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# Regional Impact Indicators for Agribusiness Projects in Asia

*RAP Analytical Report No. 1*



**Regional Agribusiness Project**  
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# **Regional Impact Indicators for Agribusiness Projects in Asia**

by

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## EXECUTIVE SUMMARY

This paper reports on preliminary activities in the development of a monitoring and evaluation approach to measure the impact of agribusiness projects sponsored by the U.S. Agency for International Development (USAID) in Asia. Measurement of agribusiness impact is important to the Asia Bureau as it seeks to improve its programs and validate continued funding for agribusiness activity. Although the indicators presented here were developed for the Regional Agribusiness Project (RAP), they are not indicators for evaluating the success of RAP. They are intended solely as indicators of the regional impact of agribusiness projects in Asia.

Before attempting to define indicators to measure the regional impact of Asian agribusiness projects, the author reviewed several relevant documents:

- The Center for Development Information and Evaluation (CDIE) agribusiness assessment design proposal and actual agribusiness assessments, to identify key indicators used in measuring the impact of agribusiness;
- Program Performance Information for Strategic Management (PRISM) indicators developed by USAID Missions to measure strategic objectives, to determine which indicators may be appropriate for measuring the impact of agribusiness projects at the regional level;
- USAID's strategy papers and implementation guidelines for the four priority areas — population and health, economic growth, environment, and democracy — defined as critical to sustainable development, to ensure that, to the extent possible, indicators are relevant to all four areas; and
- USAID Asian agribusiness project documentation including project papers, logical frameworks, and monitoring and evaluation plans, to determine what indicators are currently used to define impact.

Review of project documentation revealed a wide variety of goals and purposes for agribusiness projects in Asia. This wide variety of goals and purposes, even for projects with the same project focus, arises because these projects were not designed specifically to achieve broader Asian strategic objectives, including agribusiness goals.

Even more confusing than the variety of goals and purposes of the projects is the wide array of indicators chosen to measure impact — even the same kind of impact. For example, projects measuring increased income do so with median household income, increase in income from diversified cropping over paddy income, farm household income, income resulting from new jobs, and business's net income. Although these are all valid measures of income, they cannot be aggregated in any meaningful way. The same problem exists in attempting to measure employment and jobs.

This review of indicators led quickly to the conclusion that measurement of the impact of Asian agribusiness projects at the regional level cannot occur with simple aggregation of existing data; new indicators need to be developed.

Several guidelines that are critical to the definition of appropriate indicators and shaped the development of regional indicators in this paper are presented below.

- **Aggregation to region.** First and foremost, these measures must permit aggregation to the regional level.
- **Isolation of impact.** To maximize the usefulness to USAID in documenting its programmatic successes, and to isolate positive impacts of USAID investments in agribusiness projects and thus facilitate future funding for such projects, impacts must be attributable to USAID project inputs spent to promote agribusiness activities.
- **Impact, not outputs.** Again, to maximize usefulness to USAID, indicators must truly measure impact, not outputs.
- **Gender specificity.** To the extent possible, indicators must reflect development impacts separately for men and women.
- **Levels of impact.** Although not all projects will necessarily report on all indicators, the range of indicators must reflect projects designed to serve sectors, enterprises, and individuals.
- **USAID's four priority areas.** Although agribusiness projects target economic growth, which is one of USAID's priority areas, indicators for agribusiness projects must be relevant to measurement of impact in the other three areas designated as critical to sustainable development: democracy, population and health, and the environment. USAID has emphasized that projects will be measured by asking how projects affect the way people live.
- **Measurement.** To the extent possible, indicators of agribusiness impact should be quantifiable, objectively verifiable, unambiguous, and measurable with routine data collected as part of daily project activities.

These guidelines gave rise to the following indicators:

1. Increase in annual income generated by jobs in enterprises assisted by the project;
2. Net increase in the number of jobs in enterprises assisted by the project;
3. Number of new jobs in agribusiness enterprises assisted by the project with wages above the prevailing minimum agricultural wage;
4. Number of new enterprises established and continuing to operate for at least one year as a result of project assistance;
5. Number of enterprises expanded as a result of project assistance;
6. Increase in the export sales of agribusiness products from private sector enterprises assisted by the project;
7. Increase in the domestic sales of agribusiness products from private sector enterprises assisted by the project;
8. Increase in foreign private sector investment in agribusiness enterprises assisted by the project;

9. Increase in domestic private sector investment in agribusiness enterprises assisted by the project;
10. Number of cooperative agreements entered into between foreign private sector enterprises and enterprises assisted by the project;
11. Increase in foreign private sector investment in agribusiness enterprises;
12. Increase in domestic private sector investment in agribusiness enterprises;
13. Increase in value added production in agribusiness enterprises assisted by the project;
14. Increase in the number of agribusiness enterprises that process value added products; and
15. Number of enterprises using environmentally sound technologies as a result of project assistance.

To complete the designation of indicators two steps are needed. First, the monitoring and evaluation parameters for the Asian agribusiness projects must be completed. Second, once the Asia Bureau and RAP agree on the set of indicators they wish to use in the framework, both the Missions and the projects should be given the opportunity to comment on the proposed indicators and offer suggestions on the most appropriate ways to collect the necessary data.

## INTRODUCTION

In late 1993, the U.S. Agency for International Development (USAID) developed a new strategy for sustainable development, a strategy that will guide programmatic and budgetary decisions in the years to come. That strategy is summarized succinctly in the following paragraph taken from the USAID Strategy Papers of October 1993:

Sustainable development is characterized by economic and social growth that does not exhaust the resources of a host country; that does not damage the economic, cultural, or natural environment; that creates many incomes and chains of enterprises; and that builds indigenous institutions that involve and empower the citizenry. Many factors determine whether development is sustainable, but four issues are fundamental: population and health, economic growth, environment, and democracy. Development is "sustainable" when it permanently enhances the capacity of a society to improve the quality of life. Sustainable development enlarges the range of freedom and opportunity, not only day to day but generation to generation.<sup>1</sup>

Guidelines accompanying the strategy indicate that all strategic plans and programs are expected to identify the results sought, as well as the benchmarks to assess progress. Progress on these benchmarks will be used to assess the success of USAID programs and to allocate scarce budgetary resources. A finding of successful implementation will depend heavily on the contributions the programs make to improvements in the four priority areas.<sup>2</sup>

In line with these new directives, a key task of the Regional Agribusiness Project (RAP) is to help develop a monitoring and evaluation approach that can be used to measure the impact of agribusiness projects across the Asian region.<sup>3</sup> Measurement of agribusiness impact is important to USAID's Asia Bureau, as it seeks to improve its programs and continue funding for agribusiness.

RAP will focus on the development of a monitoring and evaluation methodology or framework, identification of key indicators, specification of data sources to quantify and measure progress on these indicators, and provision of assistance to missions or projects in the adoption and use of the framework.

Development of the monitoring and evaluation approach will involve a series of steps. First, a baseline survey of USAID-funded Asian agribusiness projects will identify performance indicators currently used to measure impact, investigate similarities and differences in these performance indicators

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<sup>1</sup>USAID Strategy Papers, LPA Revision, October 5, 1993, p. 3.

<sup>2</sup>See Implementation Guidelines: Overview, Draft #8, January 14, 1994.

<sup>3</sup>RAP defines agribusiness to include all business related to the production, processing, and marketing of agricultural products. Agribusiness is not defined by size. Large, medium, and microenterprises could be agribusiness enterprises, the determining factor being the actual activity of the business and its relation to agriculture.

as they relate to goals and purposes, and propose a set of key indicators that can measure the impact of agribusiness projects at the regional level.<sup>4</sup>

Second, with comments and reactions from the Asia USAID Missions, the set of indicators and a plan to collect data for those indicators will be finalized. The third step will involve actual data collection in accord with this plan, and, finally, a system will be established to continue the process for regional reporting.

The purpose of this paper is to report on the activities of the first step of the monitoring and evaluation effort. The first section provides an historical perspective of USAID's support for agribusiness, and contains a review of several sets of documents relevant to the task of developing regional impact indicators for agribusiness projects in Asia. The next section outlines the methodology used in the development of the indicators and provides a discussion of the indicators proposed; conclusions and next steps follow.

Although the indicators presented in this paper were developed as an activity of RAP, it is important to note at the outset that they are not indicators for evaluating the success of RAP. They are intended to serve solely as indicators of the regional impact of agribusiness projects in Asia.

### **BRIEF HISTORY OF USAID SUPPORT FOR AGRIBUSINESS PROJECTS**

USAID's support for private sector agribusiness development has evolved gradually. During the 1960s and 1970s, agribusiness support was only a small portion of total agriculture investment. With the focus on increasing farm production, agribusiness investment served as tangential support in provision of agricultural inputs, marketing support, or research. In the 1980s, because of the success achieved in increasing agricultural production, the failure of governmental agencies and parastatals to function as efficient providers of agricultural support, and a philosophy that supported open markets, USAID began to shift toward direct support of private sector agribusiness development.<sup>5</sup>

Since the 1980s USAID has funded two types of agribusiness projects:

- Projects that support the growth of private sector agribusinesses or help privatize parastatals in the agricultural sector; and
- Projects that support development of policy reforms to provide an appropriate environment for the development of agribusiness.

In Asia, early USAID support of agriculture focused on research and extension programs. Building on the remarkable successes of these programs, the Asia/Near East Bureau developed a Food

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<sup>4</sup>Throughout this paper, the terms "goal," "purpose," "outputs," "inputs," "impacts," and "indicators" are used. These terms are defined in Annex D.

<sup>5</sup>See "CDIE Assessment of A.I.D. Agribusiness Programs Design Proposal," Center for Development Information and Evaluation, Washington, D.C., March 1993, for a more complete description of the development of USAID's support for agribusiness projects.

Systems Strategy for Growth in the 1990s, which defines the development objective of expanding demand-driven agribusiness as a means to increase income and employment.<sup>6</sup> Within this strategy, USAID funding for agribusiness projects is grouped into five types of interventions:

- Organizational and institutional strengthening;
- Enterprise development;
- Intermediation for market development;
- Privatization of marketing and input supply parastatals; and
- Enabling the environment for private sector agribusiness.<sup>7</sup>

### **REVIEW OF RELEVANT DOCUMENTATION ON IMPACT INDICATORS**

Several relevant sets of documents were reviewed prior to this attempt to define indicators to measure the regional impact of Asian agribusiness projects. They included:

- The Center for Development Information and Evaluation (CDIE) agribusiness assessment design proposal and actual agribusiness assessments — to identify key indicators used in measuring the impact of agribusiness;
- Program Performance Information for Strategic Management (PRISM) indicators developed to measure strategic objectives at the Missions — to determine which indicators may be appropriate for measuring the impact of agribusiness projects at the regional level;
- USAID's strategy papers and implementation guidelines for the four priority areas defined as critical to sustainable development — to ensure that, to the extent possible, indicators would be relevant to all areas; and
- USAID Asian agribusiness project documentation including project papers, logical frameworks, or monitoring and evaluation plans — to determine what indicators are currently used to define impact.

