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INTERNATIONAL  
DEVELOPMENT**



**ANNUAL BUDGET SUBMISSION  
FY 1979**

**USAID BANGLADESH**

**DEPARTMENT  
OF  
STATE**

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## SUMMARY NARRATIVE STATEMENT

### Program Goal

The achievement of foodgrain self sufficiency in Bangladesh by 1985 is the program goal of the Mission. The conceptual and pragmatic grounds for the goal are strong. The theoretical underpinning is the Mission's DAP (refer to Appendix A for a précis of it) which presents a model of agricultural and rural development and the attendant growth linkages which affect a number of developmental concerns, viz., income, employment, equity and the general well being of the rural poor. We believe that achieving foodgrain self sufficiency in Bangladesh encompasses improved agriculture production, rural development, population control, and improved health and nutritional status.

Since Independence, foodgrain self sufficiency has been the development goal most frequently articulated by Bangladesh leaders. The sense of urgency is realistic. For example, in a recent study by the International Food Policy Research Institute, we find:

"Unless the trend of production in DME (developing market economies) countries improves in the future, production of cereals, the major food in most developing countries, will fall short of meeting food demand in food deficit countries by 95-108 million tons in 1985/86 depending on the rate of economic growth. This compares with short-falls of 45 million tons in the food crisis year, 1974/75, and an average of 28 million tons in the relatively good production period, 1969/71.

"A total cereal deficit of about 100 million tons in DME food deficit countries could well prove conservative.....

"Such a large transfer of food, largely from developed countries, could well be unmanageable physically or financially." <sup>1/</sup>

Another reason for the goal of self sufficiency is that the agriculture sector has the potential of providing hundreds of thousands of jobs at less cost than any other sector.

The major assumption of this goal is that the population of Bangladesh in 1985 will be no better off in real terms on a per capita basis than it is in 1977. As will be shown in the following sections, "staying even" in Bangladesh will prove to be a great challenge.

### Strategy - Three Cases

For the purpose of spelling out the Mission's strategy we introduce a highly simplified and assumption-laden equation: foodgrain self sufficiency is achieved when domestic agricultural production equals the minimum consumption requirement of the population. In the following paragraphs we present three cases for Bangladesh: the foodgrain gap in 1985 resulting from present agricultural and population growth trends; the achievement of foodgrain self sufficiency in 1985 by holding agricultural production growth constant at the current growth rate and varying the population growth rate; and the achievement of foodgrain self sufficiency by holding the population growth rate constant on the estimated trend and varying agricultural production. <sup>2/</sup>

1985 Gap -- Present Trends: Since 1960, agricultural production has grown at a rate compounded annually of 2.27 percent (but declined to less than 1 percent in the period 1967-68 through 1976-77).<sup>3/</sup> The growth rates for this seventeen year period for the major cereal crops are significant: Aus rice, 1.09 percent; Aman rice, 1.26 percent; Boro rice (including HYV), 10.10 percent; and wheat, 13.48 percent. If these rates are projected to the end of crop year 1984-85, gross cereal grain production would be 16.3 million tons or about 14.7 million tons net (less seed and wastage). <sup>4/</sup>

Based upon the Mission's assessment of the Bangladesh Government's current population program, the total population at mid 1985 would be about 107 million people. This represents a growth rate compounded annually of 2.96 percent between 1977 and 1985. <sup>5/</sup> Given an assumption that the minimum "stay even" grain requirement is 15.5 ounces per capita per day, the domestic consumption requirement would be 17.2 million tons of foodgrains. The difference in 1985 between net production and domestic consumption would leave a foodgrain gap, or import requirement, of 2.5 million tons.

1985 Foodgrain Self Sufficiency - Varying Population.  
Given the projection of net agricultural output above (14.7 million) and the same assumption of per capita consumption, the population of Bangladesh could not exceed 91.6 million people in 1985, at the point of foodgrain self sufficiency. Given a 1977 population estimated at 84.7 million, this implies a population growth rate not exceeding one percent per annum between 1977 and 1985.

1985 Foodgrain Self Sufficiency - Varying Agriculture.  
Given the Mission's best estimate of a 1985 population of 107.1 million per the "Present Trends" model above, and the same assumption on per capita consumption, agricultural production of cereal grains would have to reach 17.2 million tons in 1985 to achieve foodgrain self sufficiency. This would require a growth rate of 4.3 percent per year.

#### Strategy - 1977 Baseline

A key component of any strategy is the establishment of a baseline existing at the beginning of the period under analysis and to relate this baseline to an assessment of the strengths and constraints in which the program strategy will operate. In this exercise, we will discuss the socio-economic performance criteria contained in the F. A. A. Section 102(d). A more complete description of the quality of life in Bangladesh will be contained in the Mission's first draft of the "Analytical Description of the Poor Majority", which will be submitted separately. <sup>6/</sup>

Agricultural Productivity Per Unit of Land. At present, cereal grain production averages about one half ton per acre. Perhaps eight percent of this production may be attributed to high yielding varieties and associated inputs. The overwhelming share of production is indigenous varieties of rice which are dependent upon seasonal flooding and rainfall. Current and prospective programs will bring substantial additional acreage under irrigation thus paving the way for increased usage of HYV. While the state of agricultural research is not far advanced in Bangladesh, the technology is readily available here for substantial increases in production (without any new scientific breakthrough), if cultivators will adopt it. Thus we conclude that the technical conditions -- soil fertility, current or prospective availability of irrigation command, the availability of HYV seed and fertilizer -- are sufficient to allow substantial growth in agriculture. The constraints include tenure, credit and farmgate prices.

Unemployment and Underemployment. Depending upon the geographic area, the proportion of the rural population which is functionally landless (defined as owning less than one half acre per household) may range between 40 and 60 percent. This stratum of the population, which may constitute an absolute majority, finds employment as sharecroppers, lease holders, hired agricultural labor and/or migrant workers in government sponsored relief works projects. For all those in this group other than the full time sharecroppers employment is a function of the agricultural cycle. Thus, both unemployment and underemployment prevail in a huge but undefined magnitude. Indirect evidence is that real agricultural wages have declined by about one third since 1949. 1/ The population of urban Bangladesh accounts for only 10 percent of the total, and the urban, industrial demand for labor is very weak. Given equal investments, rural Bangladesh can generate more employment than the urban areas.

Income Distribution. In real terms, most urban dwellers enjoy much higher incomes than rural people by virtue of prior Government investments in, and current expenditure patterns for, infrastructure (roads, water supply, electrical power),

social services (schools, clinics and hospitals) and subsidies (particularly foodgrains and edible oil through the ration system). It appears from the Mission's Land Occupancy Survey that income in rural Bangladesh is much less evenly distributed than previously supposed. While the average cultivator farms less than two acres, allocated among more than 10 plots, it appears that only a minor fraction of the total land is actually cultivated by owners. Sharecroppers bear all input costs, assume all risks of production, and pay the landowner from 50 to 65 percent of production or pay a fixed sum, regardless of production. Further, the terms of credit are significantly skewed toward the owner/cultivator and owner/entrepreneur. As a general rule, institutional credit -- at highly subsidized rates of between 12 and 18 percent per annum -- is available only to people who can mortgage their land. By contrast the cost of credit for non-owners begins at about 50 percent per crop (or more than 100 percent per year) from non-institutional sources. The terms of both tenure and credit work to the disadvantage of the majority of the actual cultivators in Bangladesh. Given current HYV input prices and the cheap food policy of the Government (i. e. low output prices) perhaps a majority of cultivators cannot afford to invest in HYV. Thus, agricultural production, rural incomes and employment are essentially stagnant. Finally, the pressure on the land from population growth coupled with Muslim inheritance laws, presages the inexorable movement of millions of people from the status of small farm operators, to sharecroppers to landless labor between 1977 and 1985.

Population Control. About seven percent of eligible married couples are currently practicing contraception. The Government is building up its service delivery system with additional staff (as many as 30,000 paramedical personnel may be in the field by the end of 1977), better logistics and more intensive information programs. Still, below the Thana (County) level, the physical infrastructure to support such services is almost non-existent.

Infant Mortality. In 1974 the infant mortality rate in Bangladesh was estimated as 130 deaths per 1000 live births. More reliable data gathered from Matlab Thana in Comilla District, which may be atypical, in 1975 indicates that the infant mortality rate is 150 deaths per 1000 live births.

### Strategy - Three Cases Reconsidered

As previously indicated the extension of the "Present Trends" into the future is not an acceptable strategy. Notwithstanding Bangladesh Government efforts over the past four years to increase agricultural production, reduce population growth, and achieve a development balance weighted to agriculture and rural development, we can expect a continuation of decline, i. e. a slow increase in production overtaken at each point by population growth. Furthermore, we believe Bangladesh leaders would disavow the "Present Trends" as the policy course they would chart for the country's development. Even so the Government may still defer the difficult policy decisions which will be required to "develop" Bangladesh because of the general weakness of governmental institutions, the vulnerability of the country to natural disaster and the ready availability of foreign assistance. Thus, while the anticipated preoccupation of the Government with the transformation from martial law to some form of democracy may yet mean a continuation of the "Present Trends" for the near term, any Mission strategy with a reasonable prospect for "staying even" over a longer period must be sought in the other two cases.

Achieving foodgrain self sufficiency via a total population strategy would require several things (considering the current slow growth of agriculture). It would require a very large mobilization of medical and paramedical personnel; a crash program to construct family planning/health facilities in each of the 4,000 Unions in the country; nationwide availability of personnel and facilities for abortion on request; the implementation of massive educational and informational campaigns; the implementation of comprehensive incentive-disincentive packages to promote population control; and ultimately compulsory sterilization. The F. A. A.

prohibits AID from supporting abortion programs and we do not support compulsory sterilization. However, we believe Bangladesh would have to make abortion services available as a major component of its population program if a sharp reduction in the growth rate is to be accomplished in the near term. Moreover, it seems imperative for the BDG to include all presently available non-coercive population control program elements as quickly as possible in order to forestall the introduction of compulsory measures when population pressures become overwhelming.

For AID, this strategy would imply a shift in Development Assistance priorities from agricultural/rural development to population control and health. It would also imply the continuation of high levels PL 480 Title I imports to underwrite the Government's cheap food policies and an expansion of Title II, Food For Work, to help employ the increasing numbers of unemployed rural people who are losing their land. For the reasons already mentioned -- institutional weakness, political fragility, the recent disastrous experience with compulsory campaigns in India and, most importantly, the fact that Bangladesh is overwhelmingly a conservative society, we do not believe such a total population strategy would be contemplated by the leaders of Bangladesh.

The third case, achieving foodgrain self sufficiency by increasing agricultural production poses fewer political dangers but is only slightly less difficult to implement than the population strategy. It would require a substantial realignment of policies in favor of rural Bangladesh -- agriculture over industry, high food prices over cheap food and rural producers over urban consumers. This too, will be politically difficult given the Government's long standing policy of feeding the cities at cheap prices. In addition, we see three key variables: the cost of HYV inputs compared to low domestic grain prices, the terms of land tenure and the cost of agricultural credit. To achieve foodgrain self sufficiency we believe the Government would have to act decisively on at least two of these three variables. The most politically sensitive issue is the terms of tenure. This case suggests future AID programs

should include an expansion of investment in rural infrastructure (rural roads, rural irrigation works, rural electrification), HYV inputs (including fertilizer and appropriate irrigation technology) and an expansion of Title II, Food For Work, to employ excess labor in the dry season. A key component of future programs would be a decision to reduce PL 480 Title I foodgrain imports in order to raise foodgrain prices in the open market and thus shift urban purchasing power from buying imported foodgrain from the Statutory Ration System to buying grains produced by Bangladeshi farmers. This needs to be done as part of a coordinated plan of the food donors to reduce foodgrain imports gradually as progress is made in achieving foodgrain self sufficiency. From the Bangladesh Government's point of view, the loss of revenue stemming from any reduction of imported grains and hence a lesser amount of local currency generated by their sale through the ration system, might be significant. For this reason, PL 480 Title I or commodity loans should be used to finance the import of economically important non food commodities such as raw cotton and tallow.

A second critical component of a future AID program would be a sizeable agricultural credit program which would both mobilize rural savings and make credit available to all cultivators, particularly sharecroppers, so that they could afford the cost of adopting HYV. Finally, we stress that this model assumes that effective population programs would be pursued with vigor and in a manner that continues to warrant popular support.

#### Strategy -- Zero Based Budgeting

In preparing Table V, proposed Program Ranking, the Mission leans toward the agriculture strategy; however, Population/Family Planning receives first priority. We judge that a shortfall in supplies and services cannot be allowed to develop in this area. Thus, the pressure of large pipeline is a program necessity. Furthermore, our projection of a compound rate of growth in agriculture of 4.3 percent is dependent upon a continuation and expansion of the population program from about 7 percent of couples practicing contraception in 1977 to about 35 percent in 1984.

Rural Finance also receives a high priority because the Mission regards the breaking of the agricultural credit constraint as a key variable in both increasing agricultural production and incomes and employment of poor farmers. After Fertilizer Distribution - - the vehicle for fertilizer imports - - we generally rank projects higher which have a direct physical output and direct employment creating effect (e. g. rural roads and irrigation works) than those projects which do not.

PL 480 resources require special mention. The Mission recommends a dollar equivalent of 150,000 tons of wheat for Title I in the Minimum Decision package and no added increment in either the Current or Proposed Decision packages. This tonnage represents about 20 percent of the lowest estimated import requirement on the assumption of a good agricultural year. We think it makes sense to program at this low level. However, if after the Bangladesh Government has taken all requisite self help measures and if agricultural conditions are average or worse, the U. S. should stand ready to consider requests for additional Title I assistance. (Refer also to the separate narrative on PL 480 Title I.)

The Statutory Ration System, Government Employees and Large Employers categories of the public food distribution system serve the needs of urban, middle and lower middle class consumers by providing reliable supplies of food at subsidized prices. Other ration categories, for example the Modified Ration System and the Relief category, operate only intermittently and at fairly low levels. In our PL 480 Self Help measures we have sought a decrease in the volume of Statutory Ration Offtakes and a concomitant increase, depending on conditions, in the Modified Ration System and Relief category. We are aware that as food prices move up in the open market a segment of the population becomes more vulnerable to malnutrition, disease and death. The needs of these people can only be met through the Modified Ration System (at subsidized prices) or the Relief category (free food). For this reason we recommend an increase in PL 480 Title II wheat of 50,000 tons at the Proposed Decision Package level to help meet the needs of very poor or destitute people through the Relief category. (The Government could shift Title I foodgrain from the Statutory Ration to the Modified Ration system with no loss of revenue). We believe that this proposal is an appropriate interim measure in a strategy aimed toward foodgrain self sufficiency and is consistent with the intent of Congress in emphasizing the use of U. S. food resources for developmental purposes.

Footnotes

- 1/ International Food Policy Research Institute, Meeting Food Needs in the Developing World: The Location and Magnitude of the Task in the Next Decade, Research Report No. 1, Washington, D. C. February, 1976, p. 2. By comparison FAO has estimated a LDC foodgrain deficit in 1985 of between 40 and 70 million tons. One worst case projection estimates a food deficit in Bangladesh in 1985 of 3.4 million tons. See Raissudin Ahmed, "Foodgrain Production in Bangladesh: An Analysis of Growth, Its Sources and Related Policies." Washington, D.C. May, 1976, p. 27, Table V-1.
- 2/ The purpose of introducing a "gap" analysis is to illustrate relative proportions rather than to endorse absolute values at a specific point in time. The Mission has discontinued the use of the "foodgrain gap" for operational purposes such as estimating PL 480 Title I import requirements. At any given point in time the estimating errors for production and population may exceed plus/minus 10 percent of an estimate.
- 3/ Ministry of Agriculture series through 1974/75 as quoted in Raissudin Ahmed, Ibid: Appendix 1.1 and 1.2 and Ministry of Agriculture estimates and projections for 1975/76 and 1976/77.
- 4/ Currently the relative weights of the major crops are as follows: Aus 25% of total production; Aman - 55%; Boro - 18%; and wheat - 2%. If the current rate of annual compounded growth is sustained through crop year 1984/85 the relative weights would be Aus - 19.4% of production; Aman - 45.4%; Boro - 30.4%; and wheat - 4.6%.
- 5/ As projected by the Mission based upon the World Bank "medium" population and growth rate projections (Refer to World Bank Report No. 543a-BD dated February 3, 1975, Annex 1, p. 12). The yearly projection and growth rates

- 5/ are as follows : 1977 - 84,796,000 (3.03 percent); 1978 - 87,397,000 (3.02 percent); 1979 - 90,036,000 (2.96 percent); 1980 - 92,701,000 (2.94 percent); 1981 - 95,426,000 (2.92 percent); 1982 - 98,212,000 (2.9 percent); 1983 - 101,354,000 (2.89 percent); 1984 - 104,280,000 (2.75 percent); and 1985 - 107,150,000 (2.60 percent).
- 6/ Other pertinent studies will be forthcoming in the next few months, including the AID financed Dacca University National Institute of Nutrition study of Food For Work projects and the socio-economic profile of FFW laborers, and the AID financed Land Occupancy Survey.
- 7/ A. R. Khan, Poverty and Inequality in Rural Bangladesh, ILO, Geneva, March, 1976.

THE BANGLADESH DAP

Bangladesh is rural, agricultural, densely populated, and very poor. 76 of the 85 million population live in villages of less than 5,000 people. Despite an all year round growing season, crop yields average less than one half ton per acre. Existing underemployment is very high; each year one million more people seek work.

AID's Congressional Mandate reinforces the theoretical evidence that economic growth depends upon inclusion of the whole population in productive processes. Enclave strategies have failed. In this rural economy, growth with equity, and even growth alone, must mean increases in agricultural production which in turn depend upon the participation of millions of cultivators and laborers in the new seed technology. Herein lies a development strategy for the poor majority and the country as a whole.

The new seed technology ensures increased productivity per acre, more crops per year, and so increased man-hours of work, and increased economic returns. These new seed varieties, unlike the local varieties, are yield responsive to water and fertilizer, and are fast maturing. Local varieties do not hold this potential for yield, and so income growth. With more people growing more food, incomes will expand and expenditure patterns will diversify. This diversification of rural purchasing power will create markets for a whole range of off-farm wage goods such as clothing, household furnishings, bicycles, radios, etc. Still, the numbers of underemployed in Bangladesh are so large that public works programs are necessary to create seasonal opportunities for cash income. The construction of earthen canals, embankments, village market places, and minor roads adds to the irrigation and transport infrastructure necessary for agricultural growth, and importantly, creates rural purchasing power for the poor. Added cash incomes in

the hands of the poor will help sustain higher harvest prices. Similarly, market towns must be encouraged to expand to supply agricultural inputs and wage goods, to create other employment opportunities, and investment opportunities for those with ample rural incomes. While this market town emphasis is designed to serve agricultural growth processes, it does create expanded opportunities for industrial investments, and the export of labor intensive and high technology products.

Population Control is the key for ensuring per capita income growth and the improved per capita supply of social services such as school rooms and teachers, health centers and paramedical personnel.

We believe the above described growth with equity model holds hope for the development of Bangladesh and its massive population. However, the population density of Bangladesh may have already surpassed the capacity of the country's existing institutions to meet the development requirements of its numbers. Our model is theoretical; its translation into reality depends upon a host of assumptions about the model's acceptance. We examine two of these assumptions.

It is assumed that the new seed technology represents a profitable choice from the farmers' point of view and that it therefore will be rapidly accepted. In this acceptance is growth with equity. If it is not accepted, there is no such increase.

On the basis of Government studies, our own field work, and the work of others, we have come to understand that the control of credit and of much of the land in Bangladesh is highly centralized in the hands of the rural elite. Most farmers are not owner operators and the cost of credit is easily 50 percent per crop and higher. For these reasons the incentive to use HYV is less than it should be. Relatively low output prices, unfavorable tenure and credit terms, inadequate irrigation coverage, help to explain why production is not growing more rapidly than two percent a year, and why HYV rice coverage is faltering at eight percent of the total acreage.

Even more alarming is the finding that new programs such as Comilla Cooperatives and irrigation programs appear to operate on behalf of the rural elite. Subsidized Public resources such as credit and water are taken up by the rural elite and are redistributed "on lease" to actual cultivators and laborers at normal market prices.

Another assumption fundamental to our model is that per capita income growth and expenditure diversification will occur and that from these growth linkages will spring secondary sources of investment and employment. However, if population growth is out distancing real growth, per capita supplies of foodgrain, school rooms, teachers, etc., will decline. This may now be happening.

With this kind of rural economic structure, it will be very difficult to improve the real income of the bottom 50 percent of the population, and thereby provide the economic security thought to be critical for the acceptance of the small family norm. These are just two of the institutional problems that can be raised to explain why our growth with equity model may remain only a model. We know of no other strategy that has been presented to effect growth with equity for this population.

**LONG RANGE PLANNING**

**( FY 1979 - FY 1983 )**

Country/Program: Bangladesh

TABLE I  
Long Range Program Plan  
(\$ millions)

	<u>1978</u>	<u>1979</u> <u>Request</u>	<u>Planning Period</u>			
			<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Food/Nutrition	85.7	166.2	174	182	190	199
Grants	(85.7)	(166.2)	(174)	(182)	(190)	(199)
Loans	-	-	-	-	-	-
Population	9.1	12.1	16	21	27	35
Grants	(9.1)	(12.1)	(16)	(21)	(27)	(35)
Loans	-	-	-	-	-	-
Health	1.5	3.0	6	7	8	9
Grants	(1.5)	(3.0)	(6)	(7)	(8)	(9)
Loans	-	-	-	-	-	-
Education	-	-	-	-	-	-
Grants	-	-	-	-	-	-
Loans	-	-	-	-	-	-
Selected Development						
Activities	3.3	3.3	4	4	5	5
Grants	(3.3)	(3.3)	(4)	(4)	(5)	(5)
Loans	-	-	-	-	-	-
Total Functional						
Accounts	99.6	184.6	200	214	230	248
Grants	(99.6)	(184.6)	(200)	(214)	(230)	(248)
Loans	-	-	-	-	-	-
Other Accounts						
(Specify)						
Grants						
Loans						
PL 480 (non-add)						
Title I	(47.4)	(16.8)	(17)	(11)	(11)	(6)
Title II	(12.0)	(18.0)	(18)	(18)	(18)	(18)
Housing Investment						
Guaranties (non-add)	-	-	-	-	-	-

Notes to Table I  
Long Range Program Plan

Using FY 1979 as the base year, we assume the following:

1. The population of Bangladesh at the mid point of each year will be the following : 1979 = 90 million; 1980 = 92.7 million; 1981 = 95.4 million; 1982 = 98.2 million; 1983 = 101.4 million. (See also footnote 5 to the Summary Narrative Statement.)
2. Worldwide commodity price inflation will increase at the rate of 4 percent per annum. On this assumption, the index for the long range period is : 1978 = 100; 1979 = 104; 1980 = 108; 1981 = 112; 1982=117; and 1983 = 122.
3. As a simplifying assumption, development assistance (excluding PL 480) is straight-lined at about \$2.00 per capita, expressed in 1978 "constant" dollars from 1979 through 1983. For 1979 the computation was as follows: a \$ 184.6 million program level deflated by the index factor for 1979 (104) and divided by the population of 90 million, equals \$ 1.97 per capita. For 1983, the computation is 101.4 million population, times the inflation index of 122, times the per capita level of \$ 2, equals \$ 248 million for development assistance.
4. Functional Account Projections. The short term growth path for the population account has been about 30 percent per annum. The population figures are derived for 1980 through 1983 on this basis. For the health account we envisage investments in infrastructure for the delivery of integrated health, family planning, MCH and possibly nutrition services throughout the long range plan period. The selected development problems account will remain about constant throughout the period at between four and five million per annum, primarily for project development and feasibility studies. Food and nutrition will remain the primary account for Bangladesh. However, there will be a partial shift in emphasis from the financing of urea fertilizer imports, as domestic capacity is increased, to the provision of financial stimulus to the demand side as in, for example, the rural finance activities. In addition, major investments will continue to be made in rural infrastructure such as irrigation works, roads, electrification and area water and land development projects.
5. As stated in the Summary Narrative, the program goal is foodgrain

self sufficiency by 1985. On this basis, the Long Range Program Plan indicates a gradual decline of Title I wheat imports from a level of 200,000 MT in FY 1978 to a level of 50,000 MT in 1983. Title II food for work and the distribution of food to the destitute through the Relief category would continue throughout the Long Range Plan Period at the combined rate of 150,000 MT per annum.

