

DEVELOPMENT MANAGEMENT IN AFRICA:
EXPERIENCE WITH IMPLEMENTING AGRICULTURAL DEVELOPMENT PROJECTS
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AID EVALUATION SPECIAL STUDY NO. 44

by

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PREFACE

Managerial and organizational problems seriously undermine the implementation of development programs and projects in all developing countries, but they are especially serious in Africa. With the growing realization that developing countries' management capacity is a crucial factor in successfully implementing development projects, AID's Center for Development Information and Evaluation (CDIE) began a study of management experience in Africa by examining six agricultural and rural development projects. This report is a review and analysis of the findings.

Section 1 examines the problems of development management that public and private organizations in developing countries face in implementing projects and describes the procedures for evaluating experience in Africa. Section 2 offers a conceptual framework for the evaluations that is used to order the findings from the six case studies of African projects in Sections 3-5. Examples and illustrations from the cases show how policy, design, contextual, and management factors affected each other and the outcomes of the projects. The lessons from the evaluations and their implications for enhancing development management capacity are summarized in Section 6.

The implications of the lessons can only be fully appreciated by assessing them in the contexts from which they were derived, which are described in detail throughout the report. For those who cannot read the entire report, however, Sections 1 and 6 can serve as a summary. The first section explores the scope and seriousness of problems with development management in less developed countries, and the last section lists the major lessons and implications of the case studies.

I appreciate the help and guidance of the many people who were involved in the field studies and who read earlier drafts of

this report. Irving Rosenthal played a crucial role throughout the review. He provided strong guidance, editorial and substantive advice, and suggestions for improving each succeeding draft. Haven North and Kenneth Kornher also offered useful insights and comments. The interpretations and conclusions are my own, however, and do not necessarily reflect the policies of the U.S. Agency for International Development or the opinions of those who provided me with assistance.

Dennis A. Rondinelli

GLOSSARY

ASAP	Agriculture Sector Analysis and Planning Project in Liberia
CDIE	Center for Development Information and Evaluation, AID
CDSS	Country Development Strategy Statement
GA	Grazing Association (in the Lesotho Project)
GAO	General Accounting Office groupements village-level work groups
LCRD	Land Conservation and Range Development Project in Lesotho mafisa tradition in Lesotho whereby people share equipment, labor, other inputs, and agricultural goods
MOA	Ministry of Agriculture
NDD	Niamey Department Development Project in Niger
PID	Project Identification Document
pitso	traditional public meeting in Lesotho
PNS	North Shaba Integrated Rural Development Project in Zaire
PP	Project Paper
SAED	National Society for the Development and Exploitation of the Senegal and Faleme River Basins (La Societ, Nationale d'Amenagement et d'Exploitation des Terres du Delta)

1. EVALUATING DEVELOPMENT MANAGEMENT: CONCEPTS AND APPROACH

One of the most important lessons from the past 3 decades of

experience with foreign aid and international development is that success in promoting economic and social progress depends not only on the ability of developing countries to define appropriate macroeconomic policies and to mobilize financial, human, and technological resources, but also on their ability to manage those resources effectively. The impact of development assistance projects and programs is weakened substantially if foreign aid is mismanaged by either donors or host country organizations.

Governments in developing countries have long struggled with problems of management, and international assistance agencies have devoted a large portion of their financial, administrative, and technical resources to improving organizational and management capacities in developing countries. Yet, managerial problems still undermine the capacity of public and private organizations in developing countries to implement development policies, programs, and projects effectively.

For these reasons, the question of how to improve development management is now receiving even greater attention by international assistance organizations and governments in developing countries. The U.S. Agency for International Development (AID) recently formulated a strategic plan, *Blueprint for Development*, which considers institutional development a key to promoting sustainable economic growth and social progress in poor countries.^{1} AID's strategic plan points out that "training to help build an indigenous analytical capacity to conceive, plan, and implement development strategies and programs is a very important component of institution building. The principal objective of these efforts is to develop human resources and use them effectively in sustainable institutions."^{2} To the extent that development management and institutional development are closely linked, AID's attempts to strengthen institutions in developing countries largely depends on its ability to enhance host country management capacity.

The World Bank also deemed development management important enough to devote its 1983 *World Development Report* to examining the means of improving management capacity in Third World countries. "Faced with widespread poverty and slow economic growth, governments are naturally keener than ever to promote development," the Bank's report stated. "But their progress is constrained by weak institutions and management."^{3}

Because of the growing concern for enhancing management capacity in developing countries, AID's Center for Development Information and Evaluation (CDIE) in 1984 began a series of studies of development management experience. The studies focused first on Africa. They were motivated by the growing recognition, particularly in Africa, that development programs and projects were encountering greater difficulties in achieving their goals and that many of those difficulties were due to organizational and managerial weaknesses. CDIE staff noted that "there has hardly been an AID funded development project whose problems have not pointed to a lack of developing country

'capacity to manage.'" The background paper delineating the rationale and scope of work for the evaluations declared that "frequently, however, that problem has been identified without fully understanding what 'capacity to manage' means or what solutions are possible for enhancing that capacity in developing countries."{4}

{1} U.S. Agency for International Development, Blueprint for Development: The Strategic Plan of the Agency for International Development, (Washington, D.C.: AID, 1985).

{2} Ibid., p. 17.

{3} World Bank, World Development Report, 1983 (Washington, D.C.: World Bank, 1983), p. 41.

{4} Irving Rosenthal, Background Paper and Preliminary Scope of Work: Evaluation of Alternative Approaches to Enhancing Developing Country Capacity to Manage Development Projects, in Report of a Preparatory Evaluation Workshop on The Management of Agricultural Projects in Africa (Washington, D.C.: Agency for International Development, 1986).

1.1 Importance of Development Management

If the economic and social progress that has been made in many developing countries over the past 3 decades is to be sustained, and if greater progress is to be made in those countries that remain poor, public and private organizations in developing nations must have the capacity to carry out their own development programs. Ultimately, the aim of international aid is to help developing countries create a sufficiently high level of local managerial and institutional capacity to formulate and implement their development strategies.

International development assistance alone will have little impact on economic self-sufficiency and social progress in developing countries unless public and private organizations in developing countries take a stronger role in planning and managing development projects. After examining a large number of AID projects, the U.S. General Accounting Office (GAO), which monitors and evaluates the Agency's performance, recently reported to Congress that "the management and effectiveness of AID projects in health care, water development, agricultural assistance as well as projects to strengthen governmental institutions, ultimately depend upon the ability of host countries to absorb U.S. aid and implement the projects." GAO officials argued that without this implementation capacity, "the results are either large obligations of unspent assistance funds or expenditure of funds for projects with limited life after U.S. assistance is terminated."{5}

These findings were confirmed by AID's Inspector General, who

recently testified before Congress that "we find in our reviews continuing implementation problems arising often, in my judgment, from some of the practical weaknesses of the host country implementation capacity." He argued that Inspector General reviews of AID-funded activities "have shown delayed projects, increased costs flowing from these delays, frequent poor logistical support by host governments, a general lack of audits of contract and grant costs by the host governments, procurement inefficiencies in the acquisition of both goods and services, and administrative difficulties on the part of host governments in executing bid procedures, preparing contracts and administering contracts." {6}

In a special study of West African countries, for example, the Inspector General found "project after project undergoing serious delays and shortfalls in reaching planned objectives. Host countries were experiencing grave difficulties in executing many of the projects. Lack of host country funds, trained personnel, delayed procurements, overoptimistic assessments of host country capabilities were contributing conditions." As a result, the Inspector General questioned the viability of many of these AID projects once U.S. financial and technical support ended. Because of the low levels of developing country management capacity, the Inspector General concluded, "the AID investment of many millions of dollars could have been placed at serious risk." {7}

The GAO's recent review of AID's Sahel Development Program found that despite international donors having spent more than \$13 billion in this part of Africa over the past 10 years, most of the countries are no better off economically. The GAO recognized that the lack of progress was due to myriad economic, political, and physical problems in the area but noted that a major problem contributing to slow rates of economic growth in the Sahel "is the weak capabilities of the Sahelian governments to plan and manage economic development and to coordinate donor activities." {8}

Moreover, AID has learned that enhancement of organizational capacity and management skills within developing countries is a prerequisite to eliciting the kind of participation in development projects and programs needed to ensure that governments are responding effectively to people's economic and social needs. "The development experience of the past two decades indicates that the impact and sustainability of public sector investments can be significantly improved if local citizens assume a role in needs assessment, project design and implementation," AID's strategic plan emphasizes. "Too often governmental organizations and programs are out of touch with the reality of development needs, and the problems and perspectives of low income groups. Local participation (in both urban and rural areas) is essential in adapting development priorities, designs and implementation strategies to particular contexts, and in communicating to planners local needs, constraints, and priorities." Experience suggests that effective participation becomes easier when nongovernmental organizations as well as

public agencies and private enterprises have strong management skills and abilities.

To the extent that development management involves close interaction between developing country organizations that are responsible for implementing development projects and donor organizations that provide financial and technical assistance, the ability of aid agencies to manage their own activities strongly influences the performance of host country governments and the outcome of development efforts. AID's procedures for project planning, design, and implementation, as will be seen, directly affect project management organizations in developing countries. They create an environment within which project and program managers in developing countries must operate.

Increasing evidence has been accumulating for nearly 3 decades that many of the problems with the implementation of development projects in developing countries arise from lack of attention to management factors within AID. The Agency's Inspector General considers management to be the critical variable influencing the outcome of foreign assistance projects and has recently concluded that "the management and administration of the foreign aid program pose severe challenges to managers and administrators at all levels of the AID organization."⁹ Officials of the GAO concurred, pointing out that "we have made quite a few recommendations on ways AID could improve its [own] program planning, project implementation and monitoring and evaluation. We have seen recent progress toward improved project planning and implementation, but quite frankly we believe much needs to be done."¹⁰

The Inspector General argues that despite many of these administrative problems having been reported repeatedly over the years, AID's own management procedures are still weak. Reporting to Congress in 1983, he stated that cash management in many AID projects is inept or inadequate, monitoring and supervision of contractor performance are weak, procurement systems are inefficient, and commodity delivery systems are unreliable.¹¹ Thus, the Agency's problems exacerbate those of host country governments in managing development projects effectively.

Criticisms are made frequently of AID's project planning, programming, and management cycle for being too rigid, overly controlled, and ineffective in achieving development objectives. Many projects take 2-3 years to be identified, designed, reviewed, and approved before assistance is ready to flow to a developing country. Although the complexity of the projects that AID supports may in some cases justify the time and resources invested in design, many of AID's own field staff believe that the procedures are not only cumbersome but also ineffective.¹² Often, project design procedures and congressionally mandated administrative requirements become ends in themselves, complicating the process of development management and burdening organizations in developing countries. AID field staff must spend much of their time meeting these requirements or monitoring

the compliance of host country governments and little time can be devoted to interacting with intended beneficiaries or developing country project managers on substantive matters. In its review of AID projects in the Sahel, the GAO noted that the "provision of development assistance by the large number of donors and their administrative requirements places a considerable burden on recipient governments and strains their already weak administrative capabilities."¹³

According to GAO studies, the large amount of time and resources spent by AID on project design has led to neither more effective project planning nor significant reductions in delays and cost overruns. Many projects end up being "judged on criteria unrealistic in terms of implementation and are approved as long as they are well articulated and presented in the proper form."¹⁴ Because of the 2-3 year lag times between design and implementation, most projects are planned long before the host country project managers and technical assistance personnel have been selected, resulting in disjunctures between the intent of the plans and the conditions under which development managers must carry them out. AID's Inspector General points out that for this reason, "we find the host country experiencing difficulties in carrying forward the project as it has agreed to do."¹⁵

Moreover, AID's Inspector General contends that the Agency's management and review procedures do not allow its administrators to discover implementation problems and to correct them quickly.¹⁶ "Responsibility for results is sometimes diffused organizationally between field and headquarters managers and over a succession of individuals. The result can be drift and indecision," the Inspector General complains. "Clear warning signs of developing problems are not picked up and acted upon." As a result, projects fall behind schedule or are ineffectively implemented "without firm corrective action being taken at any level."¹⁷ These managerial problems in AID exacerbate those in host country government organizations and contribute to ineffective project implementation.

Why, then, have these management problems recurred over the past 3 decades? One reason is that AID has failed to evaluate adequately the lessons of development management experience from previous projects and to use those lessons to improve its own administrative performance and its interventions to enhance managerial capacity in developing countries.

Another reason is the strong internal pressures on AID staff to comply with current financial and administrative requirements. These pressures often wipe out the time to think, assess, and learn. There are strong pressures on AID field staff to expedite the approval of projects so that appropriations for each budget year can be obligated. Once a project is approved, USAID Mission personnel must look toward the next set of projects rather than back to the lessons learned about those underway or completed. Thus, little attention is given to recording the lessons of their own experience to improve their development management capacity and that of host country organizations.¹⁸ GAO investigators have

found that rather than being seen as useful means of helping their successors avoid mistakes, or of avoiding those of their predecessors, the requirement of recording lessons learned is viewed by AID field staff as one to be complied with minimally or avoided altogether. This limits the capacity of AID to improve its own and host country government managerial practices and to strengthen development institutions in developing countries.

Because management in less developed countries and in AID has become a more serious problem in recent years, CDIE began, in 1984, an intensive assessment of development management performance.

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- {5} Testimony of Frank C. Conahan, Director, International Division, General Accounting Office, before U.S. Senate Committee on Appropriations, Foreign Assistance and Related Programs Appropriations for Fiscal Year 1983, hearings, 97th Congress, 2nd Session (Washington, D.C.: Government Printing Office, 1983), p. 341.
 - {6} Statement of H.L. Beckington, AID Inspector General, before U.S. Senate Committee on Appropriations, *Ibid.*, p. 372.
 - {7} *Ibid.*
 - {8} U.S. General Accounting Office, Limited Sahelian Government Capabilities to Administer Economic Assistance Affects Their Economic Development, Report No. 472037 (Washington, D.C.: GAO, 1985), pp. i-ii.
 - {9} Beckington, p. 369.
 - {10} Conahan, p. 338.
 - {11} Office of the Inspector General, U.S. Agency for International Development, Semiannual Report of the Inspector General, As of September 30, 1983 (Washington, D.C.: AID, 1983).
 - {12} U.S. General Accounting Office, Donor Approaches to Development Assistance: Implications for the United States, Report No. GAO/ID-83-23 (Washington, D.C.: Government Printing Office, 1983).
 - {13} U.S. General Accounting Office, Limited Sahelian Capabilities, p. 13.
 - {14} U.S. General Accounting Office, Donor Approaches to Development Assistance, p. 58.
 - {15} Statement of H.L. Beckington, AID Inspector General, before U.S. Senate, Committee on Appropriations, Foreign Assistance and Related Programs and Appropriations, FY 1984, hearings, 98th Congress, 1st Session, Part I, (Washington, D.C.: Government Printing Office, 1983), p. 291.

{16} Ibid., p. 292.

{17} Ibid.

{18} U.S. General Accounting Office, Experience: A Potential Tool for Improving U.S. Assistance Abroad, Report No. GAO/ID-82-36, (Washington, D.C.: GAO, 1982).

1.2 The Evaluation Procedures

CDIE's evaluations have three major objectives: (1) to understand better what the management capacity and institution-building problems of developing countries are, and how these problems have affected the implementation of development projects; (2) to learn what management enhancement and institution-building activities have been tried by USAID Missions to overcome management problems; and (3) to generate from the review of experience lessons that can improve the way AID and developing country governments manage development projects and programs in the future.

The focus of the evaluations is on development management capacity in less developed countries. In the first stage, experience with development management was examined through an in-depth assessment of a small, but manageable, sample of projects funded by AID and implemented by host country organizations in Africa. Because the initial sample of projects was drawn from the African region, where AID considers the most important problems and opportunities to be in the agricultural sector, the projects selected for evaluation were all concerned with agriculture and rural development. These in-depth evaluations of agricultural and rural development projects were supplemented with a broader computer-based review of evaluations that had been compiled over 10 years for about 277 other African development projects.{19}

Although the primary concern in the first phase of the evaluations was with development management in African countries, the use of AID-funded agricultural projects to examine development management experience also required examining the relationships between developing country management procedures and those of AID. In reality, management capacities of donor and host country organizations become intertwined during implementation. As the analysis of the projects will show, donor and host country administrative procedures pervasively and inextricably affect each other.

This report reviews the findings of those evaluations and analyzes the lessons about development management for agricultural projects in Africa. The conceptual framework for the analysis and the characteristics of the African cases are described in Section 2. A review of experience and lessons for development management follows the outline of the conceptual framework. This review examines policy and design factors in

Section 3, contextual factors in Section 4, and management factors in Section 5. Finally, in Section 6, the lessons and implications of the cases for development management are summarized, and conclusions are drawn about how AID and host country governments can enhance development management capacity in developing countries.

{19} Agency for International Development, Signposts in Development Management: A Computer-Based Analysis of 277 Projects in Africa, AID Evaluation Occasional Paper No. 10 (Washington, D.C.: AID, 1986).

2. A CONCEPTUAL FRAMEWORK FOR EVALUATION

Underlying CDIE's development management evaluations of agricultural projects in Africa is an implicit set of hypotheses about the factors contributing to their successful implementation. Some of these hypotheses were explored in discussions at a preparatory workshop held in Easton, Maryland before the field studies were undertaken, and others were mentioned by various participants in conceptual papers and in a background paper prepared by CDIE as a scope of work for the evaluation teams.

The purpose of this section is to make these hypotheses more explicit so that conclusions drawn from the evaluations can provide insights into what the case studies reveal about effective development management. Making the hypotheses explicit is necessary for three reasons. First, the lessons and conclusions of six case studies could add up to little more than individual insights on unique experiences unless there is a more systematic way of comparing them and cumulating the lessons. This attempt to explicate the hypotheses is not intended to impose a new perspective on the evaluation effort but to clarify the assumptions and implications about the role of management in development projects that were already implicit in it.

Second, by explicating the hypotheses, the lessons of the case studies can be used to refine and further develop the hypotheses and make more accurate, concise statements about the nature of development management. Third, the hypotheses can be used to organize the findings of the African evaluations and to order the evaluation studies of projects in other developing regions, thereby extending the value of the African cases as sources of more general insight into project management problems and approaches.

In brief, an explicit framework for evaluation is necessary if the cases are to be compared and if they are to contribute more systematically to knowledge and thus be useful to AID -- and to other researchers -- in the future. The evaluations that may be done in other developing regions, together with those already done in Africa, can begin to provide a body of evidence that will allow the hypotheses to be better refined, increase our

understanding of development management, and help provide operational guidelines for development managers.

2.1 A Framework for Development Management Evaluation

"Development management" was broadly defined in the scope of work for the evaluation. Rosenthal, the AID Coordinator for the evaluations, noted that the concept of development management encompasses a wide range of activities.^{20} At one extreme, it involves the management of sociopolitical and macroeconomic policy that shapes national development goals and the basic social orientation of developing countries. The importance of this aspect of development management is clearly recognized in AID's "policy dialogue" pillar. At the other extreme, the concept involves the management of specific natural and physical resources and technologies to attain economic and social goals. This aspect is often referred to as the management of technology, or in AID's parlance, the "technology transfer" pillar. A third aspect of the concept falls between these two extremes and refers to the management of organizations and institutions through which managers use various operating systems and administrative procedures to achieve development goals. This is often referred to as "institutional development," another of the four pillars of AID strategy.

Rosenthal proposed that the CDIE evaluations focus on the third use of the concept of development management, which is concerned with organizations and institutions. He wished to give more attention "to those interventions which strengthen the capacity of LDC institutions and managers to apply effectively new economic policies and effectively use improved technological packages."^{21}

In a further attempt to define development management, CDIE's original scope of work isolated the following five sets of factors that were considered to be essential parts of an integrated development management system: (1) organizational and institutional structures, (2) administrative processes and procedures, (3) management of resource inputs, (4) management of human resources, and (5) environmental and contextual factors. CDIE's definition of development management thus supported the one used by the Africa Bureau in its Development Management Assistance Strategy Paper: "a process by which resources available to developing countries are organized and used to achieve specific development objectives."^{22}

For the purposes of this review, development management is defined the same way as the Africa Bureau used it -- a process by which institutions and individuals within developing countries organize and use the resources available to them to achieve specific development goals.

The CDIE background paper did not prescribe how the five development management factors would be assessed in the

evaluations. This issue was discussed at length by evaluators and outside experts at a preparatory workshop held in Easton, Maryland in September 1984. The purpose of the evaluations was to examine development management capacity and institutional development problems in African countries. The use of a specific set of development projects to examine management problems and practices thus focused the evaluations on these projects. This meant that development management capacity would be assessed at this phase of the evaluations in relation to those projects, because they were the sole sources of data. Given this data collection method, the criterion for assessing development management factors was how they affected the implementation of the projects. Thus, methodologically, effective project implementation represented development management capacity and became the dependent variable.

The framework for evaluation used in this review of the studies, however, builds on, but is somewhat broader than, the five sets of factors originally proposed by CDIE, although it incorporates all of these factors. The conceptual framework presented in this review also adds a sixth set -- policy factors -- that were recognized as important in the scope of work. It gives separate attention to a seventh set -- design factors -- that had originally been subsumed under administrative processes and procedures. In reformulating a conceptual framework for reviewing the evaluations, these seven sets of factors were condensed to four sets: policy, design, contextual, and management factors.

Thus, the framework presented in this review of the evaluations describes the hypothesis that effective project implementation, the dependent variable, is influenced by four other sets of independent variables: policy, design, contextual, and management factors. The structure of this conceptual framework is depicted in Figure 1.

The African case evaluations were not organized to measure these factors quantitatively but to identify whether they affected implementation, and if so, how they influenced the results. The evaluation teams gathered information from project documents and staff, host country officials, beneficiaries, USAID Mission personnel, and other informants.

{20} Rosenthal, "Evaluation of Alternative Approaches," pp. 1-2.

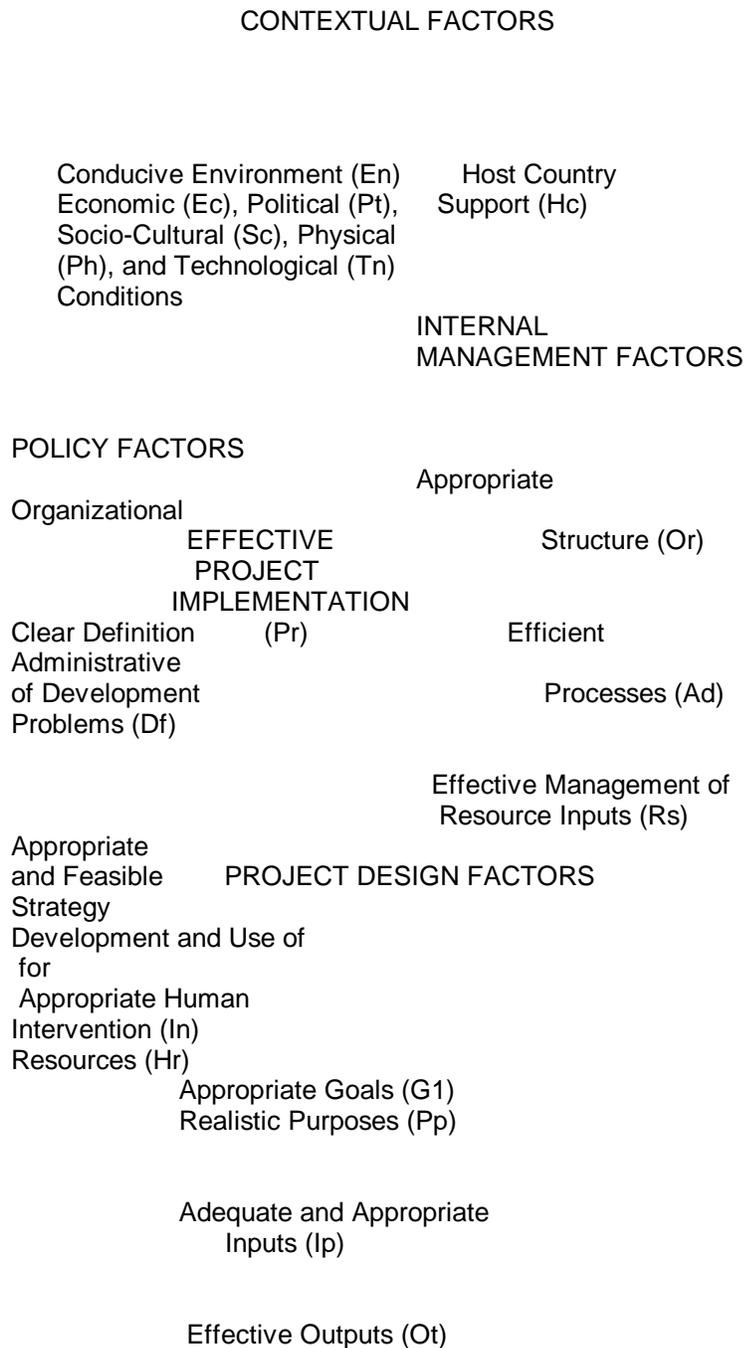
{21} Ibid., p. 2.