#### **CDIE Assessments of USAID Agribusiness Programs**

In 1993, CDIE began a worldwide assessment of USAID agribusiness programs. The center's design proposal and the subsequent assessments of agribusiness projects in Asia were reviewed to

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<sup>6</sup>Tbid., p. 13.

<sup>7</sup>Tbid., p. 16.

understand their approach to measuring impact and to assess their relevance to the present task of identifying regional agribusiness impact indicators for Asia.

### **Definition of Agribusiness**

CDIE first established a definition of the term "agribusiness" that served to distinguish the agribusiness projects they would examine. For their purposes, they defined agribusiness as:

. . . [T]hose private sector firms that supply agricultural inputs (seeds, fertilizers, pesticides, insecticides, tools and machinery) and/or collect, transport, process, transform or market agricultural produce. The firms engaged in agricultural production are excluded except when processing and marketing functions are vertically integrated as is the case with 'contract' and/or 'commercial farming' of high value crops.<sup>8</sup>

This definition closely parallels that used by RAP except for the specific exclusion of the actual production process. Therefore, the indicators chosen by CDIE for its global agribusiness assessment should be relevant to the selection of indicators for measuring regional impact.

### **Measuring the Effects of Agribusiness Projects**

The CDIE assessment focuses only on projects designed and implemented to assist and promote agribusiness enterprises directly. Policy reform projects were excluded for three reasons: constraint of time and resources; the fact that the effects of policy reform projects are not visible for a considerable time after project intervention; and the necessity of long-term time series data, which have not been systematically gathered during the projects, and which are difficult or impossible to reconstruct after the fact.<sup>9</sup>

The CDIE agribusiness assessment addresses the issues of design and performance of agribusiness projects and programs. The development under RAP of impact indicators for Asian agribusiness projects is limited in scope to measuring the performance (or impact) of agribusiness projects. Therefore, only the CDIE assessment design relative to the measurement of project performance will be delineated here.

CDIE identified five factors appropriate to assessment of the effects of agribusiness on economic development:

- Growth and improved performance of existing businesses;
- Growth of new enterprises;
- Impact on employment in the agribusiness sector;
- Estimated value of production; and

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<sup>8</sup>Ibid, p. 4.

<sup>9</sup>Ibid., p. 16.

- Estimated value of exports.

CDIE assessed Asian agribusiness projects in Thailand, Sri Lanka, and Bangladesh. At the time of this review, these assessments were ongoing and the results were in draft form. However, while the results and conclusions of those evaluations may still be under review and discussion, the methodology, particularly in the case of Sri Lanka, where five projects were reviewed, can serve as guidance for the formulation of impact indicators. Of particular interest to the RAP task is the experience of the CDIE assessors in aggregating data from the five projects to draw conclusions about the USAID agribusiness program in Sri Lanka.

The assessment in Sri Lanka focused on development in the Mahaweli, and the social and economic impacts of agribusiness projects. The economic impact was assessed by considering employment, income, and the growth of new enterprises. Important points for measuring impact of agribusiness projects that may be transferable to the RAP exercise are the categories of employment the CDIE assessment team included and the definition of the types of employment that may result from agribusiness development. Employment was examined for five categories of agribusiness enterprises: large-, medium-, and micro-sized enterprises, commercial farms, and farmer organizations. Four different types of employment generation were defined:

- Employment in agribusiness enterprises and commercial farms;
- Full and part-time employment on outgrower/contract producers' farms;
- Employment in related industries through backward or forward linkages; and
- Employment generated by the multiplier effects in the economy.<sup>10</sup>

An important question in attempting to determine impact at the regional level is: What degree of success did the CDIE assessment team achieve in aggregating their data? Although the team was successful in identifying social and economic impact of agribusiness development in the Mahaweli, they did not attempt to aggregate data for Sri Lanka as a whole, and review of their data and data sources illustrates the problems that will likely be encountered as RAP attempts to build a monitoring and evaluation framework to cover a region. That is, comparable data are not available for all projects. It is also noteworthy that many caveats were included as the indicators were evaluated with real data. This "micro" analysis is important to the CDIE assessment of Sri Lanka, but it will not always be possible to include a "micro" analysis when data are aggregated to a region. Therefore, it will be critical to choose indicators that can be measured objectively and unambiguously.

### **Strategic Objectives and Performance Indicators of PRISM**

To gain greater perspective on how missions are aggregating information to report on program effectiveness, a review was made of mission objectives, outcomes, indicators, and performance information for programs in the economic growth area. These data were available for four countries in Asia where USAID is operating agribusiness projects: Sri Lanka, the Philippines, Bangladesh, and Nepal.

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<sup>10</sup>Kumar, Lieberman, and Miller, "An Assessment of Sri Lanka's Agribusiness Program," draft report, CDIE, Chapter 3, p. 1.

Indonesia and India are currently involved in PRISM exercises so their objectives and indicators are not yet available. Table A-1 in Annex A lists these data.

Unfortunately for the purposes of this exercise, the PRISM indicators are of limited use for several reasons:

- PRISM indicators reflect strategic objectives of Missions, and these objectives are not the same across Missions.
- Because the strategic objectives are not comparable across Missions, the performance indicators used to measure progress toward those objectives are also not comparable and no aggregation is feasible.
- Although it would conceivably be possible for a Mission to have a strategic objective directly and solely related to agribusiness, none of those examined in Asia do so; rather, they reflect economic growth in total.
- Without strategic objectives related solely to agribusiness, performance indicators do not address agribusiness except in rare cases (only four indicators in Table A-1 directly measure agribusiness), and not across all Missions.

The PRISM objectives and indicators listed in Table A-1 do, however, provide useful insight as the Asia Bureau develops agribusiness strategic objectives and performance indicators. Review of the data from Mission exercises illustrates clearly the different approaches that can be taken in monitoring program performance. Sri Lanka has 3 performance indicators with 4 program outcomes and indicators to monitor its economic growth strategic objective. Nepal, on the other hand, felt the need to define 6 performance indicators, 6 program outcomes, and 31 program indicators to do the same.

### **USAID'S Strategy for Sustainable Development**

USAID's new strategy for sustainable development has been mentioned above. At this point, prior to developing indicators to measure the regional impact of agribusiness projects, it is appropriate to examine this new strategy in more detail and to note the links between and among the four priority areas to ensure that indicators developed will contribute toward measurement of accomplishments in those four areas.

USAID has specified that all projects and programs must address sustainable development; and further that sustainable development requires participation. USAID has asserted that by ensuring full participation, local involvement, and empowerment in everything it does, the agency can demonstrate that democratic governance, cleaner environments, healthier people, and economic growth are related and mutually reinforcing.<sup>11</sup> Further, all future USAID support will go toward these four priority areas, and the results of this support will be measured by asking how projects actually affect the way people live. Specifically:

Does the program produce measurable effects? Does it lower population growth rates, create jobs and incomes, enhance public health, improve air and water purity, slow the

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<sup>11</sup>USAID Strategy Papers, 1993, p. 6.

loss of soil and soil fertility, arrest the loss of biodiversity, create indigenous democratic institutions?<sup>12</sup>

Agribusiness projects fit into this paradigm in the economic growth area. First and foremost, agribusiness projects are economic growth projects. Successful agribusiness projects increase income, generate employment, and develop and expand enterprises, directly through project technical assistance at the firm or individual level or indirectly as a result of sectoral policy reform.

As agents of economic growth, agribusiness projects contribute to and are linked to accomplishments in the three other focus areas as well. Equitable and broad-based economic growth resulting from agribusiness development contributes to political stability and the growth of democracy. But economic growth cannot be sustained if the natural resources to fuel the growth are depleted, and environmental awareness and stewardship cannot exist in the midst of widespread and pervasive poverty. Agribusiness employment and enterprise development increase incomes and alleviate poverty, but people cannot participate in the economy if they are sick and the most direct way to improve people's health is by increasing their incomes through employment.<sup>13</sup>

This paradigm illustrates clearly that the major indicators which would normally be used to measure the success of agribusiness projects are the same measures that would reflect impact in all four areas: increased incomes from employment and enterprise development and expansion. The figure on the next page illustrates the relationships between the four priority areas from an agribusiness perspective.

### **USAID Asian Agribusiness Project Documentation**

Thirteen USAID Asian agribusiness projects were included in this analysis. These projects and the country in which they are or were implemented are outlined in Table 1.

The first step in building a set of indicators to measure the regional impact of agribusiness projects is to examine what indicators the projects are using individually to measure impact, given their various goals and purposes. Annex B contains a table with monitoring and evaluation parameters for most of these Asian agribusiness projects, listing the project goal, purpose, expected impacts, impact indicators, and data sources. Expected outputs and output indicators are also included (for projects where these data are available) because of the frequent mix-up in terminology between impact and output.<sup>14</sup> Including both the outputs and their indicators serves to give the reader a clearer picture of what the project actually does. Impacts and impact indicators, which are often stated in loftier terms, sometimes make actual project activities difficult to discern.

Table C-1 in Annex C serves as a first step in the consolidation of these separate tables. It contains a comparison of the goals, purposes, and foci of each of the Asian agribusiness projects. As evident with only a cursory review, there are a wide variety of projects with an agribusiness focus, or

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<sup>12</sup>Ibid., p. 10.

<sup>13</sup>These relationships were taken from the USAID Strategy Papers, *ibid.* See the USAID Strategy Paper for each of the priority areas for a complete discussion of the relationships.

<sup>14</sup>See Annex D for definitions of impact and output.

with agribusiness components. Projects also focus on sectors, enterprises, and individuals, and some projects indicate increased income as a goal, while others define it as a primary purpose.

