

PN - AAV-849
47089

ABT ASSOCIATES INC.
55 WHEELER STREET, CAMBRIDGE, MASSACHUSETTS 02138
TELEPHONE: AREA 617-492-7100
TELEX: 710-320-1382

AAI #85-73

Contract No. DAN-4084-C-00-3087-00

TOWARDS A NEW PL-480 TITLE III
AGREEMENT WITH BANGLADESH

Agricultural Policy
Analysis Project

November 14, 1985

Authors:

James T. Riordan, team leader
Steven Block
Marty Makinen

With assistance from
S.D. Chaudhury

Submitted to:
Lowell Lynch
Food for Peace Office
Agency for International
Development
Dhaka, Bangladesh

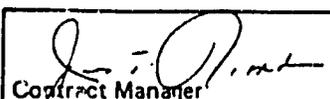
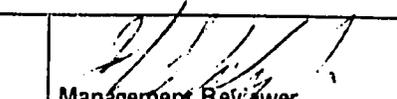
 Contract Manager	 Quality Control Reviewer	 Management Reviewer
---	---	--

TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	i
1.0 INTRODUCTION	1
2.0 CONCEPTUAL FRAMEWORK: FOOD AID AS A TOOL FOR PROMOTING FOOD SECURITY	2
2.1 The Mandate of the PL-480 Title III Legislation	2
2.2 Promotion of Macro and Micro Food Security: Food Security Versus Food Self-Sufficiency	3
3.0 PROPOSED OVERALL APPROACH	7
3.1 Relationship to Previous Title III Agreements	7
3.2 Proposed Emphasis of the New Agreement	8
3.3 Interrelationship of Policy and Program Dimensions	11
3.4 Relationship of Title III Agreement to Other USAID, BDG, and Other-Donor Programs	12
4.0 POLICY DIMENSIONS	15
4.1 Partial Stabilization of Producer and Consumer Food Markets	15
4.2 Reform of the Rationing System	19
4.3 Agricultural Productivity	23
4.4 Policies to Promote Non-Farm Rural Employment Generation	28
5.0 PROGRAM DIMENSIONS	31
5.1 Procurement of Foodgrains to Maintain Incentive Prices to Producers	31
5.2 Productive Income-Generating Activities for the Rural Poor	32
5.3 Testing of Maize as a Self-Targetting Food to Benefit the Poor	34
5.4 Irrigation Projects	35
5.5 Projects to Promote Maize, Pulses, Oil Seeds, etc.	36
5.6 Skills Education in Conjunction with Vulnerable Group Feeding (VGF) Programs	36
5.7 Creation of Institutional Capacity for Mon- itoring Progress Under Program Initiatives	37
5.8 Development of Improved Mechanisms for Targetted Food Rations	37

APPENDIX A

APPENDIX B

EXECUTIVE SUMMARY

The purpose of this report is to suggest an overall direction for the new Title III agreement. As such it would be inappropriate for this report to recommend detailed programs and policies. Rather, the Food Policy Team sees its task as being to assess "the big picture" -- to identify broad policy directions, to suggest types of programs, and to highlight the complementarities among these ideas. Our strategy in approaching this task is not to produce a "laundry list" of problems and policies. Instead, we have selected what we feel are the best policy tools for dealing with the major problems, and have suggested an integrated approach for applying them in Bangladesh.

Mandate of the PL-480 Legislation

The PL-480 preamble calls for the USG to use its agricultural productivity to combat hunger and malnutrition and to encourage economic development in recipient countries. The commodity aid provided and the local currency generated by the sales of those commodities are to be used to assist the recipient countries to:

- increase their own agricultural production;
- emphasize development of small, family farm agriculture; and
- improve their production, storage, and handling of agricultural food products.

Title III extends this mandate to call explicitly for a balance between the concern for equity and the desire to help recipient countries increase their own food production. We expect the new agreement to continue to sustain that mandate.

Conceptual Framework

The conceptual approach of this report is to examine how Title III assistance can promote food security for Bangladesh. We define food security in its broadest sense: a country's ability to maintain access to adequate supplies of food for all people at all times. Thus defined, food security reaches beyond the level of buffer stocks available for an emergency. This broad notion of food security extends to a country's ability to produce or to trade for adequate supplies of food, as well as its ability to assure access to these supplies for all socio-economic groups in society.

Thus defined, food security is conceptually distinct from food self-sufficiency, primarily in its recognition of trade as an important policy tool for managing domestic agricultural policy. This broad definition of food security thus subsumes both "macro" and "micro" notions of food security. Macro food security refers to the aggregate supply of food relative to the aggregate demand, and a country's ability to sustain sudden shocks to that supply/demand equation. Micro food security, in contrast, refers to the ability of households in each segment of society to maintain adequate nutrition levels either through the market or through public channels. Macro food security does not assure micro food security, though it is a necessary condition for it.

This report identifies policies and programs that utilize Title III food aid in moving Bangladesh towards positions of both macro and micro food security. By subsuming the need both to increase agricultural productivity and the need to increase the ability of poor consumers to purchase food and other goods (their effective demand), this broad definition of food security becomes central to the country's general economic development.

Placing Title III in this context requires recognition of the fundamental dilemma that confronts food and agricultural policy in Bangladesh: the urgent need to provide incentives for intensified agricultural production while simultaneously protecting the nutritional well-being of vulnerable consumers.

This report envisions Title III assistance as a tool for easing that dilemma. In broad terms, the key is to use the Title III agreement to create a policy environment that promotes the development of a competitive private marketing sector that conveys appropriate incentives to producers and consumers. Within this context, it is also essential to adopt policies to promote the generation of non-farm rural employment, and programs to target income generation and consumption supplements to the rural poor.

To make this approach operational, the Food Policy Study Team has designed an integrated set of policies and programs intended to:

- provide incentives and resources to increase agricultural production;
- broaden the participation of the rural poor to share in this enhanced productivity;
- broaden the base of effective demand for food and other goods through the generation of non-farm rural employment;

- target subsidies to those segments of the population genuinely in the greatest need;
- partially stabilize food markets to the benefit of both producers and consumers; and
- maintain linkages between domestic and international agricultural markets.

The expected outcomes from our recommendations are: 1) increased intensity of food production; 2) lower real food prices; 3) significant reductions in the number of malnourished consumers; and, 4) greater food security for the country as a whole. An underlying expectation is that this progress will become increasingly self-sustaining. Yet, this transition will require the continuation of generous amounts of external resources and a great deal of patience.

Proposed Approach

New initiatives are needed to attack the elements of Bangladesh's food security problems not previously stressed by Title III, while the salutary gains of the first two agreements are solidified and deepened.

Towards this end, our proposed approach to the new Title III agreement, emphasizing macro and micro food security, will:

- better define the criteria for the programming of local currency use to fit within the theme of food security;
- strengthen the incentives for the BDG to purchase domestic foodgrains through the procurement system to enhance producer incentives;
- encourage the creation of self-sustaining productive employment opportunities for the rural poor;
- promote greater diversification in crop production, with particular emphasis on pulses, oilseeds, and possibly maize;
- promote the expansion of irrigated cultivation through policies that encourage the optimal use of increasingly scarce water resources;
- encourage new uses of commodities, policies, and programs to address the expanded goals suggested for Title III;

- reorient the use of remaining Public Food Distribution System (PFDS) rations to those in nutritional jeopardy, while consolidating previous gains in reduction of the food subsidy; and
- continue to back the operation of the OMS system to stabilize seasonal foodgrain prices with Title III commodities;

In short, the proposed emphasis of the new agreement does not envision radical changes in the Title III program. Rather, it expands the scope of activity of previous agreements in new directions within an overall, consistent food security package that stresses the generation of self-sustaining income-producing activities specifically for the rural poor.

Interrelationship of Policy and Program Dimensions

As in previous agreements, policy reform and the programming of local currency will both play important roles. On the policy side, the agreement will initiate policy changes in support of BDG practices -- particularly those which relate to expansion and diversification of agricultural production, as well as consolidate reforms to date. On the program side, there will remain considerable flexibility of allocation among a variety of end uses. These permissible end uses will be defined in relatively specific terms as a function of both the broad policy initiatives as well as the strategy's focus on target populations.

The Role of Proposed Policies and Programs

Agricultural policies will play a central role in determining the course of Bangladesh's economic development. The fundamental importance of policy comes in shaping the universe of price signals that condition the economic decisions of private actors in the Bangladeshi economy, thus creating an economic environment conducive to private sector development. Private trade accounts for the marketing of 85%-90% of all agricultural commodities in Bangladesh. BDG agricultural marketing policies -- any policies that influence producer and consumer prices, as well as the storage, transportation, and processing of commodities -- should take this perspective as their point of departure.

Operationally, the BDG's progress on the policy front will be a condition for annual allocations of commodities under the agreement. This report proposes policy reforms in four categories related to agricultural marketing: (a) partial

market stabilization; (b) reform of the ration system; (c) promotion of increased agricultural productivity, and (d) generation of non-farm rural employment.

The report also recommends programs intended to fall within and to further these policy dimensions. The new agreement will define end uses that will be eligible for loan forgiveness. Within these uses, the BDG will have the flexibility to expend local currency in designated ways. The basic criteria for eligibility are that end uses contribute to the emphasis on agricultural production and that they have a developmental impact on the rural poor. At this time, it is anticipated that eligible end uses will include: (a) procurement to maintain production incentives; (b) productive activities contributing to the participation of the rural poor in development; (c) testing maize as a self-targeting food; (d) irrigation projects; (e) promotion of maize, pulses, and oilseeds; (f) skills education in vulnerable group feeding programs; (g) creation of institutional capacity for monitoring program activities; and (h) improvements of the mechanisms for targeted food rations.

Title III comprises one third to one half of total Mission development resources. As such, it has the potential to provide a unifying framework for integrating all PL-480 assistance. Both Title III and Title II, as well as the Mission portfolio as a whole, will benefit from this association.

1.0 INTRODUCTION

The Abt Associates Food Policy Study Team is pleased to submit this report on the upcoming PL-480 Title III agreement between the U.S. and Bangladesh. As the new agreement is not to be concluded until this time next year, the present report is only the first stage in a complex and sensitive process.

Our purpose in this report is to suggest an overall direction for the new Title III agreement. As such it would be inappropriate for this report to recommend detailed programs and policies. Rather, we see our task as being to assess "the big picture" -- to identify broad policy directions, to suggest types of programs, and to highlight the complementarities among these ideas. Our strategy in approaching this task is not to produce a "laundry list" of problems and policies. Instead, we have selected what we feel are the best policy tools for dealing with the major problems, and have suggested an integrated approach for applying them in Bangladesh.

