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**BIFAD**

Board for International Food and Agricultural Development

## **Baseline Studies**

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**A Conceptual Model for Analysis of Current Capacities  
and Development Needs of LDC Agricultural Research,  
Education and Extension Systems.**

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BASELINE STUDIES  
A SUMMARY STATEMENT

I. Introduction

During the BIFAD's participation in AID's FY 79 annual budget and program review, it became evident that basic information relative to both current capacities and development needs of LDC national agricultural research, education and extension (REE) systems was severely limited. Yet, it is precisely this type of information which is required in order to do a reliable job of developing a long run Title XII program in strengthening REE systems in the LDCs. Equally, such information is crucial to valid agricultural sector analysis and overall development assistance programming. Consequently, the BIFAD and AID concurred on the priority need for the conduct of baseline studies of REE systems in the LDCs and that US universities be involved through Title XII with host nationals and AID missions in the conduct of these studies.

II. Baseline Studies Objectives

The Baseline Studies have three general and eight specific objectives.

General Objectives:

1. To provide host countries, AID, BIFAD and other interested entities detailed data and analyses relative to the capacity of LDC educational, research and extension institutions and national systems to provide services of the kind, quantity and quality requisite to development and sustained growth of the agricultural and rural sector.

2. To provide an objective basis for evaluating the magnitude of the institutional development task faced by the LDCs if they are to attain their agricultural and rural development objectives.
3. To provide a basis for (a) the objective identification of priority opportunities for Title XII programs in strengthening REE institutions; (b) development of a long-term strategy for an approach to bilateral assistance in this realm of development; and (c) determining the long-run resource demands on US universities and other institutions which may participate.

Specific Objectives:

1. To obtain quantitative and qualitative estimates of the capacity of LDC educational institutions to train agriculturalists and other rural development specialists at all levels -- laborers, managers, technicians, para-professionals, educators, scientists and administrators.
2. To assess the capacity of LDC research institutions to adapt existing technology or develop new technology and to develop economic and social information requisite to improved public and private decision-making and the attendant improvements in agricultural and rural resource productivity, income levels and income distribution patterns.
3. To evaluate the capacity of the LDC's formal and informal institutional structures to: (a) disseminate technical, economic, social and other relevant information in timely fashion and useful forms to farmers and others in rural areas, especially the poor majority, as well as (b) the system's capability of reaching the various other strata of public and private decision-makers in the rural and agricultural sectors.
4. To assess the effectiveness of institutionalized mechanisms for coordinating and integrating the education, research and extension activities of the system.
5. To determine the general magnitude of services which will be required of this set of institutions if agricultural and general development goals are in fact to be met in the short, medium and longer term.
6. To provide estimates of the magnitude of such gaps as might exist between the current and projected capacity of the relevant institutions and the nation's agricultural development needs for such services.

7. To indicate the levels and kinds of investments which will be required to remove such institutional constraints as may be identified.
8. To suggest appropriate means by which the host government, AID, US universities and other donors might contribute to the development of adequate agricultural education, research and extension capacity in the LDCs.

### III. Capabilities and Functions of Effective REE Systems

The fundamental goal of baseline studies is to facilitate the development of REE institutional systems in the developing countries that can respond to the relevant range of agricultural and rural development problems. Since the composition of these systems varies from country to country, the baseline study effort is specifically designed to assist individual governments to strengthen or to modify appropriately their particular system. It is recognized that there is no ideal REE system which will meet the needs of all countries. However, an effective system must have the capability to handle three major types of problems and successfully perform four major types of functions.

#### Capabilities Required:

The REE institutional system must have the capability to address three different types of problems.

First, it must be able to address long-term and enduring problems -- such as generating employment opportunities, increasing agricultural and rural resource productivity and establishing a favorable climate for economic investments.

Second, the system must be able to address short-term problems that emerge unexpectedly -- such as natural disasters, disruptions in trading relationships, political changes, outbreaks of major diseases, droughts and floods.