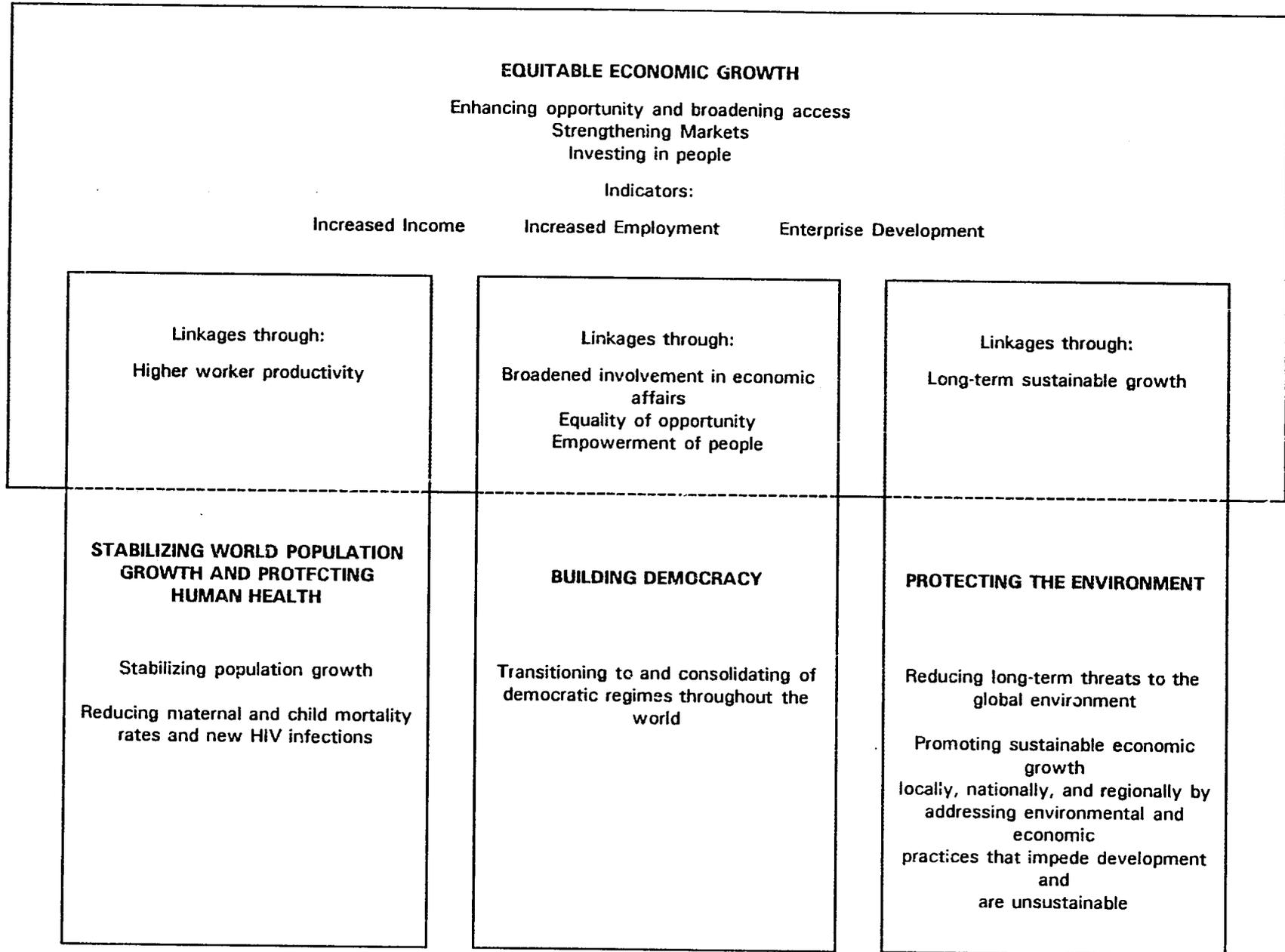
Part of this wide variety of goals and purposes is because some of the projects included here as agribusiness projects were not necessarily designed solely as such; rather, they were projects designed to address development on a wide spectrum of levels. For example, both the Sri Lanka MARD and Nepal RDP projects are really integrated rural development projects in which agribusiness plays an important role in building the farm-to-market channel. But the broader purpose of both projects is to increase the income of individuals through integrated development of a geographic area. Only in the 1990s, with the Food Systems Strategy for Growth that defines demand-driven agribusiness as a means to increasing income and employment, has there been a real structure for the design of agribusiness projects. And, notably, most of the current agribusiness projects were designed prior to 1990.

TABLE 1  
USAID ASIAN AGRIBUSINESS PROJECTS

Country	Project Name	Status
Sri Lanka	Mahaweli Agriculture and Rural Development Project (MARD)	Ongoing
	Mahaweli Enterprise Development (MED)	Ongoing
	Agro-Enterprise Project (AgEnt)	Ongoing
Nepal	Rapti Development Project (RDP)	Ongoing
	Agroenterprise and Technology Systems Project (ATS)	Ongoing
	Market Access for Rural Development (MARD)	Under design
Philippines	Agribusiness Systems Assistance Program (ASAP)	Ongoing
Bangladesh	Fertilizer Distribution Improvement Project (FDI-II)	Completed
	Agribusiness Trade and Development Project (ATDP)	Design completed
India	Agricultural Commercialization and Enterprise Project (ACE)	Ongoing
Indonesia	Agribusiness Development Project (ADP)	Ongoing
South Seas Regional	Commercial Agricultural Development (CAD)	Closing down
Regional	Regional Technical Support Project	Just begun

FIGURE 1

USAID'S STRATEGY FOR SUSTAINABLE DEVELOPMENT  
AND ITS RELEVANCE TO AGRIBUSINESS PROJECTS



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Table C-2 in Annex C provides a second consolidation of the monitoring and evaluation parameters by initial grouping of indicators into categories, which are listed below:

- Income;
- Employment and jobs;
- Enterprise development and expansion;
- Sales and exports;
- New and improved technologies;
- Investment;
- Production, productivity, and value added; and
- Policy reform.

Even more confusing than the variety of goals and purposes of the projects is the wide array of indicators chosen to measure impact — even the same kind of impact. For example, five projects have indicators to measure increased income, but the measures of that income include median household income, increase in income from diversified cropping over paddy income, farm household income, income resulting from new jobs, and net income of the business. Although these are all valid measures of income, they cannot be aggregated in any meaningful way. The same problem exists in attempting to measure employment and jobs. Four projects measure impact in employment and jobs, but the indicators chosen to reflect them include four disparate measures: on-farm and off-farm jobs in assisted agribusinesses; new jobs in assisted enterprises; increased employment in agribusinesses as a whole; and net increases in jobs in small, medium-sized, and large enterprises in the Mahaweli area.

A careful review of the other impacts expected or indicators specified in Table C-2 reveals that this phenomenon is true for each indicator group. This variety in actual indicators shows that the task of choosing indicators to measure impact at the regional level must be broken down into two steps. First, the type or category of indicators appropriate for agribusiness must be specified, and then the actual measurement must be defined to allow aggregation to the regional level.

## INDICATORS FOR ASIAN AGRIBUSINESS PROJECTS

The current disparity in indicators for measuring impact has been documented in the previous section. This disparity leads quickly to the conclusion that measurement of the impact of Asian agribusiness projects at the regional level cannot occur with simple aggregation of existing data. Instead, new indicators will need to be developed. Unfortunately, the Asia Bureau has not yet defined a regional agribusiness strategy. It may be premature to define indicators to measure impact prior to defining the objectives those indicators are to measure. However, it is possible at this point to suggest an appropriate set of indicators that may prove useful in helping to define strategic objectives, and from which the Asia Bureau can choose once those objectives have been defined.

### GUIDELINES FOR DEVELOPMENT OF INDICATORS

Before beginning to look at possible indicators, it is important to note several key points or guidelines that are critical to the definition of appropriate indicators and that were used in shaping the proposed indicators presented in this paper.

- **Aggregation to region.** First and foremost, indicators must permit aggregation to the regional level. The Asia Bureau and RAP are defining impact of agribusiness projects for Asia. It is important to keep this fact in mind for it requires construction of an indicator in a different manner than if, for example, the indicators were not to be aggregated across a region, but used to compare countries to one another.
- **Isolation of impact.** To maximize the usefulness to USAID in documenting its programmatic successes and to isolate impacts attributable to its interventions and thus ensure continued funding for agribusiness projects, impacts must be attributable to specific USAID project inputs spent to promote agribusiness activities. Indicators that include wording such as "assisted by the project" translate into "as a result of USAID funding for agribusiness" when aggregated to the regional level.
- **Impact, not outputs.** Again, to maximize usefulness to USAID, indicators must truly measure impact, not outputs. According to the USAID Strategy Papers, results will be measured by asking how projects actually affect the way people live.<sup>15</sup> Thus, project activities cannot in and of themselves serve as measures of impact. It is the results of those activities that truly define impact.
- **Gender specificity.** To the extent possible, indicators must reflect development impacts separately for men and women. It is not adequate to be gender neutral. USAID has stressed the necessity of demonstrating the impact of agribusiness projects for women.
- **Levels of impact.** Although not all projects will necessarily report on all indicators, the range of indicators must reflect projects designed to serve all three levels: sector, enterprise, and individual.

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<sup>15</sup>USAID Strategy Papers, 1993, p. 9.

- **USAID's four priority areas.** USAID has indicated clearly that its strategy for sustainable development will be carried out in four priority areas: economic growth, democracy, population and health, and the environment. Indicators for agribusiness projects must be relevant to measurement of impact in these four areas.
- **Measurement.** To the extent possible, indicators of agribusiness impact should be quantifiable, objectively verifiable, unambiguous, and measurable with routine data collected as part of daily project activities and not reliant on extensive surveys or other costly data collection methods.

## INDICATOR CATEGORIES

The guidelines noted above were used to group the impact indicators developed for the Asian agribusiness projects; these indicators fall into the following categories:

- Income;
- Employment and jobs;
- Enterprise development and expansion;
- Sales;
- Investment;
- Value added; and
- Protecting the environment.

Two categories were dropped from the original list compiled from current project use: new or improved technologies and policy reform. Introduction of new or improved technologies is used as an indicator of impact for three projects: Sri Lanka's AgEnt and MARD, and Nepal's RDP. But introduction of new technologies does not allow measurement of how USAID funding affects the way people live. Only the results of those new technologies, such as increased income or employment, will truly reflect impact. Therefore, for purposes of this exercise, introduction of new technologies is considered a project output, not an impact.

Policy reform indicators are also not included in the proposed set of indicators for Asian agribusiness projects, for two reasons. First, as noted in the CDIE Design Proposal, the impact of policy reform is extremely difficult to measure at all, and most certainly so during the life of, or soon after, a project. Second, the indicators currently used in the policy reform category by the Philippines ASAP, Sri Lanka MED, and Indonesia ADP projects, which can actually be measured during the life of the project or soon thereafter, are outputs, not impacts: in other words, they do not indicate the results of policy reform on people's lives, but rather only that policy reform occurred. Therefore, it was decided to let the proposed indicators of impact reflect the results of policy reform, and to drop policy reform as a separate indicator category.

