# BANGLADESH FOOD AID: PL 480 TITLE I AND TITLE III

AID PROJECT IMPACT EVALUATION WORKING PAPER NO. 54

by

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TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

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The statements presented in the main part of this report are intended to be brief, nontechnical yet explicit comments on the results and conclusions that follow from the evaluation team's analysis of the Bangladesh PL 480 Title I/III program. The intent is to provide a summary that is readable and informative, in a length suitable for senior officials with limited time. All of the points made in the main body of the report are supported by the analysis and data in the appendixes. Readers interested in greater detail are encouraged to read the supporting appendixes.

Finally, we would like to extend our special thanks to Nadine Johns, who so efficiently typed the team's draft report in Dhaka under difficult circumstances, and to Nancy Greaves, the incomparable word processor operator, who performed the final typing of the manuscript in Washington. The evaluation team would like to thank the Bangladesh Government officials interviewed for their time and patience in discussing with us the intricacies of this large and complex program, the largest Title III Food for Development program in the world.

## SUMMARY

U.S. food aid to Bangladesh has evolved in three phases. The first phase (1972-1975) involved the provision of wheat, mainly for emergency relief to avert famine. The second phase (1975-1980), while continuing to provide foodgrains to augment domestic supply, evolved from a Title I loan program to have a development emphasis that led in 1978 to the first PL 480 Title III Food for Development agreement. The purposes of this agreement were to promote domestic production, stabilize the consumer market, and contribute to the creation of a national foodgrain security system. The current third phase, entirely under Title III, builds on the development foundation established in phase two. It is designed to further encourage increases in production through a price support mechanism and improved market stability with greater private sector involvement.

The Bangladesh Title III program is unique. It has been directed exclusively toward macropolicy reforms and until fiscal year (FY) 1984 had no monitoring of project-level activities; that is, no program decisions were made for the use of local currency sales proceeds.[1]

The Title I/III food aid program, in concert with World Bank and other donor efforts, has achieved notable success in several important areas:

-- Essential food supplies were provided during critical periods.

-- Agricultural production has increased significantly, enhancing national food security and the country's economic stability.

-- Government food policy planning and management have been strengthened.

-- Food distribution has been improved through an open market sales system.

-- Subsidies have been reduced on food distributed through Government ration systems.

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[1]UPDATE: In 1983 the Mission established a procedure that entailed project site visits to monitor progress. As yet, no interventions have been made.

-- Private sector development has been promoted in foodgrain marketing and textile production.

Continuous effective coordination among the donors on food policies and operational problems has enhanced the impact of the U.S. food aid program. Bangladesh Government commitment, policy reforms, and program management have been and continue to be critical to the success of the program.

Bangladesh now has a broad foodgrain pricing and distribution policy framework that has the support of the donor community. Although differences exist with respect to the pace and level of Government activities, there is a consensus that the basic policy focus is sound.

Weaknesses in the U.S. Food for Development program involve program execution more than policy differences. Difficulties of varying degrees have been encountered in the following areas:

-- Procurement prices to stimulate foodgrain production have not been fully effective because of delays in announcing them.

-- Small producers reportedly are not being effectively reached by the Government procurement program.

-- The open market sales system established to moderate fluctuations in grain prices suffered from lack of oversight of lower level bureaucracies by Dhaka Headquarters. However, the system appeared to be working well by the fall of 1982 as restrictions imposed by local bureaucracies were eased.

-- Performance with respect to agreed-on self-help measures has been spotty.

-- Because of high population growth, the nutritional status of the rural poor, the overwhelming majority of the population, has deteriorated in absolute and relative terms, despite foodgrain production gains.

Improvements could be made in these areas with greater attention to more of the micro aspects of program implementation. This could include further refinement of policy initiatives or greater involvement in the programming of local currency sales proceeds, or a combination of the two. Broadening the policy dialogue to include other sectors important to development would be consistent with the approach the Mission has pursued so far.

An amendment to the 1982 agreement was in process during this evaluation and was subsequently executed on October 14, 1982. As a condition for maintaining funding eligibility, it requires quarterly joint U.S./Government of Bangladesh review and approval of projects funded from Title III proceeds to ensure that adequate progress is being made. This could have a marked impact on project performance if used to encourage sounder planning and selection of higher quality projects.

Planning for the Bangladesh Title III program has been predicated on the country achieving foodgrain self-sufficiency in the near term (i.e., during the 1980s). However, this time frame appears overoptimistic for any meaningful achievement of self-sufficiency, particularly for an improvement of the consumption/nutrition level of the population. Although the Government and the Mission are to be commended for setting and working toward this demanding goal, Washington policymakers should understand that substantial food aid assistance to Bangladesh will probably be needed for at least another decade to ensure the success of the U.S. aid program.

Given that PL 480 Title III in Bangladesh aims to stimulate increased food production, contain rice and wheat price fluctuations through the open market sales system, and build up Government food stocks, it is less costly for Bangladesh to continue receiving food aid than to attempt to purchase a comparable quantity of foodgrain on the more costly commercial market with dollar aid.[2]

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[2]See Paul Isenman and Hans Singer, "Food Aid Disincentive Effects and Their Policy Implications," Economic Development and Change 25,2 (January 1977):205-237.

## GLOSSARY

| | |
|---|---|
| ADAB | - Agriculture Development Agencies of Bangladesh |
| ADB | - Asian Development Bank |
| BADC | - Bangladesh Agricultural Development Corporation |
| BB | - Bangladesh Bank |
| BDG | - Bangladesh Government |
| BFS | - Bangladesh Fertility Survey |
| BKB | - Bangladesh Krishi (Agriculture) Bank |
| BWDB | - Bangladesh Water Development Board |
| CMLA | - Chief Martial Law Administrator |
| CSD | - Central Storage Depot |
| DA | - Development Assistance |
| DAC | - Development Assistance Committee |
| DAP | - Development Assistance Program |
| DCF | - District Controller of Food |
| DMS | - Director of Movements and Storage |
| DSDR | - Director of Supply, Distribution, and Rationing |
| EFF | - Extended Fund Facility |
| EPADC | - East Pakistan Agriculture Development Corporation |
| FAO | - United Nations Food and Agricultural Organization |
| FD | - Food Directorate |
| FPMS | - Food and Fertilizer Planning and Monitoring Secretariat |
| FY | - Fiscal Year |
| GDP | - Gross domestic product |

GLOSSARY (cont.)

| | |
|---|---|
| gram sarkars | - Local self-government unit at the village level |
| HYV | - High-yielding varieties of seeds |
| IDA | - International Development Association |
| LSD | - Local Supply Depot |
| MLAs | - Martial Law Administrators |
| MR | - Modified Rationing |
| MTFPP | - Medium-Term Foodgrain Production Plan |
| OMS | - Open Market Sales |
| PFDS | - Public food distribution system |
| pourashava | - Local self-government in incorporated urban areas |
| PVOs | - Private voluntary organizations |
| SACP | - Special Agriculture Credit Programme |
| SC/F | - Subdivision Controller of Food |
| SR | - Statutory Rationing |
| thana | - County-level of the national government |
| Tk | - Taka (Bangladesh currency) |
| TPC | - Temporary purchasing center |
| union parishad | - Local self-government unit between the district level and the village level |
| USAID | - U.S. Agency for International Development |
| zilla parishad | - Local self-government at the district level |

# 1. INTRODUCTION

Bangladesh became an independent country in December 1971. Located on the Bay of Bengal, it has a land area of 55,126 square miles, slightly smaller than that of Wisconsin. The country has a tropical climate with monsoons and periodic cyclones, of which there were 15 in the 1970s. The monsoon season typically occurs from May through November and is a prime determinant of agricultural production, the major economic activity of the country.

The population was estimated at 92 million in 1982, giving an average density of 1,670 persons per square mile, one of the highest population densities in the world. Although Bangladesh's population is 40 percent that of the United States, its land area constitutes only 1.5 percent of the total U.S. land area. With a per capita income of $120 in 1981, Bangladesh is also one of the world's poorest countries. Thirty percent of the people in the poorest 30 countries of the world are in Bangladesh. With an annual population growth rate estimated at 2.5-2.6 percent, the population is expected to double in 25 to 28 years.

A large part of the population is undernourished or malnourished. Eighty-three percent of rural families own fewer than 3 acres of land; 40 percent of the rural population is landless, and this number is growing.[1] These families generally are undernourished in calories and protein and malnourished in vitamins and minerals. As a rule, the less land owned, the greater the malnutrition.

The rural poor, some 42 million of the total 92 million population, outnumber the urban poor and are the most affected by malnutrition. Calorie consumption by the rural poor in 1981 (1,900 calories per day) was 20 percent below the internationally accepted daily minimum standard of 2,150 calories per day. Consumption surveys of 1968 and 1976[2] and preliminary data from 1981 indicate that the nutritional status of the poor has worsened since 1968. The 1975/1976 survey conducted by the University of Dhaka indicated that 60 percent of the rural population was nutritionally deficient in calories, calcium, and vitamins A, B2, and C. Each year, 30,000 new cases of blindness develop because of vitamin A deficiency. Data from the 1975/1976 survey (comparable figures were unavailable from the 1981/1982 survey) indicate that children aged 1-3 were the most affected by caloric

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[1]Joseph F. Stepanek, Bangladesh--Equitable Growth? (New York: Pergamon Press, Inc., 1978).

[2]University of Dhaka, Institute of Nutrition and Food Science, Nutrition Survey of Rural Bangladesh, December 1977.

deficiencies, with 74 percent classified as chronically undernourished. The total calorie gap of all poor is equivalent to over 1 million tons of rice annually. In this environment of undernutrition, poverty, and poor sanitation resulting in a high infection rate, 20 percent of the children do not live beyond age 5, and life expectancy is only 48 years.

## 2. SETTING

The country's major natural resources are its rich arable land, a climate that allows year-round agricultural production, abundant water resources, and its natural gas, which is a source of energy and raw material for fertilizer. Some 50 years ago agricultural production was more than sufficient to feed its population and even to export small quantities of rice. However, wartime Allied policy in 1942 ordered the removal of carts, boats, and rice from southern districts of Bengal to "deny" these necessities to the Japanese invaders, who, in fact, never came. Many observers believe that this disruption of traditional patterns of agricultural production and distribution led to the agricultural policies and problems that still plague the country, even though many of the policies have improved in recent years.

Bangladesh's union with West Pakistan in 1947 is viewed by most Bangladeshi economists as a period of economic as well as political exploitation. Because of the central Government's integrated economic policy and its dominance over regional governments, the financial resources of East Pakistan, (today's Bangladesh) were used for the development of West Pakistan. Thus, there were no fiscal restraints on internal trade or on investment between the regions. In addition, East Pakistan's accrued export surplus through the 1950s was used to finance West Pakistan's trade deficit, as was its foreign aid allocation. The dollar amount of resource transfers of which East Pakistan was deprived from 1947 to 1969 is estimated at $1,500-$3,000 million.[3]

When independence was achieved in 1971, the country still had not recovered from a devastating cyclone that had struck in November 1970. This calamity and the struggle for independence intensified the socioeconomic problems facing the country. Production fell in virtually all agricultural crops. Rice production in the two crop years of 1971 to 1973 averaged 10 percent less than it had in the 1970/1971 crop year. For the second time

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[3]Akhter Khan, "A History of the Food Problem." Paper presented at the XVI Conference of the Pakistan Economic Association at Islamabad University, February 18-20, 1973.

in 25 years (the first being after the partition from India in 1947), the area of Bangladesh had to adjust to a new economic order in the face of deteriorating world economic conditions. Continued population growth, lagging food production, and a one-third increase in import prices left the economy in shambles. Weather disasters, political turmoil, and war damage affected the productive capacity of the country, making resource availability for development impossible. The Bangladesh economy has improved considerably since these early years of independence as a result of a production increase in most agricultural crops (see Table 1).

The 1976-1981 period was one of relative prosperity, with increases in agricultural production brought about by both increases in yield and expansion in acreage under cultivation. This was achieved primarily through the introduction of an additional winter rice and wheat harvest from land previously cultivated only once during the year. As a consequence of double cropping, from 1976 to 1981 total food grain acreage in cultivation increased by 3.1 million acres, gross domestic product (GDP) increased at an annual rate of 4.7 percent, food grain production by 3.1 percent (approximately 0.5 percent per capita per year), and manufacturing output by 6.3 percent. This impressive growth is largely attributable to inflows of foreign aid, which totaled US$5.2 billion over the period.

In 1982 the economy was plagued by budgetary and balance of payments difficulties as a result of such factors as worldwide recession, a worsening in the country's terms of trade, and a leveling off of foreign aid. Although economic observers do not consider the country's economic situation hopeless, they believe that considerable effort--and aid--will be required to put the economy back on the growth track of the late 1970s.

## 3. THE PROGRAM

The United States was one of many donors that provided relief and reconstruction assistance to Bangladesh during the difficult period after Independence in 1971. Emergency grants of food aid to prevent famine were provided under Title II of Public Law 480 and continue today as Food for Work programs.

By 1974 the Bangladeshi economy had recovered somewhat; this factor and U.S. budgetary pressures on Title II funding levels, resulted in the food program being shifted to a conventional Title I (see Appendix A) loan program in 1974. The basic purpose of the U.S. food aid program, however, remained unchanged: to prevent famine.

The Title I loan program continued until 1978, when it evolved into the present Title III Food for Development program.

Table 1. Production of Major Agricultural Crops in Bangladesh, Crop Years 1970/1971 to 1981/1982
(in thousands of tons)

| Crop | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 | 1975/76 | 1976/77 | 1977/78 | 1978/79 | 1979/80 | 1980/81 | 1981/82 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rice | 10,967 | 9,774 | 9,932 | 11,721 | 11,109 | 12,561 | 11,567 | 12,765 | 12,646 | 12,539 | 13,663 | 13,415 |
| Wheat | 110 | 113 | 90 | 109 | 115 | 215 | 255 | 343 | 486 | 810 | 1,075 | 952 |
| Jute | 1,191 | 749 | 1,163 | 1,071 | 621 | 703 | 858 | 957 | 1,150 | 1,065 | 883 | NA |
| Sugarcane | 7,598 | 5,686 | 5,318 | 6,343 | 6,635 | 5,886 | 6,401 | 6,670 | 6,828 | 6,340 | 6,495 | 7,000 |
| Tea | 34,500 | 12,235 | 26,500 | 30,000 | 35,460 | 32,395 | 36,990 | 40,810 | 42,224 | 40,355 | 43,770 | NA |
| Pulses | 296 | 281 | 222 | 209 | 223 | 220 | 230 | 238 | 226 | 214 | 208 | NA |
| Oilseeds | 274 | 240 | 225 | 215 | 168 | 238 | 235 | 264 | 256 | 246 | 247 | NA |
| Condiments and Spices | 337 | 342 | 322 | 302 | 307 | 309 | 286 | 303 | 182 | 298 | 236 | NA |
| Tobacco | 39 | 34 | 39 | 41 | 40 | 44 | 63 | 49 | 43 | 39 | 47 | NA |

Note: NA = Not available.

Source: Bangladesh Bureau of Statistics.

One additional Title I agreement was entered into in 1980 for the provision of cotton, a commodity not provided for under the 1978 Title III agreement. However, the second multiyear Food for Development agreement signed March 8, 1982 incorporated the concept of a flexible commodity mix to include nonfoodgrains if appropriate; no further Title I proposals are presently contemplated.

The impetus for the change to a Title III Food for Development focus can be traced to the Mission's fiscal year (FY) 1975 program planning submission. USAID proposed a restructuring of U.S. aid to Bangladesh to emphasize a broad-based agricultural model relying heavily on technologies using high-yielding varieties (HYV) of seed developed during the "green revolution." This conceptual framework was discussed and refined over the next 2 years in the context of a growing realization that the conventional Title I loan program was piling up debt, which, even though long-term and at low interest, the country would have difficulty paying off.

A major attraction of Title III food aid is that repayment can be "forgiven" if agreed-on development provisions are satisfied, thus converting the aid to a grant. Also, the so-called crossover provision, allowing repayment of Title I loans using Title III sales proceeds, enables forgiveness of Title I debt repayments, which represents a significant foreign exchange savings to the Bangladesh Government.

The political climate in Bangladesh was unusually receptive for a Title III Food for Development program. It was agreed that agriculture would have to drive economic growth in the country and that increasing foodgrain production for the rapidly growing population was the only long-term hope for improving the welfare of the people while maintaining economic and political stability. Furthermore, the Government of Bangladesh was willing to change domestic policies and goals to conform to the philosophy of the new U.S. food aid legislation.

Among the policies and goals embodied in the 1978 agreement between the United States and Bangladesh were acceleration of increases in agricultural production by maintaining incentive prices to farmers; phase out of the Government ration system; moderation of grain price fluctuations and increases; provision of resources in support of specific Government agricultural and rural development programs; and encouragement of the development of the private sector (the cotton spinning industry and marketing and processing foodgrain and vegetable oil). Most important, the two governments agreed on the need to improve food policies and on the implications of the Bangladesh Medium-Term Foodgrain Production Plan for achieving a more stable production environment.

At the USAID Mission's urging, the Bangladesh Government in 1977 adopted a foodgrain procurement program to support the price of rice as an incentive for farmers to invest in HYV technologies. A successful procurement program was conducted in the 1977-1978 crop year. The Mission had been planning the Title III Food for Development program for some time, and this positive procurement experience gave further encouragement.

In early 1978 the Mission proposed a broad Title III program involving a two-pronged macropolicy approach to stabilizing prices as an incentive to increase production and to create a national foodgrain security system. The concept involved supporting foodgrain prices at harvest time, through Government procurement at "guaranteed" prices, and constraining increases in rice prices during lean seasons, through Government stockpiling of foodgrains and release of these stocks when needed through an open market sales (OMS) system. The Title III program also envisioned reducing Government subsidies under the ration system by raising ration prices and ultimately eliminating major parts of the system. Ration prices were serving as production disincentives; further, the system benefited certain privileged classes more than it did the poor. Provisions were included in the Title III agreement to promote the development of the private sector in agricultural marketing.

The major assumptions of the Title III Food for Development program were that price incentives would induce greater production and that Government stockpiling and timely releases through the OMS system would stabilize consumer prices and enhance foodgrain security. As the program got underway and operational experience was gained, various amendments were made to the original agreement to take these experiences into account.

