost/benefit analysis, the study recommended a master plan to be implemented in the following stages:

- Stage I: MOA proceed to consolidate data processing facilities by establishing an MOA Data Processing Center operating as a utility offering computational, software development, training, consulting and other computer-related services to various divisions. This policy will permit the MOA to control rapidly rising data processing costs and increase the utilization of installed computer equipments as proposed in previous studies of July 1981.
- Stage II: Various Divisions should be able to access MOA Data Processing Center through terminals or small computer equipment. They should retain responsibility for input preparation, scheduling, quality control, and output report distribution.
- Stage III: The MOA Data Processing Center should be given adequate resources (facilities and personnel) and support to plan for and coordinate resource sharing and facility consolidation.
- Stage IV: Consolidation should take place within the framework of a MOA Management Information System as proposed in the previous studies of June 1981 and February 1982.

Consolidation would provide the opportunity to establish linkage between files and data bases maintained by the MOA Data Processing Center. Consolidation would also provide the MOA with the opportunity to significantly increase the accessibility of this information to managers.

Dr. Hammoud proposed the following implementation schedule:

1. It is anticipated that procurement action should take place no later than December 1982.
2. Installation of the system should begin no later than April 1983.



3. Training of personnel would continue with the current and projected course recommendations to upgrade their skills to a level which matches both required skills in applications development and system knowledge.
4. The initial review, analysis and design of all identified projects should be completed as scheduled. Programming support will continue on the IBM 34 system to do various small applications and surveys as before, as well as the modification, conversion and testing of existing programs to fit on the new machine.
5. Try the best approach to match the personnel resources with the future machine capabilities and data processing workload, for effective and efficient utilization, by staffing (hiring or contracting qualified personnel) to match the projected staff requirements as being proposed.

Dr. Hammoud has also written a proposal to develop "training modules" for the MOA Data Bank and Evaluation Branch which would introduce both future users and data processing beginners, at an early stage in their careers, to the common topics likely to be relevant to them in future careers and goals. More specifically, the objectives of the proposed training modules are to provide users with (1) some of the fundamental concepts of (and developments associated with) computerized information processing; (2) a general orientation to the computer--what it is, what it can and cannot do, how it operates, and how it may be used to solve problems; and (3) some insights into the broad impact of computers on personnel in business and government, the environment in which they work, and on the society in which they live.

The following reports and papers have been developed by

Dr. Hammoud as part of the work performed in his function:

1. HAMMOUD, Salim, Project Planning and Control; proposal for the Data Processing Branch of the Data Bank and Evaluation Division of the Ministry of Agriculture, July 1981.
2. \_\_\_\_\_, Planning and Implementation of Agricultural Management Information System for the Ministry of Agriculture/GOJ, June 1981.



3. \_\_\_\_\_ , MOA Management Information System, Requirements and Characteristics, February 1981.
4. \_\_\_\_\_ . Proposed Computer Upgrading and Costs Estimates, February 1982.
5. \_\_\_\_\_ , Computer Training Curriculum; A Set of Training Modules proposed as a certificate program(s) for the personnel of the Data Bank and Evaluation Division, September 1982.
6. \_\_\_\_\_ , Ministry of Agriculture, Data Processing Needs and Requirements and Recommendations of the Hardware, Software, Staffing, and Training Required to Satisfy Those Needs, November 1982. (Included in the reference documents attached under separate cover.)

#### 3.4.3 Accomplishments In Addition to the Scope of Work

The scope of work for the position of the Systems and Programming Advisor has grown tremendously with increased responsibilities and changing priorities. While the initial statement of work emphasized on-the-job training for the systems analysts and programmers, it is clear now that this Advisor must also provide technical assistance and advice in the areas of development, management, and utilization of data processing capabilities to support the decision-making, program planning, resource management, training, and related functions of the Ministry of Agriculture.

#### 3.4.4 Implementation Barriers and Strategies

A major concern in upgrading the data processing capabilities of MOA has been the high rate of turnover of trained personnel, particularly after they receive training. Government salaries simply cannot compete with those offered by the private industry. Both the MOA and US/AID are quite familiar with and concerned about this problem. Some of the measures which have been considered to attract and retain the trained personnel in the Ministry include:

- Bonding the trained personnel to require them to serve the Ministry for a certain minimum period after they receive training at governmental expense;



- Revise and upgrade the salary structure to compete more effectively with the private industry; and
- Contract out certain tasks to private industry/contractors, which cannot be accomplished in-house.

It is unlikely that one single measure will effectively resolve this problem. An effective solution would probably require an optimum mix of all three measures and decisions, both at the policy and operational levels.

A related area of concern is the inadequacy of the present data processing capabilities of the MOA to respond effectively to requirements imposed upon it by the increased tempo of planning, programming, and training activities in the Ministry. This has resulted in multiple requests for the procurement of micro-computers, as well as uncoordinated and often duplicative procurement of data processing services. To alleviate this situation, Dr. Hammoud, ALNA Systems and Programming Advisor, has conducted a comprehensive in-depth study of the Ministry's computer and data processing needs, and recommended hardware and software required to satisfy these. The recommendations of Dr. Hammoud, if adopted, would move the MOA forward in establishing an adequate and effective data processing capability.

### 3.5 Survey Methods Specialist

#### 3.5.1 Scope of Work

In 1981, the Agricultural Planning Project was extended to provide for a one year consultation effort targeted at Statistical Survey Methods. This was done in recognition of a need for increased statistical expertise within the Ministry. The Survey Methods Specialist, Merton V. Lindquist, was assigned to the project during the one year period of August 27, 1981 to August 26, 1982.

His initial scope of work included:



- Provision of on-the-job training and in-country courses to local counterparts on all aspects of survey methodology including planning field excursions, office procedures, quality control, data processing and data analysis of sample surveys.
- Assistance in the evaluation of sampling frame.
- Assistance in developing questionnaires, control forms etc.
- Assistance in developing plans for efficient execution of sample surveys.
- Assistance in developing analytical plans for various surveys.
- Assistance in the design of various types of samples.
- Assistance in developing systems for efficient survey management and operation.
- Assistance in the statistical, sociological and economic analyses of sample survey data.
- Assistance in identifying technical assistance for specialized areas of survey needs.
- Coordination of the evaluation of existing surveys.
- Provision of management assistance in the implementation of field surveys, from sample selection and survey design through data processing, to data summarization, and finally to publication of the results.
- Improvement and evaluation of forecasting accuracy and procedures.
- Any other areas of statistical consultation which may arise from time to time including:
  - Remote sensing
  - Objective yield measurement
  - Area frame sampling
  - Livestock surveys
  - Crop production surveys
  - Nutrition studies.

Each of these activities was designed to advance the efficiency and quality of the operations of the Ministry's Data Collection and Statistics Branch.



### 3.5.2 Accomplishments

The list of activities proposed for the Survey Methods Specialist was extensive. It was deliberately made so. By 1981, the Data Collection and Statistics Branch had an already established program of censuses and surveys being conducted. The specialist, therefore, was attached to and became part of the functioning Ministry of Agriculture statistical organization.

The operations of the Statistics Branch are not static; unforeseen requirements for specific statistical information that arise because of new or changing policy concerns by the Ministry and/or problems encountered must also be attended. Therefore, it was inevitable that the specific topics listed in the scope of work received varying degrees of attention and that the specialist functioned in a sense as an integral part of an already operational organization. Accomplishments, therefore, are in part in the sense of "participation" rather than of sole development.

The activities in which the Survey Methods Specialist engaged may be categorized as follows:

- the development of informal working papers on a wide range of issues relating to the structure and operations of the Data Collection and Statistics Branch;
- participation in the design and implementation of the Special Banana Farmers' Survey;
- participation in the design and implementation of the Food and Beverage Consumption Survey; and
- participation in staff development and planning conferences and meetings with Branch staff;

The following paragraphs present more detailed descriptions of each of these activities.



Mr. Lindquist used the medium of informal working papers and memoranda to provide his analyses and recommendations regarding a wide range of Branch activities and operations. Such papers provided Ministry staff with an opportunity to consider and react to the objective observations and ideas of the Specialist within the context of their own time-frame and priorities. Areas addressed by these papers included:

- analysis and reaction to the Programme of Work for the Data Collection and Statistics Branch;
- analysis and suggestions regarding Agricultural Production Forecasts;
- observations and recommendations on Marketing Surveys currently under consideration by the Branch;
- comments on the use of an Area Frame;
- observations and notes in reference to training programs at the United States Bureau of the Census;
- analysis and recommendations on staffing and training of Branch personnel in the exterior;
- suggestions on the contents and format of the DCO Training questionnaire;
- observations and suggestions on the Agricultural Inputs Survey;
- observation and suggestions on the Special Banana Farmers' Survey; and
- analysis and recommendations on the census coverage of the Farmers' Registry.

The specialist also played a key role in designing and implementing the Special Banana Farmers' Survey. His specific activities in the conduct of this study included:

- design and documentation of a draft questionnaire;
- revision of the study's Enumerators' Manual and preparation of Chapters 3 (Listing Operation) and 4 (Interview Approach);



- participation in design and delivery of training of enumerators;
- preparation of an initial draft of a listing of tables as survey output;
- preparation of recommended computer edit specifications.

Mr. Lindquist also contributed to the development of the Farmers' Register. His participation included:

- revisions of the Enumerator's Reference Manual;
- preparation of the Supervisors' Reference Manual;
- participation in the design and delivery of four training sessions for enumerators and two sessions for supervisors.

Major responsibility was assumed by Mr. Lindquist in the conduct of the Food and Beverage Consumption Survey. His specific contributions included:

- preparation of working papers on the initial survey and alternative sample and survey designs;
- developing the details of the survey design;
- preparation of first stage sample counts from the 1970 Population Census Enumeration Districts;
- preparation of the document, "Food Consumption Survey: Selection of First Stage Sample Areas";
- preparation of the document, "Sample and Survey Operation Consideration Work Sheet."
- preparation of the document "FCS-Supplementary Sample and Survey Operation Work Sheet";
- design of the following survey forms and questionnaires:
  - HL-1 Household Listing Form
  - HL-2 Special Dwelling Place Listing Form
  - FCS-1 Control Form
  - FCS-2 Household Record Card
  - FCS-3 Food and Beverage Purchase and Consumption Questionnaire
  - FCS-5 Food and Beverage Summary Review Form
  - FCS-6 Total Household Expenditure and Family Income Questionnaire



- preparation of an Enumerators' Reference Manual for the Household Listing Operation; and
- preparation of the preliminary draft of the Enumerators' Survey Reference Manual.