Given the breadth of our scope of work (which continued to grow as we progressed) and the brevity of our time in country, it is unlikely that our report is accurate in all details. Nonetheless, we are confident that the general directions we identify are both developmentally appropriate for Bangladesh and consistent with the intent of the Title III legislation.

We also acknowledge and would like to express our gratitude for the excellent support and congeniality of USAID/Bangladesh, and the openness of all with whom we have spoken. The team also wishes to thank Peter Timmer for his careful review of our draft.

2.0 CONCEPTUAL FRAMEWORK: FOOD AID AS A TOOL FOR PROMOTING FOOD SECURITY

2.1 The Mandate of the PL-480 Title III Legislation

The PL-480 preamble calls for the USG to use its agricultural productivity to combat hunger and malnutrition and to encourage economic development in recipient countries. The commodity aid provided and the local currency generated by the sales of those commodities are to be used to assist the recipient countries to:

- increase their own agricultural production;
- emphasize development of small, family farm agriculture; and
- improve their production, storage, and handling of agricultural food products.

The Title III legislation explicitly calls for a balance between the concern for equity and the desire to help recipient countries increase their own food production. It states:

The overall goal of assistance under this title shall be to increase the access of the poor in the recipient country to a growing and improving food supply through activities designed to improve the production, protection, and utilization of food, and to increase the well-being of the poor in the recipient country. Particular emphasis should be placed on activities which effectively assist small farmers, tenants, sharecroppers, and landless agricultural laborers, by expanding their access to the rural economy through services and institutions at the local level, and otherwise providing opportunities for the poor who are dependent upon agriculture and agriculturally related activities to better their lives through their own efforts. (SEC 301(b))

The Title III mandate guided the current Agreement (8 March 1982) between the USG and the BDG. The policy of the USG as stated in the current Agreement is to assist the BDG in efforts "to increase the availability of food to the poor and to improve in other ways the quality of their lives." Specifically, the Agreement calls for self-help measures "to contribute directly to development progress in poor rural areas and enable the poor to participate actively in increasing agricultural production through small farm agriculture." The proceeds from the sale of the commodities are to be used to finance the self-help measures and "for development in the agricultural sector, in a manner designed to increase the access of the poor. . . to an adequate, nutritious, and stable food supply."

The current agreement thus addresses the mandate of Title III assistance to be used to increase agricultural production and to combat hunger and malnutrition with special attention to the needs of the rural poor. The new agreement will continue to sustain that mandate.

2.2 Promotion of Macro and Micro Food Security: Food Security Versus Food Self-Sufficiency

This report approaches the notion of "food security" in its broadest sense: a country's ability to maintain access to adequate supplies of food for all people at all times. Thus defined, food security reaches beyond the level of buffer stocks available for an emergency. This broad notion of food security extends to a country's ability to produce or to trade for adequate supplies of food, as well as its ability to assure access to these supplies for all socio-economic groups in society.

This broad definition of food security thus subsumes both "macro" and "micro" notions of food security. Macro food security refers to the aggregate supply of food relative to the aggregate demand, and a country's ability to withstand sudden shocks to that supply/demand equation. Micro food security, in contrast, refers to the ability of households in each segment of society to maintain adequate nutrition levels either through the market or through public channels. Macro food security does not assure micro food security, though it is a necessary condition for it. Thus defined, food security is quite distinct from food self-sufficiency.

The distinction between food security and food self-sufficiency is crucial, for it leads to the possible conclusion that a position of full self-sufficiency could result in a lower level of food security than a position of "near" self-sufficiency that leaves room for trade as a source of marginal consumption requirements. Full food self-sufficiency for Bangladesh would have two principal drawbacks:

- 1) Each additional unit of food production requires the expenditure of a greater quantity of domestic resources than the previous unit. This means that at some level of domestic food production, importing a unit of food begins to cost less than growing it. Domestic production beyond that point diverts scarce domestic resources from alternative uses, and thus directs resources away from their most efficient use. In other words, self-sufficiency in food production would be extremely expensive for Bangladesh to attain.

- 2) Complete dependence on domestic production would make the BDG's current cereal price stabilization policies virtually impossible to manage. Without the use of trade to even out fluctuations in domestic production levels, these fluctuations would cause parallel fluctuations in domestic food prices. Under conditions of self-sufficiency, the only tool for controlling price swings would be physical stocks, which are extremely expensive to hold and difficult to manage. The budgetary cost of controlling these price swings could be prohibitive in the absence of trade as a tool for balancing fluctuations in domestic production.

This report identifies policies and programs that utilize Title III food aid in moving Bangladesh towards positions of both macro and micro food security. By subsuming the need both to increase agricultural productivity and to increase the ability of poor consumers to purchase food and other goods (their effective demand), this broad definition of food security becomes central to the country's general economic development.

Title III provides an important opportunity to support economic development in Bangladesh. Thus, it is extremely important that the policies and programs that condition Title III assistance be conceived of in the general context of development policy, rather than merely as a palliative for today's problems. The predominance of agriculture in the Bangladeshi economy justifies a focus on policies and programs related primarily to that sector.

Placing Title III in this context requires recognition of the fundamental dilemma that confronts food and agricultural policy in Bangladesh: the urgent need to provide incentives for intensified agricultural production while simultaneously protecting the nutritional well-being of vulnerable consumers. This is essentially a conflict between long-term incentives and short-term welfare concerns.

This report envisions Title III assistance as a tool for easing that dilemma. In addition to adding to the aggregate food supply, Title III provides an infusion of local currency resources for the BDG that can help both to support intensified agricultural production and to protect nutritionally vulnerable consumers. By reducing the conflict between long-term development objectives and short-term necessities, food aid can help to provide a bridge to facilitate movement towards broader economic development.

Our team is well aware that this conception of food aid means little in the abstract. Thus, our objective has been to identify ways in which to make this conception operational in the present context, with its numerous constraints. We are also aware of the danger that the long-run availability of food aid can reduce the BDG's incentives to invest in domestic food production and other sources of foreign exchange earnings. Yet, Title III assistance also provides an opportunity to influence the BDG away from that temptation.

The Food Policy Study Team has attempted to incorporate these opportunities into a package of mutually reinforcing measures to:

- provide incentives and resources to increase agricultural production;
- broaden the participation of the rural poor to share in this enhanced productivity;
- broaden the base of effective demand for food and other goods through the generation of non-farm rural employment;
- target subsidies to those segments of the population in the greatest need;
- partially stabilize food markets to the benefit of both producers and consumers; and
- maintain linkages between domestic and international agricultural markets.

Clearly, the food and agricultural problems facing Bangladesh will not be solved in one year, or three, or five. Progress will be evolutionary. Yet, in pursuing this evolution, it is essential to start up the correct path. Food and agricultural policies will shape that path, and the Title III agreement has an important role to play in defining its direction.

The policies recommended in this report are intended to assist USAID and the BDG in selecting directions for food and agricultural development in Bangladesh. The expected outcomes from our recommendations are movements towards: 1) increased intensity of food production; 2) lower real food prices; 3) significant reductions in the number of malnourished consumers; and, 4) greater food security for the country as a whole. An underlying expectation is that this progress will become increasingly self-sustaining. Yet, this transition will require the continuation of generous amounts of external resources and a great deal of patience.

These expectations refer to directions of change. Perhaps the final attainment of these goals is unlikely during the course of the third Title III agreement. Still, that agreement is certain to play an important role in determining the extent of the progress.

The following sections of this report suggest a mix of policies and programs designed to further these objectives, with explicit concern for both the efficacy of using Title III for these ends and the likely acceptability of these measures to the BDG.

3.0. PROPOSED OVERALL APPROACH

3.1 Relationship to Previous Title III Agreements

The past two Title III Agreements have made impressive progress toward the dual objectives of increasing agricultural production (macro food security) and combatting hunger and malnutrition (micro food security). However, much remains to be done.

Fast progress has included:

- (a) the establishment of a component of the Public Food Distribution System (PFDS) to stabilize consumer prices through open market sales (OMS) during pre-harvest periods, when market prices are at their highest;
- (b) improving production incentives through the procurement system, which strives to assure a minimum price for grain producers;
- (c) reduction in the food subsidy to the non-needy both by raising the ration price and by changing its commodity composition away from rice (the preferred foodgrain) and toward wheat; and
- (d) establishment of a national system of foodgrain reserves and storage capacity sufficient to assure an adequate physical food supply in the case of a bad harvest.

In addition, the proceeds from the sales of the Title III commodities have supported agricultural production through their use to support other donor projects within the BDG's Medium-Term Foodgrain Production Plan, mainly in the area of irrigation.

New initiatives are needed to attack the elements of Bangladesh's food security problems not previously stressed by Title III, while the salutary gains of the first two agreements are solidified and deepened.

The strongest accomplishments of the past Agreements are the OMS system and the national foodgrain reserves. OMS helps to stabilize consumer foodgrain prices, thereby improving, but not assuring, micro food security. The foodgrain reserves provide some degree of macro security by assuring that emergency shortfalls can be met. They also provide the foundation for BDG food interventions, notably OMS and PFDS.

Our proposed approach to the new Title III agreement, emphasizing macro and micro food security, will:

- better define the criteria for the programming of local currency use to fit within the theme of food security;
- strengthen the incentives for the BDG to purchase domestic foodgrains through the procurement system to enhance producer incentives;
- encourage the creation of self-sustaining productive employment opportunities for the rural poor;
- promote greater diversification in crop production, with particular emphasis on pulses, oilseeds, and possibly maize;
- promote the expansion of irrigated cultivation through policies that encourage the optimal use of increasingly scarce water resources;
- encourage new uses of commodities, policies, and programs to address the expanded goals suggested for Title III;
- reorient the use of remaining PFDS rations to those in nutritional jeopardy, while consolidating previous gains in reduction of the food subsidy; and
- continue to back the operation of the OMS system to stabilize seasonal foodgrain prices with Title III commodities;

In short, we propose an integrated package of policies and programs that moves Title III in new directions building on past successes.

3.2 Proposed Emphasis of the New Agreement

The new agreement should seek to integrate several new emphases tailored to the unique challenges confronting development policy in Bangladesh with a consolidation of past efforts. The proposed emphasis of the new agreement follows from the team's identification of certain aspects of the country's economic and social situation as being particularly problematic. The basic characteristics of the Bangladeshi economy are well known.