Finally, rather than combine environmental measurement with other categories and indicators, a separate category was included to reflect environmental impact.

## **PROPOSED INDICATORS**

The indicators that were developed are presented by category in the following sections. Included for each indicator is the definition, discussion, and justification for why the indicator was chosen, difficulties involved in measurement, gender sensitivity, data sources, and analysis of current project use. These proposed indicators for Asian agribusiness projects are summarized in Table C-3 in Annex C.

### **Income**

#### ***1. Increase in annual income generated by jobs in enterprises assisted by the project***

Increased income is probably the most important measure of sustainable development. It reflects directly the economic growth of a country, it leads directly to improvement in the way people live, and it has tremendous impacts on other aspects of development. One of the most effective ways to improve health is to bring about rapid economic growth, which leads to increased income. Also, it is much more difficult for people to care about and respect the environment when they are at or below the poverty level in income. Increased income changes this perspective.

But income is also one of the most difficult things to measure and to attribute directly to project interventions. Household income in a country, or even in a targeted project area, is difficult to measure accurately, and it is nearly impossible to indicate that an increase in income would be attributable solely to a USAID agribusiness project. Profits of agribusiness enterprises are problematic measurements because of the various ways owners pay themselves salaries. Probably the most accurate measure of income resulting from project interventions is income from jobs in enterprises assisted by the project. Measurement can be obtained directly from enterprises in return for project assistance. In addition, income measured in this manner can easily be disaggregated by gender, unlike many other income measures. Care will need to be taken when setting up the indicator data collection methodology to specify exactly which employee income should be included or excluded. The major problem with measuring income in this way is that only one Asian agribusiness project, Indonesia ADP, currently measures income resulting from jobs.

### **Employment**

#### ***2. Net increase in the number of jobs in enterprises assisted by the project***

#### ***3. Number of new jobs in agribusiness enterprises assisted by the project with wages above the prevailing minimum agricultural wage***

Employment gives people income; increased employment increases income in a sector, area, country, or region. As such, employment provides a companion indicator to income, and it provides similar effects in improving health and the environment. In addition, however, it is important in empowering people, broadening involvement in economic affairs, increasing equality of opportunity, and increasing participation in society. Therefore, it is directly related to democracy. Increases in employment in enterprises assisted by the project are easily measured, and can be disaggregated by gender. The only difficulty is in ensuring that the measurement reflects net change.

But taken alone, increase in the number of jobs is not a qualitative measure. What kind of jobs are these? What if new technology in an enterprise results in replacing labor at a lower skill level? To compensate for this, the second employment indicator attempts to measure the quality of new jobs to ensure that the increases in employment defined will result in increased income.

These two indicators may, however, understate the impact of agribusiness projects because they do not take into account spin-off jobs, or the jobs created through forward and backward linkages. With accurate measurement of the numbers of jobs in project-assisted enterprises, proxy measures could be developed to estimate project-related job creation.

Most of the current Asian agribusiness projects are measuring their impact in number of new jobs. Therefore, these employment indicators should not be difficult to implement.

### **Enterprise Development and Expansion**

***4. Number of new enterprises established and continuing to operate for at least one year as a result of project assistance***

***5. Number of enterprises expanded as a result of project assistance***

New enterprises generate employment, which in turn generates income. The importance of employment and income on health and the environment has been noted above. Enterprise generation is also very important to increasing democracy because it, like employment, broadens the base of participation and increases individual choices. The major problem with tracking enterprise development is ensuring that the new enterprises are commercially viable before they are counted as successes. The indicator counting new enterprises establishes "operation for at least one year" as an easy way to approximate success. A second problem is ensuring that these new and expanded enterprises are not degrading the environment. Project personnel assisting enterprises as part of agribusiness projects will have to ensure that they are using environmentally sound production technologies by completing Environmental Impact Assessments before project resources are expended to aid in enterprise development. Once environmental soundness is assured, measurement of this indicator is easy and straightforward and can be completed directly from project records.

Enterprise expansion is slightly more difficult. For purposes of the Asian agribusiness impact measurement, expansion could be defined as: New or diversified product lines, increased volume measured in raw material purchased or processed, or increased volume of sales.

Both enterprise development and expansion indicators can be segregated by the gender of the owner. Many of the current Asian agribusiness projects are already using enterprise development and expansion as an indicator of impact.

## Sales

6. *Increase in the export sales of agribusiness products from private sector enterprises assisted by the project*
7. *Increase in the domestic sales of agribusiness products from private sector enterprises assisted by the project*

Although these two indicators cannot be separated meaningfully by gender, they add to the measurement of agribusiness project impact in two ways. First, they serve as indicators of successful establishment or expansion of agribusiness enterprises. Second, they can serve as proxies for projects that address the policy enabling environment of agribusiness. The major problems with measuring sales are the influence of inflation, price volatility, and exchange rates, so care will have to be taken in developing standardized values. Both export and domestic sales are available from the records of enterprises assisted by the projects. Many of the current agribusiness projects are using export and domestic sales as indicators of impact, and therefore are presumably already collecting these data.

## Investment

8. *Increase in foreign private sector investment in agribusiness enterprises assisted by the project*
9. *Increase in domestic private sector investment in agribusiness enterprises assisted by the project*
10. *Number of cooperative agreements entered into between foreign private sector enterprises and enterprises assisted by the project*
11. *Increase in foreign private sector investment in agribusiness enterprises*
12. *Increase in domestic private sector investment in agribusiness enterprises*

As with sales and exports, it is not possible to disaggregate investment data by gender, but nevertheless, these indicators of increased investment are important indicators of impact for agribusiness projects. There are two types of indicators of investment: those that pertain to investment in agribusiness enterprises assisted by the project and those that pertain to the sector as a whole. Within each category are domestic and foreign private sector investment. The rationale for using both domestic and foreign investment is relatively straightforward. Increased domestic private sector investment illustrates economic growth within the sector. Increased foreign investment illustrates that the sector is stable and appealing enough to attract foreign investment. By limiting the measurement in the first instance to increases in agribusiness enterprises assisted by the project, the full impact of USAID project assistance can be isolated.

The last two indicators cover investments in agribusiness enterprises, both domestic and foreign, for the sector as a whole, regardless of project assistance. These indicators are really measuring the impact of policy reform for projects that deal with that arena. Although it is more difficult to isolate the impact of USAID interventions in these cases, they nevertheless can serve as proxies of the impact of policy reform. Therefore, these indicators should be used only by policy reform projects. Several projects are currently using these indicators to reflect the impact of their interventions.

## **Value Added**

***13. Increase in value added production in agribusiness enterprises assisted by the project***

***14. Increase in the number of agribusiness enterprises that process value added products***

These last two indicators are key symbols of economic growth within the agribusiness sector and within the economy of the country as a whole. The more value added to a product within the sector or country, the greater the benefit for participants in that sector. The difficulty comes in defining an appropriate measure. Quantities are difficult to aggregate when dealing with the large number of different products inherent in the agribusiness sector. Currency value is easier to aggregate, but can be volatile with fluctuating prices in a given product market. Still, it is probably a better measure than quantity, and by limiting the measurement to enterprises assisted by the project, it remains an accurate statement of the economic impact of USAID interventions.

The second value added indicator is less accurate in isolating the impact of USAID interventions, but presents an alternative way to address value added and separate it from the volatility of prices. The increase in the number of agribusiness enterprises that process value added products will provide a definite statement of growth within the agribusiness sector. One of the difficulties with both value added indicators will be in collecting these data. None of the current agribusiness projects in Asia is collecting data to reflect this concept. Individual enterprise data can be collected easily from project records; value added enterprises in the country as a whole will be more difficult to gather.

## **Protecting the Environment**

***15. Number of enterprises using environmentally sound technologies as a result of project assistance***

To make sure agribusiness development does not create environmental problems, USAID projects must instruct and monitor the enterprises with which they cooperate and assist. This indicator will illustrate improvement. Therefore it should measure those enterprises that have changed technologies to reflect environmental concerns as a direct result of project intervention.

## **MULTIPLIER EFFECTS**

Data collected on these indicators will present a comprehensive picture of the impact of agribusiness projects. However, as noted above, agribusiness projects are economic growth projects and, as such, they have a large impact on the economy of the sector, the country, and the region. For example, it is valid to assume that for every job created in an enterprise assisted by the project, other jobs will be created both in the agribusiness sector and in related industries through forward and backward linkages and through multiplier effects in the economy. Without data on these multiplier effects, any reported impact would be understated. This would be true for income, employment, and enterprise development.

The problem with including data on forward and backward linkages and multiplier effects comes in obtaining accurate measurement. Clearly it is not possible to obtain direct measurement of all income, employment, and enterprise development changes that result from USAID agribusiness project interventions. Therefore, these effects must be estimated. It is possible to make accurate estimates of

the larger effects by obtaining reliable data through surveys and case studies and extrapolating to the larger environment. Any assessment of regional impact should include these activities.

### **ASSESSING THE REGIONAL IMPACT OF AGRIBUSINESS POLICY INTERVENTIONS**

Only two of the indicators actually deal with the policy enabling environment — increases in foreign and domestic private sector investment in agribusiness enterprises. It is extremely difficult to aggregate the impact of policy intervention to the regional level. However, when the Asia Bureau develops strategic objectives that call for policy enabling projects, care will have to be taken to develop indicators to measure the impact of those projects at the regional level. With specific regional strategic objectives guiding the development of agribusiness policy projects, it should be easier to define indicators to measure the impact of those projects for the region.

## **CONCLUSIONS AND NEXT STEPS**

At the beginning of this paper the steps for developing an agribusiness monitoring and evaluation framework for the Asian region were outlined. This paper concludes the first step. Two additional tasks remain to present a complete picture on what Asian agribusiness projects are now using as indicators of impact and a proposed set of indicators to aggregate impact to the regional level.

First, the monitoring and evaluation parameters for the Asian agribusiness projects that are listed in Annex B must be completed. In the time frame allotted for this first phase, it was not possible to obtain monitoring and evaluation plans for all projects. Many of the parameters were taken from original project papers and logical frameworks. Therefore, the parameters presented may not be current and may not accurately reflect what projects are using to measure impact. All projects should be encouraged to submit their current monitoring and evaluation plans so that these tables can be completed with current, accurate data.