A charting and listing of all of the publications produced by the Data Bank and Evaluation Division under the APP is included in the reference documents.

Finally, Mr. Lindquist contributed to the ongoing assessment and refinement of Branch operations through participation in meetings, conferences and training events with Ministry staff. Specific examples of this activity include:

- participation in conferences, working sessions and retreats concerned with agricultural statistical development as requested;
- participation in informal exchanges, sessions and seminars in reference to Survey Methods including the preparation of notes;
- observation of training of Enumerators for the Fishing Survey;
- observation of training of Enumerators for Agricultural Production Surveys.

### 3.5.3 Accomplishments In Addition to the Scope of Work

Because the scope of work for the Survey Methods Specialist was so broad, none of his extensive activities fell outside his particular assignment. The reader will note in reviewing the activities cited above that many accomplishments fell within the general management assistance task with which Mr. Lindquist was charged.

### 3.5.4 Implementation Barriers

The Survey Methods Specialist generally found the staff of the Ministry's Data Collection and Statistics Branch to be dedicated and skilled professionals. The two major barriers to completion of his scope of work



were therefore, related to resource limitations rather than organizational systems issues.

The first barrier existed in the validity and reliability of data collected from some samples. It is possible to design an objective probability sample of farmers for direct interview regarding their agricultural production, or of designated small units of land for field measure of the crops growing in the sample areas. Problems arise, however, in obtaining the data with complete objectivity. Some farmers in the sample may be unable or unwilling to report their production data objectively. Field measure exercises may be completed imperfectly. The resulting lack of uniform objectivity results in unanswered questions about the overall accuracy of some survey data.

The second barrier was a need for an overall evaluation of the statistical system in use by the Ministry. Factors such as the lack of objectivity cited above and incomplete information on the part of many reporters, indicate a need for an overall assessment of the accuracy of the statistics generated by the Branch. Compounding this problem is the lack of availability of 1978 agricultural census data which precluded comparison of the Ministry's data with the results of a similar but independent study.

#### 3.5.5 Strategies Used to Overcome Barriers

Mr. Lindquist worked with Branch staff to analyze efforts to establish greater objectivity in sampling procedures. Phase I - staff expansion and initiation of experimental objective sampling has been completed with his assistance. He also participated in the design of a second phase of development to run from 1983 through 1986 to further correct this problem.



Regarding the need for an overall assessment of the overall statistical system of the Ministry, Mr. Lindquist worked with Branch personnel in implementing interior measures to attempt to effect some improvement in the quarterly crop area and production data being reported and to study relationships in the cycles of crop production and farm gate prices over time. These included:

- a detailed regularly scheduled quarterly review by Statistics Branch and Extension Agent personnel jointly of the reported information;
- a parallel small scale data gathering operation by Branch Data Collection officers for selected important crops as a basis for essentially independent check date;
- intensive checking of reported data with data reported for prior base periods by head office statisticians as a mechanism to flag possible erroneous reporting;
- studies of the cycles of crop production and of farm gate prices to note whether significant statistical relationships between the two series exist.

In addition, the Statistics Branch was assisted in initiating planning and preparation for the conduct of a Farmers' Register as a census level enumeration. The Farmers' Register was field conducted in August/September 1982. The initial results will be available in January 1983.

The beneficial effect of the several interim measures taken is not known. It is a fact that the collective procedures being utilized are sufficiently non-objective, and rather non-scientific. In a pure statistical methods technical sense, any "feel" for the matter must await more definitive confirmation.

### 3.6 Evaluation Methods Specialist

#### 3.6.1 Scope of Work

The project required the services of an Evaluation Methodology Advisor for 13 weeks to focus on providing and transferring evaluation



methodologies and obtaining maximum use of the capabilities and resources of the Data Bank and Evaluation Division.

Specifically, the advisor was to:

- Provide technical advice in evaluating the skills inventory survey;
- Plan and implement on-the-job training for MOA staff in:
  - design methodology in a logical framework;
  - application of design methodology;
  - evaluation of forecasting accuracy and procedures;
  - the logical structure of a development project;
  - a logical framework matrix;
  - information gathering techniques;
  - methods of information analysis;
  - elements of electronic data processing;
  - cost effectiveness and financing of alternative monitoring and evaluation systems;
  - institutional aspects of monitoring and evaluating agricultural and rural development projects;
  - update skills inventory techniques;
  - designing an annual evaluation system to ascertain the effectiveness of each program or survey (e.g., Evaluation of the Training Plan).

Despite the short-term nature of this position, there has been heavy demand on the services of the Evaluation Methods Specialist, including tasks which were not explicitly recognized or called for in the statement of work, such as the evaluation of the Second Integrated Rural Development Project (IRDP-II). On the other hand, with the creation of the separate position of the Survey Methods Specialist, some of the responsibilities of the Evaluation Methods Specialist were transferred to the new position.



### 3.6.2 Accomplishments

During the period under review, Dr. Alvin Lackey, ALNA Evaluation Methods Specialist, made four site-visit trips to Jamaica. During these visits, he: (1) served as the primary resource person on reviewing, refining and clarifying the project goals; (2) provided a major leadership role in conducting the first annual review of the Agricultural Planning Project; (3) introduced evaluation methodologies and techniques to effectively monitor the MOA programs; (4) conducted evaluation training programs for the officers and administrators of the Training Division; and (5) prepared a revised Logical Framework (Log Frame) for the Agricultural Planning Project.

Dr. Lackey first visited Jamaica in February 1981 to participate in a project review of the Agricultural Planning Project attended jointly by the MOA, US/AID, and ALNA team members. The purposes of the review were to: (1) review, clarify and obtain agreement on project goals, and (2) develop a set of work plans with attendant implementation dates. With Dr. Lackey serving as the primary resource person, the three parties reached an understanding and agreed that the official goals of the project were those which appear in the Project Agreement as signed by the two governments. Although these goals are subject to revision by the signers, it is these goals, as revised from time to time, which will be used to evaluate the success of the project. It was also made clear that goal revisions would be made for the purpose of refinement and/or clarification and not to change the basic purpose of the project. Thus, the restatements of the goals for greater clarity would not require formal revision of the Project Agreement.



During his second visit to Jamaica (June 11 - mid-August, 1981), Dr. Lackey, at the request of the Ministry of Agriculture, performed an in-depth evaluation of the management system of the second Integrated Rural Development Project (IRDP-II). The major foci of this study centered on the organization, planning, implementation, budgeting, and reporting function of the management system. The framework of the study was based on the proposition that management involved the achievement of project objectives through control of physical and financial resources, people and time, based on accurate and timely information flow. The most significant observation to come out of this study was that the management of the project appeared to be shifting from control by the Project Director to a high level management committee with a number of subcommittees. Also of significance was the change in the Project Director's position which took place during the study period. These two factors were of such major importance for management and so recent that statements about how the project was being managed were perhaps not as useful as suggestions for how the new management team might proceed. Therefore, this report outlined a number of suggested procedures for the new management team to consider.

During this visit, Dr. Lackey also provided technical advice and assistance to the MOA Data Bank and Evaluation Division on a number of issues. These included:

- A monitoring system to evaluate the on-going performance of MOA programs;
- Procedures for conducting a training needs assessment project;
- Methodologies for evaluating the Agricultural Planning Project.
- Project evaluation functions of the Evaluation Branch (MOA).



- Recommendations relating to the organization and functions of the Data Bank and Evaluation Division.
- Recommendations of a system which would combine the monitoring and evaluation functions of the Evaluation Branch of MOA.

In January 1982, from the fourth through the fourteenth, Dr. Lackey returned to Jamaica to work with the staff of the Evaluation Branch of the Data Bank and Evaluation Division, to prepare and conduct the Annual Review of the Agricultural Planning Project. This task was actually initiated in the summer of 1981, when Dr. Lackey suggested the steps to be taken in the preparation of this review. Dr. Lackey performed a major leadership role in conducting this review. He worked with the participants to conceptualize the main functions of Agricultural Planning Project, and the roles and interrelationships of the Ministry's organizational units included within the project.

In addition, Dr. Lackey also prepared a job description and outline of work for a continuous cost/benefit analysis of the Second Integrated Rural Development Project.

Dr. Lackey's fourth visit to Jamaica, in the period under review, took place between July 3 through August 6, 1982. During this period of consultation, Dr. Lackey performed the following tasks:

- Reviewed and made suggestions/recommendations on the cost/benefit study being conducted by Mr. Dan Fleming and the Evaluation Branch at the Second Integrated Rural Development Project in Christiana.
- Reviewed and made comments/suggestions on the current work of the Evaluation Branch.
- Made a number of recommendations to Mr. Lester Boyne, Director, Data Bank and Evaluation regarding the functions of the Evaluation Branch.
- Prepared a revised Log Frame for the Agricultural Planning Project including a suggested MOA organization chart for presentation and discussion at a meeting of Division and Branch



Heads with AID participation. (The Log Frame is included in the reference documents under separate cover.)

- Prepared a final draft of a Log Frame for the Agricultural Planning Project along with a proposed organizational chart for submission to the Permanent Secretary and AID for approval.
- Redesigned the evaluation forms being used by the Evaluation Branch.
- Introduced a new form and procedure for calculating estimated end-of-project costs as a basis for determining budgetary requirements for each project component and total project financial needs.
- Identified a number of references for purchase under the project for use in training evaluation officers.
- Conducted a three-session training program in the evaluation of training programs for the officers and administrators of the Training Branch.
- Met with PAMCO (Project Analysis and Monitoring Company) officials to discuss the coordination aspects of the evaluations being conducted on MOA projects by the Evaluation Branch and PAMCO. Wrote suggestions to Mr. Lester Boyne concerning the relationship between these two organizational structures.