The agricultural sector dominates both the economic and the social fiber of Bangladesh. Roughly 83% of the population lives in rural areas. Rural people represent 86% of the civilian labor force, 59% of which is directly employed in

agriculture. As one of the world's most densely populated countries, there is tremendous pressure on limited land resources. Moreover, the distribution of land-ownership (and thus wealth) is highly skewed: 4% of the population owns 32% of the land, while nearly half of the rural population is landless or functionally landless (owning less than half an acre). This situation contributes to severe seasonal unemployment and an extremely low standard of living for the functionally landless rural poor. (Current national per capita income is roughly \$125.) This widespread poverty in turn contributes to widespread malnutrition: the World Bank reports that less than 40% of the population is adequately nourished by the daily minimum standard of 2020 calories, and 45% of the population consumes under 1650 calories daily. Ninety percent of the malnourished live in rural areas, with the landless and informal non-farm labor (32% of the population) surviving on merely 1500 calories per day (the minimum level necessary to sustain body weight).

The severity of these structural characteristics leaves little room to maneuver agricultural policy: the large number of marginal consumers imposes a severe constraint on the BDG's ability to provide production incentives through output prices. Bangladesh is virtually unique in the severity of its food policy dilemma. These essential features of the country's situation have guided the team towards the proposed emphasis of the new agreement.

The need to tie agricultural production issues to the new agreement -- a new emphasis under Title III -- is quite strong. The population growth rate of roughly 2.6% annually (which implies a doubling time of only 27 years) dramatically illustrates the need for increased agricultural production. Yet, increased production alone is not a panacea: the extremely high ratio of labor to land creates a situation in which increased agricultural production by itself is incapable of absorbing labor at the rate at which the labor force is growing. While opinions differ as to the precise capacity of agriculture to absorb labor, the rough magnitude of this relationship is suggested by a recent World Bank report that found that the rate of growth in rural employment is only one third the rate of growth in agricultural output.

Agricultural development in Bangladesh risks running into an income constraint, in which the purchasing power of the rural poor is insufficient to drive production increases. Moreover, the increased food farmgate prices necessary to stimulate increased productivity can severely erode the purchasing power of poor

consumers (who typically spend 70% of their income on food), and significantly reduce their already low nutritional status. Thus, if the benefits of increased agricultural production are to be shared among all segments of rural society, and not come at the expense of submerging large numbers of nutritionally vulnerable consumers into even more severe hunger, employment generation for the rural poor is a necessity.

The new Title III agreement should strive to target its interventions to the rural landless (in itself a new thrust for Title III) by generating employment opportunities for them in activities that directly complement production initiatives and that provide a self-sustaining flow of economic activity to that target population.

In this connection, Title III assistance has the potential for providing a broad context for programs such as Title II Food for Work. By following the general directions suggested here, Title II can both add to the goals of Title III and benefit from the association itself. Title III can deepen and expand the benefits of current Title II activities by:

- 1) providing the currency to purchase complementary inputs (such as bricks to surface roads) that Title II alone (with wheat as its only resource) cannot provide;
- 2) lending institutional capacity to a program that could expand if that constraint were eased; and,
- 3) providing more flexibility in the regulations than those that currently govern Title II.

In moving to incorporate renewed objectives for agricultural productivity, the new agreement should not prematurely abandon the consumption aspects of earlier agreements. As these employment generating activities take shape, there will remain a need to protect nutritionally vulnerable groups. Here, too, by stressing targeted consumption interventions, Title III can play a constructive role. Nevertheless, to the greatest extent possible these targeted consumption interventions should be income-generating activities that directly contribute to agricultural productivity, rather than "handouts." Section 5.2, below, describes specific initiatives for such programs.

One element of the past agreements that the team strongly endorses is the emphasis on partial stabilization of markets through Open Market Sales (OMS) on the consumption side and through procurement pricing on the production side. These policies provide important elements of food security, as well as direct

benefits to both producers and consumers. Yet, the team wishes to stress its finding that OMS is not a substitute for targeted consumption interventions. Nor is BDG crop procurement the sole requirement for increased agricultural production. The primary benefit of procurement for producers is that it removes some of the risk of investing in new technologies, and thus promotes the use of higher-yielding production techniques. (Section 4.1 addresses the need for more explicit analysis in determining the range within which prices are allowed to fluctuate.)

In short, the proposed emphasis of the new agreement does not envision radical changes in the Title III program. Rather, it expands the scope of activity of previous agreements in new directions within an overall, consistent food security package that stresses the generation of self-sustaining income-producing activities specifically for the rural poor.

3.3 Interrelationship of Policy and Program Dimensions

As in previous agreements, policy reform and the programming of local currency will both play important roles. On the policy side, the agreement will initiate policy changes in support of BDG practices -- particularly those which relate to expansion and diversification of agricultural production, as well as consolidate reforms to date. On the program side, there will remain considerable flexibility of allocation among a variety of end uses. These permissible end uses will be defined in relatively specific terms as a function of both the broad policy initiatives as well as the strategy's focus on target populations.

The desirability of accomplishing both policy reform and effective programming local currency (in the face of BDG resistance to relinquishing its own policy and budgetary discretion) requires that a balance be struck among several elements: USAID's desire to leverage policy change through Title III assistance, the need to account accurately for program funds, the BDG's need for flexibility in allocating its investment budget, USAID's desire to see funds properly spent, and the available administrative capacity to monitor currency uses. (Indeed, one valid use of local currency may be to hire a local firm to monitor accounts or to build the administrative capacity within the BDG to play that role.) Each of these concerns is valid and must play a role in the final agreement. Yet, the extent to which they compete with one another is somewhat a function of the final form that the agreement takes.

The team's approach of presenting an integrated package of policies and programs is conducive to resolving these questions. As the following sections of this report will illustrate, some of the initiatives presented require more specific accounting for funds than do others. Certain desired policies will require specific supporting programs for which some degree of financial accountability will be desirable, while other policy initiatives will imply no specific use of funds.

To the extent that the balance between policy reforms and tight local currency programming becomes too skewed in one direction, it will likely be at the expense of those objectives that rest on the other side of the scale. A balance that retains sufficient flexibility to support an integrated package of policies and programs will be essential to the new agreement's success.

3.4 Relationship of Title III Agreement to Other USAID, BDG, and Other Donor Programs

The policy and program emphases of our proposed approach to the new Title III agreement will build on and complement other USAID, BDG, and other donor programs in Bangladesh. The proposed approach does not, however, try to be the complement to all other programs. It is focussed on food security, and will support and be supported by elements of other programs that try to address this set of development problems.

Because the team is more familiar with the specifics of the USAID program, more will be said here about how the proposed Title III approach fits with that program than about how it complements BDG and other donor programs. However, the theme of the BDG Third Five-Year Plan is creation of more employment and equitable division of wealth alongside efforts to achieve greater economic growth. The micro and macro food security goals of the proposed Title III framework parallel this theme.

Other donors finance projects that address both agricultural production constraints and rural employment creation. For example, the World Bank is financing projects to expand irrigated acreage, to import fertilizer and improve its domestic production and distribution, to promote cottage industries, and to improve agricultural credit. The World Food Program supplies food aid for Food for Work activities and vulnerable group feeding (in addition to that supplied by USAID). The Asian Development Bank has supported expansion of irrigation, domestic fertilizer production, crop intensification, and community forestry.

Various bilateral donors have supported agricultural research, irrigation expansion, and foodgrain storage. Such projects (if they are found to be of sound design) would be eligible for support by the taka proceeds from the sale of Title III commodities insofar as they contribute both to broadening the participation of the rural poor and to increasing agricultural production.

Support for other donor projects that are consonant with these policy initiatives will preserve and strengthen the consistency of the new Title III agreement. The identification of eligible projects for support through the Title III proceeds will be undertaken during intensive review. Other components of the USAID development assistance program support increased agricultural production directly, particularly its agricultural research, fertilizer-distribution improvement, and rural finance projects. Food for Work, road maintenance and improvement, rural electrification, and agro-climatic environmental monitoring all support agricultural production indirectly. Further, Food for Work, rural industries, rural electrification, and the planned agro-forestry project all work directly or indirectly toward providing more sustainable employment opportunities for the rural poor. Title II food aid is used for Food for Work activities to provide effective demand for food among the rural poor and to build roads that contribute to furnishing incentives for agricultural production.

The proposed Title III framework will reinforce the objectives of DA and Title II initiatives. The support for a stronger procurement system will assist DA projects in fulfilling their goals of increasing production. The proposed criteria for use of taka proceeds will contribute to the achievement of increasing sustainable employment for the neediest. Title III resources will contribute directly to the developmental objectives of the Title II program by strengthening the financing of complementary inputs to Food for Work projects already begun. (Section 5.2 provides program-level details of this complementarity.)

The fact that Title III comprises one third to one half of total Mission development resources suggests that it has the potential to provide a unifying framework integrating all of PL-480 assistance. Both Title III and Title II, as well as the Mission portfolio as a whole, will benefit from this association.

Another important component of USAID's DA portfolio is its family planning initiatives. The goal of these projects is to reduce fertility by increasing the prevalence of contraception. Higher incomes and improved economic security are

widely believed to be important elements in increasing the demand for contraception. Title III initiatives to increase rural incomes (both agricultural and non-agricultural) and to improve micro food security will thereby indirectly aid in increasing demand for contraception.

Thus, the new Title III agreement will complement on-going efforts of USAID, and other parties, and will stress those objectives that are most appropriate for Title III.

4.0 POLICY DIMENSIONS

Agricultural policies will play a central role in determining the course of Bangladesh's economic development. The fundamental importance of policy comes in shaping the universe of price signals that condition the economic decisions of private actors in the Bangladeshi economy, thus creating an economic environment conducive to private sector development. Private trade accounts for the marketing of 85%-90% of all agricultural commodities in Bangladesh. BDG agricultural marketing policies -- any policies which influence producer and consumer prices, as well as the storage, transportation, and processing of commodities -- should take this perspective as their point of departure.

Operationally, the BDG's progress on the policy front will be a condition for annual allocations of commodities under the agreement. This chapter proposes policy reforms in four categories related to agriculture: (a) partial market stabilization; (b) reform of the ration system; (c) promotion of increased agricultural productivity; and, (d) non-farm rural employment generation.

4.1 Partial Stabilization of Producer and Consumer Food Markets

Market stabilization policies operate to protect both producers and consumers from wide seasonal price fluctuations and from unforeseen shocks to the country's food system. Such shocks include weather-induced production variability as well as sudden changes in international commodity and input prices.

The principal tools through which the BDG has pursued market stabilization to date have been procurement of stocks on the open market at pre-announced floor prices, and dampening of price peaks through release of stocks into the market by means of open market sales at prices which shadow fluctuations in open market prices. (Other consumption-oriented programs have less effect on market prices: Statutory Rations (SR) and Modified Rations (MR) provide price ceilings for fixed quantities of cereals, but have little effect in dampening large price swings; as presently structured, FFW has little effect on market prices for food.) To date, the BDG has been more diligent in protecting consumer prices than it has been in defending producer prices.