Second, Missions and, perhaps, projects should be given the opportunity to comment on the proposed indicators and offer suggestions on the most appropriate ways to collect the necessary data.

Once these are completed, the Asia Bureau and RAP will finalize the set of indicators to be used in defining the regional impact of agribusiness projects in Asia along with a plan to use in carrying out the remaining steps to implement the monitoring and evaluation framework.

## BIBLIOGRAPHY

- Agroenterprise and Technology Systems Project. "First Quarter Report: January-March 1993." Chemonics. March 1993.
- Agro-Enterprise Project. "First Quarter Report: January-March 1993." Oregon State University.
- \_\_\_\_\_. "Second Quarter Report: April-June 1993." Oregon State University.
- \_\_\_\_\_. "Third Quarter Report: July-September 1993." Oregon State University.
- Benoiel, Sharon, and Patricia Vondal. "Monitoring Program Performance: USAID/Nepal." PRISM Project. Management Systems International. December 1992.
- Center for Development Information and Evaluation. "CDIE Assessment of A.I.D. Agribusiness Design Proposal." Washington D.C. March 1993.
- Colegrove, Michael, Allen Eisendrath, Sridhar Bhat, Thomas Easterling, Mokhtar Hamdy, and S. Rama. "USAID/INDIA Agricultural Commercialization and Enterprise Project Paper Team Report." Chemonics. June 1991.
- Development Alternatives, Inc. "Agribusiness Development Project in Indonesia." Volume 1, Technical Proposal." July 1992.
- \_\_\_\_\_. "Assessment of Contract Farming at Lam Nam Oon, Thailand: A Combined Effort of USAID and The Royal Thai Government." January 1994.
- \_\_\_\_\_. "Mahaweli Agriculture and Rural Development Project. Technical Proposal." August 1992.
- \_\_\_\_\_. "Regional Technical Support Project for East Asia: Volume 1, Technical Proposal." July 1993.
- Eisendrath, Allen, Harley Martin, Valerie Yv. Gregory, Michael Colegrove. "USAID/India Agricultural Commercialization and Enterprise Project, Semi-Annual Workplan Review: June - December 1993." December 1993.
- Heureux, Charles. "Bangladesh Fertilizer Distribution Improvement Project, Phase II: Midterm Evaluation Final Draft." Chemonics. November 1992.
- Huntington, Richard. "Proposal for a Program Monitoring System." International Science and Technology Institute, Inc. December 1991.
- Indonesia Agribusiness Development Project. "Proposed Workplan: 1994/95." Development Alternatives, Inc. December 1993.
- \_\_\_\_\_. "Quarterly Report, Year I Quarter 1 April-June 1993." Development Alternatives, Inc. December 1993.
- \_\_\_\_\_. "Quarterly Report, Year I Quarter 2 July-September 1993." Development Alternatives, Inc. December 1993.

- International Fertilizer Development Center. "Annual Report, 1992-93, Fertilizer Distribution Improvement Project."
- \_\_\_\_\_. "Annual Report, 1991-92, Fertilizer Distribution Improvement Project."
- Kumar, Krishna, Joe Lieberman, and Eugene Miller. "An Assessment of Sri Lanka's Agribusiness Program." Draft. CDIE. No date.
- Kingsbury, David. "A Monitoring and Evaluation Plan For The Philippines Agribusiness Assistance Program." Development Alternatives, Inc. February 1994.
- Mahaweli Agriculture and Rural Development Project. "Quarterly Report: January-March 1993." Development Alternatives, Inc.
- \_\_\_\_\_. "Quarterly Report: April-June 1993." Development Alternatives, Inc.
- \_\_\_\_\_. "1993 Annual Work Plan and 1992 Review of Progress." Development Alternatives, Inc. February 1993.
- Oregon State University. "USAID/Sri Lanka Agro-Enterprise Project Proposal: Technical Application." August 1992.
- Poulin, Roger, and Craig Olson. "Impact Assessment of USAID's Agribusiness Program: The Cameroon Case Study." February 1994.
- PRISM Project. "Mission Objectives, Outcomes, Indicators and Program Performance Information For Programs in the Economic Growth Theme." Listing from Management Systems International. Draft. September 23, 1993.
- Swanberg, Ken. "Bangladesh Agribusiness Assessment." Draft. No date.
- USAID. "USAID Strategy Papers: LPA Revision." October 5, 1993.
- \_\_\_\_\_. "Implementation Guidelines: Economic Growth." Draft. January 14, 1994.
- \_\_\_\_\_. "ANE's Comments on Economic Growth Strategy Implementation Guidelines. February 4, 1994.
- \_\_\_\_\_. "Democracy Implementation Guidelines." Draft. January 14, 1994.
- \_\_\_\_\_. "Implementation Guidelines For USAID'S Environmental Strategy." Draft. March 10, 1994.
- \_\_\_\_\_. "Enabling Meaningful Choices and Effective Action: Implementation Guidelines for USAID's Strategy on Population, Health and Nutrition." Draft. January 14, 1994.
- \_\_\_\_\_. "Implementation Guidelines: Overview." Draft #8. January 14, 1994.
- USAID/Development Alternatives, Inc. "Indonesia Agribusiness Development Project Contract." April 1993.
- USAID/India. "Monitoring and Evaluation Plan and Logical Framework from the Project Paper: Agricultural Commercialization and Enterprise Project." No Date.

\_\_\_\_\_. "USAID/India Strategic Framework, FY 1994-2000." December 1993.

USAID Manila. "Portfolio and Strategy Review Paper: Draft Document for Discussion with the Asia Bureau." April 29, 1992.

USAID/Nepal. "Agricultural Sector Review from the Agroenterprise and Technology Systems Project Paper." No date.

\_\_\_\_\_. "Sustainable Income and Rural Enterprise Program, Rapti Development Project: Briefing Book." July 1993.

USAID/Philippines. "Agribusiness System Assistance Program: Program Assistance Approval Document." September 1991.

USAID/Sri Lanka. "Mahaweli Agriculture and Rural Development Project: Project Paper." July 1987.

\_\_\_\_\_. "Monitoring and Evaluation Plan and Logical Framework from the Project Paper: Mahaweli Enterprise Development Project." No Date.

\_\_\_\_\_. "Monitoring and Evaluation Section of the Project Paper: Agro-Enterprise Project." No date.

\_\_\_\_\_. "RFP: Extension to the Mahaweli Agriculture and Rural Development Project." July 1989.

USAID/Thailand. "RFP for the Regional Technical Support Project." July 1993.

Vondal, Patricia, Harriet Destler, Tracy Atwood, and David Hirschmann. "Monitoring Program Performance: USAID/Dhaka. PRISM Project. Management Systems International. February 4, 1993.

**ANNEX A**

**PRISM INDICATORS ON ECONOMIC GROWTH THEME**

TABLE A-1: PRISM INDICATORS ON ECONOMIC GROWTH THEME

STRATEGIC OBJECTIVE	PERFORMANCE INDICATORS	PROGRAM OUTCOMES	PROGRAM INDICATORS
<b>SRI LANKA</b>			
Increased competitiveness and growth of markets and enterprises	Total value of nontraditional exports	Reduced government control of productive resources	% and value of targeted government assets and investments transferred to LT private control
	Amount of foreign investment approved	Improved technologies, more diverse products and markets	Value of investments in new technologies by targeted firms
	Total value of other agricultural productions	More accessible and efficient financial markets	Value of tradeable private equity and debt
		Improved legal, regulatory and policy performance	% of public agencies restructured to respond to private sector needs
<b>PHILIPPINES</b>			
Increased productive investment	Domestic capital formation: real growth in GDCF; ratio of GDCF to GNP	Increased private sector provision of goods, services, and infrastructure traditionally provided by the public sector	Number and value of private investment in the public sector
			Amount of government budgetary support to government-owned and -controlled corporations
		Growth in business activity outside the national capital region	New business starts in selected areas outside the national capital region served by USAID projects
			Number of air passengers, and the tonnage of cargo moving into/out of selected areas
			Number and amount of bank loans in selected areas
		Improved identification and implementation of trade, investment, and fiscal and monetary policies	Ratio of imports and exports to GNP
			Inflation rate
			Total national government tax revenue as a % of GDP
Net direct foreign investment			

A-3

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TABLE A-1 – Continued

STRATEGIC OBJECTIVE	PERFORMANCE INDICATORS	PROGRAM OUTCOMES	PROGRAM INDICATORS
<b>BANGLADESH</b>			
Increased productivity and competitiveness in agriculture, finance, and industry	Increased private investment as a percentage of GDP	Strengthened market mechanisms in the agricultural, financial, and industrial sectors	Progress on implementing policy reforms
	Increased real value of agricultural output and exports		Results of policy reforms: <ul style="list-style-type: none"> <li>a. increased investments in high-value nonfood crops</li> <li>b. increased investment in small business</li> <li>c. increased private bank share of lending and deposits</li> <li>d. improved profitability of banks</li> </ul>
	Increased real value of industrial output and exports	Increased opportunity for participation in the market	New agricultural and postharvest technologies introduced Kilometers of roads built Kilometers of electric distribution lines installed Increased number of loans for horticultural export, agriculture input, agribusiness, and microenterprise Increased number of agribusinesses, industrial and small businesses, and microenterprises assisted with advisory services, studies, and training
<b>NEPAL</b>			
Increased contribution of private sector to income growth	% of GNP generated by GON	Sustained increase in private sales of cash crops and products	Average cash sales by market-oriented farm households in Rapti
	Accelerated real private investment		Number of farm households in Rapti "pockets" engaged in cash cropping
	Private sector investment as % of total investment		Cash sales of firms assisted by Agroenterprise Center
	Average rural household income in Rapti		Agroenterprise Center within the Federation of Nepal Chambers of Commerce and Industry is established
	Volume of agricultural exports	Agricultural and natural resources policy and regulatory reforms defined and implemented	Private sector representatives appointed to National Seed Board, Dairy Board, and Nepal Agricultural Research Council (NARC)