The following reports and documents have been issued as a part of the work done on this task:

1. LACKEY, Alvin S., Trip Report, February 26-March 2, 1981.
2. \_\_\_\_\_, Management Study, Second Integrated Rural Development Project, prepared by the Evaluation Unit, MOA, July 1981.
3. \_\_\_\_\_, [Proposed Reorganization of the Ministry of Agriculture], Organization Issues Group, July 1981.
4. \_\_\_\_\_, Suggestions for Evaluating the Agricultural Planning Project; Memorandum to Mr. Lester Boyne, Acting Director, Data Bank and Evaluation Division, August 6, 1981.
5. \_\_\_\_\_, Project Evaluation Functions of the Evaluation Branch; Memorandum to Mr. Lester Boyne, Acting Director, Data Bank and Evaluation Division, August 6, 1981.
6. \_\_\_\_\_, Recommendations Relating to the Organization and Functions of the Data Bank and Evaluation Division; Memorandum to Lester Boyne, Acting Director, Data Bank and Evaluation Division, August 7, 1981.



7. \_\_\_\_\_, Monitoring/Evaluation System; Memorandum to Mr. Lester Boyne, Acting Director, Data Bank and Evaluation Division, August 7, 1981.
8. \_\_\_\_\_, Trip Report, January 1982, July 22, 1982.
9. \_\_\_\_\_, Observation Re: Cost/Benefit Survey Instruments and Approach for IRP-2; Memorandum to Faith Innerarity, Branch Head, Evaluation, July 7, 1982.
10. \_\_\_\_\_, Views Re: Training Needs Assessment, July 23, 1981.
11. \_\_\_\_\_, Evaluation System; Memorandum to Mr. Lester Boyne, Director, Data Bank and Evaluation Division, July 22, 1982.
12. \_\_\_\_\_, Comments on Summary Reports; Memorandum to Faith Innerarity, Branch Head, Evaluation, July 27, 1982.
13. \_\_\_\_\_, Relationships Between PAMCO and the Evaluation Branch; Memorandum to Mr. Lester Boyne, Director, Data Bank and Evaluation Division, August 5, 1982.
14. \_\_\_\_\_, Logical Framework--Agricultural Planning Project, August 1982.
15. \_\_\_\_\_, Activities Report Covering the period July 3 through August 6, 1982; Memorandum to Geraldine Brooks, Director, Technical Assistance Team, September 8, 1982.

### 3.6.3 Accomplishments In Addition to the Scope of Work

During his second visit to Jamaica in the summer of 1981, Dr. Lackey was called upon to perform an in-depth management study of the Second Integrated Rural Development Project (IRDP-II) which consumed considerable amounts of his energy and time. This study was not explicitly recognized or implied in the statement of work.

### 3.6.4 Implementation Barriers and Strategies

This position was provided for on a short-term -- 13 weeks -- basis. However, the demands on the incumbent for additional duties and assignments have been quite heavy. Additional time has been requested for the Evaluation Methods Specialist to respond more adequately to the increasing demands for technical assistance.



### 3.7 Data and Policy Analyst

#### 3.7.1 Scope of Work

The Project required the services of a Data and Policy Analyst for one year to:

- establish a Data Analysis Branch in the Data and Policy Review Division;
- upgrade the skills of the Data and Policy Review personnel through in-country training courses, or on-the-job training in the following:
  - forecasting agricultural production and demand;
  - the role of agricultural policy decisions in social and economic development;
  - the processes by which agricultural policies are formulated and implemented;
  - implications of major policy issues such as food and population issues, marketing issues, land reform, resource conservation policies, price policy for agricultural commodities, tax policy, import-export policies, development and diffusion of new technology, and other issues related to national agricultural policy decisions and their implementation at local levels;
  - meaning and measurement of economic development;
  - operational procedures to use different forecasting techniques and evaluate forecasting accuracy;
  - distinctive features of less developed countries as related to theories of growth and development;
  - techniques for analyzing the impact of alternative policies, including function fitting, calculation of elasticity co-efficients, resource productivities and comparative advantages;
  - application of analytical techniques to policy issues most relevant to Jamaica, such as credit, taxation, price marketing, trade mechanization, population and land tenure;
  - identification of conflicts among goals, the relative importance of alternative goals and trade off among goals;
  - the comprehension of the impact of the political environment and resource limitations on priority policy issues;



- Assist the MOA's Planning and Policy Review Division in identifying needs for long and short-term overseas training and technical assistance.

Thus, the role of the Data and Policy Analyst in the Agricultural Planning Project is to develop a capability or subsystem at the Jamaican Ministry of Agriculture which would effectively use the information generated by the data collection, processing, and management specialists. The Data and Policy Analyst is to sort out these data by selecting what would be reliable and relevant. By using various economic analytical tools, ranging from marginal analysis to simulation and linear programming models, the Data and Policy Analyst would analyze these data sets (information) to obtain answers to various agricultural problems, as well as estimations of risk and uncertainty in the rural sectors. The accomplishment of this function would create an integrated information system for rural development which would also be valuable in bettering development planning, program planning, diagnosing rural and regional problems, and in identifying, formulating, and evaluating rural projects.

### 3.7.2 Accomplishments

The ALNA consultant-Data and Policy Analyst, Dr. F. Enrique Valdivia, visited Jamaica from June 17-July 17, 1981. By then, however, the Ministry of Agriculture had changed its priorities and placed a major emphasis on the Demand Analysis studies. The Data and Policy Analyst was asked by the Ministry of Agriculture to develop a workplan for Demand Analysis studies, design the methodology to be used, the resources needed to complete the studies and the schedule for the completion of the studies.

As required by the MOA, Dr. Valdivia, the Data Policy Analyst, developed an outline and workplan for the study of demand analysis for food items in Jamaica, discussing the methodology to be employed, data required



to conduct the study, sources of information and the possible applications of the information gathered in the study. Dr. Valdivia also made several presentations to the MOA management and staff to brief them about the objectives, scope, methodology, and the use of the demand analysis studies in agricultural policy development and planning.

The following publication was prepared and issued as a part of the work on this task:

1. VALDIVIA, F. Enrique, Outline of Study on Demand for Food in Jamaica, July 1981.

### 3.7.3 Current Status of ALNA's Efforts On This Task

Dr. Valdivia left the Agricultural Planning Project in September 1981 to pursue other interests. After an extensive national and international search, ALNA identified three very highly qualified, experienced, and viable candidates to be considered for selection by the Ministry of Agriculture. In the meantime, however, the MOA had already recruited two senior-level analysts who, with the technical assistance of the ALNA Survey Methods Specialist, proceeded to begin gathering data for the demand analysis studies. The Ministry has yet to finalize its plans for the utilization of the services of the Data and Policy Analyst and consequently, despite our repeated urging, has not acted on the selection of the candidate. Needless to say, this matter needs to be resolved quickly and urgently, if ALNA is to meet its obligation for the timely and successful completion of the Project. Extended delay in the final selection could result in the nonavailability of the selected candidate, requiring opening up another expensive and time consuming search for a suitable candidate.



### 3.8 Library Systems Specialist

#### 3.8.1 Scope of Work

The Project called for the services of a Library Systems Specialist on a short-term basis to assist in the establishment and maintenance of the Data Bank Library and relevant systems including:

- documentation of pertinent surveys, manuals for all data processing and programming procedures used in the Data Bank Division;
- tapes or disks of applicable canned programs with appropriate user manuals; and
- tapes or disks storing the new raw data from all surveys for which the data has been processed.

Although the statement of work appeared to focus this task on information programs and activities of the Data Bank Division, it was soon realized that such activities were pervasive throughout the Ministry of Agriculture, particularly in the MOA divisions actively associated with the Agricultural Planning Project. These divisions use as well as generate volumes of information to support the decision-making, policy development, program planning, evaluation, training, and related support functions. To obtain a proper assessment of the nature and scope of these activities, our Library Systems Specialist, Dr. Rameshwar Paul, during his first site visit in Jamaica in October 1981, prepared, at the request of Mr. Trevor Clarke, MOA Director of Budgets and Programmes, an Overview of the Information Activities in the Ministry of Agriculture. This overview helped to identify the major information resources, programs, and activities in the MOA and provided insight into the existing and potential interrelationships.

During his second visit in August 1982, at the request of US/AID, the scope of the proposed Library Information System was defined and



developed more precisely and explicitly within the framework of the Agricultural Planning Project.

The revised scope provides an integrated information resource management approach for the proposed APP Library Information System (LIS) and has the following components:

- Programmatic/Statistical Data Bases
- Publications Management
- Bibliographic Data Bases
- Document Collections, including Learning Resources Center
- Information Dissemination and Utilization

In addition, the proposed system provides for a strong and active interface with the Management Information Systems as well as the use of common centralized information processing capability of the Data Bank computer facility. Exhibit 3-2 on the following page, illustrates the conceptual model of the proposed Library Information System. A scope note defining the role of LIS within APP was prepared, and reviewed and the system was approved by both the MOA and US/AID.