OMS and crop procurement, together, act to define a loose range within which cereal prices may fluctuate. Both producers and consumers benefit from this combination of policies. Yet, the net social benefits of these policies depend

critically on the width of this price band. Commodity price stabilization is a costly endeavor, and the BDG must balance benefits against costs in determining the range between procurement and OMS prices.

The dangers of imposing too narrow a range on prices are of two types. The normal seasonal price rise between harvests directly reflects the cost of storing commodities over that period (if storage costs are competitively determined). When price floors and ceilings contract that range, the BDG subsidy required to defend that policy increases with the square of the proportion by which the competitive margins are reduced. Moreover, this "squeeze" on marketing margins progressively removes incentives for private storage, thus pushing out private traders and leaving the BDG responsible for storing and marketing large quantities of stocks. The current practice of determining the range between procurement and OMS trigger prices independently of considerations of the cost of storage thus exposes the BDG to the risk of incurring substantial costs and responsibilities.

OMS

By most accounts, the OMS policy has been well operated by the BDG. This has brought reasonable success in dampening pre-harvest price peaks, to the benefit of many consumers. OMS protects consumer welfare by providing them a price buffer against large jumps in market prices. At the same time, OMS complements the proposed phase-down of SR subsidies, since it is largely the same consumer groups who benefit from each. (Section 4.2 presents the team's recommendations regarding reforms of the ration system.) The team commends this operation and recommends that it remain a central feature of the new agreement.

It is important, however, to recognize the limits to what OMS can accomplish in protecting consumers. The benefits of price stabilization accrue mainly to those consumers who can exercise effective demand at market prices. The neediest consumers, whose effective demand is insufficient to purchase a nutritionally adequate diet at market prices, benefit minimally, if at all from OMS. Because OMS is untargeted, prices would have to be stabilized at very low levels in order to benefit the neediest. The budgetary requirements of such stabilization would be prohibitive. This strongly suggests the need for targeted consumption interventions to complement OMS. Such interventions do not compete with one another, since OMS is incapable of significantly protecting the target populations.

Production Disincentives

The concern is commonly expressed that food aid has a disincentive effect on domestic production. This is a serious concern, especially for a country like Bangladesh, which in the absence of food aid could not import the same quantities it currently receives. However, a **concern for disincentive effects strengthens the argument for targeted consumption interventions**. By supplementing the consumption of those consumers with little or no effective demand for food, targeted interventions minimize displacing the effective demand that otherwise would have supported domestic farmgate prices.

Crop Procurement

Price protection for producers operates through government procurement of foodgrains at pre-announced prices. The policy of crop procurement serves two principal functions: 1) to protect farmers from having to make desperation sales when farmgate prices are too low; and, 2) to reduce the risks of volatile market prices that can keep farmers from investing in more productive technologies. Sufficiently high procurement prices (relative to production costs) can also serve as direct incentives for increased agricultural production.

Crop procurement also serves the important purpose of generating security stocks of cereals (though, as noted earlier, the high cost of holding public stocks makes this a two-edged sword). These stocks provide the foundation for the BDG's consumption-side programs -- OMS and the Public Food Distribution System (PFDS). If Title III policy leverage is successful in motivating a vigorous procurement program, it may be possible over time to reduce Title III's role in supplying the physical stocks necessary to operate OMS.

BDG performance in announcing procurement prices before planting time, and in rigorously defending those prices, has been erratic. This year, for example, procurement of boro rice has been low because, for the first time, the Food Ministry has enforced strict moisture standards for its procurement. Although desirable for reducing storage losses, this decision effectively excused the Ministry from defending its floor price and acted to undermine the procurement program. Because of the importance that procurement will play in the new agreement, it is important that the agreement take account of the factors that motivate the BDG to hedge on procurement and act to mitigate those factors.

Four factors appear to impede effective government procurement. (1) The BDG faces the common situation in which organized urban consumer groups create political pressure to provide inexpensive food in the cities. Supporting incentive prices to farmers makes it more difficult for the BDG to accommodate this political pressure. (2) The BDG faces tight resource constraints. Procurement of foodgrains in good production years (such as this one) creates substantial cash flow pressure for the BDG. (3) Current regulations and agreements limit the channels through which the BDG can manage and dispose of stocks once procured. (4) When food imports are high (as they were last year in anticipation of a disaster that never materialized), the BDG can find itself holding large stocks that it can only dispose of by taking large financial losses. Our interviews with Food Ministry officials reflected their fear of taking large losses in the disposal of procured stocks. One should note, however, that good harvests earlier this year (along with high import levels last year) make this season atypical (and hence exaggerate these problems). Yet, it is a situation that production trends indicate is likely (and desirable) to recur.

The first of these constraints has no cure but the political will to confront the relatively well-off urban consumer groups. Title III can be of little direct assistance in that regard (though an indirect benefit may be to provide the BDG a scapegoat for having to make painful adjustments). Still, there is some scope for Title III's policy and program dimensions to ease the other constraints. Section 5.1 of this report suggests several programmatic options for using Title III towards that end.

The methodology employed in determining procurement prices is a related subject about which the team has some concern. Current practice bases procurement prices on costs of production. Calculations of production costs encounter many serious analytical difficulties. Yet, a greater cause for concern arises from the fact that procurement prices are set independently of border prices.

The relevant import price of a given crop provides a standard against which to measure the efficiency of government procurement policies. It follows from the discussion in Section 2.2 that domestic procurement prices that significantly exceed border prices result in an inefficient use of resources -- that is, beyond some level of domestic production, importing is less expensive. The BDG's

...policy of promoting self-sufficiency is justified; but policies designed to promote self-sufficiency must at least recognize the costs that goal implies. These costs are most clearly seen in the difference between procurement prices and border prices. The PDG should be induced to take these costs into account, along with the long-run dangers of creating a structural dependency among domestic producers on artificially inflated farmgate prices. This is a luxury that Bangladesh probably cannot afford.

A renewed emphasis on agricultural production must be part of the new agreement. Since government procurement is the major policy lever available through the Title III program to stimulate production directly, the team strongly recommends that the new agreement make vigorous procurement, when called for, a condition for annual commodity allocations. Input pricing and marketing and research and extension can also stimulate production; but, such policies fall under the purview of UNLAD/DA projects.¹ Using Title III resources to support production increases in concert with targeted consumption measures is the most direct means of making operational the concept of food aid as a development tool. Progress to date in this direction remains extremely fragile; its consolidation in the new agreement is vital.

3.2 Structure of the Rationing System

The policy initiative focuses on reorienting the PFDS to target rations toward those in nutritional jeopardy, while consolidating the gains to date in eliminating ration for those not in jeopardy. This will improve the country's micro food security, which reduction in food subsidies has already been accomplished. The first two Title III agreements were successful in raising ration prices -- thereby reducing the ability to buy in the system -- and in modifying the commodity composition of rations to make them less desirable to better-off consumers. Moreover, this changed composition has increased the cost-effectiveness of the assistance, allowing more food to be imported at the same cost. This helped reduce

¹ UNLAD/DA projects are designed to stimulate agricultural production that avoids the problems associated with government procurement prices from border prices. Despite the success of UNLAD/DA projects in raising input prices, a serious analytical study of their "social cost-benefit" and its implications is needed.

the total food subsidy by about two thirds: from FY80 to FY84. Now that the fiscal burden of the PFDS has been reduced, we believe it is time for the new Title III agreement to help the BDG to modify the system so that it can better address the micro food security problem of targeting the benefits of the remaining consumption programs.

The BDG established the PFDS to increase the micro food security of its population. Nevertheless, the benefits of the current PFDS programs flow disproportionately to groups in the population not in nutritional need. Thus, BDG resources are used to subsidize the consumption of groups whose micro food security is relatively high (and whose micro food security has been improved by the OMS system), while large numbers of the poor -- principally rural poor -- are both hungry and malnourished.

One method by which the food security of those in immediate nutritional jeopardy may be addressed is through growth in agricultural production and employment. This is one focus of our proposal that is discussed in the following sections. As is argued there, accelerating agricultural production alone is neither enough, nor can it be accomplished fast enough, to meet immediate needs. Thus, the team feels that a reform of the current ration system to concentrate benefits on defined target groups, combined with efforts to link as much of the food distribution as possible to employment creation and agricultural production increases, is the proper direction for the new Title III agreement.

The principal PFDS ration channels that serve relatively well-off groups are Statutory Rations (SR), Essential Priorities (EP), Other Priorities (OP), and Large Employers. Their share of 1984/85 non-relief PFDS offtake was 37 percent. OMS and sales to flour mills, which are untargeted, accounted for an additional 16 percent of non-relief offtake. The remaining 46 percent went through modified rations and FFW -- and, as such, were intended to reach the target group.

The current beneficiaries of ration channels that serve the relatively well off would have a comparatively high degree of food security in the absence of any ration. This is so since they have high enough incomes to be able to maintain nutritionally adequate diets, even in the face of substantial price increases. In addition, the development of OMS as an effective means of dampening seasonal

price fluctuations has given this group protection from seasonal hardship. Therefore, it might be argued that the BDG abolish these channels entirely. Yet, it would be difficult, and probably undesirable, for the BDG to do so, given the political importance of the groups served by these channels.

The team believes that the "safety net" for these groups can be maintained while the food and subsidy flowing through these channels are substantially reduced. The reduction could be done by linking the ration price in these channels to the variable OMS price, with a price ceiling to protect against severe price increases. In addition, the commodity mix of the ration offered should shift further towards wheat and lower-quality rice. (It is currently 1.5 kg wheat and 0.5 kg rice per person per week.) By raising the price and composing the ration entirely of less-preferred foodgrains, the offtake from these channels will be minimized during periods of normal to good foodgrain harvests (when market prices are moderate to low). Only during periods of poor harvest or natural disaster (when market prices rise to the ceiling) would offtakes through these channels be significant. Such a scheme would provide these politically sensitive groups with their "safety net" without subsidizing them during normal or good periods.

The team believes that a primary policy initiative of the new Title III agreement should be to use the means outlined above to decrease the offtake of food from the PFDS by the non-target groups, and to use the food thus saved to increase food flows to groups in need by expanding distribution through existing channels. In addition, existing channels should be improved for both better targeting and greater developmental impact and employment generation. The team realizes that improving distribution channels is easier said than done. However, doing so is of such importance that devising improvements should be a high priority among future Title III activities. (See Section 5.8 for preliminary suggestions.)