## B A N G L A D E S H

## DAP DOCUMENTATION SCHEDULE

PROGRAM YEAR	DOCUMENTS TO BE USED AS BASIS FOR PROGRAM PLANNING	DATE APPROVED OR SENT TO AID/W
FY 1975	Original DAP	December, 1974
FY 1976	Other: PL 480 Title I - "Food as a Development Resource" in FY 1978 ABS	July, 1976
FY 1977	Analytical Description of Poor Majority (Part I)	July, 1977
	Summary Strategy Statement (First Draft) in FY 1979 ABS	June, 1977
	Other: PL 480 Title I - "Food as a Development Resource" amended draft in FY 1979 ABS	June, 1977
FY 1978	Analytical Description of Poor Majority (Part II)	July, 1978
	Summary Strategy Statement (Second Draft) in FY 1980 ABS	June, 1978
	Other: Multi-Year Population Strategy	June, 1978
FY 1979	Sub Sector Assessment:	
	Rural Infrastructure	November, 1978
	Land & Water Resources	December, 1978
	Market Towns	March, 1979
	HYV Technology	April, 1979
Health Sector	June, 1979	
FY 1980	DAP Revision	December, 1979

References: TOAID A-74, dated October 29, 1976,  
STATE 302948, dated December 14, 1976

**FY 1977 - FY 1979 Programs**

Country/Program : Bangladesh

Table II  
Funding Levels for FY 1977, FY 1978, FY 1979  
 (in \$000)

	<u>FY 1977</u>	<u>FY 1978</u>	<u>FY 1979</u>
Food/Nutrition	<u>54,395</u>	<u>85,669</u>	<u>166,200</u>
Grants	54,395	85,669	166,200
Loans	-	-	-
Population/Health	<u>7,055</u>	<u>10,560</u>	<u>15,100</u>
Grants	7,055	10,560	15,100
Loans	-	-	-
(Population)	<u>(7,055)</u>	<u>(9,060)</u>	<u>(12,100)</u>
(Grants)	(7,055)	(9,060)	(12,100)
(Loans)	-	-	-
(Health)	-	<u>(1,500)</u>	<u>(3,000)</u>
(Grants)	-	(1,500)	(3,000)
(Loans)	-	-	-
Education	<u>300</u>	-	-
Grants	300	-	-
Loans	-	-	-
Selected Development Activities	<u>735</u>	<u>3,300</u>	<u>3,300</u>
Grants	735	3,300	3,300
Loans	-	-	-
Sub-Total	<u>62,485</u>	<u>99,529</u>	<u>184,600</u>
Grants	62,485	99,529	184,600
Loans	-	-	-
Security Supporting Assistance	-	-	-
Grants	-	-	-
Loans	-	-	-
TOTAL	62,485	99,529	184,600
PL 480			
Title I	65,600	47,360	16,800
Title II	12,000	12,000	18,000

AGENCY FOR INTERNATIONAL DEVELOPMENT				1. TRANSACTION CODE			2. ABS/CP				
ABS/CP SUMMARY - TABLE III				A A = ADD C = CHANGE D = DELETE			DOCUMENT CODE 6				
3. COUNTRY/ENTITY		4. DOCUMENT REVISION NO.		5. OPERATIONAL YEAR FY		6. BUREAU/OFFICE		7. GEOGRAPHIC CODE			
Bangladesh				78		ASIA		388			
8. TYPE DATA				9. TYPE ASSISTANCE							
1 1 = ABS 2 = ABS REVISION 3 = CP 4 = CP NOTIFICATION				1 1 = PROJECT 2 = PROGRAM							
10. PROJECT SEQ. - UENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. QTR. FOR OBLIG.	13. EST. FY AUTH. OBLIG. FINAL	14. APPROPRIATION	15. PRIMARY PURPOSE CODE	16. LOAN GRANT INDICATOR	17. BUDGETS (IN \$ 000)				
							(77)	(78)	(79)	LOP	
	<u>Food And Nutrition</u>										
0002	Development Services And Training	-	77	FN	299	GC	300	-	-	1,800	
0003	Agricultural Research*	1	81	FN	141	GC	360	944	900	3,267	
0012	Rural Irrigation Works	4	80	FN	263	GC	-	2,100	2,700	7,100	
0016	Ashuganj Fertilizer	-	77	FN	101	GC	15,000	-	-	45,000	
0017	Food For Work*	1	80	FN	260	GC	485	425	2,000	5,821	
0021	Rural Electrification*	3	79	FN	200	GC	19,000	21,000	20,000	60,000	
0023	Small Scale Irrigation II*		81	FN	117	-	-	-	15,000	45,000	
0024	Fertilizer Distribution Improvement *	4	80	FN	139	GC	-	50,000	36,000	112,000	
0025	Rural Credit*	4	78	FN	200	GC	4,000	3,000	-	7,000	
0032	Rural Roads	4	80	FN	134	GC	-	8,200	18,600	46,420	
0033	Foodgrain Protection*	-	-	-	-	-	-	-	-	-	
0035	Agricultural Inputs III	-	77	FN	130	GC	15,250	-	-	15,250	
0037	Rural Finance	4	81	FN	200	GN	-	-	20,000	20,800	
0039	Fish Seed Multiplication And Distribution	-	83	FN	324	GN	-	-	1,000	4,546	
0040	Water And Related Land Resources	4	83	FN	220	GN	-	-	20,000	50,000	
0041	Chittagong Fertilizer Plant	-	79	FN	123	GN	-	-	30,000	30,000	
	Sub Total						54,395	85,669	166,200	454,004	
							18. DATE DOCUMENT RECEIVED IN AID/W				
							MM	DD	YY		

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>ABS/CP SUMMARY - TABLE III</b>		1. TRANSACTION CODE <input type="checkbox"/> A = ADD <input type="checkbox"/> C = CHANGE <input type="checkbox"/> D = DELETE		2. ABS/CP DOCUMENT CODE 6			
5. COUNTRY/ENTITY		4. DOCUMENT REVISION NO. <input type="checkbox"/>	5. OPERATIONAL YEAR FY [ ] [ ] [ ]	6. BUREAU/OFFICE A. SYMBOL [ ] B. CODE [ ]		7. GEOGRAPHIC CODE [ ] [ ]	
8. TYPE DATA <input type="checkbox"/> 1 = ABS                      2 = ABS REVISION <input type="checkbox"/> 3 = CP                            4 = CP NOTIFICATION				9. TYPE ASSISTANCE <input type="checkbox"/> 1 = PROJECT <input type="checkbox"/> 2 = PROGRAM			

10. PROJECT SEQ. - UENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. QTR. FOR OBLIG.	13. EST. FY AUTH. OBLIG. FINAL	14. APPROPRIATION	15. PRIMARY PURPOSE CODE	16. LOAN GRANT INDICATOR	17. BUDGETS (IN \$ 000)			
							(77)	(78)	(79)	LOP
	<u>Population Planning And Health</u>									
0001	Population Family Planning*	1	80	PH	440	GC	7,055	9,060	12,100	43,931
0034	Malaria Control*	4	82	PH	514	GC	-	1,500	1,500	5,000
0038	Union Health Services		81	PH	539	GN	-	-	1,500	7,000
	Sub Total						7,055	10,560	15,100	55,931
	<u>Education &amp; Human Resources</u>									
0028	National Women's Development Academy	-	77	EHR	660	GC	300	-	-	300
	Sub Total						300			300
	<u>Section 106</u>									
0010	PVO Co-Financing * (OPG)	2	79	106	769	GC	735	500	500	2,500
0027	Technical Resources*	4	80	106	790	GC	-	800	800	2,212
0036	Project Development Grant II*	3	82	106	291	GN	-	2,000	2,000	10,000
	Sub Total						735	3,300	3,300	14,712
	Grand Total						62,485	99,529	184,600	524,947

18. DATE DOCUMENT RECEIVED IN AID/W

MM	DD	YY
[ ]	[ ]	[ ]

### REGIONAL PROJECT DEVELOPMENT AND SUPPORT REQUIREMENTS

The Mission estimates that \$310,000 from the Food and Nutrition appropriation and \$15,000 from the Section 106 appropriation will be required in each year, FY 1978 and FY 1979. The bulk of this requirement will be devoted to requirements associated with project development and design. In certain cases, for example, where follow-on projects are involved, e.g. Rural Finance, project development will be tied closely to the evaluation of the predecessor project. For those projects, however, where outside assistance is required for evaluation, the Mission has budgeted funds within the project. At this time the Mission foresees a continuing need for analytical and survey work related to land occupancy through FY 1979.

The following table shows the Mission projections for work-months by quarter in FY 1978 and FY 1979.

PROJECT DEVELOPMENT SUPPORT (PDS)WORK MONTHS OF REQUIRED SUPPORT

	Quarter	FY 1978				1979			
		1st	2nd	3rd	4th	1st	2nd	3rd	4th
1. Population/Family Planning		-	-	-	-	-	-	-	-
2. Rural Finance		-	-	2	-	2	3	-	-
3. Fertilizer Distribution		8	8	-	-	4	4	-	-
4. Rural Roads		-	-	-	-	-	-	-	-
5. Small Scale Irrigation II		-	-	-	-	5	5	-	-
6. Rural Irrigation Works		-	-	3	-	-	-	-	-
7. Union Health Services		-	-	-	-	-	-	-	-
8. Rural Electrification		-	-	-	-	-	3	3	-
9. Rural Pucca Works		3	3	-	-	-	-	-	-
10. Fish Seed Multiplication		8	-	4	-	-	-	-	-
11. Chittagong Fertilizer Plant		-	-	-	2	3	-	-	-
12. Malaria Control		-	-	-	-	-	-	-	-
13. Project Development Grant II		-	3	-	-	-	3	-	-
14. Water & Related Land Resources		-	-	-	-	3	3	-	-
15. Land Occupancy Study		-	4	4	4	4	4	4	4
16. Agricultural Extension		6	-	-	-	2	-	2	-
17. Soybean Project		2	-	-	-	1	-	1	-
		27	18	13	6	24	25	10	4

COUNTRY/PROGRAM Bangladesh	PROJECT TITLE POPULATION/FAMILY PLANNING				AS APPROVED FY 76	REVISION FY	DATE PP/REVISION
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 388 - 0001				AS APPROVED FY 80	REVISION FY	DATE LAST PAR 2/77
	APPROPRIATION PPH				AS APPROVED 43,931	REVISION	DATE NEXT PAR 2/78

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977-1/				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)
PROJECT TOTAL	7,055	3,923	5,705		9,060	7,981	6,784		12,100	10,457	8,427	
Oral Pills 1/	3,800	2,025	3,800		3,800	3,800	3,800	2/78- 9/79	4,200	3,800	4,200	2/79- 9/80
Condoms 1/	2,600	1,300	1,300		3,690	3,145	1,845	10/77- 3/79	4,644	4,167	2,322	10/78- 3/80
Contraceptives	135	135	0		235	0	235	2/78- 3/79	1,240	485	990	10/78- 6/80
Medical Kits	10	45	0		60	0	60	2/78- 3/79	43	60	43	10/78- 3/80
Participant Training	268	182	335		125	268	192	10/77- 12/79	75	193	74	10/78- 9/80
Consultant services	242	236	270		104	222	152	10/77- 6/79	48	152	48	2/79- 3/80
Commercial Marketing Project Advisor					46	46	0	2/78- 9/78	150	150	0	10/78- 9/79
1/ Centrally Funded												

HOST COUNTRY INPUT	2/ PARTICIPANTS PROGRAMMED				1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II			
	FY 1977	FY 1978	FY 1979	FY 1979				
PERSONNEL ON BOARD AS OF								
DH	14	4	1	1				
PASA	37	21	16	16				
CONTRACT	-	-	-	-				
	-	-	-	-				

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS  
3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE  
4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

COUNTRY/PROGRAM Bangladesh		PROJECT TITLE POPULATION/FAMILY PLANNING				AS APPROVED FY 76		REVISION		DATE PP/REVISION	
ONGOING PROJECT BUDGET DATA - TABLE IV		Page Two				AS APPROVED FY		REVISION		DATE LAST PAR	
PROJECT NUMBER 388 - 0001		APPROPRIATION				AS APPROVED FY		REVISION		DATE NEXT PAR	
INITIAL OBLIGATION		FINAL OBLIGATION		TOTAL COST		AS APPROVED FY		REVISION		DATE NEXT PAR	

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977			ESTIMATED FY 1978			ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)
PROJECT TOTAL										
Commercial Marketing Services							150	150	0	10/78- 9/79
Voluntary Sterilization "				1,000	500	500	1,500	1,250	750	2/79- 3/80
Project Evaluation							50	50	0	10/78- 9/79
<b>HOST COUNTRY INPUT</b>	<b>8,778</b>			<b>9,390</b>			<b>12,000</b>			

PERSONNEL ON BOARD AS OF		PARTICIPANTS PROGRAMMED		SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II	
9/30/77	9/30/78	9/30/78	9/30/79		
DM					
PASA					
CONTRACT					
		NON- CONTRACTI LONG- TERM			
		SHORT- TERM CONTRACTI			
		LONG- TERM SHORT- TERM			

EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS  
 LONG-TERM - INCLUDES 9 MONTHS OR MORE  
 For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

## Population/Family Planning

### Progress To Date:

Since January 1976, the population program has received greatly increased support from the top leaders of the Bangladesh Government. Progress has been made in staffing positions of the expanded Population Control and Family Planning Directorate, and the final phase of recruitment and training of a new cadre of 13,500 female and 4,500 male rural field workers will be completed in the latter half of 1977. They will take MCH and family planning information and nonclinical contraceptives, including oral pills to homes throughout the country. Subsidized sales of oral pills and condoms through over 25,000 retail shops, under the commercial marketing project, continue to show encouraging increases. In recent months, the Government has begun to place emphasis on development of voluntary sterilization services and training of doctors in new procedures. The program continues to make progress in involving other development ministries in the promotion of family planning. There are signs of increased social acceptance of family planning among Bangladeshis.

In 1975 the Mission submitted a new Project Paper for Population and Family Planning, which was approved in AID/W. The initial obligation under the terms of this new Project Paper was made in FY 1976. Although the new project was substantively different from the previous Population and Family Planning Project, the Mission continued to use the old project number (388-0001). Since we foresee no changes in either project goals or purpose through FY 1980, the Mission assumes that FY 1976 is to be considered the initial obligation date for the allowable five-year life of project and that a PID for future Population activities need not be submitted until the FY 1980 ABS. A revised PP facesheet will be submitted to cover the two year extension of this project to 1980. The present project terminal disbursement date will be amended accordingly.

COUNTRY/PROGRAM	PROJECT TITLE				AS APPROVED	REVISION	DATE PP/REVISION
	Agricultural Research				FY 76	FY	9/77
	PROJECT NUMBER				AS APPROVED	REVISION	DATE LAST PAR
ONGOING PROJECT		388-0003		FY 79	FY 81	-	
BUDGET DATA - TABLE IV		APPROPRIATION FN		AS APPROVED	REVISION	DATE NEXT PAR	
				2,561	3,267	1/77	

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977			ESTIMATED FY 1978			ESTIMATED FY 1979			
	OBLIG-ATION	EXPEN-DITURES	PIPE-LINE	OBLIG-ATION	EXPEN-DITURES	PIPE-LINE	FUND-ING PERIOD (FR-TO)	OBLIG-ATION	EXPEN-DITURES	PIPE-LINE
<b>PROJECT TOTAL</b>	360	384	820	944	975	789	10/77	900	943	746
ARI-and ARC Technicians & Consultants	-	50	415	398	465	348	3/79	465	398	415
ARC Contracts For Local Research	125	70	125	125	125	125	"	81	124	82
Training	184	76	234	199	190	243	"	160	210	193
Administrative Costs	51	20	46	83	63	66	"	81	91	56
Commodities		168	-	17	10	7	"	3	10	-
Vertebrate Pest Management (PASA)				122	122	-	10/77	110	110	-
<b>HOST COUNTRY INPUT</b>	<b>2,152</b>			<b>2,461</b>				<b>2,698</b>		

PERSONNEL ON BOARD AS	PARTICIPANTS PROGRAMMED			
	FY 1977	FY 1978	FY 1979	FY 1976
DM				
PASA	5/	6	16	16
		6	21	15
CONTRACT	1			
	7			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE 11

3/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

2/ LONG-TERM - INCLUDES 9 MONTHS OR MORE  
 4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

5/ Denver Wildlife Research Center

## Agricultural Research

### Progress To Date

The overall design work at Joydevpur and Ishurdi for a campus complex including housing will be completed by July 1977. In addition ARC is in the process of negotiating a contract with a U.S. firm for technical assistance to the project.

To date four Ph. D. candidates have departed to the U.S. for training and two participants have departed for third country short term training.

Design work and inventory lists for research equipment for the BARI laboratory complex has been completed.

In addition to these activities USAID has reached agreement with the BDG to conduct a Vertebrate Research Project under the auspices of ARI. The Mission plans to initiate this activity in early FY 78 following TDY consultations to assist in amending the original Agricultural Research Project Paper.

AGRICULTURAL RESEARCH (388-0003)  
VERTEBRATE RESEARCH COMPONENT

Bangladesh faces a dilemma in the vertebrate pest area. On one hand the BDG recognizes that there are serious crop losses occurring here, but on the other hand the Government cannot judge with any degree of accuracy the extent of these losses nor what effect that on-going control efforts may be having on these losses.

Further, there is a complete absence of research data that would be required to improve control recommendations and lead to reducing crop losses. At present the BDG has neither the research base nor the capability to focus on the systematic description, assessment, and management of vertebrate pest problems in major staple and high-cash value crops. Consequently, current vertebrate pest control recommendations have not been tested for suitability to the specific needs, pests, crops, field conditions nor the cultural practices of the Bangladeshi farmers.

Thus while it is known that losses from rodents in Bangladesh are substantial, it is difficult if not impossible to place with any feeling of confidence a monetary value on these losses. In India<sup>1/</sup>, of last years 118 million ton food grain crop it was estimated that 10 millions tons were lost or spoiled due to rats.

In Bangladesh : a. Wilcoxson<sup>2/</sup> (1975) "conservatively" estimated that total losses of food and fiber due to all pests was at least 10 percent; b. Gertsch<sup>3/</sup> assumes an annual national field loss of 10% of cereal crops to rodents; and c. Reidinger<sup>4/</sup> said that an estimated loss of 5-10% to rodents was most common in interviews with staff at research and extension agencies concerned with plant protection. If one were to consider rice alone and estimate

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1/ Letter from New Delhi - Far Eastern Economic Review, March 4, 1977.

2/ Wilcoxson, Roy D. 1975 - Plant Protection In Bangladesh, A Multi-disciplinary Study Team Report.

3/ Gertsch, UNDP proposal Strengthening Plant Protection Services.

4/ The Status of Rodent Research and Control in Bangladesh, and Recommendations, Trip Report - Russell F. Reidinger, Jr. Jan. 26-Feb. 25, 1977.

at the 5 percent loss level (4 percent pre-harvest and 1 percent post-harvest), the annual value of lost product could be nearly 120 million dollars (based on 8 cents per pound and the 1975-76 crop of 12.6 million metric tons).

The Mission proposes to amend the present Agricultural Research Project to establish an ongoing vertebrate research capability. In developing this capability the critical need therefore (and the problem that this project will address) is trained professional and supporting staff, basic facilities and equipment for lab and field research.

An ongoing research capability is needed as it is generally recognized that Vertebrate pests in Bangladesh are a serious agricultural problem in most major crops and with the small farmer most severely effected. Furthermore, while farmers as well as agriculturists know that there are severe losses to rodents, it is apparent that most often their estimates of these losses are based on casual observation and visible evidence and lack knowledge of the total damage. Unfortunately, estimates based only on the "evident" are usually "under" estimates. Stem cutting, for example, during the earlier stages incereal crop growth is regularly ignored in Bangladesh as contributing to lower yields.

With the possible exception of jute, vertebrate pests are reported to exact in-field losses to all major staple and high cash value crops which are grown in Bangladesh, including rice, wheat, sugarcane, oilseeds, peas and pulses, vegetables and potatoes, and some fruit crops. According to Dr. Reidinger<sup>4/</sup>, "the distribution and extent of damage in individual fields and from area to area over Bangladesh is erratic and complex, and valid estimates of actual losses are nearly impossible as there is a complete absence of damage assessment methodology and damage surveys."

Dr. Reidinger also reported that current control recommendations call for use of zinc phosphide or cyanogas (the only rodenticides available) when damage or rats are abundant; in practice, most small farmers rely on flooding

or digging up burrows and killing rats that attempt to escape, usually at harvest. AID experience in other countries (e. g. Philippines) have shown that these methods kill rats, but are generally ineffective in reducing crop losses. Although effective means have been found for reducing losses in some tropical countries (e. g., Philippines), a complex of factors (including differences in pest species, damage patterns and cultural practices) preclude direct transfer of the technology to Bangladesh with any reasonable assurance of success. In addition to in-field losses, vertebrate pests cause serious problems in some storage situations by direct feeding and contamination with feces and urine.

This new project component will help the BDG to increase agricultural production by decreasing losses due to vertebrate pests. Specifically, it will assist in establishing an ongoing research capability to adopt or develop improved recommendations for vertebrate pest management suited to the needs of the small farmer. The establishment of the research capability and the development of improved recommendations will be accelerated by linkage with major external research organizations which already have expertise in this area, such as the Rodent Research Center in the Philippines and the Fish and Wildlife Research Center at Denver, Colorado.

This project will be with the Bangladesh Agricultural Research Institute (BARI) where it is envisioned that the ongoing research capability in vertebrate pest management will be established in the BARI organization as a Division.

Under the BDG/AID cooperative Research Project the BARI is currently contracting with a U.S. firm to provide consultants and services. The present project purpose of the Research Project is "to establish a functioning Bangladesh Government supported and staffed research system for food crops other than rice, and cropping systems." This project purpose will be amended to read "to establish a functioning

Bangladesh Government supported and staffed research system for food crops other than rice, and for cropping systems and vertebrate pest management." The Mission and BARI will arrange for a PASA to provide a consultant and other services in support of the vertebrate activity. Under the BARI, the Contractor and PASA personnel will coordinate their respective programs.

The cost of this new project component is approximately \$725,000, plus a BDG contribution of at least 25% of the total project costs.

There will be a requirement for six weeks TDY assistance in June or July, 1977, by an overseas experienced vertebrate pest scientist to assist the BDG and Mission in designing the new project component and preparing the Project Paper amendment. We suggest that the Denver Wildlife and Research Center be solicited to provide a scientist for this work.

COUNTRY/PROGRAM	PROJECT TITLE			
Bangladesh	Private Voluntary Organization			
ONGOING PROJECT	Co-Financing			
BUDGET DATA -	INITIAL OBLIGATION	AS APPROVED	REVISION	DATE PF/REVISION
TABLE IV	FINAL OBLIGATION	FY 75	FY	DATE LAST PAR
		FY 78	FY 1979	4/11/77
	TOTAL COST	2,000	2,500	DATE NEXT PAR
				4/78

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977			ESTIMATED FY 1978			ESTIMATED FY 1979		
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE
PROJECT TOTAL	735	433	537	500	678	359	500	559	300
CARE	250	165	130	-	130	-	-	-	-
IVS (Ongoing Project)	100	115	75	-	75	-	-	62	-
SCF/CDF	184	30	154	-	92	62	-	85	-
MAP/HEED	75	60	75	50	40	85	11/77- 11/78	7	-
YWCA	-	20	5	25	23	7	12/77 12/78	-	-
MCH	-	15	-	-	-	-	-	-	-
YMCA	100	15	85	100	80	20	10/77- 12/78	20	-
IVS (New Project)	26	13	13	-	13	-	-	-	-
CNRU (SCF/CDF)	-	-	-	-	-	-	-	-	-
3-5 additional PVO projects	-	-	-	325	140	185	11/77- 6/79	385	300
MOST COUNTRY INPUT	TBD			TBD			TBD		

PERSONNEL ON BOARD AS	PARTICIPANTS PROGRAMMED		
	FY 1977	FY 1978	FY 1979
9/30/77			
9/30/78			
9/30/79			
DH	-	-	-
PASA	-	-	-
CONTRACT	-	-	-
	NON-CONTRACT	LONG-TERM	SHORT-TERM
	CONTRACT	LONG-TERM	SHORT-TERM

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

## Private Voluntary Organization Co-Financing

### Progress To Date

Seven subprojects have been funded to date : A grant for \$184,000 was signed on May 1 with Save the Children/Community Development Foundation to assist them in carrying out a community based integrated rural development approach with emphasis on self-help. CARE has completed one year of its project to develop the cooperative system in six thanas. It has made good progress in establishing an effective accounting system in the two most advanced thanas, which have begun to take it over themselves. A number of development funds have also been set up which cooperative societies use to purchase commodities and inputs for income-producing schemes. The YWCA has established its handicrafts training program, opened a retail outlet, and is now receiving orders from abroad. The program also includes instruction in nutrition, family planning, health, and sanitation. IVS is conducting a wide range of pilot projects in one thana, including cooperative management, duck raising, appropriate technology, vegetable production, and women's role in development. The Children's Nutrition Research Unit is receiving funds to gather baseline data related to general nutrition and child morbidity. The Medical Assistance Program has completed one year of its integrated rural development project in one thana. They are conducting weekly MCH clinics in two unions, work in coordination with the local family planning workers, and are developing working relationships with thana health officials. In the agriculture sector, they have assisted with a livestock vaccination program, and have demonstration plots and livestock experiments going at the project site. The community development worker has made progress in building relationships with union and thana officials and is now ready to move into the villages and stimulate development activities. The Association of Baptists is testing the feasibility of polder projects in a coastal area and is also experimenting with different rice varieties.

For FY 1978 \$500,000 has been requested to continue to support on-going PVO programs and to support USAID interest in expanding and encouraging increased PVO participation in the development process.