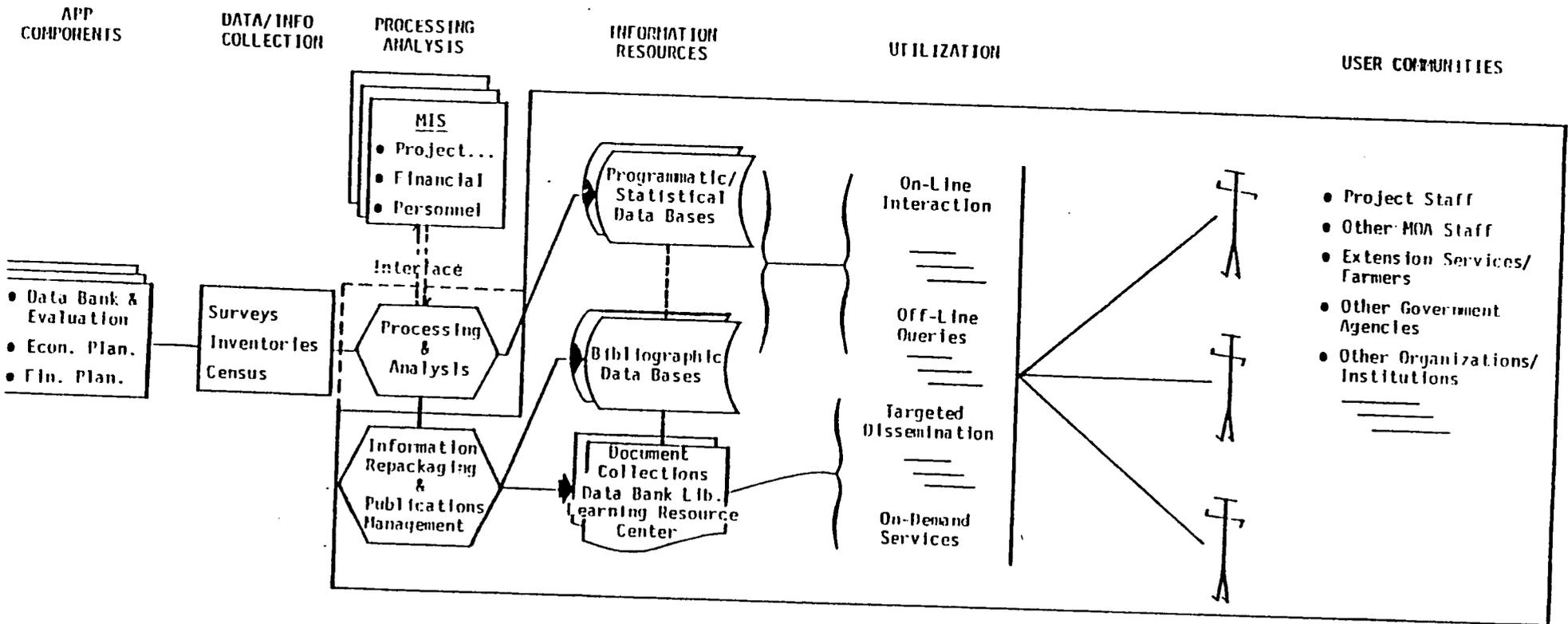
The design phase of the APP Library Information System calls for the following steps:

1. Requirements analysis of the information needs of the various MOA Divisions participating in APP
2. Systems requirements for various information systems components
3. Identification of data elements for various information systems/components
4. Developing definitions of data elements and the initiation of a Data Dictionary/Directory
5. Design of various files, structures or a unified data base



AGRICULTURAL PLANNING SYSTEM  
 LIBRARY INFORMATION SYSTEM  
 - A CONCEPTUAL MODEL -

EXHIBIT 3-2



6. Design of LIS component 2 - Information Package/  
Publications Management
7. Design of LIS component 3 - Bibliographic Data Bases
8. Design of LIS component 4 - Document Collection
9. Design of LIS component 5 - Information Dissemination and  
Utilization
10. Implementation - (Design of component 1 - Statistical/  
Programmatic Data Bases will emerge as a direct output of  
Step 5.)

The Design Phase will also attempt to define and resolve implementation issues and develop recommendations for the organizational structure and interfaces for the proposed APP Library Information System.

### 3.8.2 Accomplishments

The project schedule calls for the completion of the work on the design of the APP Library Information System by the end of December 1982. (See Information Management Function in the Agricultural Planning Project-- A Scope Note, August 19, 1982.) We plan to meet this deadline.

Besides developing the scope and the conceptual model of the LIS, design work on the following implementation steps has been completed:

- A detailed outline of the APP/LIS scope has been prepared.
- Requirements analysis of the information needs of the Agricultural Planning Project has been conducted.
- The role and the requirements for the publications management function in the Agricultural Planning Project were developed and reviewed. Three (3) systems configurations which can be implemented in stages and provide for a minimally acceptable control of the management of the APP publications to a complete ministry-wide system were proposed and received enthusiastically by the Ministry. Work on the identification of the data elements for the LIS bibliographic data bases, as well as a Data Element Dictionary/Directory (DED/D) was initiated and will be continued.
- A basic understanding of the organizational issues, structure, and interfaces affecting the implementation of LIS has been



developed and discussed informally with the MOA counterpart and the US/AID Project Monitor.

The following reports have been issued as a part of the work on this task:

1. PAUL, Rameshwar, An Overview of the Information Programs and Activities of the Ministry of Agriculture, Government of Jamaica, October 21, 1981.
2. \_\_\_\_\_, Information Management Function in the Agricultural Planning Project, A Scope Note, August 19, 1982.
3. \_\_\_\_\_, Information Management Plan for [the] Jamaican Ministry of Agriculture [submitted by JOBS, Inc.]; Some Review Notes, August 24, 1982.
4. \_\_\_\_\_, Agricultural Planning Project Library Information Systems: Project Issues and Design Considerations, September 2, 1982.
5. \_\_\_\_\_, Information Needs of the Agricultural Planning Project: Requirements for the Proposed Library Information System, October 14, 1982.
6. \_\_\_\_\_, Report of the Site Visit, August 9 to September 4, 1982, October 15, 1982.
7. \_\_\_\_\_, Publications Management in the Agricultural Planning Project, October 28, 1982.
8. \_\_\_\_\_, Report of the Site Visit, October 17 - November 12, 1982, November 16, 1982.

### 3.8.3 Accomplishments In Addition to the Scope of Work

As part of the related activities, the Library Systems Specialist prepared for Mr. Trevor Clarke, APP Project Manager in the MOA, an in-depth review of the Information Management Plan for the Jamaican Ministry of Agriculture, submitted by JOBS, Inc. The Library Systems Specialist also continued to develop informal contacts with other MOA divisions and officers who would benefit by the establishment of the APP Library Information System.



#### 3.8.4 Implementation Strategies

The Library Information System is still in the Design Phase with implementation scheduled to begin in early 1983. A major barrier to implementation of the LIS might be encountered as the Ministry faces organizational issues. In anticipation of that potential barrier, we have had several informal discussions with the MOA counterpart and the US/AID Project Monitor. As a result of these discussions, we have developed a basic understanding of the organizational issues, structure, and interfaces affecting implementation of the LIS. We believe this understanding will contribute significantly to the removal of barriers which may impede the implementation of the LIS. We will continue to develop similar understandings on related issues through formal and informal communication with appropriate personnel involved and try to resolve the issues or conflicts before they emerge as barriers.

#### 3.9 Audio-Visual Aids Specialist

##### 3.9.1 Scope of Work

The Project required the services of an Audio-Visual Aids Specialist, in consultation with the Training Division personnel, for three months who would determine ways in which audio-visual aids may be used to help achieve the objectives of training programs, and to advise in the selection of related media. Specifically, the statement of work required this Advisor to:

- conduct training courses and workshops to orient training division personnel in the effective use of audio-visual methods.
- assist in the preparation and implementation of courses to upgrade the skills and methodology of trainers to enable them to design, administer and present effective training programs.



- advise as to the requirements for upgrading the training center facilities at Eltham and Twickenham Park in Jamaica to allow for optimum use of audio-visual aids and equipment.

The Project provided for the establishment of a centralized Learning Resource Center (LRC) to support the training programs of the MOA. The Audio-Visual Aids Specialist was required to serve primarily in an advisory and support capacity to determine ways in which audio and video technologies could be used to achieve the training objectives of the Project. An initial requirement of this task was a quantitative assessment of existing learning resources including books, periodicals, magazines, statistical resource materials, audio-visual supplies, and equipment both from local setting, and when appropriate, from abroad. As such, the Learning Resource Center was to be actively interfaced and integrated with the APP Library Information System.

The project also called for the following:

- A series of formal workshops on instructional design and development, featuring the proper use of audio-visual materials and equipment, the production, evaluation, and selection of audio-visual materials, and individualized instructional methods.
- An audio-visual training manual to be used by the MOA personnel, which includes
  - a detailed document with diagrams, specifications, and costs for the improvement of the physical facilities;
  - an audio-visual bibliography or catalog describing all of the commercially prepared subject matter materials, as well as materials used to improve instruction; and
  - a list of equipment and self-instructional software recommendable for use in the local environment.

### 3.9.2 Accomplishments

During his first site visit to Jamaica in November 1981, Dr. Lionel S. Duncan, ALNA Audio-Visual Aids Specialist, made an in-depth



analysis of the role of the LRC in the MOA's training program, covering the following areas:

- training procedures and requirements of MOA;
- facilities requirements for educational media production and utilization;
- minimum personnel requirements for the proposed audio-visual services;
- list of recommended basic equipment and materials; and
- audio-visual support requirements, including inventory management, electrical power requirements, and proposed physical facilities.

Dr. Duncan returned to Jamaica in August 1982, and found that despite his analysis and recommendations, very little progress on the establishment of the LRC had occurred between November 1981 and his return in August 1982. In fact, some unanticipated events had imposed new requirements on his work plan for the Learning Resource Center. These events included:

- A complete turnover of the administrative staff of the Training Unit. Most of the staff with whom technical assistance had been delivered in the past, were all transferred or temporarily away from the unit.
- The Training Unit had been relocated from the main quarters of the Ministry. This move led to new requirements for physical arrangements. These new facilities are temporary, and create some difficulties in consolidating intermediate planning.
- The urgency to acquire audio-visual equipment that was displayed during the previous visit, seemed to have decreased with the staff turnover. As a consequence, the equipment which was assumed acquired, had not been ordered.

These and other developments required establishing new analysis, rapport with new personnel, and diverted emphasis on reassessing the new organization and requirements. As a consequence, the following tasks were implemented:



1. Analysis of the equipment status

The purchase of equipment has not been indicated. This made workshops on The Use of Equipment and Production of Audio-Visual Materials unfeasible. The initiative was taken to verify the status of the list of equipment proposed during the last visit. This required a search of the registers and files, locating and interviewing old as well as new administrators, justifying the equipment selection at the US/AID level, and soliciting commitments for the earliest possible dates for the acquisition of a partial listing of the equipment.

2. Establishing rapport with a new counterpart

Ms. Marilyn Clarke, who has recently returned from training in the United States, was assigned the responsibility of implementing the LRC. Her training overseas was in the Administration of Training Programs. Her status and responsibilities have not been defined, but it will be important that her role in administering the LRC and the Audio-Visual Program be clarified soon. Dr. Duncan would then work more directly with Ms. Clarke as counterpart in LRC.