{22} U.S. Agency for International Development, "Africa Bureau Development Management Assistance Strategy Paper" (Washington, D.C.: AID, 1984), p. 1.

2.1.1 Internal Management and Organizational Factors

CDIE's background paper argued that the implementation of AID projects depends on effective management systems, practices, and institutional arrangements. Four specific sets of internal management and organizational factors were identified:

Figure 1. A Conceptual Framework for Development Management Evaluation



1. Appropriate and effective organizational structures and institutional arrangements (represented as "Or" in the following equation) to carry out the projects
2. Effective and efficient administrative procedures (Ad) to ensure that the tasks specified in the project design are accomplished satisfactorily
3. Effective and efficient procedures for managing resource inputs (Rs), particularly financial and commodity resources
4. Effective procedures and methods for managing human resources, enhancing human capabilities, and encouraging appropriate behavior to accomplish the project's objectives (Hr)

Therefore, effective management (M) is a function of these four sets of factors, symbolically represented by the equation:

$$(2.1) \quad M = f(\text{Or}, \text{Ad}, \text{Rs}, \text{Hr})$$

The hypothesis is that these four sets of factors form a dynamic, interactive management system. If any one or all of the conditions are weak or deficient, it is likely that the project will be implemented less effectively, unless other parts of the management system can somehow compensate for the deficiencies.

2.1.2 Contextual Factors

CDIE's background paper clearly recognized that effective implementation of development projects depends on contextual conditions, that is, on the environment (En) in which the projects are carried out. It was argued that this set of contextual factors should be examined carefully because the environment for agricultural development in Africa would most likely be different from that in which other kinds of projects, in other countries, would have to be managed. The key contextual factors were identified as political (Pt), sociocultural (Sc), economic (Ec), physical (Ph), and technological (Tn).

The environment (En) for development project implementation, then, is a function of the five factors described above:

$$(2.2) \quad \text{En} = f(\text{Pt}, \text{Sc}, \text{Ec}, \text{Ph}, \text{Tn})$$

The hypothesis is that if unfavorable conditions exist in any of these factors in a developing country, they can adversely affect the environment for implementing a project, although not necessarily doom it to failure.

An assumption underlying the hypothesis is that favorable political, sociocultural, economic, physical, and technological conditions will enhance the environment for successful implementation. One implication is that projects should be designed in ways that recognize and cope with the environmental conditions under which they will be carried out. It was assumed that environmental factors cannot always be changed by project managers but that they must at least be understood and addressed effectively if projects are to succeed.

In addition, host country support (Hc) was considered to be an essential factor in achieving project objectives. As noted earlier, if a developing country government does not support a project, little will be accomplished even with the best of managerial practices. One does not have to assume that host country support necessarily means that the national government would implement the project. Rather, the implication is that this factor reflects the host government's willingness to create conditions within which national, local, private, voluntary, or other organizations might perform the tasks. The national government would be expected to support the goals and purposes of the project, cooperate with AID, provide logistical support and counterpart resources, or help to remove obstacles to progress when necessary.

The context (C) for effective project implementation, then, is a function of at least an environment (En) conducive to effective implementation and host country support (Hc), such that

$$(2.3) \quad C = f(En, Hc)$$

The hypothesis here is that even with good project managers working with an appropriate project design, it will be more difficult to implement projects effectively in the absence of favorable contextual conditions. Further, unless project managers understand the contextual factors, it is unlikely that they will be able to select and use management systems that are most appropriate to their work environments.

2.1.3 Policy Factors

Discussions at the preparatory workshop in Easton concluded that successful implementation of development projects also depends on appropriate policies. AID's emphasis on "policy dialogue" as one of the four pillars of its strategy recognizes the importance of appropriate policies to set the direction for development and provide guidance for identifying, assessing, and selecting projects. It also assumes that projects may be ineffectively implemented or will have little impact on development in the face of adverse policies.

Although policies are influenced strongly by, and in turn influence, the environment in which they are formulated, they deserve separate examination because nonenvironmental factors

shape public policies. Moreover, policies can have a direct influence on project design and implementation apart from the influence of environmental factors. For the purposes of this evaluation, an appropriate policy was considered to have two elements. One is the clearest possible definition of the problems (Df) to be solved or opportunities to be pursued through the project. Without an accurate definition of development problems or opportunities, projects cannot contribute effectively to either national or sectoral objectives. The other is appropriate and feasible strategies of intervention (In) to overcome, ameliorate, or cope with the problem and to take advantage of opportunities.

Appropriate policy (PI), then, is a function of two factors--the clarity of problem definition (Df) and the feasibility of interventions (In):

$$(2.4) \quad P = f(Df, In)$$

The hypothesis is that an unclear definition of problems and opportunities and inappropriate strategies of intervention will lead to ineffective project design and eventually to poor project implementation or to the implementation of a project that will make little real contribution to development.

2.1.4 Design Factors

Finally, implicit in CDIE's scope of work, and explicit in AID's project management procedures, is the contention that appropriate, realistic, and effective project design is essential to problem solving and to successful implementation. AID Project Papers must clearly define a project's goals, purposes, inputs, and outputs. It is assumed that effective implementation consists of accomplishing the tasks described by the project proposal.

Embodied in AID's logical framework approach to project formulation is the assumption that good project design (D) consists of identifying appropriate goals (G), realistic purposes (Pp), adequate and appropriate inputs (Ip), and effective outputs (Ot)

$$(2.5) \quad D = f(G, Pp, Ip, Ot)$$

The hypothesis is that although design deficiencies can be -- and often are -- overcome by effective management, the successful implementation of a project would be enhanced by plans that have from the outset stated appropriate goals, realistic purposes, adequate and appropriate inputs, and feasible targets or outputs.

In brief, the conceptual framework sets out the major hypothesis underlying the evaluations: that effective project implementation (Pr) is determined by policy (PI), design (D), contextual (C), and management factors (M)

(2.6) $Pr = f(PI, D, C, M)$

Although CDIE's evaluations are concerned primarily with the management factors, they clearly recognize the importance of context, policy, and design in assessing development management capacity to implement projects effectively.

Each of these sets of factors, and the hypotheses derived from them, will be examined through the analysis of the African development projects in Sections 3-5 of this report.

2.2 Uses of the Evaluation Framework

If one accepts these hypotheses as accurate statements of the structure and definition of development management capacity underlying CDIE's evaluation, then it is possible to order the findings of the evaluations to provide interesting insights into the validity of the factors used in formulating the hypotheses, the validity of the hypotheses, and the implications of the hypotheses and lessons learned from the evaluations for enhancing development management capacity in AID and in developing countries.

It should be clear that no attempt was made in explicating the conceptual framework depicted in Figure I to offer a formal theory. Instead, the conceptual framework is a statement of a set of dynamic relationships that are believed to affect project implementation. The framework does not imply that all of the sets of factors are of equal importance or each always has the same effect on project implementation. Evidence from the evaluations will elucidate this issue.

Nor should the framework be seen as a tightly constructed deductive model for evaluation. There are advantages in leaving the conceptual framework somewhat loose for the present and using a combination of deductive and inductive approaches to refining it. Observations and conclusions from these and other evaluations can be used to generate more refined hypotheses, to clarify the relationships depicted in Figure I, and to formulate propositions about the nature of the relationships.

At this stage, all of the hypotheses remain to be tested and revised. The functional relationships stated earlier may, in fact, be more accurately referred to as "probability statements." For example, it can be argued that there is a higher probability that the management of a project will be more effective if there are appropriate organizational structures to carry it out, effective and efficient administrative procedures used in the project, effective management of resource inputs, and appropriate use and development of human resources. That is, equation 2.1 -- defined earlier as a functional relationship -- could also be perceived as a probability statement, represented symbolically as

(2.7) $P(M) = P(\text{Or, Ad, Rs, Hr})$

The hypothesis is that a low probability of effectiveness in any of these factors will reduce the probability of having an effective management system.

The conceptual framework is partially deductive because the hypotheses are derived from functional relationships using terms that have a positive connotation. This makes the hypotheses testable. Evidence from the cases can either support or question their validity.

But this does not imply that all of the factors that are hypothesized to contribute to effective project implementation must be "positive" for projects to be implemented effectively. Some factors may compensate for others. For example, a good project design and effective management may overcome the negative effects of an unfavorable environment or of poorly defined policies. Or, effective management could overcome the ill effects of a deficient project design. These and future evaluations provide evidence about the relationships among these factors in specific cases. They help generate evidence about which factors are "necessary but not sufficient," and provide clues about proper sequencing, timing and priorities in coping with management problems.

The conceptual framework is partially inductive in the sense that the terms used to describe the factors are open to differing interpretations. The words "accurate," "good," "effective," "efficient," "realistic," "adequate," and "successful" were not defined more precisely because they are still open to debate. The evaluations themselves will help to define them more precisely or to help resolve the debates about them.

For example, the hypothesis in equation 2.6 indicates that effective project implementation depends in part on effective project design. "Effective project implementation" can have several meanings. It can mean that the project was completed on time and within budget. It can mean that it achieved the goals and objectives stated in its initial design. It can mean that what was done through the project -- even if it deviated from initial designs -- had favorable impacts on intended beneficiaries. It may mean that although the initial design was not appropriate, the activities of the project had desirable effects or produced unintended benefits.

Similarly the term "good project design" can be variously interpreted. One argument, for example, made by J. Price Gittinger in his book for the World Bank, *Economic Analysis of Agricultural Projects*, is that good design involves detailed and comprehensive preparation, formulation, and appraisal.^{23} He implies that effective design results in a detailed plan for what will be done and how it will be done. In this approach, a good design is one that is thoroughly prepared prior to implementation. Effective implementation lies largely in following the plan and

completing the project on time and within budget.

Others argue that this "blueprint" approach is not only ineffective but perverse.^{24} Another interpretation contends that good project designs are simple, broad, and flexible strategies and that the details of implementation should evolve through a collaborative learning process in which the beneficiaries play a major role. Good design sets out a broad strategy and tactics are formulated through a process of interaction, participation, and incremental learning.

Although all of these terms could be defined more precisely, there are advantages to leaving them somewhat vague and using the findings of the evaluations to define them more precisely. The case studies provide insights into the range of conditions under which different definitions are most appropriate.

In sum, explicating the conceptual framework that is implicit in CDIE's evaluations is useful not only for ordering the findings of the African cases, but also for clarifying assumptions, relationships, hypotheses, and implications for other future evaluations.

{23} J. Price Gittinger, *Economic Analysis of Agricultural Projects*, (Baltimore, Maryland: The Johns Hopkins University Press, 1982).

{24} David C. Korten, "Community Organization and Rural Development: A Learning Process Approach," *Public Administration Review* 40 (1980):480-511.

2.3 The African Development Projects

The evaluations of African development projects consisted of two components. One component was a computer analysis of previous evaluations of 277 bilateral development projects out of more than 1,000 that had been completed by USAID Missions between fiscal years 1975 and 1983. Frequencies of problems and recommendations were tabulated using the Statistical Analysis System (SAS).^{25} Of these 277 projects, more than 58 percent were concerned with agricultural or rural development, and the rest were educational or human resources development, health, population or other types of projects. The primary interventions used were technical assistance (58 percent) and training (34 percent). Only about 60 of the 277 evaluations made conclusions about the "success" of the projects: of those assessed, 29 percent were judged to be successful and 20 percent to be somewhat successful. About 12 percent were considered by the evaluators to be unsuccessful.

The second component was an in-depth field evaluation of six African agricultural development projects. This sample consisted of the following cases.

{25}AID, Signposts.

2.3.1 North Shaba Rural Development Project -- Zaire

This \$31 million project included about \$19 million in AID loans and grants to the Government of Zaire over a 10-year period from the mid-1970s to the mid-1980s. It sought to increase food production in the North Shaba area. The project was originally designed to identify an effective rural development process for improving smallholder production and income. Its goals changed later to increasing small farmers' income by improving their ability to produce maize and to develop institutions that could help to increase production of all agricultural goods. The project aimed to strengthen the maize production and marketing capacity in North Shaba, to produce small tools that were not previously available, and to build or repair overpasses and roads in the area. It also sought to establish farmers cooperatives and agricultural research and extension centers and find ways to make farm inputs more accessible to a larger number of rural households. The evaluators of the project judged that it had achieved its goals and was successfully implemented.{26}

{26} Irving Rosenthal, Leroy Jackson, Ruth Mara, and Laura McPherson, Development Management in Africa: The Case of the North Shaba Rural Development Project in Zaire (Washington, D.C.: Agency for International Development, 1985).

2.3.2 Egerton College Expansion Project -- Kenya

The Egerton College expansion was part of a larger Agricultural Systems Support Project sponsored by AID in Kenya. The aim of the Egerton component was to upgrade the quality of faculty and physical facilities at the College so that it could increase the supply of trained personnel able to provide agricultural extension services to small land-holders. The project cost about \$45 million, of which about \$34 million was provided through AID grants and loans. Primary tasks were to construct and rehabilitate buildings, purchase special equipment, and provide advanced degree education for Egerton faculty. U.S. professors were recruited to temporarily replace Egerton faculty who were in training overseas. The evaluation stated that the project successfully attained all of its major objectives.{27}

{27} Norman K. Nicholson, Donald Bowles, Ndungu Gathinji, and Elinor Ostrom, Development Management in Africa: The Case of the Egerton College Expansion Project in Kenya (Washington, D.C.: Agency for International Development, 1985).

2.3.3 Bakel Small Irrigated Perimeters Project -- Senegal

From 1977 to 1985, this project sought to improve dryland agriculture in the Bakel River Basin by introducing irrigation systems and new cultivation practices in 25 villages. The project was amended during implementation to test the feasibility of a solar pumping system for irrigation. The project aimed to irrigate more than 900 hectares, train farmers in improved agricultural techniques, and establish village-level irrigation maintenance organizations. The evaluators found that the project achieved its irrigation and training goals but that the solar pump experiment failed.{28}

{28} Matt Seymour, Laura McPherson, and David Harmon, Development Management in Africa: The Case of the Bakel Small Irrigated Perimeters Project in Senegal (Washington, D.C.: Agency for International Development, 1985).

2.3.4 Niamey Department Development Project -- Niger

This \$27 million project, funded in part by an \$18 million grant from AID, was designed to increase rainfed agricultural production in the Niamey Department through improved farming techniques. It sought, over a 6-year period beginning in 1980, to institutionalize the process of rural development by establishing self-managed village organizations that would assist farm families to increase their output and incomes. The project attempted to improve the delivery system of the Government's rural development and agriculture technical services, create self-managed village agricultural organizations, provide to those organizations credit, agricultural supplies, and technology, increase the participation of women in productive activities, and coordinate agricultural development programs in the project zone. The evaluators found that the project was only partially successful; it accomplished some of its goals and fell short in others. They concluded, however, that on the whole the impact of the project thus far has been minimal.{29}

{29} Thomas M. Painter with Roger Poulen, David Harmon, and Douglas Barnett, Development Management in Africa: The Case of the Niamey Department Development Project in Niger (Washington, D.C.: Agency for International Development, 1985).

2.3.5 Agriculture Sector Analysis and Planning Project -- Liberia

The Agriculture Sector Analysis and Planning (ASAP) project in Liberia was a follow-on activity to the Agriculture Development Program that began in 1972. The ASAP project was funded by a \$3.2 million grant from AID and received additional

financing from the Liberian Government. The project sought to develop a stronger capacity to do sector analysis and planning within the Ministry of Agriculture so that the Ministry could help traditional farmers solve their production and marketing problems. Technical assistance for sector planning and analysis was provided to the Ministry, staff were given the opportunity to take short- and long-term training, basic data collection systems were to be established, and the capacity for agricultural project analysis was to be strengthened. The evaluators concluded that the project contributed to building capacity within the Ministry to do sector analysis but that it failed to institutionalize sector planning as the primary instrument of decision-making.{30}

{30} Chris Hermann, Margaret Shaw, and John Hannah, Development Management in Africa: The Case of the Agriculture Analysis and Planning Project in Liberia (Washington, D.C.: Agency for International Development, 1985).

2.3.6 Land Conservation and Range Development Project -- Lesotho

The goals of this project, which began in 1980 and was to run for 7 years, were to stabilize the erosion of agricultural and rangelands in the project zone and thereby help to increase agricultural and livestock production. The \$16 million project sought to strengthen the technical and managerial capabilities of the conservation and range management sections of the Ministry of Agriculture and Marketing. The project aimed to develop plans to protect crop and rangelands and to establish a prototype range management area where techniques could be demonstrated to local grazing and range management associations. Evaluators concluded that overall the project was successful in achieving its objectives. However, they raised serious questions about the Government's ability to sustain the benefits after AID funding ceases.{31} (See Table 1 for a profile of all six projects.)

The review of the cases (see Sections 3-5) is organized along lines suggested by the conceptual framework. First, the findings about policy, design, and contextual factors are assessed, then the lessons about management factors are described. Finally, the major conclusions and implications are outlined. The discussion draws heavily on draft reports from the evaluation teams and, to the greatest degree possible, allows the evaluators to "do the talking." The reports are quoted extensively so that the connotation and intent of the evaluators are preserved. Because this review quotes heavily from draft reports with widely varying styles of pagination, the conventional practice of footnoting pages on which each quotation appears was not followed. Readers interested in the context from which quotations and references were taken can read the completed evaluations, which were published by CDIE as special studies.

{31} Marion Warren, George Honadle, Sam Montsi, and Bob Walter,

Development Management in Africa: The Case of the Land Conservation and Range Development Project in Lesotho (Washington, D.C.: Agency for International Development, 1985).

3. POLICY AND DESIGN FACTORS IN DEVELOPMENT MANAGEMENT

The studies of the African projects showed quite clearly that policy and design factors directly and indirectly influenced the implementation of development activities. This section examines the influence of policies on implementation and then explores how the relationships between policy and design factors affected the six agricultural and rural development projects in Africa.

3.1 Policy Factors

The evaluations highlighted the importance of national government and donor organization policies in defining development problems and in shaping management strategies. National policies were influenced to a large degree, of course, by the social, economic, and cultural environment and were thus a product of the contextual factors within each of the African countries. Policies deserve separate attention, however, because they directly influenced how problems and opportunities were applied

Table 1. Characteristics of Six African Development Projects

To see Table 1, please order paper copy of Document No. PN-AAL-081

perceived, defined, and handled. The policies of international assistance agencies played a crucial role in determining how development problems and opportunities were identified and how projects were designed. Donor organizations also attempted to influence the macroeconomic policies of developing countries through foreign aid activities, and their priorities became one of the sets of factors that had to be considered by African managers in planning and implementing development projects.

The importance of creating a favorable policy setting is reflected in the fact that "policy dialogue" is one of the four pillars of AID strategy. A major assumption underlying AID's concern with policy reform is that appropriate policies are essential to support development projects if they are to effect desired economic and social changes and that inappropriate policies can hinder or obstruct change. The influence of policies on a country's development, and on the implementation of projects, is highlighted in AID's Policy Paper on policy dialogue. It states that "even an integrated set of well planned and well executed economic assistance projects may fail to have a significant developmental impact in the absence of a favorable economic policy environment."{32}

The Agency views policy dialogue as one means of changing the environment in which projects are implemented and of policymakers' perceptions about appropriate interventions. Policy dialogue, which has become a pervasive aspect of development management in recent years, is defined as "AID interaction with other donor institutions and with developing countries' governments, addressed to support their economic policies when they are deemed effective, and to promote their improvement when they are deemed defective. It is this interaction which forms the core of the policy dialogue."{33}

The conceptual framework described earlier hypothesized that two specific aspects of policy affect the design and implementation of projects. First, policies directly shape the definition of development problems and opportunities by the government and by AID, and thereby influence how projects are conceived and designed. Second, policies set the framework for formulating appropriate and feasible strategies for intervention. The African agricultural development cases confirmed the important role that policies have in project design and management. But they also made clear that policy changes alone were unlikely to ensure successful implementation.

{32} U.S. Agency for International Development, AID Policy Paper, Approaches to the Policy Dialogue (Washington, D.C.: AID, 1982), p. 1.

{33} Ibid.

3.1.1 Impact of Policy Setting

The African projects showed that the policy setting provided opportunities or created obstacles to successful project implementation. National policies, to some degree, determined whether the projects reflected an accurate definition of problems and opportunities and feasible interventions to cope with them.

For example, the Land Conservation and Range Development project in Lesotho resulted in part from, and was made possible by, changing Government policy toward land use during the late 1970s. The evaluators noted that the Government introduced laws and regulations to improve the use and management of land, culminating in the 1979 Land Act. Although it took the Government a long time to develop the capacity to implement the act -- primarily because of opposition from groups who felt that their interests were threatened by it -- the evaluators noted that without these policy changes and some commitment by the Government to implementing them, the objectives of the project would have been difficult to achieve.

Similarly, the success of the project in Kenya in expanding the capacity of Egerton College to produce graduates who could

help increase smallholder output ultimately depended on national policies toward agriculture. No matter how successful the project was in expanding Egerton College, its graduates would have had little real impact if national agricultural or economic policies were deleterious for the small-scale farmer. The evaluators of the Egerton College case recognized explicitly the importance of the policy setting in which the goals and purposes of the project would have to be achieved. They noted that successful changes -- away from "cheap food" and manufacturing import-substitution policies, which imposed a hidden tax on agriculture, kept producers' prices down, kept the exchange rate overvalued, and hampered agricultural exports, and toward a new policy of encouraging agricultural exports, increasing production for domestic markets, and creating marketing incentives -- would really determine the impact of the Egerton College Expansion project, assuming that it achieved its immediate objectives.

Indeed, the question of whether the Egerton College project represented an accurate definition of the problem and a feasible intervention for improving small landholder production depended on the Kenyan Government's ability to implement new agricultural policies favoring small farmers. In an unfavorable policy setting, the Egerton College expansion would be at best irrelevant and at worst a waste of scarce resources. The evaluators cited some analysts' views suggesting that because smallholders were receiving relatively low levels of income from agricultural activities and that more than half of rural household income came from off-farm employment, resources might have been better spent on expanding off-farm employment opportunities. The logical framework of the Egerton College project assumed that Kenyan agricultural policies would change favorably and, thus, that graduates of the school could help improve production practices.

3.1.2 Effects of Policy Change on Projects

Macroeconomic policies also directly affected the successful implementation of the North Shaba rural development project in Zaire. When the project was being formulated, exchange rates in Zaire were set artificially low. Higher black market rates made maize cheaper to import from abroad than to grow domestically. Increasing maize output in North Shaba would have been extremely difficult without changes in monetary policies. When exchange rates were revised, new conditions for farm production were created within which the project's outputs were readily accepted and eagerly supported by farmers. "Today, with a more realistic exchange rate, domestic maize is now cheaper than imported maize although the price paid to the farmer has increased dramatically," the evaluators concluded. "As a result, the demand for domestic maize has become almost insatiable. The maize farmer, the project's beneficiary, is in the enviable position of being able to sell all of the maize he or she produces and at a higher real price." The evaluators argued that the project's success resulted from both its interventions to improve production and from macroeconomic policy

changes. The policy reforms and project interventions were mutually reinforcing.

The North Shaba case also showed how policies of the Government and AID influenced the project's design and implementation. The project proposal resolved a policy conflict between AID and the Government of Zaire over the best way to improve agricultural production and over the feasibility of alternative interventions. The evaluators noted that the Zairian Government wanted the kind of highly controlled, collective farm project that the Belgians had operated during the colonial period. It would use large amounts of fertilizer and other inputs to achieve higher levels of production. USAID insisted on an integrated rural development project, however, in which small-scale farmers would participate through cooperatives that would be created by the project. After long negotiations, the USAID position prevailed.

The North Shaba project was formulated during a period in the 1970s when AID had a strong policy of promoting integrated rural development activities aimed at improving the living conditions of the "poor majority." This followed from the "New Directions" mandate set out in the Foreign Assistance Act of 1973. AID's policy was adopted in the project design and was reinforced by the selection of a technical assistance contractor who was also strongly committed to such an objective. The technical assistance advisers insisted on implementing the project through a participative procedure that organized farmers into cooperatives. This reflected their own policy prescriptions for effective rural development as well as AID's "New Directions" strategy.