COUNTRY/PROGRAM	PROJECT TITLE		AS APPROVED	REVISION	DATE PP/REVISION
Bangladesh	Rural Irrigation Works		FY 1978	FY -	-
ONGOING PROJECT			AS APPROVED	REVISION	DATE LAST PAR
BUDGET DATA -			FY 1980	FY -	-
TABLE IV	PROJECT NUMBER	APPROPRIATION	AS APPROVED	REVISION	DATE NEXT PAR
	388-0012	FN	7,100	-	7/79

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977			ESTIMATED FY 1978			FUND PERIOD (FY-TO)			
	OBLIGATION	EXPEN-DITURES	PIPE-LINE	OBLIGATION	EXPEN-DITURES	PIPE-LINE				
PROJECT TOTAL				2100	1500	600	2700	2,400	900	
Project Consultants (265 pm)				1,398	1,000	398	560	900	58	6/79 12/80
Construction				702	500	202	2,140	1500	842	10/79 12/80
HOST COUNTRY INPUT				892			900			

PERSONNEL ON BOARD AS OF	PARTICIPANTS PROGRAMMED			
	FY 1977	FY 1978	FY 1979	FY 1979
OH	9/19/77	9/29/78	9/29/79	
PASA				
CONTRACT	5/	8	3	

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS  
 3/ LONG-TERM - INCLUDES 6 MONTHS OR MORE  
 4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.  
 5/ Host Country Contract

COUNTRY/PROGRAM Bangladesh		PROJECT TITLE Food For Work				INITIAL OBLIGATION FY 1976	REVISION FY	DATE PP/REVISION 10/77
ONGOING PROJECT BUDGET DATA - TABLE IV		PROJECT NUMBER 388-0017				FINAL OBLIGATION FY 1980	REVISION FY	DATE LAST PAR 9/2/76
		APPROPRIATION FN				TOTAL COST	REVISION	DATE NEXT PAR 8/15/77
		U. S. DOLLAR COST (\$ 000)						

PROJECT INPUTS	ESTIMATED FY 1977				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ FUND- PERIOD (FR-TO)
PROJECT TOTAL	485	570	169		425	470	124		2,000	1,650	474	
CARE Technicians	288	300	110		288	320	78	10/77	318	350	46	10/78 3/80
Commodities; Office supplies, Furniture Equipment and Vehicle Parts.	108	200	35		107	110	32	"	122	140	14	"
Other Costs : CARE Overhead Costs Nutrition Impact Survey	89	70	24		30	40	14	"	60	60	14	"
Pucca Construction Program Including Technical Training, Construction Costs, Local Contractor									1,500	1,100	400	10/78 6/80
HOST COUNTRY INPUT	4,240				4,267				5,000			
3/ PERSONNEL ON BOARD AS OF		3/ PARTICIPANTS PROGRAMMED		1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II								
	9/30/77	9/30/78	9/30/78	FY 1977	FY 1978	FY 1978	2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS					
DH							3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE					
PASA							4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.					
CONTRACT												

## Food For Work

### Progress To Date

In FY 1976, 531 earthwork projects were undertaken, involving payment by the BDG of approximately 51,000 MTs of wheat to landless and near landless laborers. CARE reimbursed the BDG with 42,811 MTs of Title II wheat representing in kind payments to approximately 500,000 laborers for 15 million person days of work to move 1 billion cubic feet of earth.

In FY 1977 over 1,000 FFRW projects representing 100,000 MTs of wheat were approved for implementation. These projects included 471 irrigation canals, 357 flood control and land reclamation embankments, 170 rural roads, 142 water reservoirs. For FY 1977 thru FY 1980 it is estimated that approximately 1,000 - 1400 earthwork projects will be implemented annually involving payments of 100,000 MTs each year to the participant laborers.

### FFRW Appurtenant Structures

FFRW projects are designed to distribute food to needy people and generate employment through earth moving projects. Inputs which would add to the development benefits have not yet become a regular part of the program. For example, a FFRW project may have been designed to construct a farm-to-market road, but at present there are no provisions in the program to cover the cost of the construction materials or construction fees to install the numerous culverts and small bridges needed to make the road completely functional. To meet this need it is proposed to amend the FFRW project by adding an appurtenant structure (pucca works) component which will result in the completion of approximately 150 such structures on CARE FFRW projects in three selected districts in the first year, 250 in second and 300 in the third. The cost to AID will be approximately \$1.5 million for FY 1979 and 2.0 million for FY 1980.

These structures will include small reinforced concrete/brick bridges, reinforced concrete box culverts, small sluiceways, etc. They will be designed and constructed at the Thana level in concert with the Food for Relief Works planning and construction cycle. Disbursements from AID will follow the FAR procedure; for each structure which is certified complete according to specifications. AID will reimburse the government an agreed upon percentage of the original cost estimate.

Thana level standards will be used, but construction will be in accord with specifications and designs as provided in a Pucca Works Technical Manual. The manual will be the result of a USAID DST funded consultant contract which will be initiated before the end of 1977.

A local engineering consultant will review and approve each project design, and then monitor actual project implementation under the supervision of the USAID Engineering Division.

Another crucial element for the success of the project is the training and motivation of the BDG technicians who are responsible for all construction projects at the Thana level. To meet this need, the proposed project amendment will include funds to cover part of the costs to train 150 officers the first year, 400 the second year and 600 the third year.

## EVALUATION

Since this is an integrated program it is required that after each year a Project Appraisal Report (PAR) be completed as part of the regular evaluation. This was done in FY 76. An AAG audit was also conducted at about the same time. As part of the AID/CARE grant agreement a special, in-depth evaluation will take place after the second year of operation, probably in August 1977. USAID and CARE have also had the benefit of two U. N. Interagency Special Evaluation Team reports on WFP's parallel Food Relief Works project. These reports have provided valuable assistance to BDG, CARE and USAID management in fine tuning the program to maximize benefits.

There is still much that is unknown about the participating laborers, their families, and the program's nutritional and economic impact on them. To help answer some of these questions USAID has signed a contract with the Institute of Nutrition and Food Science, University of Dacca to conduct a study which is intended to 1) develop a social profile of the FFRW worker and his family, 2) determine the effects of Title II wheat on wages and foodgrain prices in the village 3) determine how the recipient laborers dispose of the wheat earned on the projects, 4) measure the probable nutritional impact of the wheat on the laborers' families and 5) determine the probable effects of the earthwork structures on local economic conditions. The data for this study has been collected during the 1977 dry season, and the final report will be completed in January 1978. In addition in February 1977 Mission economists conducted a preliminary cost benefit analysis of a randomly selected FFRW project. The results were encouragingly positive.

COUNTRY/PROGRAM	PROJECT TITLE	AS APPROVED	REVISION	DATE PP/REVISION
Bangladesh	Rural Electrification	FY 1977	FY -	-
ONGOING PROJECT		AS APPROVED	REVISION	DATE LAST PAR
BUDGET DATA -		FY 1979	FY -	-
TABLE IV		AS APPROVED	REVISION	DATE NEXT PAR
		60,000	-	9/78

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977			ESTIMATED FY 1978			ESTIMATED FY 1979		
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE
PROJECT TOTAL	19,000	-	19,000	21,000	35,000	5,000	20,000	22,000	3,000
Project construction equipment : Poles, lines, transformers and other accessories	10,000	-	10,000	14,000	21,000	3,000	12,000	12,000	3,000
Pole line construction transportation	2,000	-	2,000	2,000	4,000	-	2,000	2,000	-
Service connections and structures	5,000	-	5,000	4,000	7,000	2,000	4,000	6,000	-
Contingency and Training	2,000	-	2,000	1,000	3,000	-	2,000	2,000	-
PROJECT TOTAL	1,000	-	1,000	12,000	5,000	-	5,000	-	-

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

5/ Host Country Contract

HOST COUNTRY INPUT	PARTICIPANTS PROGRAMMED		
	FY 1977	FY 1978	FY 1979
PERSONNEL ON BOARD AS OF			
DH	9/30/77	9/30/78	9/30/79
PASA		12	12
CONTRACT	3	9	9

AID 1330-8 (2-77)

## Rural Electrification

### Progress To Date

The Rural Electrification Feasibility Study is underway and was approximately 40% complete as of May 15, 1977. Completion of the entire study is expected by October 8, 1977.

Phase I final report will be issued by mid July.

COUNTRY/PROGRAM Bangladesh	PROJECT TITLE FERTILIZER DISTRIBUTION IMPROVEMENT		AS APPROVED FY 78	REVISION FY	DATE PP/REVISION 6/78
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 388 - 0024		AS APPROVED FY 80	REVISION FY	DATE LAST PAR -
	APPROPRIATION FN		AS APPROVED 112,000	REVISION	DATE NEXT PAR 4/79

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ PERIOD (FR-TO)
PROJECT TOTAL	-	-	-		50,000	120	49880		36000	50000	35680	
Agriculture Inputs					15,000	-	15,000	8/78- 8/79	15200	15000	15200	8/79-8/80
TSP					12,000	-	12,000	8/78- 8/79	12000	12000	12000	8/79-8/80
UREA					8,000	-	8,000	10/78- 8/80	-	8000	-	
Bulk Handling					7,000	-	7,000	10/78- 8/80	-	7,000	-	
Granulation and other improvements of TSP factory					7,400	-	7,400	10/78- 10/79	8200	7,400	8200	10/79- 10/80
Fertilizer Storage					200	40	160	8/78- 8/79	300	220	240	8/79-8/80
Training and Technical Assistance					400	80	320	8/78- 8/79	300	380	240	8/79-8/80
Contingency					87,000				96,000			
HOST COUNTRY INPUT												
3/ PERSONNEL ON BOARD AS OF		9/30/77	9/30/78	9/30/79								
DH		-	-	2								
PASA		-	-	10								
CONTRACT	5/	-	2	6								
		PARTICIPANTS PROGRAMMED		FY 1977		FY 1978		FY 1979				
		NON-CONTRACTS; LONG-TERM		-		-		2				
		SHORT-TERM CONTRACTS		-		-		-				
		LONG-TERM SHORT-TERM		-		-		-				

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

5/ Host country contracts.

AID 1330-8 (2-77)

COUNTRY/PROGRAM Bangladesh	PROJECT TITLE Rural Credit	INITIAL OBLIGATION FY 1977	AS APPROVED FY 1977	REVISION FY -	DATE PP/REVISION
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 388-0025	FINAL OBLIGATION FY 1978	AS APPROVED FY 1978	REVISION FY -	DATE LAST PAR
	APPROPRIATION F/N	TOTAL COST	AS APPROVED 7,000	REVISION	DATE NEXT PAR 12/78

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977			ESTIMATED FY 1978			ESTIMATED FY 1979		
	OBLIGATION	EXPENDITURES	PIPE-LINE	OBLIGATION	EXPENDITURES	PIPE-LINE	OBLIGATION	EXPENDITURES	PIPE-LINE
PROJECT TOTAL	4,000	-	4,000	3,000	2,877	4,123	-	3,823	300
Advisors (200 PM including both FY 77 and FY 78)	1,500	-	1,500	500	1,000	1,000	-	700	300
Training <sup>5/</sup>	320	-	320	73	393	-	-	-	-
Loan Capitalization (Based on FAR Procedure)	2,070	-	2,070	2,427	1,374	3,123	-	3,123	-
Commodities	110	-	110	-	110	-	-	-	-
<b>MOST COUNTRY INPUT</b>	<b>1,000</b>			<b>1,000</b>					

1/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACTS LONG-TERM		1	
SHORT-TERM CONTRACTS		3	
LONG-TERM CONTRACTS			
SHORT-TERM CONTRACTS			
PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
OH			
PASA			
CONTRACT	8	6	6

2/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II

3/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS  
 4/ LONG-TERM - INCLUDES 9 MONTHS OR MORE  
 For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.  
 5/ Bulk of training funds will be for short term in country training.

## Rural Credit

### Progress To Date

USAID/Bangladesh is now in the process of preparing a Project Paper for submission in late June/early July. The credit models currently in preparation will include all six commercial banks in Bangladesh, along with the Bangladesh Krishi Bank, JSB and IRDP. The Mission is also developing a model independent of the above named institutions.

A team of technical consultants is assisting with project preparation including finalization of all models and definition of technical assistance and training requirements.

COUNTRY/PROGRAM Bangladesh	PROJECT TITLE Technical Resources	INITIAL OBLIGATION FY 1978	AS APPROVED FY 1978	REVISION FY -	DATE PP/REVISION
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 388-0027	FINAL OBLIGATION FY 1980	AS APPROVED FY 1980	REVISION FY -	DATE LAST PAR NA
	APPROPRIATION 106	TOTAL COST	AS APPROVED 2,212,	REVISION -	DATE NEXT PAR 7/79

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIGATION	EXPENDITURES	PIPE-LINE	FUND PERIOD (PR-TO)	OBLIGATION	EXPENDITURES	PIPE-LINE	FUND PERIOD (PR-TO)	OBLIGATION	EXPENDITURES	PIPE-LINE	FUND PERIOD (PR-TO)
PROJECT TOTAL	-	-	-	-	800	150	650	7/78	800	760	690	4/79-9/80
Consultants					370	100	270	9/79	455	380	345	4/79-9/80
Training					150	50	100	7/78	100	100	100	4/79-9/80
Long term					(60)		(60)	9/79	(60)	(60)	(60)	
Short term					(90)	(50)	(40)		(40)	(40)	(40)	
Equipment for disaster Preparedness					280	-	280	7/78 9/79	245	280	245	4/79-9/80
MOST COUNTRY INPUT					120				120			

1/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACTS LONG-TERM	-	6	6
SHORT-TERM CONTRACTS	-	5	5
LONG-TERM CONTRACTS			
SHORT-TERM CONTRACTS			
CONTRACT	-	2	6

2/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II

3/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS  
 4/ LONG-TERM - INCLUDES 9 MONTHS OR MORE  
 For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

COUNTRY/PROGRAM Bangladesh		PROJECT TITLE Rural Roads				AS APPROVED FY 1978		REVISION FY -		DATE PP/REVISION	
ONGOING PROJECT BUDGET DATA - TABLE IV		PROJECT NUMBER 388-0032		APPROPRIATION FN		AS APPROVED FY 1980		REVISION FY -		DATE LAST PAR	
						AS APPROVED 46,420		REVISION -		DATE NEXT PAR 6/79	

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE		OBLIG- ATION	EXPEN- DITURES	PIPE- LINE		OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND PERIOD (FR-TO)
PROJECT TOTAL					8200	6,700	1500		18,600	15,100	5,000	
Road Consultants (252 pm per year)					1,700	1,700	-		1,100	1,100	-	5/79 4/80
Road Construction					6,000	4,500	1,500		17,000	13,500	5,000	9/79 12/80
Bridge and Water Connections					500	500	-		500	500	-	9/79 12/80
HOST COUNTRY INPUT					2,750				8,220			

- 1/ PERSONNEL ON BOARD AS OF 9/30/77 9/30/78 9/30/79
  - 2/ PARTICIPANTS PROGRAMMED
  - 3/ NON-CONTRACT; LONG-TERM
  - 4/ SHORT-TERM CONTRACT; LONG-TERM SHORT-TERM
  - 5/ CONTRACT 9 9
- 1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II
- 2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS
- 3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE
- 4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.
- 5/ Host Country Contract

COUNTRY/PROGRAM		PROJECT TITLE				DATE PP/REVISION	
Bangladesh		MALARIA CONTROL				NOV. 77	
ONGOING PROJECT		PROJECT NUMBER				DATE LAST PAR	
BUDGET DATA -		388-0034				FY 1982	
TABLE IV		APPROPRIATION				DATE NEXT PAR	
		PPH				1/79	
		TOTAL COST				5000	

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	FUND- PERIOD (FR-TO)
<b>PROJECT TOTAL</b>	1500	1420	80		1500	1490	90		1500	1490	90	
Advisor, full time, and Consultants	130	60	70	1/78	130	60	70	8/79	85	85	70	11/78 5/80
Training, short-term	15	15	0	1/78	15	15	0	9/78	15	15	0	11/78 9/79
Commodities	1225	1225	0	1/78	1225	1225	0	1/78	1250	1250	0	11/78 6/79
Contingency	130	120	10	1/78	130	120	10	12/78	150	140	20	11/78 12/79
<b>MOST COUNTRY INPUT</b>	5,800				6,100				6,650			

PERSONNEL ON BOARD AS OF	PARTICIPANTS PROGRAMMED			NON-CONTRACTS LONG-TERM	SHORT-TERM CONTRACTS	LONG-TERM SHORT-TERM
	FY 1977	FY 1978	FY 1979			
9/29/77						
11/29/78		5	5			
	1					

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYS LEVEL SHOWN IN TABLE II

3/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

4/ LONG-TERM - INCLUDES 9 MONTHS OR MORE  
For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

COUNTRY/PROGRAM Bangladesh	PROJECT TITLE Project Development Grant II				AS APPROVED FY 78	REVISION FY -	DATE PP/REVISION 3/78
	PROJECT NUMBER 388 - 0036				AS APPROVED FY 82	REVISION FY -	DATE LAST PAR NA
	APPROPRIATION 106				AS APPROVED 10,000	REVISION -	DATE NEXT PAR 5/79
PROJECT DATA - TABLE IV							

U. S. DOLLAR COST (\$ 000)

PROJECT INPUTS	ESTIMATED FY 1977-1				ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ FUND- PERIOD (FR-TO)	OBLIG- ATION	EXPEN- DITURES	PIPE- LINE	4/ FUND- PERIOD (FR-TO)
PROJECT TOTAL	-	-	-	-	2,000	1300	700	-	2,000	2,000	700	-
CONSULTANT SERVICES					2,000	1300	700	4/78- 9/79	2,000	2,000	700	4/79- 9/80
HOST COUNTRY INPUT	1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II											
2/ PERSONNEL ON BOARD AS OF	2/ PARTICIPANTS PROGRAMMED											
9/30/77	9/30/78	9/30/79	FY 1977	FY 1978	FY 1979							
DH	-	-	-	-	-	NON- CONTRACT; LONG- TERM						
PASA	-	-	-	-	-	SHORT- TERM						
5/ CONTRACT	-	-	12	-	-	CONTRACT; LONG- TERM						
						SHORT - TERM						

- 1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II
- 2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS
- 3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE
- 4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.
- 5/ Host country contracts

PROJECT NARRATIVE STATEMENTS

Agricultural Research (388-0003)

The FY 1978 CP request of \$716,000 for Agricultural Research has been increased \$228,000 for a total FY 1978 proposed obligation of \$944,000. The additional funds will be utilized in support of a vertebrate pest research activity as an additional component to the on-going Agricultural Research Project.

The activity will be carried out by the Bangladesh Agricultural Research Institute (BARI) where it is envisioned that a division level research capability in vertebrate pest management will be established. The project component is designed to help the BDG increase agricultural production by decreasing losses due to vertebrate pests.

The funds requested will cover technical assistance requirements including a PASA with the U.S. Fish and Wildlife Research Center at Denver Colorado.

Accordingly, the final year of obligation is now scheduled for FY 1981 rather than FY 1979 as shown in the FY 1978 CP. Total life of project cost is now \$3,267,000.

Food For Work (388-0017)

The FY 1979 ABS life of project cost is now shown at \$5,821,000 in comparison to the FY 1978 total cost figure of \$2,361,000.

The increase reflects additional funding for CARE monitoring of FFW projects in FY 1979 and FY 1980, plus the Mission's plans for an Appurtenant Structure program beginning in FY 1979.

Listed below is a breakout of the actual and proposed obligations through 1980.

	<u>Actual</u>		<u>Proposed</u>			<u>Total</u>
	<u>FY 76</u> <sup>*</sup>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	
CARE Grant	411	485	425	500	500	2,321
Appurtenant Structures	-	-	-	1,500	2,000	3,500
	<u>411</u>	<u>485</u>	<u>425</u>	<u>2,000</u>	<u>2,500</u>	<u>5,821</u>

\* Includes Transition Quarter.

Rural Electrification (388-0021)

The new life of project cost in the FY 1979 ABS is \$60,000,000 as compared to \$40,000,000 in the FY 1978 CP. The additional \$20,000,000 to be obligated in FY 1979 is based on the expectation that the feasibility study, currently underway, will demonstrate that additional areas in Bangladesh can be electrified.

Small Scale Irrigation II (388- 0023)

The FY 1978 CP proposed a \$10,000 total obligation for this project. The Mission now plans to shift the obligation to FY 1979 for a new total of \$15,000,000, followed by additional obligations of \$15,000,000 in FY 1980 and FY 1981 respectively.

While there is no lack of demand for handpumps, the production of the units has been constrained by a shortage of raw materials. Thus, there are sufficient funds available in Small Scale Irrigation I to sustain the project through FY 1978. The Mission will evaluate this initial effort in late June 1977 and continue to observe the project's performance in FY 1978. In anticipation of increased pump sales the Mission proposes an additional \$45,000,000 FY 1979 thru 1981 under Small Scale Irrigation II.

Fertilizer Distribution Improvement (388-0024)

Listed below is a revised schedule of component costs for the project. The FY 1978 CP request has been increased by \$16.0 million for a proposed obligation in FY 1978 of \$50 million. In addition, the Mission proposes to fund this project through FY 1980 for a total life of project cost of \$112,000,000.

<u>FY 1978 Project Component</u>	(\$ thousands) <u>Amount</u>
a) Fertilizer Imports	27,000
b) Bulk handling	8,000
c) Improvements at the TSP and other fertilizer facilities	7,000
d) Fertilizer Storage	7,400
e) Training and Technical Assistance	200
f) Contingency	400
	<hr/> \$50,000

Additional fertilizer needs were indentified in the process of developing the FY 1977 Agricultural Inputs Project Paper, as were the need for improvements at the TSP factory and for Training and Technical Assistance. The revised estimate for bulk handling was prepared during the recently completed feasibility study.

#### Rural Credit (388-0025)

The FY 1978 CP request of \$4.0 million has been reduced to \$3.0 million. The \$1.0 million reduction reflects the Mission's best current estimates of the capacity of the proposed institutional models to disburse and recover loans in the pilot experiment. It also reflects the most efficient number and mix of technical consultant personnel.

Based on final project design at the PP stage, the project requirements will include a total of \$7.0 million in AID resources over a total disbursement period of three years.

#### Foodgrain Protection (388-0033)

Mission has decided not to proceed with project development since other donors are developing substantial projects in this field.

#### Population/Family Planning (388-0001)

As noted in the Progress to Date statement (see Table IV), a new Project Paper was submitted in 1975 and the initial obligation was made in FY 1976 although the project number remained the same as the previous project. A revised PP facesheet will be submitted to cover the two year extension of this project to 1980.

The total life of project cost is now estimated at \$43,931,000 which reflects the Mission's priority commitment to the country's population program.

#### Malaria Control (388-0034)

In the PRP the Mission proposed a phased five year project with AID inputs ranging from \$1.4 million to \$2.0 million each year. While preparing the FY 1978 CP, AID/W put the bulk of AID funds into the first year of the project. The Mission, however, remains convinced that incremental funding would be the most appropriate method for this project.

It is proposed to obligated funds over a five year period, FY 1978 - FY 1982. AID's life of project cost is reduced from \$8,560,000 to \$5,000,000 due to the increased contributions by other donors.

PVO Co-Financing (388-0010)

See Table IV for full listing of OPGs. A Project Paper amendment will be submitted in FY 1978 to extend the life of project to FY 1979, or beyond. The total project cost is now \$2,500,000 which reflects our best estimate of continued PVO interest in the Co-Financing concept.

Technical Resources (388-0027)

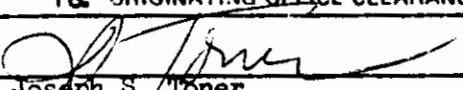
The FY 1979 ABS proposed obligation of \$800,000 is a slight reduction of the \$814,000 in the FY 1978 CP. The reduction reflects the Mission's recent assessment of the proposed inputs with the bulk of the funds being shifted from consultants to disaster equipment. The \$14,000 reduction is for the participating training component.

Project Development Grant II (388-0036)

While initially viewed as a one year project, the Mission has subsequently come to the recognition that there will be a continuing requirement for high quality feasibility studies to lay the groundwork for projects. Therefore it is proposed to extend the project to five years (FY 78-FY 80) with \$2,000,000 funding in each year.