3. Analyzing the new physical facilities

The new facilities are limited, but adequate for beginning the improvement of the training efforts. A lay-out will be submitted to Ms. Clarke for implementation. A list of the type of resources that may be acquired or produced in-house will also be submitted. This should serve as an implementation guide during the interim period between Dr. Duncan's visits.

4. Workshops in instructional design and development

Workshops for planning were modified as a result of scheduling difficulties; however, several opportunities were afforded to meet with trainers. These meetings emphasized systematic procedures for improving training methodologies and were well received. Interest for more hands-on experience in the future seemed high.

We believe that, in spite of the unexpected changes, the motivation and interest in the Learning Resource Center, and the search for alternative training methods to replace some of the straight traditional lecture methods are extremely high. This has been very encouraging. With the staff returning from training in the U.S., the future and potential of media and a viable Learning Resource Center is quite promising. A detailed



proposal for a Learning Resource Center in the Training Division of MOA has been prepared. The proposal includes a conceptual model of the proposed LRC, purpose of the LRC, proposed plan for the LRC (physical facilities and staffing and detailed operational plan), equipment, staffing and production of resource materials together with a detailed cost analysis.

The following reports have been issued as a part of the work on this task:

1. DUNCAN, Lionel S., Trip Report, The Agricultural Planning Project, ALNA No. 201, December 1981.
2. \_\_\_\_\_, Site Report, Visit of August 10 to 27, 1982; Audio-Visual, Agricultural Planning Project--Scope of Work.
3. \_\_\_\_\_, Proposal for a Learning Resource Center in the Training Division, Ministry of Agriculture, [October 1982].

### 3.9.3 Implementation Barriers and Strategies

As previously mentioned, the major barrier to the effective implementation has been the inadequacy of the organizational capabilities at the MOA to follow through on the plans and recommendations of the Audio-Visual Aids Specialist. With the returning U.S. trained staff, this problem appears to have been rectified to a great extent. The future development of various media and a viable Learning Resource Center are indeed achievable through the Agricultural Planning Project.



## 4.0 PROJECT MANAGEMENT

Major considerations in managing the contract are presented in this section of the report. We include ALNA's relationship to US/AID--the client, relationship with the MOA--the beneficiary of services, our technical assistance designs and deliveries, and our approach to technology transfer. Throughout this section, we highlight the important cross-cultural implications of management which impacted the coordination and administration of the contract.

### 4.1 Significant Factors Affecting Project Management in Jamaica

#### 4.1.1 Relationship With Client--US/AID

ALNA's conceptual approach to managing the project is based on an interactive relationship between US/AID and ALNA. The Team Leader has been charged with the responsibility for establishing and maintaining a positive working relationship with the ARDO Cyril Buchanan and US/AID Deputy Director, Dr. Frank Morris who monitor ALNA's contract performance in Jamaica. Other ALNA team members and home office corporate managers have been supportive of this relationship in their backstopping role. This role has primarily involved advising the Team Leader of information and contractual requirements from US/AID/Washington. On occasion in ALNA's corporate support role, direct contact with US/AID in Jamaica has been extremely facilitative and informative. Communication through cable and telex of team members' travel schedules has been the most common communique to ALNA/Washington.

The Team Leader's role in maintaining an interactive relationship has been much more specific. As such, she has been asked to ensure that (1) regular meetings are held to create a facilitative atmosphere, share information, discuss mutual concerns, and plan project implementation



direction; and (2) progress reports are made to detail accomplishments, technical assistance and training delivered, barriers encountered and surmounted in project implementation, and next work scheduled to be undertaken. This is the type of open relationship which has allowed for flexibility and sensitivity to changes in activities and time frames, and which has provided the Team Leader with guidance in her management decisions.

4.1.2 Relationship With Beneficiary of Services--MOA

A second significant factor affecting project management in Jamaica is the relationship with the MOA. Acknowledging the need to be particularly sensitive to the personnel at the MOA, the Team Leader has been ALNA's coordinator and liaison. With this end in mind, she has been charged with establishing and maintaining a close working relationship with the APP Project Manager, Trevor Clarke and APP Coordinator, Tasmin P.O. Taylor who direct the project in the Ministry.

The Team Leader's role in maintaining a sensitive relationship has included (1) regular meetings to share information, handle technical assistance requests, and coordinate the acquisition and utilization of project resources; and (2) technical reports of services delivered by specialists, calendars and implementation schedules, and plans for technical assistance strategies in the future. Occasionally the Team Leader has been requested to assume a temporary staff role in the Ministry in the absence of the APP Project Manager. In her role as technical assistance consultant to the Training Division, the Team Leader has had the opportunity to establish secondary relationships with extension personnel and Jamaicans in the field who are the ultimate beneficiaries of training and technical assistance.



In the next subsections, we discuss our approach to technical assistance, training, and the transfer of technology, for it is from ALNA's conceptual approach to management that these processes have been developed.

#### 4.2 Design and Delivery of Technical Assistance

##### 4.2.1 Common Elements

The major result of a needs assessment process is the development of technical assistance plans and strategies. Since each situation and problem in the MOA was unique in history, staffing, and structure, each technical assistance plan or strategy was unique—a tailored strategy or intervention provided by ALNA as a resource to alleviate a troubling condition in the MOA. While each strategy was unique, there were enough common components to link our approach to technical assistance and training.

These common elements included:

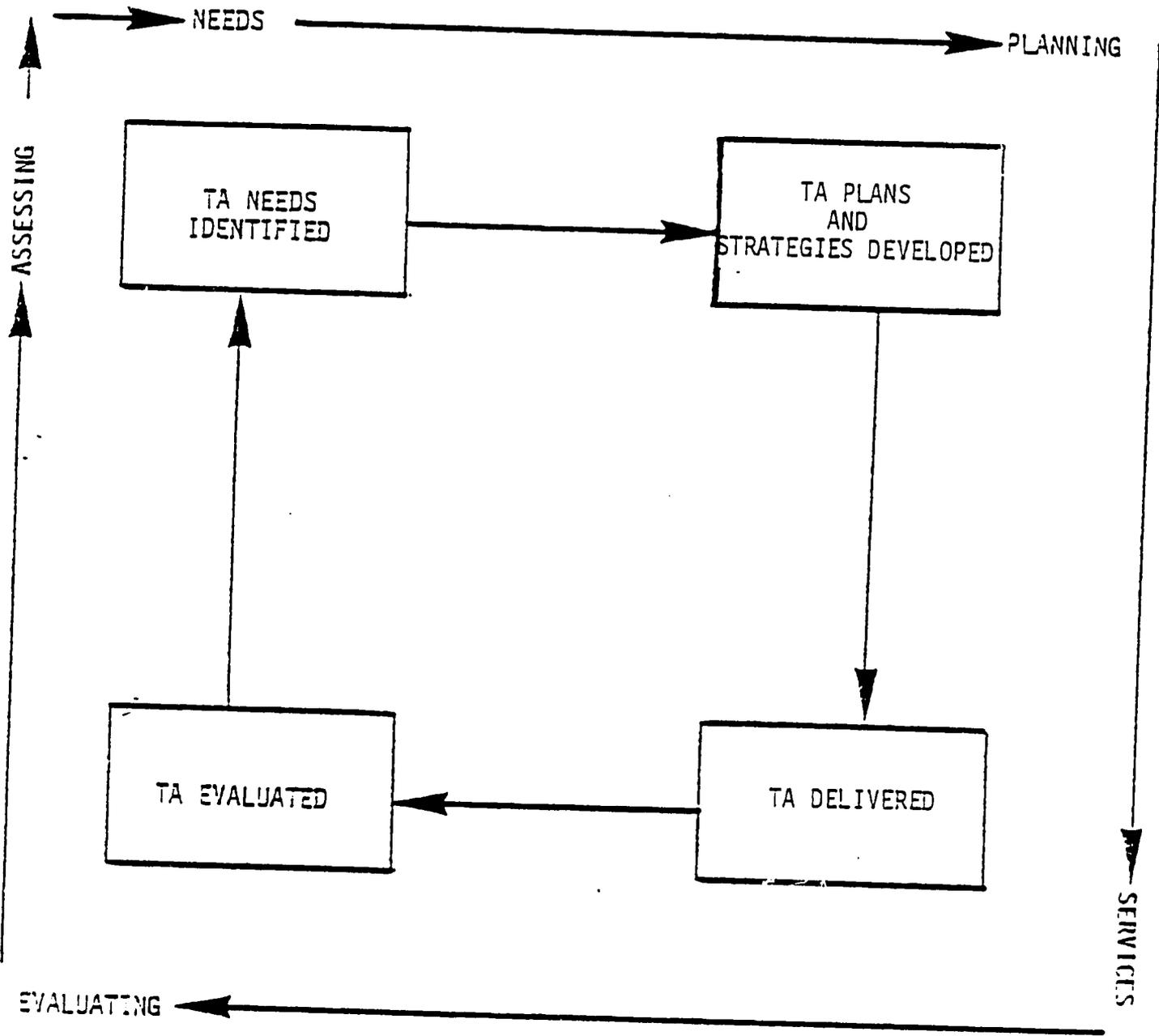
- identified problems or obstacles that the MOA wanted to resolve and major areas of need for training and technical assistance;
- measurable objectives designed to address the problem areas;
- resources currently available to be utilized in solving the problem;
- specifically tailored technical assistance strategies and/or training designed to meet the identified needs;
- designation of key MOA personnel and divisions to be impacted;
- timetable of action steps and completion schedules;
- system for evaluating the technical assistance or training and the subsequent impact of the intervention(s) on the MOA's objectives.

The conceptual design shown in Exhibit 4-1 illustrates the common elements and their link pin effect.



68

CONCEPTUAL DESIGN  
OF  
TECHNICAL ASSISTANCE



#### 4.2.2 Relevant Definitions of Technical Assistance and Training

We defined technical assistance within the context of the MOA and this Agricultural Planning Project as:

- On-site assistance designed to resolve or alleviate management, operational, programmatic, or performance problems specific to an organization/division/unit/individual.
- Information sharing through resource materials, workshops, discussions and conferences, or telephone calls to answer specific questions.