Between the two major channels directed at groups in need, FFW and MR, the team feels that FFW is superior in addressing the micro food security problem. (Other programs such as Vulnerable Group Feeding and Gratuitous Relief are highly meritorious but much smaller in scale.) This is so both because of the nature of the channels and how they work in practice. MR is supposed to provide foodgrains at subsidized prices to households in categories A and B (payers of no to low taxes) in the rural areas. The population addressed by MR is indeed needy (see below for a discussion of whether MR actually reaches this group), but merely selling them grain at a subsidized price begs the question of whether those groups have enough

effective demand -- that is, enough income to purchase the grain even at the subsidized price. Moreover, MR neither aids agricultural production, nor creates any new sustainable productive employment.

FFW is strong in many of the areas where MR is weak. Both are aimed at people in need. Still, FFW directly provides its target group with the means to earn the food offered. In addition, FFW projects build roads and embankments, dig water-control channels, and undertake other activities that help increase agricultural production (IFPRI's study of WFP-supported FFW found a 33 percent increase in agricultural production in villages benefitting from FFW. This finding is consistent with the earlier Abt Associates study of AID-supported FFW.) In so doing, more sustainable employment is created.

Finally, on the implementation side, FFW has proved more reliable in actually delivering food to target groups. MR is controlled by local upazilla councils that in practice, may divert significant quantities to influential non-target people (the validity of this hypothesis should be verifiable through the results of the USAID-financed study of MR due out in February 1986). Although the upazilla councils also control FFW, experience suggests that FFW does in fact reach intended beneficiaries. Furthermore, independent organizations (for example, CARE) can more easily monitor performance. FFW can also be more flexible in adjusting to seasonal fluctuations in the demand for agricultural labor.

Unfortunately, many of our interviews indicated that the capacity of FFW to absorb more food is limited. Nonetheless, Food Minister Chowdhury told us that his Ministry would have liked an additional 150,000 MT of foodgrain in the 1985/86 FFW program. Our interview with the Master Plan Organization also indicated a strong potential demand for labor-intensive work for water development (see Sections 5.2 and 5.4 for details), many of which would lend themselves to FFW. The provision of complementary inputs through the use of taka proceeds might further widen FFW possibilities (see Section 5.2). The team feels that FFW holds so many advantages over alternative micro food security interventions that investigation of just how tight the absorptive capacity constraint is deserves special attention during intensive review. Section 5.2 further points out that taka proceeds can be used to strengthen the institutional capacity to expand FFW.

On a much smaller scale, VGF is quite successful in reaching the target population. The team supports the use of Title III resources to expand VGF to the extent of its absorptive capacity.

Given the likely limits on how much additional food can be effectively handled by FFW, the team also feels that an improved MR system, or a conversion of MR to a "fair-price shop" or other improved system, is highly desirable. The February 1986 results of the study of the MR system will provide basic information about the strengths and weaknesses of actual MR. These results should be used during intensive review to design guidelines on how the new Title III agreement might assist the BDG in improving MR. Some possible directions that may be considered include: changing the composition of the MR ration to include more self-targeted foodgrains to decrease their desirability to the non-needy (see discussion of maize in Section 5.3.) and targeting MR geographically -- to pockets of poverty both within Bangladesh as a whole and within localities, by placing distribution outlets in places accessible to the poor or carrying a stigma to the non-poor. (Section 5.8 expands on these ideas.)

The question of production disincentives arises in this context. Section 4.1 discusses the benefits of targeted consumption programs in minimizing possible disincentive effects.

4.3 Agricultural Productivity

The proposed policy emphasis on increased agricultural productivity is a new direction for Title III. It lies at the heart of Bangladesh's drive towards macro food security. Attaining this goal will require a sustained and enormous effort on many fronts. Title III can contribute by focusing on particular policy constraints to the country's agricultural development.

Section 4.1 noted the potential incentive effects of public foodgrain procurement. This section suggests two further production policy areas in which Title III may play a role: water policy and crop diversification policy. Our discussions with participants at all levels of the food system led us to concentrate on these issues, though others issues could be relevant as well. Water is a vital input, the management of which is becoming increasingly central to the expansion of agricultural productivity. A large proportion of recent productivity gains has resulted from the rapid expansion of irrigated acreage. The continuation of these gains will require explicit attention of to the choice of irrigation technologies. Crop diversification is also a major challenge for policymakers in Bangladesh. The

emphasis on cereal production has impeded minor crop development. As Bangladesh moves towards self-sufficiency in cereals it will become increasingly important (for economic, agronomic, and nutritional reasons) to give renewed attention to the issue of crop diversification.

As a general point regarding agricultural policy, the team wishes to state its recommendation that before adopting agricultural policies, USAID and the BDG assess the impact of those policies on the nutritional well-being of all classes of consumers. This suggestion follows The World Bank's recommendation for a national nutrition policy.

Water

Water policy is a complex and specialized area in which the team has no special expertise. Yet, our discussions of constraints to agricultural development have turned repeatedly to this subject.

To date, title III support for irrigation has consisted, in effect, primarily of counterpart support for irrigation projects. While this valuable contribution should continue, the team has encountered several questions related to water policy that Title III may address constructively in the new agreement. The policy issues exist on two broad levels. The long-term "macro" issue is whether the future of water development in Bangladesh lies in groundwater or in surface water development. Most of the mechanized irrigation to date has come from groundwater sources: deep tubewells (DTWs), shallow tubewells (STWs), and hand pumps (HTWs).

The number of irrigation wells has increased tremendously since 1972, and the returns in terms of foodgrain production have been quite substantial. Yet the heavy exploitation of groundwater has created a crisis in some regions, where the rate of water use has exceeded the natural rate of aquifer recharge. This has lowered the water table in those regions to a point that threatens the viability of HTWs and STWs. A recent study of this problem by the Master Plan Organization and Harza (a hydro-engineering firm) projects that the country's groundwater resources will be fully depleted in ten years time. This danger points to the need for surface water development. The MPO recommends a balanced approach in which minor groundwater irrigation proceeds in tandem with accelerated surface water

development projects. If further investigation reveals this to be a wise course, Title III provides the leverage with which to encourage appropriate BDG policies towards that end (for example, price policies for irrigation equipment and water).

The "micro" issues of water policy concern the efficiency of water use and its distribution among farmers. The substantial subsidy on water use (particularly for owners of DTWs) may affect both the distribution and the efficiency of water use adversely.

Based on numerous interviews and some literature review, the team's strong impression is that irrigation subsidies have accrued primarily to large farmers, who typically dominate both the cooperatives and the institutional credit channels necessary to purchase irrigation equipment. It is possible that the concentration of control over irrigation equipment — DTWs in particular — has created a class of "waterlords," with local monopolies over irrigation water. This, in turn, may have led to the familiar monopoly problem of lower available supplies and higher prices for water than would be the case without the monopoly. The chairman of the Bangladesh Agricultural Development Council (BADC) asserted to us in conversation that this situation of restricted supply is common in some areas. The findings of a 1984 study sponsored by the Bangladesh Agricultural Research Council (BARC) support this analysis as well. The heavy subsidy for DTWs may also have distorted the balance of irrigation equipment away from minor irrigation techniques, and contributed to the situation in which DTWs are sapping the utility of nearby STWs and HTWs.

Lacking both the time and the specialized expertise, the team is unable to do more at this time than to identify these issues, point out their importance to agricultural production, and urge further examination of this potentially major constraint to increased productivity. The team recommends that appropriate specialists be enlisted to investigate these issues during intensive review. In principal, Title III provides a ready channel for leveraging policy reforms to address both the macro and micro issues of water use in Bangladesh.

Crop Diversification

There is unanimity among the BDG and the donor community that crop diversification should be a priority in the coming years. It is in this regard that the distinction between "food" and "foodgrains" is critical: the intensive drive for foodgrain self-sufficiency in recent years has been accompanied by a serious decline in the production of pulses and oilseeds (non-foodgrains).

The economic explanation for declining pulse and oilseed production appears to lie in past pricing policies that, in order to stimulate cereal production, have artificially altered the relative farmgate prices of pulses, oilseeds, and cereals. This has caused farmers to substitute cereal production where they would otherwise have grown non-cereal crops. We do not question the need for increased cereal production. Still, recent experience suggests the need to moderate price policies that induce farmers to shift largely out of pulse and oilseed production. Such price policies need also take account of border prices and the tradeoffs implied by growing rather than importing certain products when imports may be less costly. As described below, this tradeoff is particularly pronounced in the case of oilseeds.

The decline of pulse and oilseed production is of concern for several reasons. Pulses are an important source of protein in the Bangladeshi diet, and pulse consumption has declined seriously. Similarly, oilseeds are a source of fats. In addition to these nutritional concerns, the issue of soil depletion is of increasing importance: pulses are nitrogen-fixing crops, and thus replenish some of the micro-nutrients that foodgrain production depletes. The decline in pulse production thus contributes to the soil depletion problem as well.

The question, then, is how Title III can help to promote crop diversification. The answer lies broadly among three policy areas: crop research, extension, and pricing. (Section 5.5, below, discusses specific programs to promote crop diversification.)

A stronger emphasis on crop diversification in agricultural research will be an important part of easing the technical constraints to diversification. Our interviews at the Bangladesh Agricultural Research Institute (BARI) pointed out a possible imbalance in the allocation of research funding between rice and minor crops -- to the detriment of the latter. Production trends seem to support this assertion. Given the generic research goal of lowering unit costs of production, an increased research emphasis on pulses and oilseeds is essential to make them competitive with foodgrains in their attractiveness to farmers. Policies designed to correct this situation should include increased funding for minor crop research and a reduction in the distortion of relative output prices of cereals and non-cereals.

Agricultural extension also holds some promise for increasing the incentives for farmers to diversify their crop mix. Demonstration projects would be a cost-effective method of diffusing new technologies and improved cropping practices. The Director of BARI argued that the use of better quality seeds and more timely sowing could yield 20-30% increases in pulse production. Such increases would lower the unit production cost of pulses, thus making their production relatively more attractive. This suggests potentially high returns to investments in extension by demonstration.

The procurement program for foodgrains has skewed incentives away from the production of minor crops. Research and extension can lower the unit production costs of pulses and oilseeds, and thus mitigate the current skewing of production incentives against these crops. A further advantage of stimulating diversification from the input side is that it avoids further distortions of relative output prices.

The relative cost of imports vs. domestic production is also an important question, particularly in the case of oilseeds. We feel that caution should be exercised in considering restrictions on imports of low-cost vegetable oils as a means of raising domestic prices to stimulate local production. Such a price increase without accompanying mitigating measures would further decrease unacceptably low levels of fat intake in the Bangladeshi diet and divert scarce resources from badly needed alternative uses. Any consideration of import substitution for oilseeds should weigh these tradeoffs carefully.