TABLE V - FY 1979 PROPOSED PROGRAM RANKING

RANK	DECISION UNIT Bangladesh	DECISION PACKAGES/PROGRAM ACTIVITY/SUPPORT ITEM	REVISOR BY				CONSOLIDATED BY					
			APPROPRIATE AGENCY				PROGRAM REQUIREMENTS					
			CUMULATIVE EXPENSES (\$000)	INCREMENTS (\$000)	WORK ONLY		CUMULATIVE US	CUMULATIVE FN	INCREMENTS (\$000)	CUMULATIVE		
					US	FN					US	FN
		<b>Decision Package - Minimum :</b>										
		Work Force and Operating Expenses										
1		0001 Population/Family Planning (GO)	P	983	42	79	42	79	-	-	-	-
2		0037 Rural Finance (GN)	F/N	983	-	-	43	79	12,100	12,100	12,100	12,100
3		0024 Fertilizer Distribution Improvement (GO)	F/N		1	1	43	80	16,000	16,000	28,100	28,100
4		0032 Rural Roads (GO)	F/N		-	-	43	81	20,000	20,000	48,100	48,100
5		0023 Small Scale Irrigation II (GN)	F/N		-	-	43	81	8,000	8,000	56,100	56,100
6		0012 Rural Irrigation Works (GO)	F/N		-	-	43	81	7,000	7,000	63,100	63,100
7		0038 Union Health Services (GN)	H		-	-	43	81	2,700	2,700	65,800	65,800
8		0021 Rural Electrification (GO)	F/N		-	-	43	81	1,500	1,500	67,300	67,300
9		PL-480 Title II			-	1	43	82	10,000	10,000	77,300	77,300
10		0017 Food for Work (CARE) (GO)	F/N		-	-	43	82	12,000	12,000	89,300	89,300
11		0003 Agricultural Research (GO)	F/N		-	-	43	82	500	500	89,800	89,800
12		PL-480 Title I			-	-	43	82	900	900	90,700	90,700
					-	-	43	82	16,800	16,800	107,500	107,500
		<b>Decision Package - Current :</b>										
13		0037 Rural Finance (GN)	F/N	1,016	-	-	43	82	4,000	4,000	111,500	111,500
14		0024 Fertilizer Distribution Improvement (GO)	F/N		-	-	43	82	16,000	16,000	127,500	127,500
15		0036 Project Development II (GO)	106		-	-	43	82	2,000	2,000	129,500	129,500
		<b>Decision Package - Proposed :</b>										
16		0032 Rural Roads (GO)	F/N	1,068	-	-	43	82	10,600	10,600	140,100	140,100
17		0023 Small Scale Irrigation II (GN)	F/N		-	-	43	82	8,000	8,000	148,100	148,100
18		0021 Rural Electrification (GO)	F/N		-	-	43	82	10,000	10,000	158,100	158,100
19		PL-480 Title II			-	-	43	82	6,000	6,000	164,100	164,100
20		0017 Food for Work (Pucca Works) (GO)	F/N		-	-	43	82	1,500	1,500	165,600	165,600
21		0040 Water & Related Land Resources (GN)	F/N		-	-	43	82	20,000	20,000	185,600	185,600
22		0039 Fish Seed Multiplication & Distribution (GN)	F/N		1	1	44	82	1,000	1,000	186,600	186,600
23		0010 PVO Co-Financing - OPG (GO)	106		-	-	44	82	500	500	187,100	187,100
24		0041 Chittagong Fertilizer Plant (GN)	F/N		-	-	44	82	30,000	30,000	217,100	217,100
25		0034 Malaria Control (GO)	H		1	1	45	82	1,500	1,500	218,600	218,600
26		0027 Technical Resources (GO)	106		-	-	45	82	800	800	219,400	219,400

AGENCY FOR INTERNATIONAL DEVELOPMENT				1. TRANSACTION CODE		PID	
<b>PROJECT IDENTIFICATION DOCUMENT FACESHEET</b>				<input type="checkbox"/> A    A = ADD <input type="checkbox"/> C    C = CHANGE <input type="checkbox"/> D    D = DELETE		2. DOCUMENT CODE 1	
TO BE COMPLETED BY ORIGINATING OFFICE							
3. COUNTRY/ENTITY Bangladesh .				4. DOCUMENT REVISION NUMBER <input type="checkbox"/>			
5. PROJECT NUMBER (7 DIGITS) <input type="checkbox"/> 388-0037 <input type="checkbox"/>		6. BUREAU/OFFICE A. SYMBOL    B. CODE ASIA <input type="checkbox"/> 04 <input type="checkbox"/>		7. PROJECT TITLE (MAXIMUM 40 CHARACTERS) <input type="checkbox"/> Rural Finance <input type="checkbox"/>			
8. PROPOSED NEXT DOCUMENT A. <input type="checkbox"/> 2    2 = PRP <input type="checkbox"/> 3    3 = PP				B. DATE    MM    YY 09    78			
9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY <input type="checkbox"/> 79 <input type="checkbox"/> b. FINAL FY <input type="checkbox"/> 81 <input type="checkbox"/>				10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = 15 Taka )			
				FUNDING SOURCE		BASE	
				A. AID APPROPRIATED		20,800	
				B. OTHER U.S. \$		-	
				C. HOST COUNTRY		30,300	
				D. OTHER DONOR(S)		-	
				TOTAL		51,100	
11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 79		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) FN	200	043		20,000		20,800	
(2)							
(3)							
(4)							
TOTAL				20,000		20,800	
12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)							
041	042	246					
13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)						14. SECONDARY PURPOSE CODE	
BR	BS	EQTY	TNG				
15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)							
Increase in income of rural poor							
16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)							
Establish a functioning and effective self-financing rural financial system which is fully accessible to and used by small farmers, tenants, share-croppers, landless rural laborers and other rural poor such as small fishermen, women artisans, etc.							
17. PLANNING RESOURCE REQUIREMENTS (staff/funds)							
Seven man-months of consultant assistance - PD & S							
18. ORIGINATING OFFICE CLEARANCE						19. DATE DOCUMENT RECEIVED BY AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION	
Signature 						MM    DD    YY                         	
Title Joseph S. Toner Director USAID/Bangladesh			Date Signed MM    DD    YY 05    27    77				
AID 1330-2 (3-76)							

PROJECT IDENTIFICATION DOCUMENT

Rural Finance (388-0037)

I. Summary of the Problem to be Addressed and the Proposed Response

A. The Problem

The problem to be addressed is the absence of a functioning and effective rural financial system which is fully accessible to the rural poor: small farmers, tenants, sharecroppers, landless rural laborers, small fishermen, women artisans, etc.

B. The Solution to the Problem

The solution is the establishment of such a system which can provide a convenient and timely source of credit and a financially attractive and reliable repository for surplus cash. The system should be self-financing, with full recovery of all loans including interest a basic project objective. It should provide a less expensive source of credit than the non-institutional sources upon which the target group has had exclusively to rely, but must retain much of the flexibility and informality which has contributed to the success of such non-institutional sources. It should provide opportunities for members of the target group to invest in high-yielding inputs and thereby to increase their crop yields and incomes.

C. Description of the Proposed Project

1. Project Outputs

The Project outputs include the establishment of functioning local level banking outlets throughout Bangladesh. There are approximately 65,000 villages in Bangladesh, each with a population ranging between 500 and 1500. Each of these will have local access to a banking outlet. A minimum of one such outlet for every five villages, or approximately 13,000 outlets, will be established and will undertake a credit program targeted specifically to the project target group. These 13,000 outlets will be established on a phased basis over one to three years, depending on the pace of implementation of the FY 1977 experimental project.

## 2. Technical and Physical Resources Required

The resources required to establish such outlets will include the following:

- (1) Technical assistance: Full time team of four specialists throughout the three-year life of project, plus approximately 24 man-months of short-term expert assistance.
- (2) Additional staff: 13,000 village loan officer/managers plus 13,000 guard/messengers.
- (3) Training: One month for each loan officer/manager the first year, plus two weeks each subsequent project year. Also, observation training of senior level credit officials through visits to successful Small Farmer Credit Projects in the Philippines, Korea, Thailand, Malaysia, etc. will be provided. 20 man-months.
- (4) Facilities: Rental of 13,000 village buildings plus local purchase of 13,000 bicycles.
- (5) Seed Capital: To cover loans extended by each outlet in its first year of operation in excess of savings mobilized.

In addition, project implementation will require AID direct-hire staff resources as follows:

US direct hire Project Manager	:	6 man-months per year
Local direct hire	:	24 man-months per year

## 3. Estimated Disbursement Period of the Project

Project disbursements are expected over a total project life of three years.

## D. Major Assumption Pertinent to Project Success

The major assumption to project success is that at least one successful, nationally replicable credit model will be identified during the course of the FY 1977-78 project.

#### E. Related Bangladesh Government and Other Donor Activities

The Bangladesh Government announced in February 1977 the establishment of an agricultural credit program to make available Tk. 100,00,00,000 (one hundred crore, or approximately \$67 million) during calendar year 1977. The program is targeted to small farmers, but early indications are that much of the credit is not reaching the target group.

In addition the World Bank is active in rural credit. The Bank's seven thana Rural Development (RD-1) project has a sizable credit component; the Intensive Jute Cultivation Scheme (IJCS) likewise involves credit. Also, the Bank is financing a major credit study which is expected to begin in July 1977 with the final report available in early 1979.

Also the Asian Development Bank has a four thana rural development project similar to the Bank's RD-1, as well as an "Agricultural Credit" project which involves primarily the financing of shallow tubewells. ADB is also financing technical assistance to the Bangladesh Krishi Bank and is associated with the World Bank's major credit study.

Various private and voluntary agencies, most notably the Mennonite Central Committee and the Ford Foundation, are involved in varying but limited degree in rural credit.

#### F. Realistic Alternatives to the Project

This project is a follow-on to an experimental credit project funded in FY 1977-78. The FY 1977-78 project will test a series of credit models with the objective of identifying one or more that succeed in reaching the target group with timely and sufficient credit, mobilizing savings and recovering principal and interest for continuing lending operations on a permanent basis. A wide range of alternative project models will thus be developed prior to PP preparation and will serve as the basis for final project design.

#### G. Intended Direct and Indirect Beneficiaries

The direct beneficiaries will be all those who do not presently have access to institutional credit. These include small landholders, tenants, sharecroppers, landless laborers, small fishermen, women artisans and others: the poor majority, as defined by their systematic exclusion from existing credit institutions.

Indirect beneficiaries will include all who will benefit from increased rural economic and agricultural productivity.

## H. Spread Effects

The objective of the project will be to spread, on a national basis, one or more viable rural financial systems. It is assumed that if a profitable model is identified as a result of the FY 1977-78 project, a certain amount of spread will occur spontaneously. The FY 1979 project will accelerate this process by establishing an increasing number of credit outlets in each of the three years of the project, for a total of 13,000 such units.

## II. Financial Requirements and Plans

### A. Estimate of Total Project Costs

It is estimated that the project's start-up costs will total approximately \$50.3 million, as follows:

1. Full time team of four expatriates for three-year life of project, plus 24 man-months of short-term assistance, \$10,000 per man-month X 168 months = \$1.7 million. Approximately half of this would be utilized during the first 18 months of the project, for an initial grant allocation of = \$ 0.9 million\*

2. Additional Staff: Salaries for first year of hire

A. 13,000 Loan Officer/Managers

Tk. 500/MO x 12 Mos x 13,000 + 15 = 5.2 million

B. 13,000 Guard/Messengers

Tk. 250/MO x 12 Mos x 13,000 + 15 = 2.6 million

3. Training

A. One month in-country training per loan officer first year, plus two weeks each succeeding two years.

Tk 1,000 x 13,000 + 15 (First Year) = 0.9 million

Tk 500 x 13,000 x 2x2 + 15 (succeeding years) = 1.7 million

B. Third country observation training:

20 man-month @ \$5,000 = 0.1 million

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\* The remaining \$0.8 million would be allocated separately later as the need arose. This is reflected in the "life of project" figures in Block 11 of the facesheet.

## 4. Facilities:

## A. Village Building Rental

Tk 330/MO x 12 Mos x 13,000 + 15 = \$ 3.4 million

## B. Purchase of Bicycles (local market)

Tk 1,000 x 13,000 + 15 = 0.9 million

## 5. Seed Capital for Loans made in first year of operation of each branch\*

## A. 200 Loans per outlet averaging

Tk 250 each x 13,000 outlets + 15 = 43.3 million

## B. Less Savings Mobilized

200 deposits averaging  
Tk 50 x 13,000 + 15

-8.7

## C. Net Seed Capital

= 34.6 million

## 6. Total

= 50.3 million

B. AID Contribution

AID will finance \$20.8 million of this requirement on a grant basis, of which \$20.0 million will be obligated the first year. The disbursement period of the project is expected to range up to three years depending upon the pace of project implementation planned as a result of experience gained in the FY 1977-78 experimental project. The disbursement mechanism for the AID project will be worked out as part of the project design process.

C. Bangladesh Government and Other Donor Contributions

It is expected that the entire residual balance of project costs will be financed by the Bangladesh Government. However, the other major donors which have been actively involved in rural credit may participate. However at this time no such commitments have been made.

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\* It is assumed that the volume of both loans and deposits will increase each succeeding year of the project, with increased deposits plus repaid loans covering subsequent cycles of lending. Project disbursements for needed capital will reflect the pace of establishment of new banking outlets.

### III. Development of the Project

#### A. Determination of Project Feasibility

Full details of the project and its feasibility will be worked out during the course of implementation of the FY 1977-78 experimental project. See Project Paper for the FY 1977-78 project for implementation plan, consultancies, etc.

#### B. Schedule of PRP and PP Submissions

The PRP should be prepared for submission at the end of FY 1978 following completion and evaluation of the first year of the FY 1977-78 pilot.

The PP will probably be submitted in the second quarter of FY 1979.

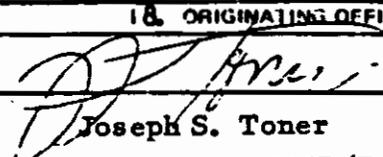
#### C. AID Resources Necessary to Develop PRP and PP

It is expected that the Mission staff, in consultation with the technicians implementing the FY 1977-78 project and with up to two work-months of additional specialized consultant assistance, will be able to prepare the PRP without AID/W assistance.

Up to five workmonths of specialized consultant assistance may be required during preparation of the PP.

### IV. Issues of A Policy or Programmatic Nature

Programmatic and policy issues, if any, will be identified during the course of the FY 1977-78 project.

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT IDENTIFICATION DOCUMENT FACESHEET</b> TO BE COMPLETED BY ORIGINATING OFFICE				1. TRANSACTION CODE <input checked="" type="checkbox"/> A    A = ADD <input type="checkbox"/> C    C = CHANGE <input type="checkbox"/> D    D = DELETE		PID 2. DOCUMENT CODE	
3. COUNTRY/ENTITY Bangladesh				4. DOCUMENT REVISION NUMBER <input type="checkbox"/>			
5. PROJECT NUMBER (7 DIGITS) <input type="checkbox"/> 388 - 0038		6. BUREAU/OFFICE A. SYMBOL    B. CODE ASIA        04		7. PROJECT TITLE (MAXIMUM 40 CHARACTERS) <input type="checkbox"/> Union        Health Services			
8. PROPOSED NEXT DOCUMENT A. <input type="checkbox"/> 2 = PRP                      B. DATE <input type="checkbox"/> 12/77 <input type="checkbox"/> 3 = PP				10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = 15 Tk.)			
9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY <input type="checkbox"/> 79    b. FINAL FY <input type="checkbox"/> 81				FUNDING SOURCE    MKS BY			
				A. AID APPROPRIATED    7,000			
				OTHER 1.			
				U.S. 2.			
				a. HOST COUNTRY    10,000			
				b. OTHER DONOR(S)    16,000			
				TOTAL    33,000			
11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 79		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) PH	539	510		1,500		7,000	
(2)							
(3)							
(4)							
TOTAL							
12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)							
440							
13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)						14. SECONDARY PURPOSE CODE	
BRW							
15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)							
To establish an integrated rural health delivery system in Bangladesh.							
16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)							
To put basic health services in physical proximity to a majority of the rural poor.							
17. PLANNING RESOURCE REQUIREMENTS (staff/funds)							
18. ORIGINATING OFFICE CLEARANCE						19. DATE DOCUMENT RECEIVED 1: AID/W, or FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION	
Signature 							
Title Joseph S. Toner Director, USAID/Bangladesh				Date Signed MM DD YY 05 27 77		MM DD YY 	

## PROJECT IDENTIFICATION DOCUMENT

## Union Level Health Services (388 - 0038)

I. Summary of the Problem to be Addressed and the Proposed Response

## A. The Problem

As noted in Bangladesh's first Five Year Plan, health care is still largely urban - oriented and curative - based. The 92% of the population who live in rural areas have little access to modern health services. Of the estimated 7,000 doctors in the country, over 75% are working in urban Areas. The health services available to most villages consist only of the village dai (midwife), the local health practitioner, and occasional visits by the field based health workers and family planning workers. Doctors and hospitals are so remote as to be considered only at times of serious need, and even then are likely to be beyond reach.

Of the 356 rural thanas, only 150 had Rural Health Center (RHC) facilities as of June, 1973 (outpatient dispensary, MCH clinic with six maternity beds, diagnostic laboratory, and supply storage). During the first FYP period the BDG planned to upgrade existing RHCs to a Thana Health Complex (2 story building with 31 beds) and to build new Thana Health Complex (THC) centers in all 356 rural thanas. 222 THCs have now been completed. As well as completing these thana centers, the next step in the process of implementing an integrated health delivery system in all rural areas is to build subcenters in each of the country's 4,352 unions. These subcenters will include office and working space for both a Medical Assistant (New category health worker with 24 months' training) for general health services and a Family Welfare Visitor (female) for family planning and MCH services, plus support personnel, as well as living quarters for the FWV. The health and the family planning workers will each have an examination room equipped with basic medical instruments and the center will be stocked with medicines to treat common illnesses and with contraceptive supplies for family planning.

In addition to providing a health referral point for the field based Family Welfare Workers (male) and Family Welfare Assistants (female) who are presently in position, the major role of union sub-centers might eventually be to support, supply, reinforce, and train community based, indigenous health and nutrition workers. Considerable evidence from elsewhere in South Asia indicates that even well distributed health centers reach only those within a small radius of the center, and rarely attract families of landless laborers. Progress in the development of community-based services on a large scale, however, is unlikely to be rapid, and may have to rely heavily, in the near future, on voluntary organizations.

At the time the Bangladesh DAP was prepared in late 1974, it was considered that any U.S. funds available for health and family planning would have a greater impact on the health of the nation and on mortality and morbidity rates if they were applied to the urgent need to reactivate and develop the dormant family planning program. At that time, WHO was giving, and continues to give, a wide range of assistance in the health sector. Accomplishments in the intervening two and a half years include: MCH services, which had been virtually nonexistent, have been combined with family planning; a new category of basic health worker has been created; with assistance from U.N. specialized agencies and IBRD, progress has been made in training Medical Assistants and Family Welfare Visitors, who are to be union-based; and the BDG is now putting greater emphasis on getting basic services to the rural population. The first phase of union subcenter construction, projected in the First FYP is seriously behind schedule and is lagging behind the production of trained personnel. The Mission has concluded that a subcenter at union level is an essential component of the BDG's health and family planning service delivery system designed to reach rural people.

Given the poor communication and transportation system in rural Bangladesh, the thana head-quarters is generally too

remote to serve as a base of operations for union level health and family planning workers. The kinds of services these workers are to deliver (i.e. maternal and child health care, family planning services, medication for common ailments, first aid, referral services, and advice/assistance on preventive health measures) require close and continuing contact with the rural people and a union health subcenter is necessary to deliver these services effectively.

B. The Solution to the Problem

This project will assist the BDG in providing the physical infrastructure necessary to put these basic health services in physical proximity to a majority of the rural poor.

C. Description of the Proposed Project

1. Project Outputs

500 union health subcenters, built to AID-approved standards and specifications, equipped as agreed, staffed with both Health and family planning personnel, and providing services to the surrounding areas .

2. Technical and Physical Resources Required

The Mission proposes that the Fixed Amount Reimbursement (FAR) mechanism be used to fund this project. This arrangement will put the bulk of the management responsibility on the BDG and will reduce the AID risk as the BDG will have to produce a functioning health subcenter before they receive full reimbursement. AID will finance 75% of the total previously agreed construction cost of each health subcenter built to agreed specifications, up to a total of 500 subcenters.

Implementing this funding arrangement would be accomplished through the following steps:

- a. BDG and USAID health and engineering officials agree on criteria for site selection, i.e., the subcenters

would have to be located where the greatest number of people in the union would have easy access to them.

- b. BDG and USAID officials agree on design and construction standards. The BDG would probably contract with an expatriate engineering firm and/or local consultant to perform this task with monitoring by USAID engineering staff.
- c. BDG and USAID officials then agree on a uniform, fixed cost for each subcenter.
- d. BDG and USAID health officials agree on furnishing and equipment for the completed subcenters, the inventory of drugs and contraceptives they will have, and the personnel who will be assigned to them.
- e. The BDG then has the responsibility to construct the subcenters to the agreed plans and specifications.
- f. The engineering firm or consultant would be responsible on AID's behalf for approving construction sites and monitoring.
- g. When construction is completed, upon consultants certifying that it is in compliance with specifications, AID will certify that a building meets agreed standards and will authorize reimbursement of half of its contribution (37<sup>1</sup>/<sub>2</sub>% of the agreed fixed total cost of construction).
- h. The BDG will equip and staff the subcenters as agreed.
- i. The USAID Health Officer will certify that the personnel and equipment criteria have been met and authorize reimbursement of the second half of AID's contribution.

### 3. Estimated Disbursement Period of the Project

Construction will be phased over three years with 20% of AID funds obligated in the first year and 40% in each of the next two years.

D. Major Assumptions Pertinent to Project Success

These Are:

1. That the Health and the Population Control Divisions of the Ministry, who will each have personnel assigned to the subcenters, will cooperate in the construction and use of the subcenters.
2. That there are sufficient contractors willing to work in rural areas.

E. Related Other Donor Activities

The BDG is committed to constructing subcenters in all 4,352 unions during the second plan period. The Population Control and Family Planning Division of the Health & Population Control Ministry has turned over funds for 100 subcenters to the Construction and Building Directorate and 50 of these are under construction. In May, 1977 the Ministry plans to initiate an experiment in Tangail District in which the Union Councils will be responsible for construction of 12 of these subcenters in 12 unions. It is hoped that this will give the people a sense of ownership and responsibility for the finished product. If this experiment is successful, this will become the normal procedure for subcenter construction.

Under the World Bank's first Population Project 24 subcenters are being constructed. The Bank is considering additional construction in their new project to begin in 1978 but we don't yet know how large a program they will have.

In 1976 and 1977 UNFPA committed \$300,000 for rental and/or renewal of existing buildings to be used as health subcenters. At \$600 per building, UNFPA expects this amount to cover 500 centers. The unions that will receive these funds have now been selected and orders have gone to the district officials to renovate existing facilities and/or rent facilities.

## F. Realistic Alternatives to the Project

Alternative, but not mutually exclusive, ways to deliver basic health services to the rural people include:

- a. Use of mobile health clinics which would visit each union/village on a regular schedule.
- b. Use of paramedics who would work out of the Thana health center and travel regularly throughout the thana.
- c. Identify and train village level workers, and rely on them, solely, for the provision of services.

Operational union subcenters have been selected as one of the most feasible paths to reach expanded health delivery objectives because given the very primitive communication and transportation systems in much of the country, a physical base closer to the people than a health center at the Thana Headquarters is needed. Distances and communications are such that effective coverage by paramedics is often not possible from the Thana Headquarters.

A nationwide network of mobile units would be very unreliable due to bad roads and the difficulties involved in general maintenance and getting spare parts. Furthermore, rural people need some kind of health facility within walking distance if they are to be able to obtain advice and/or treatment from trained medical personnel when they are ill.

As indicated above, the identification and training of community-based workers, responsible in large part to the community is highly desirable despite the length of time necessary. Such integrated services which include preventive health care, the identification of children nutritionally at risk through periodic weighing, highly focused health nutrition education, food supplementation, and family planning, are being established in a growing number of low income countries, and are reaching those previously untouched by government health services. This experience has clearly demonstrated, however, that where such community services are initiated without the support of a well-functioning, on-site training and referral system nearby, they quickly fall into disarray. The existing health system at the thana level would not be capable of providing such back-up support.

Another important reason for selecting subcenter construction is that the BDG is committed to a health care network at the Village level and is expending its own resources to get the program started.

#### G. Intended Direct and Indirect Beneficiaries

The beneficiaries of this project will be rural people who would receive improved health care in the union subcenters and through the expanded outreach system these subcenters will offer. Those benefiting especially by this project should be women of child bearing age and children under five. As a result of the family planning services offered, women should have fewer and more widely spaced pregnancies, leading to better health and lower maternal and infant mortality rates. The Maternal and Child Health program will improve the health of both mother and child and should significantly increase a child's chances of surviving to his fifth birthday. At present, one in four Bangladeshi children dies before the age of five.

In general, the poorer sections of the population should receive relatively greater benefits compared with that available to them now since the wealthy and middle class villagers can afford to get medical service from private practitioners and at thana centers while the poor have limited access to expensive indigenous practitioners who provide the only medical resources in many villages.

The Ministry of Health and Population Control will benefit by having well-built facilities from which to carry on its work.

## II. Financial Requirements and Plans

### A. Estimate of Total Project Costs

The BDG estimates that each subcenter will cost about \$16,250 and that the total cost for all of them will be about \$75 million. During the three year life of this project, the BDG., AID, and other donors will spend about \$33 million to build about 2,000 subcenters.

### B. AID Contribution

This grant project, using the FAR mechanism, will fund 75% of the cost of 500 subcenters for a total of \$6.1 million. In addition, the A & E consultant for three years will cost about \$900,000, for a total project cost of \$7.0 million.

C. Bangladesh Government and Other Donor Contributions

The BDG will provide 25% of the cost of the 500 subcenters to be built for the AID project and they will build another 500 subcenters for a total commitment of about \$10 million. The IBRD/IDA, under an umbrella arrangement with some other donors, will provide about \$16 million for the construction of about 1,000 subcenters.

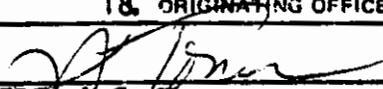
III. Development of the Project

A. Schedule of PRP and PP submissions

The PRP will be submitted to AID/W in December, 1977 and the PP will be submitted in FY 1979.

B. Resources Necessary to Develop PRP and PP

During project preparation a consultant might work with the BDG to develop a comprehensive program of services to be delivered through the subcenters.