Training, on the other hand, was defined as an activity occurring in a formal group setting, generally with an instructor/participant relationship, and with the objective of increasing personal skills. ALNA's APP team did not consider the provision of technical assistance and training to be a panacea, but rather only one phase in developing the MOA's institutional capability to meet the agricultural demands of Jamaica.

At the core of ALNA's technical assistance and training plan is a series of factors which when considered lead to the decision as to which mode is appropriate to use. Definitions are crucial in this process. Our experience indicated that technical assistance and training decisions were far less subjective or personal when the following distinctions were considered:



TECHNICAL ASSISTANCE	TRAINING
Designed to resolve or alleviate operational, programmatic, or performance problems specific to a particular organizational division, limited unit, or individuals.	Designed to impart information or increase skills; usually directed at knowledge, skills or attitudes; expected to produce behavioral change (e.g. job performance).
Designed to alleviate a "deficiency in execution."	Designed to alleviate a "deficiency in skill."
Often delivered on a one-to-one basis.	Usually provided in a group setting.
Specifically directed at an identified need, often with "unique" characteristics.	General enough to apply to the entire group; designed to address common needs.
Usually conducted in an informal manner with preplanned flexibility to respond on an "as needed" basis.	A more formal procedure where specific methodologies may be identified and developed.
Usually conducted at the recipient's "on-site" location.	Usually delivered in a central location (or where most appropriate facility is located).

Most often these distinctions were made by the APP team as a matter of course and from years of experience delivering technical assistance. However, there are occasions when the specialist analyzed the situation, conferred with the division head in the MOA and the Team Leader, then made the decision on the most appropriate mode.

There were a few situations in which either technical assistance or training was requested by the MOA personnel, and in the specialist's best judgment, the other mode was more appropriate.



Another distinction which the APP team often made was "deficiency in skill" versus "deficiency in execution." Skill deficiency indicates a need for new concepts or behaviors, updating or modifying existing knowledge to reach the required or desired performance level (most often, resulting in a need for training). Deficiency in execution indicates that basic knowledge exists, but there is a problem with performance. Our team found that what was sometimes needed was a redesign of procedures, removal of job impediments, or reallocation of resources. In other words, there was a need for technical assistance.

The various technical assistance designs used by our team specialists may provide a model for US/AID, and the collective plans may very well provide the MOA with numerous models to be used, adapted, redesigned, and evaluated over time. This is a process which could ultimately provide US/AID with research and state-of-the-art opportunities that transcend the Agricultural Planning Project. Models of the technical assistance strategies and plans alone could offer a resource which may be shared throughout the agricultural/rural development sectors.

#### 4.2.3 Requirements of Technical Assistance Consultants

The work of a technical consultant in a developing country involves a number of difficult tasks--all simultaneously interacting and influencing the quality and quantity of the technical assignment as well as the human relationships with the counterparts. Ideally, the ultimate objective of this type of technical assistance is to make the host institution independent. To work toward this objective places a great number of demands on the technical assistance team, in particular, on the Team Leader and long-term specialists. Such was the case with the ALNA team assigned to the Agricultural Planning Project in Jamaica.



Our team found that Jamaicans are proud and expressive people. They have their own unique characteristics, as does any culture in any country, be it developed or less developed. Such uniqueness imposes certain requirements on a team of technical consultants. Broadly these requirements included:

- technical competence and credibility;
- a high threshold for frustration, ambiguity, and stress;
- the ability to establish self-sustaining and meaningful relationships within Jamaica;
- an appreciation and respect for the values, beliefs, and customs of Jamaica and its people; and
- the flexibility, resourcefulness, and creativity to be a productive technical assistance consultant.

It is the premise of this report--indeed, of ALNA's approach to technical assistance that an appropriate sensitivity and blend of the requirements is essential for successful delivery of services to the MOA. ALNA's observation and experience in conducting numerous technical assistance contracts showed that the absence of either the technical requirements or the human relations requirements usually led to failure. In Jamaica, during the last few years, there have been examples of highly technically skilled consultants who were released from service due to their inability to relate cross-culturally and sensitively to the environment in which they were assigned to work.

In delineating the role of technical assistance in developing countries such as Jamaica, Dr. Frank Morris, Deputy Director of US/AID in Jamaica, proposed five factors which lead to establishing trust that are vital for the delivery of technical assistance. Dr. Morris cited:

- mutual respect;



- self confidence;
- thorough knowledge of one's own history and a thorough knowledge of the language, history, and culture of the developing country;
- ability to understand, appreciate, and accept differences; and
- understanding and acceptance of the mutual interdependence of peoples and nations.

Such attributes are important in the technical consultants, though such attributes are difficult to recognize in lists of their credentials or even in face-to-face interviews. While we found that it was not possible to assess the degree to which our technical team possessed such attributes, we felt it was important to emphasize the expected roles and enabling behaviors that support ALNA's concept of technical assistance. For the most part, we feel that our technical assistance has borne this out over the two years.

While we do not feel it is sufficient enough to merely mention the attributes, we have instituted several team practices which are designed to improve our team's chances for success in delivering technical assistance. Among the technical practices established for the remaining work on the APP are:

- request and description of the work to be performed communicated to the Team Leader and technical consultant prior to his visit;
- opportunity for the technical consultant to respond to the request in advance of arrival on-site;
- pre-conference with the Team Leader on-site before the technical assistance or training begins in the MOA;
- discussion and work plan in a mutual agreement with the division head or unit head (including strategies and written reports); and
- post-conference follow-up with Team Leader before departure from post.



Our objectives with the initiation of these practices are not only related to improving the quality of technical assistance, but with strengthening the management and coordination of the project from ALNA's side and from the MOA's side.

Among the human relations practices is: the involvement of the Team Leader and team members in community activities in Jamaica; encouragement of team members to become a part of the cultural life of Jamaica by interacting with Jamaicans beyond the work day at the Ministry; and by formally and informally participating in the professional and social events with Embassy personnel and appropriate Government of Jamaica activities. The emphasis on cross-cultural relationships transcends the MOA, and we feel that our team members maximize their effectiveness as technical assistants and trainers when they are able to relate to the cultural environment and the technical work simultaneously.

#### 4.2.4 Cultivating the Partnership Between Consultants and the MOA

In addition to the role that the technical consultants play themselves in establishing and maintaining a mutual climate for technical assistance, AID and the MOA also bear a great deal of responsibility. In Ralph Tomlinson's booklet, The Roles of a Resident Foreign Advisor to a Developing Country, he says

"Before setting up an advisory program, foreign-assistance administrators should resolve a number of issues, many of which usually remain ambiguous both to advisors and to local agency directors long after the advisors have begun working in the developing nation."

The Agricultural Planning Project was not an exception. Tomlinson points out that there are important job specifications that are key to



creating the partnership between the deliverer and the recipient of technical assistance. Some of these are:

- the scope of the advisor's activities
- the decision-making responsibility
- administrative work to be performed
- involvement in budget decisions
- day-to-day operations
- role in reception activities
- reporting responsibility (written)
- reporting responsibility (verbal impressions)
- heirarchical relationships

Such was the case with the ALNA team with the APP. The Team Leader who is the chief of party and functioning on a continuous full-time basis in Jamaica is more impacted by these factors than any other team member. However, we have found that the factors are just as significant for short-term specialists as they are for long-term team members.

The factors listed above comprise a basic set of key elements that make technical assistance more likely to succeed when resolved by AID and the MOA before the arrival of the technical team. In the case of the APP, a number of factors were already decided, while a number of factors, such as the scope of the advisor's activities have been continually evolving and being updated to meet the changing needs of the Ministry. Both positions are appropriate for the success of the APP.

The recipient of technical assistance, the MOA, has a responsibility to ensure the success of technical assistance and ultimate transfer of technology. Dr. Frank Morris, US/AID Deputy Director delineated what he felt were pitfalls which developing countries such as Jamaica should avoid



when managing technical assistance; thereby, achieving greater results from the expertise, and ultimately developing independent skills and knowledge.

The pitfalls, cited as disadvantages, were as follows:

- becoming overly dependent upon technical assistance (foreign or outside);
- allowing the consultant to stimulate a dependency upon his services, the services of his firm, or friends;
- relying upon technical assistance because it is easily available or offered at little or no cost;
- utilizing the advice of the wrong technical expert which is beyond the needs and means of the developing country;
- managing the technical assistance very poorly (particularly if TA is easily available at little or no cost);
- assuming more of a proactive role, rather than a reactive role in managing technical assistance; and
- managing the technical resources very loosely (particularly with the rising costs and limited resources).

Dr. Morris offered advice on how the developing country should get the most out of technical assistance, and ALNA concurs that the following points are applicable to the Agricultural Planning Project and the Ministry of Agriculture. First, Jamaica must manage, direct, and control the technical experts who are coming to assist the country. Second, the personnel assigned to work with the technical consultants must be competent and self-confident enough not to be intimidated by the outside expertise. Next, only the technical consultants who are able to teach and transfer their skills and knowledge should be accepted by the recipient of services. Fourth, only accept the technical expertise if there are Jamaicans who are working closely to learn and transfer the knowledge at the conclusion of the technical assistance. And finally, Dr. Morris urged that the technical expert not be



allowed to remain in the country too long delivering technical assistance and building increased dependence upon his expertise.

Thus, the real ends of technical assistance will be reached as ALNA's team of consultants continues to consciously demonstrate the technical and human relations skills, and as the MOA takes measures to institutionalize the expertise. The section which follows addresses ALNA's approach to the transfer of technology and the measures taken to assist the MOA in maximizing the use of our training and technical assistance.

#### 4.3 Approach to Technology Transfer

The basic objectives of the Agricultural Planning Project are to increase the institutional capability of the MOA to collect, organize and analyze relevant data; upgrade its level of personnel, both quantitatively and qualitatively; improve its administration and management; identify and satisfy its ongoing training requirements; and utilize these factors effectively to meet the stated project goals.

The following project outcomes, as articulated in the Project Paper, will determine the degree to which the APP has succeeded in accomplishing the above objectives:

- The MOA will have absorbed additional trained permanent staff professionals and satisfactorily upgraded the capabilities of other existing professionals.
- The MOA will have increased its permanent data handling capacity through computer availability, data storage and retrieval capacity, and trained personnel on board.
- The MOA will have significantly augmented its general management and specialized training systems capacities.
- The MOA will be using the information from the equipment, personnel, and systems improvements made under the project in designing sound plans and policies to benefit the rural/agricultural sector in general and small farmers in particular.