In all, there were six amendments, involving both policy and procedural adjustments, to the August 2, 1978 Title III agreement, dated May 11, June 15, June 22, and June 29, 1979; March 7, 1980; and June 26 1981. The more important provisions in these amendments emphasized setting a preharvest deadline on foodgrain procurement pricing provisions and developing a rationale for and a system of trigger, target ceiling, OMS selling, and ration prices. In addition, the "price package" called for changes in the OMS system, including establishment of an OMS ceiling price, and changes in the ration system pricing to bring these prices in line with fair market value.

The 1978 Bangladesh Title III program was the second program initiated under the new provision of the PL 480 legislation. It was unique in that its focus has been directed exclusively toward macropolicy changes.

The program has been successful in establishing a procurement program to support prices and acquire commodities for

Government programs, including the accumulation of reserves, and an open market sales mechanism to release commodities from stockpiles to dampen seasonal price swings. These initatives have strengthened the nation's foodgrain security system. The Government's willingness to make difficult decisions and to take decisive action have been among the most important factors in this success.

The second multi-year Title III agreement, covering FY 1982 to FY 1984, was signed March 8, 1982 and has been extended through FY 1985. It contains the same conceptual and policy framework as the first agreement. Although it is still too early to make a final judgment, evidence suggests continued success with the Title III program under the second agreement. (Section 4 reviews the experience to date.)

As shown in Table 2, U.S. food aid to Bangladesh from Independence through FY 1982 totaled US$1.055 billion. U.S. food aid currently accounts for about 44 percent of all donor food aid to Bangladesh.[4]

## 4. PROGRAM IMPACTS

### 4.1 Impact on Foodgrain Production

The most direct impact of the U.S. food aid program on foodgrain production has been at the policy level. A secondary impact has been achieved through the use of local currency sales proceeds for projects in the Bangladesh Government development budget, particularly since 1981 when the Government issued the Medium-Term Foodgrain Production Plan.

The cornerstone of the policy approach was the 1978 reform of a Bangladesh Government national procurement program, with prices calculated to serve as production incentives throughout the year, especially during the months when farmgate foodgrain prices are low--in other words, a producer price support mechanism.

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[4]UPDATE: The Title III agreement extension through 1985 includes the provision of foodgrains in the amounts of US$60 million in FY 1983, US$65 million in FY 1984, and US$75 million in FY 1985. Because of serious flooding from June through October 1984, extra allotments of Title III food have been made: US$3 million in FY 1984 and US$17 million in FY 1985.

Table 2. Food Aid Disbursements to Bangladesh, FY 1972-FY 1982 (in thousands of U.S. dollars)

| Donor | FY 1972-75 | FY 1976-78 | FY 1979-82 | Total |
|---|---|---|---|---|
| United States | 401,041 | 300,156 | 353,860 | 1,055,057 |
| Title I | (258,591) | (246,025) | (12,440) | (517,056)[a] |
| Title II[b] | (142,450) | (30,290) | (109,518) | (282,258) |
| Title III | - | (23,841) | (231,902) | (255,743)[c] |
| Other | 705,959 | 177,344 | 446,540 | 1,329,843 |
| Total | 1,107,000 | 477,500 | 800,400 | 2,384,900 |

[a]Includes US$16.351 million of cotton, of which US$9.969 million was provided in FY 1978 and US$6.382 million in FY 1980.
[b]Food for Work.
[c]Includes US$9.180 million in cotton provided in FY 1982.

Source: U.S. Bilateral Economic Assistance to Bangladesh, All Years Summary (Dhaka, Bangladesh: USAID, October 1982); and World Bank, Bangladesh: Recent Economic Developments and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: World Bank, March 3, 1982).

Until 1975, the Bangladesh Government procured minimal amounts of domestic foodgrains. Since 1975, average tonnage procured has increased progressively from the minimum (by agreement) 128,000 tons first procured in 1975. The program is intended to reduce dependence on imports by using an incentive mechanism to promote increased agricultural production and to encourage the adoption of HYV technologies. A floor price would be set sufficiently high to encourage producers to invest in the modern inputs associated with the HYVs. The procured rice would be stored to provide public food supply stocks during lean seasons. Stocks would be released to the market through the OMS system to even out price fluctuations in the market price of foodgrains. The Government previously had procured domestic foodgrains on an ad hoc basis but not as a part of an integrated development approach.

The basic mechanism of the new procurement program called for the Government (1) to calculate a price that would provide a fair return on investment to farmers who adopt the HYV technology for production; (2) to announce this price in advance of the planting seasons (July 1 in the case of the wet season rice crop and November 1 in the case of dry season rice and wheat); (3) to maintain this price throughout the season; and (4) to procure all

grain offered. Private intermediaries would be used to provide greater outreach to increase procurement of rice, paddy, and wheat from small farmers who otherwise would not be served.

There have been some difficulties with the new system, but the overall effect has been quite positive. The Government procurement program began to function effectively only in FY 1981. Use of HYV technologies has increased, and production has risen. In the second half of the 1970s, average acreage planted to foodgrains increased by 5.2 percent (made possible through drainage, flood control, and irrigation), whereas yields rose 12.9 percent, mostly through the use of HYVs, fertilizer, and pesticides. Total production was up 18.8 percent (see Table 3).

The economy was just beginning to pull out of an extended slowdown at the beginning of this period, and it is likely that some improvement would have occurred even in the absence of the policy stimulus from the U.S. food program. This should not, however, detract from the credit due the Title III program. The evidence indicates that the U.S. program played a significant role in bringing about this improvement.

Because the ration system subsidies are widely regarded as a disincentive to local foodgrain production (particularly rice), both Title I and Title III programs have sought to raise ration prices and ultimately abolish rationing, thereby offsetting any disincentive effects on local production. Evidence from studies and data published by the Bangladesh Bureau of Statistics suggests that there has been little or no direct disincentive to foodgrain production resulting from Title I/III (mostly wheat) programs.

Table 3. Foodgrain Acreage, Average Yields and Production in Bangladesh, Crop Years 1970/1971 to 1981/1982

| Crop Year | Acreage (1,000 acres) | | Average Yields[a] (maunds/acre) | | Production[b] (1,000 tons) | |
|---|---|---|---|---|---|---|
| | Rice | Wheat | Rice | Wheat | Rice | Wheat |
| 1970/1971 | 24,494 | 311 | 12.19 | 9.63 | 10,967 | 110 |
| 1971/1972 | 22,975 | 314 | 11.58 | 9.80 | 9,774 | 113 |
| 1972/1973 | 23,796 | 297 | 11.36 | 8.25 | 9,932 | 90 |
| 1973/1974 | 24,410 | 305 | 13.07 | 9.73 | 11,721 | 109 |
| 1974/1975 | 24,197 | 311 | 12.50 | 10.07 | 11,109 | 115 |
| 5-Year Average | 23,974 | 308 | 12.14 | 9.50 | 10,701 | 107 |
| 1975/1976 | 25,525 | 371 | 13.40 | 15.77 | 12,561 | 215 |
| 1976/1977 | 24,419 | 395 | 12.89 | 17.57 | 11,567 | 255 |
| 1977/1978 | 24,778 | 467 | 14.02 | 19.99 | 12,765 | 343 |
| 1978/1979 | 24,992 | 654 | 13.77 | 20.23 | 12,646 | 486 |
| 1979/1980 | 25,106 | 1,071 | 13.59 | 20.59 | 12,539 | 810 |
| 5-Year Average | 24,964 | 592 | 13.53 | 18.83 | 12,416 | 422 |
| 1980/1981 | 25,474 | 1,461 | 14.60 | 20.03 | 13,663 | 1,075 |
| 1981/1982[c] | NA | NA | NA | NA | 13,415 | 952 |

Note: NA = Not available.

[a] 1 maund = 82.29 lbs.; 1 long ton = 27.22 maunds.
[b] Gross production expressed in long tons of rice equivalent.
[c] Estimated.

Source: World Bank, Bangladesh: Recent Economic Developments and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: World Bank, 1982).

As wheat production increases in the 1980s, Title III may cause a disincentive to production unless wheat consumption continues to rise. Both USAID and Bangladesh Government officials are aware of the potential for foodgrain imports to become a disincentive for domestic production. Certainly the fact that imported grain constitutes about 10 percent of the total domestic consumption and is equivalent to 60 percent of the commercially marketed domestic crop cannot be simply dismissed. Continuous monitoring of this situation should be a priority in considering when and what alternative aid commodities may be needed and to avoid Government complacency in its reliance on heavy grain imports.

Another factor dampened production increases early in the program. Under the first Title III agreement of August 2, 1978, local currency sale proceeds from U.S. food aid could be used for any of the projects in the Government's development budget. Encouragement of production thus was diffused; the Government was free to allocate these funds among any development projects it chose. Later, with the Government's issuance in February 1981 of the comprehensive Medium-Term Foodgrain Production Plan (MTFPP), a framework was provided for more directly applying the local currencies generated under the Title III program to foodgrain production.

The World Bank, with USAID's full support, was the principal force behind the adoption of the MTFPP. The objective of the MTFPP strategy was to provide a more stable production environment through projects designed to bring about three major types of improvements:

-- Improved water control, mainly through minor irrigation, drainage, and flood control

-- A steady supply of inputs to match demand

-- Incentive and stable farmgate prices

Since the adoption of the MTFPP, all local currency proceeds have been used for projects designed to achieve these improvements. Although the focus has improved, problems have arisen with Bangladesh Government fiscal and accounting procedures for MTFPP and other projects. In their September 1982 evaluation, Kunkel and Thormann reported two instances in which substantially more Title III local currency funds had been attributed to two MTFPP projects than had actually been expended for the projects.[5] In addition to implications concerning Government

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[5]David E. Kunkel and Peter Thormann, "FY 1982 Evaluation of the Bangladesh Title III Food for Development Program, September 14-28, 1982" (Washington, D.C.: AID and U.S. Department of Agriculture, November 24, 1982), unpublished.

accounting procedures related to local sales proceeds, questions have been raised about how effectively this resource has been used in supporting the basic objectives of the Title III program. Further, some MTFPP projects have been suspended after Title III local currency funds were allocated to them, some projects have been dropped, and others have been added (see Appendix D).

Through reported interviews and discussions, Kunkel and Thormann found several projects that performed poorly in FY 1982 and were either disregarded, phased out, or had their funding shifted to other agencies. Among these projects were the following: Est(Taka [Tk] 57,000 Title III disbursements); Power Plant-Irrigation Distribution System (Tk 1,250,000 Title III disbursements); Command Area Development (Tk 58,000 Title III disbursements); and Support to Locally Developed Small Pumps and Other Agricultural Implements (Tk 600,000 Title III disbursements).[6] In general, low-lift pump and irrigation projects performed well.

Through the MTFPP, Bangladesh set the goal of achieving self-sufficiency in foodgrains by 1985. This goal has obvious implications for the level and duration of U.S. food aid. In fact, because of production shortfalls in 1982 the target date has already been extended to the late 1980s.

The evaluation team believes this extra time will be needed for the production-based, market-oriented agricultural development policy to become fully and efficiently established. The dynamics of the market system need to be better understood and trusted. The confidence of both producers and consumers is necessary for it to work, and this takes time to build. Although production gains over the past few years have been impressive, the annual gap between foodgrain production and consumption requirements is over 1 million tons.

The MTFPP self-sufficiency goal is 20 million tons of foodgrain. Production in the 1981/1982 crop year was 14.5 million tons. Thus, a compound annual growth of 8.4 percent, compared with an average growth rate in recent years of over 4 percent, would be required to reach 20 million tons by 1988. The average annual growth rate during the second half of the 1970s was about 3.4 percent.

Because of financial pressures, the Bangladesh Government has had to reduce planned funding allocations for the MTFPP and for the rest of its development budget. This step was taken with the full agreement and urging of the International Monetary Fund, the World Bank, and AID. This will stretch out implementation of

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[6]The exchange rate in 1982 was approximately US$1=Tk 17.

the plan. The FY 1981 funding allocation for the MTFPP was 28 percent below that originally projected, and in FY 1982 the shortfall was over 50 percent. The overall financial condition of the Government does not suggest that these shortfalls are likely to be recovered. In fact, given current budgetary stringencies, further budget adjustments could be necessary.

Because of the seriousness of the local currency resource inadequacy, the Asian Development Bank is actively considering raising the percentage of local currency it will finance under its projects. West Germany is contemplating this as well.

Foodgrain self-sufficiency is often referred to in terms of achieving the 20-million-ton foodgrain production goal, without much attention being given to the nutritive aspects. This goal is based on an estimated population of 102 million by 1985. At that population level, 20 million tons of foodgrain (less the usual 10 percent for seed, feed, and waste) would provide an average of 15.5 ounces per person per day, or 1,600 calories per day. At this level, per capita grain consumption would be approximately 24 percent below minimum daily requirements of 2,150 calories.[7]

Without additional grain imports, this production goal will force the population to reduce grain consumption from the current 85 percent of calories to 75 percent. However, Table 4 shows a trend toward even larger declines in nongrain food consumption. Most of the other foods (animal products, fish, and vegetables) cost more than foodgrains and thus, without an increase in purchasing power, the demand for less costly foodgrain is not likely to fall below 75 percent of calorie requirements. Furthermore, the trend toward lower nonfoodgrain product availability can be expected to increase the cost of these food items still further because of increasing demand, particularly if insufficient foodgrain is available. Despite high grain consumption, the total calorie consumption is deficient and is likely to decline even if production goals are met.

Given this situation, it is encouraging that the Government continues to give priority to the agricultural sector in its development budget. The World Bank reports that MTFPP projects were given a significant degree of protection during the Government's budget retrenchment in 1982.[8] Given the serious

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[7]The U.N. Food and Agriculture Organization has established requirements at 2,322 calories, which is probably high.

[8]World Bank, Bangladesh Foodgrain Self-Sufficiency and Crop Diversification, Report No. 3953-BD (Washington, D.C.: World Bank, 1982).

budgetary difficulties facing the Bangladesh Government, this protection obviously involved difficult choices and decisions for which the Government deserves considerable credit.

Furthermore, within the agricultural sector, additional resources have been allocated to increasing foodgrain production, primarily to make available the modern inputs required for HYV production. Wheat and rice have shown increases in production, with wheat production increasing by more than 30 percent between 1975 and 1980.

Although not all gains in foodgrain production can be directly attributed to Title III policy changes, there is every indication that the program has positively effected production. A national foodgrain procurement program, in effect a guaranteed floor price system, has been established and is working with some success. This program is designed to provide price stability for foodgrain producers at a level sufficient to cover their investments in HYV technologies and still realize a reasonable profit.

Table 4. Per Capita Food Intake by Food Source, January-July, 1962 and 1976

| Source | 1976 gm/ pers/day | 1976 Percent of Total | 1962 gm/ pers/day | 1962 Percent of Total | Percent Change |
|---|---|---|---|---|---|
| Cereal | 546 | 62 | 523 | 65 | -4 |
| Animal | 57 | 6 | 44 | 5 | -22 |
| Other (plant) | 284 | 32 | 240 | 30 | -15 |
| Total | 887 | 100 | 807 | 100 | -9 |

Source: Kamaluddin Ahmad, Economic and Nutritional Effects of Food Relief Work Projects (Dhaka: University of Dhaka, Institute of Nutrition and Food Science, March 1978).

There has been some concern that the increases in the price of fertilizer and other inputs have exceeded increases in output prices, leading to a decreased use of fertilizer during 1982. However, Bangladesh's rice/fertilizer price ratios compare favorably with those of other South Asian countries. For example, in FY 1982 the Bangladesh price ratio of paddy to urea was 1.05, whereas Pakistan's was 0.55 and India's was 0.52. This would indicate that the decline in fertilizer use is due to other

factors, such as the erratic incidence of monsoons during 1981 and 1982, which adversely affected crop yield and farmer incomes, leading to a drop in fertilizer usage. New Government agricultural policies encouraging increased private sector participation in the agricultural input market also temporarily caused a reduced demand for fertilizer. Farmers' expectations of increased grain prices in 1983, however, prompted increased fertilizer sales in late 1982.

Before the introduction of HYV technology to Bangladesh in the early 1970s, foodgrain production and growth were almost totally dependent on the erratic weather and existing soil fertility. The country's original development strategy proposed to tame the rivers, but the economic crisis and deficient organizational capacity at independence prevented its implementation. Meanwhile, rapid population growth continued. The advent of new agricultural technology introduced an element of optimism for achieving foodgrain self-sufficiency by the 1980s and created greater prospects for training and extension, infrastructure development, and increased domestic investment in agriculture. In part, the subsequent PL 480 agreements have supported these efforts through self-help measures established to improve distribution of agricultural inputs, increase and diversify food production, better disseminate agricultural research information, strengthen rural institutions for small farm agriculture, ensure remunerative prices, and provide more equity in the ration system.

## 4.2 Impact on Foodgrain Producers

Although it is difficult to precisely quantify the impact of the U.S. Food for Development program on foodgrain producers, indirect indicators imply a positive effect.

For the many small producers who must buy a portion of their foodgrain consumption requirements in the market during lean periods, the OMS system undoubtedly makes a big difference by protecting their real incomes through constraining price increases. Also, producers typically have to borrow money to meet their food needs during lean periods and must pay very high interest rates--80 percent per year is not uncommon--which reduces their ability to invest for increased production the following season. Thus, not only are the small producers helped directly by the OMS system, but it also has a positive impact on the broad objective of increasing overall foodgrain production.

In the past, some observers of agricultural development programs built around HYV technologies have argued that the new technologies had unintended negative effects due to their differential impact on producers. The argument is that initial

benefits from these programs go to larger farmers who are market oriented and have the capital to finance and risk the costlier HYV seeds, irrigation equipment, and other costs not associated with traditional agriculture. Furthermore, small farmers and the landless have to pay higher market prices for their food without corresponding increases in their incomes as a result of rising use of HYV technologies.

There are two reasons that should allay concern about this distributional problem in Bangladesh. First, the Mission reports that 1982 surveys conducted by USAID indicate that all farmers, whatever the level of their production, seem to adopt new technologies in roughly equal proportions and in a short time. The landless also benefit because HYV technology is associated with increased demand for labor and, eventually, reduced foodgrain costs. There is still some controversy about whether the demand for labor in HYV technology keeps pace with the gains in yield. World Bank studies indicate that virtually all crop-related increases in employment have been attributed to expansion of HYV technology.[9] In Bangladesh, however, HYV technology still accounts for only 21 percent of total foodgrain area, and some farmers, the landless in particular, may not receive a fair share of the yield benefits.