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT IDENTIFICATION DOCUMENT FACESHEET</b> TO BE COMPLETED BY ORIGINATING OFFICE				1. TRANSACTION CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;">A</div> A = ADD C = CHANGE D = DELETE		PID 2. DOCUMENT CODE 1	
3. COUNTRY/ENTITY Bangladesh				4. DOCUMENT REVISION NUMBER <div style="border: 1px solid black; display: inline-block; width: 30px; height: 15px;"></div>			
5. PROJECT NUMBER (7 DIGITS) <div style="border: 1px solid black; display: inline-block; padding: 2px;">388-0039</div>		6. BUREAU/OFFICE A. SYMBOL ASIA		B. CODE <div style="border: 1px solid black; display: inline-block; padding: 2px;">04</div>		7. PROJECT TITLE (MAXIMUM 40 CHARACTERS) <div style="border: 1px solid black; display: inline-block; padding: 2px;">Fish Seed Multiplication and Distribution</div>	
8. PROPOSED NEXT DOCUMENT A. <div style="border: 1px solid black; display: inline-block; padding: 2px;">2</div> 2 = PRP 3 = PP				B. DATE MM YY <div style="border: 1px solid black; display: inline-block; padding: 2px;">12 77</div>		10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = 15 Taka )	
9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY <div style="border: 1px solid black; display: inline-block; padding: 2px;">79</div> b. FINAL FY <div style="border: 1px solid black; display: inline-block; padding: 2px;">83</div>				FUNDING SOURCE		BAGSCEP	
				A. AID APPROPRIATED		4,546	
				B. OTHER U.S. 1.			
				2.			
C. HOST COUNTRY		1,785		D. OTHER DONGR(S)		6,331	
		TOTAL					
11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY <u>79</u>		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1)	324	077		1,000		4,546	
(2)							
(3)							
(4)							
TOTAL				1,000		4,546	
12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)							
313		319					
13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)						14. SECONDARY PURPOSE CODE	
15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)							
To increase the Food Fish Supply to Supplement the Protein intake in the Bangladeshi Diet.							
16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)							
Increase the production of Fish Fry and Fingerlings in order to increase Fish production from aquaculture throughout Bangladesh.							
17. PLANNING RESOURCE REQUIREMENTS (staff/funds)							
12 mm's of consultant services for technical analysis and project design from regional PD&S funds.							
18. ORIGINATING OFFICE CLEARANCE						19. DATE DOCUMENT RECEIVED 1: AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION	
Signature 				Date Signed		MM DD YY	
Title Joseph S. Toner Director USAID/Bangladesh				MM DD YY 05 27 77		MM DD YY	

Fish Seed Multiplication and Distribution (388-0039)

## I. Summary of the Problem to be Addressed and the Proposed Response to the Problem

A. The Problem

Three quarters of a rural family's income in Bangladesh is spent on food. However, nutrition is inadequate and intake of protein and especially animal protein is too low. The 1962-64 Nutrition Survey done in East Pakistan indicated that the daily intake per capita was approximately 57 grams and there are indications that protein consumption has decreased since that time. A commonly used minimum requirement per person per day is 61.5 grams of available protein.

There is also a basic nutritional requirement for animal protein to supply certain amino acids and others needed nutrients in addition to the protein derived from cereal grains and pulses. The source of 80 percent of the animal protein in the Bangladeshi diet is fish. However per capita consumption of fish per annum is very low, 8 to 10 kilograms. In order for the nutrition requirement for animal protein to be met, it has been suggested that fish consumption will have to reach a level of 30 kgs. per capita per year in addition to grain and pulses protein.<sup>1/</sup>

Available statistics on inland fisheries in Bangladesh are unreliable. Estimates of fish production vary from source to source, even within governmental agencies. However, the 1976 estimates of the Ministry of Agriculture, Division of Forestry, Fisheries, and Livestock of inland fish production were 730,000 metric tons (MT) of which approximately only 35,000 MT (five percent) came from fish ponds and tanks (aquaculture). It is estimated that only 85,000 MT of fish per year come from marine sources. Bangladesh is endowed with extensive areas of inland water. The total inland water area is estimated at 3,200,000 acres. This includes rivers, canals, haors, oxbow lakes, ponds, tanks and Kaptai reservoir. Of the 3,200,000 acres, 19,000 acres relate to aquaculture (ponds and tanks). An additional 500,000 acres of estuaries and other brackish inland water ways were previously reported. However, brackish water areas, mainly mangroves have been reestimated since 1974 on the basis of ERTS satellite photos to cover a

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<sup>1/</sup> Report of Project Identification Mission to Bangladesh on Inland Fisheries and Aquaculture, H.R. Rabanal, Asian Development Bank, Manila, April, 1976.

much more extensive area of 1,500,000 acres. Very limited attempts have been made since 1971 at development and management of aquaculture. These pond and tanks resources, therefore, remain relatively idle.

The alternative of using fish for animal protein would be to use other types of animal products. Large numbers of chickens and ducks are evident in the country and provide a good source, though limited. However we are not aware of a ready means to dramatically increase this source. The other principal alternative is livestock production, but increases here would be very difficult because (1) open grazing land is very limited, (2) much of the open land is flooded every year, and (3) livestock consume large quantities of grain the use of which would be difficult to justify in the current grain deficit situation.

#### B. Solution to Problem

Fish has been recognized as an inexpensive source of high quality protein which can supplement the diets of lower income people. The growing fish which eat on aquatic organisms under controlled conditions can make a contribution to improved nutrition to many people in Bangladesh, not only in terms of gross food yield but in terms of high quality protein from fishery products. In high-production aquaculture, advantage can be taken of the fact that certain aquatic organisms are very effective converters of primary foods not readily used by man, many are more efficient than the first-level food converters such as cows and pigs. The nutritional "score", referred to as the net protein utilization (NPU) of fish approximates that of red meat and both are well above the score for plant protein. The highest NPU score of 100 is accorded to eggs, fish muscle is 83 and beef muscle is 80, whereas rice is rated at 57 and soy flour 56. Protein from fish is of very high quality containing relatively large amounts of the essential amino acids. The percent of protein from the essential amino acids is 50 percent, whereas from rice it is only 43 percent. The most essential amino acid is lysine which contains only 2.8 percent protein in rice compared to 10.5 percent in fish muscle. Compared to cereal grains or other important food staples fish is rich in protein both when expressed as a percentage of total energy content and in relation to its edible portion.

The economic potential of inland fisheries in Bangladesh is very great. The BDG has accorded a high priority to the expansion of inland fish production as a main source of animal protein for domestic consumption. In order to increase fish production the country's inland resources, mainly ponds and tanks, should be put into full production. Essential to the production of fish in ponds and tanks

is a readily obtainable supply of fish fry and fingerlings. For the indigenous species of major carp, the only existing source of spawn for hatching is from rivers. Using this natural system as a main source has its limitations and cannot meet the demands necessary to increase fish production significantly.

In other less developed countries, with similar climatic and environmental conditions as Bangladesh, it has been clearly shown that monetary benefits gained from fisheries can be several times greater than those derived from crop production. Attachment A is a table taken from the Bangladesh Land and Water Resource Sector Study (Volume IV, Technical Report No. 11) which clearly shows the economic benefits derived from aquaculture. With proper management of stocking and rearing with fertilization yields can range from 2,600 to 4,500 pounds per acre for carp and 7,000 to 10,000 pounds per acre for *Tilapia nilotica* per annum. Even minimum inputs for pond fertilization (with no feedings) will produce yields of 600 to 1,200 pounds per acre per annum.

For several years to come the Bangladeshi farmer will have to continue to rely on traditional and existing marketing systems. In rural areas the "hats" bazars will continue to be his main outlet. Therefore, the marketing of fish throughout most of the country will be done in terms of fresh fish transported by local means and sold within several hours of being caught. By increasing fish production

This project will focus on increasing fresh water fish production for domestic consumption in order to increase the nutritional level of the people of Bangladesh by a greater intake of quality protein to supplement plant protein and the carbohydrate intake. In order to do this the project will be mainly concentrating on developing a system which insures adequate annual supplies of fish fingerlings and (through extension services) promotes farmer rearing of fish year round through improved management practices.

### C. Project Description

#### Implementation Plan

The main objective of this project is to provide adequate quantities of fish fry to farmers and producers of fish. USAID and BDG have chosen to do this through an existing government facility, the Fish Seed Multiplication Farms (FSMFs). Facilities of selected FSMFs will be fully developed in order to breed and produce increased numbers of recommended species of fish for pond cultivation. The managerial capabilities of FSMF personnel will be improved and supported. The main breeding and production farms will have a Farm Manager whose job is to manage the farm and produce fish fry and fingerlings. He will also guide the Fisheries Extension Service program. The Farm Manager will have a Unit Extension Officer and Fieldmen under his direct supervision.

There will be a pre-determined number of extension units throughout the project areas. There will be a Unit Extension Officer for each unit. He will set up a demonstration fish farm on private ponds hired on a rental basis. Demonstration of improved practices on fish culture will be held at each pond. The Unit Extension Officer will survey ponds and other waterbodies located in his designated area (command area for one Unit Extension Officer is a 10 square mile zone with the FSMF as a focal point for technical and logistical support) during the first two years of the project. This officer can concentrate on these surveys while the facilities of the FSMFs are being developed. After the survey, a plan for intensive fish culture in ponds and other water areas will be developed. The Unit Extension Officer will study local problems of fish culture and assist pond owners to induce them to take up fish culture. He will organize fisheries cooperative societies and farmer user groups. His long range objective is to extend the extension service activities that are proven successful throughout the sub-division.

In order to reach the masses of farmers, the Unit Extension Officer will be assisted by Fieldmen. In the existing extension service scheme there are 110 Fieldmen. It is proposed that the services of the Fieldmen will be placed under the disposal of the Farm Manager and Unit Extension Officers. The Fieldman will be the direct link to the farmer. There is an FAO proposal to increase the number of Fieldmen to 300 as qualified staff are trained under the existing Training and Extension Project. This number will be determined during the design of the project.

Once the FSMFs are developed and begin to produce adequate number of fish fry, and the extension workers begin to motivate farmers in fish pond culture, combination of this whole system will provide the services needed to distribute fries and fingerlings. As the demand for fish seed for pond cultivation increases and Extension Service will motivate private producers to get into the seed business.

There will be establishment of a revolving fund to handle all financial assistance provided by AID under this project. This provision will allow for all income incurred from the sale of fish fry and fingerlings to be kept in a separate account for continuous operation of the FSMFs. Excess funds will be used for future expansion as needed.

#### 1. Outputs

- a. The output from this project will be a fully developed system capable of producing and distributing accepted species of fish fingerlings to farmers and producers.
- b. An extension capability able to assist farmers in fish pond culture and management which will increase fish production.

#### 2. Inputs

##### a. BDG

- (1) All necessary Fish Seed Multiplication Farms as identified by the Project.
- (2) Additional land if needed.
- (3) In-country degree training at B.Sc. and M.Sc. levels for personnel and in-country fellowships and workshops and seminars.

- (4) All operational and development budget support as specified in the approved BDG Scheme for Strengthening of Fisheries Extension Service in Bangladesh.
- (5) Transportation support for distribution of fish fingerlings .
- (6) Adequate funds for specified travel and daily allowances for BDG project personnel.
- (7) 50 percent of the cost of all building construction.

b. USAID

- (1) Technical consultancy assistance for development of the project.
- (2) 50 percent of the cost of construction of buildings and 75 percent of other capital improvements on the Seed Multiplication Farms .
- (3) Installation and materials for tubewells of specified FSMFs .
- (4) Long and short term advisors and consultants to the project for five years .
- (5) Motor cycles , bicycles and trucks for the support function of the extension and fingerling distribution activities .
- (6) Short term third country and U.S. non-degree training.
- (7) Renovation of private ponds for demonstration purposes .
- (8) Training materials and publications for the project.

D. Assumptions

A major assumption is that the Government of Bangladesh through the Ministry of Agriculture, Division of Forestry, Fisheries and Live-stock will reorganize the Directorate of Fisheries to strengthen its

technical and extension capabilities. The BDG will provide all the necessary institutional changes necessary for the success of such a project. All laws and regulations needed concerning tanks and ponds will be enacted and/or enforced.

E. Host Country and Other Donor Activities

The Ministry of Agriculture, Division of Forestry, Fisheries and Livestock recognizes the need for increasing fish consumption in order to provide better nutrition for the people of Bangladesh. The Directorate of Fisheries has initiated a scheme for strengthening of the Fisheries Extension Service. This scheme provides a direct link to the Fish Seed Multiplication Farms to increase fingerling production and to motivate owners of ponds to adopt improved cultural practices in their ponds.

There are a large number of derelict tanks, both privately and publicly owned, which (after modest renovation) can be used for greatly enhanced fish production. The BDG has accorded a high priority to the reclamation and renovation of derelict ponds and tanks by initiation and implementation of three schemes. However, all of their schemes are for reclaiming public tanks.

UNICEF, WFP and CIDA have assisted BDG by supplying a total of over 3500 tons of wheat for food-for-work projects for pond reclamation since 1975. With additional inputs of foodgrain and cash UNICEF aims to reclaim 1600 acres of ponds at the project site of Neemgachi. The largest reclamation scheme has been BDG's Northern Fish Culture Project.

UNICEF has initiated support to the Directorate of Fisheries through its Inland Fisheries Development Program. The objectives of this program are to motivate private pond owners into profitable pond management through the fisheries extension scheme, to assist the BDG in formulating strategies in the use of public waters for production of inexpensive fish for human consumption and to organize fish farmers groups among the landless to exploit the use of derelict tanks. UNICEF has initiated support to the Fish Seed Multiplication Farms in improving facilities on five farms as a pilot project and helping train personnel. It is this initial work on the FSMFs that has encouraged the BDG to seek further donor assistance in developing the whole system.

FAO/UNDP are supporting the overall operation of a Fisheries Coordination Project. This project is primarily focused on reorganizing and strengthening the Directorate of Fisheries.

FAO/DANIDA are involved with the development of an Aquaculture Center at Mymensingh. Along with the Fisheries Complex at Chandpur, this Center will take care of the Country's need for inland fisheries research.

FAO/NORAD are assisting the BDG with a scheme for expansion of activities for the Fisheries Training Institute for inservice training of fisheries personnel.

An area of great concern to most donors and to the BDG is the adequacy and absorptive capacities of the marketing system. FAO/DANIDA and the British ODM are providing marketing assistance to the government. The British will be supporting an integrated project at Neemgachi to expand aquaculture production, focusing on the marketing problem.

It is the intent of this project to coordinate very closely with all of these interrelated projects to assure expansion of aquaculture and increase inland fish production. The project will complement much of the UNICEF and FAO work in fisheries extension.

#### F. Realistic Alternatives to the Project

The alternative to expanding the production of animal protein would be increasing production of poultry and livestock. This alternative is not very feasible on the large scale needed as discussed in Section IA paragraph 4 above.

Another alternative is to continue to concentrate solely on crop production as a source of protein. The Solution to the Problem, Section IB justifies the need to increase animal protein in the Bangladeshi diet and the need to supplement plant protein.

The alternative to expanding the production of fish through aquaculture (ponds, tanks and inclosed inland water bodies) for increasing domestic fish consumption would be to concentrate on marine fisheries. Expansion of fishing in the Bay of Bengal would

require sophisticated capital-intensive inputs. Moreover, the transportation and marketing of sea fish would be very difficult to promote and support. Many other facilities in the country would have to be developed until this alternative would be possible.

For this project a system is already in place which has great potential for increasing quality protein consumption. In addition to supplying a commodity in great demand, fish fry and fingerlings, the project will assist (through extension service) with the technical and promotional aspects needed to increase overall fish production.

#### G. Direct and Indirect Beneficiaries

Direct benefits in terms of improved diets will be derived by rural and urban people of Bangladesh.

Direct benefits of increased fish production will also go to owners of ponds and tanks who improve the management practices in their ponds. Benefits will also be derived by private businessmen who take advantage of new fish production technologies applied by the public sector through the Directorate of Fisheries.

#### H. Spread Effect

With an intensive concentration of promotional programs towards owners of idle and/or poorly managed ponds to improve management practices, many farmers will see the high percentage of return fish farming can have. With the development and expansion of the scheme for strengthening of Fisheries Extension Service, many fish farmers will be contacted and given supervised assistance. The Fish Seed Multiplication Farms will be the focal point of promotional expansion for increasing fish production. A five mile radius from the FSMFs will be the main target area.

The UNICEF scheme will concentrate its efforts on a volunteer operation of youth workers. Between the combination of fishery extension workers, demonstration models, and volunteer workers, the spread effect will be achieved throughout the project areas. However, it is essential that either through the public or private sector, or a combination of both, demand for fish fry and fingerlings be met.

Fish is not an item which is controlled by or has any connection with the Government's ration system. Therefore, the producer is not limited in whom he can sell to. As the supply increases throughout the country, mainly in rural areas, and the price becomes lower, the demand will be even greater. An open market price on fresh water fish should provide farmers with sufficient incentives to invest in aquaculture and the improved practices for increasing production.

## II. Financial Requirements and Plan

The estimated cost of the proposed project is \$6,331,334. The source of financing will be a grant to the Ministry of Agriculture, Division of Forestry, Fisheries and Livestock for the Directorate of Fisheries for \$4,546,000 (72 percent of total project cost).

The BDG's contribution consists of local currency cost of Tk 26,780,000 U.S. \$ Eq. 1,785,334 (28 percent of total project cost).

### A. USAID

1. Technical TDY assistance for development of the project. (Other Funds)
2. Construction and Capital Improvements \$ 1,846,000
  - a. Water sources (tubewells)
  - b. Buildings  
(quarters, training hostels, breeding water supply channels, etc.)
3. Vehicles - motor cycles and bicycles (30 motor cycles and spare parts 150 bicycles and spare parts) - Trucks 150,000
4. Training - In-country fellowships, third country short term; in-country degree training B.Sc. and M.Sc. ; workshops - Farmer Field days and farmer tours 200,000
5. Equipment and Supplies 200,000
6. Training materials and publications 100,000

7. Funds Demonstrations of Renovation and management of ponds	\$	250,000
8. Technical Assistance (4-5 years)		<u>1,800,000</u>
Total		4,546,000

B. BDG

1. In-Country Training Workshops and Seminars	Tk	750,000
2. Operational and Budget Support for Scheme for Strengthening of Fisheries Extension Service		8,000,000
3. Transportation support for distribution of fingerlings		1,500,000
4. Travel and Daily Allowances for BDG project personnel		750,000
5. Construction		<u>15,780,000</u>
Total	Tk	26,780,000

(US \$ 1,785,334)

III. Development of the Project

A. Studies and Analysis

At the present time the Asian Development Bank has a seven man consultant team in Bangladesh to assist the BDG in the formulation of fishery projects and to prepare in detail an integrated project for fisheries development. The Bank has done a number of other reports relating to overall fisheries development. An important area already identified for development is aquaculture and the expansion and improvement of fish seed production and demonstration farms.

In 1967-69 USAID financed a study through Auburn University for a fishculture project in East Pakistan. An analysis was done on the need for development of the BDG Fish Seed Multiplication Farms and the Fisheries research facilities. The final reports indicate strong justification for development of the farms and a system for fingerling distribution.

The International Bank for Reconstruction and Development (IDA) in there Bangladesh Land and Water Resources Sector Study, Technical Report No.11 - Fisheries, have identified fish seed supply necessary to the development of inland fisheries and increasing fresh water fish production.

B. Documentation Schedule

1. TDY consultancy will be necessary for developing the technical concepts for the project by October, 1977.
2. The Project Review Paper (PRP) will be submitted to AID/W by December, 1977.
3. Depending on the availability of technical assistance for preparation of the Project Paper, USAID/Dacca will submit the PP to AID/W by May, 1978.

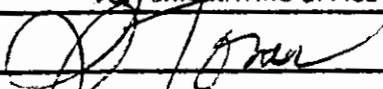
C. AID Resources Needed for PRP and PP Preparation

1. External consulting services are needed to help prepare the technical analysis for the PRP. Regional Project Development and support Funds are requested for this purpose.
2. AID/W TDY services are required for PRP analysis and PP preparation.
3. In connection with preparation of analysis for PRP, consulting services can be used for developing PP.

IV. Issues of a Policy or Programmatic Nature

1. How will the BDG assist the commercial sector to begin developing facilities for fish seed production and distribution?
2. Most privately owned fish ponds are under joint ownership. Will this be a major constraint in the promotion of convincing farmers to invest in improved management practices of these ponds?
3. Will the use of ponds for raising fish conflict with their use for irrigation of crops and or retting of jute?

4. Will credit be available to all farmers for renovation of ponds?
5. Since agricultural wages are declining in real terms, will the landless poor be able to afford fish protein even at reduced prices?
6. Should the BDG sell fingerlings at full cost or at a subsidized rate to promote aquaculture?

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT IDENTIFICATION DOCUMENT FACESHEET</b> TO BE COMPLETED BY ORIGINATING OFFICE				1. TRANSACTION CODE <input type="checkbox"/> A    A = ADD <input type="checkbox"/> C    C = CHANGE <input type="checkbox"/> D    D = DELETE		PID 2. DOCUMENT CODE 1	
3. COUNTRY/ENTITY Bangladesh			4. DOCUMENT REVISION NUMBER <input type="checkbox"/>				
5. PROJECT NUMBER (7 DIGITS) <input type="checkbox"/> 388-0040 <input type="checkbox"/>		6. BUREAU/OFFICE A. SYMBOL ASIA    B. CODE <input type="checkbox"/> 04 <input type="checkbox"/>		7. PROJECT TITLE (MAXIMUM 40 CHARACTERS) <input type="checkbox"/> Water and Related Land Resources <input type="checkbox"/>			
8. PROPOSED NEXT DOCUMENT A. <input type="checkbox"/> 2 = PRP    3 = PP    B. DATE <input type="checkbox"/> 09 <input type="checkbox"/> 78 <input type="checkbox"/>				10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = Tk 15.0 )			
9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION a. INITIAL FY <input type="checkbox"/> 79 <input type="checkbox"/> b. FINAL FY <input type="checkbox"/> 82 <input type="checkbox"/>				FUNDING SOURCE		b85284	
				A. AID APPROPRIATED		50,000	
				B. OTHER		1.	
				U.S.		2.	
				C. HOST COUNTRY		8,823	
D. OTHER DONOR(S)							
		TOTAL		58,823			
11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY <u>79</u>		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) FN	220	060		20,000		50,000	
(2)							
(3)							
(4)							
TOTAL				20,000		50,000	
12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)							
023	021	022	012	055	011		
13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)						14. SECONDARY PURPOSE CODE	
BR						123	
15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)							
Increase small farmer incomes							
16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)							
Increase crop yield per cost unit of agricultural input for small scale farming in Bangladesh.							
17. PLANNING RESOURCE REQUIREMENTS (staff/funds)							
Six (6) work-months of water resources engineering and specialist time from Regional PD & S funds.							
18. ORIGINATING OFFICE CLEARANCE						19. DATE DOCUMENT RECEIVED BY AID/W, OR PER AID/W DOCUMENT, DATE OF DISTRIBUTION	
Signature 							
Title Joseph S. Toner, Director USAID/Dacca Bangladesh				Date Signed MM DD YY		MM DD YY	

## PROJECT IDENTIFICATION DOCUMENT

## WATER AND RELATED LAND RESOURCES PROJECT (388-0040)

I. Summary of the Problem to be Addressed and the Proposed Response to the Problem

The purpose of this project is to increase crop output (yield) per cost unit of agricultural input for small scale farming in Bangladesh. The project directly addresses the major thesis of the Bangladesh DAP. Quoting from page 29 of the DAP, "Production growth made possible by the new seeds and modern fertilizers, is the cornerstone of this model without which income and employment generation do not occur." Given the fact that inputs such as seed and fertilizer must be used in appropriate combinations with respective soil and water conditions to maximize yields, and that the basic soil and water conditions vary by region in Bangladesh, the Water and Related Land Resources Study (Scope of Services attached hereto) will provide recommendations for low-cost, high yield combinations of water (flood control, drainage and irrigation techniques), new seed varieties and related inputs and cultivation techniques (p. 1, Scope of Services) for five defined regions in Bangladesh.

Based on these recommendations, this project will focus on provision of the technical, financial and institutional assistance necessary for adoption of these low-cost small scale input technologies by the maximum feasible number of farmers. Constraints which would limit the adoption of these technologies by small farmers will be addressed specifically. This project substantively corresponds to the Appropriate Agricultural Technologies project proposed for FY 1975 and FY 1976 on page 99 of the DAP.

The major output of the project will consist of increased yields in selected core areas in two or more of the approximately five general water and soil divisions of Bangladesh. The specific outputs (e.g., flood control, irrigation, seed distribution, soil management, land consolidation, marketing and/or appropriate technology systems) will be determined on the basis of the Phases II and III recommendations from the Water and Related Land Resources Study. To the extent that Study recommendations involve inputs which could be provided through other on-going AID-financed projects, the final project will reflect the incorporation of inputs from such projects. Potentially related projects specifically include Rural Credit, Rural Irrigation Works, Agricultural Research, Small Scale Irrigation, Fertilizer Storage and Food for Work.

The project will be implemented over a five year period, incorporating two or more separate subprojects. The first of these subprojects will proceed directly from the conduct of the Water and Related Land Resources Study, reflecting a selection during the Study of one area for full feasibility and project preparation. The second subproject will be selected from the remaining alternative areas identified in the Study, with the feasibility and project preparation to be carried out under separate funding \*/ in the second year of this project. Because agricultural yield/farm income is such a predominant concern for Bangladesh, this project is assumed to be the first in a series of projects which would include both refined methodology based on initial experience and broadened geographical scope.

There are numerous host country activities which may represent single elements of a model approach to increasing yields per unit cost of input, but integrated programs to increase crop yields have to date been limited to small scale agricultural research pilots. Such host country programs and projects involving other donors, such as the World Bank's agricultural extension project (Minimum Package Program), integrated rural development project (RD1), tubewell project, large scale flood control and irrigation projects, will be taken in consideration both during project design and implementation stages.