Maize

The question of maize production dominates discussions of crop diversification. The team approaches this issue with caution. There is little question that maize production is technically possible in Bangladesh. Yet, important questions remain as to its economic viability. Maize production would need to be highly fertilizer-intensive and consumer demand for it is undeveloped and uncertain. The team strongly recommends that the contemplation of large investments in maize production await the results of the maize consumption pilot study outlined in Section 5.5, below. The possibility of producing maize as an export crop also warrants serious investigation.

It may also be desirable to contract the services of a foreign research team (perhaps from a large grain company) to test a hybrid corn variety and then help to establish a private marketing network for its dissemination.

The present situation with maize invites comparison with the situation with wheat in the early 1970s. Wheat at that time was neither produced nor consumed on a large scale, though today it is the second most important crop in Bangladesh. This points to similar possibilities for maize. Nevertheless, the similarity to maize is imperfect, particularly since widespread acceptance of wheat by Bangladeshi consumers occurred amidst a severe famine.

Potatoes

It should be noted that potatoes have some of the same presumed self-targeting characteristics as maize. Moreover, potato production is already widely practiced by Bangladeshi farmers. The current glut of potatoes on the market suggests that productivity could well be supported by including potatoes in ration channels. This could be done on a seasonal basis, to reduce problems of storage. We encourage the BDG's recent move in this direction.

4.4 Policies To Promote Non-Farm Rural Employment Generation

Rural non-farm employment generation is essential if the rapidly growing rural population is to be self-supporting and economically secure. High population density, and the widely-observed phenomenon that on-farm employment grows at only a fraction of the growth rate of agricultural productivity, point to the importance of non-farm rural employment. Indeed, the absence of such employment generation will undermine agricultural production incentives, which ultimately must be driven by the market demand of rural consumers. Section 5.2 outlines several programmatic proposals for rural employment generation; this section considers the broad policy environment that conditions the prospects for employment generation.

Employment policy is a broad area, one that extends far beyond the scope of this report. Yet, non-farm employment policies are relevant to agricultural policy in two ways: First because agriculturally-based activities are likely to comprise the majority of non-farm employment; and, second, because agricultural production incentives depend directly on local market demand.

Limited time and an already broad scope of work prevented the team from examining these policy issues in depth. Yet, we recognize the importance of employment policy and we are comfortable in suggesting policy areas for investigation during intensive review.

Private marketing channels are the lifeline of the agricultural sector. Indeed, the non-farm activities most closely tied to agriculture are the performance of marketing functions: storage, transportation, and processing. These activities can be a rich source of non-farm employment. For this reason, it is essential that BDG policies act to create a competitive environment for the development of these marketing channels. Any price policies that squeeze marketing margins (for example, too high a procurement price, too low a retail price, legal restrictions on marketing functions) are likely to reduce the demand for marketing services, and thus reduce the demand for labor in the marketing sector as well.

Among these marketing functions, processing may hold the greatest potential for providing employment. The choice of a particular processing technique implies a certain degree of labor intensity. Policies that influence this choice have significant potential for generating non-farm rural employment. The relative market prices of capital and labor strongly condition the choices made by private processors regarding choice of technique. Thus, special care must be taken not to distort these price signals in favor of capital. Policies that make capital artificially cheap relative to labor include:

- 1) Artificially low interest rates for credit undervalue capital and distort technology choices away from labor. Subsidized credit can also exacerbate the distribution of benefits if it is rationed to relatively well-off recipients. If investment capital is more easily accessible than working capital, a further bias away from labor intensive techniques is likely.
- 2) Overvalued foreign exchange rates, which artificially make imported goods (capital) relatively cheaper than non-traded goods (labor), push private processor towards capital intensity.
- 3) Tariff structures that give preference to imports of capital goods over consumer goods and raw materials can also make capital artificially cheap relative to labor.

- 4) Artificially high labor costs supported by minimum wage regulations, can reduce the total demand for labor, though they obviously benefit those workers with jobs.

These considerations apply to on-farm employment and input supply activities, as well as to off-farm employment. Title III may provide the policy leverage necessary to sway the BDG away from the types of policies outlined above. However, the extent of these distortions in the Bangladesh economy remains to be evaluated. The team was unable to address these questions adequately; consequently, a systematic investigation of these types of price distortions is essential during intensive review.

Non-farm rural employment is the key to long-term agricultural development in Bangladesh. In addition to providing micro food security to the rural poor and increasing the market demand needed to support agricultural productivity, such employment has important second-round demand effects (for the products of small-scale rural industries, for example) and it creates linkages with other sectors of the economy.

5.0 PROGRAM DIMENSIONS

The programs recommended in this section are intended to fall within and to further the policy dimensions outlined in Section 4. The new agreement will define end uses that will be eligible for loan forgiveness. Within these uses, the BDG will have the flexibility to expend local currency in designated ways. The basic criteria for eligibility are that end uses contribute to agricultural production, and that they have a developmental impact on the rural poor. At this time, it is anticipated that eligible end uses will include: (a) procurement to maintain production incentives; (b) productive activities contributing to the participation of the rural poor in development; (c) testing maize as a self-targeting food; (d) irrigation projects; (e) promotion of maize, pulses, and oilseeds; (f) skills education in vulnerable group feeding programs; (g) creation of institutional capacity for monitoring program activities, and, (h) development of improved mechanisms for targeting food rations.

5.1 Procurement of Foodgrains to Maintain Incentive Prices for Producers

The team believes that the procurement policy of the BDG to provide greater incentives for production of foodgrains is an essential element of its food security strategy. To date the performance of the BDG in procurement has been uneven. Particularly in times of long supply, the BDG has been reluctant to procure all foodgrains offered (see Section 4.1 for details). To give the BDG greater incentive to procure when foodgrain prices are low, we propose that loan forgiveness be granted for use of Title III taka proceeds to purchase foodgrains through the procurement system at the agreed procurement price. This will help to relieve any budgetary constraint the BDG may feel in a long-supply situation.

The incentive for the BDG to procure foodgrains using taka proceeds with loan forgiveness might appear weak. Any taka proceeds used for procurement could not be granted forgiveness again for use in funding other development projects, unless such "double counting" is not of concern to USAID. To the extent that the BDG is later able to sell its stocks it will have more money available to fund development activities. Encouraging the use of Title III funds to support producer incentives, while simultaneously generating resources for use in targeted consumption interventions is a constructive use of food aid as a development tool.

5.2 Productive Income-Generating Activities for the Rural Poor

The targeting of developmentally productive, income-generating activities for the rural landless is proposed as a central feature of the new agreement. The emphasis will be on providing this group with self-sustaining employment in order to enhance their effective demand for food and other necessities. By stressing an income-oriented approach to benefiting the target populations over consumption supplements wherever possible (though both are necessary), the agreement hopes to strengthen the connection between growth and equity. This section discusses possible programs for employment generation; Section 4.4 addressed the relevant policy issues.

The ultimate goal is for economic growth in Bangladesh to be driven, not by food aid, but by effective demand from within. Yet, Title III assistance can spur that process by providing the resources necessary to generate such effective demand. The danger of an income constraint looms large for Bangladesh as it progresses towards foodgrain self-sufficiency. The example of India, which for lack of effective demand exports foodgrains despite chronic malnutrition, is all too close.

Thus, it is essential that Bangladesh combine its need for increased food production with measures to enhance the effective demand -- purchasing power -- of its rural poor. Increased agricultural production alone cannot solve this problem. As noted earlier, the World Bank has found that rural employment in Bangladesh has grown at roughly one-third the rate of growth in agricultural production. **If, production incentives in the absence of targeted programs for the rural landless reduce their effective demand, this would rob agricultural development of the engine necessary to sustain it.** The difficulties of making this concept operational are significant, but not insurmountable.

One possible use of taka proceeds is to support the creation of productive activities for the rural poor. One such use of taka proceeds could be to purchase bricks to surface Food for Work roads, and to pay for the labor of laying them. Forestation of road embankments is another possibility. The lack of permanence of many Title II Food for Work projects has detracted from their contribution to rural development. The need for improved maintenance of Food for Work projects emerged as a central theme of the team's interviews with BDG officials. With its ability to provide resources other than wheat alone, Title III offers a unique opportunity to complement Title II activities while providing a broad policy context in

which is widely seen developmental contribution. In such cases, expenditures of local currency would extend the useful life of capital assets that both support agricultural development and contribute to giving the rural poor access to self-sustaining economic activity. Such projects can operate through existing FFW institutions, with their US proceeds providing complementary support.

Title II currency can also help to ease the constraint that institutional capacity places on the Title II program. The requirement of stringent accounting procedures for Title II funds, and a scarcity of the administrative capacity to meet these requirements has constrained the expansion of Food for Work. The question of whether and how Title III resources can be used to alleviate that constraint is important and should be a subject for further investigation during intensive reviews.

The renewed emphasis on food production of the new agreement will increase the demand for Food-for-Work-like activities in production-related projects. The **refueling and maintenance of roads to increase farmers' access to markets can be an important contribution to agricultural production.** Section 5.4 below identifies several similar activities related to irrigation and surface water development. The Ministry of Food's desire for a 25% increase in the amount of local currency available to support Food for Work reveals the BDG's preference for such activities. Whether the BDG will be able to manage increased FFW requests is to be evaluated.

The team recommends that in times when high levels of public food stocks provide the BDG a bargaining chip for defending its procurement price, and subject to the absorptive capacity of the channels through which Food-for-Work-like projects already operate, Title III funds should be used to supplement existing Title II activities. This use of Title III funds would directly support the drive for increased agricultural production and, at the same time, provide productive employment for the target populations. Both of these ends are strongly in line with the goals of the Title III legislation. This use of Title III would be a further step towards implementing the concept of food aid as a development tool outlined in Section 2.2. Local expenditures for the value of commodities used in this manner could further improve local economies of this type.

These recommendations imply a broader conception of Title III than has traditionally been held. The team believes that the unique circumstances of Bangladesh justify the view outlined in this report. The team also feels that this

conception is possible precisely because it calls for a broader conception of programs already in place. Such an approach is badly needed and clearly preferable to any recommendations that would seek to create new channels to perform activities within the reach of current ones.

5.3 Testing of Maize as a Self-Targeting Food to Benefit the Poor

Now that wheat has become a well accepted part of the Bangladeshi diet, it is less useful as a self-targeting commodity in the PFDS system. Maize is a potential alternative. In principle it has all of the desirable characteristics of a good self-targeting foodgrain for Bangladesh:

- it is less preferred than the main foodgrains, rice and wheat;
- nutritionally, maize is virtually equal to the preferred grains;
- it has the potential to be grown locally at a relatively low unit cost, to a large extent on land currently underused;
- it is relatively inexpensive to import; and
- it could easily be made part of the Title III package.