The second, more persuasive reason is that there is no other reasonable course available for Bangladesh. The country needs to increase foodgrain production and to do so quickly. HYV technologies offer the only possible solution to the country's need for increased production to feed its growing population and maintain economic and political stability.

Furthermore, the development process necessitates change, and change never evenly affects all groups in a society, whether in traditional cultures or Western societies. Those who are positioned and equipped to adapt quickly to innovation and technological change will benefit earlier and (at least initially) to a greater degree than those who are not as adaptable. When the needed production increases are achieved, the system should be fully established, and adjustments at the margin should then be possible and appropriate.

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[9]World Bank, Bangladesh: Recent Economic Developments and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: World Bank, March 3, 1982).

## 4.3 Impact on Consumers

The Title I/III program has directly affected consumers in four ways. First, U.S. food aid augmented domestic supplies available for consumption. Second, incentive pricing and procurement conducted under provisions of the Title III Food for Development program helped to stimulate production increases that also added to supplies available to consumers. Third, the OMS system moderated price increases of foodgrains to consumers by injecting Government foodgrain stocks into the regular market during lean periods. For example, World Bank statistics on weighted average wholesale prices of wheat and coarse rice indicate price variations of as much as 50 percent (from July to June in the crop year 1972/1973) before effective implementation of the open market sales system.[10] In the 1980/1981 crop year, wheat price data show that price variations under the open market sales system did not exceed 11 percent. Fourth, a portion of U.S. food aid was channeled through the Government ration system to serve the rural poor. The first two impacts were discussed in the preceding sections; the last two are discussed below.

The current high level of grain consumption in Bangladesh, a population already consuming too few calories, particularly in rural areas, results in inadequate consumption of nongrain foods. This, in turn, leads to vitamin and mineral malnutrition, now a serious problem in Bangladesh. If allowed to continue, the trend toward ever lower consumption of nongrain foods will result in increased mortality. Action is needed to reverse the trend and accelerate production of all foods, setting goals and developing projects that reach beyond the MTFPP goals for grain.[11] Clearly, without more purchasing power and more nongrain product availability, increased grain production will give little or no relief to the pervasive undernutrition and malnutrition.

### 4.3.1 The Open Market Sales System

There are three basic elements to the OMS price mechanism: initial prices, the adjustment mechanism, and minimum prices. Initial prices are established at a fixed percentage above the Government procurement price to allow a reasonable return to private dealers buying and selling at the same prices, thus encouraging development of private marketing mechanisms. These

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[10]World Bank, Recent Economic Developments.

[11]Wennegren, Antholt, and Whitaker, Agricultural Development in Bangladesh (Boulder, Colorado: Westview Press, 1984), p. 121.

prices are adjusted on a subdivision basis (there are 68 subdivisions reporting prices across the nation) when market prices move up or down 10 percent or more. When this happens, the OMS prices are adjusted by one-half the percentage change of the market price, thus acting as a brake against further movement. Minimum prices are fixed at a percentage above rice and wheat procurement prices to ensure reasonable returns to private dealers operating in the market.

Sales under the OMS system are made to the public at large. Consumers in general benefit when price rises in lean periods can be minimized. The OMS system aims to keep market stocks plentiful enough to stabilize the price at a level that is affordable to the majority of buyers.

The concept as it was established in the initial Title III agreement envisioned that the Government would "hold" the market price at a predetermined level by releasing into the marketplace whatever amount of stocks would be needed to accomplish this. However, it was realized subsequently that Government foodgrain reserves could be depleted by a sustained drawdown in a time of severe shortages, with disastrous results to national foodgrain security. Therefore, the concept was changed to one of "moderating" price increases through timely releases from Government stocks instead of entering the market at the outset of price increases and holding the market price. Initially, only wheat was marketed through the OMS system, but later milled rice and unmilled paddy were included.

### 4.3.2 Management

As with other elements of the new Title III Food for Development program, management difficulties emerged as the program began to operate. During the first lean period (September-October 1978) OMS supplies were very low; sales were made in some subdivisions where the trigger price had not been reached, whereas no OMS sales were made in several subdivisions where the trigger price had been reached. A disproportionately high share of OMS sales went to Dhaka, the capital city, and over half went to flour millers whose products tended to go to wealthier consumers.

These irregularities and operational problems were the subject of extended negotiations between the Mission and the Bangladesh Government, which gradually resulted in tightened control of OMS operations. Procedures were revised, a limitation was placed on the amount that could be sold to flour millers, and basic policies were reviewed and reconfirmed. Adjustments continue to be made to improve the program.

The evaluation conducted by the Mission in December 1979 concluded that the OMS system was unsuccessful in constraining rice prices within set limits in its first year.[12] The need for operational adjustments was cited, including finding the right price for wheat (the intervention commodity), low Government stock levels, and other similar factors.

Good harvests over the next 2 years, however, limited the need for further OMS interventions. In fact, since August 1979, stock levels have been adequate to support OMS operations whenever price conditions warranted. October 1981 was the first time in nearly 2 years that wheat and rice prices rose sufficiently to make OMS prices attractive. The total volume of grains supplied through the OMS system in FY 1982 was 46,385 tons (37,233 rice and 9,152 wheat); in FY 1983 the total doubled to 116,408 tons (36,546 rice and 79,502 wheat).

Generally, the OMS system functioned effectively during the October-November 1982 crop season and contributed to limiting market price increases in areas where it operated.[13] No serious distributional problems were observed. In 1982 however, several operational difficulties arose, most of which involved special conditions imposed by local food controllers, such as restricting the number of dealers handling OMS grains, limiting quantities dealers could buy at a time, and limiting the geographic area in which dealers could resell their OMS offtakes. Some of these problems may have resulted from a poor understanding of central Government policies and implementation procedures.

In their September 1982 program evaluation, Kunkel and Thormann recommended that training courses be held at the subdivision level to explain the OMS system to local officials.[14]

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[12]USAID/Bangladesh, "The PL 480 Title III Program in Bangladesh: An Evaluation of the First 16 Months, August 1978-November 1979" (Dhaka: USAID, December 13, 1979).

[13]UPDATE: During 1983, rice prices followed the usual seasonal pattern, falling to a low in June through July and rising to a high from September through November. The maximum variation was only 8 percent. Wheat prices performed similarly, but with a maximum variation of 15 percent. During the flooding period in 1984 (June-October), prices started upward and without major action by the Government probably would have at least doubled, as in past crises. By increasing imports from Thailand and Burma and through additional allotments to Title III and releases to the OMS system, the Government was able to dampen speculation and prevent irrational price increases (14 percent or more for rice and 18 percent or more for wheat). This is taken as an indication that the OMS system is working well.

[14]Op. cit.

However, in visits to 39 subdivisions the impact evaluation team was told that no training had been provided to local officials responsible for end-of-line operation of the program. In several cases the evaluation team noted that the officials were new and seemed unfamiliar with the policy or procedural systems for the OMS system.

Another reason for local variations in operations, however, is that local officials have a degree of autonomy under the decentralized Government system. Therefore, they frequently modify instructions from Dhaka based on their judgment of local conditions.

The October 14, 1982 Title III amendment specifies that all wheat provided under the agreement be used in the OMS system and permits the Government of Bangladesh to impose restrictions on handling OMS grains. Prior to the signing of this amendment, the Government was required to "provide sufficient commodities to all areas to satisfy all dealers (licensed and unlicensed) wishing" to participate in the OMS system. In practice, however, the local officials had been limiting the dealers, contrary to the Title III agreement, arguing that their selection of dealers was contributing to the success of the program. With the Title III amendment in place, further testing of this practice will be possible.

### 4.3.3 Modified Rationing

Modified rationing is one of 10 categories in the Government's subsidized public food distribution system. Its stated purpose is to serve the rural poor; by terms of the original Title III agreement, this grain was intended only for category A ration card holders (those so poor they pay no income tax). This category of rural poor own very little or no agricultural land and thus do not produce enough to meet their consumption requirements.

A 1978 study of 25 local jurisdictions observed from October to December, the season of greatest need for rationed rice, revealed that an insignificant amount was allotted for purchase by the rural poor.[15] Even when the poorest (category A) took the full allotment, the amount available was only 0.6-0.7 seer per month (1 seer = 0.933 kilogram). Given that the adult requirement is about 0.6 seer per day, the allotment met only 3.6 percent of the adult requirement. During that period the ration price was about 60 percent of the market price, so the contribu-

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[15]USAID/Bangladesh, "PL 480 Title III Program in Bangladesh."

tion to income of the savings achieved by buying ration rice was a little more than 1 percent.

The study further determined that category A ration card holders were almost totally dependent on the market during this period because they could meet only 2 to 11 percent of their cereal grain requirements from their own resources. Fifty-five percent of those in category A reported having no cash to purchase food. The median consumption of calories from all foods reported for category A was only 70 percent of minimum nutritional requirements.

In negotiating the first Title III agreement, AID had pressed for the requirement that Title III foodgrains be used solely in the OMS system. This was considered to be a more effective and equitable means of foodgrain distribution than modified rationing because the basic purpose of the OMS system was to protect the real incomes of the landless and small farmers who purchase foodgrain in the lean season. The Bangladesh Government, on the other hand, strongly argued that the modified rationing program already helped the rural poor and should be continued. Table 5 summarizes the actual experience under the first Title III agreement.

The compromise reached was to permit use of U.S. foodgrains for both the modified rationing and the OMS systems, with the understanding that OMS sales would replace a portion of modified rationing sales. The March 8, 1982 Title III agreement authorized an additional 175,000 tons of wheat, which could be used for either the OMS or the modified rationing program; however, none was used for the modified rationing program in 1982.

Administration of the modified rationing program has been very loose. Mission and other studies[16] have shown that categories B, C, and even D card holders have been receiving modified rationing foodgrain. Distribution also is erratic and falls below levels set in the guidelines. In addition, those in both the Bangladesh Government and the donor communities who are knowledgeable about the program believe that substantial "leakage" occurs in the modified rationing program as it does in other public food distribution categories. As shown in Table 5, early in the program, the Government emphasized modified rationing over OMS uses.

Because of difficulties with the operation of the modified rationing program, and to strengthen the OMS system, the second Title III agreement was amended in October 1982 to limit the use of wheat to the OMS system.

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[16]USAID/Bangladesh, "PL 480 Title III Program in Bangladesh"; and World Bank, Recent Economic Developments.

Table 5. Use of Foodgrain Under the Title III Agreement of August 2, 1978 (in metric tons)

| Category | Open Market Sales | Modified Rationing | Reserve | Total |
|---|---|---|---|---|
| Provided | - | - | - | 1,174,000 |
| Authorized Use | 1,174,000 | 600,000 | 200,000 | - |
| Actual Use | 180,200 | 554,700 | - | 734,900 |
| Balance | 398,000 | 45,300 | - | 439 100 |

Source: D.E. Kunkel and P. Thormann, "FY 1982 Evaluation of the Bangladesh Title III Food for Development Program" (Washington, D.C.: AID and U.S. Department of Agriculture, November 24, 1982), unpublished.

## 4.4 Impact on Institutional Mechanisms

In a sense, donor food aid may be the sine qua non for all institutions of Bangladesh. The country's food situation is so precarious that halting the 1.2 million tons of foodgrains provided annually by aid donors would lead to chaos. No government could long survive under such circumstances. Thus, U.S. food aid, which constitutes approximately 44 percent of total donor food aid (see Appendix B), must have a substantial impact.

### 4.4.1 The Policy Dialogue

The Title III program has been the underpinning for a broad policy dialogue with the Bangladesh Government in the following areas:

1. Establishing production incentive prices for farmers
2. Improving food security by holding and properly managing reserves
3. Promoting private sector development
4. Reducing inequitable and costly food subsidies by phasing down the Government rationing systems

5. Moderating consumer price increases through the OMS system

Some of these impacts have been discussed in the preceding sections. The others are reviewed in the following paragraphs, together with other issues related to the institutional aspects of the program.

### 4.4.2 Private Sector Development

Development of private sector activities relating to agriculture has been a key element of the Title III program from the outset. Since 1978 when the Bangladesh Food for Development program was initiated, the Bangladesh Government has adopted various private sector initiatives, including distribution and marketing of fertilizers, pesticides, and other agricultural inputs. Promotion of the private sector by the United States, the largest food donor, probably had some effect, but the Mission reports that there is more coincidence than causal relationship between the U.S. program and most of these private sector initiatives. Fortuitously, the administration in power had views similar to those held by the Mission concerning the utility of expanding the private sector.

The Bangladesh Agriculture Development Corporation has been the public sector agency largely responsible for distributing fertilizer, including domestically produced urea, at wholesale prices to farmers. However, within the last 3 years the Government has increasingly emphasized shifting this role to the private sector (see Appendix G) while increasing its concentration on more profitable crop management techniques.

A more direct causal relationship does exist, however, between U.S. food aid and private sector development in the cotton spinning industry. The March 1982 Title III agreement included a provision for the Bangladesh Government to create an investment climate favorable to the development of the private sector cotton spinning industry. The initial step was to eliminate the 12,500-spindle limitation on new spinning mills that appeared to be an obstacle to profitable manufacture, and thus to large-scale private investment in the industry. This was to be followed by Government identification of and action on any other legal or administrative matters that were constraining private sector development in the industry.

On June 26, 1982 the Bangladesh Government removed the size limitation on new spinning mills, allowing investors to construct any size plants they considered economical. Since then, four license holders have announced plans to construct new mills exceeding the previous 12,500-spindle limitation. In September

1982 the Government announced plans to divest itself of many nationalized spinning mills. Under this plan, 40 to 60 percent of spinning capacity will be turned back to the private sector. Since November 1982, 18 textile mills have been denationalized and returned to their former Bangladeshi owners.

### 4.4.3 Bangladesh Government Policy Formulation and Planning

The most visible evidence of institutional development occurring under the food program is the Bangladesh Government's creation of a policy planning and monitoring unit in its Planning Commission to develop and furnish data and analyses to Government decision-makers for use in formulating agricultural policies. This organization, called the Food and Fertilizer Planning and Monitoring Secretariat (FFPMS), was established in early 1980 at the urging of USAID and the World Bank.

The FFPMS was established to provide policymakers with a framework for food policy analysis. Its activities have affected policy decisions on appropriate procurement prices, fertilizer supplies and prices, and adequate foodgrain stock levels, and have ensured that needed analysis on food policy measures is carried out. AID finances the FFPMS and supports it with technical assistance and training, largely because of its relationship to the Food for Development program. AID is funding an economist to work as an adviser to FFPMS.

The FFPMS is headed by a project director who is a member of the Planning Commission. Reporting to the project director are three section chiefs, who are responsible, respectively, for food, fertilizer, and economics (the economics post is vacant). The full-time professional staff of the FFPMS numbers nine.

The FFPMS has reached an effective operational capacity. The unit now publishes regular reports on food supplies and sources and statistical data on foodgrains and agricultural inputs such as fertilizer. In addition, it prepares position papers for the Government Council Committee on Food, Agriculture, and Rural Development and for the Council Committee on Food and routinely monitors foodgrain production and distribution in Bangladesh.

### 4.4.4 Food Management Costs

The Government's involvement in food management is extensive and includes procurement, storage, and distribution of domestically produced and imported foodgrains; importation, sale, or rental of production inputs; and numerous related activities.

Many of these activities are subsidized, and the financial cost is a heavy burden on Government resources.

According to a World Bank estimate, the subsidy on the distribution of foodgrains averaged 37.7 percent of total Government food costs over the period 1977-1981.[17] This subsidy was estimated to have declined to 28.4 percent by FY 1982 because of Government policies to increase distribution through private markets and to raise ration prices to bring them more into line with free market prices. The subsidy on fertilizer was estimated to be 27.7 percent in FY 1982, reduced sharply from the 35.6 percent subsidy in FY 1978.

These substantial subsidies reduce the amount of funding available for other purposes. Although the Government has taken measures to reduce the level of subsidies on the foodgrain and inputs side, the goal remains to bring them into line with operating costs.

### 4.4.5 Phasing Down the Ration System

From the outset of the Food for Development program in 1978 a Mission objective has been the phasing down and ultimate elimination of major parts of the ration system. The World Bank also was active in getting the Bangladesh Government to reduce ration subsidies; cooperation between the World Bank and the Mission was an important aspect of this effort. The OMSn system was considered to be more equitable and effective in delivering foodgrains than was the ration system and less of a financial burden on the Government. The phase down of the ration system was to be accomplished by (1) establishing the OMS system and (2) raising ration prices to bring them gradually closer to the free market rate.

The Government has taken various measures to rationalize its foodgrain distribution policy. Procurement and ration prices have been increased, and the ration quota has been reduced. By late FY 1981 and early FY 1982 the difference between prevailing market prices and ration prices was only 15 percent for rice, the narrowest margin in 10 years. Government sales and distribution

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[17] World Bank, Recent Economic Developments.

of grains in FY 1981 fell to 1.5 million tons, with ration distribution falling to its lowest level since independence.[18]

### 4.4.6 Development of a Market System

Perhaps the institutional development that will have the greatest long-term impact has been the development of a more open free market system. Since the signing of the first Title III agreement in 1978, major changes have occurred in Bangladesh's foodgrain marketing system. Many of these changes can be attributed directly to changes in foodgrain procurement and sales policies that have been the keystone of Title III activities in Bangladesh. The Government has adopted policy changes that should lead to an improvement in the marketing position of the small producer and an increase in free market competition. The major elements of the market system and related revisions in Government policy are described below.

Procurement stations. The Government has greatly increased the number of Government procurement stations to reach more farmers. To reach the more remote farmers, mobile procurement units (trucks) were introduced that go to small villages to buy grains at the Government procurement price.

Market participation. Before the Title III program, Government procurement was handled primarily through procurement agents approved by the Ministry of Food to purchase foodgrains from producers. Procurement centers were authorized to purchase from private farmers; however, because of geographic inaccessability and inconvenient procurement and payment procedures, farmers sold primarily to agents rather than directly to procurement centers. Government regulations have been changed and simplified so that all farmers and traders are free to offer grains at Government procurement points for the full procurement price plus a transportation bonus.