As noted above, specific steps may be incorporated into the project design and implementation to assist low-income farmers in adoption of appropriate low-cost methods and management techniques. The Scope of Services for the Water and Related Land Resources Study (pp. 10, 13, 18-22, Scope of Services) sets forth in detail the requirements for development of mechanisms to ensure that the project benefits are in fact made accessible to the proposed beneficiaries.

## II. Financial Requirements and Plans

The estimated total financial requirement for the project is \$ 58.8 million. AID funds will be provided on a grant basis with the total AID contribution for the project estimated at \$ 50.0 million as follows:

<u>Year</u>	<u>Input</u>	<u>Cost (\$ 000)</u>
FY 1979	Training/Technical Assistance/Final Design	5,000
	Construction and commodities procurement	15,000
FY 1980	Training/Technical Assistance	2,000
	Construction and commodities procurement	3,000

\*/ Project Development Grant

FY 1981	Training/Technical Assistance/Final Design	5,000
	Construction and commodities procurement	15,000
FY 1982	Training/Technical Assistance	2,000
	Construction and commodities procurement	3,000

The schedule above reflects the requirement to permit adequate funding at the outset of each subproject for the initial final design as well as pipeline procurement and contracting costs. It also allows for two year implementation and evaluation of the first subproject, with concurrent performance in the second year of full feasibility and project preparation for the second subproject.

The host country contribution may include such items as payments for infrastructure, development of organizations, and/or local costs for Government and expatriate personnel. The specific components and amount of host country contribution are subject to discussion with the Government upon completion of the Study. The amount in any case is recommended not to exceed 15 percent of total project costs, thereby requiring a waiver of the 25 percent minimum host country contribution to project costs. The provision for such a waiver is set forth in Section 110(a) of the Foreign Assistance Act which provides for such a determination in the case of countries such as Bangladesh included in the UNCTAD "relatively least developed countries" list. The 15 percent level is considered adequate evidence of the Government's commitment to the project and reflects appreciation of the total development demands upon Bangladesh resources.

### III. Development of the Project

General background data is available in the IBRD Land and Water Resources Sector Study of Bangladesh (1972) which is the basis for tentative selection of the five regions for the purpose of this project. Many past studies on irrigation conducted through the previous Water and Power Development Authority (WAPDA) could contribute toward feasibility and design of flood control and irrigation for certain types of schemes. However, the Water and Related Land Resources Study will be a pioneer study on integrated application of low-cost inputs to affect yields throughout Bangladesh. The first task of this Study (p. 2, Scope of Services) will be to review previous and on-going work which

## BANGLADESH - WATER AND RELATED LAND RESOURCES STUDY

### Scope of Services

#### General

The purpose of the study is to develop least cost alternatives for effective use of water and related land resources in Bangladesh. The study will address all relevant technical, equity, institution and economic factors required for the development of such alternatives, which in their main parts can be applied selectively by area in Bangladesh. The objective of the study will be to find combinations of water use and cropping patterns that will increase incomes of all cultivators within the areas of study. It will design a follow-on project that can be implemented in coordination with existing Bangladesh Government institutions, such design to meet all project feasibility requirements necessary for consideration of such project for financing by the US agency for International Development (AID). The study will include formulation at least cost alternatives for selected zones. Variables to be tested will be limited to flood-control, drainage and irrigation techniques and the use of new seed varieties and related cultivation techniques.

The study and all services above will be financed for both US dollar and local currency (Bangladesh taka) costs by AID Grant 388-0031

a. The purpose of any project proceeding from the alternatives, and therefore of the alternatives themselves is to achieve at least cost an improvement in the incomes of farmers, including small farmers, sharecroppers and lease holders, in the potential area of development. The term "least cost" as used here includes all economic on-farm water control and crop combinations in order to minimize per acre capital costs subject to a minimum agricultural production increase of five percent per annum. Improvement in such incomes is perceived of as a product of increased crop production, higher yields per acre, remunerative prices, with access both to sufficient supply of agricultural inputs and to markets for crop production. An essential element in such improvement is also the adequacy of effective agricultural extension assistance.

b. Potential areas for application of the alternatives are currently affected adversely both by absence of or inadequate irrigation as well as by periodic excess flooding. This may not necessarily mean, however, that the alternatives as developed include components addressed as such to these requirements, i. e., construction of canals, embankments or drainage or placing of tubewells or low-lift pumps. The alternatives are to be conceived in the broadest terms. This could, for example, mean that flood control and gravity or other irrigation do not become part of the final recommendations of any one or more of the alternatives,

3. Taking into account the basic principles outlined above, the Consultant will construct least cost alternatives derived from the International Bank for Reconstruction and Development (IBRD) Land and Water Resources Sector Study of Bangladesh" (1972, Nine Volumes), such alternatives to be addressed to the IBRD identified zones defined by surface water characteristics as follows:

SUMMARY OF FLOODING CONDITIONS ON GROSS AGRICULTURAL AREA

Zone	Area in Square Miles			Group 1/ Total
	nf + sf	mdf	df	
Practically no moderately or deeply flooded land	13,400	209	117	13,732
20 - 30% moderately deep and deeply flooded land	6,492	1,605	588	8,683
40% moderately deep and deeply flooded land	1,003	538	270	1,811
60-65% moderately deep and deeply flooded land	2,059	2,566	2,017	6,642
70-80% moderately deep and deeply flooded land	1,066	1,549	2,550	5,165
<b>TOTAL Bangladesh</b>	<b>24,026</b>	<b>6,467</b>	<b>5,542</b>	<b>36,035</b>

nf = virtually non-flooded (less than 1 ft)

sf = shallowly flooded (1-3 ft)

mds = moderately deeply flooded (3-6 ft)

df = deeply flooded (over 6 ft)

1/ Exclusive of homesteads and water (tanks)

(SOURCE: Volume 8, IBRD Study.)

use of different crop varieties (e. g., deep water varieties or crop varieties using less water and a shorter growing season), as well as in terms of the timing and extent of construction of such flood control and irrigation works if required. On the latter question, it will therefore be necessary to consider whether flood control work should precede irrigation construction or vice versa or proceed concurrently. Similarly, in this context each alternative will need to address gravity flow irrigation as opposed to tubewell irrigation, or some composition of both or neither, taking into account both questions of cost/benefit as well as Government or local population capability to implement both systems. Each alternative will articulate and detail the separate bases for the options set forth, the specific situations which would determine the preferred selection of each, and costs of each as a percentage of the total. The latter figure should also address the cost of maintenance and reflect this both separately and in the evaluation of the options.

b. Institutional Requirements: Critical examination will need to be made of the ability of the Government effectively to coordinate and reflect in the direction of any project envisaged by each alternative the broader concerns of the Government itself as well as the duties, responsibilities and interests of the substantive Government agencies.

the organization recommended should be both broad-gauged and at a sufficiently senior level in the Government to ensure a full range of substantive contribution and the exercise of authority at a level that commands complete Government commitment and high-level Government attention. Accordingly, each alternative should articulate both the composition and level within the Government of the directing body or authority for any such project. At the same time, the Consultant should address and recommend with respect to the question of the composition, structure and authority of the project organization at different levels, i. e., at the national Government in Dacca, the regional(Divisional) level, the District and the project level itself. Lines of communication, authority and responsibility should be clearly stated and the number of such bodies or mechanisms and their level in the Government set forth in relation to each other. At the project level itself, this recommendation should specifically address the relationship between the people of the project area and Government officials; the organization, role, responsibilities for example of local water users organization; and the formulation of such other mechanisms to ensure a strong participatory voice in both project design and implementation of the local directly-affected beneficiaries. Each alternative should similarly address the extent and type of motivational work required,

d. Equity: Each alternative must show that the farmer, including small farmers, sharecroppers and leaseholders, will have equitable and substantial access to any project derived and that this access will be substantively beneficial. In this connection, each alternative will have to address, evaluate and recommend with respect to the problem of the likelihood that the economic benefits of such a project are more inclined to accrue to the larger farmers if measures are not built into such a project to limit the amount of absolute capital subsidy which any single farmer can receive. Each alternative therefore, should reflect the principle that such a project should not unduly strengthen the larger farmers relative to the small farmers, including sharecroppers and leaseholders, to the extent that land concentration trends are reinforced or even accelerated. Accordingly, each alternative should test each physical, economic and organizational concept for the potentially adverse impact on such small farmers, including sharecroppers and leaseholders, and should set forth and recommend mechanisms to protect against encroachment by larger farmers as the benefits of such project accrue. Each alternative should also address and provide for secondary employment benefits from any project derived, for small farmers, including sharecroppers and leaseholders, and laborers not primary beneficiaries of such project.

alternative, taking into consideration a required rapid payout from irrigation on any infrastructure investments and the need to justify adoption of a least cost alternative whatever the development characteristics or components, each / <sup>alternative</sup> should reflect an internal rate of return of 15 percent as minimal. The five percent annual production increase cited under I. 2. a above also represents a minimum standard in applying recommended on-farm water and crop combinations. Each alternative should indicate the potential and specifics for this standard to be improved upon as any derived project is subject to specific design, including detailing of costs and benefits and completion of sensitivity analyses. Each alternative itself should detail costs and benefits and sensitivity analyses reflecting the separate development designs included in the alternative, and each shall at a minimum attain the above 15 percent internal rate of return. Each alternative should also address analyses on a micro (farm) level for the several options showing effects of the option from an economic and financial standpoint on different classes of farmers, from small (including sharecroppers and leaseholders) to large, including at both full cost and deferred user rates. Each alternative shall include recommendations with respect to such user rates including, if deferral is recommended, analysis of the financial and economic implications thereof. Each alternative is to be specifically addressed in terms that

such project. Each alternative should reflect all of these assessments as evaluated, in a hypothetical profile of an area to be served by a project derived from each alternative. The profile should include the expected effects on income levels and distribution, on-farm and non-farm employment patterns, potential for improved education, health and social institutions, impact on social structures, changes in local leadership, and generally the opportunity for social improvement and enhancement of human rights as a result of a project derived from the alternative. The profile should include the expected effects on income levels and distribution, on-farm and non-farm employment patterns, potential for improved education, health and social institutions, impact on social structures, changes in local leadership, and generally the opportunity for social improvement and enhancement of human rights as a result of a project derived from each alternative. The profile should particularly reflect the findings of each alternative under d, e and f above. Human rights in this context shall refer for example to the right to adequate diet, employment, health care, etc.

h. Environment: Each alternative should specifically detail the environmental criteria to be addressed by any project deriving from the alternative and should reflect in the alternative itself that set of preferred

### Phase II - Selection of Project

1. Pending Government and AID approval of the alternatives under Phase I above, the Consultant shall select a specific area in Bangladesh, an area with potential and a requirement for water and related land resources development, such selection to be on the basis of the criteria reflected in the relevant alternative, and shall present this selection to the Government and AID for approval. Such presentation shall include a detailed analysis of the relationship of all relevant factors of the proposed project area to the appropriate alternative and of the specific potential of the area for development in terms of the criteria set forth in the alternative. The analysis shall include an order of magnitude listing of the costs and benefits of such development and a general description of the structures, facilities, and resources required for project implementation and maintenance, including an estimated time schedule from initial design to completion.
2. Upon Government and AID approval both of the alternatives under Phase I above and of the selection of project by the Consultant, the Consultant shall proceed with a full feasibility study for the approved project.

### Phase III - Feasibility Study/Project Design

1. The project feasibility study shall reflect, take into account and incorporate for the project all of the principles, criteria, findings and recommendations of the relevant least cost alternative under Phase I above, and shall be in such form, detail and specificity as regard costs,

and management provisions required as well as the costs of all such arrangements.

c. **Equity:** The feasibility study/project design must provide for the farmer beneficiaries, including small farmers, sharecroppers and leaseholders, to have equitable and substantial access to the benefits of the project. The study/design must specifically provide for a mechanism whereby the small farmers are protected from encroachment by the larger farmers as the benefits of the project accrue. The study/design must also provide for protection or alternative benefits for those small farmers and laborers who will be non-beneficiaries of the basic project, such provision to include alternative employment development opportunities as secondary benefits of the project.

d. **Land Patterns:** Land ownership and land use patterns for the project area shall be detailed and the recommendations shall specifically take these into consideration in selection of the development alternative for the project, e. g. , irrigation methods, flood control requirements, use of different crop varieties, and the mix of these. Recommendations should be included as to any changes required in the land use patterns required for project implementation as well as by the local participation requirements under a. above.

f. **Social Impact:** The feasibility study/project design shall include an analysis of the social and human rights impact of the project, as provided under 1.3.g above, specifically addressed to the project area population. The analysis will demonstrate the compatibility of the project with the socio-cultural environment in which it is introduced, the likelihood of the new practices and institutions to be introduced among the population of the project area being applicable elsewhere (confirmation of the alternative thesis), and the social impact and enhancement of human rights, the distribution of benefits, burdens, opportunities, advantages and disadvantages, among the project area population, both beneficiary and non-beneficiary. The analysis should specifically address the factors of resistance to project change of groups among the population, the bases for such resistance and recommended measures to alleviate or overcome it. The study/design should develop a profile for the area including data on density and geographical distribution of population, income levels and income distributions, employment patterns for both on-farm and other work, existing and required institutions for education, health and social welfare, local leadership patterns, and the relationship of the profile to the design of the project. The role of women shall be particularly addressed in the study/design, including the place, opportunities and advantages enjoyed

h. Evaluation: Based on the criteria set forth in the appropriate alternative pursuant to I. 3.i above, the feasibility study/project design shall specify in detail an evaluation plan for the project setting forth a schedule for such purpose. The evaluation will be based upon and shall include, and the study/design shall so include, a collection of baseline data for the project area as the starting point for such evaluation, and such data shall provide for all of the social, economic, agricultural factors reflected in the relevant alternative and included in the study/design. The evaluation shall specifically detail the indicators against which project performance is to be measured, and shall include a Logical Framework Matrix (AID Form 1020-28 (1-72)) providing a summary for the project design and evaluation requirements. The Matrix will be supported by an analysis in narrative form specifying the bases for the selection of each of the factors, indicators, assumptions, goal, purpose, inputs, outputs and means of verification identified in the Matrix.

i. Agricultural Inputs: The feasibility study/project design shall specify in detail the requirements for agricultural inputs in order to achieve the purpose of the project. These shall include fertilizer, seed (both high-yield varieties and others), pumps (hand-operated and mechanical), insecticides, and any other similar requirements. The study/design shall specify the organizational and manpower requirements for the distribution

character of the project. Preliminary scopes of contracts and engineering and construction schedules, will be included. Detailed cost estimates, including initial and recurring costs, will be included and reflected in the cost/benefit and internal rate of return analyses above. The study/design shall recommend, and support such recommendation, with respect to the selected methods in least cost terms of carrying out construction, including labor-intensive methods, use of equipment, or mix of both. The Consultant shall estimate the manpower and equipment costs required for the construction selected and support this by evaluation of the alternatives to such selection. The recommendations for structures shall also address the requirements for maintenance of the project once completed. Recommendations for structures of whatever character will reflect the conduct by the Consultant of a review in detail of the hydrology of the area, including a review of all such existing data with respect to the area, as well as on-site confirmation by the Consultant.

k. **Equipment:** All equipment and materials for implementation of the project shall be specified in detail, including vehicles, construction equipment, trucks, boats and any other equipment or materials required for the project. The feasibility study/project design shall specify the initial and recurring costs of all such equipment and materials and shall reflect these costs in the cost/benefit and internal rate of return analyses above.

n. Other Rights: The feasibility study/project design will specify in detail the requirements for obtaining of any and all other rights, for use of the water and land necessary for the project, including rights of other countries to such water use, rights and interests of lower riparian users, and the effects of the project on such users. The effect of non-obtaining of such rights shall be evaluated and the alternatives, including the relative costs and benefits thereof, shall be specified in detail.

o. Cost Estimate: The feasibility study/project design shall specify in detail all initial and recurring costs of the project showing total financing required. All costs should be shown in terms of the application of such costs, i. e., for foreign exchange or local currency costs. Foreign exchange shall be specified in US dollars and local currency in Bangladesh taka. Bangladesh taka shall also be expressed in US dollar equivalent so that the total cost of the project, in each of its major components, is expressed in US dollars. Unless advised otherwise at the time of preparation of such cost estimate, the rate of exchange to be used for the project shall be US \$ 1.00 = Tk 15.0. Allowances for inflation and escalation should be included and shown separately, including the

Reports

The Consultant shall maintain full and continuous liaison with the Government offices designated by the implementing Government agency and with the AID Mission to Bangladesh. Regular meetings will be held as determined by the Government and AID to review the progress of the work. In addition, the Consultant will provide the following reports:

a. bimonthly progress reports in five (5) copies detailing progress in performing the services hereunder, two (2) copies of which report shall be provided to AID;

b. the least cost alternatives required under Phase I shall be submitted in draft in ten (10) copies to the Government and five (5) copies to AID, and upon approval by the Government and AID, said approval to be recorded within thirty (30) days of receipt, shall be printed in fifty (50) copies, of which thirty (30) will be provided to the Government and twenty (20) to AID;

c. the project selection required under Phase II above shall be submitted in draft in ten (10) copies to the Government and five (5) copies to AID, and upon approval by the Government and AID, said approval to be recorded within thirty (30) days of receipt, shall be printed <sup>in</sup> fifty (50) copies of which thirty (30) will be provided to the Government and twenty (20) to AID; and

taka expenditures to be reimbursed on the basis of the Consultant purchasing such taka at a bank in Bangladesh and providing appropriate receipts therefor.

2. In addition the Government will provide the following support to the Consultant:

a. provide all available maps, drawings, data, reports and any other information pertinent to the services to be performed;

b. provide access to all areas in Bangladesh necessary for the Consultant to visit in performance of the services;

c. assist the Consultant and the Consultant's non-Bangladesh personnel in arranging for necessary permits for tax and Customs free import of spirits, food-stuffs, cigarettes and consumable personal effects up to the limits prescribed by the Government for persons of such privileged status under the laws of Bangladesh;

d. exempt or pay any taxes, duties, fees, levies or other impositions imposed under Bangladesh laws and regulations on the Consultant and Consultant personnel and dependents (other than personnel or dependents who are citizens or permanent residents of Bangladesh) in respect of:

- Phase I - least cost alternative - 5 months
- Phase II - project selection - 1 month
- Phase III - feasibility study/project design - 6 months

2. The following skills and experience would be expected to be represented, from time to time or for the whole term, in the Consultant's team:

Project Manager

Economist

Sociologist or Anthropologist

Land - Use Planner

Agricultural Advisor

Cooperatives Specialist

Civil/Soils Engineer

Water Resources Engineer

Hydrogeologist

Operations and Maintenance Specialist

Environment Analyst

The total estimated level of effort required for performance of the services is expected to be on the order of 85 man months.

## PROJECT IDENTIFICATION DOCUMENT

## Chittagong Fertilizer Plant (388-0041)

I. Summary of the Problem to be Addressed and the Proposed Response

## A. The Problem

The broader problem is the need for expansion of domestic production of fertilizer, a principal component of the requirement for food production increase. A directly related question however is the critical Bangladesh need for increased foreign exchange.

From the current FY 1977 year through FY 1979 Bangladesh will require approximately \$ 150 million in foreign exchange for the import of up to 625,000 MT of urea fertilizer. In FY 1980 when the Ashuganj Plant is expected to begin production - 475,000 MT per year at 90 percent capacity - Bangladesh will be able to meet its domestic area requirements with some surplus for carryover or export. At a point between FY 1983-86, depending on carryover and growth in domestic demand, that surplus could once again become a deficit.

## B. The Solution to the Problem

This project will respond through assistance in financing the foreign exchange costs for construction of an ammonia/urea manufacturing plant with related natural gas pipeline and gas field development.

## C. Description of the Proposed Project

## 1. Project Outputs

The project will take advantage both of a major (and almost the only) Bangladesh natural resource - natural gas - as well as provide a source of needed foreign exchange earnings and savings. The initial project report, for example, estimates that at 90 percent capacity, export of the plant output would earn annually on the order of \$ 54 million. This would be in addition to savings of some \$ 48 million a year on substitution of natural gas for oil imports.

In a situation where Bangladesh foreign exchange earnings have so far not exceeded \$ 400 million a year, and in most years have been substantially lower, and where the present current account deficit is on the order of \$ 1.1 billion, this \$ 102 million per year would be a significant addition.

Such an increase is not only critical in the longer term to the ability of Bangladesh to begin to respond to its own development needs, but even in the shorter term is essential to the Government's application of donor resources to broader areas of activity. Although all donor resources currently applied to fertilizer import are on a grant and concessional basis, and this is expected to continue in the short term, the expanding requirement for assignment of these funds to a single import need will increasingly preclude assistance to other areas. Accordingly, even if domestic production capacity without the addition of this plant were able to meet a suppressed demand for urea, the expansion of the potassium and potash (primarily TSP and MP) import requirement will continue to require an increasing portion of Bangladesh or donor foreign exchange.

## 2. Technical and Physical Resources Required

The project will provide for basic engineering, design, procurement and construction, including all ancillary facilities, of a plant designed to produce 1000 MT of ammonia and 1730 MT of urea per day, with rated annual capacity of 570,000 MT of urea. Development of the gas wells at the Bahkrabad gas field and construction of a 200 km transmission pipeline serving both the plant and the city of Chittagong will be an integral part of the project.

## 3. Estimated Disbursement Period of the Project

Initial disbursements are expected to take place in the second quarter of FY 1979 with all disbursement complete within five years of project authorization, i. e., final disbursement should take place by the end of FY 1984.

## D. Major Assumptions Pertinent to Project Success

The principal assumption is that domestic demand for fertilizer will grow at a rate which requires the plant's produce beginning in the mid 1980s. This assumption will be confirmed through the experience of the current FY 1977 Agricultural Inputs Project as well as through the prospective FY 1978 Fertilizer Distribution Improvement Project (see below).

A second major assumption is that the product of the plant will find a ready market during those years when domestic demand permits export. The basis for this assumption is to be confirmed through the project development study discussed below.

A third major assumption is that following completion of the Ashuganj project, the Bangladesh chemical fertilizer industry will have sufficient absorptive capacity to meet the requirement for effective management and operation of the Chittagong plant. The assumption is critical to proceeding with the project and will depend upon a finding, based on review of Ashuganj progress as well as of the operations of the other domestic plants, at the point where a decision is required on an AID commitment for funding of the project.

Finally, an additional major assumption is that once the product of the plant is required for domestic usage, it can be effectively distributed. This requirement will be addressed through separate AID projects (FY 1977 Agricultural Inputs III and FY 1978 Fertilizer Distribution Improvement).

#### E. Related Other Donor Activities

The Ashuganj Project is the only current related donor activity with financing under multilateral arrangement. The donors apart from AID include the International Development Association, Asian Development Bank, United Kingdom, Switzerland, Iran and the Federal Republic of Germany. The Chittagong project would also be under multilateral financing (see Part III below).

#### F. Realistic Alternatives to the Project

There are at least two principal alternatives.

The most obvious is not to construct the plant but continue to import the fertilizer required to meet expected usage levels. Given the continuing and long term foreign exchange cost implications, this would involve severe development penalties for Bangladesh. The second alternative would be not to increase the import of fertilizer, in effect artificially to depress demand. This however would be equally unacceptable in terms of the penalties involved.

#### G. Intended Direct and Indirect Beneficiaries

The intended beneficiaries will be the farmers of Bangladesh who will benefit from adequate supply of fertilizer - a principal component for agricultural production, the source of rural income. The economy generally will benefit to the extent that other foreign exchange resources are released from the requirement for fertilizer import financing, or otherwise saved or earned through the project, and thereby available for development activity, including in the rural sector. The immediate beneficiaries will be the staff and workers of the plant and gas system.

## H. Spread Effects

Confirmation of the effective implementation and operation of the project will increase the likelihood that other resources, donor and private, may be committed to development of Bangladesh natural resources and generally improve the prospects for investment in Bangladesh.

## II. Financial Requirements and Plans

### A. Estimate of Total Project Costs

The total capital cost of the plant is estimated at \$ 253.12 million equivalent, including \$ 155.44 million in foreign exchange. The preliminary estimate of the related gas system is \$ 107.84 million equivalent, of which \$ 66.24 would be foreign exchange. The totals for the project therefore are on the order of \$ 361 million including about \$ 222 million in foreign exchange.

### B. AID Contribution

The AID financing, on a grant basis, would be \$ 30 million, representing a portion of the total foreign exchange costs.

### C. Bangladesh Government and Other Donor Contributions

The Bangladesh Government will meet all the local currency costs of the project. The other donors will meet the balance of the foreign exchange requirement, i. e., estimated at \$ 192 million, representing \$ 222 less the AID contribution of \$ 30 million.

## III. Development of the Project

### A. Determination of Feasibility

The project was originally proposed to the Asian Development Bank (ADB) by the Bangladesh Government in early 1975. Preliminary ADB review indicated the project was feasible and these findings were further developed during ADB team visits to Bangladesh in October/November 1975, and June and October 1976.

As a result of the ADB appraisal and following discussions with the Bangladesh Government, it was agreed that in order to prepare a suitable proposal for consideration by multilateral and bilateral donors, further study would be required of the basic feasibility and costs of both the plant and gas system.

Accordingly, the ADB in November 1976 authorized a loan of \$ 2.5 million to Bangladesh to finance the costs of a Technical Advisor (TA) with responsibility basically for: Phase 1) final technical and economic feasibility, and preparation of the project implementation plan; Phase 2) development of design criteria, prequalification and preparation of IFBs for the general contractor; and Phase 3) evaluation of proposals, and assistance in supervising the work of the contractor, establishing suitable operating facilities and arranging training.