There remain, however, some doubts as to whether Bangladeshis, even of the poorest strata, will eat maize at all and whether the agricultural research station production successes can be replicated on a grander scale. (Section 4.3 describes the team's caution regarding maize from a policy perspective.)

Thus, the team recommends that a test of maize as a self-targeting food be undertaken in the early part of the new Title III agreement. If the test proves successful and is paralleled by success on the production side, then maize could become an important part of the Title III commodity mix until domestic production is firmly established. Proven profitability of maize production should be a prerequisite for its large-scale introduction into consumption channels. This is a necessary precaution to avoid creating a dependency on a crop that may not be able to be produced domestically.

Intensive review should include the design of a test of maize as a foodgrain targeted to the poor. The design should benefit from the shortcomings of the poorly carried out sorghum test of 1978. It should concentrate on the

question of whether maize can improve the targeting of the current or modified MR system. It should also include elements of demand stimulation for the rural poor, including publicity regarding low-cost methods of preparing maize and its nutritional value. The acceptability of maize might be enhanced by offering a ration of combined wheat and maize flour. There may also be promise in the Javanese experience, where cracked maize is mixed and steamed with poor quality rice. This mixture has proven quite successful as a self-targeting food.

5.4 Irrigation Projects

Title III has provided substantial local currency funding for irrigation development -- roughly Tk 3.9 billion since FY79/80. This support has contributed to a remarkable rate of expansion in acreage irrigated by modern methods (a 9.6% average annual increase over this period). The returns to irrigation in terms of increased foodgrain production are highly impressive. The team recommends continued support for irrigation in the new agreement.

As Section 4.3 describes, a number of water policy issues have arisen, particularly with regard to the efficiency of its use and the equitability of access to water for various classes of farmers. It is important that cash support for irrigation projects under the new agreement be consistent with the policy concerns raised earlier.

The access of small and marginal farmers to water provided under AID-supported irrigation projects should remain a precondition for project selection. Wherever possible, irrigation programs should work to eliminate monopoly control of irrigation systems. This, in turn, should contribute to competitive pricing for water use, which we hope would reduce water prices, increase access, and motivate more efficient use of water resources in general. **One possible use of Title III taka proceeds could be to provide credit — unsubsidized credit — to small farmers for investments in minor irrigation.** Local currency proceeds could also be well spent in developing the institutional capacity to better manage water extraction.

Spending taka proceeds for irrigation projects will add to on-going irrigation programs to generate employment in constructing and maintaining improved water distribution channels. This expansion of irrigation facilities will enhance agricultural productivity and, at the same time, generate productive employment for rural target groups. Similarly, bringing more land under irrigation can generate increased demand for farm labor.

Flood control activities may also be an important part of water development schemes for rainfed agriculture, which is likely to remain the principal source of rural incomes. Flood control requires the building and maintenance of embankments to capture and channel surface water. These highly labor-intensive activities also have high potential for generating productive non-farm employment. Food for Work is a highly appropriate means of financing this type of development.

The above examples are excellent illustrations of how non-farm employment generation can increase the effective demand of rural target groups while directly contributing to increased agricultural productivity.

5.5 Projects to Promote Maize, Pulses, Oilseeds, etc.

Section 4.3 discussed the policy implications of crop diversification; this section extends that discussion to the program level. The use of taka proceeds to promote the crops other than foodgrains should depend in part on how they meet the criterion of promoting sustainable development for the rural poor and how they further the emphasis on production increases in the new agreement. For example, maize promotion projects should complement the testing of maize as a self-targeting foodgrain in the ration system not moving production promotion too far ahead of effective demand creation.

From the team's interviews at BARI it appears that much could be gained by supporting the diffusion of already developed pulse technology. Taka could be used to support the training of extension workers in promotion of such practices. This direction should be pursued in intensive review.

The team was unable to investigate all of the issues surrounding oilseed promotion. We recognize the low levels of fat in the Bangladeshi diet as an important problem that should be addressed by oilseed policy. See section 4.3 for a discussion of our views on import substitution policy for oilseeds.

5.6 Skills Education in Conjunction with Vulnerable Group Feeding (VGF) Programs

Where the skills education components of VGF programs are found to be technically sound, taka proceeds could be allocated for their support. Such initiatives should aim at developing skills that will provide sustainable supplemental income or production (for example, home gardens) or training in how to make better use of currently available resources (for example, nutrition education).

We recognize that the absorptive capacity of such programs may be a constraint. However, there may also be potential to use taka proceeds to strengthen the administration of the programs to ease that constraint. The following section expands on this theme.

5.7 Creation of Institutional Capacity for Monitoring Progress Under Program Initiatives

One of the concerns expressed by the August 1985 GAO report on Title III was that there be closer monitoring of the use of taka proceeds. In response to this concern, the team proposes that local currency generation be used to develop local institutional capacity to carry out such monitoring.

Local currency could be used to build up capability within the BDG or to contract with a private-sector entity to monitor local currency expenditures under the program. The intent of this institution-building activity would not be to duplicate accounting systems already set up in the other-donor-supported projects that local currency generations will be used to support. Rather, it is to give AID the assurance it needs that funds are allocated for intended uses and, perhaps more importantly, to assess on a continuing basis whether the end uses the agreement is supporting are in fact contributing to equity-based development. The creation of such institutional capacity will facilitate selection of end uses to be included in the agreement as well as changes that may be called for in midstream to increase the development return on Title III resources.

5.8 Development of Improved Mechanisms for Targeted Food Rations

This report has consistently stressed the need for targeted consumption programs to complement employment generation programs for the rural poor. The current ration system has recently come under severe criticism -- much of it justified -- for subsidizing relatively well-off consumers to the relative exclusion of the needy. The criticism has tended to treat the ration system as a whole, despite the existence of six separate ration channels. As suggested in Section 4.2, it is now necessary to focus criticism on the particular ration channels that are particularly untargeted -- namely SR, EP, OP, Large Employers and Flour Mills. These channels do indeed divert subsidies away from genuinely vulnerable consumers. Yet, the undeniable existence of a large class of poor consumers for whom

consumption subsidies are vital suggests that the proper development response lies -- not in eliminating all rations -- but in working to improve and to expand targeted ration channels while reducing the current set of untargeted rations.

MR is the only current non-relief channel intended to reach Bangladesh's poorest consumers. The forthcoming survey of MR by a local firm is likely to confirm that the benefits of MR leak to non-targeted consumers. One approach to the problem would be to concentrate efforts on improving the current MR operation. If successful, MR could then be expanded and stocks transferred from a scaling-down of untargeted ration channels. Still, further investigation may suggest that a new channel would better serve the needs of the rural poor. Fair-price shops -- which are conceptually similar to ration shops -- have operated successfully in India. A network of rural fair-price shops that would operate through private distributors of government subsidized stocks is one option deserving of serious investigation.

As noted throughout the report, the selection of self-targeting commodities (for example, inferior foods for which consumption declines as incomes rise) is an essential part of targeted rationing programs. Other desirable characteristics of targeted channels include locating them near the poor and far from the better-off consumers (that is, in pockets of severe poverty), and the imposition of waiting time (queues) to discourage better-off consumers from participating. No system will be completely leak proof; yet, measures like these can help to target benefits with a minimum burden on program administration.

The detailed design of a targetted rationing scheme falls beyond the scope of this report. Nevertheless, the design of such a system along the lines suggested here should be a high priority under the new agreement.

APPENDIX A

LIST OF PERSONS CONTACTED

S.A.F. Chowdhury, Director General, Ministry of Food
S.A. Mahmood, Secretary of Agriculture
A.K.M. Kamaluddin Choudhury, Secretary of Food
M.J. Choudhury, Minister of Food
A.H. Shadatullah, Planning Commission
A.H. Khan, Minister of Industries
Chairman, Bangladesh Agricultural Development Corporation
S. Alam, Bangladesh Rice Research Institute (BRRI)
R. Karim, BRRI
M. Nasiruddin, BRRI
Nur-E-Elahi, BRRI
Anwarul Hoque, BRRI
M. M. Rahman, Bangladesh Agricultural Research Institute
Deepak Das Gupta, The World Bank
Paul Kohling, Asian Development Bank Resident Director
David Hughart, The World Bank Resident in Dhaka
Dir. of Food Policy Monitoring Secretariat
Michael Sackett, World Food Program Resident in Dhaka
Administrators of KSS (Agricultural Cooperative near Muktagacha
Walter Garvey, Team Leader, Bangladesh Water Sector Master Plan Project
Director, Master Plan Organization
Jack Gershon, Asian Vegetable Research and Development Center
A.K.M.A. Hag, Beacon Consultants
Nuimuddin Chowdhury, Bangladesh Institute of Development Studies

APPENDIX B

SCOPES OF WORK FOR INTENSIVE REVIEW

This appendix presents eight suggested scopes of work for intensive review. The topics are: (a) Review of Agricultural Price Policies; (b) Investigation of Specific Reforms of the Ration System; (c) Examination of the Scope for Expanding Food for Work Activities; (d) Policies to Promote Non-Farm Rural Employment; (e) Review of Water Policy Alternatives; (f) Analysis of Policies to Promote Crop Diversification; (g) Elaboration of Plans for Maize Consumption Pilot Study; (h) Review of Other Donor Portfolios for Possible Support by Title III.

A. Review of Agricultural Price Policies

Statement of the Problem

Agricultural price policies are the strongest policy tool available to the BDG for pursuing its agricultural development objectives. Indeed, many of the BDG's current policies operate through agricultural price interventions. Current practices for determining agricultural price policies in Bangladesh appear to have several serious methodological flaws that could bring unintended results.

In response to this situation, USAID should contract a team to investigate current BDG agricultural price policies. The team's recommendations can help to define the policy conditions of the new Title III agreement.

Terms of Reference

The team will produce a report which will include the following topics:

- 1) The relationship between the BDG procurement price and the border price for a particular crop -- Currently, procurement prices are set based on a calculation of the cost of production. Yet, this methodology alone can lead to a domestic price structure which diverges widely from border prices. Domestic procurement at greater than border prices represent a real economic cost which is not accounted for by the current method of determining pro-

curement prices. Moreover, procurement at greater than border prices requires protective trade barriers to prevent imports from underpricing local farmers. The economic costs of these effects should be calculated and incorporated into policy decisions.