- The MOA will have increased capacity to conduct needed agricultural surveys.

It should be noted that the emphasis is on what the MOA will have "absorbed", "increased", "augmented", and "used", or become capable of using. The project, therefore, is essentially a transfer of technology, methodology, or expertise by the ALNA team to MOA personnel and institutions.

A major emphasis in the Project is on providing relevant and appropriate training. The Project provided for each ALNA team member to conduct on-site assessment activities to determine the specific training needs of current personnel; set priorities among these needs; identify available resources, including existing courses in the MOA and other branches of the Government of Jamaica, course materials, facilities, and personnel; and initiate training programs.

The extensive training activities undertaken and planned in this Project have been discussed in detail previously in Section 3.0. However, it is clear that the training alone will not accomplish the technology transfer objectives of the project, particularly recognizing the high turnover rate that has characterized staffing of the Ministry. We are especially sensitive to the fact that public sector involvements in highly technical fields which compete with the private sector are currently not competitive nor likely to be competitive in the near future. The MOA's training programs and the institution-building efforts are therefore, continually frustrated by the attrition of people to the private sector after they have spent their required time with government, subsequent to receiving training.



To accomplish the technology transfer objectives, therefore, it is essential that the project place due emphasis on developing capabilities in MOA to (1) develop, integrate, organize, manage, and utilize its institutional resources to support decision-making, policy development, program planning, and related support functions, and (2) when necessary, be able to utilize the capabilities of the private sector of Jamaica for many of the responsibilities which cannot be accomplished in-house because of the lack of adequate personnel.

We are taking a number of steps to develop these institutional capabilities of the MOA. At the direction of US/AID and the Permanent Secretary of the MOA, we have conducted a comprehensive in-depth study to determine the Ministry's computer and data processing needs, and recommend hardware and software required to satisfy these. The recommendations of the study, when implemented, would provide for a consolidated data processing facility which will permit the MOA to meet its data processing and analysis requirements, develop and implement management controls to monitor the performance of its various programs, and accomplish its mission and program objectives more effectively.

The Ministry is also in the process of developing, with our technical assistance on the Library Information System, an integrated resource management program to manage the information generated or collected by the APP components. This system would cover the program and statistical data collected by the MOA divisions, all publications and substantive memoranda generated within APP components, as well as acquired by or for them, and provide for the effective utilization of these resources to support the MOA's decision-making, policy development, program planning, evaluation, training, and related support functions.



The proposed Library Information System will be actively interfaced with the Management Information and Project Control systems and serve as an important component of the "institutional memory" of the MOA. A workplan to set up a Learning Resource Center (LRC) in the MOA's Training Division has also been put together. Interfaced actively with the APP Library Information System and the MOA Library, the LRC will provide strong informational support to the training programs of the MOA through

- production of subject matter resource materials,
- provision of audio-visual equipment, and
- training in the proper use of the equipment and materials.

With the publication of Part I of the Master Training Plan, the training program of the Ministry has also established institutional capability to assist the MOA components in planning and meeting their training requirements on a long-term basis. Parts II and III of the Master Training Plan will carry this process further by (1) analyzing all projected training needs and proposals for 1983/85, and (2) evaluating and analyzing the long-term plan for training and staff development, as it relates to the Ministry of Agriculture's Five Year Development Plan.

In the area of evaluation, new techniques and methodologies have been introduced and are in operation at the MOA. A revised Log Frame for the Agricultural Planning Project has been prepared. These methodologies will permit MOA to more effectively monitor the performance of its various programs.

Similar progress is being made, though less easily discernable, in transferring expertise in the areas of survey methodology and data collection, and data policy development and analysis.



For the successful accomplishment of APP, and the transfer of appropriate expertise and skills to the MOA, and for the MOA not to become overly dependent upon outside technical assistance, it is important that ALNA team members are not used in operating line positions. We are equally mindful not to stimulate a continual dependency on our services or to offer advice which might stimulate a demand or aspiration beyond the MOA's real need or capacity. Each ALNA team member is urged to offer only the most appropriate technical assistance to meet the MOA's needs.

We believe that tasks accomplished under the Agricultural Planning Project have been appropriately directed and will result ultimately in the transfer of technology, methodology, and expertise that the MOA needs to

- Collect, organize, and analyze relevant data;
- Improve the professional skills of current personnel;
- Improve the administration and management of select divisions; and
- Identify, prioritize, and meet both MOA and relevant public sector training needs.

In turn, these institutional capabilities will permit the MOA to

- Increase rural incomes and improve rural amenities and social infrastructure as a basis for raising the standard of living of the rural population;
- Ensure that all agricultural land is retained and used in as efficient manner as possible;
- Create agro-industrial and small enterprise opportunities in rural areas to reduce the unequal distribution of capital and economic activity between rural and urban areas;
- Produce as much food and raw materials as is economically feasible to meet domestic food and nutrient requirements, to increase exports of traditional crops, and to develop new crop exports; and
- Structure agricultural production to reverse the growing reliance on imported commodities.



## 5.0 CONCEPTUAL APPROACH TO PLANNING THE FINAL 15 MONTHS OF THE PROJECT

Within the previous sections of this report, we have presented the accomplishments of the first two years of the contract and identified the strategies we applied to overcome barriers to project implementation. At this point, we are prepared to begin the planning stage for the contract's final 15 months.

Our approach to this effort will involve a number of activities to be conducted during the month of January 1983. First, we will conduct a needs assessment, discussing with both MOA staff and the ALNA team members the activities, priorities and outcomes to be achieved during the duration of the contract. At the same time, we will complete an in-depth review of the contract evaluation recently completed by US/AID evaluation team. Finally, we will meet with the staff of US/AID in Jamaica to discuss and resolve a number of issues which will directly impact our Plan of Work for the remaining months.

The first subsection of the report presents some of the observations and suggestions which we have developed as lessons learned from our first two years of contract operation. While this discussion is not presented as conclusive, it does provide us with an opportunity to highlight some specific issues prior to entering into the formal planning process.

### 5.1 Analysis of Assumptions About the Final Year of the Project

Because the nature of US/AID-assisted technical assistance projects is formative changes in direction, methods, and resources during implementation must always be expected. Examination of the challenges faced by the project staff during the past two years, along with the strategies



employed to meet those challenges, provides sufficient evidence to suggest that certain aspects of our approach should be revised during the last phase of the contract to maximize contract resources and avoid recurrence of past problems.

The experience we have gained during the past two years suggests strongly that some of the assumptions which guided the contract design for years 1 and 2 will not be valid in the remaining 15 months of the contract. We wish to discuss those assumptions and provide a conceptual base which will be useful as a guide for contract design and execution during the last 15 months of the contract period.

5.1.1 Assumption 1: The Team Leader Can Function in Two Roles

During the last two years, the APP has become institutionalized within the MOA. Institutionalization of the project has resulted in greater demands being placed upon the MOA as it realizes potential resources, and capabilities. ALNA's technical assistance project has had to accept its share of this recognition on the part of the MOA; and because of the APP's visibility, the demands on the Team Leader have increased significantly.

During the past year, the Team Leader's liaison role has increased. She spends increasingly more time interpreting the project within and outside of the MOA and to foreign dignitaries. Requests for TA have multiplied, requiring time for revision of plans and reallocation of limited resources. In addition, she provides overall coordination services to the APP and its expanded organizational structure--a structure which is in a constant growth mode.

The new demands are further complicated by the negative impact of the environment in which she has to work. For example, unexpected utility service interruptions have been occurring with increased frequency.



As the APP's capacity increases, the demands on the MOA Training Division have similarly increased. And, as employment in the country has increased, staff turnover has increased, resulting in a greater need for training, policy development, and program design and implementation.

These coterminous demands on the Team Leader are quickly reaching the overwhelming stage, and, if continued, will severely and negatively impact our ability to deliver technical assistance services.

The Scope of Work requires the Team Leader to function as project manager and administrator and to serve as technical assistance advisor to the MOA Training Division. The contract was designed to allocate approximately half time to each function. However, it is becoming increasingly clear that the original assumptions on which of the dual role of the Team Leader was based, are less valid now than at the inception of the project.

5.1.2 Assumption 2: Turnover in MOA Staff Would Not Impact in a Negative Way Our Ability to Deliver Assistance

In order for a technology transfer plan to be successful, it is necessary to have a stable environment. This project was designed for the transfer of technology through technical assistance and training methodologies. The larger portion of technology transfer planning had, as its aim, the transfer of knowledge to individuals in the MOA.

During the past year, the APP was faced with an inordinate number of staff changes across all of the TA target areas. All of the key MOA managers with whom ALNA's team interacted turned over at least one time, and the key person responsible for survey management and administration left the organization. For the most part, as these personnel left, ALNA team members were witness to an exodus from the MOA of the products of their transfer technology activities.



The result was replication and repetition of TA and training efforts every time new people came into the organization. This instability resulted in inefficient and, to some degree, ineffective applications of APP resources. Consequently, the resources earmarked for other activities were used to duplicate efforts. We were unable to accomplish some of the objectives originally planned. The assumption that the turnover in MOA staff would not negatively impact our ability to deliver assistance is no longer valid. We must now accept turnover as a reality and revise our structure and technical assistance and training approaches so that technology transfer can be provided within the context of a changing personnel resource pool.

5.1.3 Assumption 3: Demand for Technical Assistance Services Would Gradually Decrease During the Life of the APP

This assumption was a major underpinning of the organization design for ALNA's APP project. It was hypothesized that, during the first year, major technology transfer efforts would be undertaken, resulting in a strengthened MOA workforce. It was further expected that this workforce would continue to grow in capability, requiring less TA and different TA over the course of the 3 1/2 year contract period.

What has taken place in the last two years has been the reverse of this assumption. In fact, the demands for TA have increased substantially. As the APP and the Ministry have developed and grown, more TA has been desired and required. As staff became more knowledgeable and more skilled, they left the MOA and moved into the private sector in search of greater rewards for their newly acquired knowledge and skills. And the ALNA team has encountered an increased demand to assist new staff and to support the ever expanding programmatic efforts of the APP and the Ministry.