Finally, the REE system must be able to provide on-going services essential to the effective operation of the rural economic and social processes. That is, it must be able to provide, on a continuing basis, reliable, accurate, and relevant information on technical, social and economic conditions to decision-makers throughout the economy -- consumers, farmers, managers, administrators, ministers, etc.

Functions Required:

A system with the capabilities described must be able to perform at least four functions.

First, The system must be able to identify problems that are obstructing development and to identify opportunities for accelerating development. Such problems and opportunities occur throughout the economic system -- from producers and consumers to the highest levels of policy making. Unless this function of identifying problems and opportunities is institutionalized, numerous possibilities for advancing development go unrecognized and may never be exploited.

second function that the system must perform is to generate knowledge on how to overcome problems obstructing

development and how to exploit opportunities for accelerating development. Again, knowledge is needed throughout the system and is a prerequisite to getting on with the development process. Thus, institutionalized capacity to generate knowledge on how to resolve problems and exploit opportunities is essential.

The third function the REE system of institutions must perform is the dissemination of knowledge and information in timely and usable form. The dynamic nature of development involves a multitude of decisions. Producers, consumers and administrative officials at all levels continuously make decisions that may or may not advance development. If the goal is to advance development, and a broadly based participatory type of development is desired, then this information disseminating component of the overall REE system must receive, evaluate, put in a usable form and distribute large quantities of information on a continuous basis.

Finally, education is probably the most fundamental function that the REE system must perform. It is trained minds that make the social and economic system function effectively. Producers, consumers and officials at all levels must be appropriately trained before they can effectively contribute to the development process. Thus, an integral part of the REE system is the education function.

In short, the basic assertion underlying baseline studies is that a set of institutions that can be responsive to the multiple development needs of a particular country is a prerequisite to development. Further, that to be responsive this set of institutions must have specific and unique capabilities and be able to perform effectively essential functions.

#### IV. Baseline Study (BLS) Methodology

A BLS methodology has been developed and is designed to focus the activities of the US and LDC groups conducting the studies on attainment of the general and specific objectives of the exercise and to assure cross-country comparability of the findings. It is a generalized conceptual framework within the bounds of which empirical studies in individual countries will be conducted.

The methodology is structured to permit systematic investigation of the complex and interdependent relationships of a nation's REE system and to accommodate the diversity in existing institutional arrangements found in the developing countries. It is divided into five sections. Each of the first four sections provides the basis for proceeding to the next section. The last section is designed to identify unique or innovative elements in the REE system that might be used in other contexts.

Section 1 is designed to provide background essential to objective analysis of the REE system. It is a summary of the country setting for agricultural and rural development, research, education and extension. The methodology is designed to identify the relevant subdivisions of the total REE system for which manpower, financial and other data will be collected. Hence, this section provides the framework for analysis of the entire REE system including the components to be included in each subdivision. Also, this section of the methodology is designed to provide a framework for analyzing the critical organizational determinants of an effective REE system. The characteristics to be considered are:

1. Institutional -- client group linkages.
2. Incentives for high performance on the part of individuals employed in the REE system.
3. The critical mass needed to maintain an effective program.
4. Doctrine/philosophy of, and commitment to, public service for agricultural development.
5. Capacity for self sustaining institutional growth and development.
6. Knowledge base and its use for effective institutional performance.
7. Leadership-administration capacity and training needs.
8. Organization-opportunities and obstacles.

In short, this section is designed to guide the determination of the current resource levels and functional capacity of the REE system in research, education and extension and to assess

the critical organizational characteristics of the system.

Section II is designed to quantify the human, capital and other resources available to the several subdivisions identified in Section I. Since the sum of all subdivisions constitutes the entire REE system, this section will quantify the resources available in the total REE system. This quantification will include current manpower levels, annual operating costs, investments in physical facilities, past growth in REE system resources and anticipated growth in resources allocated to the REE system. In addition, this section will include an evaluation of the critical organizational determinants of an effective REE system. This combination of information will provide a REE system benchmark (baseline) to be used in Section IV for developing recommendations for strengthening the overall system.