The strategy of forming cooperatives for farmer participation was unfeasible because of the Government's policy priorities and local cultural constraints. However, because the project organization was autonomous enough to make changes during implementation, managers and advisers were able to devise more appropriate policies. Moreover, AID's policies changed over time. The "poor majority" development strategy yielded to a concern with macroeconomic growth and private enterprise development.

Government policies not only influenced conceptions about how projects should be designed, but had a continuing influence on their implementation. The Niamey Department Development (NDD) project in Niger, for instance, was conceived as an agricultural production project because the Government strongly supported programs to increase agricultural output after the 1968-1974 drought years through the early 1980s. The NDD project was thus geared to promoting rainfed agriculture through improved production techniques. The project was designed to work through existing central Government technical services in the project zone.

Early in the project's implementation, however, Government policies began to change. The changes created uncertainties for

and complexities in the management activities for a project conceived under previous policies. The changes resulted from a reassessment of rural development activities at a national seminar in Zinder in 1982, at which the efficacy of centrally controlled, large-scale production projects was seriously questioned, as well as the constraints created by adverse economic conditions. "For several years Niger has been in a bind between declining uranium revenues at one extreme, and high recurrent costs of large-scale projects, ambitious programs of infrastructural development, high petroleum prices and increasing debt service at the other," the evaluators pointed out. The Zinder seminar and subsequent Government policy placed greater emphasis on convincing the rural population to take greater financial responsibility for rural development through self-help and locally financed activities.

The uncertainties created by changing Government policies, and the implied need for the NDD project and its beneficiaries to adapt to these uncertainties, was obvious to the evaluation team. They noted that "the NDD is in the midst of a transition from a national rural development policy that promoted large regional rural development projects to one that emphasizes smaller-scale, village-level interventions." They surmised that the outcome of the transition was "far from clear to donors and, we may suppose, to the government," and concluded that "the outcome must be even more problematic from the perspective of Niger's peasant producers. They are being asked to play an active role in rural development after more than three quarters of a century of being taught to follow orders rather than to take local initiatives."

These changes in policy created uncertainties for project managers that were not predictable at the time of project design.

3.1.3 Impacts of Projects on Government Policies

The African case studies established that projects were often strongly influenced by government and AID policy but that the projects, in turn, affected government policies and procedures. Indeed, some of the African projects were designed to effect long-range policy changes. The Agriculture Sector Analysis and Planning (ASAP) project in Liberia, for example, was based on the premise that the Government's agricultural policy was reactive, poorly informed by relevant information and analysis, and defined primarily by individual projects. As a result, Liberia's agricultural policies lacked coherence and direction. The Ministry of Agriculture's decisions were disjointed, overlapping, and sometimes contradictory. The evaluators noted that the objective of the ASAP project "was to create a capacity that would permit more informed decisions to be made about alternative activities based on a better understanding of the development potential and resource base of the sector as a whole. In effect, the projects ultimately were intended to bring about a reorientation of agricultural development policies."

Despite the wide-ranging problems in implementing the project, the evaluators concluded that the capacity of the Planning Department of the Ministry of Agriculture to do better agricultural sector analysis and planning has steadily improved. The evaluators found that "training and technical assistance contributed significantly to establishing the Planning Department's current capability. Though no official sector plan is in place, MOA [Ministry of Agriculture] has in recent years become increasingly receptive to a sector approach to planning."

Even with rather drastic changes in AID's policies during the life of the project, the activities in North Shaba also had an important impact on Government policy, precisely along the lines originally intended. The pervasiveness of the contractor's philosophy of beneficiary participation, even when the intervention strategies were changed, left a lasting impression on Zairian policymakers. The evaluators pointed out that the North Shaba project's strong identification with the technical assistance team made it something of a demonstration of the "people-oriented" approach to development. "In the design and the early days of the project, [the contractor] worked closely with AID to convince the government of Zaire to accept a strategy of people-oriented development, a 'New Directions' approach." Although the cooperative effort fell short of expectations, "in another sense, [the contractor] has done its job well: the government of Zaire now believes in a 'people orientation,' at least in North Shaba." The evaluators saw subtle changes in Government policy as a result of the project: "Now that AID has shifted policies to a more 'top-down' economic model, the government of Zaire is pushing to retain farmer groups and participation in its own rural development strategy."

The evaluators of the North Shaba project argued that although the policy setting had an important influence on its success, the project also changed Government policy. They concluded that "a project which affects government policy can be as successful as one which builds large infrastructure or creates new institutions." They also raised a note of caution for donors, however, about making drastic changes in policy for projects that are already underway: "Implementation of new and different AID policies midway through a project should only be attempted after careful consideration of possible impact on a project designed in a different policy framework."

The cases confirmed that although policy factors do influence the outcome of projects, other factors also affect their implementation. Among these influences are the ways in which the projects were planned and formulated, how their goals and purposes were originally defined, the outputs that were selected, and the amounts and types of inputs that were provided.

3.2 Design Factors

The implementation of agricultural development projects in

Africa was influenced as well by the procedures used by AID and other donor organizations for formulating, designing, and approving them. AID's project formulation and planning procedures, for example, place strong emphasis on systematic and thorough design prior to the approval of a foreign aid loan or grant. The logical framework used in designing AID projects requires careful identification of goals, purposes, inputs, and outputs in objectively verifiable form. The conceptual framework for evaluation, therefore, hypothesizes that effective project implementation depends on the choice of (1) appropriate goals, (2) realistic purposes, (3) adequate and appropriate inputs, and (4) effective outputs.

There is a strong debate among development managers, however, over how detailed and comprehensive project designs should be. One approach -- reflected in AID's own procedures -- is that projects should be designed in great detail prior to their approval. The Agency requires USAID Missions to submit detailed plans, analyses, and justifications for each project. A Project Identification Document (PID) must describe how the proposed project relates to the Mission's overall development program (Country Development Strategy Statement, or CDSS) and Plan of Action. It must identify primary beneficiaries and provide information on the goals and purposes of the project. It must include descriptions of the outputs and required inputs and preliminary estimates of costs. This assumes that the Mission staff already has a clear conception of the problem and of the most effective intervention.

Once the PID is approved, the Mission must formulate a detailed proposal. Project Papers (PPs) must provide information on the amounts of loans and grants needed from AID, total project costs, and the sources of counterpart government contributions. The project's goals, purposes, inputs, and outputs must be described in detail. For each of these elements, designers must provide "objectively verifiable indicators" by which progress can be measured and evaluated. In addition, the designers must be able to explicate their assumptions about conditions that will affect the success of the project, and all of this information must be summarized in matrix form. Once the project's design is described, the Mission must justify it by providing economic assessments of the effects of the project on intended beneficiaries, technical feasibility assessments, "social soundness" analyses, financial assessments, a detailed programming schedule for all tasks and activities, "milestone" indicators of progress, a schedule for disbursement of funds, and procurement, monitoring, reporting, and evaluation plans.

Another approach -- most recently reflected in work sponsored by AID in Asia -- argues that projects cannot be designed in great detail and attempting to do so not only leads to unrealistic expectations, but can stifle creativity and learning during implementation. Over-detailed and restrictive project plans ultimately lead to unresponsive and ineffective interventions that may satisfy AID requirements but that do not necessarily lead to beneficial and sustainable outputs for the project's

"target group." Critics argue that AID's design procedures result in preplanned interventions that do not allow the designers or managers to analyze and understand the needs of the intended beneficiaries or to offer opportunities for the beneficiaries to participate actively in planning and designing the projects. AID's procedures do not allow the Missions to build local capacity for sustained action through collaboration and learning and thus the benefits rarely last long after the project is completed.^{34} Some critics of AID's design procedures call for a learning process approach to project planning and implementation. In this approach the goals and objectives would be only broadly defined and the project would be shaped through interaction with and participation by those whom it is intended to help.

The evaluations of the African cases tended to support a position that fell somewhere between these two conceptions of good project design. Although they noted the importance of having clear, well-defined objectives and goals, they also showed the importance of flexibility, responsiveness to local conditions and needs, and of providing wide scope for learning and change. A frequent observation in the computer-based assessment of the 277 African project evaluations, for example, was that "project design was overly ambitious, aiming for unrealistic targets in too short a time frame." It also noted that when the projects were designed in too much detail or too quickly the objectives often conflicted with traditional values or local conditions. The evaluators indicated that it was essential to involve host country officials or beneficiaries in project design, especially if the objective was to sustain benefits beyond the period of AID funding.

{34} See, for example, David C. Korten, "Management of Social Transformation," *Public Administration Review*, 41, (1981): 609-618; and Dennis A. Rondinelli, *Development Projects as Policy Experiments: An Adaptive Approach to Development Administration* (New York: Methuen, 1983).

3.2.1 Project Goals and Purposes

Several lessons about managing project design emerged from the six African cases. Most of the African cases supported the need for a design process in which goals are defined as clearly -- and as simply -- as possible at the outset, but in which wide scope is left for adjustments and changes during implementation.

Value of Clarity and Simplicity in Design. The North Shaba project (PNS) in Zaire, for instance, was affected throughout its implementation by confusion about its primary goals and purposes. The evaluators noted a lack of consensus among the Government, AID, and the technical assistance contractors on whether the project was an agricultural development project aimed at

increasing maize and food production or a rural development project aimed at increasing farmers' income. The ambiguity was important, for the evaluators stated "it is clear that the original project design was overly complicated if PNS' principal goal was production oriented. That is, production and marketing successes were maintained with the existence of only the infrastructure and extension subsystems." If the major goal was to achieve long-term rural development, however, the project was designed inadequately: "under the broader goal, the farmer group development and intermediate technology subsystems should not have been terminated and the data collection and marketing and credit subsystems should have been strengthened."

The confusion was compounded by amendments to the project in 1980 and 1983. AID added new goals of attaining self-sufficiency in food production and development of institutions that could sustain increased production and marketing of agricultural products. The amended project plans also stressed the importance of replicating the North Shaba project in other parts of Zaire or in other African countries, an objective that had not been stated in earlier designs.

Despite the confusion in its formal design, the North Shaba project was successful because the technical assistance contractor and the Zairian implementing organization were able to respond to changing policies and circumstances quickly. The ability to maintain flexibility during implementation was crucial in an uncertain environment. The evaluators concluded that "indeed, since the project has shown quantifiable success, perhaps finessed goals and flexible implementation strategies have a place in a complicated project such as PNS."

Another lesson drawn from North Shaba was that "a development project will tend to be more successful if its design is administratively simple and its management enhancement interventions are phased and integrated carefully into local social and production systems." The evaluators of the Egerton College project in Kenya came to the same conclusion. Their analysis suggested "the efficacy of simple, clear and quantifiable goals and performance standards to project success." The evaluators observed that many organizations in developing countries "typically have weak management systems and few have the level of management flexibility afforded by Egerton College's parastatal status." Therefore, they thought that "it is important to keep the project within the capabilities of the host institution if [it is] to have 'ownership' and if it is to sustain the effort after the project ends. In addition, the simpler and clearer the project goals, the easier it is to reach consensus around them, to discipline activity around them, and to provide objective criteria for resource allocation."

Experience with the Egerton College project suggested that it is better to break goals down into simple, discrete, and phased objectives and to look at institutional development as a long-term effort that can be achieved best by allowing organizations in developing countries to tackle a series of

simple, clearly defined projects incrementally. "The goal should be to keep the project simple, assure that the institution can manage it within its existing systems, and aim for quick, clear and incremental successes."

The evaluators concluded that the Egerton College project was successful because its goals were clear and uncomplicated and because there was widespread understanding of its purposes. The objectives of the project did not generate conflict among divergent interests, and the basic activities to be performed were kept within the managerial and technical capacity of the organization.

Design Strategies for Multipurpose Projects. In some circumstances, however, projects must have multiple goals to deal effectively with complex problems. Agriculture in any country is a complex system; overcoming one obstacle without dealing with others usually has little impact. Designers of the Niamey Department Development project in Niger, for example, found that a "package" of activities was needed if agricultural production was to be increased significantly. Extension services, village organizations, credit, agricultural inputs, new technology, and management assistance were all necessary to raise the output of farm families. Similarly, the North Shaba project in Zaire required an integrated package of inputs -- farm supplies, roads, bridges, cooperatives, and agricultural research. The provision of one without the others would have been ineffective.

The evaluations implied that when the design of projects cannot be simplified, planners must at least be clear about overall strategies so that the project will have a general direction that can be supported and promoted by those responsible for implementing its many components.

In other situations, there are limits to the degree to which objectives and goals can be clarified, and those limits must be respected by designers if the project is to be approved and supported. Often potential participants and supporters of a project became involved because they perceived that it would advance their own interests and objectives, even if their goals differed or if there was little consensus on its main purposes. In some situations, the goals of different participants could not be easily reconciled during design and had to be worked out during implementation. This was the case in the Bakel project in Senegal, where the objectives of the National Society for the Development and Exploitation of the Senegal and Faleme River Basins (SAED) and local farmers were in direct opposition during the early years of the project and only converged as the new SAED leadership became more responsive to its client's needs.

Recognizing the inherent differences in goals during the early years of the project, SAED technicians attempted to get farmers to cooperate not by reason, but by an appeal to divine authority. Some SAED technicians told villagers that "it is God that has installed SAED. To not work with SAED, that would be like a son refusing the heritage of his father." It would have

been difficult if not impossible -- given the attitudes of the leadership in SAED at the time, and Government agricultural policies -- to reconcile these differences in goals during the design phase. The evaluators reported that

During this early era -- which was to last until approximately 1982 -- SAED itself was operating under a mandate, which while not God-given, was all encompassing. It was one of several Regional Development Authorities in Senegal, and its responsibility was to develop the Senegal River Basin. Explicitly stated as an objective was the reduction of the overall national food deficit. With the world market for peanuts -- Senegal's main cash crop -- falling, import substitution of critical foodstuffs became the theme. SAED was looked upon as the agent to overcome the deficit of what the bureaucrats and politicians of Dakar perceived as the preferred food in Senegal: rice.

The farmers of Bakel, on the other hand, were anxious to refill their granaries which had been depleted during the 1968 to 1973 drought, and had no particular preference for rice. Sorghum, millet and maize were preferred crops in the Bakel area, with the sorghum cous-cous eaten with milk as a porridge at breakfast and with meat or vegetables at other meals. The initial collective work had focused on either vegetable gardens, for consumption, or sorghum. The idea of producing rice to feed the civil servants of Dakar was not exactly what they had in mind when they had formed their groups.

Given these conflicting goals, the project could only proceed by remaining ambiguous in its objectives at the outset. As will be seen, however, these conflicting goals had to be resolved during implementation. The design provided a strong enough strategy to allow conflicting interests to be reconciled without undermining the project's overall purposes.

The evaluations indicated that the design of complex, multipurpose projects must reflect their special needs and characteristics. Evaluators of the North Shaba rural development project argued, for example, that "complicated technical assistance projects should not be expected to achieve results in unrealistically short time frames. It takes at least a full generation to create new institutions and to teach new management approaches in traditional societies." They concluded that complex projects must be designed to provide long-term financial support -- for at least 10 years in many cases--and allow enough flexibility for managers to make appropriate changes in phasing and sequencing objectives during implementation.

Need for Flexibility in Design. When projects cannot be designed as simple, clear, and incremental sets of tasks, their design must be flexible enough to allow for adjustment, reconciliation, clarification, and redirection in goals and activities during implementation. Evaluators of the Agriculture Sector Analysis and Planning (ASAP) project in Liberia concluded

that "flexibility to modify implementation strategies is important for planning projects so that activities can be adjusted to cope with unanticipated constraints or to capitalize on unexpected opportunities."

The need for maintaining flexibility and latitude for change in the project design arises not only from the difficulty of clarifying and obtaining consensus on objectives, but also from the fact that many of the other factors -- policy, contextual, and even managerial -- that affect implementation cannot always be anticipated during the design stage, nor completely controlled during the life of the project. Evaluators of the ASAP project in Liberia pointed out that environmental and contextual factors strongly influenced its outcome, but that "these contextual factors were beyond the control of the Agriculture Sector Analysis and Planning project and, with the exception of organizational culture, were impossible to predict accurately." It would have been extremely difficult to know how the Ministry of Agriculture would have to proceed in shaping the details of its sectoral analysis and planning tasks when the project was being planned. The evaluators found that although the goals of the projects were clearly understood by the Liberians, "what is less clear is precisely what types of studies are needed and where the information obtained from these studies will lead." The evaluators concluded that "to maximize the utility of that information, the implementation of the project must allow for initial open-endedness and frequent redirection of activities." The ability to redirect activities during implementation depends in part on the degree of flexibility allowed by the project design.

The project's designers could not fully appreciate the complexity of introducing sectoral analysis and planning in a Ministry of Agriculture that was later to be deeply affected by financial problems and by the political changes that came with a subsequent coup. Nor could they anticipate the organizational changes that were needed within the Ministry of Agriculture to adopt sector planning. Nor could they be sure when they were planning the project how much support the Minister would give to reorganization. The case for design flexibility was made stronger by the evaluation team's observation that it was unlikely that the designers of the project "could have made reorganization a formal objective, because the initiative for doing so did not originate with the Liberians. Rather, this appears to have resulted, in part, because reorganization fit within the broader interests of the Minister of Agriculture and, in part, from the interests or objectives of USAID technical advisors at the time."

Although the ASAP project was not entirely successful, it did make substantial gains in introducing sectoral planning. Implementation was difficult but as the evaluators emphasized, "management issues came to be addressed because project assistance was interpreted by USAID, contractors, and MOA [the Ministry of Agriculture] as a resource and not a rigid blueprint. Considerable flexibility was permitted in adjusting activities

based on experience as well as a changing project environment. As it happened these changes in the project's environment provided new and unexpected opportunities to reorganize." The evaluators found that "these changes, combined with leadership initiatives in proposing a broad organizational and policy framework, contributed to defining planning as an integral part of MOA operations."

Finally, the cases indicated that project designs must be kept flexible and responsive to the need for change during implementation because they deal with complex, highly uncertain, and risky ventures. Evaluators of the Liberia project emphasized that "managing agricultural planning projects requires managing uncertainty -- there is no guarantee that workable and acceptable investment strategies will be identified by the project. However, the payoff from such projects (i.e., increased return on investments in the sector), warrants the high risk. AID should view its support for such projects as providing the risk capital that developing countries can afford."

Because of the uncertainty characterizing complex projects and because they must be designed for the long term, evaluators of the North Shaba project argued that their designs must allow managers to reassess objectives and, when necessary, change priorities during implementation. "The existence of multiple goals or purposes should be clearly understood during project design. The priority among these [goals] needs to be re-evaluated periodically during implementation," they concluded. "There should be no necessary bias, however, in favor of maintaining the order of priority during the course of the project."

3.2.2 Project Inputs and Outputs

The evaluations pointed out that implementation of several of the African projects was adversely affected by either insufficient or inappropriate inputs. This was usually a design problem -- those responsible for formulating the project either underestimated resource needs or misunderstood them and thus provided inappropriate inputs. Problems arose from the perception that good managers operate within existing resource constraints, and from inflexibility in AID's procedures for obtaining sufficient and appropriate inputs once the projects were underway.

Adverse Impact of Insufficient or Inappropriate Inputs. The lack of adequate and appropriate resources was a problem that obstructed field activities in the Bakel project in Senegal. In 1982, farmers "revolted" against SAED because it was unresponsive to their needs. Dissatisfaction stemmed from the inadequate and untimely provision of diesel fuel, fertilizer, seeds, and spare pump parts, all of which were critical inputs for expanding agricultural production. The project failed to establish village storehouses for fertilizer and seeds. Problems arose not only

from ineffective management, but from inappropriate design. Those who wrote AID's Project Paper provided for some inputs -- such as trucks and fuel -- but ignored others. Some of the inputs that were provided were inappropriate for the project area. The evaluators were critical of the project's designers because "the fact that the roads were unpaved and closed much of the time, that inadequate storage existed in the Bakel and at the villages, and that some detailed analysis of needs and development of pipelines for items subject to national shortage (e.g., fertilizer) might be useful, does not seem to have entered into the plans."

Moreover, during the project's implementation SAED's ability to improve agricultural production through extension of irrigation systems depended largely on its zone-level staff. They were responsible for opening up or extending the perimeters, overseeing the procurement and distribution of supplies, supervising the installation of the irrigation equipment, monitoring maintenance and operations, and keeping records on credit repayment. Yet the zone staff were not supplied with vehicles or provided with other means of transportation. They had to find their own ways of getting to the villages. Although they were given a small travel allowance, they had to use their own vehicles or commuter buses. The evaluators noted that under these circumstances, "village visits, while they do occur, are irregular, with villages farthest away from the zone station receiving the least number." Because of inadequate transport, the most remote villages received the least attention.

Financial resources were insufficient to compensate adequately the pump operators and extension staff on whom effective operation of village irrigation systems strongly depended. This resulted in constant turnover among field technicians. Often they were compensated with extra water or assistance in preparing their fields, but as the evaluators found, "these incentives do not appear to be strong enough to keep them in their positions."

Role of Inputs in Establishing Project's Legitimacy and Acceptability. The cases also emphasized the importance of providing adequate and appropriate inputs in establishing a project's legitimacy and in acquiring support for its activities among potential beneficiaries. The legitimacy of the North Shaba project (PNS) in Zaire depended on its ability to deliver resources that were clearly needed and desired by the local population. Early in the project, farmers in North Shaba were provided with low-cost adapted seed and improved cultivating methods. Roads were improved so that merchants and truckers could buy larger amounts of agricultural goods. The project made available small tools that farmers could not previously obtain. The evaluators emphasized that the project's legitimacy with local officials

was strengthened by actions that demonstrated concerns beyond the narrow mandate of the project. PNS became a respected member of the communities in which it operated.

The project's electrical generator, for example, was connected to the Kongolo hospital so that it could provide backup power in an emergency; PNS sold gasoline when no one else had any; it sent courtesy messages over its radio channels for local businessmen; it provided vehicles to transport the sick; it permitted the repair of government trucks at the project facility when special skills were needed; and it authorized use of the PNS guest house for important official visitors not directly associated with the project.

The evaluators noted that the project's ability to provide appropriate resources to its primary beneficiaries and to those whose support was needed for effective implementation was an important factor in helping to develop "a vested interest and sense of participation by individual farmers as well as the local authorities in the success of the project."

Selection of Inputs That Provide Quick, Visible Results.
Several of the evaluations contended that effective implementation of a complex project often depends on providing inputs that produce quick, visible results that staff and clientele alike can benefit from while awaiting longer term changes. The Liberia Agriculture Sector Analysis and Planning project, for example, gained support within the Ministry of Agriculture by providing inputs that the Ministry could not obtain elsewhere. The evaluators reported that

The project provides funds for essential activities and commodities that are outside of MOA's operating budget. For example, the project has provided motorbikes for county statisticians and enumerators to give them the mobility they need to carry out their work. Communication between the central office and the field is extremely difficult because of limited budgets and the lack of telephones or radios. Consequently, the project provides funds for essential travel from the central office to the field. Microcomputers as well as basic supplies and equipment necessary for the farm surveys have also been purchased through the project.

In Lesotho, the evaluators of the Land Conservation and Range Development project found that farmers identified the project most closely with its agricultural inputs: assistance with pasture improvement, with livestock management, and with improving the quality of their herds, wool shearing and dip tank facilities, tractors, and improved seed. "Based on these responses," the evaluators concluded, "it is apparent that the project has gained farmer support as a result of its quick, successful effort to show visible results and provide real services." They argued that provisions should be made in the design of all projects for inputs that can be delivered quickly to intended beneficiaries. Evaluators of the North Shaba project came to a similar conclusion. They observed that "success breeds success," and that therefore, "some investment in short-term

actions that demonstrate productive successes may be a necessary first step to get farmers and government officials to pay attention to longer term suggestions for more sophisticated institutional changes and human resource development."

Local Needs Versus Replicability Criteria in Choosing Inputs and Outputs. Several of the evaluations suggested that effective implementation depended heavily on designing projects for the specific conditions and needs of the locality in which they would be carried out. Evaluators argued that AID officials should worry less about designing projects that are potentially replicable throughout a country and instead should seek to ensure that project designs take advantage of and reflect the unique conditions and needs within the project area.