The original assumption about demand must be analyzed and new design and implementation strategies must be developed to address this reality.

5.1.4 Assumption 4: TA Would Be Advisory In Nature

Technical assistance methodologies range from the more distant advisory services to the hands-on staff support variety. The original project design assumed that the advisory type of TA would be most cost beneficial. This approach would be successful in a stable environment which permitted the organization to incorporate consultant advice. We have found during the course of the past two years that this is not the case. While some MOA staff are in a position to benefit from advisory assistance, most require hands-on guidance--staff support. This latter type of assistance requires more labor dollars and time resources. The project however, has had to revert to this method of TA in order to assure that our objectives were met. The causal situation can be attributed to absence of personnel, workload of personnel, and the lack of understanding of how TA should be utilized. Because, in many instances, we were forced to revert to staff support as opposed to advisory assistance, our resources were consumed at an accelerated rate, and some project objectives had to be revised downward.

During the time remaining in the contract period, this assumption must be revised so that design and implementation strategies are available to deal effectively within the reality of the environment in which project staff work.

5.2 Project Design Issues To Be Addressed During The Planning Process

In the above subsection, we identified some areas in which improvements would greatly enhance our ability and capacity to deliver the



technical assistance to the MOA. In this subsection, we present some suggested strategies upon which we are considering basing our Work Plan for the remaining 15 months of the contract.

#### 5.2.1 Team Leader

We recommend that the dual roles required of the Team Leader be separated into two distinct positions. There is currently sufficient evidence to justify a full-time position for the Team Leader for the remaining 15 months. The responsibilities of the Team Leader would not change, and the execution of those responsibilities would be on a full-time basis.

We feel that this division of labor will provide for greater efficiency and effectiveness in the delivery of project-related coordination and administration by relieving the Team Leader of the responsibility of training technical assistance. She will have more flexibility to manage the project, administer local logistics, monitor service delivery, and communicate accomplishments, problems, and issues to the Ministry and to US/AID.

#### 5.2.2 Training Technical Assistance Consultant

Based on the continuing requests for technical assistance from the Director and staff of the Training Division, we believe the MOA would benefit by having a full-time advisor for a 12-month period. Technical assistance should be provided during the remaining 5 months at appropriate intervals. If this new position is added, we believe the Training Division would be better able to respond to the growing demands of training new staff, the development of training policy and training systems, and the implementation of the Master Training Plan.

Therefore, we recommend the addition of this new position as it is essential to free the Team Leader to devote full-time to the management and administration of the project.



112

### 5.2.3 Systems and Programming Advisor

The technical assistance objectives of data processing would be greatly enhanced if there were a stable staff. We anticipate that until the salaries in the public sector for ADP personnel are competitive with the private sector, the problem of turnover will persist. We therefore recommend that the MOA contract out for staff with a local or stateside firm. In the ADP area, to a large extent, technology transfer will have taken place when the computer system is designed, programs are developed, and the hardware is configured. Personnel are less important in this environment for technology transfer to take place than in other environments. In this type of capacity building, knowledge is in the software, and thus can be transferred to new staff at will. Consequently, it is perfectly acceptable and appropriate to meet technology transfer and institutionalization goals through the use of temporary personnel.

It is imperative that the staff required for establishing the ADP system be employed immediately. Given the growth and demand for services and the requests which fragment the system, it will be far less costly in the long run to immediately centralize ADP, as opposed to centralization at a later date when fragmentation has been established. The MOA is in a precarious position as each organizational unit would like to have its own computer. This type of fragmentation is both inefficient and ineffective and will show a negative cost benefit in a very short time. Therefore, it is our recommendation that ADP centralization and outside contracting for staff be employed as feasible measures to meet data processing and systems needs.

### 5.2.4 Survey Methods Specialist

The ALNA Survey Methods Specialist, Merton Vincent Lindquist, has completed his one year assignment with MOA and submitted his terminal



report. At the same time, Ashok Sahney, Assistant Director of the MOA Data Bank and Evaluation Branch and Chief of the Statistical Branch, transferred to another position in the Marketing Division of MOA. His successor, John Campbell, is also leaving to pursue studies overseas which will leave a major vacuum in the MOA's capability to continue its growth program of statistical surveys and data collection.

At a time when the tempo of planning and data collection activities is picking up, we believe this vacuum can seriously damage the credibility of the Agricultural Planning Project and the Data Bank and Evaluation Branch and impede the planning and related activities of MOA. We, therefore, strongly recommend that technical assistance in this area be continued as a stop-gap measure until the staffing in the Statistical Branch resumes a normal level. Naturally, ALNA will be pleased to respond positively to any further requirements in this area.

#### 5.2.5 Evaluation Methods Specialist

The ALNA Evaluation Methods Specialist, in his four site visits to Jamaica, has accomplished most of the project objectives with respect to providing and transferring evaluation methodologies to MOA. However, there has been a heavy demand for his services and skills, including the IRDP evaluation and other tasks which were not explicitly recognized or called for in the statement of work. We anticipate this demand to continue for the rest of the contract period and recommend that he continue to be retained to provide technical assistance to the MOA at least at the level of effort expended over the past two years.

#### 5.2.6 Data and Policy Analyst

The advisory services required of the Data and Policy Analyst have not been delivered to date. Instead of providing the technical services in



the areas of: establishing a Data Analysis Branch; upgrading the skills of the Data and Policy Review personnel; assisting in identifying long and short-term training and technical assistance needs; the assigned Data and Policy Analyst was utilized as a staff person to conduct Demand Analysis studies.

After completing these studies, ALNA's Data and Policy Analyst terminated his employment, and the position has not been filled. The position remains vacant to-date due largely to the MOA's decision about the scope of work required of this specialist, and to US/AID's deliberation about the type and quantity of technical assistance to be contracted. Even more than this, the question of using the Data and Policy Analyst as an adjunct staff member in the MOA or as a technical advisor has been raised. Discussions have ranged from using the specialist to help develop the Five Year Plan to completely changing the role from Data and Policy Analyst to Farm Management expert. Either usage is outside the intent of the contract to ALNA. Either usage will result in adjunct staff services, rather than technical assistance advisory services.

We believe that the original scope of work required by US/AID is a valid use of the Data and Policy Analyst position. Thus, it is recommended that ALNA provide the Data and Policy Analyst as planned to deliver the services required to strengthen the MOA's institutional capability and accomplish other contract tasks. We request assistance in finalizing a decision, so that the services of a Data and Policy Analyst may be retained with the resources remaining in ALNA's current contract.

#### 5.2.7 Library Systems Specialist

By the time this report is submitted, ALNA, working in close collaboration with the MOA and US/AID, would have completed work on the



design phase of the Library Information System for the management and utilization of the information resource of the Agricultural Planning Project as well as developed a set of recommendations with respect to the organizational issues, structure, and interfaces of the System. We believe that, when operational, this System will make a significant contribution to the MOA's decision-making, program planning, evaluation, training, and related support functions. We anticipate that, as the Ministry proceeds with the implementation of the APP Library Information System, ALNA will continue to plan an important, though increasingly diminishing role in the remaining contract period. This technical assistance is likely to require 2 or 3 visits (60-80 days) to Jamaica between February 1983 and May 1984 during the implementation phase.

Because the field of information is very dynamic and fast changing, we foresee a continuing need for low-level assistance/liaison, particularly in the areas of resource development and accessing--machine searching of non-MOA data bases until such a capability is readily available in Jamaica, and enhancing resource utilization. With the MOA, we are able to identify and scope out these needs more precisely, we would be pleased to make appropriate recommendations.

We should also add here that the present system is being developed within the framework of the Agricultural Planning Project and does not cover the other MOA information programs and activities. As this system becomes operational, it should be extended to cover, in an add-on activity, or perhaps, as a separate small project, the management and utilization of the information resources of the entire Ministry. The Ministry's interest and concern in this area was expressed when it asked Dr. Paul, ALNA consultant, in October 1981 to prepare an overview of the information activities and



programs of the MOA. As the work on this task nears completion, we suggest that the interest in Dr. Paul's October 1981 findings and recommendations be reactivated.

#### 5.2.8 Audio-Visual Aids Specialist

The ALNA Audio-Visual Aids Specialist has made two site visits to Jamaica and has accomplished most of the project objectives with respect to developing a proposal for the Learning Resource Center (LRC), using audio-visual aids and techniques in the training programs of the MOA, and developing a list of basic equipment and materials. This equipment, although recommended in November 1981, has not arrived one year later. Once this equipment is received by the MOA, ALNA's Audio-Visual Specialist anticipates two (2) site visits to Jamaica--about 30 days--to (a) conduct a series of workshops on instructional design and development featuring the proper use of the audio-visual materials and equipment, the production, evaluation, and selection of audio-visual materials, and individualized instructional methods; and (b) initiate an audio-visual training manual.

#### 5.2.9 Technical Assistance Training Strategies

It is our belief that achieving the objectives of the APP is more important than any commitment to technical assistance methodology. Though the technical advisor mode may be planned for the TA delivery, we should not continue to use it as the only method. If other methodologies seem more appropriate given our two years of experience regarding the setting and the needs, then we are willing to alter our strategy.

Because of excessive staff turnover, lengthy periods for replacing staff, and the increase in demand for support, we believe that our team should respond to these occurring situations with strategies and methodologies that result in the accomplishment of the objectives of the APP.



We believe it appropriate when MOA staff positions have not been filled, to do the staff work rather than delaying the assistance until a position is filled. We believe that when MOA staff are not emotionally and mentally prepared to receive TA, the appropriate strategy for our team is to deliver hands-on assistance.

We recognize the pitfalls these approaches hold for us. However, as we are aware of these pitfalls, we can respond in a timely manner to the situations and work toward change that will yield positive results. Although it is not our desire to prevent institutionalization, we believe that in instances in which institutionalization is not possible, the objectives of the APP should not be compromised. We, therefore, recommend high flexibility in the selection of the type of technical assistance, the methods of delivery, and the approach to TA. While the short-term efforts may result in higher resource utilization and costs, the long-term benefits will be recognizably more cost effective.