Procurement price. The Title III agreement required the Government of Bangladesh to announce the official procurement

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[18]UPDATE: In January 1983 the retail ration price was above the procurement price for the first time ever and remained at 85-95 percent of the market price during the first 6 months of 1983. During 1982 and 1983, ration system supplies totaled about 1.9 million tons, up from 1981. They are projected to remain at that level in 1984. The demand for ration grains seems to remain stable even though ration prices have been higher than market prices at times. Further study of why buyers use the ration system would appear to be necessary in order to understand why they do not seem to be sensitive to price.

price early enough before the planting season for farmers to respond to it. This part of the agreement has not always been observed, but there have been improvements recently. At the subdivision level, the Food Controller usually publicizes the Government procurement price before the harvest, which at least alerts the farmer to the minimum farmgate price that can be expected for the next harvest period.

The Title III agreement provides that the Bangladesh Government will support foodgrain prices at levels sufficient to induce investments in HYV technologies. Whether the procurement price is an effective incentive for adoption of HYV technology is uncertain, but it does provide a price floor that minimizes market risk for producers with a marketable surplus. For smaller producers, the Government price provides an incentive to enter the market system. In Bangladesh, small producers have traditionally stored any surplus, selling only when necessary to meet cash obligations.

Open market sales. The public food distribution system dates back to the famine of 1943. Since that time, Bangladeshi governments have intervened in the food market in various ways. In recent years, the Government has controlled about 10 percent of the marketed volume of grain--either by controlling the retail price or by targeting recipients.

The Title III OMS system aims at reducing the extent of Government intervention in the market system. Through efforts under the Title III program, antihoarding laws have been relaxed, thus encouraging more competition among wholesalers and retailers (see Appendix E). As the OMS system was conceived by the authors of the agreement, its objective was to inject supplies from Government stocks directly into the regular market system. Although the original scheme has been modified by the Bangladesh Government to include some restrictions on dealers, sales procedures, and prices, it is a step in the direction of free market competition.

The policies that have evolved out of the Title III agreement have had a significant impact on the foodgrain marketing system, from producers to consumers. Althcugh the implementation of official policies has not been fully executed, sufficient evidence exists at the operational level to indicate that there has been a significant impact on marketing. If present policies continue, this impact should increase.

### 4.4.7 Institutional Weaknesses

There have been several charges of corruption in the handling of food by Bangladeshi authorities. These charges usually have involved Food for Work projects, which are outside the scope of this evaluation (Food for Work projects are supported under PL 480 Title II), and food distributed under Government ration systems, which can no longer include Title III foodgrains under the new Title III agreement.

Bangladesh Government officials acknowledged that there have been problems with the ration system. We believe that the Mission's encouragement of the Bangladesh Government to raise ration prices to bring them closer to free market prices, to reduce the rice portion of the ration system, and to take other related measures had a salutary effect on the operation of the ration system. However, a deeper understanding of the demand for ration rice is still needed. The most effective measure taken to restrict the scope for corruption has been the adoption of the OMS system to deliver foodgrains. Transactions are more open, and fewer intermediaries are involved.

An institutional weakness on the U.S. side involves the system of multiple agency administration of PL 480 Title III programming in Washington. Each Title III provision that affects U.S. foodgrain policy must be reviewed and approved by members of a U.S. Government committee made up of representatives of several Cabinet-level Departments including Agriculture, Treasury, and State (AID), as well as the Office of Management and Budget. Often representatives find that a provision of the agreement proposed will be in conflict with the objectives of their respective departments. Because the Committee must operate by consensus, the resultant delays and frustrations impede the development of Title III program designs. This system was a source of frustration and delay in the design and implementation of the Bangladesh Title III program, especially in the early years. The system seems to have improved somewhat over the last few years, but further improvements seem possible.

### 4.4.8 Bangladesh Development Project Weaknesses

USAID and the Bangladesh Government now undertake annual reviews of the projects approved for disbursement of Title III local currency sales proceeds. However, there is little active followup by the Mission on project-level details. The Bangladesh Government selects projects and chooses when to drop them or add new ones. The Mission makes little or no critical judgment on the individual projects involved.

There has been no Mission monitoring or data collection on projects approved, nor is there review and concurrence in project selection, as recommended by Kunkel and Thormann in their evaluation of the program in September 1982.[19] Without some attention to the projects, no record of performance or of project selection priorities can be established. Furthermore no comparison of project effectiveness can be made to guide future selection.[20]

## 5. CONCLUSIONS

1. The U.S. food aid program has been successful in bringing about important policy changes to stimulate production and improve foodgrain security in Bangladesh.

2. The Bangladesh Title III Food for Development program is compatible with current AID policies. From the outset, the program emphasized policy dialogue as a development tool, promoted private sector development, and stressed institutional development as key elements of the program.

3. Mission planning and management of the Title III food program have been exceptional. As operational experience was gained, lessons were noted and applied to the conduct of the program to keep it on a sound course. Negotiating successful production incentive prices, ration price adjustments, and open market sales procedures and establishing a flexible commodity mix for the program are key indicators of this sound management approach.

4. Procurement prices adopted by the Government pursuant to the 1978 and 1982 Title III agreements provided farmers with a sufficient return to encourage them to invest in HYV technolo-

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[19] Op. cit.

[20] UPDATE: Since the evaluation, the Mission has scheduled quarterly reviews of Title III development projects; however, only one was held during 1983. The evaluation by V. Molldrem and P. Wenger (Bangladesh: Title III Food for Development Program, FY 1983 Evaluation, Washington, D.C.: AID, September 1983) recommends a more practical schedule of mid-term reviews as well as the regular annual reviews. The opportunity to pass critical judgment on these projects should develop in the future, based on data now being collected by USAID. Also since this evaluation, a USAID Bangladeshi national has been assigned to track the expenditure of local currency funds on various projects, to visit the project sites, and to create data files on these projects.

gies. Administration of this program by the Government has been uneven, particularly in the early years of the system, but overall performance has been good, if not strictly according to the conditions established in the Title III agreements.

5. As with the other elements in the Title III Food for Development program, the open market sales system has not worked perfectly, but the overall impact has been positive.[21] During the early part of the Title III program, Government operations tended to benefit the more privileged classes and flour millers; the bulk of U.S.-provided food was distributed under Government-run ration systems instead of through the OMS program. Some mechanical and logistical difficulties still exist, but the only significant problem remaining in the OMS program is to ensure that local officials at the village and thana (county) level properly implement central Government policies. The Mission is fully aware of this problem and is working to resolve it.

6. The objectives of the PL 480 food aid program are compatible with the development assistance activities of the U.S. aid program. At times, leverage of food resources has been used to achieve policy objectives in nonfood areas (e.g., removal of spindle limitations inhibiting growth in the textile industry). However, the food aid program has been only partially integrated into the Mission's strategic planning for development assistance activities. The Mission indicates in its FY 1985 Country Development Strategy Statement that it expects to further the process of combining food and development assistance resources in the coming years to confront major problems, including generating new employment, stemming growth in landlessness, improving the status of women, and increasing family planning.

7. Bangladesh has established the goal of achieving self-sufficiency in foodgrains by the late 1980s. This goal has obvious implications for the level and duration of U.S. food aid; achieving it would not necessarily mean the end of a Title III program. Production shortfalls have caused some rethinking of this goal and of what other measures will be required to reach it. Because major changes are required in the structure of agricultural production and inputs, it is doubtful that Bangladesh will reach foodgrain self-sufficiency by the end of the decade. Although production gains over the past few years have been impressive, agricultural production has not closed the consumption gap because of continued high population growth.

The annual gap between foodgrain production and consumption requirements is currently over 1 million tons. It will take some

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[21]UPDATE: The relatively stable prices during 1983 are further evidence of the probable improved effectiveness of OMS operations.

time for a producer-driven, market-oriented response to agricultural development policy to become sufficiently established to close this gap. The confidence of both producers and consumers is necessary for it to work, and it will take time to build up this confidence.

8. The Mission position has been to concentrate on food pricing and distribution policies, paying relatively little attention to the development projects jointly approved by USAID and the Bangladesh Government for the use of local currency sales proceeds. However, there is evidence that the funds are not being used as effectively as they might be.[22] The lack of more careful program management diminishes the impact of this important resource.

Greater impact could be achieved with local currency generations if there were more USAID involvement in their programming, at either the policy or project level, or both.[23] The Mission's FY 1985 Country Development Strategy Statement indicates that active consideration is being given to greater involvement in programming local currencies generated under Title III. The evaluation team believes the greater Mission involvement would benefit program effectiveness.

## 6. RECOMMENDATIONS

1. The Bangladesh agricultural development program will require continued substantial donor support for at least another decade. Cessation or a sharp reduction in aid levels would jeopardize present gains and future goals.

We recommend that U.S. food aid be continued at approximately the present annual level to support Bangladesh Government efforts over this period. The food aid under PL 480 Title III has been successfully used as a policy tool, as a food security resource, and as a development resource.

2. The list of projects approved for use of local currency generations is subject to continuous change as projects are com-

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[22]For example, Kunkel and Thormann pointed out in their September 1982 evaluation that total disbursements for some of these projects had been quite low and that some of the projects had been dropped by the Bangladesh Government after receiving Title III local currency funding.

[23]UPDATE: Since this evaluation, a beginning has been made in monitoring project performance on those approved for local currency proceeds use.

pleted or dropped and new ones are proposed. Until now, changes in the approved list of projects have been made on an ad hoc basis. The Title III program should establish a more systematic approach for modifying the list of approved projects.

Before this review occurs, USAID should examine Bangladesh Government and donor evaluations that include analysis and statistical indicators of progress. This information should simplify the determination of what to include in the approved list of projects. The provision in the October 1982 amendment of the second Title III agreement for quarterly reviews of projects approved for local currency funding could serve this purpose if handled in this manner.

Greater Mission involvement at the project level would have minimal to modest staffing implications for USAID; depending on the system adopted by the Mission for this task, our estimate is that it would require up to three local positions.

3. Now that the Bangladesh Food for Development program is more mature, new initiatives should be directed toward the policies and implementation requirements of the Medium-Term Foodgrain Production Plan to build on the tested, but still evolving, food policy foundation that has been laid over the past several years. For example, the Mission might consider greater involvement in the development of intersectoral policy objectives to support the Plan, covering such major constraints as employment generation, credit to small farmers, water control, and family planning aspects. Out of these deliberations might emerge a set of high-priority activities that could most effectively use Title III local currency sales proceeds. Consideration might also be given to the use of these proceeds outside the food sector to support high-priority programs--for example, to accelerate the integration of maternal and child health care with family planning to facilitate achievement of fertility reduction goals.

4. The policies for activating open market sales of Government buffer stocks in food deficit areas and in seasons of scarcity (June-July, September-November) have been slow to evolve and complex to administer because of the need for more detailed market performance information from many regions. This system is now largely in place and has gone through two successful seasons. Although a few more seasons will be needed to test the system, almost everyone is optimistic, even the formerly reluctant Bangladesh Government officials.

The Mission has developed a grain price reporting system to monitor the operation of the open market sales system and procurement policies. This system might more appropriately be a part of the Bangladesh Government data system and could be transferred there relatively easily via computers. This reorganization could free Mission staff to work on new policy initiatives.

## 7. LESSONS LEARNED

1. The effectiveness of the unique policy approach to the Food for Development program in Bangladesh provides a useful model for other countries facing similar circumstances.

2. Title III programs require a different and usually more involved and active management approach than do Title I programs. Therefore, a learning period is required to work out policy and operational problems, during which programs should set relatively uncomplex and limited objectives until a firm foundation is developed. This approach should enhance the management and long-term effectiveness of Title III programs. The Bangladesh case illustrates that gaining experience on a few objectives paves the way for more in-depth development planning.

3. Active oversight of projects financed with local currency sales proceeds of Title III commodities is required to ensure the most effective use of this important resource.

4. Delays should be anticipated in obtaining policy and program approvals for new Title III programs until the U.S. interagency management system is more efficiently institutionalized, as it seems to be for PL 480 Title I and Title II programs.

## APPENDIX A

## PL 480 TITLES I AND III: SUMMARY OF MAIN PROVISIONS

by Georgia Sambunaris

### 1. GENERAL BACKGROUND

The Public Law (PL) 480 program, enacted in 1954, is the primary means by which the United States provides food aid to developing countries. In addition to combating hunger and malnutrition, the program is designed to encourage economic development, to support U.S. foreign policy goals, and to expand the market for U.S. agricultural exports. Its resources are provided in bilateral and multilateral programs through Titles I, II, and III. For the purposes of this evaluation, Titles I and III require elaboration. (A summary of U.S. food aid to Bangladesh is provided in Table A-1.)

### 2. TITLE I

Title I provides for long-term, low-interest loans to friendly developing countries to help meet chronic or unexpected food shortages, on condition that the countries themselves undertake self-help measures to improve the efficiency of agricultural production, marketing, and distribution. Current legislation requires that at least 75 percent of food aid provided under Title I be allocated initially to countries whose per capita income is at or below the eligibility level of the International Development Association (IDA)--US$680 in 1979 prices.

### 3. TITLE III

Title III provides for commitments of funds and "forgiveness" of Title I loans to low-income developing countries under certain conditions. Specific legislative authority exists for authorization under Title III of multiyear supply agreements of up to 5 years with "IDA eligible" countries that are prepared to undertake specific actions to address the constraints to equitable development, particularly in the food and agriculture sector. PL 480 commodities or local currency sales proceeds used for agreed-on development purposes may be applied against the country's repayment obligation to the United States--that is, the United States may "forgive" the Title I loan.

Table A-1. U.S. Food Aid to Bangladesh, Fiscal Years 1972 to 1982
(in thousands of U.S. dollars)

| | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Title I | - | - | 33,034 | 255,557 | 135,467 | 59,486 | 51,072 | 6,058 | 6,382 | - | - | 547,056 |
| Title II | - | - | 139,133[a] | 3,317 | - | 15,645 | 14,645 | 38,543 | 12,804 | 25,035 | 33,136 | 282,258 |
| Title III | - | - | - | - | - | - | 23,841 | 56,334 | 64,738 | 46,830 | 64,000 | 255,743 |
| Total | - | - | 172,167[a] | 258,874 | 135,467 | 75,131 | 89,558 | 100,935 | 83,924 | 71,865 | 97,136 | 1,055,057 |

[a]Includes shipments from 1972-1974.

Source: U.S. Bilateral Economic Assistance to Bangladesh, All Years Summary (Dhaka, Bangladesh: USAID, October 1982).

# APPENDIX B

## MACROECONOMIC PERFORMANCE IN BANGLADESH

by Georgia Sambunaris

### 1. INTRODUCTION: BANGLADESH DURING THE 1970s

Bangladesh, or the land of Bengalis, is over 3,000 years old yet has been a nation only since December 1971. As East Bengal then as East Pakistan, the history of Bangladesh has been characterized by recurrent exploitation, centuries of neglect, and a series of natural catastrophies that have left it largely dependent on aid from foreign donors. Its natural wealth lies in its fertile soil, abundant labor supply, natural gas reserves, and surface and groundwater resources.

During 1971 to 1975, Bangladesh experienced economic stagnation, especially in its agricultural sector. Natural disasters such as the flood of late 1974 and political turmoil contributed to its difficulties as an impoverished new nation. From 1971 to 1975 foreign assistance was relief oriented, with food aid alone accounting for 41 percent of all aid disbursements to Bangladesh. However, 1975 to 1980 was characterized by an improving economy, especially in the areas of food production and distribution; increased privatization of the economy; and tax efforts. Gross domestic product (GDP) increased at an annual rate of nearly 7 percent, foodgrain production by 3.1 percent, and manufacturing output by 6.3 percent. This impressive growth rate is largely attributable to the vast inflows of foreign aid and coincided with the tenure of the late President Ziaur Rahman. Net aid disbursements over fiscal years (FY) 1976-1981 totaled US$5.2 billion. By comparison, earnings from exports and wage-earner remittances totaled US$4.2 billion. Although no real growth occurred in export earnings, the large influx of foreign aid provided for a 10-percent increase in the rate of growth of real imports, even during the worldwide oil glut of 1979-1980.[1]

However, because of mounting difficulties, the FY 1982 economy was plagued by budgetary and balance of payments difficulties. Real levels of investment were lower, agricultural output was down slightly, and there was less foreign aid in real terms. Highly unfavorable weather conditions, an undiversified economic structure, and deteriorating terms of trade are contributing to

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[1]See USAID, "Bangladesh Policy Reform Grant," No. 388-0059 (Dhaka, Bangladesh: USAID, May 21, 1982).

Bangladesh's current economic problems. According to World Bank projections, overall growth in GDP in FY 1982 and FY 1983 was expected to be only about 1.1 and 2.5 percent, respectively (see Table B-1).

Agriculture, which accounts for over half of GDP, grew at an average annual rate of 4.4 percent from FY 1973 to FY 1979, yet is estimated to have increased by only slightly more than 2 percent per year from FY 1980 to FY 1983. However, the FY 1983 growth rate for agriculture was expected to be 3.4 percent, up from -0.7 percent in FY 1982. (See Tables B-2 and B-3 for a breakdown of sectoral contributions to GDP.)

Table B-1. GDP Growth by Sectors, FY 1973 to FY 1983 (in percentages based on constant FY 1973 prices)

| Sector | 1973-1979 | 1980 | 1981 | 1982[a] | 1983[a] |
|---|---|---|---|---|---|
| Agriculture | 4.4 | 0.1 | 5.5 | -0.7 | 3.4 |
| (Crop sector) | (5.3) | (-0.4) | (6.1) | (-1.5) | (2.9) |
| (Others) | (1.5) | (2.0) | (3.0) | (2.7) | (5.7) |
| Manufacturing | 15.7 | 0.2 | 7.7 | 0.3 | -3.5 |
| Construction and Utilities | 7.5 | 8.5 | 3.5 | 3.2 | 3.7 |
| Trade and Transportation | 11.3 | 12.2 | 2.3 | 4.2 | 3.9 |
| Other Services | 3.5 | 5.0 | 11.3 | 2.2 | 4.2 |
| GDP (at market prices) | 6.8 | 3.7 | 5.9 | 1.1 | 2.5 |

[a]Estimated.