This finding was perhaps most clearly stated in the evaluation of the Land Conservation Range Development project in Lesotho. The Seblabathebe region was physically isolated from the rest of the country, largely inaccessible except by a fair weather roads, and usually unconnected by telecommunications. The evaluators argued that the very isolation of the project area made it a good site because the impact of the interventions could clearly be demonstrated. Once this site was chosen, designing the project to meet the unique needs and conditions of the area was crucial to its success. Attempts to produce results that were chosen more for their potential replicability than for their appropriateness to this area would have been both infeasible and deleterious.

Flexibility in Input and Output Specification. The African cases emphasized that the outputs of the project must be acceptable to the beneficiaries and that the inputs must be both sufficient and appropriate to achieve the intended goals. But evaluators noted that proper selection of appropriate inputs and outputs cannot always be done during the design stage. Identifying the most appropriate inputs and outputs for a project requires a thorough knowledge of the locality in which the project will be implemented and the ability to learn through experience as the project progresses. Designers could not always anticipate during the planning stage which inputs would be most valued by rural households or would be most critical for achieving the project's objectives.

One of the most important inputs for farmers from the Niamey Department Development project in Niger, for example, turned out to be one that was not considered critical by the designers for increasing rainfed agricultural production: the ox-drawn cart. Yet the ox-drawn carts tended to be the most popular and desired input. "Its popularity resides in the perceived diversification of real income it offers during the dry season months, a period which until very recently has been neglected by NDD's interventions," evaluators discovered. "The cart enhances farm-level resource management by addressing local-level constraints (on needed income) more effectively than the production techniques being promoted by the project."

The design of the project in Kenya, on the other hand, was deemed deficient because it provided inappropriate technical assistance. Funds were provided to replace Egerton College faculty, who were away on training leave, with professors from the United States. But the American professors were costly and ineffective resources. The evaluation team found that the cost of sending American professors to replace Kenyans was extremely high. Many of those who went to Kenya were not skilled in the subjects they were to teach; some of the courses they taught at Egerton were inappropriate or irrelevant; and thus they made little real contribution to the educational objectives of the College.

Although the American professors were usually competent, they were not familiar with the College's curriculum, teaching styles, or student needs. Their inappropriateness was reflected not only in their professional activities but in their lack of social interaction with the remaining faculty. "The sense is that they were socially isolated and did not mix well," evaluators later discovered.

Part of the isolation of the technical assistance staff may have resulted from AID policies in recruiting [them]. Housing units, which were considerably larger than the housing units provided for Kenyan teaching staff, were specially built for the U.S. faculty members. These units were equipped with the large, American-style electric appliances, which were not even appropriate after the technical assistants returned home for use in the Home Economics laboratories. Since the American technical assistants also received a "hardship" allowance on top of their regular American salaries, and were allowed to bring in cars and other household items under diplomatic immunity, they had and exhibited a level of wealth far above that of their Kenyan colleagues. Kenyan staff felt restrained in inviting the Americans to their far more humble homes. Some of the American technical assistants were able to break out of this walled existence, but most of them existed in social and, to a large extent, in intellectual isolation.

The leaders of the project overcame some of the difficulties and tensions between American and Kenyan staff by maintaining strong control over the project and by keeping Kenyans in positions of authority. They seriously questioned, however, whether the resources used to bring in American professors could not have been used more effectively in other, more appropriate ways to achieve the project's goals.

Capacity To Redesign During Implementation. The evaluations implied that if selecting the proper inputs and outputs cannot always be done during design, then the project should be framed broadly enough to allow for redesign as the result of learning

during implementation. For example, after discovering that farmer cooperatives would not work in the North Shaba rural development project in Zaire, extension workers set about finding alternative ways of increasing production that were more attuned to local culture and behavior. In effect, they were able to redesign part of the project's outputs during implementation by using methods that were more appropriate to local needs. When they abandoned the cooperative activities, they established demonstration fields, often with guarantees of produce to offset the risk of farmers who provided land to demonstrate the new methods. "Under this plan, farmers and their neighbors could see results, and individually adopt new methods as they so chose. Thus, instead of the original project strategy of group or community action, which might be appropriate elsewhere, farmers were able to observe passively and choose to participate on an individual basis in project offerings."

Because the attention and commitment that a project commands depends in part on the adequacy and appropriateness of the inputs it provides, and because these cannot be fully anticipated during design, then the ability to make changes in those inputs and outputs during implementation is crucial. The team that evaluated the Liberia project suggested that some inputs be kept under the discretionary control of the project managers so that they can respond effectively to changing needs: "Without at least some discretionary resources available to managers, they become, in effect, administrators of activities that are controlled outside the institution."

In sum, the African cases indicated that design factors were important in influencing the implementation of these six agricultural development projects. They found that clearly stated, well-understood, and incrementally phased goals can help guide project managers toward intended results. Often, however, complex problems and conflicting objectives cannot be captured in a project with simple and clear goals. Therefore, it is important that project designs be kept flexible and that managers be given wide scope for altering plans during implementation, especially when conditions and needs unexpectedly change. The evaluations highlighted the importance of providing adequate and appropriate inputs and selecting outputs that meet the needs of the project's staff and beneficiaries. They suggested that projects be designed to operate effectively within the areas in which they must be implemented and that less attention should be given to designing them for widespread replication. Because appropriate inputs and outputs often cannot be identified accurately during the design phase, project plans and agreements must leave some discretion for managers to make changes during implementation.

Although the evaluations confirmed that policy and design factors were both influential in determining the outcome of these six agricultural development projects, they also highlighted the important roles that environmental and contextual factors played in their implementation.

4. THE INFLUENCE OF ENVIRONMENTAL AND CONTEXTUAL FACTORS

Increasingly, AID has found that the effective management of development projects depends on creating a conducive environment for intervention. But the African cases suggested that it is even more important for those who manage projects to understand existing conditions and to be able to tailor interventions appropriately to them. The evaluations confirmed that economic, political, cultural, and technological conditions and host country government support for a project -- or at least the lack of obstruction or hostility to its aims and outputs -- are critical factors influencing implementation.

More than 80 percent of the 277 African project evaluations included in the computer assessment indicated that the projects were affected by contextual factors. More than 17 percent of the evaluations emphasized that donor procedures and relationships were incompatible with or were adversely affected by the sociocultural or economic environment in which the projects had to be carried out. Nearly 26 percent indicated that sociocultural, political, or economic conditions within the country adversely affected the projects' performance. Other recurring problems included adverse geographical and climatic conditions, technological problems, and incompatibilities between project design and the actual conditions under which the project had to be implemented. The six field evaluations tended to support the hypothesis that environmental and contextual factors play an important role in the successful implementation of development projects. All of them emphasized the importance of understanding the environment in which the project must be implemented, as well as local social, cultural, and economic constraints and opportunities that inevitably affect development activities.

4.1 Impact of Environmental Conditions on Project Identification and Design

The six African cases illustrated quite clearly that environmental conditions within developing countries have a strong impact from the very beginning of the project cycle. They usually shape the forces that create development problems and opportunities. They also help shape planners' perceptions of how projects should be designed. Nearly all of the projects addressed problems arising from long-standing, complex, and adverse environmental conditions. The Land Conservation and Range Development project in Lesotho, for example, was initiated because of low levels of efficiency in land management and of productivity in livestock raising. Evaluators pointed out that the project was necessary because of several environmental conditions that led to poor performance throughout the agricultural sector: the national economy's heavy dependence

on revenues from economic activities in the Republic of South Africa, migration of workers to South African jobs, overgrazing and uncontrolled breeding practices among traditional livestock herders, communal ownership of land that inhibited effective resource management, and climatological factors.

The Government of Liberia sought funding for the Agriculture Sector Analysis and Planning project because of widespread deterioration in agricultural production. In just 2 years, from 1980 to 1982, agriculture's contribution to gross domestic product declined from 19 percent to about 14 percent. In a country in which 70 percent of the population depended for income on agriculture and related activities, sharp declines in prices for agricultural exports and in production were sufficient motivation for the Government to find ways of improving the Ministry of Agriculture's planning and analytical capability.

4.2 Impact of National Economic and Political Conditions

The national economic and political environment also played an important role in determining the outcome of most of the African development projects. The evaluations strongly implied that although environmental and contextual factors often cannot easily be changed, they must at least be understood so that projects can be managed effectively within existing constraints and so that appropriate strategies can be developed. National economic, social, and political factors were especially important influences on all of the African agricultural development projects. For example, in Kenya, the Egerton College project was successful in part because it was operating under highly favorable environmental conditions. The project started during a time of economic expansion and even when economic growth declined, the College was able to maintain its financial position because of the autonomy it had in the governmental system and because it had its own sources of revenue.

The ASAP project in Liberia also offered a vivid example of the adversities that economic and political changes can bring to development activities. The attempt to expand analytical and planning capacity within the Ministry of Agriculture was undermined by the economic woes that befell Liberia soon after the project was initiated. Declining world prices for exports, decreasing export earnings and foreign exchange, the lack of liquidity, and declining public revenues eroded people's confidence in the economy. These problems were exacerbated by mismanagement, corruption, and political uncertainty within the Government. The fiscal crisis in the early 1980s weakened the project's ability to improve the Ministry of Agriculture's (MOA) analytical capacity. The evaluators noted that "funds are extremely limited in MOA, even for regular functions. Even salaries are as much as three months late. This severely restricts MOA's capacity to utilize fully the technology provided by the project or to undertake needed internal management reforms." The country's fiscal problems aggravated the already

poor working conditions in Government agencies and hastened the pace of personnel turnover in the Ministry.

The evaluators of the LCRD project in Lesotho also noted the important role that the political environment played in structuring organizational relationships and managerial practices during the project's implementation. The political and administrative structure in Lesotho was a mixture of modern and traditional -- half of the Government's cabinet was composed of village, ward, or principal chiefs. "Both formal and informal linkages tie the chieftanship to the political and administrative machinery of government," the evaluators noted. "The tension between these opposing yet complementary interests permeates administrative dynamics at district and village levels."

The technical assistance advisers had to adapt their managerial practices to this political context. They had to create formal contact with the Ministries of Agriculture and Interior and with other Government agencies that could affect the outcome of the project. Informal contacts also had to be maintained with the chiefs and traditional local courts through which farmers brought their grievances and settled their conflicts. The staff had to make critical decisions about which aspects of the project were to be subjected to the slow, lengthy, traditional processes of decision-making and which should be handled by directives so that expedient actions could be taken. Management under these circumstances required a profound understanding not only of the national political culture but also of local traditions. Local traditional authorities in Lesotho were strong and could block or delay the implementation of unacceptable decisions. A project that ignored this complex and mixed system of governance in either its design or implementation would be doomed to failure.

Moreover, the project operated in an economic environment that was only partially affected by Government policy or by domestic influences. Lesotho's economy was strongly affected by economic and political forces in the Republic of South Africa. Remittances from workers in South African mines accounted for nearly 41 percent of Lesotho's gross national product in the early 1980s. Much of the difficulty in managing livestock production in Lesotho was because nearly half of its male labor force worked in South Africa, where in a little more than 2 weeks of work they could earn as much as 1 year's farm labor income in Lesotho. The impact on a project attempting to improve agricultural productivity was pervasive. Evaluators pointed out that "the migration of able bodied men from the rural areas of Lesotho leaves women, old men and children to attend to arduous agricultural tasks. Normally plowing, planting, cultivating and attending to livestock are male functions. But the women and children left in the villages have found themselves increasingly doing these tasks."

These conditions resulted in low productivity and made it difficult for the project staff to introduce innovations. The evaluators found that although males were away working, the men

still retained their positions of authority in the family. All major suggestions made by agricultural extension officers about crop selection and animal culling, slaughter, and sale had to be sent for approval by wives to their husbands in South Africa before a final decision could be made. "The end result is that decisions on important and perhaps urgent issues tend to be delayed," the LCRD project evaluators noted. "It is quite possible too that negative decisions may be arrived at on some issues purely because the wife did not relay the message from the officers correctly and with sufficient details."

Moreover, Lesotho's dependence on the South African economy created a shortage of herdboys to help tend and manage livestock. The boys quickly migrated when they came of age and could find the opportunity. This was especially devastating to the livestock management improvement project because care of the herds depended almost entirely on these untrained boys. Bosothe culture and traditions did not allow women to participate in livestock-raising activities or to be anywhere near where animals were raised.

Finally, the strong flow of remitted wages into Lesotho brought overinvestment in livestock without adequate concern for maintaining the quality of the animals, making herd management more difficult.

The attempt to increase agricultural output in the Niamey Department Development (NDD) project in Niger by training peasants in production improvement techniques was severely constrained by technological conditions and by the political and cultural obstacles to introducing innovations in traditional training "packages." A 25-year-old standardized and unproven package of production improvement techniques was taught to rural families because it was the only one acceptable to the national agricultural agencies and because extension agents and trainers had been taught only those techniques for more than a generation. These conditions limited the NDD project staff to promoting methods that fell within the acceptable technological framework.

The evaluators pointed out that "no alternative technical packages were available at the beginning of NDD I (1977) and there are no clear-cut alternatives three years into NDD II (1984). By the force of circumstances, NDD has promoted the only improved techniques available.... It is very likely that under conditions where deviations from what amount to a standard intervention recipe of the government's technical services are negatively sanctioned, support for any innovations by NDD would have been nonexistent."

4.3 Impact of Local Social and Cultural Environments

The African cases also revealed the extent to which development management was influenced by local social and cultural traditions. The Land Conservation and Range Development

(LCRD) project in Lesotho, for example, had to be sensitive to the interests of local traditional authorities, and it often had to operate through traditional procedures. The civil service in Lesotho was a relatively new institution that was still somewhat weak. It was, in many respects, rooted in traditional practices and values. For example, the project implementing unit had difficulty managing the project's resources effectively because of the mafisa tradition. Rural people shared equipment, labor, and other inputs as well as agricultural goods, and this practice spilled over into the operations of government agencies. Thus, LCRD staff were expected to share the project's resources with other Government agencies needing vehicles or equipment.

Project personnel also had to make use of the pitso, or traditional public meeting, that was usually attended only by male members of the villages to discuss issues of common interest and to make decisions affecting their community. Project staff had to use the pitso to extend technical guidance to farmers about soil conservation and range development and were expected to use a similar process of consensus building with other civil servants.

Moreover, project staff had to be sensitive to other local organizations that influenced people's opinions and attitudes. The overwhelming majority of rural families in Lesotho were Christian, with the Catholic Church claiming the most members. The churches not only molded social opinion from the pulpit, but also dominated the educational system and provided most of the health services in rural areas. The evaluators of the LCRD project observed that "it would certainly facilitate acceptance of change at the village level if the change is supported or at least not opposed by the religious movements."

Although the traditional processes were extremely important in implementing the project effectively, they also clashed with concepts of modern management. "In government this need for consensus can bring on protracted periods of stasis and great reluctance to implement difficult decisions," the evaluators noted. "The traditional practice of deciding through consensus is a time consuming process that has carried over into government and helps explain why decision making is often difficult." Ironically, the success of the project depended not only on understanding the traditional culture and practices, but also on the ability of technical assistance advisers and project staff to manipulate or avoid them when decisions had to be reached quickly. On the whole, however, the evaluators concluded that "sensitivity to informal decision making is key to good project performance."

Evaluators of the North Shaba project in Zaire came to a similar conclusion, arguing that "an in-depth understanding of the local socio-economic and technical environment is a sine qua non to successful project design and effective project management. Managers should be careful not to generalize from other project experiences without first analyzing the unique characteristics of the project setting."

This conclusion was based on the inability of the project managers to implement effectively the policy of farmer group development or cooperative activity in North Shaba. The policy advocated in the project inadequately reflected the cultural setting and behavior patterns of the farmers who were to be organized into cooperatives. The evaluators noted that "the transient and hierarchical Luba ethnic group of the eastern project zone did not appear to have had an interest in forming cooperative groups. Their problem was the need to move frequently as their way of maintaining soil fertility in the forest region." Moreover, the Hemba were not a highly cohesive ethnic group and had difficulty working cooperatively outside of their lineages: "choice of one person to rule a group of independent lineages was not looked upon kindly, and jealousies remain to this day." In addition, the memories of colonial policies forcing people of the zone to settle in fixed villages and to farm under production quotas left a pervasive legacy of mistrust of organized farming schemes and of methods sponsored by either the central Government or foreigners.

The evaluators concluded that the concept of "democratic, broad based, farmer councils, cooperatives or agricultural centers serving to channel ideas between farmers and the project, was at cross purposes with the local sociocultural tradition. Predictably, even energetic project management could not change these basic sociocultural values in the short time provided by the project. The farmer group development subsystem could not succeed and was terminated early."

The evaluators of the Niger project also emphasized the importance of understanding the socioeconomic and cultural context at the local level. They concluded that planners of projects seeking to enhance farmers' ability to manage resources must understand the constraints, other than those on production, that rural populations face. They must also examine critically all national extension models that claim to provide assistance to farmers and verify that project interventions address accurately the real constraints on intended beneficiaries.

4.4 Projects as Interventions To Change Contextual Conditions

All of this is not to say, however, that projects must operate only within the scope of existing cultural and environmental conditions. Those conditions must be appreciated, but if a project is to bring about change, these conditions must sometimes be manipulated and altered. In the North Shaba project, many actions were taken to expand the constraints of local traditions and behavior by introducing new maize seed varieties, cultivation practices, and processing methods. The evaluators saw "that while farmers did not originally like the taste of the new maize and while the women complained that the new grain was more difficult to pound into flour, the returns from the improved seed, new cultural practices, more efficient marketing system, and higher prices were powerful incentives that

caused farmers to make changes and increase their production."

These changes, however, had to be brought about within the existing cultural milieu. The staff had to learn gradually which elements of the local culture could be changed and to which elements they had to adapt. They learned eventually that the most successful parts of the project were those that broadened farmers' options -- for buying new seed varieties and taking advantage of increased farmgate prices -- without forcing them to adopt new approaches. They relied on demonstration effects to bring about change rather than attempting to force changes that conflicted with local culture and behavior.

4.5 Impact of Host Country Support

The degree to which host country governments either provided or withheld active support for development projects also influenced implementation. In some of the cases, host country governments provided direct support through their central ministries or agencies or indirectly assisted the implementing organizations by providing supplies, equipment, technical advice, financial resources, or policy changes. Where host country support was strong, it usually contributed to more successful implementation. For example, the Senegalese Government's willingness to respond to farmers' complaints about the early administration of SAED in the Bakel area was an important factor in redirecting what was becoming a disastrous situation into a successful project. The Government's willingness to replace the director of SAED and support changes in its organization and policies allowed SAED's new leaders to change a hostile environment in the river basin into one in which the project unit and the farmers came to cooperate effectively.

The lack of host country support or commitment had deleterious effects on project implementation. Management of the North Shaba rural development project (PNS) was made more difficult by the failure of the Zairian Government to provide the budgetary resources it had promised. Actual outlays were as much as 20 percent less than those budgeted for PNS. The Government's failure to meet its financial obligations to the North Shaba project were partially due to weak budgeting and financial analysis capacity at the national level, resulting in unrealistic revenue estimates. It also resulted from lack of control over exchange rates and from international economic problems not entirely within its control.

But the Government's overall support for agricultural development generally was weak and this adversely affected all programs and projects attempting to increase agricultural production. Some of the problems of implementing PNS, therefore, were attributed by the evaluators to the "failure of the government of Zaire to assign a high priority to agriculture." The evaluators pointed out that "although agriculture has provided 30 percent of the GDP over the last ten years,

government support to the sector has been well below 10 percent of the national budget."

The Agriculture Sector Analysis and Planning (ASAP) project in Liberia never attained its goals of getting the Ministry of Agriculture to adopt and use sector planning because there was little commitment to change within the Liberian Government. Evaluators observed that "both Ministry and USAID staff report a disinterest in MOA [Ministry of Agriculture] for sector planning and no strong incentive within the government of Liberia for the approach." Without host country commitment to sector planning, the evaluators predicted that "it is very unlikely that the current project will achieve this objective." The Government not only failed to support ASAP, but provided little help to any of the Ministry's activities. "Inadequate communication, insufficient office supplies, salary cuts, salary delays, no regular promotion, and few incentives largely reflect this situation," evaluators found. Without stronger support the Ministry could do little to create the conditions that would have allowed sector analysis and planning to be used effectively. Evaluators argued that "if sector planning is to improve the management of available resources and maximize returns on investments, economic and other types of analyses produced on the basis of a sector strategy cannot be consistently ignored or overruled by political leaders and other decisionmakers."

In brief, the cases showed that environmental and contextual factors pervasively influenced the implementation of the African development projects. Social, political, economic, cultural, and technological conditions within African countries influenced the design of projects and the types of interventions chosen. National economic and political conditions influenced what could and could not be done by project managers during implementation. And all of the projects were influenced by local social and cultural forces that created limitations and opportunities for development managers.

The cases emphasized the need for understanding environmental and contextual conditions to design and manage projects effectively. They showed that some environmental and contextual conditions could be changed through appropriate interventions but that others were immutable constraints within which development managers had to learn to operate. The African case studies confirmed that together with policy, design, and environmental factors, the success of projects also depended on the adoption of effective management practices and procedures.

5. INTERNAL MANAGEMENT AND ORGANIZATIONAL FACTORS

The conceptual framework for the evaluations identified four sets of organizational and management factors that constitute an integrated system of management: (1) appropriate organizational and institutional structures, (2) efficient administrative processes, (3) effective management of resource inputs, and (4)

effective management of human resources. A hypothesis was that this management system is crucial for effective project implementation. The Center for Development Information and Evaluation (CDIE) scope of work for the evaluations indicated that these management factors contributed strongly to development management capacity in developing countries, and they were thus given much attention in the case studies of the six African agricultural development projects.

5.1 Organizational Structure

The computer analysis of the 277 African development projects completed between 1975 and 1983 confirmed that the organizational and institutional factors proposed in the original CDIE scope of work were critical. In 55 percent of the projects, the nature of support services was mentioned as an important variable in implementation. The other structural factors identified were the organizational relationships of the project to the intended beneficiaries and the relationship of the project organization to government agencies.

The six case studies confirmed the importance of a variety of other organizational factors, including the "organizational culture" in which projects must be designed and implemented, the role of institutional development in sustaining benefits, balance between autonomy and linkage for project implementing organizations, the need for interorganizational coordination and interaction, and the role of proper organizational relationships between USAID Missions and project implementing units in facilitating effective management.

5.1.1 Organizational Culture

The evaluations emphasized the importance of organizational culture in shaping opportunities for, and creating constraints on, effective implementation.

Too often, project designers and technical assistance advisers assume that the organizational environment existing in developing countries is -- or should be -- similar to that of Western countries. Rarely is that the case. The organizational environment in Africa was almost never as rationally and efficiently structured (although it may be efficient given local values and perspectives) as project designers assumed it should have been.

The evaluation of the project in Liberia described the main characteristics of an organizational culture that appeared in other African countries as well. The evaluators pointed out that in Liberia authority within an organization was often vested in a single person who served in a patron role. Policy- and decision-making were often ad hoc and highly personalized rather

than an institutionalized process. Budgeting, finance, procurement, and personnel systems were also usually ad hoc arrangements. Personnel appointments tended to be made informally and through personal contacts rather than by formal merit standards or official procedures. Accountability for the results of actions taken within organizations tended to fall on the patron responsible for an individual's appointment rather than on the person responsible for the actions. Moreover, the survival and expansion of the entire administrative system often depended not on objective criteria of performance, but on the capacity to co-opt previously excluded groups into a larger coalition of support.

This kind of organizational culture had deleterious impacts on the implementation of AID-funded projects in several countries. In Liberia, patronage practices hindered the improvement of management within the Ministry of Agriculture. The lack of specificity about assigned tasks, roles, functions, and priorities, the overlapping jurisdictions and responsibilities, and the competitiveness within the Ministry for limited resources, all had negative impacts on management improvements proposed by USAID advisers. The evaluators pointed out that "the organizational culture of Liberia's system of public administration is strongly influenced by patronage values that run contrary to the objectives of project planning. In particular, sector planning assumes that decisions are made on an informed basis to maximize economic benefit to the sector. The influence of patronage, on the other hand, leads to decisions that protect or advance personal rather than public economic or political interests."