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TABLE A-1 -- Continued

STRATEGIC OBJECTIVE	PERFORMANCE INDICATORS	PROGRAM OUTCOMES	PROGRAM INDICATORS
	Average rural household income nationwide		NARC given autonomy
			% of NARC research studies that are responsive to needs of commercial farming and agroenterprises
			Private dairy and seed commodity associations obtain legal status
			Simplified procedures for import of agroprocessing inputs enacted
			Simplified procedures for exporting agrobased products enacted
			Implementation of draft forest legislation, regulations, and operational guidance
			Privatization of dairy industry
			Privatization of vegetable seed production and marketing
			Legislation and regulations enacted turning over state-run irrigation control to user groups
		Increased private control and sustainable management	Number of forest user groups registered
			Forest land turned over to community groups
			Privatization of tree nurseries
			% of selected communities utilizing more sustainable management practices in turnover areas
		Revenue and regulatory policies simplified, codified, and implemented	Business registration and licensing procedures are simplified or eliminated, codified, and made public
			Internal marketing barriers eliminated
			Transparent, equitably applied, and simplified tax codes established, codified, and implemented
			Tax reform to increase elasticity and incentives for productive activities
		Financial markets and instruments expanded with prudent regulations applied	Number and diversity of financial institutions

A-5

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TABLE A-1 – Continued

STRATEGIC OBJECTIVE	PERFORMANCE INDICATORS	PROGRAM OUTCOMES	PROGRAM INDICATORS
			Prudent regulation of new financial institutions established
			% of bank loans made to private sector
			Total market value of equity shares
			% of free market foreign exchange available on the trade account
		Private sector/state-owned enterprise balance redressed	% of industrial and commercial state-owned enterprises
			% of USAID market basket price index subject to GON control
			Privatization of trade and investment promotion and distribution of essentials
			Reduction in the subsidization of selected commodities
<b>INDONESIA: Not yet available</b>			
<b>INDIA: Not yet available</b>			

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**ANNEX B**

**MONITORING AND EVALUATION PARAMETERS FOR ASIAN  
AGRIBUSINESS PROJECTS**

TABLE B-1

**MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS**  
**Sri Lanka: Mahaweli Agriculture and Rural Development Project (MARD)**

<b>Project Goal</b>	<b>Project Purpose</b>	<b>Expected Impacts</b>	<b>Impact Indicators</b>	<b>Data Sources</b>	<b>Expected Outputs</b>	<b>Output Indicators</b>	
To obtain the maximum economic return from the land and water resources available to the settlers of System B	To increase settler income through heightened resource productivity, improved terms of trade with input suppliers and produce buyers, and linkages into commercial production channels	Increased income from diversified cropping	% increase in income over paddy-only production for farmers who grow diversified crops	Cultivation census and farm record-keeping system			
			Increase in hectares planted in diversified crops	Cultivation census			
			Increase in the number of farmers participating in diversified cropping	Cultivation census			
		Effective farmer organizations	Turnout groups with membership agreement signed and cleaning canals every month	MARD project records			
			Unit-level farmer organizations legalized and undertaking at least one economic activity for members	MARD project records			
		Farmers taking responsibility for canal maintenance	Decrease in MEA recurrent cost expenditures in constant 1988 Rs.	MEA budget			
			Water use as a percentage of requirement	MEA irrigation operating records			
		Improved access to inputs and markets	Postharvest handling facilities operating for System B products	MARD project records			
				Fully operational commercial nucleus farms	MARD project records		

Source: Proposal for MARD II

TABLE B-2

MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Sri Lanka: Mahaweli Enterprise Development (MED)

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
To raise median household incomes of Mahaweli settlers to the national level	To accelerate creation of permanent private enterprise employment in small, medium, and large enterprises	Increased income	Increase of median household income of Mahaweli residents to the national level by 1995	GSL labor force and socio-economic survey	Policies, regulations, and procedures conducive to enterprise growth in the Mahaweli with clear guidelines for entrepreneurs	Up to 15 special studies completed: identifiable market-oriented changes made to policy regulations or procedures; guidelines for investors prepared and widely distributed
		Increased employment	A net increase of 1,250 jobs in Mahaweli SSEs by 1995	GSL data on regional employment	An increased market orientation to EIED programs and implementing procedures	Private sector views systematically reviewed and incorporated into EIED planning
			A net increase of 9,200 jobs in Mahaweli MLEs by 1995	GSL data on occupations of Mahaweli settlers		Effective use of private sector organizations in EIED program and service delivery
	To strengthen GSL commitment to market-oriented approaches to Mahaweli development	Strengthened market forces	Private sector free to operate in project area without unfair competition from public sector entities	Midterm and end of project survey	Program of public relations to promote Mahaweli investment and products	Promotional seminars held in Colombo; brochures and video materials produced and distributed
			No new government-owned productive facilities	EIED MLE database		Promotional and marketing missions undertaken to Europe, Middle East, America and industrialized Asia

TABLE B-2 — Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
			Land tenure arrangements established for private enterprise that are secure and that permit land to transfer between private parties	Project reports, work plans, financial records, field inspections, evaluations	Field-based business advisory services available to Mahaweli SSEs	Up to 30 EIED and contractor field advisor positions filled and services delivered throughout the Mahaweli to 900 existing and 165 aspiring entrepreneurs; ad hoc short courses conducted for groups of existing entrepreneurs
			Distortions of market forces avoided in Mahaweli programs, but, if distorting interventions are necessary, economic cost-benefit factors will be considered		Adequate financial resources mobilized via savings and credit mechanisms to meet needs of SSEs	Group lending and saving scheme in place and financially viable; used by entrepreneurs and enjoying acceptable repayment rates
					At least 750 Mahaweli settlers trained in basic business skills and management practices	25 entrepreneur development training programs completed
					Administrative business services available at cost to SSEs	8 business centers established and operating
					Preinvestment Programs completed for MLEs	10 PIP programs completed for at least 40 MLEs
					Information clearinghouse accessible	Clearinghouse established in EIED or via private contractor

B-5

Source: Project Paper M&E Plan and Logical Framework and Proposal for a Program Monitoring System

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TABLE B-3

MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Sri Lanka: Agro-Enterprise Project (AgEnt)

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
To diversify and commercialize agriculture systems	To stimulate the development and expansion of private agro-based enterprises	Increase in value of exports	8% annual increase in value of export of non-plantation crops from 1992-1999	GSL reports		
		Establishment of new agroenterprises and expansion of existing agroenterprises	350 new agroenterprises established or expanded with project support	Project reports Evaluation follow-up of firms assisted	Agroenterprise investments	3,120 consultations on individual agroenterprises
						100 special technical consultant reports
						1,360 agroenterprise staff trained
		Jobs created in project assisted agroenterprises	9,700 on-farm jobs created			
			3,225 off-farm jobs created			
			20 new outgrower programs			
		Introduction of new production and processing technologies	100 new technologies introduced and adopted	Agroenterprise grants	100 production trials	
			40 new markets/products developed		20 postharvest handling trials	
					20 marketing trials	
		Improved agroenterprise financing	5 new financial instruments	Improved agroenterprise financial facilities	5 reports on revised appraisal activities	
			50 investment packages completed			
			\$12 m in investments approved			
		Increased value added production	\$51.6 m increase in value added production		Sectoral, environmental, and policy issue studies	12 studies
		Increased private sector investment	\$18.3 m increase in private sector investment			

Source: Progress Report

TABLE B-4

MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Nepal: Rapti Development Project (RDP)

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
To improve the balance among population, land, and natural resources	To increase household incomes, well-being, and productivity and improve sustainable management of farm and forest resource systems	Increased productivity	Increased household incomes and food self-sufficiency	To be completed later	Improved crop productivity technologies verified and adopted by farmers, to cover most of the irrigated area and make some measurable impact on upland rainfed areas	Technologies for sustainable agriculture, including soil fertility, management, and other sustainable agricultural practices verified and adopted by farmers
		Improved sustainable management of farm and forest resource systems	Cereal, horticultural, and livestock productivity increased in areas where acceptable tested technology is available			Supplies of improved cereal, horticultural, and fodder seed and other inputs established and managed locally
			Forest productivity increased and the condition of the land resource base improved through expanded autonomous local management			Increased areas of cultivation, technology adoption, and volume of production, marketing, and consumption of high-value, low-volume cash crops
		Better community management of productive resources is achieved by 100 local groups resulting in increased productivity, local government revenue, and private investment for development		Improved livestock productivity technologies and increased marketing being managed through livestock groups	A model for increased livestock productivity through animal health delivery service, grazing control, improved herd management, and increased fodder production, and marketing is tested and applied by 35 livestock management groups	
						Increased supply of doffer and forage through new plantings, improved grazing control, and better use of crop residues in collaboration with DOA and DOF

TABLE B-4 -- Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
					Autonomous local management of forest resources through user groups supported by improved extension programs providing training/technical management advice, and access to appropriate inputs	Improved forest management through local forest user groups, actively using management plans to autonomously manage forests in 35 communities
						Accessible forest areas handed over to user groups for autonomous management under simple management plans
						Increased planting by farmers to supply fodder, organic matter, and firewood from their own lands into their farming systems
					Active involvement of farmers in extension, marketing, common resource management, and credit and input services	Expanded active local user groups for agriculture, livestock, forests, irrigation, and women
						Established 3 pilot demonstrations for the integration of user groups within the local government structure
						Model developed, tested, and applied for increased farmer collaboration with extension services and private entrepreneurs
						Improved technologies verified and adopted by farmers

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TABLE B-4 - Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
						Increased supply of fodder, forage, and forest products into farming systems through improved management of community and private lands
						Protection and improvement of key problem areas in community watersheds
						Improved and more reliable supply of seed, seedlings, fertilizers, medicines, and other inputs
						Increased participation of women in local user groups
						Improved market opportunities for local producers of agricultural, livestock, forest, and related products
						Expanded SFDP with 30 new sites for a total of 55 in the zone. Established 3 pilot small farmer associations with autonomous local management
						Started 25 new small enterprises based on feasibility studies by PEU
						Started 100 new household and agro-related microenterprises supported by technical components of RDP

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TABLE B-4 — Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
					<p>Improved effectiveness of LDOs and district officers in planning, coordinating, and monitoring development programs. Improved management of district and community governments for development.</p>	<p>District line agency budgets and work plans allocate resources effectively to achieve productivity and income outputs</p>
						<p>Increased emphasis on local groups and families as clients of line agency programs, through problem-oriented extension programs</p>
						<p>Line agencies use resource inventories and other monitoring data more effectively to guide program plans</p>
						<p>Improved collaboration among line agencies to optimize use of plant, soil, and water resources</p>
						<p>Improved technical and communication skills of line agency field workers</p>
						<p>Improved reliability and flow of fertilizers, foundation seed, and appropriate agrochemicals to districts</p>
						<p>Established a PEU with ADB/N at Tulsipur</p>
						<p>Established women in development program that has increased women's participation in agricultural and forestry development</p>

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TABLE B-4 – Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
						Contracted 20 steel bridges through local user groups and rehabilitated 2,500 hectares of irrigation

Source: Revised Project Logical Framework (from Briefing Book)

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TABLE B-5

MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Nepal: Market Access for Rural Development

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
		Sustainable increases in farm household income				
		Expanded commerce in new and traditional cash commodities				
		Improved marketing and business management capabilities of producer marketing groups				
		Institutionalization of market development and business development capabilities by participating nongovernmental organizations				
		Improved market information available to producer groups, traders, and nongovernmental organizations for preparing market strategies and individual plans				

Source: From conversation with USAID. This is a proposed project still under design. An announcement is expected in 1994.