Section III of the methodology is designed to identify the major developmental constraints of the rural sector that a strengthened REE system could effectively address. This part of the conceptual model has three explicit purposes:

1. To specify the relationship between client groups and types of agricultural/rural economic activity.
2. To specify the relationship between types of agricultural/rural economic activity and levels and kinds of efforts by the REE system.
3. To develop a rank order of major developmental constraints by client groups and types of agricultural/rural economic activity.

The results of this part of the analysis will provide a basis for comparing the identified rank order of developmental constraints with existing resources (from Section II) devoted to the REE system. Also, it will provide a basis for the following analysis (Section IV) designed to develop a prioritized list of recommendations for strengthening the REE system.

Section IV of the methodology identifies procedures to be used in an analysis of the problem areas identified in Section III as a basis for recommendations for strengthening the overall REE system. The results of this part of the baseline study are to provide a prioritized list for:

1. Problem areas that could be effectively addressed by strengthening the REE system.
2. Recommendations for strengthening the REE system.

The findings of this part of the baseline study will provide information on REE strengthening needs to:

1. The host government for use in developing national policies and programs to strengthen the REE system.
2. US AID Mission for use in developing US technical assistance projects and programs.
3. Other donors for use in developing their assistance program as they relate to strengthening the host governments REE system.

Finally, the aggregated results of this part of the baseline study will serve as an objective basis for the BIFAD and AID/Washington to develop a global program for strengthening

REE systems in the developing countries. This global program will provide AID with a justification for Administration and Congressional request for program support in this arena.

Section V of the methodology specifies the procedures to be used to identify unique or innovative elements of the REE system. The objectives of explicitly identifying these elements are:

1. To assist the host government and outside donors to build upon successful dimensions of the REE system.
2. To provide other LDC governments with knowledge of particular elements of an REE system that have proven effective in a particular LDC setting.

This analysis of the unique and innovative elements of the REE system will further provide a basis for developing recommendations for strengthening the REE system.

#### V. Execution of a Baseline Study

There are several requirements that must be fulfilled before a baseline study can be effectively executed.

First, the decision to undertake a baseline study must be based on a thorough understanding on the part of host government and US AID officials of the role and importance of the REE system in the development process. This suggests that it may be appropriate for the AID Mission to request the assistance of a short-term consultant to work with host

country officials and the Mission to evaluate the need for a baseline study.

Second, effective procedures for organizing and directing prestudy activities must be developed. Considering the complexity of the study, and the need to adapt it to unique institutional and other circumstances in each country, the study must involve host country officials in the REE system. Moreover, in many cases the use of a host country national(s) to develop a data base for cooperative use in the study would be desirable. Development of this data base would probably require one or two middle level technicians working for one to two months to pull together existing information on the REE system. Ideally, these technicians would work under the direction of a host government official that would be participating in the baseline study.

Finally, the BLS contractor must be trained in the use of the BLS methodology. The BIFAD staff and AID/Washington personnel are prepared to conduct workshops on the use of this methodology. These will be conducted just prior to the BLS field work and will incorporate an analysis of all available information on the LDC research, education and extension system.

The baseline study methodology is currently being organized into a manual for use by US and host national research

teams. This manual will direct the activities of the baseline study contractor so as to accomplish the objectives of the baseline study exercise.

#### VI. Effective Use of Baseline Study Results

The baseline study exercise is designed to identify a range of problems constraining the effective performance of the REE system in the developing country. This means that the number and magnitude of problems identified will tend to exceed the response capabilities of any one donor. Thus, the most important result of the baseline study exercise may be one of assisting the host government to undertake internal reforms to strengthen the REE system. Some of these will probably require outside assistance. Thus, the US AID Mission must follow up with the host government on the appropriate role of US development assistance. This follow-up could involve assisting the host government to set priorities on its own internal reforms as well as identifying the US role in the government's efforts. Finally, it is anticipated that this entire follow-through exercise will lead to a division of responsibility among the host government, US development assistance efforts and the development assistance efforts of other donors for strengthening the host government's REE system.