Moreover, the American project designers had made assumptions about the acceptability of sectoral analysis and planning that simply were not consistent with the attitudes of Liberian administrators. Evaluators of the Agricultural Sector Analysis and Planning (ASAP) project pointed out that

Agriculture sector analysis projects assume that two types of values or rationality guide the workings of government agencies: 1) purposive rationality -- in which the staff of a public institution ascribe to collectively held values about the importance of achieving institutional objectives; and 2) economic rationality -- in which decisions are made primarily on the basis of maximizing economic return to the sector. Such assumptions are not consistent with the organizational culture of Liberia's system of public administration. It is not surprising that the results of economic analyses appear to have had limited effect on decision-making. In short, assumptions of purposive and economic rationality are untenable until profound and fundamental changes occur throughout the government of Liberia and in its approach to public administration.

In a sense, the very objectives of the ASAP project ran counter to the organizational culture of the Ministry of Agriculture. Achievement of project goals depended on first changing rather drastically the organizational environment and the attitudes and behavior of public administrators.

Evaluators of the Egerton College project described the organizational culture in Kenya as being one in which "leadership of all kinds tends to be personal, authoritarian in a neutral sense, particularistic around certain issues or individuals, and to be exercised through hierarchical bureaucratic structures." This resulted in organizations having strong executives and weak middle-management. In an organizational culture in which authority was concentrated at the top and in which little attention was paid to middle-level managers, there was little incentive for staff initiative or development. The organizational culture in Kenya, as the evaluators noted, became crucial to the effectiveness of the project and to its success in improving the capability of Egerton to produce graduates who could help raise smallholder yields. "The work ethic instilled at Egerton" they pointed out, "is put to severe test under a personnel system which assigns graduates to a low status job and keeps them there, at little change in pay over time."

The organizational culture in Zaire also affected the implementation of the North Shaba rural development project. The evaluators emphasized that the state, the church, and the private sector in Zaire all played central roles in delivering services that would normally be provided by the public sector in the West. Moreover, the public sector was characterized as one in which there is "a lack of productivity, heavy political influence on the determination of administrative priorities and pervasive corruption.... Political and administrative positions are too often used for personal and clan profit. Public servants have been locked into institutionalized corruption by social pressures and by the inadequate government wage structure in the public sector."

5.1.2 Institution Building and Sustainability

Several of the evaluations concluded that appropriate organizational structure was a crucial variable in a project's success. But they questioned whether there are universally valid prescriptions for effective project organization. In some cases, strengthening existing organizations was the most effective means of implementing the project. In other cases, however, the evaluators argued that creating new or semiautonomous parallel organizations was necessary to overcome constraints and obstacles to change and to ensure that outputs and benefits would be sustained when international funding and technical assistance ended.

Evaluators of the ASAP project in Liberia discovered that attempts to institutionalize sector analysis and planning in the

Ministry of Agriculture would not succeed without reorganization of the Ministry, a condition that had been overlooked or ignored by the project's designers. Attempts were made by the technical assistance advisers to promote reorganization only after finding strong obstacles to the adoption and use of sector analysis and planning during the project's implementation. But it was also found that the emphasis on reorganization diverted resources intended to strengthen technical capacity and thus may have weakened the project's ability to attain its original goals. The decision to try to improve organizational structures during the implementation of the project so that sector analysis would be more acceptable within the Ministry involved a tradeoff. Ultimately, it may have weakened the technical capacity of the Ministry to do sector analysis and planning. Evaluators concluded that "policy and planning changes require organizational changes." It cannot simply be assumed in project design and implementation that policy changes alone will bring about changes in attitude, behavior, and institutional practices without "corresponding modifications in organizational structure and management arrangements to implement new policy and planning objectives." They argued that "developing the capacity to manage sector planning requires a long term initiative in institution-building" that must be recognized and provided for in the design of the project.

Evaluations of several of the African projects suggested that sustaining the benefits of development projects depended on building local and national institutions capable of making decisions, allocating and using resources effectively, and managing their own development activities. Without widespread institutional development within the project implementing organization and among beneficiary groups, it would have been difficult to sustain the benefits of projects after international funding ended.

Experience in the Bakel, for example, showed that real progress in implementing the project and sustaining its benefits did not occur until SAED began developing the organizational capacity of farmer' groups to make important agricultural decisions. The evaluators observed that

Much has changed over the years. SAED/St. Louis now follows a stated policy of real decision-making and authority at the groupement [village work group] level, moving toward fully functioning autonomous perimeters by 1987. Individuals and groupements determine which crops they will plant and to whom they will market -- or not -- based on their needs. SAED/St. Louis has decreed the establishment of Joint Committees throughout the region, and the villagers of Bakel are cautiously, but apparently optimistically, participating.

SAED began to see the successful organization of farmers as a precondition for a successful project. It promoted the

development of groupements that would rely less on SAED and would increase farmers' production so they could repay their debts to SAED. SAED's emphasis on strengthening local organizations, the evaluators concluded, "is encouraging in terms of sustainability."

On the other hand, the lack of attention to institution building in the Land Conservation and Range Development (LCRD) project in Lesotho seriously jeopardized its capacity to provide benefits when foreign assistance ends and weakened the Government's future capacity to sustain the outputs of the project. Despite the fact that the LCRD project was quite successful in achieving its short-term goals, the evaluators were concerned that the attention paid to mediating conflicts, absorbing criticism, and finding ways of getting crucial decisions made about difficult and sometimes unpopular actions gave it a unique set of functions that other organizations might not be able to perform after the project was completed. Unless an organization that could perform the same functions succeeded the project management unit, the benefits of the LCRD project would not be sustained when AID assistance ended.

Although institution building is considered a crucial AID strategy, the evaluators of the Niamey Department Development (NDD) project in Niger warned that it must be done deliberately rather than casually and with an understanding of the organizational culture. There were instances in which the creation of new or parallel institutions was much more effective than building up the capacity of existing ones.

Again, the evaluations emphasized that flexibility in design and implementation seemed to be crucial for institution building. Many of the organizational requirements for successful project implementation could not be fully appreciated or predicted during the design phase, and those responsible for implementation had to have the flexibility to shape project management systems to meet local needs and changing requirements.

The success of the North Shaba project (PNS) in Zaire, for example, was attributed in part to such flexibility:

PNS, operating through an independent project authority mandated by the Department of Agriculture, was free to evolve its own structures and did not have to follow existing models. The original project paper envisioned a classic western model, with a project director located in Kongolo and proposed deputy directors supervising all activities in Mbulula and Nyunzu. This model was never adopted, due to personnel shortages as well as implementation realities: the staff and work in the outer areas simply weren't [perceived to be] important enough to attract the high level personnel desired. What evolved in place of this model was a more flexible matrix approach which synthesized the Zairian heritage of strong centrist direction with an American decentralized organization that promoted human

resource development within the limitations imposed by the North Shaba environment.

Over time, the PNS structure changed as conditions in North Shaba changed. The need to modify PNS' organizational structure from the one outlined in the project design arose early. Evaluators noted that the legitimacy of PNS ultimately depended on changes in the organization of the project management unit: "Dominated by Americans by design as a means of avoiding the common graft and corruption problems in Zaire, it didn't fit well with the informal -- but critical -- social network that was being established." When the Zairian Director was away on business, the local staff felt that they had no voice in the affairs of the project management unit. "It must be stressed that this perception in no way detracts from the ability of American personnel to communicate or work with the Zairians," the evaluators argued, "they were simply too much the outsider to handle some of the problems that would crop up." The Director adjusted the structure by creating a new position of deputy director for a Zairian and by filling another position with a project staff member. With three Zairians and one American in the project management unit, there was sure to be at least one Zairian always in charge. With these organizational changes, the evaluators observed, "the project thus looked more like a typical Zairian staffing pattern and the PMU [project management unit] was able to fulfill not only formal but informal decision-making roles at all times."

Over time, the project management unit became even more decentralized, allowing a greater responsiveness to local needs -- a prerequisite for eliciting the support of intended beneficiaries -- and creating a sense of "ownership" and commitment among the project staff.

5.1.3 Autonomy and Linkage of Project Organizations

The degree to which project management organizations should be relatively autonomous and independent or closely linked to existing organizational networks is strongly debated among management theorists and practitioners. The African cases suggested that a high degree of autonomy and independence was beneficial for most of the projects. There were also disadvantages, however, to being isolated from or ignored by the rest of the administrative system.

The success of the Egerton College project in Kenya, for example, was attributed to the fact that the College was an autonomous, parastatal unit, funded by a grant from the central Government. As a parastatal, the College had control over its own funds and operations. The evaluation team found that this fiscal and operational autonomy "provided the college with flexibility and the capacity to innovate without undue bureaucratic regulation, and has contributed considerably to

College and project success." Because of its autonomy, the College's staff was able to make more expedient decisions, to act more quickly on those decisions, and therefore to operate more efficiently. "Capability to fire incompetent staff not only enhances the productivity of a staff but avoids the demoralizing effect of having to keep and pay incompetent people while trying to encourage others to work up to their highest potential," the evaluators observed.

Similarly, the Land Conservation and Range Development project in Lesotho's Sehlabathebe area was successful in part because it was isolated from the national capital, Maseru. The project management unit, for all practical purposes, operated as an independent organization. It made most decisions without closely consulting national headquarters. Because of its distance from the capital and the relative physical isolation of the project area, contacts between the project staff and district line agencies were minimal. This had both positive and negative effects on the project. To some degree the project organization was ignored by, or even alienated from, higher level authorities, but as the evaluators pointed out, "on the other hand, loose coordination permits flexibility in field level staff and allows them to respond to local conditions." The physical environment and context, in any case, would have made closer linkages with national agencies unfeasible. Because of its physical isolation, the project management unit would have had to operate de facto as an autonomous organization to achieve its goals.

Evaluators of the North Shaba rural development project (PNS) in Zaire also pointed out that PNS's physical isolation and distance from the capital gave it an autonomy that was quite beneficial. Headquarters pressures on the staff were not constraining. The organization was not overloaded with requests for additional work or with tasks that were not germane to the project, and the number of outside visitors could be controlled. Moreover, because of the lack of other distractions in the remote town, project staff tended to work far longer than the usual 8-hour day. The managers and staff of the project had to rely on their own resources and find creative ways of compensating for the potential adversities of their remote location. Important linkages were created with local officials and organizations, and this contributed to the legitimacy of and support for the project.

There were also disadvantages to isolation and autonomy, however, especially when a project was just beginning and needed inputs and support from other organizations or divisions of its own institution. Of the four divisions, or delegations, of SAED in Senegal, for instance, Bakel was the most remote and autonomous. It was also the last to establish itself and to begin operating effectively. Because the Senegal River Basin was the closest to SAED headquarters and was easiest to manage, SAED put the bulk of its resources and attention into the Bakel region first. The evaluators observed that "Bakel, by contrast, is the farthest removed of the delegations and does not have large amounts of flat land characteristic of the Delta. Thus Bakel moved very slowly. As late as 1983, it had no real office space

of its own and the then current project director had to drive to St. Louis for spare parts." The remoteness of the area and its weak linkages with headquarters gave Bakel an unfavorable image. "In fact, not so jokingly, it was called Siberia," the evaluators noted. "In earlier days, it was the place to which an employee, whose performance was lacking could be posted."

One of the most serious difficulties with using autonomous organizations or independent project management units was maintaining resources for beneficiaries after the project ended. Experienced personnel who worked for project management units began to divert their attention to finding other jobs long before the project was completed, knowing that they soon would be out of work. In the North Shaba project, for example, evaluators saw the PNS staff begin to disintegrate a full year before funding for the project was to end. In a large project like PNS, the income and skill development that came to a region through the jobs provided by the project organization also declined with its completion.

Effective implementation often required finding an appropriate balance between organizational autonomy and interdependence. Evaluators of the North Shaba case concluded that "while the organizational culture in many African countries promotes informal networking as a more efficient way of organizing project activities than establishing new, formal linkages, both are vital for sustainability." Operating autonomously through informal networks of organizations may have been more expedient in the short run, but it also diverted attention from institutionalizing the project's activities so that beneficiaries could continue to be served after international aid ceased.

5.1.4 Problems of Interorganizational Coordination

Despite the fact that some degree of linkage was necessary, coordination of activities among different organizations providing inputs for projects was a problem in nearly all of the African cases.

In Liberia, plans to reorganize the Ministry of Agriculture (MOA) so that it could make better use of sectoral analysis were undermined by the lack of cooperation from other agencies and ministries and lack of integration within the Ministry. Evaluators found that "factors external to the project constrain full implementation of these plans. Because of limited discretionary funds, MOA managers largely administer programs that are managed through donor-funded projects. Consequently, there is only nominal integration of agricultural programs into MOA operations." Ad hoc committees were created to coordinate and integrate agricultural programs, but they lacked the means to follow up on recommendations. Linkages among agencies remained weak because of poor coordination.

In the Niger Niamey Development Department (NDD) project, the evaluation team concluded that the attempt to promote cooperation among technical services was limited by their lack of commitment to the project. There was little vertical integration among the services. Their institutions were not structured to reinforce and support collaboration among service representatives. "Ministries compete for resources (money, personnel and training), and incursions by one ministry into another's territory are not welcomed," the evaluators discovered. In Niger, technical service positions were career positions. Technical officers responded to those rewards and punishments that advanced their careers within their own services rather than to pleas from project managers for coordination across services. Rural development agents in Niger attached little value to teamwork, the evaluators found, "because they have been socialized to do so from very early in their careers."

Moreover, the technical service representatives at the local level had little motivation to cooperate with each other or with NDD, even though the project brought in external funds, because they did not perceive it as their project. They thought that the project drained the time of already overworked personnel. "Under these conditions, the integration and commitment of technical services required for successful operation of large regional development projects become problematic," the evaluators concluded. The NDD project could not attain its objectives without the cooperation of the national technical services: "Simply put, if the services so critical to the implementation of NDD programs do not deliver, very little happens."

The African cases showed that the willingness of organizations and groups to coordinate was determined largely by their perceptions of how their interests would be served by cooperation. Grazing Association (GA) members, who were the beneficiaries of the Land Conservation and Range Development project in Lesotho, often undermined or ignored rotational grazing procedures established by the GAs because they did not believe that the regulations were in their immediate interests. Nonmembers violated the regulations regularly because they felt no commitment to the GAs and saw no benefits in the land use rules. Many farmers who did not own livestock ignored grazing area boundaries in cultivating land and physically threatened officials who attempted to enforce the regulations. Evaluators noted that "the lack of clear advantage of GA membership to non-owners of livestock and the inability (or unwillingness) to cooperate with GA regulations, raise some real doubts concerning the sustainability of the Range Management Associations and Grazing Associations following project completion."

Moreover, the willingness of local chiefs to cooperate with the LCRD project in Lesotho was influenced strongly by their impressions of how interaction with other participants affected their powers and prerogatives. The evaluators observed that the chiefs "appear ambivalent toward district government. They are on occasion unwilling to cooperate with technical line ministry

staff, whom they see as part of a continuing effort to erode their power. Furthermore, the allegiance which they command from rural people has enabled them to resist effectively implementation of public policies." For example, the local chiefs slowed the progress of land tenure reforms mandated by the Land Act of 1979. A pervasive tension existed between chiefs and technical ministry representatives at the local level because chiefs saw the introduction of modern methods and technical criteria for agricultural decision-making as a threat to their personal authority and power, especially in decisions about land allocation.

In Senegal, SAED discovered how difficult it was to get cooperation through command and directive. After seeing the hostilities created between project staff and farmers during the early years of the Bakel project, new leaders of SAED began to take a different approach to eliciting cooperation. Evaluators found that SAED's philosophy changed "from one of directing the farmers' every move to one of allowing the farmer to make his own decisions as to crops, groupement organization structure, and division of land between collective areas and individual areas. While the farmer has always made his own crop and land decisions, SAED now supports these actions and, in fact, tries to enhance them with technical and financial assistance, consistent with its own constraints." Only when SAED moved toward reciprocal and mutually beneficial interaction with its clients was it able to elicit their cooperation in the implementation of the project.

5.1.5 USAID Mission and Project Organization Relationships

Several of the evaluations commented on the importance of organizational relationships between the units or agencies responsible for project implementation and the USAID Mission staff and technical assistance advisers. All of them implied that policy, logistical, and administrative support from the USAID Mission was needed if a project was to operate effectively. Too much interference, however, often caused confusion, resentment, and a passive attitude on the part of developing country project managers. Some of the evaluation teams argued that the best arrangement was one in which responsibility for ongoing operations was delegated to the implementing unit, with USAID staff and advisers playing a supporting role. This allowed the host country organization to develop a sense of "ownership" of the project, seeing it as its own rather than as a foreign intervention, and to take responsibility for its successful implementation.

Evaluators of the Agriculture Sector and Planning project in Liberia believed that USAID's technical assistance advisers there played too strong a role in attempting to reorganize the Ministry of Agriculture. Between 1979 and 1982, USAID advisers took the lead in writing the plan for internal reorganization of the Ministry and in formulating policy revisions to have the reorganization carried out. However, this intervention has not

been completely successful. "The current structure of the Ministry generally conforms to the plan's recommendations," evaluators noted, "but the plan does not represent official MOA policy. At present MOA staff are uncertain about the official status of the plan. Because of the heavy involvement of the technical advisers in its production, some view at least parts of the plan as a USAID-generated document rather than an MOA product."

In the Egerton College case, the faculty and staff firmly resisted the attempt of technical assistance advisers to reorganize the curriculum, which the Kenyans thought to be an unwarranted intrusion on their managerial and academic responsibilities.

Nevertheless, too little attention and support by the USAID Mission or its technical assistance advisers can be as dangerous as too much interference. Evaluators of the Bakel project emphasized that its neglect by the USAID Mission in Senegal was deleterious. "Overall, SAED-AID relations are characterized by a detachment, aloofness and looseness," the evaluators pointed out. "This has been particularly the case between the AID project manager in Dakar and his contacts at SAED headquarters in St. Louis; and between the AID project manager and AID technicians in the field in Bakel." Lack of attention to the project by USAID staff caused misunderstandings and some confusion between the Mission and SAED; it made it more difficult for SAED to do long-range planning and procurement. SAED officials complained that USAID provided little in the way of management support. They thought that there was "a lack of continuity and consistency at USAID as reflected in frequent personnel changes and concomitant changes in management styles." Changes in AID rules and regulations disrupted the project and inconvenienced SAED. The Mission's failure to provide cost information on AID-procured commodities also weakened SAED's ability to plan and budget its resources.

In this case, SAED officials would have welcomed stronger involvement by AID in planning and programming and in helping to develop management capability within the organization. "Had USAID personnel been closely involved with SAED in the programming of project activities from the outset, USAID would have had more influence on and better control over project progress, would have had better communications and rapport with SAED, and both organizations would have learned how to work effectively with one another," the evaluators concluded. "The root of many of the complaints voiced by SAED vis-a-vis its working relationship with USAID is simply the lack of a continuing USAID involvement with SAED management."

The perceived lack of support also caused some resentment among AID's field technicians at Bakel and created confusion about their relationships with the SAED project staff. Until quite late in the project, SAED managers simply treated the technical assistance advisers as functionaries, because USAID and SAED were not able to develop a strong counterpart relationship.

Yet the USAID Mission's lack of attention to and interference in the Bakel project was also beneficial. SAED came to see the project as its own and to take responsibility for its implementation without depending too much on the technical assistance advisers' initiative and direction. Moreover, the AID field technicians, realizing that they were not going to receive strong support or direction from the Mission in Dakar, "drew upon their own resources, became fully accepted by SAED functionaries and farmers, and performed remarkably well under difficult conditions to implement the project."

A more effective relationship seems to have developed between the USAID Mission in Zaire and the North Shaba rural development project (PNS). Although the PNS had weak linkages to the central Government because of its physical distance from Kinshasa, it was able to maintain fairly strong linkages with USAID. The evaluators noted that "USAID was involved in negotiations with the government of Zaire on PNS agreements and major policy matters, and supported the contractor with logistics and communications. USAID/Kinshasa staff made periodic visits to the site. The project was considered at the USAID regular quarterly review meetings." Yet the Mission delegated daily operations and managerial decisions to the PNS and technical assistance advisers, who operated independently of either AID or the Government. PNS was able to make its own financial commitments, sign contracts, maintain accounts and dispense and collect money, hire and manage its own staff, and dispose of property without being subject to constraining external regulations. "Project success was achieved, therefore, within the unique context of PNS, with minimum external interference."

5.2 Administrative Procedures

Organizational and structural arrangements had an impact on project implementation, but administrative procedures also played an important role. The computer assessment of completed projects in Africa noted a number of administrative and procedural problems affecting their outcome. Many of the projects suffered from insufficient authority to perform their mandated tasks, inadequate program planning, insufficient decision-making ability or ineffective decision-making processes within the project organization, and lack of coordination among project staff.

The six African cases particularly highlighted the relationships among organizational structure, local leadership, and administrative procedures. They provided insights into formal and informal management styles, monitoring and feedback for administrative responsiveness, and the impact of AID administrative requirements on local project management.

5.2.1 Administrative Procedures, Organizational Structure, and

Leadership

The evaluations confirmed that although formal management procedures and systems could alleviate or solve many administrative problems, they could not alone ensure a project's success. The effective use of management systems depended on an appropriate organizational structure and motivated leadership.

Evaluators of the Bakel project in Senegal, for instance, found that changes in organizational structure created opportunities or constraints for different management styles and procedures. In the early years of the project's history, the implementing organization -- SAED -- was highly centralized and run in a hierarchical, autocratic manner. Its management procedures were not only ineffective in achieving the goals of the project, but were unpopular with the farmers whose behavior SAED was trying to influence.

With a change in leadership in SAED, however, its structure was decentralized, opening up opportunities for using new managerial procedures and styles. The evaluators pointed out that management styles and decision-making procedures largely paralleled changes in SAED's organizational structure. After the organization was decentralized, managerial style changed markedly. There was increased concern for the future of the organization and its beneficiaries, increased sharing of responsibilities within the organization, delegation of responsibility and authority within SAED and to the beneficiary organizations, and "growing appreciation of the need for rational quantitative and qualitative tools to monitor and to bring about progress toward organizational objectives."

The changes in management style and procedures in SAED had positive impacts on the attitude of farmers and SAED staff. Evaluators noted that "an esprit de corps has arisen among the project employees -- it appears as visible pride when discussing the project, as rising to the defense of the project when criticism is offered...."

5.2.2 Formal and Informal Administrative Procedures

Nearly all of the African case studies yielded stories of how ineffective, inefficient, or nonexistent administrative systems undermined implementation, caused delays, increased costs, or diverted the projects from their planned courses. At the same time, some of the projects offered examples of activities that operated effectively with informal, indigenous, or incomplete management systems. The Egerton College project in Kenya, for example, was carried out by an institution that had only a rudimentary budgeting system, in which administrative decisions were made by a few of the organization's leaders, sometimes on a personalistic basis. Furthermore, within this system, the academic decisions were made through loosely structured informal

arrangements and through collegial rather than hierarchical interactions. The project was carried out successfully in an organization in which academic decision-making was decentralized and administrative decision-making was centralized. The evaluators emphasized that the College "had very weak management systems by U.S., or even Kenyan, standards. None of the major actors at the College had any formal management training. Finally, the project had no management enhancement component to rectify this situation. We must conclude, therefore, that the success of the Egerton expansion project cannot be attributed to the formal management systems employed by the College."

The Egerton College case suggested that the lack of or weaknesses in formal management systems could be compensated for by other favorable conditions. The evaluators concluded that this project was successful despite the lack of formal management systems because of the following:

- The determination of top College management not to allow the project to fall into the "active donor/passive recipient" mode
- The determination of College management to reduce the potential chaos of the project to a minimum
- The small size and stability of the staff at the College
- The match of the management style at Egerton to the requirements of a diverse and decentralized system of multiple parallel enterprises
- The extraordinary match between the incentive system within the College and the requirements of the project
- The autonomy of the College and freedom from Ministry interference
- The capacity of top College management to inspire trust among faculty

The Egerton College case implied that these conditions were far more important to successful implementation than formal management systems. They made formal administrative systems less crucial in determining the project's outcome. Although evaluators did emphasize that "as the environment becomes more volatile and less benign, the college will need better data on the costs of different forms of instruction, programs and student mixes," they insisted that "the project should teach us that it is possible for highly motivated people to produce a major success without elaborate management systems."

Similarly, the Bakel project in Senegal often operated through informal processes of interaction. The evaluators concluded that "in any organization where difficult-to-attain objectives are set and in which inefficiencies in operations exist, informal 'methods' arise to get the job done." In the

Bakel project, this informal interaction arose only after management was taken over by a responsive, creative and energetic director who motivated his staff to take responsibility for the project. The informal methods worked because "certain project personnel, who have kept project and overall organization goals uppermost in their minds and who are cognizant of the various bottlenecks which can impede attainment of these goals, have taken appropriate actions, somewhat outside of formal organization channels."