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TABLE B-6

MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Philippines: Agribusiness Systems Assistance Program (ASAP)

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators	
Sustained private-sector-led growth in the agribusiness system	To improve the enabling environment for private investment in agriculture linked to a more efficient smallholder sector	Reduced policy bias against agribusiness and an improved policy framework	Improved capability to advocate policy reforms for at least 15 agribusiness trade associations, regional universities, nongovernmental organizations, and other private sector entities	GOP statistics	Policy studies	# policy studies	
					ASAP M&E case studies and monitoring of market development and policy impacts	Policy advocacy strategies	# policy conferences
					Market linkage development	Strategic market studies	# strategic market studies
						External evaluations	# trade missions
		ASAP M&E	# training workshops and seminars				
		Fewer restrictions on open markets	At least 50 small and medium agroenterprises with strong backward linkages to small farmers, either established or expanded	ASAP M&E	Quarterly reports		Market opportunity assessments
						Other project documents	
Increased capacity for policy analysis, agribusiness advocacy, and collection and dissemination of market information for private sector agribusiness development	Average 15% increase in agribusiness purchases (for firms participating in ASAP market development activities) from small farmers (in physical volumes) attributable to ASAP						
Improved mechanisms for technology search and access and adaptation by private agribusiness	Average 15% increase in agribusiness sales (for firms participating in market development activities) either for domestic consumption or export attributable to ASAP						

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TABLE B-6 — Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
		Improved vertical linkages in selected agribusiness subsectors and new ventures made possible by cost sharing	Actual agribusiness sales and purchases generated (minimum 2:1 ration of sales and purchases to market development expenditures)	Other project documents		
			At least 5 sectoral policies changed and effectively implemented, increasing the open market orientation of the agricultural sector			

Source: Project monitoring and evaluation plan

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MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Bangladesh: Fertilizer Distribution Improvement Project II (FDI-II)

Project Goal	Project Purpose	Expected Impacts	Impact Indicators*	Data Sources	Expected Outputs	Output Indicators
To increase agricultural production	To increase the use of fertilizer consumption through more responsive and cost-effective distribution, while simultaneously ensuring the continuous and adequate supply of fertilizer nationwide	Development of significant private sector involvement in the distribution of fertilizer	Employment generated by the expansion of crop production			
		Development of large-scale private wholesalers with the potential for marketing fertilizers nationwide	Increased farmer income from higher productivity and lower input costs			
		Policy reform focusing on private sector entry into large-scale fertilizer wholesaling, price rationalization, dealer development, and sales promotion	Employment generated in input and marketing activities			
			Enterprise development in the fertilizer industry			

Source: Annual reports, midterm evaluation, and CDIE assessment

\*These are not necessarily the original impact indicators used in project monitoring and evaluation, but rather indicators of impact used to assess the project as part of the overall CDIE agribusiness assessment

TABLE B-8

**MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS**  
**India: Agricultural Commercialization and Enterprise Project (ACE)**

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators	
To develop a dynamic private agribusiness sector in India	To improve the investment environment for private agribusiness in horticulture	Larger share of agro-industry in industrial value added		<u>Goal and Purpose:</u>  National agricultural statistics  Export documents  Employment statistics  Annual performance reports  <u>Outputs:</u> Output monitoring reports	Increased investment in agribusiness by private firms	25 loans received by agribusiness entrepreneurs	
						100 private firms assisted with technical assistance	
		Higher quality of processed agricultural goods			Improved management in agribusiness	Increased sales of agricultural products and agribusiness equipment and supplies	
		Larger share of agricultural goods in exports					Decreased costs of production and processing in assisted firms
		Increased employment in agribusiness					
		Growth of agribusiness firms supported by ACE	Total number of agribusiness projects assisted in postharvest handling, packing and packaging, transport, cold storage, processing, and marketing	ACE monitoring reports  Annual sample surveys  Business performance data	Strengthened financial institution support for agribusiness	Improved project identification and appraisal capabilities	
						Strengthened monitoring and support	
						Increased lending	
				Total assets invested in these projects		Increased repayments	

TABLE B-8 – Continued

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
			Number of projects assisted in key deficiency areas in India's post-farm agribusiness system		Strengthened business association	Increased services to members
			Total assets invested in these projects		Policy dialogue	Workshops, policy studies, and dialogue
			For sustainability: annual gross revenues, net income, capacity utilization, and tonnage of produce handled			8 policy studies, workshops
		Growth of output and sales in key subsectors	Gross sales (national and State of Maharashtra)			
			Horticultural production in Maharashtra*			
			Processing volume in Maharashtra*			
			Export sales in Maharashtra			
		Project replication in priority subsectors	Number of types of projects that replicate ACE-assisted agribusiness projects			
		Increased lending by DFIs to horticultural subsector	Lending by DFIs to horticulture subsector			

\* Not directly correlated with the project

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TABLE B-9

MONITORING AND EVALUATION PARAMETERS FOR ASIAN AGRIBUSINESS PROJECTS  
Indonesia: Agribusiness Development Project (ADP)

Project Goal	Project Purpose	Expected Impacts	Impact Indicators	Data Sources	Expected Outputs	Output Indicators
To generate sustainable increases in employment and incomes by increasing the competitiveness, efficiency, and growth of agribusinesses in Indonesia	To enhance public sector support to agribusiness and to strengthen the private agribusiness sector, especially agribusiness organizations	Agribusiness production, processing, marketing, and trade and investment are more efficient and competitive	100 new agroprocessing firms in the market  Agribusiness trade increased by \$1 billion and investment by \$500 million		GOI institutions capable of analyzing agribusiness deregulation issues, developing and testing options, and implementing policy changes	MOA and MOI completing 2 policy studies each year
		GOI institutions support agribusinesses more efficiently and effectively	At least 50% of the policy agenda achieved  MOA and MOI offering two new services to the private sector		New institutions assisting and promoting agribusiness	Agribusiness Development Center/s staffed and operational
		Small and medium-sized firms in product lines supported by the project are expanding their production, processing, and marketing of agribusiness products	5 agribusiness organizations initiating services supported by the GOI, and operating as full partners in policy and regulation formulation		Public and private institutions collaborating to assist and promote agribusiness	2 policy fora and 5 joint promotions being organized annually
		Rates of increase in employment, incomes, exports, and trade and investment in specific agribusiness lines supported by the project are higher than they would have otherwise been	In assisted product lines, new sales of \$500 m and investment of \$250 m — at least \$100 m in U.S. goods and services  In assisted product lines, at least 100,000 new jobs created representing \$30 m in new incomes, of which 66% goes to low- and medium-income people		Private agribusiness associations providing valued, self-financed services to members and advice to GOI on policy and regulatory matters	5 private, self-financed organizations viewed by GOI as partners in policy development

Source: Contract

**ANNEX C**

**SUMMARY TABLES COMPARING GOALS, PURPOSES, IMPACTS,  
OUTPUTS, AND INDICATORS OF ASIAN AGRIBUSINESS PROJECTS**

TABLE C-1

## COMPARISON OF THE GOALS, PURPOSES, AND FOCI OF ASIAN AGRIBUSINESS PROJECTS

Project	Project Goal	Project Purpose	Project Focus		
			Sector	Firm	People
Nepal: Rapti Development Project (RDP)	To improve the balance among population, land, and natural resources	To increase household incomes and well-being, productivity, and improved sustainable management of farm and forest resource systems			X
Sri Lanka: Mahaweli Agriculture and Rural Development Project (MARD)	To obtain the maximum economic return from the land and water resources available to the settlers of System B	To increase settler income through heightened resource productivity, improved terms of trade with input suppliers and produce buyers, and linkages into commercial production channels			X
Sri Lanka: Mahaweli Enterprise Development Project (MED)	To raise median household incomes of Mahaweli settlers to the national level	To accelerate creation of permanent private enterprise employment in small, medium, and large enterprises		X	
Indonesia: Agribusiness Development Project (ADP)	To generate sustainable increases in employment and incomes by increasing the competitiveness, efficiency, and growth of agribusinesses in Indonesia	To enhance public sector support to agribusiness and to strengthen the private agribusiness sector, especially agribusiness organizations	X	X	
Sri Lanka: Agro-Enterprise Project (AgEnt)	To diversify and commercialize agriculture systems	To stimulate the development and expansion of private agro-based enterprises		X	
Nepal: Agroenterprise and Technology Systems Project (ATS)					
Nepal: Market Access for Rural Development (MARD)*					
Philippines: Agribusiness Systems Assistance Program (ASAP)	Sustained private-sector-led growth in the agribusiness system	To improve the enabling environment for private investment in agriculture linked to a more efficient smallholder sector	X		
Bangladesh: Agribusiness Trade and Development Project (ATDP)	To produce an open and competitive market for the supply and distribution of agricultural inputs and technologies	To increase private sector investment in agricultural inputs, technology, and marketing	X		
Bangladesh: Fertilizer Distribution Improvement Project II (FDI-II)	To increase agricultural production	To increase the use of fertilizer consumption through more responsive and cost-effective distribution, while simultaneously ensuring the continuous and adequate supply of fertilizer nationwide	X		

\* This is a proposed project still under design. An announcement is expected in 1994.