Phase 2 will only proceed if sufficient indications of financing interest have been received by the Bangladesh Government and the ADB from potential donors. Similarly, Phase 3 will only go ahead when adequate financing arrangements have been made. The contract with a consultant is expected to be concluded by September 1976. Phase 1 should then be complete within six to eight months i. e., by February/April 1978. Phase 2 should be complete by the following October 1978/January 1979.

While the Bangladesh Government has the responsibility for mobilizing donor assistance for the project, the ADB has agreed to assist in organizing the project funding arrangements once commitments have been secured. To this purpose a preliminary meeting of potential donors was held at Manila in October 1976 at which interest without commitment was indicated by a number of donors, including AID.

The position taken by AID basically stated that further interest would be subject to: 1) resolution of the priority for such a project in terms of the Congressional Mandate; 2) establishing of basic project feasibility through Phase 1 of the TA's work; 3) all project implementation and coordination questions satisfactorily resolved; and 4) the Ashuganj implementation record confirming the prospect for effective implementation of the project.

These issues were outlined in detail in the Mission's comments prior to APAC review of the project as well as in the guidance to the AID representatives at the October 1976 Manila meeting. The Congressional Mandate and Ashuganj questions are discussed under Issues below.

The specific project implementation issues however include availability of personnel, coordinating arrangements, relationship of the project to parent organizations, procedures for procurement approvals, taxes and duties, electric power supply and availability of skilled labor, The critical question of technical and management absorptive capacity is a major project assumption as discussed above. A favorable determination on this question will be essential to proceeding with the project. Some of these questions, e.g., project organization, have been addressed in part in the initial paper for the ADB TA loan.

While donor financing interest and commitments therefore are still some months away, the procedure is already in process by which these decision points will be reached. The Bangladesh Government in the meantime has indicated that it will be assigning \$ 50 million of a current Saudi Arabian grant to the funding requirements for the project.

#### B. Schedule of PRP and PP Submissions

If on review of the TA Phase I report, the basic findings on project feasibility are positive, and assuming an assessment of AID priorities supports an investment in this project, the PRP would be submitted between February/April 1978.

Similarly, assuming AID decisions are again favorable to proceeding with the project, the PP would be submitted in the first or second quarter of FY 1979.

Both of these dates would be in accord with the schedule for submissions by the TA and with potential donor reviews at each point.

#### C. AID Resources Necessary to Develop PRP and PP

Project Development and Support requirements are identified for two workmonths in FY 1978 at time of PRP preparation and three workmonths in FY 1979 at the time of the PP. Skills include chemical engineering, manufacturing specialization and marketing economics. Mission resources otherwise should be adequate.

For project implementation/monitoring purposes, Mission direct hire requirements are expected to include two workmonths each per year for a project/capital development officer and engineer. An additional two workmonths of local engineering staff may also be required.

#### IV. Issues of a Policy or Programmatic Nature

The principal AID issue from a policy point of view is the question of the priority to be accorded this project in terms of the Congressional Mandate. It is clear, for example, that the project does not act directly upon the poorer rural majority. It may, however, be critical to the Government's longer term ability to do so, in meeting the requirement for increased crop production as a basis for improved rural incomes. While the linkage is indirect, it may nonetheless be important enough to merit AID support.

On this point, it may be relevant to note the following excerpt from the Administrator's report of July 3, 1975 to the House Committee on International Relations on implementation of the "New Directions":

"Experience in South Asia over the past several years, after the "Green Revolution" took hold and the small farmer came to use the new technology, indicates that a short supply of fertilizer affects the small farmer more than the large because, notwithstanding South Asian government programs for "fair distribution" of inputs the market price, which in periods of serious shortage means the "blackmarket", rations supply to consumers with money (or credit) as against those without. Consequently maintaining an assured and adequate supply achieves the goal of "fair shares" as well as that of higher production. Therefore AID financing of fertilizer and fertilizer plants is a key to having the small farmer get access to supply. If measures are taken at the same time to create a viable distribution system which reaches villages and remote areas, the combination will achieve production and distribution goals." (Pages 9-10)

As discussed above, the question of effective distribution is being addressed through separate AID projects.

An issue of equal importance is the extent to which poor farmers will share equitably in the benefits which derive from HYV inputs. Mission assessment is that sharecroppers and agricultural labor are severely limited in their ability to benefit from HYVs by the prevailing terms of tenure, credit and input-output price relationships. Since tenurial reform is too sensitive for a bilateral project and agricultural credit is being addressed by a separate activity, it may be appropriate to raise the input-output price issue in the context of this project. The Government can give the target group a sufficient incentive to use HYV inputs by either reducing the costs of inputs (thereby increasing the public subsidy) or increasing farmgate grain prices (thereby reducing the public subsidy on ration system grain). As is reflected in current

PL 480 self-help proposals, the Mission favors the latter course. The USG and other donors have been pressing these views on the Bangladesh Government for some time and these recommendations are apparently under study at high Government levels. If positive steps in this direction are not taken by the Government before a commitment is to be taken on the project, the Mission believes that a question for AID/W resolution is whether Bangladesh Government action to increase farmgate prices of foodgrains should be a precondition to AID participation in the project.

Apart from the domestic fertilizer requirement which this project addresses, however, in the short term it will contribute immediately to Bangladesh foreign exchange earnings. This is a separate issue, one which concerns the assignment of priorities for Bangladesh and other donor resources, i. e., the extent to which these will be committed in increasing amounts to the costs of fertilizer imports or foodgrains, and are precluded from broader application. The Bangladesh contribution to meeting these needs can only be increased effectively in the short term through exploitation of its natural gas resources. Consideration of the question should take into account the UNCTAD definition of Bangladesh as a "relatively least developed" country for purposes of section 110(a) of the Foreign Assistance Act as well as the inclusion of Bangladesh under the listing of 40 countries eligible for development grant assistance under section 211(a) of the Act.

A critical additional issue will be the progress of the Ashuganj project. As discussed above, this question generally will have to address the absorptive capacity of the Bangladesh chemical fertilizer industry to meet the requirement for effective operation and management of the Chittagong plant. Principal indicators that this requirement can be met will be not only the operating record of the existing domestic plants but principally a determination that the Ashuganj project is firmly and finally on the path of successful implementation. In the absence of a conclusive favorable finding on the progress of Ashuganj, this project could not be considered.

Finally, a continuing issue in consortium projects, one which has been underscored in the experience of the Ashuganj project, is the absolute necessity for effective donor coordination and monitoring. Before a commitment can be made to this project therefore the mechanism for such coordination and monitoring must be clearly spelled out and understood both by the donors and by the Bangladesh Government. The responsibilities entailed in the task must also be accepted by the principal donor agency. Since in this case, the ADB is expected to take the principal monitoring and coordination role, the ADB should consider the necessity of assigning a senior responsible officer to Bangladesh for the purpose of exercising this responsibility effectively. The size and complexity of this project would certainly merit such an assignment.

## PL 480 TITLE I

## - FOOD AS A DEVELOPMENT RESOURCE -

Introduction

In the Summary Narrative Statement we discuss the pivotal role of Title I foodgrain imports. While these imports are crucial to the maintenance of this food deficit nation, the quantities provided must be carefully regulated over time to avoid serving as a disincentive to the Bangladesh Government's progress in reaching foodgrain self sufficiency.

The analytical framework for "food as a development resource" is the Bangladesh DAP (refer to Appendix A of the Summary Narrative Statement). The rural poor are to be brought into the economic main stream by increased agricultural production. If Title I imports are to be treated as a development resource, primary emphasis must be placed upon ensuring that their use promotes (or as a minimum does not inhibit) domestic agricultural production. Processes set in motion by increased agricultural production will generate rural employment and increased family income. The agricultural production related growth linkages are the center of this development strategy which holds hope for ensuring the participation of millions of the rural poor in the development process. Additionally, increased rural incomes and employment may promote acceptance of the small family norm.

Foodgrain self sufficiency is the goal of the Bangladesh Government, and because indefinite reliance upon foreign food supplies cannot be guaranteed the BDG must be stimulated to increase domestic production and internal grain procurement and to rationalize the public food system. We assume that reduced levels of Title I imports in FY 78 and beyond will help provide such a stimulus.

It is clear that Bangladesh will remain food deficit for the next several years and that food imports are necessary. There are,

however, serious questions about the minimum foodgrain import requirement in any given year given the self sufficiency goal on the one hand and the domestic consumption requirement on the other. The latter consideration is especially difficult because the public food system -- through which imported foodgrains are distributed -- does not operate very effectively in terms of meeting the consumption requirements of the rural poor and destitute. The policy environment in which Title I foodgrains are injected, and the quantity and timing of imports will determine whether these grains contribute to, or detract from, the Government's self sufficiency goal.

In the past we believe food imports may have acted as a disincentive to domestic production in two ways: (1) by increasing supplies and hence reducing the price at which private traders may sell grain in urban areas; and (2) by permitting the BDG to give less attention to domestic agricultural development. Food imports feed 60% of the urban population residing in the six statutory cities and do so at ration food prices which have been less than going market prices. The Government places greater attention vis a vis the donors upon food imports rather than upon its agricultural development programs.

In our view domestic foodgrain production and imports should be integrated into one food system that promotes a progressive agricultural modernization process. Title I food commodities represent an important resource transfer that should be used to encourage agricultural policies and to finance a part of the implementing programs. Because food is a commodity that has a market impact of its own, the effect of importing it is more complicated than an equivalent value of foreign exchange assistance.

#### Balance of Payment Position

The case for concessionally financed Title I food commodities for Bangladesh rests on the country's inability to finance its import bill out of its own foreign exchange earnings. In general terms the maintenance and development requirements of this economy far surpass the foreign exchange generated by the export of the country's traditional crop - jute.

The country's balance of payments position deteriorated soon after Independence and remained extremely precarious up until 1975. It will be weak for the foreseeable future.

Exports since Independence have not attained more than eighty percent of their pre-Independence level. The import bill grew significantly in 1973 and 1974 because of the international commodity inflation but has since stabilized. Despite this extreme price inflation, the country's basket of imports remains essentially the same as that imported immediately prior to Independence. For BDG FY 1977 the import bill is approximately \$900 million while exports earnings may reach about \$400 million. The current account balance is financed almost entirely by grant and concessional assistance.

Bangladesh's debt service burden was approximately \$18 million in FY 1974 and increased to \$28 million in FY 1975. Although the country has been successful in obtaining assistance on grant and concessional terms, its debt service burden is increasing to about \$50 million in FY 1978. This does not include some \$300 million in short term obligations to the IMF.

We expect that all donors will continue to provide assistance either on grant or concessional loan terms, as required by Bangladesh's status as one of the least developed and "Most Seriously Affected" nations in the world. Overall, we believe that the economic conditions and prospects of Bangladesh support the financing of food assistance under Title I terms. This is consistent with the UNCTAD definition of Bangladesh as a "relatively least developed" country for the purposes of Section 110(a) of the Foreign Assistance Act.

#### Demand - Supply Analysis

Under current agricultural conditions (refer to the Summary Narrative Statement) cereal grain production in Bangladesh might be expected to total 13 million tons, plus or minus ten percent (or between 11.7 million and 14.3 million tons). If we allow ten percent for seed and wastage, net agricultural production would range between 10.5 million and 12.9 million tons. If the population in mid 1977 is 84.7 million people and if we assume that the minimum foodgrain requirement per capita per day is 15.5 ounces, then the

requirement or "demand" would be 13.6 million tons. In 1977 the foodgrain gap would range between 700,000 MT and 3,100,000 MT. Unfortunately it is the very range of these estimates -- which would in fact be wider if the population and per capita requirements assumptions were expressed as a range -- that makes this kind of "gap" analysis of little practical value for Bangladesh.

The traditional gap analysis is rendered even less useful by the fact that most foodgrain imports do not find their way into the diets of the people who are consuming less than the 15.5 ounces per day minimum. Thus, while the absolute size of the foodgrain gap may be larger than imports indicate in any given period, there is no reliable expression of its magnitude (such as market price) due to the very low purchasing power of the people who are affected most by an inadequate diet. This is to say that the difference between the absolute foodgrain gap (an unknown quantity) and foodgrain imports is expressed in the malnourished status of between 20 and 40 percent of the population.

Given that the public food distribution system is oriented to meeting the requirements of urban dwellers, military personnel and civil servants rather than the rural poor (e. g. free food distributed through the Relief category accounted for about 3 percent of grains moved through the public system and Food For Work averages between 15 and 25 percent of public food offtakes through the five month dry season), a more practical approach is to study the requirements of the public food system by itself, and to treat the distributive issue again later.

BDG FY 1977 (July 1976 through June 1977) serves as a good basis of analysis. The Government started the year with about 825,000 tons in stock. It will import about 880,000 MT during FY 1977. Its domestic procurement effort will reach about 300,000 MT and offtakes for all categories from the public ration system will be about 1,475,000 MT. The closing stock will be about 530,000 MT.

At first glance, if stock building objectives are set aside, the minimum foodgrain import requirement in BDG FY 1977 was 1,175,000 MT (i. e. 1,475,000 MT minus the domestic procurement effort). However, if the BDG had achieved its domestic procurement target of 500,000 MT, the import requirement would be

reduced by 200,000 MT to a new total of 975,000 MT. It is this figure that the Mission proposes to use as the minimum total import requirement for all purposes. We note here that in BDG FY 77 about 162,000 MT of foodgrain will arrive under Title I and 43,000 arrived under Title II Food For Work for a total of about 20% of the minimum import requirement.

#### Title I as a Development Resource

For purposes of this discussion we refer to AIDTO CIRC A-313 dated June 3, 1976 to review the various ways in which Title I could be used as a development resource.

Title I as foreign exchange support (to the extent the foreign exchange saved by Title I concessional sales is used for development purposes). Clearly, Title I sales are a most valuable form of foreign exchange support to the Bangladesh Government, as is indicated by the preceding discussion. (This assumes that no other donor would have provided the foodgrains and the BDG would have imported the same amount and paid for it from free foreign exchange). We cannot determine, however, the proportion of this foreign exchange savings used for development, since non-development expenditures far exceed the savings.

Generating local currency for development purposes with Title I sales. BDG sales of Title I foodgrains through the public ration system generate Taka receipts. However, the extent to which Title I generated local currency may be attributed to development expenditures as distinct from contributing to the revenue budget is unclear. The foreign exchange costs of development projects are financed almost wholly by grants or concessional loans. The donors are also increasing their annual contributions to local cost financing. Development expenditures have slowed considerably in the past year: FY 77 development expenditures were targeted at about \$735 million and may not exceed \$400 to \$500 million by year's end and, with continuing donor aid commitments, the aid pipeline has grown from about \$1 billion at the end of FY 1976 to a projected \$1.7 billion at the end of FY 1977. The A. I. D. pipeline will be about \$100 million at the end of BDG FY 1977.

We may note, incidentally, that the total value of aid disbursements has exceeded BDG development expenditures annually since Independence.

A more difficult question is whether the Bangladesh Government's food budget as a whole (of which Title I imports are a variable fraction) generates a revenue surplus or deficit. By one set of calculations the BDG incurred a Taka 166 crore (about \$110 million) loss in its FY 76 food budget and may net a Taka 60 crore (about \$40 million) revenue gain on its FY 77 food budget. Refer to Appendix A for the details of these calculations.

Title I as a part of a larger package of financial and technical assistance "... to provide bargaining leverage for desired policy changes." The Mission has pursued a set of policy changes relating to foodgrain self sufficiency in FY 1977 using Title I as the leverage. While the original FY 77 Title I agreement now includes more specific self help language than prior year agreements, the measures fall short of our goals. Refer to Appendix B for the text of the agreed self help measures.

In the negotiations which are underway as this is written, the Mission will seek a quantified target with respect to reducing the foodgrain offtakes from the Statutory Ration System. The Mission believes that the achievement of the foodgrain self sufficiency goal set out in the Summary Narrative Statement will require: (1) an underlying confidence on the part of BDG leaders that the U.S. will respond generously to any food import needs caused by natural disaster; and (2) convincing efforts by the U.S. to provide smaller and smaller quantities of Title I foodgrains annually in exchange for increasingly stringent self help language and actions on the part of the BDG. As we approach the 1980s we will strive to alter the BDG's perception of Title I from that of a commodity which is almost always available in ample quantities to that of a scarce resource which, inevitably, will diminish in availability over time. If the Mission fails in this educational effort, the U.S. might become an unwilling party to a dependency relationship which would serve neither the long run interests of Bangladesh nor the U. S.

One important resource at our disposal to soften the impact of declining Title I levels is to increase Development Assistance and, hence, to expand investment in agriculture, rural development and

PL 480 Title I -- Recommendations for FY 1979

Returning to the Demand - Supply Analysis above we note that the minimum total import requirement is roughly 1 million MT per annum assuming average or better domestic production and assuming, further, that the BDG will procure at least 500,000 MT of the marketable surplus. About 250,000 MT of the import total will be used for Food For Work or Relief (e. g. WFP program of about 100,000 MT; 100,000 MT Title II grant to CARE for FFRW and 50,000 MT Title II proposed for Relief). Of the remaining 750,000 MT import requirement we propose a FY 1979 Title I level of 150,000 MT of wheat. In the aggregate PL 480 Titles I and II would account for 30 percent of the total import requirement, as compared to 20 percent in FY 1977.

<u>TITLE I COMMODITY</u>	<u>MT</u>	<u>ESTIMATED COST</u>
Wheat	150,000	\$ 16,800,000

In addition the Mission recommends the following illustrative set of Self Help measures which we would strive to incorporate in the Title I Agreement:

a. Ration Prices -- the Mission recommends that the ration price for all categories (Statutory Ration, Modified Ration, Government Employees, Large Employers) except Relief and Priorities (i. e. public institutions such as prisons, etc.) be established, by the terms of the FY 79 Agreement, sufficiently high to ensure incentive prices to farmers and in any case no less than the present procurement prices.

b. Statutory Ration Coverage -- the Mission recommends that offtakes from the Statutory Ration System be curtailed to a level of about 120,000 MT per annum (as compared to the recent average of 360,000 MT per annum).

c. Open Market Operations -- the Mission recommends that open market operations be initiated in the six Statutory cities at a significant level of operations, approximately 200,000 MT in annual volume. Imported and domestically procured grain would be auctioned through this system to restrain urban grain prices from rising above a pre-determined level, say 50% above the procurement/ration price.

population control programs. This proposed shift in proportions from an overwhelmingly large Title I and small Development Assistance program to the converse is indicated in Tables II, V and, in particular, the Long Range Program Plan, Table I. Another possible approach and one the Mission had recommended for FY 1977, would be to soften the budgetary impact of reduced food aid by providing non-food commodities, e. g. raw cotton, and tallow under Title I. The BDG would then both save foreign exchange and earn Taka revenues through the sale of such commodities.

Title I foodgrains to fill the gap and to dampen inflation. As discussed above the absolute size of the "gap" is illusive and even if it were known, the public food distribution system is not currently directed toward alleviating the effects (e. g. severe malnutrition and starvation) of inflation on the rural poor. Although the Mission is concerned about stable prices, it is our explicit objective to persuade the BDG to abandon its cheap food policy. (Refer to our PL 480 Title I FY 79 recommendations for how this might be done).

Title I foodgrains distributed directly to lower income people. Currently about 18 percent of the food which is distributed through the public food system is allocated to poor or destitute people. However, the sources for this small effort are from the WFP vulnerable group feeding program, WFP Food For Work and Title II Food For Relief work. Only a small amount of Title I foodgrains reach the lowest income groups. We propose to increase Title II allocations for relief feeding (refer to the separate narrative on Title II).

Title I foodgrains as a resource to build country stocks. This prospect holds only slight promise. Although the BDG has set a goal of building the storage capacity to between 1.5 and 2 million MT, the Mission is not yet convinced that either of these levels makes sense in terms of requirements for emergency reserves and operating stock levels and the associated problems of high cost of storage and the risk of damage and spoilage. Furthermore, the Government is so strongly oriented toward current consumption, it would be extremely difficult to import an agreed tonnage for the explicit purpose of building stocks.

d. Domestic Foodgrain Procurement -- the Mission recommends that domestic procurement be targeted at 600,000 MT an increase of 20% above the FY 1977 target. In general, emphasis would be placed upon procuring larger quantities of HYV Boro rice and HYV wheat than is the current practice.

e. Domestic Procurement Prices -- the Mission would recommend a separate price floor for wheat and HYV rice. The dual objectives of this measure are to increase the incentive for investing in HYV production by small farmers and sharecroppers and to establish a competitive advantage for HYV grains over indigenous varieties.

#### Usual Marketing Requirement

The Bangladesh Government places great emphasis on assured supplies of foodgrains for the ration system. During 1974 and again in 1977 when food arrivals fell below Government expectation, foreign exchange was spent for commercial purchases. Under normal circumstances it is undesirable for the Government to spend its own foreign exchange for commercial foodgrain purchases as grant and concessional food aid is available. This PL 480 proposal, as implemented over time, will lessen the necessity for food aid and for Government commercial purchases.

Donald W. Born, Attachment to a Memorandum "BDG FY 1976 and FY 1977 Food Budgets" American Embassy, Dacca, Bangladesh, March 11, 1977.

TABLE I

## BANGLADESH: FY 1975/76 CASH FOOD BUDGET (Revised Estimates)

	<u>QUANTITY</u> (Long Tons)	<u>VALUE</u> (Tk. Crores)
I. RECEIPTS <sup>1/</sup>		
A. Offtakes		
1. Rice	483,000	89.63
2. Wheat	928,000	129.16
3. Edible Oil	23,755	24.95
4. Sugar (maunds)	69,500	47.12
5. Salt (maunds)	1,300,000	<u>2.27</u>
B. Total		293.13
II. EXPENDITURES		
A. Cash Payments in Foreign Exchange <sup>2/</sup>		153.31
1. Rice		(13.23)
2. Wheat		(128.08)
3. Edible Oil		(12.00)
B. Procurement		174.41
1. Rice (Paddy)	425,000	(143.45)
2. Wheat	20,000	(4.08)
3. Edible Oil (imports)	56,000	(26.88)
C. Debt Service		12.00
D. Incidentals (R.E.)		119.37
E. Total		459.09
III. NET EXPENDITURES		-165.96

1/ These are the BDG's May, 1976 revised estimates

2/ Deferred payment on previous food purchases.

SOURCE: Ministry of Finance

TABLE I I

## BANGLADESH: FY 1976/77 CASH FOOD BUDGET (Projected)

	<u>QUANTITY</u> <u>(MT)</u>	<u>VALUE</u> <u>(Tk. Crores)</u>
<b>I. RECEIPTS</b>		
A. Ration Sales <sup>1/</sup>		
1. Rice	600,000	140
2. Wheat	500,000	90
B. Other Receipts		<u>5</u>
C. Total		235
<b>II. EXPENDITURES</b>		
A. Procurement <sup>2/</sup>		
1. Rice	250,000	84
2. Wheat	50,000	10
B. Incidentals <sup>3/</sup>		60
C. Cash Payments in Foreign Exchange <sup>4/</sup>		14
D. Soviet Wheat Loan <sup>5/</sup>		<u>7</u>
E. Total		175
<b>III. NET</b>		60

<sup>1/</sup> Most of the other commodities, e.g. edible oil, sugar, flour, net out to near zero and can be ignored for the purposes of this estimate. For example, expenditures on flour mills are estimated at Tk. 6.16 crores against receipts of Tk. 6.83 for a net return of Tk. 6,700,000 or about 10% of receipts.

<sup>2/</sup> The budget estimates were based on procuring 400,000 MT of rice at a cost of Tk. 135.01 crores and 100,000 MT of wheat at Tk. 20.42 crores.

<sup>3/</sup> Originally budgeted at Tk. 131 crores for FY 76/77, these included such items as

	<u>TK. CRORES</u>
<b>OCEAN FREIGHT COSTS:</b>	
Rice (Japan, KR, US PL-480 )	17.78
Wheat (US, France, Australia)	28.63
Edible Oil	4.25
<b>FOR RICE:</b>	
Gunny sacks	3.0
Port Handling charges	2.0
Internal freight	7.0

## TABLE II (continued notes)

The ocean freight costs from the US were estimated at \$30/MT for wheat and \$45/MT for rice.

But the budget estimate of 131 crores assumed imports of 1,500,000 MT of foodgrains.

4/ Final installment payments for commercial purchases and purchases on short-term suppliers' credits. The figure, Tk. 13.96 crores, is from the Finance Ministry

5/ Embassy estimate.

## Excerpts From The

AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH FOR THE SALES OF AGRICULTURAL COMMODITIES UNDER PUBLIC LAW 480, TITLE I, PROGRAM.

Item V. Self-Help Measures:

A. The Government of Bangladesh will continue to place special emphasis on actions contributing directly to development progress in poor rural areas and on enabling the poor to participate actively in increasing agricultural production through small farm agriculture.

B. The Bangladesh Government agrees to : (1) Improve the system for distribution of agricultural inputs to ensure greater accessibility by all farmers; (2) pursue agricultural research goals which aim to increase and diversify food production; (3) take effective measures to disseminate agricultural research information through the extension service and by other means to Bangladesh farmers; (4) strengthen rural institutions and promote participation in agriculture and other productive processes; (5) strengthen and expand cash-based rural works programs generating rural purchasing power; and (6) reduce subsidies on agricultural inputs commensurate with incentive price levels for foodgrain production.

C. The Bangladesh Government will:

1. Ensure remunerative prices for domestic agricultural production by making timely and appropriate efforts to reach the Government's FY 77 voluntary procurement target of 500,000 tons of foodgrains; by encouraging, in addition, the active participation of private grain dealers in food procurement; gradually constraining offtakes from the ration system in a phased manner; and by limiting all foodgrains imports to the minimum necessary to meet the difference between domestic production and total domestic requirements.