- 2) **The difference between procurement prices and the Open Market Sales trigger price for a given crop --** The methodology used in determining the differential between these prices takes no account of real storage costs. In the absence of these programs, food prices would rise from harvest to harvest by the cost of storing commodities over that period. If the difference between procurement and OMS prices is less than the cost of storage, the BCG not only must subsidize the marketing margins, but it may also squeeze private storage facilities out of the market. The team should examine the relationship between storage costs and the difference between procurement and OMS prices to determine the true costs of the current pricing system. The team should also recommend an improved methodology for determining the difference between procurement and OMS prices.
- 3) **The ratio between input costs and the value of outputs in the production of various crops --** The relationship is critical for farmers' decisions of how intensively to cultivate their land. Evaluating farm-level decisions under alternative input/output price ratios can provide a basis for determining input price and procurement price policies.
- 4) **The possible disincentive effects of PL-480 food aid on agricultural production --** The team should examine the extent, if any, to which food aid undercuts domestic production of food. The team should also recommend approaches to marketing designed to minimize disincentive effects.

Level of Effort

This scope of work calls for three person-months of effort. A three person team should spend three weeks in country gathering information and producing a draft report. The team will then require one week in the U.S. to refine their analysis and to produce a final draft of their report. The team should consist of two agricultural economists and one policy analyst.

B. Investigation of Specific Reforms of the Ration System

Statement of the Problem

The current ration system serves many non-needy consumers, and appears to do a relatively poor job of serving nutritionally-vulnerable consumers. A strategy needs to be devised to redirect the benefits of food rationing more exclusively to needy consumers. USAID should contract a team to assist in devising such a strategy.

Terms of Reference

The form and performance of the BDG food rationing system has direct implications for the Title III agreement. Working from this perspective, the team should produce a study which includes attention to the following issues:

- 1) What socio-economic classes of consumers benefit from the current ration channels, and what is the distribution of these benefits between classes?
- 2) What are the main problems that prevent the ration system from more greatly benefiting needy consumers?
- 3) What marketing mechanisms could be established (such as fair price shops) to improve the targeting of food rations?
- 4) How much scope is there for improving the current system of Modified Rations (MR)?
- 5) What types of targeting mechanisms would be appropriate for Bangladesh? (Geographical targeting? Self-targeting commodities? Rationing by queues?)
- 6) How much would an improved rationing system cost to operate?
- 7) Of what scale are the expected benefits from an improved ration system?

The team could use the forthcoming survey of the ration system (due in February 1986 from a local consulting firm) as the basis for its study.

Level of Effort

This scope of work will require three person months of effort. A two person team should be recruited from a U.S.-based firm to join efforts with one local

expert familiar with the ration system. These three people would collaborate for three weeks in Bangladesh and produce a draft report. The U.S. team would then spend the remainder of the time at its home base refining its recommendations in a final report.

The U.S. team should consist of one specialist in food targeting mechanisms and one food policy economist. The local counterpart would have special expertise and familiarity with the ration system and ideally would have participated in the survey of the ration system currently underway.

C. Examination of the Scope for Expanding Food for Work Activities

Statement of the Problem

This report identifies several important roles that the Food for Work program could play in supporting the policy directions recommended for the next Title III agreement. USAID should contract a team to determine the extent to which the current Food for Work program could be expanded to fulfill this role.

Terms of Reference

The team should address the following issues:

- 1) What are the principal constraints to expanding current Food for Work activities?
- 2) What types of resources would be required to ease those constraints?
- 3) What role can Title III play in providing those resources?
- 4) What specific physical activities -- activities which contribute directly to increasing agricultural productivity -- are appropriate for Food for Work programs to undertake?
- 5) What would be the effect of expanding Food for Work on rural labor markets?

Level of Effort

This project will require six person-weeks of effort by a two-person team consisting of an institutional analyst and an agricultural policy analyst. Both team members should be familiar with the current situation in Bangladesh with regard

to both the Food for Work program and the agricultural economy. The team will spend two weeks in Bangladesh and one week at home in producing its report.

D. Policies to Promote Non-Farm Rural Employment

Statement of the Problem

Bangladesh is perhaps the most densely populated country in the world. Its huge rural population and limited land resources create severe seasonal unemployment and underemployment. Moreover, recent trends indicate that agricultural production growth alone is incapable of absorbing sufficient amounts of labor to ameliorate this situation. At the same time, efforts to increase agricultural productivity must be driven by market demand in the rural areas. Since many of the underemployed lack sufficient purchasing power, they are incapable of providing this market demand. **The generation of non-farm rural employment is the key to improving this situation.** Therefore, USAID should undertake a study of potential policies to stimulate the creation of such employment.

Terms of Reference

The team should identify and assess the effects of current policies that influence the demand for non-farm rural employment. These policies might include: artificially low interest rates for credit, overvalued foreign exchange rates, preferential tariffs for capital imports, and artificially high labor costs. The team should give special attention to how these and other pricing policies might effect marketing margins and hence the demand for labor in agricultural marketing activities.

Having investigated these issues, the team should present recommendations for policy reforms to encourage the generation of non-farm rural employment.

Level of Effort

This scope of work requires three person months of labor. The team should consist of an agricultural economist and a labor policy analyst from a U.S. firm, as well as a local counterpart who is familiar with local rural labor markets and who is technically qualified to participate in the team's economic analysis.

The U.S. consultants and local counterpart will spend three weeks in Bangladesh conducting their investigation, during which time they will produce a draft report. After receiving Mission comments on its draft, the U.S. team will spend one week at home complete its final draft.

E. Review of Water Policy Alternatives

Statement of the Problem

Water policy is emerging as a major issue in Bangladesh agricultural policy. Important questions regarding the extent of the country's water resources and how best to access and to distribute them need to be answered. These answers are critical inputs for policies intended to extend irrigated acreage in Bangladesh. In response to this need, USAID should contract a team of specialists to investigate issues related to water policy.

Terms of Reference

The water policy team will need to address a broad range of economic and technical issues. The Master Plan Organization will need to play a significant role in this investigation, since it and Harza have produced a major hydrogeological report on this subject. Issues to be addressed include:

- 1) What should be the balance between groundwater and surface water as the source for future irrigation schemes?
- 2) What are the technological trade-offs implied by accessing these resources through various types and scales of irrigation equipment?
- 3) How does the choice of irrigation technique effect the distribution of water use by various classes of farmers?
- 4) What types of water pricing policies are appropriate to motivate optimal use of this resource?
- 5) What types of financing schemes are appropriate?
- 6) What is the expected impact on agricultural productivity from various irrigation plans?
- 7) What role is appropriate for the BDG to play in financing and managing irrigation?

Level of Effort

This scope of work requires fifteen person-weeks of activity. A three-person team, consisting of a hydrological engineer familiar with irrigation techniques, a resource economist, and an agricultural economist will spend four weeks in Bangladesh gathering information and preparing a draft report containing recommendations for water policy. The team will then have one week in the U. S. to finalize their report and recommendations.

F. Analysis of Policies to Promote Crop Diversification

Statement of the Problem

The rapid gains in cereal production in Bangladesh have not been matched by growth in the production of secondary crops (pulses, oilseeds, etc.). Indeed, production incentives for cereals may have brought greater cereal production at the direct expense of alternative crops. This is of concern for nutritional and agronomic reasons, as well as for its economic implications. As Bangladesh moves closer to cereal self-sufficiency, the issue of crop diversification becomes increasingly important. In response to this problem, USAID should initiate a study to determine what policies have led to declining production of alternative crops and to recommend reforms of these policies.

Terms of Reference

The team will investigate a range of policies relating to agricultural production, including:

- 1) the extent of distortions in relative farmgate prices for cereals and alternative crops;
- 2) the effect of these distortions on production levels of various crops;
- 3) the potential role of research and extension in increasing the attractiveness to farmers of alternative crops;

- 4) the prospects for near-term technological advances (improved seeds, etc.) for the production of alternative crops; and,
- 5) possible export markets for alternative crops.

Level of Effort

This scope of work calls for a three person team consisting of two agricultural economists and an agronomist. This team will require nine person weeks to complete the investigation. Two weeks of this time are to be completed in Bangladesh, with one week in the U. S. to respond to Mission comments on a draft report and to finalize the recommendations of the final report.

G. Elaboration of Plans for a Maize Consumption Pilot Study

Statement of the Problem

Maize has attracted a great deal of attention among those concerned with agricultural policy in Bangladesh. It could be a low-cost alternative to rice and wheat for the Public Foodgrain Distribution System (PFDS). Yet, there is serious skepticism regarding its desirability to Bangladeshi consumers. USAID should initiate a pilot study to test this hypothesis, as a prelude to its possible inclusion in the PL-480 commodity package.

Terms of Reference

A team of experts should design a pilot consumption study of maize. This design will have to: identify appropriate consumer groups, devise a mechanism for delivering the maize to them for the duration of the study, develop a survey instrument to measure consumers' response to maize, project the demand for maize on a national scale, and analytically determine the extent to which maize would be a "self-targeting" commodity in Bangladesh. The test should also investigate the desirability of various methods of preparing maize (for example, cracking it and steaming it mixed with low-grade rice, or mixing maize flour with wheat flour).

Level of Effort

This scope of work calls for a three person team consisting of a nutritionist, a food policy economist, and an expert in survey design. This team would design, but not implement, the experiment. This design should require three person months -- two weeks in Bangladesh familiarizing itself with the situation and two weeks in the U.S. designing the survey instrument. Implementation of the study and analysis of the results would be the subject of later projects.

H. Review of Other Donor Portfolios for Possible Support by Title III

Statement of the Problem

This report has suggested that taka proceeds be used to support other donor programs the goals of which are consonant with the policy directions of the new Title III agreement. Such a study could also contribute to taking greater advantage of existing channels. USAID should thus contract a team to examine and to identify potential programs for such support.

Terms of Reference

The team should systematically review existing USAID-supported and other donor programs (such as Vulnerable Group Feeding and Food for Work programs supported by the World Food Program) to determine whether they further the policy directions of the Title III agreement, the extent of their absorptive capacity, the constraints to increasing their absorptive capacity, the cost of doing so, and the acceptability of their accounting procedures. The team will then recommend specific uses of taka proceeds, as well as present its analysis of how USAID can assist in increasing the absorptive capacity of worthy programs.

Level of Effort

This scope of work calls for a two person team consisting of two policy analysts who are familiar with the Title III program, other donor programs, and the current situation in Bangladesh. The team will spend two weeks in Bangladesh

meeting with representatives of various programs, and will present preliminary findings to USAID. The team will require two weeks in the U.S. to meet with representatives of other donors organizations and to complete its report.

These scopes of work are intended to outline a series of studies on topics which the present report has identified as being particularly important. The team sees this more as a list of suggested topics, than as a full and final description of the individual projects.