TABLE C-1 – Continued

Project	Project Goal	Project Purpose	Project Focus		
			Sector	Firm	People
India: Agricultural Commercialization and Enterprise Project (ACE)	To develop a dynamic private agribusiness sector in India	To improve the investment environment for private agribusiness in horticulture	X		
Regional Technical Support Project (RTSP)	To assist Southeast and East Asian countries in accelerating and sustaining both broad-based and environmentally conscious economic growth	To transfer the technical expertise needed to help solve critical development problems in select East Asian countries	X		

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TABLE C-2

## INDICATOR GROUPING FOR ASIAN AGRIBUSINESS PROJECTS

Indicator Group	Project	Impact Expected or Indicator Specified
<b>Income</b>		
	MED	Increase in median household income
	MARD	% increase in income over paddy-only production for farmers growing diversified crops
	Nepal MARD	Expected impact: increases in farm household income
	ADP	Rates of increase in income resulting from new jobs
	ACE	Net income of the business
<b>Employment/Jobs</b>		
	AgEnt	On-farm and off-farm jobs created in assisted businesses
	ADP	New jobs in assisted agribusinesses
	ACE	Increased employment in agribusiness
	MED	Net increase in jobs in Mahaweli small, medium, and large enterprises
<b>Enterprise Development/Expansion</b>		
	RDP	(output) Started household and agro-related microenterprises supported by project
	AgEnt	Agroenterprises established/expanded with project support
	ADP	New agro-processing firms in the market
		Small and medium-sized firms in product lines supported by the project are expanding their production, processing, and marketing of agribusiness products; new sales in assisted product lines
	MARD	Fully operational commercial nucleus farms
	ACE	Growth of agribusiness firms supported by project
		Replication of agribusiness projects (firms) in priority subsectors
<b>Sales/Exports</b>		
	AgEnt	Increase in annual value of exports from non-plantation crops
	ADP	Increase agribusiness trade by \$ ____ (amount)
	Nepal MARD	Expected impact: expanded commerce in new and traditional cash commodities
	ACE	Larger share of agricultural goods in exports
		Growth of output and sales in key subsectors: gross sales (national and State of Maharashtra)
		Growth of output and sales in key subsectors: horticultural production in Maharashtra
		Growth of output and sales in key subsectors: processing volume in Maharashtra
		Growth of output and sales in key subsectors: export sales in Maharashtra

TABLE C-2 – Continued

Indicator Group	Project	Impact Expected or Indicator Specified
	ASAP	Increase in agribusiness sales for assisted firms (export or domestic)
<b>New/Improved Technologies</b>		
	AgEnt	Introduction of new production and processing technologies by agroenterprises
	RDP	Improved technologies verified/adopted by farmers
	MARD	Postharvest-handling facilities operating for System B products
<b>Investment</b>		
	AgEnt	Improved agroenterprise financing: new financial instruments
		Improved agroenterprise financing: new investment packages
		Improved agroenterprise financing: total investments approved in agribusiness
		Increase in private sector investment
	ACE	Total assets invested in projects supported by the project
		Increased lending by DFIs to horticulture subsector
	RDP	Improved community management of productive resources achieved by increased private investment for development
	ADP	Rates of increase in trade and investment in specific agribusiness lines supported by the project; in assisted product lines investment of \$250 m, at least \$100 m in U.S. goods and services
		Increase in agribusiness investment
	<b>Production/Productivity/Value Added</b>	
	MARD	Increase in hectares planted in diversified cropping; increase in the number of farmers participating in diversified cropping
	AgEnt	Increased value added production
	RDP	Increased productivity: measured by increased household income and food self-sufficiency
	ACE	Larger share of agroindustry in industrial value added
<b>Policy Reform</b>		
	ASAP	Reduced policy bias against agribusiness and an improved policy framework; improved capability to advocate policy reforms for agribusiness trade associations, regional universities, nongovernmental organizations, and other private sector entities
		Fewer restrictions on open markets: number of small and medium agroenterprises with strong backward linkages to small farmers either established or expanded
		Fewer restrictions on open markets: sectoral policies changed and effectively implemented, increasing the open market orientation of the agricultural sector
		Increased capacity for policy analysis, agribusiness advocacy, and collection and dissemination of market information for private sector agribusiness development
		Improved mechanisms for technology search and access and adaptation by private agribusiness

TABLE C-2 – Continued

Indicator Group	Project	Impact Expected or Indicator Specified
		Improved vertical linkages in selected agribusiness subsectors and new ventures made possible by cost sharing
	MED	Strengthened market forces: private sector free to operate in project area without unfair competition from public sector entities
		Strengthened market forces: no new government-owned productive facilities
		Land tenure arrangements established for private enterprise that are secure and that permit land to transfer between private parties
		Distortion of market forces avoided in Mahaweli programs but economic cost/benefit considered if distorting interventions are necessary
	ADP	GOI institutions support agribusinesses more efficiently and effectively: at least 50% of the policy agenda achieved
		GOI institutions support agribusinesses more efficiently and effectively: MOA and MOI offering two new services to the private sector
		GOI institutions support agribusinesses more efficiently and effectively: agribusiness organizations initiating services supported by the GOI and operating as full partners in policy formulation

TABLE C-3

## PROPOSED INDICATORS FOR ASIAN AGRIBUSINESS PROJECTS

Indicator	Possible or Feasible to Segregate by Gender?	Data Sources	Projects Using Similar Indicators	Impact Expected or Indicator Specified in Project
<b>Income</b>				
1. Increase in annual income generated by jobs in enterprises assisted by the project	Yes	Project records data collected from assisted enterprises	Sri Lanka: MED	Increase in median household income
			Sri Lanka: MARD	% increase in income over paddy-only production for farmers growing diversified crops
			Indonesia: ADP	Rates of increase in income resulting from new jobs
			Nepal: MARD	Expected result. sustainable increases in farm household income
			Bangladesh: FDI-II	Increased farmer income from higher productivity and lower input costs
			India: ACE	Net income of the business
<b>Employment/Jobs</b>				
2. Net increase in the number of jobs in enterprises assisted by the project	Yes	Project records data collected from assisted enterprises	Sri Lanka: AgEnt	On-farm and off-farm jobs created in assisted businesses
3. Number of new jobs in agribusiness enterprises assisted by the project with wages above the prevailing minimum agricultural wage	Yes	Project records data collected from assisted enterprises	Indonesia: ADP	New jobs in assisted agribusinesses
			Bangladesh: FDI-II	Employment generated by the expansion of crop production
				Employment generated in input and marketing activities
			India: ACE	Increased employment in agribusiness
Sri Lanka: MED	Net increase in jobs in Mahaweli small, medium, and large enterprises			

TABLE C-3 — Continued

Indicator	Possible or Feasible to Segregate by Gender?	Data Sources	Projects Using Similar Indicators	Impact Expected or Indicator Specified in Project
<b>Enterprise Development/Expansion</b>				
4. Number of new enterprises established and continuing to operate for at least one year as a result of project assistance	Yes	Project records data collected from assisted enterprises	Nepal: RDP	(output) Started household and agro-related microenterprises supported by project
5. Number of enterprises expanded as a result of project assistance  Expansion defined as:  a. New/diversified product lines b. Increased volume measured in raw material purchased/processed c. increased volume of sales	Yes	Project records data collected from assisted enterprises	Sri Lanka: AgEnt	Agroenterprises established/expanded with project support
			Indonesia: ADP	New agro-processing firms in the market
				Small and medium-sized firms in product lines supported by the project are expanding their production, processing, and marketing of agribusiness products; new sales in assisted product lines
			Sri Lanka: MARD	Fully operational commercial nucleus farms
			Bangladesh: FDI-II	Enterprise development in the fertilizer industry
			India: ACE	Growth of agribusiness firms supported by project Replication of agribusiness projects (firms) in priority subsectors
<b>Sales</b>				
6. Increase in the export sales of agribusiness products from private sector enterprises assisted by the project	No	Standard trade statistics	Sri Lanka: AgEnt	Increase in annual value of exports from non-plantation crops
7. Increase in the domestic sales of agribusiness products from private sector enterprises assisted by the project	No		Indonesia: ADP	Increase agribusiness trade by \$ ___ (amount)
			India: ACE	Larger share of agricultural goods in exports Growth of output and sales in key subsectors: gross sales (national and State of Maharashtra)

TABLE C-3 – Continued

Indicator	Possible or Feasible to Segregate by Gender?	Data Sources	Projects Using Similar Indicators	Impact Expected or Indicator Specified in Project
				Growth of output and sales in key subsectors: horticultural production in Maharashtra
				Growth of output and sales in key subsectors: processing volume in Maharashtra
				Growth of output and sales in key subsectors. export sales in Maharashtra
			Nepal: MARD	Expected result: expanded commerce in new and traditional cash commodities
			Philippines: ASAP	Increase in agribusiness sales for assisted firms (export or domestic)
<b>Investment</b>				
8. Increase in foreign private sector investment in agribusiness enterprises assisted by the project	No		Sri Lanka: AgEnt	Improved agroenterprise financing: total investments approved in agribusiness
9. Increase in domestic private sector investment in agribusiness enterprises assisted by the project	No			Increase in private sector investment
10. Number of cooperative agreements entered into between foreign private sector enterprises and enterprises assisted by the project				
11. Increase in foreign private sector investment in agribusiness enterprises	No	Project records: data collected from assisted enterprises	India: ACE	Total assets invested in projects supported by the project
12. Increase in domestic private sector investment in agribusiness enterprises	No	Project records: data collected from assisted enterprises		
			Nepal: RDP	Improved community management of productive resources achieved by increased private investment for development
			Indonesia: ADP	Rates of increase in trade and investment in specific agribusiness lines supported by the project; in assisted product lines investment of \$250 m, at least \$100 m in U.S. goods and services

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TABLE C-3 – Continued

Indicator	Possible or Feasible to Segregate by Gender?	Data Sources	Projects Using Similar Indicators	Impact Expected or Indicator Specified in Project
<b>Value Added</b>				
13. Increase in value added production in agribusiness enterprises assisted by the project	No		Sri Lanka: AgEnt	Increased value added production
14. Increase in the number of agribusiness enterprises that process value added products	No		Nepal: RDP	Increased productivity – measured by increased household income and food self-sufficiency
			India: ACE	Larger share of agroindustry in industrial value added
<b>Protecting the Environment</b>				
15. Number of enterprises using environmentally sound technologies as a result of project assistance	Yes	Project records	None	

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**ANNEX D**

**DEFINITIONS OF TERMS USED IN PAPER**

Throughout this paper the following terms — goal, purpose, impacts, outputs, inputs, and indicators — are used. These terms are defined below.

- **Goal:** The project goal is a statement of the objective to which the project is directed. It is usually set at a level beyond the project and cannot be expected to be attained by a single project. However, it is assumed that the project will contribute toward goal achievement.
- **Purpose:** The purpose is the reason for doing the project. It defines in narrative terms the results expected or desired at the end of the project. In a well-planned project, achievement of the purpose contributes to achievement of the goal.
- **Impacts:** The impact of a project is the result of achieving the goal and purpose of a project.
- **Outputs:** Project outputs are the results produced by the project that, taken together, lead to achievement of the purpose.
- **Inputs:** Inputs are the resources provided to carry out project activities that lead to producing project outputs.
- **Indicators:** An indicator is a measurement instrument or device that can facilitate concise, comprehensive, and balanced judgment about progress toward achieving objectives.