2. Establish within two to four years a permanent grain price stabilization program. The program will include the following components:

a. Appropriate Bangladesh Government institutions charged

with developing policy options for the Bangladesh Government with respect to the rationalization of agricultural development goals, rural income and employment goals and maintenance of reliable supplies of foodgrains for the urban sector and the society's destitute.

b. Bangladesh Government intervention in domestic grain markets and/or increased private sector participation in such markets to maintain domestic foodgrain prices;

c. With other policy changes leading to foodgrain self sufficiency, the BDG will undertake a phased reduction beginning in FY 1978 of the ration system bearing in mind prevailing conditions, including levels of domestic production and procurement, by reducing the geographic coverage, numbers of ration card holders, amounts of subsidies, and the quantities of ration per card holder provided through this system.

3. Improved procedures and systems for the feeding of destitute people on a when and where needed basis to ensure adequate levels of nutritional intake.

4. Continue to improve and upgrade foodgrain storage and stock management to ensure the effective and economic management of its foodgrain stock and distribution systems.

5. Expand the number of fertilizer retail outlets and simplify procedures in order to increase access by small farmers and thus stimulate food crop production.

6. Provide to the U.S. Government monthly (within 30 days of the closing of the month) statistics on its foodgrain stock position (e.g. opening stocks, actual arrivals, actual offtakes and actual procurement and closing stocks) and forecast of future foodgrain stock positions under various agricultural conditions.

Country/Program Bangladesh

PL 480 TITLE I AGREEMENTS AND SHIPMENTS

Commodity	FY 1977 Estimate			FY 1978 Request			Carryover to FY '79 (MT)
	Agreements (MT)	Shipments (MT)	Carryover to FY '78 (MT)	Agreements (\$)	Shipments (\$)	Carryover to FY '79 (MT)	
Wheat	275	200	75	\$22.4	\$30.8	(275)	-
Rice	75	-	75	-	-	-	-
Vegetable Oil	10	10	-	\$25	\$25	(40)	-

Commodity	FY 1979 Request			Carryover to FY 1980 (\$)
	Agreements (MT)	Shipments (\$)	Shipments (MT)	
Wheat	\$16.8	(150)	\$16.8 (150)	-

Note : Estimates are in Thousands of Metric Tons and Millions of Dollars.

PL 480 TITLE IIProgram Goal

As stated in the Summary Narrative, the development goal of the Mission and the Bangladesh Government is foodgrain self-sufficiency by 1985. It is our contention that higher farm output prices coupled with increased investment in the rural sector are critical requirements to spurring agricultural growth to the necessary levels to achieve this goal. Further, increased farm production through the use of high-yielding variety technology will require substantial increases in both on-farm and off-farm labor. We recognize, however, there will be a time lag between higher farm output prices and an increased demand for labor by farm owners and agro-industrial entrepreneurs. It is imperative that, during this period, landless agricultural laborers and others on the lowest end of the economic spectrum do not become victims of higher food prices prior to being absorbed in an expanding job market. The Mission believes that the present Government ration system, as described below will be unable to effectively reach this group during the interim period between higher food prices and increased employment. Since the Mission has more effective control over the use of Title II resources than it does over Title I, we propose to use Title II as a means of providing food relief to the Bangladeshis who constitute the landless poor.

CARE Food For Relief Works Program

There are approximately 22 million employable males in rural Bangladesh, but only about 13 million man-years of labor are required to do all of the rural agricultural tasks. This leaves about 9 million years of unemployment or underemployment. Many of these are poor itinerant laborers whose normal tasks of planting, harvesting, irrigating and cultivating offer only seasonal employment. When these jobs are complete there are few, if any, alternative means of support for these laborers and their families.

To provide relief to this destitute portion of the population and to utilize this slack economic resource the Bangladesh Government (BDG) has implemented a food relief program in Bangladesh using Title II donated wheat as payment to laborers. The overall goal of this Food For Relief Works (FFRW) program is to provide direct relief food and employment to rural landless and near landless people. The Title II resources are used both as an incentive and a wage to laborers for the construction of labor intensive, rural earthwork projects such as irrigation canals, flood control and land reclamation, embankments, roads, and water reservoirs. A more complete description of this Title II Program is provided in the approved Project Paper and related documents.

In FY 1976, the first year of the five-year program, 531 earthwork projects were undertaken, involving payment by the BDG of approximately 51,000 MTs of wheat to landless and near landless laborers. CARE reimbursed the BDG with 42,811 MTs of Title II wheat representing in-kind payments to approximately 500,000 laborers for 15 million work-days of work to move 1 billion cubic feet of earth.

In FY 77 over 1,000 FFRW projects representing 100,000 MTs were approved for implementation. These projects included 471 irrigation canals, 357 flood control and land reclamation embankments, 170 rural roads, 142 water reservoirs. These proportions by type of activity are generally in consonance with Mission development priorities. For FY 77 thru FY 80 it is estimated that approximately 1,000 to 1,400 earthwork projects will be implemented annually involving payments totalling approximately 100,000 MT each year to the participant laborers.

CARE, in addition to programming Title II wheat as a Cooperating Sponsor, is also an AID grantee and thus must comply with grant documentation and evaluation procedures as well as normal Title II procedures. This grant is used to finance the dollar costs of operating eight Regional Field Offices which approve and monitor the FFRW projects as submitted by the local government. Based on CARE's field monitoring, which consists of a certain percentage of surveying, CARE reimburses the BDG for a percentage of the wheat the BDG utilized in implementing the projects. As noted above CARE only

reimbursed the BDG for 84% of the wheat utilized in FY 1976. The 16% "docking" was the result of projects not completed at all or not completed according to specifications. The reimbursement aspect of this unique Title II program reduces losses of Title II wheat and serves as an incentive to the BDG to improve the quality of the projects.

Ration Rate. The ration rate will remain 6.15 lbs of whole wheat per person per day for 70 cubic feet of earthwork moved. This rate is adjusted according to soil conditions and the distance the laborer must move the earth. Thus the program is designed so that the average worker, who has a family of six, will earn 6.15 pounds per day which is roughly equivalent to 2,800 grams of wheat containing 9,200 calories and 343 grams of protein.

Multi Year Program Planning. The Project Paper and the USAID/CARE grant agreement stipulate a five-year Title II program from FY 76 through FY 80 involving approximately 450,000 MT of wheat and \$2 million to CARE. However, CARE and the USAID prefer not to develop at this time a multi year Program Plan since each Program Plan contains grant budget figures for the upcoming fiscal year. In addition CARE and USAID find the annual exercise helpful as a management tool to set priorities and make operational adjustments to new and unforeseen conditions. The FY 78 Program Plan is being submitted at the same time as the ABS, and contains a detailed description of the operational aspects of the program. No substantive changes are anticipated for FY 79.

## Relief Feeding

### The Ration System

The Government ration system has ten different ration categories or "food spigots" for distributing food through the public sector. In the ten month period between July, 1976, and April, 1977, this ration system distributed approximately 1.2 million long tons (LT), of which roughly 25% was procured domestically and the balance from food imports including PL-480, Titles I and II. The standard ration allotment is two seers(4.10 lbs)

of rice and one seer of wheat (2.05 lbs) per adult family member per week. One half of the adult ration is allotted per child family member per week. The fixed ration shop prices of rice and wheat are 2.25 taka (\$.15) per seer and 1.75 taka (\$.11) respectively. Although there is considerable variation in free market price, ration shop prices are normally lower. For example, at the end of April, 1977, the market price of rice in Dacca was 3.62 takas (\$.24).

The ten ration categories are described below. The percentage figures in parenthesis represent the proportion of the total ration system distribution received by each category from July, 1976 through April, 1977.

1. Statutory Rationing (25%)

This category includes the residents of the six urban areas designated by the BDG as eligible for statutory rationing (SR). These urban areas are the cities of Dacca, Narayanganj, Chittagong, Khulna, Rajshahi and Rangamati and include approximately 5% of the total population according to BDG census figures. Up until January, 1977, any person, whether Bangladeshi or expatriate, who was certified by a municipal officer as residing in one of the above urban areas was theoretically entitled to a ration card. Since January, 1977, only new BDG employees or those transferred from rural areas have been issued SR cards.

2. Government Employees (15%)

Government civil service employees and school teachers assigned to areas not covered by the SR system are issued rations on the same basis as those covered by SR.

3. Priorities (6%)

The "priorities" category covers the armed forces and police personnel as well as inmates of BDG operated institutions such as jails, hospitals, etc.

#### 4. Large Employers (4%)

Rations are issued to major industrial plants, e. g. the Adamjee Jute Mills, for redistribution to their employees. On paper at least, an employee at such a plant is not entitled to rations from any of the other categories.

#### 5. Private Flour Mills (10%)

The BDG issues whole wheat, as available, to private millers for the production of flour, which is sold to the general public.

#### 6. Government Flour Mills (2%)

The BDG also issues whole wheat to mills which it owns.

#### 7. Open Market Operations (4%)

The BDG often sells grain in the open market at a price equal to or slightly above ration prices to depress free market prices and/or increase ration offtakes to reduce stocks. Open Market Operations (OMO) are usually confined to the urban areas and the monthly sales vary widely.

#### 8. Food For Work (12%)

The CARE food for Relief Works Project is described above. The World Food Program contributes an equivalent amount of wheat to the BDG to reach the same target group.

#### 9. Modified Rationing (19%)

This category covers rural people not otherwise eligible for any other ration category except FFW. Ration allotments are made on an as available basis, i. e. after the needs of all other ration categories are met. When available, rations are sold for the same prices existing under Statutory Rationing.

Within the MR category there are four subcategories (A, B, C, D, ), ranked according to need with the "A" category being the neediest. In theory need is determined by tax payments, i. e. the fewer taxes one pays, the less income one has and, therefore, the needier one is. At present we have no data showing offtake levels by each of the sub-categories nor can we estimate whether the persons in each category actually meet the need criteria. We do suspect, however, given the location of BDG Local Storage Depots (LSD) and the difficulties of transporting food in rural areas that most MR offtakes are in the non-SR urban areas and market towns, e. g. Bogra, Brahmanbaria, Comilla, Sylhet, etc..

#### 10. Relief (3%)

This category covers gratuitous feeding for those deemed to be destitute and in need of relief. The determination of need is made by the Thana Parishad (Council) upon the recommendation of the Union Parishad Chairman of the individual's area of residence.

#### Beneficiaries

In the July, 1976 - April, 1977 period, the categories specifically targeted toward the rural poor, i. e. FFW, MR and Relief, received 34% of the offtakes while those specifically not targeted toward the rural poor, i. e. SR and Government Employees (GE), received 40% of the offtakes. The two groups received roughly equivalent amounts except for the months of November, December and January when the SR - GE categories accounted for their highest percentages of offtakes, 44%, 48% and 45% respectively. For the same period, the "rural" categories achieved their lowest percentages of offtakes, 24%, 18%, and 29%, respectively. Further, the month of December, 1976, the high point of offtake percentage for the SR - GE group and the low point for the "rural" group, was the lowest month for total offtakes during the period. Thus, there is evidence that the ration system is biased toward meeting the requirements of urban residents and government employees prior to meeting those of the rural poor.

Examining the ration categories from the standpoint of U.S. assistance, all of PL-480 Title II reaches the rural poor, either through CARE's Food For Relief Works projects or the World Food Program (WFP) Vulnerable Groups program. Since the FFW programs and the Relief category, are almost entirely supported by Title II and WFP contributions, only those falling in the MR category are reached by PL-480 Title I. If FFW and Relief are subtracted from the ration offtake totals MR constitutes 22% of the balance. Assuming Title I is prorated according to the percentages of each category and that one-half of the MR offtakes reach the rural poor then 11% of Title I reaches the rural poor as opposed to 100% of Title II.

### The Mission Strategy

Given these realities, the Mission, while recognizing the continuing need for food imports in Bangladesh, wishes to phase out Title I over time and place greater reliance on Title II to meet the food and nutritional requirements of the rural poor. In the short term, however, we do not foresee the BDG being able to administer Food For Work projects at substantially higher levels than that currently programmed, i. e. 220,000 metric tons per year shared evenly Title II and WFP. Over the longer term, the Mission believes the BDG can significantly increase its ability to administer an expanding FFW program and is encouraging it to do so. There are, however, destitute families who will be unable, for a variety of reasons, to avail themselves of the FFW programs. Therefore, for FY 1979, the Mission is proposing a total Title II level of 150,000 MT of wheat. Emphasis and priority will be placed on maximizing the use of Title II through CARE's Food For Relief Work projects. After all of the FFW requirements are met, the balance of the 150,000 MT will be used to feed destitute families through the Relief category of the BDG's ration system. This would enable Title II to meet relief feeding requirements in the periods of the year when FFW is not fully operational.

We realize this is a highly unusual course of action but believe it is justified in the context of the Mission strategy, overall Title II objectives and the food requirements of the rural poor and destitute.

PL - 480, TITLE II1. Country BangladeshSponsor's Name CARE

A. Maternal and Child Health ..... Total Recipients \_\_\_\_\_

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>(Thousands)</u>	
		<u>KGS</u>	<u>Dollars</u>
_____	_____	_____	_____
_____	_____	_____	_____
<u>Total MCH</u>		_____	_____

B. School Feeding ..... Total Recipients \_\_\_\_\_

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>(Thousands)</u>	
		<u>KGS</u>	<u>Dollars</u>
_____	_____	_____	_____
_____	_____	_____	_____
<u>Total School Feeding</u>		_____	_____

C. Other Child Feeding ..... Total Recipients \_\_\_\_\_

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>(Thousands)</u>	
		<u>KGS</u>	<u>Dollars</u>
_____	_____	_____	_____
_____	_____	_____	_____
<u>Total Other Child Feeding</u>		_____	_____

D. Food For Work ..... Total Recipients 7,350,000

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>(Thousands)</u>	
		<u>KGS</u>	<u>Dollars</u>
<u>7,350,000</u>	<u>Bulk Wheat</u>	<u>100,000</u>	<u>@\$120/MT 12,000</u>
<u>Total of Food for Work</u>		<u>100,000</u>	<u>12,000</u>

II. Sponsor's Name Government of BangladeshE. Other (Specify) Destitute Family Feeding: Total Recipients 4,000,000

(Thousands)

<u>No. of Recipients by Commodity</u>	<u>Name of Commodity</u>	<u>KGS</u>	<u>Dollars</u>	
<u>4,000,000*</u>	<u>Bulk Wheat</u>	<u>50,000</u>	<u>@\$120/MT 6,000</u>	* Govt-Govt Grant-Relief
<u>Total Other</u>		<u>50,000</u>	<u>6,000</u>	

<u>Country/ Program</u>		<u>Technical Assistance to Cooperatives</u> (\$000)		
<u>Bangladesh</u>		<u>FY-1977</u>	<u>FY-1978</u>	<u>FY-1979</u>
<u>Grants</u>				
388-0010	PVO Co-Financing (OPG)	534	100	100
388-0002	Development Services and Training	35	-	-
388-0021	Rural Electrification	*	*	*
Total		569	100	100

\* A rural electrification feasibility study, currently underway, is considering the establishment of rural electric cooperatives as one of the alternative design features. Depending on the recommendations of the consultant and the position of the Bangladesh Government, a portion of the USAID Rural Electrification Project funds may be devoted to financing technical assistance to rural electric cooperatives.

Table 1

## Program Analysis for the Oral and Condom Supplies Needed to Achieve Full Availability

	1976	1977	1978	1979	1980	1981
A. "Full Supply Analysis						
1. Married women of reproductive age - (See Annex A)	12164	12493	12830	13176	13532	13898
2. 65% of line A1 (Contracepting women required to achieve replacement fertility)	7907	8120	8340	8564	8796	9034
3. 50% of line A1 (Contracepting women utilizing orals and condoms)	4744	4872	5004	5138	5278	5420
4. Annual stock requirements for "full availability"						
a. Orals- $\frac{1}{3}$ of line A3 x 13 monthly cycles	24669	25334	26021	26718	27446	28184
b. Condoms- $\frac{1}{3}$ of line A3 x 100 units	284640	292320	300240	308280	316680	325200
B. Annual New Supply From Non-AID Bilateral Sources						
1. Private Commercial Sector						
a. Orals	761	1010	1540	1975	2210	2450
b. Condoms	9706	17000	20000	22000	24000	26000
2. Other Donors						
a. Orals	0	6133	6200	6000	6000	6000
b. Condoms	0	69637	50400	52000	55000	60000
3. Host Country Government Procurement						
a. Orals	0	0	0	0	0	0
b. Condoms	0	0	0	0	0	0
4. Total In-Country Stock						
a. Orals	761	7143	7740	7975	8210	8450
b. Condoms	9706	86637	70400	74000	79000	86000
C. Gap to be filled to Achieve "Full Availability"						
1. Orals (line A4a less line B4a)	23908	18191	18281	18743	19236	19734
2. Condoms (line A4b less line B4b)	274934	205683	229840	234280	237680	239200
D. AID Bilateral Supply Objectives						
1. Orals	8258	11250	20000	20000	20000	20000
2. Condoms	13968	115200	144000	172800	216000	230400
E. Total New Supply						
1. Orals (line B4a plus line D1)	9019	18393	27740	27975	28210	28450
2. Condoms (line B4b plus line D2)	23674	201837	214400	246800	295000	316400
F. Remaining Supply Gap						
1. Orals (line A4a less line E1)	15650	6941	0	0	0	0
2. Condoms (line 4Ab less line E2)	260966	90483	85840	61480	21680	8800
G. People Gap						
1. Orals (line F1 divided by 13)	1204	534	0	0	0	0
2. Condoms (line F2 divided by 100)	2610	905	858	615	217	88
3. Total (line G1 plus line G2)	3814	1439	858	615	217	88

Table 2

AID Bilateral Logistic and Financial Analysis  
of Orals

A. AID Inventory Analysis	Calendar Year				
	1977	1978	1979	1980	1981
1. Beginning of year stock					
2. Add: Scheduled deliveries <sup>*</sup> <del>(<del>36,000,000</del>)</del>	6,600	7,850	14,850	18,850	20,850
3. Less: Expected Use **	11,250	20,000	20,000	20,000	20,000
4. End of Year Stock	10,000	13,000	16,000	18,000	20,000
	7,850	14,850	18,850	20,850	20,850

To be completed by AID/Washington

B. Financial Analysis (FY 78)

1. CY 1979 deliveries (Line A 2 above) \$3,800,000
2. Estimated cost per unit in FY of purchase
3. Estimated total cost for FY 78 (to be determined by AID/W)

C. Financial Analysis (FY 79)

1. CY 1980 deliveries (Line A 2 above) \$4,200,000
2. Estimated cost per unit in FY of purchase (To be determined by AID/W)
3. Estimated total cost for FY 1979 (To be determined by AID/W)

\* CY 77 revised from Annex B to reflect actual situation; CY 78 and 79 revised downward from Annex B due to increase in other donor's obligations and change in BDG's planned contraceptive mix.

\*\* Use of AID supplied commodities only

Table 3

AID Bilateral Logistic and Financial Analysis  
of Condoms

A. AID Inventory Analysis	Calendar Year				
	1977	1978	1979	1980	1981
1. Beginning of year stock	22,896	51,696	80,496	109,296	138,096
2. Add: Scheduled deliveries (See Annex B)	115,200	144,000	172,800	216,000	230,400
3. Less: Expected Use	86,400	115,200	144,000	187,200	216,000
4. End of year stock	51,696	80,496	109,296	138,096	152,496

To be completed by AID/Washington

B. Financial Analysis (FY 78)

1. CY 1978 deliveries (Line A 2 above) \$3,690,000
2. Estimated cost per unit in FY of purchase
3. Estimated total cost for FY 78 (to be determined by AID/W)

C. Financial Analysis (FY 79)

1. CY 1979 deliveries (Line A 2 above) \$4,644,000
2. Estimated cost per unit in FY of purchase (to be determined by AID/W)

3. Estimated total cost for FY 1979 (to be determined by AID/W)  
 \* CY 77 excludes 28.8 million condoms to be diverted from FPIA stocks to BDG program (Noted in Table 1, B2b-Other Donor Supplies). CY 77 revised from Annex B to reflect actual situation, CY 78 and 79 revised upward from Annex B due to change in BDG's planned contraceptive mix and because other donors of condoms have not been identified as previously expected.

\*\* Use of AID supplied commodities only.

**MISSION EVALUATION PROGRAM**

Bangladesh  
Period Covered: FY 1978 and FY 1979

EVALUATION SCHEDULE

Project Title	No.	Type	Last Evaluation Date	No. Last PAR	Date of Submission FY 78 and/or FY 79	Period Covered Next Eval	Remarks
<u>Food &amp; Nutrition</u>							
Development Services and Training	0002	G	4/77	77-3	5/78, 6/79	5/77-5/78	
Agricultural Research	0003	G/L	N.A.	N.A.	11/77, 11/78	4/76-10/77	
Rural Irrigation Works	0012	G	N.A.	N.A.	7/79	6/78-7/79	'78 Project
Ashuganj Fertilizer	0016	G	3/76	<u>1/</u>	6/78, 6/79	6/77-6/78	<u>2/</u>
Food for Relief Works	0017	G	9/76	<u>2/</u> 76-3	1/78, 8/78	8/77-8/78	
Small Scale Irrigation	0019	L	N.A.	<u>3/</u> N.A.	6/78, 6/79	6/77-6/78	
Rural Electrification	0021	G	N.A.	N.A.	9/78, 9/79	7/77-9/78	'77 Project
Fertilizer Distribution Improvement	0024	G	N.A.	N.A.	8/79	8/78-8/79	
Rural Credit	0025	G	N.A.	N.A.	12/78	9/77-12/78	'77 Project
Fertilizer Storage	0030	L	N.A.	N.A.	12/77, 12/78	9/76-12/77	

Bangladesh  
Period Covered: FY 1978 and FY 1979

EVALUATION SCHEDULE

<u>Project Title</u>	<u>No.</u>	<u>Type</u>	<u>Last Evaluation Date</u>	<u>No. Last PAR</u>	<u>Date of Submission FY 78 and/or FY 79</u>	<u>Period Covered Next Eval</u>	<u>Remarks</u>
Rural Roads	0032	G	N.A.	N.A.	6/79	5/78-6/79	'78 Project
Foodgrain Protection	0033	G	N.A.	N.A.	11/78	10/77-11/78	
Agriculture Inputs III	0035	G	N.A.	N.A.	6/78, 4/79	6/77-6/78	'77 Project
<u>Population &amp; Health</u>							
Population/ Family Planning	0001	G	2/77	77-1	2/78, 2/79	2/77-2/78	AID/W Tdy
Malaria Control	0034	G	N.A.	N.A.	1/79	12/77-1/79	'78 Project
<u>Education &amp; Human Resources</u>							
National Women's Development Academy	0028	G	N.A.	N.A.	7/78, 7/79	6/77-7/78	'77 Project
<u>Section 106</u>							
PVO Co-Financing	0010	G	4/77	77-2	5/78, 5/79	4/77-5/78	
Karnaphuli	0018	L	N.A. $\frac{4}{}$	N.A.	8/78, 8/79	8/77-8/78	
Tech Resources	0027	G	N.A.	N.A.	7/79	6/78-7/79	'78 Project
Project Dev. I	0031	G	N.A. $\frac{5}{}$	N.A.	9/78, 9/79	9/77-9/78	

Bangladesh  
 Period Covered: FY 1978 and FY 1979

EVALUATION SCHEDULE

Project Title	No.	Type	Last Evaluation Date	No. Last PAR	Date of Submission FY 78 and/or FY 79	Period Covered		Remarks
						Next Eval		
Project Dev. II	0036	G	N.A.	N.A.	5/79	4/78-5/79		'78 Project
<u>Other Evaluations</u>								
<u>OPGs under PVO Co-Financing Project (388-0010) 6/</u>								
CARE			4/77	77-4	4/78, 4/79	4/77-4/78		
IVS			N.A., 7/	N.A.	6/78, 6/79	6/77-6/78		
MAP/HEED			5/77	77-5	5/78, 5/79	5/77-5/78		
YWCA			N.A.	N.A.	12/77, 12/78	12/76-12/77		
CNRU			N.A.	N.A.	5/78	5/77-5/78		
CDF			N.A.	N.A.	6/78, 6/79	6/77-6/78		

Bangladesh  
Period Covered: FY 1978 and FY 1979

Evaluation Schedule Footnotes:

- 1/ Project evaluated by Mission for internal use. Agency had no requirement at that time for evaluation reports on loan-funded activities. FY 1977 evaluation was scheduled for April but due to delays caused by site problems has been delayed to June.
- 2/ FY 1977 evaluation scheduled for August. There will be two evaluations during FY 1978: a Special evaluation will be conducted in January, requiring 2 AID/W TDY's, and one CARE/NY TDY; and the regular evaluation in August.
- 3/ FY 1977 evaluation was scheduled for April but has been postponed to June to allow for full analysis of first sales season.
- 4/ FY 1977 evaluation scheduled for August, 1977.
- 5/ FY 1977 evaluation scheduled for September, 1977.
- 6/ Mission considers it necessary to conduct regular annual evaluations of PVO projects in order to gain necessary information for decisions on whether to extend the projects or not and for determination of replicability.
- 7/ FY 1977 evaluation scheduled for May, 1977.

A Narrative Statement of Mission views on the evaluation system  
will be submitted in early August, 1977.