The integrated rural development project (PNS) in North Shaba operated through a highly decentralized system of delegated authority and dispersed responsibility for decision-making and management rather than through formal systems of central control. Yet despite the lack of formal management systems -- or, perhaps, because they were missing -- decisions were creatively and responsively made. The evaluators concluded that "the lack of central direction may have been a contributing factor to the management maturation of PNS staff and was, perhaps, not the most efficient way to achieve project goals, but it does appear to have made a contribution to individual and institutional management development in a way that more centralized direction might not have allowed." Delegation of managerial responsibility and decentralization of management procedures seemed to be the most direct and effective way of developing the managerial capacity of middle-level staff.

Often, informal management procedures were the only ones that could be used in rural areas. In many of the irrigation perimeters in which the Bakel project operated, for example, treasurers of the groupements or farmers cooperatives were illiterate. Their financial and management records were therefore rudimentary and only marginal improvements could be made in them. Similarly, the ability of SAED to improve farm records for agricultural management in Senegal had to be slow and incremental because many of the farmers could not read or write. Informal methods and indigenous approaches were deemed the most appropriate.

In Lesotho, the Land Conservation Range Development project staff used a combination of formal and informal management procedures. Locally, the staff used informal but highly directive approaches to decision-making and management; at the national level they used formal channels and persuasion. The evaluators noted that

At the field level the project takes an informal leadership role in decision making within the Grazing Association. Since livestock deployment in the different range areas is sensitive to delay, project staff force swift decisions and attempt to avoid the lengthy traditional decision process. This active role interjects technical criteria as primary ones and establishes the Grazing Association as the authority on range management decisions -- an area previously totally

controlled by the principal chief. Some observers see this as a key element in field success to date.

With national agencies, the project staff interacted more formally and more subtly, attempting to get support and policy changes through consensus and persuasion. The evaluators observed that "at both levels, however, acute sensitivity to hidden agendas and informal interactions has guided project activity."

Substantial evidence that most of the projects were managed by informal processes, however, does not imply that more sophisticated management systems have no place in the implementation of agricultural development projects in Africa. Clearly, as organizations such as Egerton College expanded and became involved in more numerous activities, informal administrative systems were no longer entirely appropriate. Egerton College was expanding in an environment of greater uncertainty and confronted the limits of its informal management systems before the AID project was completed. Evaluators pointed out that "as external resources become more limited and as the market for Egerton graduates is less assured, if Egerton College were to continue with its present management systems it would be ill-prepared for the problems to come." The evaluators saw the lack of assistance for management improvement as one of the weaknesses in AID's project design.

Moreover, the evaluators of the Agriculture Sector Analysis and Planning (ASAP) project in Liberia saw the need for management systems as a vital mechanism for structuring the research needed to develop sectoral analysis and planning capacity within the Ministry of Agriculture. Management systems could balance flexibility in implementation with accountability for achieving the broad goals of the project. "This mechanism prevents the flexibility in implementation from causing the project to degenerate into ill-defined vagueness and directionless trial and error," they concluded. "The mechanism serves to coordinate activities, promote the progress of research, and aid in the evaluation of the utility of what is produced." ASAP's evaluators emphasized that good management systems could guide project activities without necessarily controlling every task.

Finally, several of the evaluations concluded that an important element of the management system should be procedures for monitoring and feedback. Administrative responsiveness to change depended, obviously, on an ability to understand the changes that were taking place. The Niger evaluation team concluded that "all project interventions must include systematic follow-up and support for the activities of beneficiaries. Feedback mechanisms must be provided to assure that rapid adjustments of project strategies are possible on the basis of observed results."

5.2.3 AID Administrative Requirements and Local Management

Nearly all of the evaluations concluded, explicitly or implicitly, that AID's administrative procedures should support but not constrain the host country's management of development projects. In some cases, AID's administrative requirements were found to be hindrances to efficient project management, especially when standardized requirements were applied indiscriminantly in inappropriate situations.

For example, AID's insistence that host country organizations adopt its accounting and financial reporting procedures caused confusion and difficulty in several African projects. At one point, AID "decertified" the Bakel project in Senegal -- making it ineligible to receive funding -- because it did not have an approved accounting system. The weak relationships between the USAID Mission in Senegal and SAED allowed the project organization to fall behind from 1979 to mid-1982 in filing financial reports with the Mission. SAED followed the General Accounting Plan, which is accepted by the Government of Senegal, but does not directly conform to AID reporting requirements. After decertification, an audit by Deloitte, Haskins, and Sells found that SAED, in fact, had a sound accounting system, with adequate information and financial controls. SAED could not get enough trained accountants, however, to be able to satisfy the reporting requirements of AID and other international donors, all of which had different procedures and all of which insisted on reports that conformed to their needs.

Had the USAID Mission been working more closely with SAED management, the problem could have been identified and remedied through training or technical assistance, preventing an unnecessary disruption in the flow of funds to the project. More important, however, the Bakel case "underlined the need for both parties to understand each others' accounting systems, requirements, and how the two may be linked so as to satisfy AID's requirements with the minimum of strain on SAED's already overburdened staff." AID's insistence on the application of its own administrative procedures often required the implementing organization to set up multiple accounting and reporting systems or to create a separate one for AID. In some cases this created a heavy burden on the projects.

5.3 Management of Resource Inputs

The computer analysis of completed African projects found that about 36 percent of the projects encountered financial management problems, including inadequacies of long-term financial planning, poor or nonexistent accounting systems, inadequate operating budgets, insufficient local currency or foreign exchange, and inadequate information and reporting systems. Moreover, nearly 27 percent of the evaluations reported commodity management problems, including inadequate long-term

planning, purchasing, inventory, warehousing, and delivery systems, and ineffective use and maintenance of commodities. The six in-depth case studies identified other resource management problems and needs.

5.3.1 Procurement and Supply Management

The African cases illustrated that in projects where procurement and distribution of large amounts of supplies and equipment are essential to success, effective procurement and financial management systems had to be established quickly if other components of the project were to be implemented effectively. The Niger case, for example, was one in which large amounts of agricultural inputs -- implements, fertilizers, seed treatments, and draft animals -- had to be ordered, procured, stored, and delivered in the quantities needed and at appropriate times in the agricultural cycle. Too few supplies delivered at the wrong time could severely undermine the project's objectives. Evaluators of the Niamey Department Development (NDD) project in Niger found that "inefficient distribution of inputs by state agencies has been the bane of rural development projects" and that the NDD project had to develop procedures to lessen farmers' dependence on state agencies by constructing numerous cooperative warehouses throughout the project zone and purchasing large trucks to ensure delivery. Despite these actions, ineffective input procurement and delivery systems continued to limit the project's impact on increasing rural production.

Ineffective procurement systems also marred the implementation of the Egerton College project in Kenya. USAID was unable to deliver books and equipment effectively to Egerton College, and this adversely affected institution building. Procurement accounted for a small part of the overall budget, and therefore USAID Mission staff gave it little attention. "Waivers were received for procurement of vehicles, a fairly routine practice, but for lab equipment, sewing machines (for Home Economics), and catering equipment, they were not requested," the evaluators pointed out. "Departments now face significant problems in maintenance and procurement of spare parts for brands not serviced in Kenya." The lack of appropriate equipment and books severely constrained the College's faculty in coping with steadily increasing student enrollments.

The Bakel project in Senegal also encountered procurement problems. Difficulties arose from lack of standardization in the supplies and equipment secured for it and from a lack of flexibility in AID requirements for procuring appropriate machinery and equipment. Evaluators found that SAED's operations would have been greatly improved with the adoption of an inventory management system that recorded supplies from SAED headquarters to the groupement level and covered all activities in which there were stocks and flows of physical items. Simplified perpetual inventory and distribution records could have been developed for the groupements and checked through annual physical inventories. "The early problems of commodity

standardization and the ongoing minor problems in procurement could have been avoided if USAID had worked closely with SAED and BSIP [Bakel Small Irrigated Perimeters project] personnel on management matters," the evaluators concluded.

Having an effective system of obtaining equipment and supplies was especially important in the North Shaba rural development project because of the region's physical isolation and the lack of transportation and communication facilities. "A key to overcoming these constraints was to recognize them and exercise creative management to overcome them," the evaluators observed. Project leaders gave special attention to commodity management by creating a logistics unit with 20 Zairian staff. An expatriate logistics adviser was hired, and the AID contractor's chief of party supervised the logistics staff in the project zone. Special attention was given to setting up a supply network. Purchases were made through the contractor's home offices in the United States, and the USAID Mission opened letters of credit with international banks to facilitate overseas purchases. The project signed long-term contracts with commodity suppliers, oil companies, and freight-forwarding companies in Zaire's major seaport to ensure that its supply system operated effectively. "The thrust of these actions meant that logistics was tackled as a professional operation and not, as is too often the case, assigned as the part-time duty of some other officer," the evaluators noted. The attention to logistics turned out to be a key factor in retaining expatriate and Zairian project staff in a remote and isolated area and provided the inputs necessary for the project to perform its tasks effectively.

Although logistics and supply systems were effective, the North Shaba project suffered from the lack of internal commodity management procedures. "During most of the project's life there was no tracking of purchase requests, no periodic warehouse inventories, no monitoring of fuel use, and no logical physical arrangement of items stored in the warehouse," the evaluators found. "This lack of a physical arrangement made it difficult for French speaking Zairian warehouse workers to find specific parts, since almost everything in the warehouse was American made and labelled only in English."

The African cases support the contention made in one of the evaluations that effective procurement and supply systems must be created early in the implementation phase if projects are to be completed successfully and on time. Weak commodity management systems did not doom any of the projects to failure, but in several cases they limited the projects' ability to achieve their objectives and made their implementation more costly.

5.3.2 Financial Management Systems

Nearly all of the African projects were judged by their evaluators to have had weak or deficient financial management and budgeting systems, at least by Western standards. But there was

a wide range of opinion in the evaluations about the degree to which deficiencies in budgeting and financial management adversely affected project implementation. All of the cases indicated that the projects could have been managed more effectively with better financial information and records. In several projects, however, the lack of acceptable financial management systems did not detract from their success. Further, in none of the less successful cases would better financial systems alone have significantly altered the results. Moreover, although they did not meet the standards of formal systems by AID criteria, the indigenous methods that were being used were often adequate for the projects' purposes. Indeed, several of the evaluation teams noted that AID requirements for financial management and auditing caused problems for the implementing organizations.

The Egerton College project, proclaimed by its evaluators as an overwhelming success, operated effectively with a very weak financial management system. Financial reports were lacking or seriously delayed. The books were not kept annually or regularly, and few of the College's staff had any financial analysis capability. The College had accounting procedures to monitor cash flows but no real budget system. With strong leadership and commitment to the project by faculty and staff and effective organization, however, the evaluators found that "the weak budgeting and financial management systems at the College do not appear to have constrained the project."

The most serious financial management problem in the Egerton project arose from design deficiencies. Insufficient attention had been given in the project proposal to recurring maintenance costs that would be incurred by the College after the building construction and physical expansion were completed. AID funding covered construction costs but did not consider the increased financial burdens on the College to maintain the buildings. The project designers did not include recurrent costs in their calculations of project feasibility, and the College did not have financial reporting and analysis procedures that would have assessed the recurrent cost implications for the school's budget. As a result, decisions were made throughout the implementation of the project without any real understanding of the impacts these decisions would have on the College's budget in the future or on the amounts of revenues it would need to maintain expanded facilities.

However, the College was able to overcome most of the problems that arose from the lack of financial management capability. "We did not find that the successes at Egerton College were due to the presence of the type of managerial accounting and fiscal records maintained, or to the transfer of management technologies developed in modern countries," the evaluators concluded.

Evaluators of the Bakel project in Senegal argued that "management accounting is vital for the effective operation of any organization. It allows the organization to analyze its

operations, its progress toward objectives, the deviations from budget, as well as the implications of budgetary, financial and nonfinancial changes which do or will impinge on the organization." Yet they found that SAED carried out the Bakel project without such a system. It never had, until late in the project's life, a managerial accounting system, staff who could do either budgetary or financial analyses, or much budgetary control. The evaluators and AID considered the situation unacceptable. Section 121(d) of the Foreign Assistance Act required Missions in the eight Sahelian countries to certify the adequacy of host country accounting, and the USAID Mission in Senegal decertified the project for a short time because SAED failed to provide required financial reports. However, the implementing organization was able to comply with the Government of Senegal's accounting requirements, which were judged to be sound by an international auditing firm, and achieve most of the project's goals.

The Niamey Department Development (NDD) project in Niger also came under severe criticism by AID's Inspector General for its lack of suitable accounting systems. In 1982, it was threatened with decertification or termination unless its financial management procedures were improved. As a result, close attention was given by the USAID Mission and the project staff to creating acceptable financial, credit reimbursement, and commodity management systems. But the evaluators questioned their contribution to achieving the project's ends. "There can be no doubt that fiscal accountability has become more rigorous in the project," they noted, "but it is far from clear how this rigor has promoted NDD's objectives. Considerable NDD staff time was required during 1983 to satisfy IG [Inspector General] requirements, and at the time of the second interim evaluation, considerations of accountability still predominated." They found, however, that in the interim the broader goals of the project, such as institution-building, were eclipsed by the attention given to routine administrative requirements. The evaluators concluded that although basic financial management may have been important, "attention to allocation of material resources for purposes of accountability must not occur at the expense of attention to the human resources so essential for development."

In the North Shaba project in Zaire, rural development activities were quite successful despite the fact that "PNS did not have in-depth information on local currency transactions and was unable to provide reliable financial data for planning and reporting purposes." Through most of its life the project operated without financial journals, ledgers, balance sheets, and reconciliations. Only in 1983, when a Deputy Director for Administration and Finance was finally hired, did the project have even rudimentary financial management procedures. The evaluators noted that "the negative impact on project performance of poor financial management is assumed but cannot be demonstrated. The positive impact of improved performance is also assumed but cannot be proven. Since USAID/Zaire handled most of the dollar accounting, and since contractor staff themselves

double checked most of the local currency accounting, it may be that only basic accountability and simple record keeping are all that was necessary for Zairian personnel."

Financial management systems were not very sophisticated in the Land Conservation and Range Development project in Lesotho either, but the USAID Mission retained control of accounting for dollar expenditures and the designers of the project made provisions that would reduce the budgetary constraints on the project organization. The project design permitted fungibility by allowing the project some degree of discretion in transferring funds among budget items and by providing for a 15-percent allowance for inflation and a 10-percent contingency fund. Currency adjustments worked in favor of the project, relieving it of serious financial constraints. The technical assistance advisers took primary responsibility for preparing reports required by USAID, while encouraging project managers to keep financial accounting and recording procedures as simple as possible. Thus, evaluators concluded that the procedures were adequate for the project's needs: "obligations did not force cash flow crises; although financial accounting and reporting was an onerous burden on the TA [Technical Assistance] team leader, the reports were acceptable, personalized local processes did not pose major barriers, and the Grazing Association carried on with project support even though both its financial situation and ability to assess that situation remained less than exemplary."

The finding that financial management systems were not crucial factors in the success or failure of these six African development projects does not imply that financial management is unimportant. All of the evaluation teams argued for increased training for financial management personnel and recognized the importance of improving systems for recording and analyzing financial data, both to satisfy donor criteria for accountability and to give implementing organizations a stronger capacity to understand the financial implications of their decisions. Yet an important lesson that emerged from these cases was that financial management systems were merely tools. Alone they could not ensure the success of a project. Like other tools, they could be used effectively or ineffectively. Unless the project had adequately trained staff, financial data were unlikely to be collected and used properly. Moreover, the evaluations emphasized that financial management systems, like other management tools, had to be appropriate to specific needs and conditions in the project area if they were to contribute to successful implementation.

5.3.3 Managing Technological Inputs

Technology transfer was one of the primary means by which AID attempted to bring about development, and its management was, not surprisingly, an important factor affecting the implementation of agricultural development projects in Africa. Several of the projects sought to test and apply new technologies -- methods,

techniques, knowledge, procedures, or equipment -- in African countries, and all of them had a technology transfer component. Thus, the management of technology transfer had a direct or indirect influence on the outcome of all of the projects.

Because of the importance of technology transfer in the African cases the evaluators gave its management close attention. The evaluations illustrated the importance of selecting and adapting technologies that were appropriate to the needs of beneficiaries and to the conditions of the project area. Although the Agriculture Sector and Planning project in Liberia fell far short of institutionalizing sector analysis and planning methods in the Ministry of Agriculture, the evaluators attributed the shortcomings to factors other than the types or quality of technology transferred. They argued that the technology was quite appropriate in its simplicity, low cost, and adequacy to the needs of the Ministry's decision-makers. They concluded from their observations in Liberia that "appropriate technology for data-related activities must be simple, low cost, yet sufficient to be sustainable. Sophisticated state-of-the-art technologies should be avoided when the objective is to develop information systems that the host country must support."

They found that an important indicator of appropriateness was that the technologies transferred to Liberia were within the management capacity of the Ministry of Agriculture and concluded that appropriate technologies will differ among countries and even among organizations in the same country. While arguing for simple and low cost technologies, however, evaluators of the project noted that throughout the life of the project "it is crucial that efforts be continued to transfer any and all information technologies that are within the management capabilities of the country." New and more sophisticated technologies could be introduced incrementally as managerial capacity expanded through training, technical assistance, or application of the methods and techniques previously introduced. "The danger of the appropriate technologies argument," they warned, "is that it is prone to myopic interpretations. In the area of information technology, that argument can easily degenerate into a Luddite mentality that will only widen the already existing gaps between developed and developing countries in their access to and use of information."

The principle that technology must be appropriate is almost a truism. But the African cases uncovered many instances in which the wrong technology was provided or in which its transfer was managed ineffectively, thereby rendering it inappropriate. Sometimes inappropriate technology was prescribed because of organizational inertia, failure to assess the feasibility of technology transfer before proceeding with testing or application, unresponsiveness to the desires of beneficiaries by project designers and managers, or the dominance of political priorities over local needs.

The Bakel project offered a clear case of questionable technology transfer, in which project managers and the AID

Mission did not pay close enough attention to feasibility analysis before proceeding. After the project was underway, its design was amended to include testing of a solar heat pump for irrigation. The amendment was made in 1978 after the Government received a joint proposal from American and French firms that specialized in heat transfer technologies to test a solar pump in Bakel. The Government persuaded the AID Mission to add this component to the project, despite the fact that it should have been obvious that the pump was inappropriate. The evaluators found that

Although the pump was designed to provide enough water to irrigate 200 hectares, by 1982 it was conceded that it would be able to irrigate 32 hectares at top efficiency. Unfortunately, top efficiency could only be obtained by ensuring that the glass collector panels situated on the roof of the Project headquarters remain dust free. Given the location of the Bakel on the edge of the Sahara, it became obvious that top efficiency could never be achieved, and in early 1983 all work ceased on the pump. The panels remain, as roofing for headquarters, and a small diesel costing perhaps one percent of the solar installation provides water for the base.

Although technological experimentation can be a valid purpose of development projects, the Bakel case illustrates the need for more careful feasibility analysis before proceeding with the decision to test new energy-generating technology, which in this case provided only very costly roofing material.

Other problems of technology management also occurred in Senegal. Early in the Bakel project, SAED pushed ahead with the introduction of rice cropping in the river basin, because the Government placed high priority on increasing rice production and many of the technicians working for the organization had gained their experience by working in flat deltas where rice was easy to grow. The unresponsive and inflexible SAED leadership largely ignored soil studies of the Bakel, indicating that only about 10 percent of the farm area was well suited for rice production. When it was irrigated, the rest of the soil in the area was better suited to growing wheat, sorghum, millet, peanuts, and vegetables.

Early hostilities between SAED and the farmers were caused by SAED's insistence on rice production long after trials showed the infeasibility of growing rice. SAED technicians ignored the fact that farmers, for good reasons, only planted rice on a small portion of their irrigated land. "SAED's commitment to producing rice on all of it, regardless of type, may have been perceived as unusual by the farmers, but they gave it a try," the evaluators observed. "The trial lasted one to two years in most villages before frustration set in. Trying to maintain the new pump sets with inadequate diesel and assistance from SAED was bad enough, but having the water drain through the soils so quickly was

absurd. Pumping enough water to maintain the rice on the drier [dry land] soils would have been far too costly, so the farmers began shifting to other irrigated crops, notably maize."

However, SAED continued to focus on rice and provided farmers with little technical or financial assistance with maize production or with the experiments that farmers themselves undertook with irrigated sorghum. SAED exacerbated the ill effects of an inappropriate technology by withholding support for more appropriate ones.

Inappropriate technology was sometimes transferred because AID procurement regulations usually restrict project organizations to obtaining equipment made by American firms. A minor but typical example was seen in the Egerton College case. The Home Economics Department requested a modest number of new sewing machines for its sewing laboratories. The department requested a European machine because the faculty knew that it would stand up better under the extensive use required at the College and because it was the type most commonly used by extension agents in the field. Yet the request was denied by AID because non-American brands were specified, even though, as the evaluators discovered, "training the trainers on different types of machines than they would later use was not practical for the educational purposes of the equipment." Similar problems arose with equipment ordered by the Biology Department. AID procured American-made microscopes with which the faculty was unfamiliar and that were different from those that the College's graduates would be using in the field. Their usefulness in the project was severely limited.

Evaluators of several cases concluded that effective adaptation and use of technological inputs depended largely on training and support systems for those who used them. The need for support systems -- provisions for repair, maintenance, and spare parts supply, and guidance in the use of equipment -- was especially important because AID required the projects to buy American technology. Serious difficulties arose when technology support systems were not planned and managed effectively. In the Egerton College case, for example, the academic departments that were required to obtain American equipment found that little of it came with spare parts. "Department heads are unfamiliar with the equipment, they do not even know how to list the spare parts most likely to be needed over the next five years," the evaluators found. "Manufacturers provide no more than a mailing address and are not prepared to maintain a service operation in Kenya. Much of this equipment may not operate for long since the technicians at Egerton College are unfamiliar with its operation and repair, and no one in Kenya can help them."

Evaluators of the Bakel project in Senegal found a similar problem. Although waivers had been obtained to procure European-made irrigation pumps that were clearly more appropriate to conditions in Senegal than American-made equipment, new waivers had to be obtained every time the previous purchases had to be replaced. Sometimes old pumps were replaced with different

equipment because the waivers were not processed in time. The evaluators found that at the time of their visit, "although Bakel had theoretically settled on one type of pump, 10 non-standard and inappropriate pumps financed by AID and 8 non-standard pumps financed by SAED were in stock, each with an inadequate supply of spare parts and the AID-financed ones with no dealer in Dakar as back-up."

Although the need for training to support technology transfer may seem obvious, the evaluators of the Egerton College case found that "very little provision was made for training support staff to maintain equipment under the expansion project." Because much of the equipment had to be procured in the United States, project staff and ultimate users frequently were not familiar with the specific models acquired for them. "The team encountered frequent complaints about the problems of maintaining American supplied equipment," evaluators pointed out, "and we wonder if this might have been reduced with adequate attention to technical training."

In summary, the evaluators of the African agricultural development projects confirmed the importance of effective resource and input management for successful implementation. They showed that procurement and supply problems, deficiencies in financial management, and difficulties with managing technological inputs still plague projects in Africa and that more careful attention to input management could have overcome or prevented serious problems from arising. The evaluations indicated, however, that procurement, financial, and technological management systems must be appropriate to the needs and capabilities of the implementing organizations and tailored to the conditions within which they will be used. They also indicated that the adoption of such tools alone will not guarantee that a project will be successfully implemented in the absence of other management factors.

5.4 Management of Human Resources

The computer analysis of the 277 African development projects frequently cited human resource management factors as important influences on implementation. Over 42 percent of the projects encountered the following problems as the result of difficulties with project cadre and staff: (1) lack of adequate skills to perform their functions, (2) incompetence or inexperience, (3) unavailability of trained staff or high turnover of personnel during the life of the project, (4) inadequate conditions of employment, (5) and low motivation or commitment to project goals. About 21 percent of the evaluations cited problems with managing the participation of beneficiaries in planning and implementation, with developing favorable attitudes toward the project, and with skills and performance enhancement. Others cited poor leadership as a problem and indicated that other personnel or interpersonal problems contributed to ineffective implementation.

The six case studies also underlined the importance of human resources management factors in influencing the outcomes of the agricultural development projects and emphasized the crucial roles of leadership, training, personnel stability, and beneficiary participation.