Source: World Bank, Recent Economic Trends and Medium-Term Development Issues, Report No. 4277-BD (Washington, D.C.: World Bank, March 4, 1983).

Table B-2. Sectoral Contributions to GDP, FY 1970 to FY 1982
(in percentages)

| Sector | 1970 | 1973 | 1975 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982[a] |
|---|---|---|---|---|---|---|---|---|---|
| Agriculture | 61.42 | 60.09 | 58.70 | 56.98 | 56.73 | 55.57 | 54.91 | 55.43 | 54.16 |
| Industry | 8.26 | 7.28 | 7.38 | 8.24 | 8.43 | 8.46 | 8.23 | 8.45 | 8.85 |
| Construction | 4.59 | 3.19 | 3.47 | 4.09 | 4.41 | 5.00 | 5.72 | 5.09 | 5.28 |
| Power and Gas | 0.24 | 0.17 | 0.20 | 0.24 | 0.26 | 0.27 | 0.30 | 0.32 | 0.38 |
| Transport | 4.63 | 5.30 | 5.17 | 5.36 | 5.31 | 5.37 | 5.42 | 5.32 | 5.27 |
| Trade | 7.45 | 7.75 | 7.76 | 7.45 | 7.39 | 7.47 | 7.47 | 7.38 | 7.28 |
| Housing | 4.42 | 5.20 | 4.93 | 4.78 | 4.61 | 4.61 | 4.65 | 4.56 | 4.74 |
| Administration | 2.44 | 2.92 | 4.87 | 5.37 | 5.52 | 5.83 | 6.05 | 6.14 | 6.28 |
| Banking and Insurance | 0.50 | 0.72 | 0.68 | 0.76 | 0.77 | 0.81 | 0.80 | 0.81 | 0.84 |
| Other Services | 6.05 | 7.38 | 6.84 | 6.73 | 6.58 | 6.61 | 6.45 | 6.50 | 6.92 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

[a]Estimated.

Source: Bangladesh Economic Survey, 1981-1982.

Table B-3. Sectoral Contributions to GDP, FY 1970 to FY 1982
(in Taka, at FY 1973 constant prices)

| Sector | 1970 | 1973 | 1975 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982[a] | Growth Rate (%) Over Previous Year 1981 | 1982[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Agriculture | 3,183.6 | 2,722.0 | 2,970.1 | 3,216.1 | 3,454.2 | 3,519.8 | 3,580.3 | 3,834.0 | 3,751.2 | 7.1 | - 2.2 |
| Industry | 428.1 | 329.8 | 373.5 | 465.0 | 513.0 | 535.6 | 536.5 | 583.7 | 612.9 | 8.8 | 5.0 |
| Construction | 237.7 | 144.4 | 175.6 | 230.6 | 268.4 | 317.0 | 372.7 | 352.2 | 365.8 | - 5.5 | 3.9 |
| Power and Gas | 12.4 | 7.5 | 10.0 | 13.6 | 15.6 | 17.4 | 19.5 | 22.3 | 26.3 | 14.4 | 17.9 |
| Transport | 239.9 | 239.9 | 261.5 | 302.3 | 323.5 | 340.3 | 353.6 | 368.3 | 364.8 | 4.2 | - 1.0 |
| Trade | 386.4 | 351.3 | 392.4 | 420.3 | 449.7 | 473.1 | 486.9 | 510.7 | 504.1 | 4.9 | - 1.3 |
| Housing | 229.3 | 236.0 | 249.4 | 269.8 | 280.6 | 291.8 | 303.5 | 315.6 | 328.2 | 4.0 | 4.0 |
| Administration | 126.3 | 132.1 | 246.2 | 303.3 | 336.1 | 369.3 | 394.3 | 424.4 | 435.2 | 7.6 | 2.5 |
| Banking and Insurance | 25.8 | 32.8 | 34.9 | 43.1 | 47.0 | 51.0 | 52.2 | 56.1 | 58.1 | 7.5 | 3.5 |
| Other Services | 313.8 | 334.2 | 346.2 | 379.7 | 400.9 | 418.8 | 420.8 | 449.5 | 480.1 | 7.8 | 6.8 |
| Total | 5,183.3 | 4,530.0 | 5,059.8 | 5,643.8 | 6,089.0 | 6,334.2 | 6,520.2 | 6,016.8 | 6,926.5 | 6.1 | 0.1 |

[a]Estimated.

Source: Bangladesh Economic Survey, 1981-1982.

## 2. THE BALANCE OF PAYMENTS

Bangladesh's balance of payments difficulties, characterized by a worsening in its terms of trade and a leveling off in foreign aid availabilities, is further affected by three factors: (1) over 50 percent of its export earnings are dependent on the demand from developed market economies that are experiencing recession; (2) its export earnings account for only 30 percent of the import bill, which in turn is growing faster than exports; and (3) export prices for jute and jute goods are decreasing while import prices are increasing.

During Bangladesh fiscal years 1979-1983, the current account deficit is expected to steadily deteriorate from $830 million to $1,190 million (see Table B-4). The inability of aid disbursements to cover the gap has led to heavy drawdowns on exchange reserves and commodity aid pipeline availabilities. Furthermore, this crisis was heightened through the suspension of the International Monetary Funds (IMF) 3-year Extended Fund Facility (EFF) totaling SDR 1 billion, or approximately US$800 million. The Bangladesh Government's reaction has been to cut back on imports and to undertake large-scale commercial bank loans. The IMF and the Bangladesh Government are negotiating a new IMF standby credit valued at US$75 million.

### 2.1 Exports

The total value of export earnings is expected to increase by nearly 7 percent from FY 1979 to FY 1983, while import costs are projected to increase 77 percent during the same period. Although demand for jute products, which account for roughly two-thirds of Bangladesh's export earnings, shows continued strength, any hope for improving the trade deficit situation is thwarted by the continued decline in the prices of raw jute and jute goods. In FY 1982 the volume of jute manufactures exports was expected to increase to an estimated 550 thousand tons from 493.5 thousand tons in FY 1980. However, the unit price of jute exports was projected to decrease to $550 per ton from $715 per ton during the same period. In addition, the remaining export commodity mix of tea, leather, and fish products, although increasing in volume and value terms, does not represent a significant enough portion of total exports to affect the overall terms of trade.

Table B-4. Balance of Payments, FY 1973 to FY 1983
(in millions of U.S. dollars)

| Item | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982[a] | 1983[b] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Trade Balance | -372 | -551 | -1,050 | -885 | -454 | -859 | -946 | -1,645 | -1,822 | -1,961 | -1,680 |
| Merchandise Exports, (FOB) | (355) | (374) | (352) | (381) | (411) | (490) | (610) | (727) | (711) | (626) | (650) |
| Merchandise Imports, (C&F) | (-727) | (-925) | (-1,402) | (-1,266) | (-865) | (-1,349) | (-1,556) | (-2,372) | (-2,533) | (-2,587) | (-2,330) |
| Services (net) | 21 | -21 | 12 | -24 | -29 | -32 | -27 | 3 | 11 | -70 | -110 |
| Current Account Balance | -318 | -553 | -1,004 | -847 | -402 | -778 | -830 | -1,432 | -1,425 | -1,619 | -1,190 |
| Aid Disbursements | 551 | 461 | 901 | 808 | 533 | 828 | 1,030 | 1,222 | 1,147 | 1,210 | 1,350 |

[a]Provisional.

[b]Projected.

Source: World Bank, Recent Economic Developments and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: World Bank, March 4, 1983).

## 2.2 Imports

The total cost of imports in Bangladesh increased from $1,556 million in FY 1979 to $2,587 million in FY 1982. However, total import costs are expected to decrease slightly to $2,330 million in FY 1983. Petroleum imports alone accounted for 87 percent of merchandise export earnings in FY 1982 but are projected to decrease to 67 percent in FY 1983 (see Table B-5). On the other hand, because of inadequate rainfall since the summer of 1981, commercial foodgrain import costs are expected to increase 33 percent from $285 million in FY 1982 to $380 million in FY 1983. Despite this slight improvement in import costs, Bangladesh's overall terms of trade over the past 2 to 3 years have deteriorated and have been further affected by a leveling off in real terms of external aid to finance its balance of payments.

## 2.3 Foodgrain Situation

Since Independence, Bangladesh has had to supplement domestic foodgrain production with imports to meet the minimum food requirements of a rapidly growing population. In most years the import requirements have been met by aid donors. However, weather-related crop failures have created a need to purchase food imports on commercial terms.

After record production in rice and wheat in the crop year 1980/1981, adverse weather and Government policy changes depressed agricultural productivity in 1982/1983. Import and production costs, declining rural per capita incomes, and rising foodgrain prices combined to create a bleak performance picture. Agriculture as a percentage of GDP is expected to remain stagnant, averaging 48.4 percent from FY 1981 to FY 1983. Real growth decreased by 1.4 percent in FY 1982 after a record increase of 5.5 percent in FY 1981.

Because of the erratic 1982 monsoon, the first aus rice crop produced 248,000 tons less in FY 1982 than in FY 1981. The subsequent aman harvest proved to be the smallest in 5 years. The combined effect of these two poor harvests caused foodgrain prices to increase sharply. However, the FY 1982 boro crop produced a record 3.1 million tons and helped to ease the situation. World Bank projections for FY 1983 foodgrains show an expected increase of 4 percent in overall foodgrain production.[2]

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[2]World Bank, Bangladesh: Recent Economic Development and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: March 3, 1982).

Table B-5. Merchandise Trade Estimates and Projections for Bangladesh, FY 1981 to FY 1984
(in millions of U.S. dollars)

| | 1981 | Provisional 1982 | Projected 1983 | Tentative 1984 |
|---|---|---|---|---|
| Exports | | | | |
| Raw Jute | 119 | 102 | 107 | 118 |
| Jute Manufactures | 366 | 291 | 306 | 360 |
| Tea | 41 | 38 | 51 | 53 |
| Leather and Hides | 57 | 63 | 46 | 62 |
| Fish, Shrimp, Froglegs | 42 | 54 | 70 | 80 |
| Naphtha, Furnace Oil, Bitumen | 49 | 42 | 29 | 30 |
| Newsprint & Paper | 8 | 6 | 5 | 11 |
| Rice | - | 5 | - | - |
| Urea | 10 | - | 4 | 7 |
| Others | 19 | 25 | 32 | 39 |
| Total | 711 | 626 | 650 | 760 |
| Imports | | | | |
| Foodgrains | 250 | 285 | 380 | 250 |
| Edible Oils | 92 | 71 | 88 | 100 |
| Oil Seeds | 11 | 5 | 4 | 5 |
| Crude Petroleum | 344 | 334 | 290 | 290 |
| Petroleum Products | 147 | 213 | 145 | 150 |
| Coal and Coke | 16 | 23 | 30 | 30 |
| Pig Iron | 32 | 25 | 31 | 35 |
| Cement | 33 | 30 | 32 | 38 |
| Clinker | 15 | 15 | 12 | 15 |
| Fertilizers | 104 | 104 | 66 | 80 |
| Raw Cotton | 108 | 80 | 69 | 95 |
| Staple Fibre | 3 | 7 | 6 | 15 |
| Yarn | 20 | 22 | 37 | 40 |
| Textiles | 36 | 24 | 25 | 35 |
| Capital Goods | 665 | 670 | 650 | 750 |
| Others | 657 | 679 | 465 | 652 |
| Total | 2,533 | 2,587 | 2,330 | 2,580 |
| Indices, FY 1973 = 100 | | | | |
| Export Price Index | 176 | 147 | 157 | 175 |
| Import Price Index | 275 | 276 | 260 | 270 |
| Terms-of-Trade Index | 64 | 53 | 60 | 65 |

Source: World Bank, Recent Economic Developments and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: World Bank, March 3, 1982).

In recent years, the attention of policymakers has been focused on achieving foodgrain self-sufficiency by 1985, the end of the Second Five-Year Plan. This effort is largely outlined in the Bangladesh Government's Medium-Term Foodgrain Production Plan (MTFPP), which was prepared with the assistance of the World Bank and other donors. But with the population increasing at an average rate of 2.5-2.6 percent per year and Bangladesh's continued dependence on favorable weather conditions, a more realistic target would be to aim for self-sufficiency after 1990.

In any event, successful implementation of the Plan also would improve the production environment for nongrain food crops. In addition, improvement in the quantity and quality of agricultural inputs and a marketing system for ensuring adequate incentive prices for farmers and foodgrain price stability are being pursued.

## 2.4 Trends in U.S. Food Aid

Table B-6 indicates that the amount of food aid to Bangladesh has been significant both in absolute terms and in relation to total aid from all sources. Food aid from all sources has averaged about $242 million per year, nearly one-fourth of total foreign assistance provided to Bangladesh from FY 1977 to FY 1982.

U.S. food assistance to Bangladesh over the past decade has averaged approximately 46 percent of total food aid. U.S. food aid as a percentage of total food aid reached nearly 68 percent in FY 1975, then slowly declined to 22.4 percent in FY 1980. Since then the U.S. percentage has steadily increased to an estimated 44.1 percent in FY 1982.

Clearly, U.S. food aid has been a critical resource to Bangladesh and will continue to be an important resource for some years to come.

# 3. FISCAL POLICY: THE BUDGET

The formulation and implementation of budgetary policy in Bangladesh is affected mainly by unpredictability in four areas. First, the food account is affected by domestic foodgrain production, prices for domestic procurement, and sales under the ration system, all of which are unpredictable from year to year. Second, the heavy reliance on import-related taxes and foreign financing subjects the development budget to pressures outside the Government's control. Third, the Government's large financial involvement with public enterprises plays a dominant role in

Table B-6. Summary of External Assistance to Bangladesh, FY 1972 to FY 1982
(disbursements in millions of U.S. dollars)

| Category | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| All Foreign Aid | | | | | | | | | | | |
| Food Aid | 129.6 | 182.6 | 228.7 | 382.3 | 313.5 | 121.6 | 177.9 | 179.1 | 374.6 | 194.1 | 220.0 |
| Commodity Aid | 137.7 | 288.9 | 108.2 | 375.5 | 369.2 | 352.9 | 374.3 | 482.5 | 377.8 | 393.1 | NA |
| Project Aid | 3.5 | 79.9 | 124.3 | 143.4 | 125.5 | 158.6 | 275.7 | 468.4 | 469.8 | 560.2 | NA |
| Total | 270.8 | 551.4 | 461.2 | 901.2 | 808.2 | 533.1 | 827.9 | 1,030.0 | 1,222.2 | 1,147.4 | 1,210.0 |
| U.S. Food Aid | NA | 172.2[b] | NA | 258.9 | 135.5 | 75.1 | 89.6 | 100.9 | 83.9 | 71.9 | 97.1 |
| U.S. Food Aid as % of Total Aid | NA | 13.4[b] | NA | 28.7 | 16.8 | 14.1 | 10.8 | 9.8 | 6.9 | 6.3 | 8.0 |
| U.S. Food Aid as % of Total Food Aid | NA | 31.8[b] | NA | 67.7 | 43.2 | 61.8 | 50.4 | 56.3 | 22.4 | 37.0 | 44.1 |

Note: NA means not available.

[a]Estimated.

[b]Covers the period FY 1972-1974.

Source: World Bank, Bangladesh: Recent Economic Developments and Selected Development Issues, Report No. 3768-BD (Washington, D.C.: World Bank, March 3, 1982).

industry, energy, transportation, and finance. Revenue performance in FY 1980 and FY 1981 was weakened by a substantial shortfall in imports, which in turn occurred because of lower than anticipated export earnings and foreign aid inflows. Fourth, flows of foreign aid also directly or indirectly finance about two-thirds of the Government's development budget, thereby subjecting its overall size and composition to the variability in flows of aid.

During the late 1970s and early 1980s, central Government finances in Bangladesh have benefited from increasing inflows of foreign resources provided to assist in financing the development program and to relieve persistent food shortages. During the 1977-1981 period, foreign resources financed, on average, nearly 45 percent of total Government expenditures and 85 percent of the deficit. Despite the large inflow of foreign aid, the burden of servicing foreign debt has remained low because a large portion of aid has taken the form of grants, and loans have usually been provided under favorable terms.

In 1982 Government fiscal performance was not expected to meet its initial budget targets. As in previous years, the budget was based on assumptions that did not materialize, particularly in regard to the inflow of foreign aid, domestic inflation, agricultural production, and the volume of foreign trade. Substantial departures from the budget occurred in foreign financing, which was expected to increase 33 percent but increased only approximately 16 percent, and in foreign revenues, which were projected to increase 26 percent but increased only about 10 percent. In addition, total expenditures were budgeted to rise by nearly 20 percent and current expenditures by 10 percent in 1982 over 1981. However, performance again is expected to be disappointing in light of the prospective 20-percent increase in the consumer price index and higher interest payments.

On the whole, the overall deficit was projected to decline to 20 billion Taka, or nearly 10 percent of GDP in FY 1982. The FY 1983 deficit is estimated at 7.6 percent of GDP.

On the issue of food aid as a disincentive to foodgrain production in Bangladesh, several studies indicate that there has been some disincentive to foodgrain production as a result of the ration system, which is viewed as benefiting certain privileged clases. However, given that PL 480 Titles I and III are provided to Bangladesh mainly in the form of wheat, whereas Bangladesh is primarily a rice culture, any disincentive would be slight. Statistics on local wheat production from crop year 1972/1973 to 1980/1981 show a steady increase in the amount of wheat harvested, from 90,000 tons to 1,075,000 tons. The annual percentage rate of increase in wheat production from crop year 1970/1971 to 1980/1981 was 25.6 percent. During the same period total rice production increased at an annual rate of 2.3 percent. Although

one may contend that the high rate of increase in wheat production as compared with rice provides evidence of a substitutional disincentive to rice production, a 1982 USAID/Dhaka study attributed the impressive growth of wheat production to its low production base. Other factors, such as PL 480 encouragement of high-yielding seed variety technology, mechanized irrigation, and pesticide use also tend to discredit the disincentive argument for the Bangladesh case.

## 4. DONOR PARTICIPATION[3]

Since 1971, Bangladesh has received over $11 billion in the form of loans and grants from 35 nations, 10 multilateral agencies, and a number of private institutions based largely on humanitarian grounds. From 1971 to 1980 annual disbursements averaged $821 million, most of which has been for commodity and food aid.