5.4.1 Leadership and Managerial Capability

Directly or indirectly, all of the cases concluded that strong, highly motivated, and responsive leadership was a necessary but not sufficient condition for the successful implementation of projects. Formal management systems and organizational structures could not compensate for weak, unmotivated, and unresponsive leadership. Indeed, the cases repeatedly emphasized the central role of good leadership in accounting for the successful management of African agricultural development projects and of weak or ineffective leadership for the failures. Leadership emerged as one of the most important management factors affecting implementation in all six African case studies.

Evaluators of the Agriculture Sector Analysis and Planning (ASAP) project in Liberia found a direct relationship between the leadership provided at different stages of the project and its impact on the Ministry of Agriculture. The Agriculture Development Program that preceded and laid the groundwork for the ASAP project "was able to achieve some of its objectives because of the leadership provided by key actors," the evaluators observed. But the ASAP project started poorly because the Ministry of Agriculture had four different ministers during the first 4 years of implementation, "and their support varied from indifferent to negative." The evaluators concluded that although other factors also accounted for poor implementation, "the lack of steady support for the objectives of the second project at senior levels in the Ministry" was the most critical. Only in the later years of the project's life did a new Minister of Agriculture, who supported the project, make extensive use of the Planning Division and redirect attention to building the Ministry's sectoral analysis and planning capability.

The evaluators found that although it was primarily a technology transfer project, the ASAP project implementation depended more on leadership than on the technology that was transferred. They concluded that "the leadership provided by individuals in key management positions significantly affected what the project did or did not accomplish, regardless of the soundness or utility of the technology itself."

The Bakel project in Senegal provided more evidence of the importance of administrative and political leadership. During the project's early years, SAED was in constant conflict with the farmers in the Bakel river basin. Irrigation supplies were not delivered to the project -- or to the farmers -- on time. SAED

gave farmers little or no guidance on how to construct their irrigation canals and dikes. SAED's prices for commodities that farmers contracted to sell to the project were below market prices, and farmers were restricted to growing crops that SAED considered to be of high priority. Not surprisingly, many farmers broke their contracts with SAED out of dissatisfaction with the arrangements.

Early evaluations of the Bakel project placed much of the blame for the hostile relationships on SAED. SAED was described as an authoritarian, highly centralized organization only concerned with imposing its plans for development on the rural population. It relied on capital-intensive machinery to increase production in an area of traditional family farming, seized land, and displaced people from their farms. Despite its support from the central Government and foreign aid organizations, SAED was unpopular with Bakel farmers.

Because of the lack of responsiveness to their needs, the farmers began to put political pressure on both local and national Government officials to have the Director of SAED replaced. After an investigation by the Prefect of the Department of Bakel, the Director was replaced by someone more sensitive to the needs of farmers in the region and willing to exert strong leadership to achieve the project's goals. After the leadership change, the organizational structure of SAED was decentralized to make it more responsive. The evaluators noted that changes occurred in the project almost immediately under new leadership:

The new and energetic SAED Director in Bakel arrived with a number of concessions: groupements would no longer be required to sell to SAED, they could cultivate whatever crop mix they chose, and they were encouraged to take as much initiative as they liked, as long as they maintained the contractual obligations of cultivating a minimum number of hectares and showing good faith in debt repayment. Perhaps most importantly, the new Director travelled almost constantly throughout the first six months of his stay, talking over problems and listening to grievances. For many villagers, the Project is described in terms of 'pre that director' and 'post this director.' His charismatic leadership, combined with the major SAED policy changes and the villagers' confidence in their gains during the conflict, all contributed to the feeling of a new beginning in the 1983-1984 agricultural season.

The change of leadership in the project produced tangible results: rice production increased dramatically, rapid advances were made in constructing village storehouses, the groupements began managing seed and fertilizer distribution on their own, and joint decision-making committees were formed by SAED and the villagers to manage project activities at the local level. With

leadership passed to a person who was energetic, knowledgeable about local conditions, and sensitive to farmers' needs, the evaluators could state that "at the time of the team's visit to Bakel, few complaints about relations over the last two years were heard. With poor rains, all seem committed to making irrigated agriculture in Bakel work, with a minimum of strain."

The Egerton College project in Kenya was also successful largely because of the strong leadership of the school's principal. He took clear control of the project, operated through established and accepted decision-making arrangements within the school, used a combination of formal and informal managerial techniques, protected the project's resources, and inspired the staff to use resources effectively to attain the school's objectives. The leadership style of the principal and other major actors in the case was crucial to the project's success.

Their decision to take an active role in managing and controlling the project, rather than leaving its implementation to technical assistance advisers or the donor organization, allowed the project to become an effective instrument of institutional development. The evaluators emphasized that the "Egerton College leadership decided early in the project to assert its role as an active manager of assistance rather than a passive recipient. Basic decisions regarding construction and equipment were made by the College with full participation by Department Heads in the planning. Department Heads remained Kenyan, even though this meant that fairly junior Kenyans served as 'Acting Heads' while senior staff were in the U.S., and supervised far more senior American staff."

The College's leadership resisted strong pressures by the U.S. staff -- who were hired to replace Kenyan faculty while they were in training overseas -- to broaden the scope of the project to include curriculum reform. The evaluators concluded that the maintenance of local control "had a generally efficacious effect on the academic management of the College. Participation in planning the expansion gave faculty a sense of 'ownership' and resulted in a physical plant that was responsive to their requirements."

The weak leadership of one of the directors of the Niamey Department Development project in Niger, however, adversely affected its implementation, and the evaluators concluded that "personality characteristics and management styles of project directors have a critical influence on morale and integration of project participants at all levels of operation." They found that a director "whose style is open and supportive of staff can have an important positive impact on management enhancement efforts. A director whose style is uncommunicative deprives these efforts of the support they require to enter into management practice."

Leadership was found to be a key variable in all of the African development projects. Several of the evaluations showed

that projects could be implemented successfully despite poor design and weak management systems if they had strongly committed, benevolent, and responsive leadership. But the principle did not necessarily hold in reverse. The most carefully and wisely planned project with the most elaborate management systems would not necessarily be successful without strong and committed leadership. The evaluators of the Egerton College project perhaps summed up its importance most concisely in concluding that "the institution may flourish under strong leadership, but typically it has few defenses against weak leadership."

5.4.2 Participation

The six African evaluations made a strong case for participation by beneficiaries in project planning, design, and management. When relevant government agencies, project staff, private organizations, and beneficiary groups were involved, the projects were not only implemented more effectively, but the results were often more relevant and more easily sustainable. Participation brought visible indicators of commitment and a sense of "ownership" on the part of those whose support was necessary to manage the projects effectively.

Although the need for participation is another principle that has become a truism, the tendency to ignore beneficiaries in project planning, design, and implementation was evident in several of the African cases.

The great difficulties described earlier between SAED and the farmers in the Bakel project were directly attributable to SAED's authoritarian and nonparticipatory style of management. Farmers were not recognized as active participants in the project. SAED imposed its own priorities, approaches, and requirements on farmers with little sensitivity to their needs or to the conditions under which they were working. After the "farmers' revolt" led to a change in SAED's leadership, a more collaborative and participatory approach was taken that began to overcome the farmers' hostility and that contributed significantly to achieving the project's objectives. The evaluators found that

As part of its new responsive approach, SAED has begun supporting the villagers more and more in their efforts at diversification. A U.S. Peace Corps Volunteer was recruited and is working with a number of villages in fruit tree cultivation, primarily bananas and guavas. Demonstration Farm personnel -- notably the American agronomist -- are working with a number of new women's groups and youth groups in vegetable gardening for consumption and profit. The farm is also aggressively undertaking trials in irrigated maize and sorghum -- preferred crops in many villages -- in addition

to rice trials. An American advisor posted in SAED/St. Louis is working on a number of labor-saving devices, including rice decorticators. These related activities, many of which are done on technicians' personal time, appear to greatly enhance SAED's new image in Bakel.

Had such participatory procedures not been adopted, it is unlikely that the Bakel project would have made much progress toward achieving its goals.

One of the reasons that the formation of effective farmers' cooperatives was unsuccessful in the North Shaba project (PNS) was that the project staff were unwilling to delegate to farmers an authoritative role in establishing and operating them. "Simply stated, most project management staff never appear to have gone beyond looking at farmers as recipients or beneficiaries of the project, that is, as passive actors in the process," the evaluators observed. "They were legitimate actors, to be sure, legitimacy conferred by living and farming in an area in which outsiders decided to carry out a project. But outside of some small-scale and often ineffective income-generating activities and social services, not even the Farmers' Councils appear to have been conferred much authority to act in any capacity beyond their household production units."

The failure of the PNS staff to elicit real participation by the Farmers' Councils was attributed to the reluctance of farmers to be organized. This was partly due to their memories of the country's colonial period, to ambiguity in the project design about the role of participation, and to the fact that AID requirements for reporting progress were based only on quantitative measures. This last factor encouraged the staff to initiate as many activities as possible in the most expeditious way, often ignoring the project's participation and institution-building goals. "Actual attitudinal change, conferring of authority, and exercise of power were not quantifiable and thus not reported...", the evaluators observed.

On the other hand, the highly participatory process used in planning for the expansion of physical facilities at Egerton College was a key factor in its success. All of the department heads, and through them the faculty, were involved in the design of their new academic facilities. They were consulted about what they needed and wanted in the buildings, and they had a strong role in formulating the specifications for the construction work. As a result, the evaluators found, "most of the department heads with whom we talked are not only proud of the new facilities that have been added to Egerton College, they are generally satisfied with how the new or remodeled facilities operate." Moreover, the process created a stronger sense of identification with the results and engendered a stronger feeling of competency among the department heads. As a result, "enhanced confidence and pride pervades middle-level management at Egerton College," the evaluators concluded.

Interestingly, the one aspect of the project in which the opinions of staff were ignored -- the design and construction of the library -- resulted in technical problems, unnecessary costs, and widespread dissatisfaction. The evaluators found that

The librarians' concern for a secure library to protect their book collection and for floors in the general entry way which were easy to maintain, were not included in the final design. Instead of high, movable louvres or transom windows, the library was constructed with low, permanently open, aluminum louvres throughout the first floor. Students can easily slip books through these louvres. The evenings are cool at the high elevation of Egerton College. Cold drafts sweep through the library at night. The College is now paying its own staff to board up most of the louver panels and to place heavy wire mesh over the others. The black, raised, tiles at the entry-way are already curling at the edges and will probably need to be replaced relatively soon with the type of floor originally requested.

The cases suggested that participation was not only vital for effective implementation, but that it was also a valuable instrument of human resources development through which project goals could be more effectively achieved.

5.4.3 Training

Several of the evaluations concluded that personnel training was also one of the most effective means of increasing managerial capacity in project implementation and of sustaining benefits. But it had to be appropriate to local needs and requirements and carefully managed to bring about desired results.

Evaluators of the North Shaba project were critical of its designers for not providing adequate training to the Zairians responsible for managing it. Over 8 years, only 30 staff -- out of 800 who worked for the project -- received formal training. Less than \$100,000 out of the more than \$9 million spent on the project went for training. The evaluators found that there was no focus to the training programs that were provided and that technical and managerial enhancement happened mostly through on-the-job training by technical assistance advisers. The inadequacy of budgeting and accounting processes in the project was attributed by Zairian staff largely to the lack of trained accountants and people with financial management skills, a problem that could have been easily overcome through formal training programs. Staff of the data collection and analysis section complained that their work was seriously inhibited by the lack of training. Evaluators concluded that "the only criticism

we heard of the project from Government of Zaire officials in Kinshasa was that insufficient attention had been given to training of Zairian personnel so that they could more quickly take over the project." As a result, Government officials believed that Zairians were not given the opportunity earlier to move into positions of authority, another problem that could have been overcome with training.

On the other hand, training programs were considered to be a key factor in improving human resources for effective management and successful implementation of the Bakel project in Senegal. The project offered a training program that reached from SAED headquarters down to the village level.

At headquarters, staff training contributed significantly to improving commodity procurement, distribution, and control systems that were essential to extending irrigation in the Bakel area. The project provided training for warehousemen in inventory management and control, enabling them to create an efficient operation and their own training program for new staff. Extension agents are given both classroom and field training, and other staff were given diversified programs of instruction. In addition to increasing their technical abilities, the training programs contributed to decentralization, created greater flexibility and responsiveness among the staff, and helped to overcome the shortages of skilled personnel that plagued most other development projects in Africa. The evaluators found that

The payoff for this type of training enables one employee to substitute for another. At the project base, several employees could substitute almost fully for one another on the job, by virtue of a combination of training and similarity in job descriptions. For example, the project accountant and the credit manager had related but different positions; the former attended to procurement, inventories and cash flows at the base, while the latter attended to the delivery of farm inputs and receipt of credit at the villages. Nevertheless, more general aspects in the training enable them to substitute for one another when needed at the base. This is important in a bureaucracy that is decentralizing and where field staff will have to rely upon their own resources to meet unforeseen and changing demands.

Much of the village-level training was given by SAED extension agents and U.S. technical assistance personnel either at demonstration farms set up in the Bakel area or in water management and farming methods in the villages. Villagers were given training in basic irrigation construction techniques, field preparation and maintenance, and water distribution management. Training at all levels improved the project's performance. Training was also used as a strategy for eliciting more widespread participation by beneficiaries in the project's activities.

The cases showed that in some circumstances, however, the ability to train people at the local level in new techniques and methods was limited by culture and tradition, or by political constraints. The Niamey Development Department (NDD) project in Niger was a case where training for farmers took the form of a "package" of production techniques that was of questionable effectiveness; however, it was the only set of techniques that was supported by the Government's agricultural services. Yet experience showed that most farmers in the project area either did not adopt the techniques taught in the training programs or selectively adopted portions of the package. Farmers ignored the training because they felt that the package did not increase their productivity or enhance their management capacity. The NDD project would not abandon the training package, in part because of institutional inertia (it was easy to deliver) and in part because the Ministry never bothered to examine the results of its application. Evaluators of the NDD project found that "the longevity of NDD's technical package results from an absence of effective feedback from NDD applied research and observations of results obtained by graduates in their own fields to the project's training programs. NDD has no mechanism routinely to allow greater flexibility and responsiveness of NDD extension training to the diversity of production conditions in the project zone."

The lesson drawn by the evaluators from this case was that results of training programs must be carefully monitored, and the feedback used to make them more responsive to local needs and changing conditions. In cases such as this one, however, changes in training programs had to be introduced slowly to overcome political, administrative, and cultural obstacles associated with traditional training methods.

Training for project staff and other professionals was also found to be important in developing the human resources capacity required to implement projects successfully and to sustain their benefits. Evaluators of the NDD project in Niger argued that in-country training seminars for the Government's rural development services "have provided a supportive setting for collective approaches to problem solving, and rural development personnel have been exposed to new models of social action." A recurring problem, however, was sustaining new attitudes, skills, and behavior learned during the training programs after the trainees returned to their agencies, where patterns of authority, decision-making, and rewards were inconsistent with the concepts of cooperation and responsiveness taught in the courses. The evaluators concluded that the impact of training would be limited unless efforts were made to build "structural support for the innovations they introduce."

Staff training also played a crucial role in the Land Conservation and Range Development project in Lesotho. About 24 community development professionals and 28 technical staff were trained under the AID project. "Returned participant trainees constitute the one group on whom the impact has clearly been

substantial," the evaluators found. The training strengthened the technical and managerial capacity of the project, and the trainees advanced quickly to higher levels of responsibility within the organizations implementing the project. Indeed, AID-sponsored training became an important criterion for professional mobility throughout Lesotho, and former trainees of other AID projects quickly rose to high positions throughout the Ministry of Agriculture.

As a result of their observations, however, the evaluators saw the need for improvements in overseas training programs. Because overseas trainees were promoted quickly, programs should have combined technical and managerial training. Moreover, they found that training should have been extended beyond project staff to include other participants who could play important roles in sustaining the benefits of the project when external funding ended. Finally, the evaluators argued that project designers should have provided for more extensive on-the-job training for professionals and technicians because of the relatively high turnover among those who received overseas training. Often, training funds were spent on the first occupants of project staff positions. When they later moved up in the project organization or to other jobs in the government, little money was left to train their replacements.

Most of cases indicated that training -- especially an overseas program -- was most effective when it was carefully monitored and supervised by the donor and the project managers. The Egerton College case provided an example of an organization that carefully controlled and monitored the overseas training of its faculty. The evaluators noted that through the initiative and leadership of the College's principal and department heads,

pressure was maintained to get faculty in training back as soon as possible -- to get Kenyan teachers teaching Kenyan students and to consolidate the expansion effort. Participants were clearly informed about their training goals and continually reminded of the importance of expediting their work. Communication was maintained (e.g., through a newsletter) so that they were not isolated from events at home, and the regular site visits provided close monitoring of their curriculum and progress. It appears that the discipline of the U.S. training institutions and the contractor may have been as important as the pressure on the participants.

This careful management of the training effort minimized the disruption that can come when a large number of an organization's staff is away for training. It also ensured that the training truly led to institution building rather than simply to individual professional development. At the same time, these efforts reminded the trainees of their importance to the College and the need for them to return as quickly as possible to take up their duties.

5.4.4 Personnel Management and Stability

A number of the cases noted that stability in personnel assignments among technical assistance personnel and host country counterparts was important for effective project management. The evaluators argued that incentives and inducements must be designed into projects to recruit and retain good staff.

High rates of turnover among project staff and counterpart government personnel -- exacerbated by adverse economic and political conditions within the country -- seriously affected several of the projects. The Agriculture Sector Analysis and Planning project in Liberia, for example, was particularly buffeted by changes in staff at every level within the Ministry of Agriculture (MOA). Rapid turnover of senior ministry officials (five ministers in as many years) meant a shifting base of support for the project's management interventions. "The Government coup in 1980 only accelerated the normal loss of competent professional staff necessary for statistical and analytical work," the evaluators noted. "After the coup, severe economic problems produced major budgetary constraints for the government of Liberia. Combined with continued political uncertainty, the work environment has not been conducive to retaining professionals within the MOA." The turnover meant that new people had to be trained and that trained professionals were lost to the Ministry in which planning and analytical capacities were to be increased.

On the other hand, the success of the Egerton College project was attributed in part to the high level of stability in assignments. The evaluation team noted that the College benefited greatly from the fact that more than 40 percent of the College's staff had been employed there for more than 7 years and of the staff hired since 1978, about 36 percent were Egerton graduates. "This has meant that institutional norms, working relationships, procedures, and traditions have been retained throughout the period." Moreover, it permitted the formulation and acceptance of a strong institutional doctrine that guided behavior and promoted commitment to organizational goals. As a result, "the College mission is widely shared, understood and valued," the evaluators noted. "Everyone we met stressed the importance of the technically trained and practically oriented graduates Egerton College produced." Personnel stability allowed the doctrine to remain strong. Moreover, it contributed to what the evaluators found to be the "high morale, the sense of efficacy and the 'can-do' mentality," of the faculty and staff that accounted for the project's success.

Several of the cases stressed that an essential part of keeping good staff was to provide the supplies, equipment, and resources needed to perform their work successfully and, in remote or "hardship" locations, to provide amenities that eased the burdens of serving there. In the remote Bakel area of Senegal, "central level management realized that basic personnel

support -- adequate offices and residences, in-service training and career advancement -- enhanced its abilities to recruit and post better qualified personnel to the area," the evaluators observed. "Further it learned that provision of technical and material support would enhance the actions of those committed few who had stayed during the 'tough' period. The realization that these steps could have been taken earlier, or at least in an accelerated manner, may be possible only in hindsight, but is certainly applicable to future efforts in similar areas."

In brief, the cases provide strong evidence that human resources management was an essential aspect of effective development project implementation, and highlighted the importance of leadership, training, participation, and personnel stability in the outcome of agriculture development projects in Africa.

6. LESSONS AND IMPLICATIONS OF THE DEVELOPMENT MANAGEMENT EVALUATIONS

This review of the evaluations of African agricultural development projects had three purposes: (1) to test the validity of the conceptual framework (see Figure I in Section 2 of this report) by identifying the major factors that influenced the implementation of those projects; (2) to identify from the experience with the projects, the practical lessons for development management; and (3) to draw from those lessons implications for enhancing development management capacity in developing countries.

In this review, development management was defined broadly as a process through which individuals and institutions in developing countries organize and use the resources available to them to achieve specific development objectives. Because the focus of the evaluations was on a sample of agricultural projects in Africa, development management capacity was assessed by the effectiveness with which development projects were implemented. The hypothesis underlying the evaluations was that effective project implementation was a function of four sets of factors: policy, design, contextual, and management. The evaluations placed the most emphasis on management factors and on the relationships between them and the other three sets of factors.

The CDIE evaluations drew on a computer analysis of 277 AID-assisted development projects in Africa to help identify questions and issues to be explored in the field studies of the six African agricultural development projects on which this review is based. The relatively small size of the field sample precludes making broad generalizations about development management. However, the cases do yield strong suggestions about the effectiveness of strategies used to solve management problems and of management capacity enhancement interventions in the six projects. Although each project is somewhat different, the six projects were representative of those that AID supports in

African countries.

The case studies yield at least two kinds of evidence. First, they provide information that helps test whether the conceptual framework described in Section 2 identifies the major factors affecting the successful implementation of development projects in Africa. Second, they yield important lessons and conclusions about the nature of development management. These lessons, in turn, hold important implications for how governments in developing countries and international assistance agencies can enhance management capacity among managers, staff, and beneficiaries involved in the development process and of the public and private sector organizations working on development activities.

The lessons of experience can be used in two ways. First, from a research perspective, the lessons can be used as propositions about development management that can be further tested. The propositions from this study will allow subsequent studies to focus more closely on selected factors that were found to be important in the African evaluations. As the sample becomes larger, additional evidence will be generated about these propositions. Comparative analyses will yield more precise lessons for development management. Second, from a practical perspective, the lessons from these cases provide guidelines that should be considered in the design and implementation of future projects. Some of the lessons confirm what is already known about managing development projects in Africa. In confirming known problems, the cases highlight the need to address these problems more effectively. Some of the lessons challenge conventional wisdom. These can lead designers and managers to rethink how they might deal more effectively with management problems and about new strategies for enhancing development management capacity.

6.1 Identification of Major Development Management Factors

The six cases yield substantial evidence that the sets of factors identified in the conceptual framework -- that is, policy, design, contextual, and management -- are critical in influencing the implementation of those projects.

The case studies confirm that these four sets of factors determined how effectively the six agriculture development projects were carried out and that the framework offers a useful way of assessing host country development management capacity. Moreover, the evidence from the cases tends to support other studies that have been done of development management in Africa, indicating that these four sets of factors were important.

For example, Jon Moris' review of experience with rural development projects in Africa provides another analysis of the policy, design, contextual, and management factors that influence implementation.^{35} He concluded that among the most critical

functions that must be performed by development managers in Africa were the following (with similar CDIE factors in parentheses):

- Matching people to assignments that use their special strengths (human resources management)
- Safeguarding performance specifications while negotiating the design and implementation of field programs (design)
- Remaining alert to issues under consideration at a particular moment within the larger administrative system (policy, contextual)
- Ensuring that all parties to a key decision have advance knowledge of the issues at stake (organizational, administrative process, human resources management)
- Identifying and securing commitment for all important components that depend on outside support (organizational, administrative process)
- Providing contingency arrangements to back up all key components if their supply is at all problematic (administrative procedures, management of inputs)
- Identifying those items requiring long startup times so that preliminary actions can be taken in time (design, administrative procedures, management of inputs)
- Exploring unofficially the political feasibility of all required measures for project implementation (policy, contextual)
- Learning and acknowledging the constraints that each party involved in negotiations feels to be binding (contextual, design, human resources management)
- Establishing realistic decision rules and deciding when general regulations must be ignored or overridden (administrative procedures, contextual)

CDIE studies add further evidence that these factors are crucial aspects of development management capacity.

Recent studies of development management factors in nine Southern African countries by John D. Montgomery,^{36} using a broader sample and a different methodology, also add evidence that the four sets of factors identified in the CDIE studies are critical. Development managers in Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia, and Zimbabwe were asked to identify "management events" that influenced positively or negatively the performance of their tasks, and more than 1,800 events were identified. Among the most frequently

mentioned events were those that had to do with motivating behavior (human resources management), managing resources (management of inputs and administrative processes and procedures), establishing and maintaining organizational relationships (organizational and institutional arrangements), and policy analysis (policy and contextual factors). Skills associated with management of human resources were the most frequently mentioned by African managers as those used to cope with these events, followed by those associated with input management, administrative procedures, and organizational and institutional arrangements.

CDIE's evaluations also confirmed that the four sets of factors described in the conceptual framework are inextricably related to each other. That is, the four sets of factors constitute a dynamic system in which each set has an impact on the others and, together, they affect project implementation. For example, contextual factors were seen to influence national development policy, which in turn influenced how project goals, purposes, inputs, and outputs were selected. The designs influenced how the projects were managed.

Because development management is a system of dynamically related factors that affect each other in complex and subtle ways, development management capacity consists of the ability to deal with all four sets of factors. Although the cases showed that not all of the factors are equally important and that some factors affect implementation differently in different projects, the implication is that development managers must be able to cope with all four sets of factors. Therefore, all the factors and the relationships among them should be given attention in the design of projects, training programs for development managers, evaluations, and research on managerial and institutional development.

{35} Jon Moris, *Managing Induced Rural Development* (Bloomington, Indiana: Indiana University International Development Institute, 1981).

{36} John D. Montgomery, "The African Manager," paper prepared for Expert Group Meeting on Policy Issues in Urban Services for the Poor (Nagoya, Japan: United Nations Centre for Regional Development, 1985).

6.2 Lessons and Implications for Development Management Enhancement

The case studies provide lessons that can serve as useful propositions for further research and as guidelines for actions to enhance development management capacity in developing countries. Several caveats should be considered before reviewing those lessons.

One is that development management is more than the

application of a particular set of organizational arrangements, administrative procedures, and procurement, financial, and human resources management techniques. Development management is a process by which individuals and institutions organize and use effectively the resources available to achieve specific development objectives. Development management is affected by national policy and contextual factors that must be understood and manipulated, by perceptions of development problems and opportunities that are shaped by social, economic, political, and technological conditions within developing countries, by the way interventions are structured (design), and by a set of somewhat intangible human variables such as leadership, participation, commitment, creativity, and responsiveness.

The cases confirmed that effective development management involves good judgment in interpreting how the variety of factors influencing the achievement of project goals should be addressed and how the proper organizational arrangements, administrative procedures, and management techniques can be applied in varied settings to achieve specific development objectives. Because good judgment usually results from a combination of knowledge, experience, and maturity, one can say that development management is as much an art as a science.

A caveat that follows is that lessons of experience cannot easily be reduced to simple universal rules, because management is as much an art as a science. The cases show clearly that development managers deal with complex problems, opportunities, and environments. Managers work in situations and with problems that are uncertain. Development managers must make complex tradeoffs that reflect these uncertainties, rather than simpler choices that are possible in more stable and known environments. Managers of the African projects had to consider tradeoffs between adapting to local traditions and cultural constraints and attempting to bring about changes that challenged social and cultural traditions, and between relying on more formal management systems familiar to donors and on informal processes of interaction more common in rural areas of Africa.

A major conclusion of this evaluation is that managers must determine how their projects differ from others and decide which management strategies that worked effectively in another country or project may be appropriate for their own projects. Indeed, several of the cases showed that the same management strategies -- for example, organizing cooperative farm groups to elicit participation -- had opposite effects in different countries. Detailed financial management systems that might have been appropriate in one project were not necessary or effective in others. Moreover, the same management principles that worked well at one stage of a project's life were found to be inappropriate at another stage.

Because the studies showed that some management practices and procedures frequently led to beneficial results but sometimes had undesirable effects, it would be dangerous to attempt to derive universal principles about which management strategies apply in

all cases. Ultimately, good management is what works best to achieve results efficiently in a particular situation. However, some management strategies and techniques have a higher probability of achieving objectives in particular circumstances.

An important implication for efforts to enhance development management capacity is that they must distinguish between that aspect of management that consists of leadership, judgment, experience, and creativity -- that is, the human element -- and that which consists of systems, procedures, and regulations through which routine tasks are performed -- that is, the institutional element that Leonard refers to as "bureaucratic hygiene."^{37} In most developing countries, institutional improvements are necessary but not sufficient. It is often the leadership, judgment, experience, and creative aspects of management that are the most critical for successfully implementing development activities and that are most often neglected in management enhancement interventions.

Therefore, although the lessons from the evaluations provide guidelines for assessing and enhancing development management capacity in developing countries, they should not be seen as absolute rules that are universally applicable. They should be seen as conclusions that provide propositions for further study and aids to judgment for development managers. The lessons and implications of the case studies are now summarized by factor sets.

^{37} David K. Leonard, "The Political Realities of African Management," in Report of a Preparatory Evaluation Workshop on the Management of Agricultural Projects in Africa (Washington, D.C.: AID, 1986).

6.2.1 Policy Factors

1. Policies of national governments and international assistance agencies play an important role in identifying problems and opportunities for intervention. Favorable policy settings can facilitate the effective implementation of projects and unfavorable policies can obstruct their management. Careful attention should be given in the design stage to the potential impacts of policies on project implementation and to the policy changes that may be needed for the project's objectives to be met.

2. Policies play an important role in project design by providing parameters for the definition of goals and purposes and for the selection of inputs and outputs. They reflect, and in some cases help shape, the environment in which the projects will be carried out and the amount of support host country governments are likely to give them. Enough flexibility must be provided in project designs to allow for redefinition of the basic strategies for project implementation if national policies change

drastically.

3. Projects, in turn, can have a strong influence on government policies and programs. Projects can influence the ways in which government officials think about and deal with problems, even when the projects themselves are not entirely successful in achieving their immediate goals. Attention should be given in the design and management of projects to how they can effect policy changes that enhance and sustain the project's outputs.

4. Although national policies influence the outcome of projects, policy changes alone are insufficient to guarantee more effective implementation. Even when policies have a direct impact, successful implementation also depends on appropriate design, a conducive environment, and efficient internal management.

6.2.2 Design Factors

1. Project implementation is influenced heavily by AID and host country government procedures for formulating, designing, and approving projects. Project design is clearly affected by government policies and by contextual factors. The failure of the project designers to understand these factors adequately can adversely affect a project's outcome. One result can be to restrict the actions of managers and organizations responsible for project implementation.

2. When possible, project goals should be kept simple and discrete; attempts should be made to design projects as an incremental series of tasks that can be accomplished within existing or easily expandable management capacity.

a. In many cases, when problems or systems that must be addressed are complex and multifaceted, when discrete interventions cannot be identified before implementation, or when multiple interests cannot easily be accommodated, goals must be defined broadly.

b. In circumstances in which goals cannot be clearly defined during the design phase, development managers must be skilled in coalition building, obtaining consensus from diverse interests, and providing a sense of direction for the participants and beneficiaries during implementation.

c. In complex projects, planners must at least be clear about overall strategies, if not about specific goals and objectives, so that development managers can set general directions that can be supported and followed by those responsible for managing their many components.

d. The design of complex, multipurpose projects must reflect their special needs and characteristics. They usually

require a longer duration to achieve their objectives; greater flexibility to change direction as changes occur in policy, context, and government support; and a more secure commitment of financial, technical, and human resources over a longer time.

3. Project designs should be flexible enough to allow for change and adaptation during implementation. Most of the factors affecting project implementation, particularly in complex projects, cannot be predicted accurately during the design phase, especially if there is a long time gap between design and activation. Even exhaustive feasibility analysis and comprehensive planning cannot anticipate changes in policy, contextual, and management conditions that will affect the outcome of projects. Nor can they accurately identify potential problems and opportunities or predict with certainty the behavior of participants and beneficiaries. Therefore, project designers should provide overall strategies for implementation and leave the choice of tactics to the project's managers who will be held accountable for the results.

4. Designers should attempt to tailor the project as closely as possible to local conditions and needs, even if this reduces the potential for widespread replication.

5. Sufficient and appropriate inputs must be provided by AID and the host country governments for projects to be implemented effectively. Because these inputs cannot always be identified accurately prior to a project's activation, sufficient flexibility must be provided to change the inputs during implementation as deficiencies or new needs are discovered. Some discretionary funds should be provided for project managers to respond to changing needs during implementation.

6. Project designs should not only include inputs that are directly related to the achievement of the project's outputs, but also those that indirectly affect implementation by establishing the project organization's legitimacy and by creating support among potential participants and beneficiaries.

7. Project designs should include inputs that provide quick, visible results to meet the immediate needs of participants and beneficiaries, as well as inputs for achieving longer term, more fundamental changes.

8. Sufficient flexibility should be provided by project designers to allow development managers to adapt and adjust inputs and outputs during implementation after experience has been gained from early project activities.

6.2.3 Contextual Factors

1. National economic and political conditions have a strong impact on implementation. The constraints and opportunities they create must be considered by planners and managers. If the

projects are to be completed successfully and their outputs are to be sustained, project designs must be tailored to local conditions and accurately reflect the needs and desires of intended beneficiaries.

2. Environmental conditions usually shape the perceptions of planners and managers about problems and opportunities during the design phase and throughout implementation. National economic, political, social, and technological conditions affect the design of projects and their organizational structures and administrative procedures.

3. Local social and cultural environments and traditional institutions and practices create parameters within which development managers and technical assistance advisers must work and make changes. Traditional institutions and practices can be obstacles that managers must overcome to achieve their goals, or they can be useful instruments through which the local population participates in development activities. In either case, they must be understood by development planners and managers.

4. In cases where traditional institutions and practices clash with modern management needs, development managers must make difficult choices about which social and cultural factors they will attempt to change and those to which they must accommodate. Such institutions and practices should be carefully analyzed, and the potential impacts of changes in them on local populations should be understood before attempts are made to displace or alter them.

5. The degree to which host country governments support projects also influences their implementation. Where host country support is strong, it usually contributes to more successful implementation. The lack of support -- or, more frequently, weak support -- often has deleterious effects, although strong local leadership and effective internal management can sometimes overcome these problems. In the long run, however, projects depend on financial resources, political commitment, personnel, supplies, and other inputs from government agencies. When they are not forthcoming, it undermines the capacity of development managers to achieve the project's objectives. Provisions should be made in the design of projects and in loan or grant agreements with the government to identify the inputs that will be needed from host country organizations and for monitoring their delivery.

6. Although environmental and contextual factors often cannot easily be changed, they must at least be understood so that projects can be managed effectively within existing constraints and so that appropriate strategies for coping with them can be developed. The concept of environmental analysis in project design should be broadened beyond looking at potential physical impacts to assessing the political, social, cultural, and technological conditions that are likely to affect a project's implementation.

6.2.4 Management Factors

Organizational Structure

1. The organizational culture in which projects are carried out shapes the opportunities for and creates constraints on effective development management. The organizational culture in African countries rarely conforms to Western images of efficient and rational procedures that are often called for in project designs. Rarely are development projects able to change the local culture sufficiently to enable foreign methods and techniques to work as effectively as outsiders think they should. Organizational structures and arrangements for development management usually reflect the indigenous organizational culture, and they must be clearly understood by development planners and managers before changes are prescribed.

2. An appropriate organizational structure for a project is a crucial variable in its success. In some cases, strengthening existing organizations is most effective; in other cases, new or parallel organizations must be created to overcome constraints and obstacles to change.

3. Although some degree of centralization and hierarchy characterize most development institutions, decentralized organizational structures seem to be more effective in devolving responsibility and authority to levels where decisions must be made, in strengthening administrative capacity at middle levels of management, in keeping organizations more responsive to clients and beneficiaries, and in developing a sense of "ownership" among project staff and participants. Often decentralized organizations can discern changes in their environment more easily, provide better feedback to top management, and elicit the participation of beneficiaries, especially in remote areas.

4. Organizational and institutional development achieved by strengthening existing or parallel project implementation organizations and by increasing the capacity of beneficiary groups to participate in project planning and implementation is a major determinant of whether benefits are sustained after foreign assistance ends. Attempts should be made early in a project to develop organizational capacity to sustain benefits over the long run.

5. Organizational changes required to achieve project goals must be deliberately planned and carried out as part of project design and implementation, and sufficient resources must be provided for that purpose. It cannot be assumed that organizational reforms will occur automatically as the result of policy changes or as a result of technical activities pursued during the implementation of a project.

6. Often tradeoffs must be made in the design phase between the amount of time and resources that will be devoted to achieving technical or substantive objectives and those that will be committed to achieving organizational reforms. When strategies are not well developed for both sets of activities, the attention given to one during implementation will often be at the expense of the other.

7. Sufficient flexibility must be given to development managers to make changes in organizational structures and institutional arrangements during a project's implementation. Often the impact of organizational structure cannot be accurately predicted during the design phase and changes in leadership, resources, environment, and policies can all affect the efficacy of the project implementing agency.

8. Supportive linkages between project organizations and others in its operating environment are essential for successful implementation. However, project organizations that have a high degree of autonomy and independence in decision-making and control over resources and operations seem to be more successful than those that are under the close control of central bureaucracies. An appropriate balance between independence and accountability must be struck in designing organizational and institutional structures for implementation.

9. Informal networks of cooperation and interaction are as important, and in many cases more so, than formal organizational linkages. Development managers must give adequate attention to informal processes of interaction with higher level bureaucracies, vertical organizations, and beneficiary groups, if project objectives are to be achieved effectively.

10. Projects that are located in remote or isolated areas require a large amount of autonomy, independence, and control over their own resources to respond effectively to local needs and demands. However, they also need adequate financial, technical, and logistical support from external organizations if they are to operate efficiently under hardship conditions.

11. Coordination among government agencies and private organizations is an essential feature of almost all development projects, but it depends more on the creation of incentives and inducements for coordination than on formal requests or orders to cooperate.

a. Coordination and cooperation largely depend on the degree to which various groups and organizations identify favorably with the goals of the project, obtain benefits from it, or see their own interests enhanced by its success.

b. Coordination and cooperation can be enhanced by managerial strategies that develop a sense of "ownership" of the project among participants and beneficiaries.

12. Sustaining the benefits of development projects depends

on building local and national institutions capable of making decisions, allocating and using resources, and managing their own development activities effectively after project implementing organizations terminate their operations. Planning for the transition from temporary project organizations to sustainable institutions is an important component of development management.

13. The USAID Mission's relationship to the host country project organization should be supervisory and supportive. But if institutional development and sustainability are important goals, then USAID should not attempt to intervene too directly in the ongoing operations of the implementing organization unless it requests such assistance. The USAID Missions' role should be to instill a sense of "ownership" and responsibility in the implementing organization and to help provide the resources necessary for it to accomplish its tasks.

Administrative Procedures and Practices

1. Effective project implementation results from the application and use of appropriate management systems, procedures, and practices. Although formal management procedures can solve many administrative problems encountered during implementation, they alone cannot ensure a project's success. Their effective use depends in part on an appropriate organizational structure and motivated leadership within the implementing organization.

2. The adoption of new management procedures and practices often requires organizational reforms or changes in leadership style, and such a possibility should be assessed before new management systems are prescribed.

3. The lack of or weaknesses in formal management systems may obstruct the successful completion of development projects, but they are not always essential preconditions for success. Appropriate informal and indigenous management procedures may work as well if not better than formal systems when projects have strong leadership and committed staff.

a. Relatively simple, informal, indigenous management procedures may be more appropriate and effective in developing countries than the complex, formal systems often used in Western countries. An assessment of the effectiveness of existing systems and of how indigenous procedures might be improved should be done before decisions are made to transfer management technologies from Western countries.

b. Management systems that delegate responsibility and decentralize functions may be the most direct and effective way of developing the managerial capacity of middle-level staff in project-implementing organizations.

c. Different types of management procedures, with

different skill requirements, are often needed for different components of a project. Often, the kinds of management systems that are appropriate for the project implementing organization are too complex or sophisticated for beneficiary groups or small-scale organizations operating in rural areas. Management systems must be tailored to the needs, capabilities, and resources of the groups who will use them.

4. Management systems should change as organizations expand, take on new responsibilities, and become proficient in the use of modern administrative procedures and practices. Management procedures should "grow" in step with organizational requirements. Several types of management systems may be needed throughout the life of a development project, and managerial assessment should be a continuing function during implementation.

5. Management procedures and practices should attempt to provide guidance and direction without controlling in detail every aspect of decision-making. Sufficient latitude must exist for creativity, innovation, and responsiveness to change and uncertainty by development managers and staff. Management systems must balance flexibility for managers to respond to complex and uncertain conditions with accountability for achieving development goals.

6. Monitoring and feedback are essential to the successful implementation of projects, especially if a "learning approach" to project design and management is used.

7. AID's management procedures should support but not constrain the host country's development institutions. AID's managerial procedures and requirements can be obstacles to the effective implementation of development projects when standardized practices are indiscriminately applied in all countries.

Management of Resource Inputs

1. In projects in which the distribution of large amounts of supplies and equipment is essential to achieving project goals, appropriate commodity procurement, storage, inventory, and distribution systems must be established quickly if other components of the project are to be implemented effectively.

a. An important element of effective commodity management is the procurement of equipment and supplies that are appropriate to the needs of participants and beneficiaries and to the conditions under which the project will be carried out. In cases where "tied aid" requirements conflict with the needs of the project, AID should approve procurement waivers.

b. In projects that depend heavily for their success on the provision of commodities, logistics management should be made the responsibility of a full-time experienced staff member or

unit, and AID should provide adequate training and technical assistance to support the logistics managers.

c. Special attention must be given to establishing a special, reliable procurement and supply network for projects located in physically remote or distant rural areas that are usually at the end of the government's regular supply channels.

2. Although some form of financial management system can enhance development organizations' capacity to implement projects more effectively, elaborate procedures or Western-style practices are not usually a precondition for success. Some projects are successful using indigenous or rudimentary procedures that are sometimes considered inadequate by AID. But financial management problems can arise from the attempt by donor agencies to impose their own accounting and reporting standards on developing country organizations.

a. Sufficient attention must be given in project design and implementation to recurrent costs. Appropriate procedures for assessing and dealing with recurrent costs should be an integral part of project management systems.

b. Because international donors' insistence that project implementing organizations maintain separate accounting systems often imposes a heavy burden on scarce managerial skills in developing countries, whenever possible AID should allow the use of indigenous accounting systems to obtain financial information, or assist local organizations to adapt indigenous procedures, before insisting on the use of new or separate procedures that only produce financial reports for AID.

c. AID should provide adequate training in financial management to allow project implementing organizations to meet AID's financial reporting and accounting obligations and their own needs for long-term financial and budgetary analysis. AID should not impose special requirements on development organizations without providing the resources to assist them in meeting those responsibilities.

3. The management of technology transfer is important in the effective implementation of AID-funded projects in developing countries because most have a technological component. However, other factors such as leadership, commitment, a sense of ownership by stakeholders, and participation by beneficiaries can be as important -- if not more crucial -- than the kind of technology that is transferred.

a. Inappropriate technologies are often introduced in development projects and programs because of organizational inertia, failure to assess the feasibility of technology transfer before proceeding with testing or application, unresponsiveness to the desires and needs of beneficiaries by project designers and managers, or the dominance of political priorities over local needs. Serious attention must be given in project design and implementation to selecting technology that is appropriate to

local needs and conditions and that is simple, low cost, and adequate to the needs of its intended users.

b. Technologies transferred to developing countries should be within the "management capacity" of the organizations that will disseminate and use them. More sophisticated technologies should be introduced incrementally only as the need arises and the management capacity of the implementing organizations expand.

c. Serious attention should be given in project design and implementation to ways of adapting indigenous technologies, or of supporting indigenous efforts to develop local technologies, before prescribing the transfer of technologies from abroad.

d. AID and host country governments must provide adequate training and support systems for using and maintaining equipment and supplies transferred from outside of the country. Adequate resources must be included in project budgets to ensure that transferred technology is adequately maintained and effectively used.

Human Resources Management

1. Strong leadership is a necessary condition for successful project management; other factors generally cannot compensate for weak or inappropriate leadership. Therefore, before a project is activated, serious attention must be given to recruiting and retaining strong leaders in project management positions.

a. The legitimacy, acceptance, and support of a project depend heavily on the motivation, commitment, and responsiveness of project leaders. Project leaders must be responsive not only to the needs of beneficiaries but also to those of their own staff and personnel in other organizations that can provide support or create obstacles to achieving a project's goals.

b. The degree to which projects and programs are successful in promoting institutional development largely depends on whether project managers and staff take an active role in managing and controlling the project, rather than passively leaving its implementation to technical assistance advisers and the donor organization.

c. Different types of leadership styles are appropriate to different situations and phases of a development project or program. In some situations, charismatic, visible, and dynamic leaders are most effective; in others, collegial, low-key, and participatory styles of leadership are most appropriate. Adequate means must be developed to assess leadership impacts on a project during implementation and to replace managers who are not providing appropriate leadership and direction.

d. Leadership must be developed throughout a project implementing organization, not only among top managers or

administrators. The motivation, commitment, and responsiveness of staff in pursuing development goals largely depends on the incentives offered to them to act creatively in addressing problems and exploiting opportunities. Leadership training should be given to managers at various levels of responsibility within implementing units.

2. Opportunities for participation by relevant government agencies, project staff, private organizations, and beneficiary groups in the planning and management of development projects not only leads to more successful implementation, but often makes it easier to sustain benefits after external financial and technical assistance ends.

a. Participatory planning and management procedures can create commitment and a sense of "ownership" among major "stakeholders" in development projects and programs. They can also yield important information about stakeholders' needs and desires and about the problems and opportunities with which development managers must cope.

b. Participatory management is a valuable instrument of human resources development and can help strengthen the planning, decision-making, and administrative skills of those individuals and groups that participate in development activities.

3. Training is one of the most effective means of increasing managerial capacity in project implementation and of sustaining benefits, but it must be appropriate to local needs and requirements.

a. A wide variety of training modes must be considered in project design and implementation. Informal, short-term, on-the-job, demonstrative, participatory, and formal domestic and overseas educational programs all have advantages and limitations for different groups at different times during the life of a project. Reliance on only formal overseas training may be inappropriate for a wide variety of development managers' needs.

b. Managerial and technical training must be combined if the administrative capacity in implementing organizations is to be improved over the life of a project. Personnel who are trained only in technical specializations often are not adequately prepared to deal with the managerial problems that inevitably arise in every development activity. Nor are they adequately prepared for the professional mobility and advancement that is often the result of successfully completing technical training.

c. Management training programs should extend beyond the usual exposure to formal systems, procedures, and techniques. They should also develop skills in problem-solving, policy analysis, leadership, learning processes, social and cultural assessment, organizational analysis, informal interaction, negotiation, participatory administration, and other skills that will enhance the ability of managers to cope with the variety

of factors that influence the implementation of development activities.

d. Training opportunities should be provided to those at all levels within development organizations if new behavior and skills are to be institutionalized and to beneficiary and support groups whose behavior and skills affect the implementation of development programs and projects.

e. Training programs must be sensitive to the constraints on change created by local social traditions, culture, politics, and technology in the areas where development managers work. Training that exposes development managers to new forms of behavior, values, and practices is often ineffective unless organizational changes are made in their "home agencies" to allow them to apply their newly learned attitudes and skills. Training is most effective when designed in a specific organizational context or combined with organizational development activities.

f. The impacts of training programs should be carefully monitored and evaluated to discern their effects, so that they can be quickly adapted to changing needs.

g. Training provided early in the life of development projects should be aimed at enhancing the capacity of host country personnel to take responsibility for project management and for internal training.

h. Long-term overseas training should be carefully planned to meet the needs of indigenous development organizations and carefully monitored by the donor agencies and leaders of the organizations from which the trainees come. Periodic visits and frequent correspondence by top-level managers, periodic progress reports from trainees, and assessments from institutions providing the training are all means of supervising and monitoring the training of personnel in overseas programs.

i. Provisions should be made in the design and implementation of development projects to minimize the disruption and discontinuity in implementing organizations that often result from having key staff away in long-term training.

j. Training programs should be designed to ensure that they contribute to institution building and individual professional development.

4. High turnover rates among staff and leaders seriously weaken project implementation. Stability in personnel assignments among technical assistance advisers, project staff, and host country counterparts is essential for effective project management. Financial, professional, and career mobility incentives must be designed into a project to recruit and retain good staff. Innovations such as dual technical and administrative promotion and pay tracks may be necessary to keep good technical and managerial staff.

5. Special attention must be given to providing adequate resources, facilities, and inducements to attract and retain good staff in projects located in physically remote or distant rural areas.

6.3 Conclusions

The CDIE evaluations of the agricultural development projects in Africa offer no easy answers to development management problems. But they highlight the seriousness of management deficiencies and the importance of management factors in implementing development activities. They offer propositions about management strategies that can be further tested in other evaluations and yield a long list of lessons that can help development managers make better judgments about critical management issues. These lessons offer practical guidelines that can help AID and host country governments fashion more effective institutional development and management enhancement interventions in the future.

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