Bangladesh has received 50 percent of its total assistance since 1971 from the 16 Development Assistance Committee (DAC) nations, predominantly the United States, Japan, the Federal Republic of Germany, Canada, and the United Kingdom. Sixty-seven percent was offered as grants by DAC nations and the remaining 33 percent from multilateral agencies, mainly the International Development Association and the Asian Development Bank, with "soft loans" providing up to 50-year repayment periods at no interest.

Donor coordination in Bangladesh ranks high compared with the experience in many other developing countries. Dialogue between the Government and most donors occurs frequently on policy and operational matters. The Aid Consortium Group meets annually in Paris to review performance of the economy, discuss policy, and outline future aid commitments at the highest levels. In addition, a Local Consultative Group meets regularly to review and discuss day-to-day issues under consideration by the Bangladesh Government or certain donors.

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[3]For an excellent analysis of donor participation in Bangladesh see E. Boyd Wennergren, An Assessment of the Agricultural Sector in Bangladesh (Logan, Utah: Utah State University, March 1983).

APPENDIX C

# THE PUBLIC FOOD DISTRIBUTION SYSTEM[1]

by John Warren Smith, Daniel H. Erickson, and Harold L. Rice

## 1. CATEGORIES OF PUBLIC FOOD DISTRIBUTION

The public food distribution system is the mechanism for distributing foodgrains (together with salt, sugar, and edible oil) to consumer beneficiaries of 10 programs in Bangladesh. The categories of public food distribution are shown in Table C-1.

Table C-1. Public Food Distribution by Category, FY 1978 to FY 1982 (as percentages of total offtakes)

| Category | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|
| Statutory Rationing | 24.4 | 23.2 | 20.5 | 22.5 | 15.1 |
| Modified Rationing | 19.1 | 17.3 | 16.0 | 11.8 | 23.7 |
| Essential Priorities | 6.6 | 5.3 | 3.5 | 5.8 | 4.9 |
| Other Priorities | 17.7 | 21.9 | 22.4 | 23.5 | 18.5 |
| Large Employers | 4.8 | 4.2 | 4.4 | 2.0 | 2.7 |
| Flour Mills | 11.7 | 10.2 | 7.4 | 8.2 | 6.1 |
| Marketing Operations | 0.3 | 0.5 | 0.4 | 0.0 | 5.3 |
| Open Market Sales | 0.0 | 2.9 | 4.6 | 0.0 | 2.3 |
| Food for Work | 13.8 | 12.0 | 18.4 | 22.9 | 18.0 |
| Relief | 1.6 | 2.5 | 2.4 | 3.3 | 3.4 |

Source: Bangladesh Directorate of Food.

[1]The descriptive portion is based on World Bank, Bangladesh: Food Policy Issues, Report No. 2761-BD (Washington, D.C.: World Bank, December 19, 1979). Section 2 is based on information furnished by concerned Bangladeshi public officials and field research.

## 1.1 Statutory Rationing

In principle, statutory rationing is extended to all people living in six cities: Dhaka, Narayanganj, Chittagong, Khulna, Rajshahi, and Rangamati. The ration consists of specified quantities of rice, wheat, sugar, edible oil, and salt to be provided weekly through licensed dealers at prices fixed by the Government. The ration-issue price for coarse rice fluctuated between two-thirds and three-fourths of the free market price during 1976-1979 and recently was raised to 90 percent of the market price. The statutory rationing system accounted for about 23 percent of the foodgrains distributed through the public distribution system in fiscal year (FY) 1979 but declined to 15 percent in FY 1982. Although issuance of new ration cards in statutory rationing areas was officially stopped in 1974 (except for civil servants posted to these six cities), the number of cards increased by about 18 percent. This was because of the inclusion of Rajshahi in April 1975 and Rangamati in October 1976 and changes in the delineation of the statutory rationing areas.

Statutory rationing coverage in the defined areas, therefore, declined from about 77 percent of their total population in 1976 to 63 percent in 1979. Many people living in the defined areas are ineligible to receive these rations because they are new immigrants from the rural areas. However, these immigrants most likely are among the most needy of the urban population.

## 1.2 Modified Rationing

The modified rationing system, which functions outside the statutory rationing areas, is meant to benefit primarily the rural poor, who are classified into four income (or tax-paying) categories. In principle, only the lowest income groups are entitled to benefit from modified rationing. However, distribution is subject to the availability of grains after the requirements of priority categories have been satisfied. Thus, there has been a considerable fluctuation in the amount of foodgrains distributed under this category. In FY 1982, modified rationing accounted for 23 percent of total public food distribution. This was the highest percentage for the past 5 years.

Only about 10 percent of the modified rationing allocation goes to small towns. Ration cards for the modified rationing system are issued by the union parishads (local self-government unit), and food is distributed on the basis of special master rolls prepared by the chairmen of the union parishads. Distribution seems to be more or less at the discretion of local leaders (chairmen and members of the union parishads). Reportedly, considerable quantities of grain are diverted for sale in the open market and, therefore, do not reach the intended recipients.

## 1.3 Essential Priorities

Essential priority groups include members of the armed forces, the Bangladesh Rifles, the police, jail and hospital inmates, residents of orphanages, and rural and reserve police who do not live in the defined statutory areas. Government rations to the groups are about 5 percent of the total.

## 1.4 Other Priorities

This category consists of employees of Government, parastatal and autonomous bodies, educational institutions, railways, nationalized banks, rural development workers, and employees of large institutions. These account for about 20 percent of the total.

## 1.5 Large Employers

Employees of large establishments (i.e., those employing 50 or more persons) who live outside statutory rationing areas are usually entitled to buy 35 seers (1 seer = 0.933 kilogram) of wheat per month regardless of family size; occasionally, this may be 15 seers of rice and 20 seers of wheat.

## 1.6 Flour Mills

Distribution in this category has steadily declined over the past 5 years, from 11.7 percent in 1977 to 6.1 percent in 1981.

## 1.7 Market Operations

Market operations entail sales of limited quantities of grains through ration shops at somewhat higher than ration prices but lower than regular retail prices. Ration eligibility is not required to purchase such grains. This distribution mechanism is seldom used to any significant extent. In FY 1982 the Government used it to reduce old stocks of foodgrains to make way for unexpectedly large supplies of donor stocks and domestic procurement.

The open market sales (OMS) mechanism was developed under the Title III agreement to help stabilize foodgrain prices. It is designed to operate only when foodgrain prices exceed a prede-

termined level by injecting Government foodgrain stocks into the regular market with minimal resale restrictions. Sales are made to the public at large; there are no special eligibility requirements. The percentage of foodgrain offtake allocated to open market sales depends primarily on foodgrain price fluctuations and the levels of Government stock. In FY 1982 the amount was 23 percent.

### 1.8 Food for Work

The Food for Work program has been expanding; in FY 1981, it accounted for 18 percent of all grains distributed through the public system. Daily wages are fixed at a level considered sufficient to buy enough food to provide the energy requirements for an average family of five. These wages are equivalent to about two-thirds of average agricultural wages. The program is important in both moderating rural underemployment during the dry season and providing food to the most needy.

### 1.9 Relief

Under the relief category, a small minority continues to receive free food. These allocations constitute only 3.4 percent of the total public distribution. Distribution is made by the Ministry of Relief and Rehabilitation under master rolls prepared by union parishad officials.

## 2. MECHANICS OF OPERATION

The public food distribution system is centrally administered by the Food Directorate, a unit within the Food Division of the Ministry of Food. Various facets of the operation come under the aegis of the Director of Supply, Distribution, and Rationing (DSDR); the Director of Movements and Storage (DMS); and the Director of Silos.[2] Acting on a request from the DSDR, the DMS is responsible for overseeing the unloading of ships carrying the imported foodgrain and for ensuring that the foodgrain is then transported to its appropriate destinations.

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[2]Currently, one official holds both the Director of Movements and Storage and Director of Silos posts.

The Food Directorate administers the distribution through subordinate officials whose responsibilities encompass successively lower echelon administrative units within the country. Reporting to or through the chain of command to the DSDR are four Divisional Controllers of Food with responsibility for internal procurement and movement of commodities to the 12 central storage depots and the 48 local supply depots. There are also 22 District Controllers of Food and 72 Subdivisional Controllers of Food. The Subdivision Controllers supervise thana (county) inspectors.[3] The Ministry of Food also operates 325 temporary purchasing centers in public buildings and rented facilities.

An officer-in-charge manages each central storage depot (which meets the storage and distribution needs of several districts), each local supply depot (which meets the storage and distribution needs of several union parishads or one or more thanas, depending on population considerations, area, and production), and each temporary purchasing center.

The central storage depot officers-in-charge report to the DMS and to the Regional Controller of Food; the local supply depot officers-in-charge report to the DSDR through the District Controllers of Food (DCF), and the temporary purchasing center officers-in-charge report to the Director of Procurement through the DCFs. The Director of Silos is responsible for foodgrain storage in four Bangladesh Government silos located in the port of Chittagong and at Narayanganj, Achnganj, and Santatra. The DMS allocates incoming foodgrain shipments between Chittagong and Chalna considering (a) port facilities, (b) area needs, and (c) terms and conditions of supply. However, because of draft restrictions, only very small ships, ranging from 6,000 to 10,000 deadweight tonnage, may proceed directly to Chalna without first unloading some cargo at the Chittagong outer anchorage. The DMS is responsible also for managing 298 trucks owned by the Government and used in food distribution throughout the country but mainly in Dhaka, Chittagong, and Khulna.[4]

Whereas imported foodgrains arrive by ship at ports of entry, locally procured foodgrain may be delivered to a local supply depot the farmer/producer or an agent, by using available transport such as lorry, cart, or rickshaw.

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[3]A concept is in the planning stage to upgrade the thana, giving it an elected chairman and administrative structure that would have a role in public food distribution system administration.

[4]Of these 298 trucks, 151 are in running condition, 41 are not running but are repairable, 93 are not repairable but are not yet condemned, and 13 have been condemned.

After foodgrains enter the public distribution system, they are transported by railway, road transport, river boat, or barge. A Transport Coordinating Committee meets every other Wednesday to discuss transportation requirements for food, jute, and other commodities. Priorities are set and equipment is allocated. Contractors are selected through competitive bids for furnishing trucks, self-propelled barges, dumb barges, and country boats. The DMS furnishes transportation only for movement between districts. The District Controller of Food makes arrangements for moving foodgrain between local supply depots in a single district.

Unless the terms and conditions of sale state otherwise, both imported and locally procured foodgrains are distributed throughout the country on the basis of local needs without regard to the source. If there is a foodgrain stock shortage at any local supply depot, the District Controller of Food will attempt to alleviate it by moving foodgrain from other depots in the district. If this is not feasible, the DMS will move in foodgrain from outside the district.

When foodgrains arrive at port, they are usually unloaded into port silos. Sometimes this requires triple handling--ship to silo, silo to central storage depot, and central storage depot to local storage depot. However, when appropriate, the DMS sends foodgrain directly from ships to the local storage depots to cut down transportation cost and handling losses.

To draw foodgrains from a local supply depot, a dealer pays a Subdivisional Controller of Food and receives a delivery order specifying the kind and amount of grain the dealer may receive. The dealer presents the delivery order to the local supply depot officer-in-charge who, in turn, arranges for delivery to the dealer's transport vehicle. Delivery is on a first in, first out basis.

After the foodgrain leaves the local supply depot, it enters the private sector. The ration shop is a Government-licensed private establishment, typically family operated. Customers present their ration cards at the shop and are authorized to purchase prescribed quantities at a subsidized price. At the union parishad level, ration cards are not issued, but the names of persons whose income is so low that they do not pay taxes are placed on a priority list for purchase at ration shops. In practice, however, those on the priority list do not always receive ration shop grain. Open market sales are mainly through Government-licensed private foodgrain dealers.

The following statistical information shows the magnitude of the public food distribution system and its operations. The Food Directorate has a Director General and staff totaling 3,084 persons. During FY 1982, 2,035,804 long tons of foodgrains passed

through the system. Normally, 60 to 70 percent of the grain is imported; the balance is procured in-country. For the harvest year 1982/1983, less than 30 percent was expected to be locally procured. During 1980/1981, a bumper crop year, about 50 percent of the public distribution foodgrain stock was procured in Bangladesh.

A study of the local supply depot organization and operations at Comilla provides insight into the operations at the local level.[5] The Comilla depot has an officer-in-charge/inspector and an executive staff of two subinspectors, four assistant subinspectors, and eight guards. It contracts for a workforce of 45 laborers for loading and unloading. Laborers are paid 10-15 Taka (Tk) a day.

The Comilla warehouse has a capacity of 8,450 million tons, and as of January 15, 1983, it had 89,300 maunds of rice and wheat in stock. The 1982/1983 procurement target for the aman season was 8,000 maunds, but actual procurement was 2,000 maunds. The procurement price was Tk 210 per maund (82.28 pounds) for rice and Tk 135 per maund for wheat.

Tracking some of the paperwork can give a better view of the administrative practices of the public food distribution system. The local supply depot officer-in-charge sends daily activity reports to the Subdivisional Controller who then sends a compiled report to the District Controller with a copy to the Ministry of Food. At the national level, the Directorate of Movement and Storage issues a monthly movement plan to consignors and consignees and all others concerned with the movement of foodgrains, so that the necessary transport equipment can be assigned.

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[5]The local supply depot at Comilla is larger than the typical depot because of its direct link to Chittagong port. It services the local supply depots of other thanas, thus performing a central storage depot function.

## APPENDIX D

## MEDIUM-TERM FOODGRAIN PRODUCTION PLAN

by John Warren Smith and Blaine Richardson

The Medium-Term Foodgrain Production Plan (MTFPP) was issued in February 1981 as a part of the Second Five-Year Plan to help achieve self-sufficiency in foodgrains by FY 1985. The objective of the MTFPP strategy was to provide a more stable production environment through projects designed to achieve the following:

1. Improved water control, mainly through minor irrigation and drainage and minor flood control--especially for aus and aman rice--to minimize the use of imported inputs and capital goods and the farmers' needs for cash and credit

2. A steady supply of inputs matching demand

3. Incentive-producing and stable farmgate prices through more efficient procurement and marketing

Improved water control is a prerequisite to a more stable production environment that will assist small farmers in achieving self-sufficiency.

An understanding concerning the water sector strategy was reached between the Bangladesh Government and the World Bank in their joint review of the Bangladesh Water Development Board (BWDB) in 1979 and later confirmed by the Government in the MTFPP. The water sector strategy emerged both from the over-riding need to achieve immediate self-sufficiency in foodgrain production and from the country's land and water resources pattern that requires linking and sequencing individual projects into an evolving system of water control.

The MTFPP's strategy emphasizes technically simple, divisible, quick-to-plan, and quick-to-implement projects to avoid the danger of irrevocably committing scarce financial resources to major, indivisible projects. Emphasis can be changed as experience or changing needs and situations dictate.

The FY 1982 share of agriculture was 32 percent of the economy's Annual Development Program as projected in the MTFPP and is expected to increase to 36 percent during FY 1983. This is an improvement over the 28 percent and less alloted to agriculture before the start of the MTFPP.

Nevertheless, there has been a shortfall in actual Annual Development Program allocations for the MTFPP from those projected for its first 2 years. The actual MTFPP allocation in FY 1982 was less than one-half the projected one. The same relationship is likely to remain in FY 1983 and 1984. Lower funding has caused the Government to reorder the priorities of some of its MTFPP programs. Table D-1 lists the originally approved projects that are expected to be retained.

Most of the remaining projects face budget cuts that will reduce their effectiveness. Funds for field visits by support services have been reduced, which undermines their efficiency and effectiveness.

Provisional FY 1982 performance data from the Bangladesh Agricultural Development Corporation (BADC) for projects using local currency generated by Title III showed, as might be expected with any project portfolio, that performance varied widely. For example, the objectives of the Low-Lift Irrigation Pump project were to put into operation 44,000 low-lift pumps and to irrigate 1.956 million acres of land. Target achievements were 86 percent and 84 percent, respectively. By contrast, the project for the Establishment of a Workshop Complex in the Private Sector performed poorly. The target was to establish 70 workshops in the private sector, to train 9,000 persons, and to procure 40 machines. The performance record showed that no workshops were set up, no people were trained, and 37 machines were purchased.

The Government took corrective action for several projects (on the list of approved projects for Title III funding) that did not perform well during FY 1982. The Establishment of a Workshop Complex in the Private Sector has been dropped from the BADC program and shifted to other implementing agencies. The Power Plant-Irrigation Distribution System project has proven to be more complex and more difficult to complete than anticipated and has been abandoned. The Command Area Development project will be given minimum funding during FY 1983 and is expected to be dropped from the BADC's FY 1984 budget. Support to the project for Locally Developed Small Pumps and Other Agricultural Implements will be terminated in FY 1983 because it duplicated another project and did not receive support from the intended beneficiaries.

Total disbursements from local currency generated under Title III to the projects just mentioned were quite small relative to total disbursements: $104,000 out of a total of $32 million.

The implementation of traditional, capital-intensive projects has suffered from a variety of problems. Chief among these have been construction delays, technical problems, and cost increases.

Table D-1. Core Projects in the Medium-Term Foodgrain Production Plan

| Name of Project | Estimated FY 1982 Local Currency Expenditure (in Taka 1,000s) |
|---|---|
| Manu River Project | 149,275 |
| Karnafuli Irrigation and Flood Control | 78,018 |
| Barisal Irrigation II | 26,831 |
| Muhuri Irrigation | 4,055 |
| Shallow Tubewell (IDA) | 59,277 |
| Intensive Agricultural Program for North-West | 317,092 |
| Supply of Low-Lift Pumps Under Canal Digging Program | 83,376 |
| Power Plant - Irrigation Distribution System | 1,759 |
| Low-Lift Pump Irrigation | 926,099 |
| Low-Lift Pump (IDA) | 22,652 |
| Deep Tubewell Irrigation | 576,714 |
| Shallow Tubewell Irrigation Throughout Bangladesh | 398,062 |
| Command Area Development | 3,890 |
| Establishment of Workshops in Private Sector | 962 |
| Support to Locally Developed Small Pumps and Other Agricultural Implements | 193 |

Source: Based on information from the Bangladesh Water Development Board and the Bangladesh Agricultural Development Corporation.

The approved list of projects is subject to continuous change as projects are completed, others are dropped, and new projects are proposed. Until now, the procedures for making changes in the approved list of projects appear to have been ad hoc. The Title III program is now at a stage at which a systematic approach to modifying the list of approved projects should be considered.

The MTFPP concentrates on foodgrains, almost exclusively rice and wheat, which account for about 85 percent of the total calorie intake of the population. Consumption targets were set at 15.5 ounces per person per day, for a projected population of 102 million by 1985. To achieve this goal, a sustained annual production growth rate of 7.2 percent would be required to reach a gross production of 20 million tons of foodgrains by 1985. The average FY 1978-FY 1980 benchmark production level was about 13 million tons.

Basically, the plan calls for the use of modern technologies to increase agricultural productivity, that is, increased acreage under high-yielding variety (HYV) seeds, expanded and more efficient use of fertilizer, and improved irrigation and water control.

Policy measures include higher priority for the agricultural sector, improved planning and implementation of agricultural programs and projects, and institutional development to improve input supply and marketing. Expansion of private sector activities was envisioned. Funding for the agricultural sector under the Annual Development Budget is to be increased, and measures are to be taken to protect this investment against funding cuts, even if cuts should have to be made in the overall development budget.

Principal plans for reaching the production target of 20 million tons of foodgrain include the following:

-- Irrigation. Doubling acreage under irrigation from roughly 3.6 million to 7.2 million acres and improving 2 million acres by drainage and flood control measures

-- HYV and fertilizer technology. Expanding use of HYV seeds from 6,000 tons to 58,000 tons and doubling fertilizer usage from 840,000 tons in FY 1979 to 1.9 million tons by FY 1985

-- Institutional development. Strengthening the physical infrastructure required for expanded agricultural production (e.g., procurement, transportation, storage, processing, marketing)

The physical targets of the MTFPP are summarized in Table D-2.

Table D-2. Main Features of the Medium-Term Foodgrain Production Plan, FY 1978 to 1985

| Output/Input | Pre-MTFPP | | | MTFPP | | | | | Total MTFPP Increment |
|---|---|---|---|---|---|---|---|---|---|
| | FY 1978 | FY 1979 | FY 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | |
| Foodgrain Production (gross; MT) | 13.1 | 13.0 | 13.3 | 15.4 | 16.2 | 17.3 | 18.6 | 20.0 | 6.7 |
| Fertilizer (1,000 tons) | 715 | 730 | 840 | 1,000 | 1,200 | 1,430 | 1,665 | 1,900 | 1,060 |
| Irrigated Area (1,000 acres) | 3,160 | 3,430 | 3,630 | 3,913 | 4,518 | 5,447 | 6,315 | 7,220 | 3,590 |
| Minor Irrigation (1,000 acres) | 1,810 | 2,050 | 2,230 | 2,620 | 3,142 | 3,898 | 4,560 | 5,250 | 3,590 |
| Major Irrigation (1,000 acres) | 150 | 180 | 200 | 293 | 376 | 549 | 755 | 970 | 770 |
| Traditional Irrigation (1,000 acres) | 1,200 | 1,200 | 1,200 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | (-200) |
| Irrigation Units in Operation | | | | | | | | | |
| Low-lift Pumps (1,000 units) | 36.7 | 36.7 | 38.6 | 42.0 | 44.0 | 47.0 | 49.0 | 51.0 | 12.4 |
| Deep Tubewells (1,000 units) | 7.5 | 9.3 | 10.5 | 11.0 | 13.0 | 17.0 | 21.0 | 25.0 | 14.5 |
| Shallow Tubewells (1,000 units) | 12.0 | 16.9 | 23.4 | 38.0 | 58.0 | 81.5 | 105.0 | 130.0 | 106.6 |
| Hand Tubewells (1,000 units) | 40.0 | 90.0 | 110.0 | 195.0 | 275.0 | 350.0 | 425.0 | 500.0 | 390.0 |

Source: Bangladesh Medium-Term Foodgrain Production Plan, February 1981.

Financial requirements for the 57 projects included in the MTFPP were estimated in 1981 at $5.4 billion, of which $2.9 billion is the foreign exchange requirement and $2.5 billion is local currency. The total estimated foreign aid requirement was $3.2 billion. Fertilizer, pesticides, and seeds represented 40.6 percent of total MTFPP financing requirements; irrigation projects, 34.7 percent; rural institutions and infrastructure, 11.2 percent; marketing, storage, and transport, 10.3 percent; and research, extension, and training, 3.2 percent. Financing for each of these subsectors is shown in Table D-3.

Table D-3. Financial Requirements of the Medium-Term Foodgrain Production Plan (billions of dollars in constant FY 1980 prices)

| Item | Public Sector Net[a] | Private Sector[b] | MTFPP Combined Total[c] | Foreign Exchange Requirements |
|---|---|---|---|---|
| Minor Irrigation | 0.56 | 0.67[d] | 1.23 | 0.76 |
| Major Irrigation, Drainage and Flood Control (BWDB) | 0.63 | -- | 0.63 | 0.22 |
| Fertilizer, Pesticides, and Seeds | 0.71 | 1.47[d] | 2.18 | 1.46 |
| Marketing, Storage, and Transport | 0.55 | -- | 0.55 | 0.18 |
| Subtotal | 2.45 | 2.14 | 4.59 | 2.62 |
| Research, Extension, and Training | 0.17 | -- | 0.17 | 0.06 |
| Rural Institutions and Infrastructure | 0.60 | -- | 0.60 | 0.22 |
| Total | 3.22 | 2.14 | 5.36 | 2.90 |

[a]Gross public sector outlays net of recoveries from the private sector such as sale of minor irrigation equipment, fertilizer, and the like.
[b]Private sector purchases referred to under footnote "a." Excludes private sector investments in kind.
[c]Excludes public sector investments to be realized through mass mobilization of voluntary labor.
[d]The private sector share of financing would be 54% and 67% in minor irrigation and in the supply of recurrent inputs (fertilizer, pesticides, seed), respectively.

Source: Bangladesh Medium-Term Foodgrain Production Plan, February 1981.

APPENDIX E

## GOVERNMENT FOODGRAIN PROCUREMENT

by John Warren Smith

Prior to FY 1975, procurement of domestic foodgrain by the Government of Bangladesh had been minimal. The famine of that year shocked the Government into compulsory procurement of about 128,000 tons of foodgrain (see Table E-1). That was the last year of official compulsory procurement. However, that year, the threat of famine set in motion a Government procurement policy for accumulating an emergency reserve of foodgrain stocks from domestic harvests and aid-financed imports. The increased Government purchase of domestic harvest was possible because of an increase in the Government procurement price for paddy from 45 Taka (Tk) per maund (1 maund = 82.28 pounds) to Tk 74 per maund at the end of 1975 (see Table E-2).

Table E-1. Procurement of Foodgrains, FY 1975 to FY 1981 (in long tons of rice equivalent)

| Year | Tons |
|---|---|
| 1975 | 127,862 |
| 1976 | 414,957 |
| 1987 | 313,606 |
| 1978 | 550,440 |
| 1979 | 355,163 |
| 1980 | 348,477 |
| 1981 | 1,016,733 |

Government procurement prices for paddy continued to rise until they reached Tk 119 per maund in FY 1982. Despite the rise in prices, the volume procured fluctuated as regular market prices rose above or fell below the Government price. This procurement, along with imports, became the reserve stocks, which are the basis for regular offtakes for the various categories of the public food distribution system as well as emergency reserves.

The March 8, 1982 Title III agreement provides a description of the procurement price concept. The primary objective in establishing and implementing procurement prices is to provide

Table E-2. Foodgrain Procurement Prices, FY 1970 to FY 1982
(in taka per maund)

| Year | Effective Date[a] | Aus | | Aman | | | Boro/IRRI | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Paddy | Rice | Paddy | Coarse Rice | Med. Rice | Paddy | Rice | Wheat |
| 1970 | Jan. 1, 1970[b] | -- | -- | 18.0 R | 29.41 R | 29.79 R | -- | -- | -- |
| 1971 | Jan. 1, 1971 | -- | -- | 19.0 B | 30.96 B | 31.37 B | -- | -- | -- |
| 1972 | Jan. 15, 1972[c] | -- | -- | * | * | * | -- | -- | -- |
| 1973 | Dec. 14, 1972 | -- | -- | 23.0 | 37.40 | 37.85 | -- | -- | -- |
| 1974 | Nov. 15, 1973 | -- | -- | 45.0 | 71.69 | 72.63 | -- | -- | -- |
| | Jan. 2, 1974[d] | -- | -- | 45.0 + T | 71.69 + T | 72.63 + T | -- | -- | -- |
| 1975 | Nov. 15, 1974[e] | -- | -- | 74.0 + 3.0 | 118.0 + 3.0 | 120.0 + 3.0 | -- | -- | -- |
| | Apr. 21, 1975 | -- | -- | * | * | * | 74.0 + 3.0 | 118.0 + 3.0 | -- |
| 1976 | Aug. 1, 1975 | 74.0 + 3.0 | 118.0 + 3.0 | * | * | * | * | * | -- |
| | Apr. 1, 1976 | * | * | * | * | * | * | * | 72.0 + 3.0 |
| 1977 | Sept. 14, 1976 | 70.0 + 3.0 | 112.0 + 3.0 | * | * | * | * | * | * |
| | Feb. 19, 1977[f] | * | * | 74.0 + 4.0 | 118.0 + 4.0 | 120.0 + 4.0 | * | * | * |
| | Apr. 1, 1977 | * | * | * | * | * | * | * | 74.0 + 4.0 |
| | May 1, 1977 | * | * | * | * | * | 70.0 + 4.0 | 112.0 + 4.0 | * |
| 1978 | Aug. 1, 1977 | 70.0 + 4.0 | 112.0 + 4.0 | * | * | * | * | * | * |
| | Nov. 15, 1977 | * | * | 80.0 + 4.0 | 128.0 + 4.0 | 130.0 + 4.0 | * | * | 80.0 + 4.0 |
| | May 1, 1978 | * | * | * | * | * | 80.0 + 4.0 | 128.0 + 4.0 | * |
| 1979 | Aug. 1, 1978 | 80.0 + 4.0 | * | * | * | * | * | * | * |
| | Apr. 4, 1979 | * | * | * | * | * | * | * | 86.0 + 4.0 |
| | May 2, 1979 | 86.0 + 4.0 | 128.0 + 4.0 | * | * | * | 86.0 + 4.0 | 136.0 + 4.0 | * |
| 1980 | Nov. 15, 1979 | * | * | 96.0 + 4.0 | 154.0 + 4.0 | ..[g] | * | * | * |
| | Nov. 15, 1979[h] | 105.0 + 5.0 | 165.0 + 5.0 | 105.0 + 5.0 | 165.0 + 5.0 | .. | 105.0 + 5.0 | 165.0 + 5.0 | 105.0 + 5.0 |
| 1981 | Nov. 4, 1980 | 110.0 + 5.0 | 170.0 + 5.0 | 110.0 + 5.0 | 170.0 + 5.0 | .. | 110.0 + 5.0 | 170.0 + 5.0 | 110.0 + 5.0 |
| 1982 | Dec. 7, 1981 | * | * | 119.0 + 5.0 | 185.0 + 5.0 | .. | * | * | 119.0 + 5.0 |

Note: -- = no procurement.
.. = no longer applicable.
* = no price change.
R = regular.
B = 5-mile border belt.
T = transport bonus (variable, see footnote "d").

[a]The announcement of procurement prices is usually (although not always) made prior to sowing/planting, while the effective date generally denotes the date when Government purchases at the announced prices will commence.
[b]Different procurement prices were set for the 5-mile border belt than for the rest of the country to encourage procurement and discourage smuggling into India.
[c]The procurement price differential for the border belt was eliminated effective Jan. 14, 1972.
[d]Effective Jan. 2, 1974, a transport bonus was paid to farmers and traders delivering grains to purchasing centers. The amount of the bonus depended on the distance traveled to reach the center: Paisa 50 for up to 5 miles, Paisa 75 for 5-10 miles, and Tk 1 for over 10 miles.
[e]The variable transport bonus was abolished and replaced by a single, uniform transport bonus of Tk 3, effective with the procurement price increase of Nov. 15, 1974.
[f]Effective Feb. 19, 1977, the transport bonus was increased to Tk 4.
[g]The higher price quotation for medium-quality rice was abolished effective Nov. 15, 1979.
[h]The Government changed the previously announced procurement prices on Nov. 11, before they became effective. At the same time the transport bonus was increased to Tk 5.

Source: Ministry of Food.

incentives to farmers to produce more by adopting high-yielding varieties (HYV) of seed and associated technology. Foodgrain production will be encouraged by establishing and announcing procurement prices for each major foodgrain crop well in advance of the planting season (July 1 in the case of aman and November 1 in the case of boro and wheat). The agreed procurement price will be maintained throughout the season, and all offered grain of suitable quality will be procured regardless of lot size.

Full use is to be made of private intermediaries, particularly to increase procurement of rice, paddy, and wheat from small farmers and remote areas that would otherwise not be served. The Medium-Term Foodgrain Production Plan of February 1981 identified the following three methods for improving foodgrain procurement:

1. Construct feeder and access roads connecting villages, market places, and procurement centers.

2. Increase Government grain storage capacity, provide procurement fund allocations, and improve organizational efficiency to remove existing constraints on timely foodgrain procurement from farmers by public sector agencies.

3. Expand private grain trading by liberalizing the anti-hoarding legislation, improve traders' access to credit, and supply better market information to farmers, traders, and consumers.

The excellent procurement effort of FY 1981 showed the capability of the procurement mechanism even under great strain. In FY 1981, total procurement was 85 percent greater than the previous record in FY 1978. The FY 1981 procurement program also required an unprecedentedly large expenditure of scarce financial resources. Payments for foodgrains alone amounted to Tk 4.6 billion of the Government's overall current expenditure budget of Tk 14.1 billion. The Government mobilized several kinds of resources in its procurement of over 1 million tons of crops:

1. Refining and liberalizing the payment system. Buying centers issued weight-quantity stock certificates to sellers and dealers upon delivery of grain. Certificates were exchanged for payment at local branches of the commercial banks for a small commission (Tk 0.75 per maund). The commercial banks were then reimbursed by the Government. Overall, the new system worked well. There were no complaints concerning lack of funds either from temporary procurement centers or at the thana (county) level.

2. Sharply increasing the number of procurement centers. To reach remote farmers, the number of temporary pro-

curement centers was raised from 259 to 361. The government also authorized union parishads and gram sarkers (villages) to procure grain on their own. Although the amounts actually purchased by these government levels were relatively small (estimated at 60,000 tons), they did bring the procurement effort even closer to the small producer.

3. Making a major effort to expand foodgrain storage facilities. Although storage facilities were inadequate to accommodate all the grain that could have been purchased in FY 1981, the Government's efforts to expand storage capacity did increase the procurement volume.

Early in FY 1981, the Government undertook a program to expand permanent foodgrain storage facilities by 386,000 tons--200,000 tons through a "crash" program using Government resources and another 186,000 tons under projects assisted by the International Development Agency; the Asian Development Bank; and the Governments of the Federal Republic of Germany, Japan, and the Netherlands. Altogether, 772 warehouse units were to be constructed. Progress on these projects during the year was commendable (see Table E-3). As of June 30, 1981 a total of 347 units (accommodating 173,500 tons) had been completed and handed over. This brought total Government-owned storage capacity to 1.35 million tons. By the end of 1981, Government-owned storage capacity was expected to reach 1.5 million tons.

Many of the new warehouses were to be constructed in surplus production areas where storage pressure is the greatest. Care was taken to ensure that some units would be located in the more remote areas with poor transportation connections to allow for procurement and security stocks for emergency periods.

Other efforts to increase total storage capacity included a plan to repair dilapidated warehouses, to increase the number of hired private warehouses, and to requisition space at railway sheds, thana Training and Development Centers, schools, and empty Government warehouses. Hiring and requisitioning private and Government warehouses increased storage capacity from 150,000 tons on June 30, 1980 to 350,000 tons on June 30, 1981.

In sum, the Government's efforts to maximize procurement were impressive.

There also has been a slight upward trend in the rate of procurement (see Table E-4). In 1978, procurement was 4.6 percent of production--a result of a major Government purchasing effort in the aman crop. The Government purchased 6.8 percent of the aman season crop. In subsequent years until 1981, the percentage of the aman crop purchased was much lower, although the production level dropped only slightly. The year 1981 was the

Table E-3. Storage Capacity of the Ministry of Food, 1980
(in long tons, as of September 30, 1980)

| Division/District | Local Supply Depots | Central Storage Depots | Foodgrain Silos | Total |
|---|---|---|---|---|
| Rajshahi (total) | (183,730) | (50,500) | (26,248) | (260,470) |
| Dinajpur | 53,938 | - | - | 53,938 |
| Rangpur | 37,504 | - | - | 37,604 |
| Bogra | 27,636 | 20,000 | 26,248 | 73,884 |
| Rajshahi | 44,052 | - | - | 44,052 |
| Pabna | 20,500 | 30,500 | - | 51,000 |
| Khulna (total) | (114,071) | (143,600) | - | (257,671) |
| Kushtia | 17,760 | - | - | 17,760 |
| Jessore | 20,486 | - | - | 20,486 |
| Khulna | 23,675 | 122,600 | - | 145,275 |
| Barisal | 29,650 | 21,000 | - | 50,650 |
| Patuakhali | 22,500 | - | - | 22,500 |
| Dacca (total) | (125,750) | (91,250) | (52,199) | (269,199) |
| Jamalpur | 12,250 | - | - | 12,250 |
| Mymensingh | 36,250 | 22,000 | - | 58,250 |
| Tangail | 13,250 | - | - | 13,250 |
| Dacca | 35,500 | 69,250 | 52,199 | 156,949 |
| Faridpur | 28,500 | - | - | 28,500 |
| Chittagong (total) | (116,975) | (116,550) | (156,117) | (389,642) |
| Sylhet | 28,500 | - | - | 28,500 |
| Comilla | 34,800 | 12,350 | 51,813 | 98,963 |
| Noakhali | 23,750 | - | - | 23,750 |
| Chittagong | 22,000 | 104,200 | 104,304 | 230,504 |
| Chittagong Hill Tracts | 7,925 | - | - | 7,925 |
| Total | 540,526 | 401,900 | 234,564 | 1,176,990 |

Note: Storage capacity of hired warehouses at local storage depots is not included.
Source: Ministry of Food.

Table E-4. Foodgrain Production and Procurement by Crop, Crop Years 1977/1978-1980/1981 (thousands of tons)

| Crop Year Ending June 30 | Production | Procurement[a] | Procurement as % of Production |
|---|---|---|---|
| Aus | | | |
| 1978 | 3,103 | 1.6 | 0.1 |
| 1979 | 3,288 | 28.6 | 0.6 |
| 1980 | 2,809 | 0 | 0 |
| 1981 | 3,236[b] | 86.9 | 2.7 |
| Aman | | | |
| 1978 | 7,422 | 502.6 | 6.8 |
| 1979 | 7,429 | 197.4 | 2.7 |
| 1980 | 7,303 | 177.1 | 2.4 |
| 1981 | 7,837[b] | 501.3 | 6.4 |
| Boro | | | |
| 1978 | 2,239 | 79.8 | 3.6 |
| 1979 | 1,929 | 1.0 | 0.1 |
| 1980 | 2,427 | 262.2 | 10.8 |
| 1981 | 2,586[b] | 195.0[c] | 7.5 |
| Wheat | | | |
| 1978 | 343 | 13.2 | 3.9 |
| 1979 | 486 | 50.7 | 10.4 |
| 1980 | 810 | 148.9 | 18.4 |
| 1981 | 1,075[b] | 163.0 | 15.2 |
| Total | | | |
| 1978 | 13,107 | 597.2 | 4.6 |
| 1797 | 13,132 | 267.7 | 2.0 |
| 1980 | 13,349 | 588.2 | 4.4 |
| 1981 | 14,734[b] | 946.2 | 6.4 |

[a]Procurement of crop grown in the indicated crop year, not necessarily the year of actual purchase.

[b]Recently revised estimates.

[c]Estimate based on procurement as of November 15, 1981.

major test of Government procurement capabilities. Procurement rose from 550,400 tons to 1.017 million tons. Government centers purchased 6.4 percent of the total crop. Procurement probably would have been even larger, but lack of storage facilities was a constraint. New storage capacity constructed since 1981 will remove that constraint.

Procurement in support of prices was very limited in 1982 because the price of paddy, rice, and wheat generally exceeded procurement prices. A few procurement centers reported a decline in the price of grain to below the procurement price for part of the season. Procurement, which had been projected at 760,000 tons, was only 298,000 tons for the July to June, 1981/1982 crop year.

Steps have been taken to encourage private grain trade. Relaxation of restrictions imposed on grain trading through the antihoarding laws has been particularly important. Table E-5 summarizes the changes that have taken place.

Table E-5. Government Antihoarding Laws Affecting Licensed Foodgrain Dealers

| | Maximum Amount That Can Be Held (in maunds) | | |
|---|---|---|---|
| Effective Date | Retailer | Wholesaler | Time Limit |
| November 11, 1979 | 30 | 300 | 7 days at one location and 29 days at different locations |
| August 4, 1980 | 100 | 1,000 | No time limit |
| January 3, 1981 | 250 | 5,000 | No time limit |

In recent years, procurement has also been used to support a floor price for producers. Less emphasis is placed on the role of building reserve stocks through domestic procurement and more on providing an incentive for farmers to increase production.

The Title III agreement provides for Government support of foodgrain prices at levels sufficient to induce investments in HYV technologies. An amendment to the agreement further specifies that announcements of procurement prices be made well in advance of the planting seasons to effectively influence farmers'

decisions. In particular, it is understood that this provision is to apply to the aman season. However, no announcement was made in advance of the 1982/1983 aman planting season.

Apart from the announcement itself, success or failure of the procurement program normally is judged by the level of farmgate prices during the year. Farmgate prices should be no more than Tk 5 to 10 below the procurement price. This benchmark criterion has not been examined in recent years, and it may well be in need of review. An incomplete and inconsistent series of farmgate prices complicates the use of this criterion.

A survey of 39 of the 68 subdivisions in Bangladesh was undertaken to examine the operational effectiveness of the procurement and price support program at the field level.

The only major Government purchase of domestic foodgrain was in 1981. At that time, a little more than 1 million tons of foodgrain, about 6.4 percent of estimated production, was purchased. Not only was the Government procurement mechanism under pressure because of the bumper crop, but shipments of imported foodgrains were arriving simultaneously. A shortage of storage capacity quickly developed, which limited the Government's ability to purchase all domestic foodgrain offered at collection centers. In many areas, the floor prices could not be maintained. The survey attempted to find out what the problems had been, whether they had been solved, and the current status of procurement. Unfortunately, the subdivision officals could not recall much about procurement in 1981, and the answers were unreliable. Storage problems were recalled, but problems about the availability of Government funds, transportation, and payment procedures were not mentioned.

Whenever there is a change in the Government procurement price, it is publicized nationally through radio, TV, and newspapers. At the subdivision level, announcements are made on loudspeakers, through banners posted at local supply depots, and by word of mouth. Dealers and traders are usually knowledgeable about the procurement price, but farmers are not. Indeed, knowledge of the exact procurement price is of little practical significance to the farmer because most small farmers have access only to traders, not directly to Government purchasing centers, and must accept the traders' prices. This means that the timing of announcements of a Government price change is usually a moot question for farmers.

Although the survey did not provide new insights into the 1981 procurement, about 20 percent of the Subdivision Controllers of Food said foodgrain storage capacity was insufficient, even though Government storage capacity has been greatly increased. Most of these respondents said they only had storage capacity for 6 months but needed it for 1 year. Many respondents said that

warehouse construction was still continuing. Present storage capacity is probably sufficient for most purposes.

The Government procurement price for paddy was Tk 135 per maund when the survey was conducted. When asked about the average regular market price, the Subdivision Controllers usually gave a price range, so it was difficult to derive a meaningful average from the survey. However, in only one subdivision was the regular market price reported to be below the procurement price. In this case, the regular market price was Tk 135 per maund. In over half the subdivisions, the regular market price was Tk 150 or more per maund. The Subdivision Controllers were asked to estimate the average farmgate price for paddy in their subdivision. In 11 subdivisions, the farmgate price of paddy was reported to be equal to or less than the Government procurement price. However, more than one-half of the Subdivision Controllers thought the farmgate price was Tk 140 or more per maund. This survey did not provide precise price levels, but it did indicate that Government procurement prices are generally below the effective free market level.

In general, farmgate prices were only Tk 5-10 below the regular market price. This narrow profit margin indicates a high degree of market efficiency in bringing the paddy from the production area to the market.

To encourage Government procurement from small traders, mobile units were introduced. About one-half of the subdivisions surveyed said they had mobile units, but several subdivisions indicated that the mobile procurement program was not yet operational. Units that were operational did not follow the purchasing procedures that were designed to bring Government procurement closer to the producer. The mobile units were to purchase directly from producers or small traders in local ghats and bazaars. A bank representative was to accompany the procurement agent and pay cash on the spot so the producer or trader would not have to travel to a bank. In practice, a prosperous dealer with cash would accompany the thana food inspector and purchase from the small traders, paying cash on the spot. No Government financial officer accompanied them. The mobile unit would take the grain to the local supply depot and the dealer was reimbursed through weight-quantity stock certificates as usual.

The survey collected evidence of compulsory procurement by Government officials. Dealers were persuaded to sell a quantity of grain to the local supply depot at a loss. Apparently, it was understood that the dealer's retail operation would later receive special consideration from Government officials. Certain producing areas were closed to outside traders, which reduced demand and lowered the regular market price to the level at which Government agents could purchase the grain.

The survey pointed out the high degree of decision-making autonomy at the subdivision level for both open market sales and procurement. This raises the question of the effectiveness of communication between Dhaka Headquarters, where policy is determined, and the subdivisions and thanas, where the policy is to be implemented. It appears from the survey that local policy often supersedes national policy. Policy implementation training provided at the local levels needs to be reviewed. The quality of administrators at the subdivision level seemed to be adequate, but they may not have the disciplinary authority required to control the thana food officials. Also, decisions of the Ministry of Food representative, who is only one of several local officials of equal or higher rank, are circumscribed by the influence of others. Clearly, successful policy implementation must be focused at the subdivision and thana level.

Although the procurement of foodgrains has been emphasized, the intent of the Title III agreement was primarily to provide a floor price for foodgrain. This includes a mechanism for meeting increased demand whenever the equilibrium market price falls below a predetermined level. In this context, Government purchase of foodgrains from domestic harvest is merely a byproduct of maintaining the floor price. Procurement is not an objective in itself, and, conceptually, there is no target to be met either in amount or percentage of harvest collected.

The wording of the agreement may be misleading in specifying the floor price as an incentive for adopting HYV technology. Certainly, farmgate prices affect input decisions, but adoption of HYV technology is a highly complex process, and the continued use of the technology depends on far more than the Government floor price. Equally or more important is the timing and amount of imports available, the availability of technical information, and the individual producer's perception of the opportunity cost in time and resources for HYV vis-a-vis expected return.

Information received by the Mission about compulsory procurement indicates that the Ministry of Food is not fully aware of the Mission's intent. Information from the survey not only showed that dealers and traders are "levied" directly, but there is evidence that areas are closed off to outside traders who would create demand and keep farmgate prices above the Government price. By excluding these dealers through administration manipulation, subdivision officials have been able to drive prices down to their level, and then purchase at the "market price."

Compulsory procurement obviously subverts the intent and spirit of the agreement. However, the agreement emphasizes procurement. The agreement requires that private intermediaries be used to increase procurement, roads be constructed to increase accessibility to procurement centers, and storage capacity be increased to remove constraints to procurement. These provisions

are certainly necessary, but the floor price rationale is not stressed and the intent may not be clear to the Bangladesh Government. Because the agreement is the official guide for Bangladesh Government actions, the language may need to be changed in a future amendment to clearly reflect the intent of the agreement.

## APPENDIX F

## OPEN MARKET SALES SYSTEM

by John Warren Smith

The inequities inherent in the statutory rationing and modified rationing systems led to the inclusion of the concept of an open market sales (OMS) system in the Title III agreement. The essence of OMS is the injection of Government foodgrain stocks into the regular market using private dealers and a minimum of resale restrictions to stabilize prices. Sales are made to the public at large. By maintaining foodgrain prices that are affordable by the majority of the population, all consumers who purchase from the market will benefit. It is during the lean periods, when prices are high, that the population suffers privation most acutely. Increasing the supply of foodgrain to the market during these periods dampens the extreme price increases that devastate the financial resources of the poor.

The major emphasis of the OMS program is to make wheat, rice, and paddy available at reasonable prices throughout the country at times of unusually high market prices for foodgrains. The OMS system is designed to be triggered by both major interruptions in the long-term supply trend and seasonal price fluctuations. The thrust of the agreement is to replace the ration system by OMS as the principal means of public food distribution by the time foodgrain self-sufficiency is achieved.

There are basically three aspects to the OMS price mechanism: initial prices, the adjustment mechanism, and minimum prices.

1. Initial prices. An initial OMS price will be set for rice at approximately 15 percent above the rice procurement price of Tk 190 per maund (with transportation bonus), except for the statutory rationing areas where the difference will be about 20 percent. With OMS rice retailing about Tk 10 above the wholesale OMS price, the aim is to constrain the seasonal movement of coarse rice prices within a range of 20 to 25 percent of the procurement price. OMS paddy and wheat prices would be set at appropriate ratios to the coarse rice price.

2. Adjustment mechanism. OMS stocks of rice, wheat, and paddy will move at their established prices whenever market conditions warrant. Changes in OMS prices will be dictated by the movement of coarse rice prices only. Prices will be adjusted on a subdivision basis according to a price schedule promulgated by the Food Ministry in Dhaka. The basic principles underlying the price schedule are as follows: (1) OMS prices will be adjusted upward or downward whenever the subdivisional average coarse rice

price has moved 10 percent from its last price change; (2) the amount of OMS price change will be 0.5 percent of the change in the coarse rice price (i.e., if the subdivisional average coarse rice price reached Tk 241, the rice OMS price would move to Tk 230); changes in wheat and paddy OMS prices will be made to maintain the initial wheat-to-rice and paddy-to-rice ratios discussed above; and (3) OMS prices in statutory rationing areas will always be 5 percent higher than OMS prices elsewhere.

3. Minimum prices. At no time will the OMS rice price be less than 15 percent above the rice procurement price (including transportation bonus); nor will the wheat OMS price be less than Tk 5 per maund above the wheat procurement price. (Because paddy procurement prices can presumably move in tandem with rice procurement prices, similar provision is not required with respect to the paddy OMS price.)

The following paragraphs describe the major features of the OMS system covered by the Title III agreement.

If experience with the OMS program demonstrates a need, the Bangladesh Government and the U.S. Government may use implementation letters to agree on changes in the OMS price-setting mechanisms and the percentages indicated above.

The Bangladesh Government is to provide sufficient commodities to all areas to satisfy all dealers (licensed or unlicensed) wishing to buy OMS wheat, rice, or paddy.[1] Sales will be in any quantity, with a lot size of 10 to 200 maunds, except that unlicensed dealers may be limited to 150 maunds (about one 5-ton truck load). The foodgrain dealers will be free to resell their OMS rice, wheat, or paddy in any quantity, at any price, to any buyer in any location.

All the wheat covered by the Title III agreement may be used for open market sales. If foodgrain stocks fall below 500,000 tons, the Government may suspend open market sales and postpone the use of commodities provided for open market sales under this agreement.

Recognizing that open market sales of rice and paddy can have a greater impact on rising prices than open market sales of wheat, the Government of Bangladesh will include rice and paddy in the open market sales program. In exchange for the paddy used in open market sales, the Government will be allowed to use wheat provided under this agreement to supply flour millers. Every 2 tons of OMS rice sold will allow the Government to supply 3 tons

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[1]This provision was deleted in the October 14, 1982 amendment to the Title III agreement.

of wheat provided under this agreement to the Government distribution categories designated as flour millers. The Government will deposit in the Special Account the full Commodity Credit Committee value of any wheat supplied under this agreement that is exchanged for rice or paddy and used in OMS. These ratios may be reviewed if relative prices of wheat, paddy, and rice change.

The Bangladesh Government will advertise the official OMS wholesale price locally through the public media. In addition, the OMS price will be posted at the point of sale in the foodgrain warehouse.

On October 14, 1982 the PL 480 Title III agreement was amended to require that all Title III grain be used for OMS. The amendment also deleted the provision that restricted the Bangladesh Government from setting resale conditions on OMS dealers. The amendment was part of an initiative to make Title I and III commitments early in the new U.S. fiscal year. It provided Bangladesh with 100,000 metric tons of wheat and 10,000 metric tons of soybean oil valued at US$21.6 million, leaving an authorized balance of US$38.4 million for the fiscal year.

Although the concept of open market sales was acceptable to the Bangladesh Government and was tried several times, the OMS program was not successful in moderating the upward movement of prices until the fall of 1982. Before that time, several factors worked against the successful operation of the system. Until 1982, only wheat was sold through open market sales, making the system relatively ineffective; the cross-elasticity of wheat and rice was less than originally supposed, and relatively small amounts were injected into the system. In addition, the ration price of rice was only 75 to 80 percent of the market price. The OMS concept was new to the distribution system, and there were misunderstandings and procedural snags at all levels.

From September 1981 through May 1982, stocks registered a continuous decline from a high of 1,343,000 tons to only 487,000 tons, a level at which the agreement permitted the suspension of open market sales. During this period, the combination of low imports and limited procurement resulted in the decline of wheat stocks, which were reduced to only 14,000 tons. Thus, OMS sales in March and April were of necessity limited largely to rice and paddy and constituted the only way for the Government to move rice into the market without resorting to an increase in the amount of rice distributed through the ration system.

The shortfall of the aman rice crop in 1982 led to an increase in foodgrain sales prices that triggered substantial OMS sales in September, October, and November 1982 (see Table F-1). In September, OMS offtake for rice and wheat were 14.5 percent and 12.6 percent, respectively, of total public food distribution system (PFDS) offtake. Total rationing system offtake was 44.1

percent of the total, compared with 13.3 percent for open market sales. In October, retail foodgrain prices rose rapidly and open market sales increased. Open market sales of wheat, at about 26 percent of total offtake for the month, equaled total modified rationing (MR) and statutory rationing (SR) sales. OMS rice was 28 percent of the total offtake, but MR sales soared to 46.3 percent. Because of the substantial injection of foodgrains into the October market, prices did not reach their expected high and began to level earlier than usual. By the end of November, OMS offtake was down to 6.5 percent of the total offtake.

A survey of 39 of the 68 subdivisions in Bangladesh was undertaken for the evaluation team to examine the operational effectiveness of the OMS system at the field level.

Table F-1. Percentage Public Food Distribution Offtake by Category, FY 1982

| | September | | | October | | | November | | |
|---|---|---|---|---|---|---|---|---|---|
| Category | Rice | Wheat | Total | Rice | Wheat | Total | Rice | Wheat | Total |
| SR | 10.1 | 15.0 | 13.3 | 8.0 | 9.2 | 8.8 | 19.3 | 15.4 | 16.3 |
| MR | 53.1 | 19.5 | 30.8 | 46.3 | 17.3 | 25.4 | 41.2 | 12.8 | 19.4 |
| OMS | 14.5 | 12.6 | 13.3 | 28.0 | 26.2 | 26.7 | 7.3 | 6.3 | 6.5 |
| Other | 22.3 | 52.9 | 42.6 | 17.7 | 47.3 | 39.1 | 32.2 | 65.5 | 57.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Computed from Bangladesh Government reports.

In the subdivisions surveyed, about 40 percent of the Subdivision Controllers of Food have been in their positions since the most recent Title III agreement was signed on March 8, 1982, giving them ample time to become familiar with the general procedures. Another 14 percent had held their position from 6 months to a year.

In general, the Subdivision Controllers of Food were experienced and knowledgeable about Government food allocations. In subdivisions in which the Food Controller was newly appointed, longer tenured employees assisted in answering questions. In almost all subdivisions, records on OMS sales (and other Government offtakes) were readily available. It is unlikely that short tenure by the Subdivision Controllers of Food would result in procedural deviation from the Title III agreement.

Sales of OMS stocks in September, October, and November were countrywide. In only six of the subdivisions surveyed were there any thanas without open market sales during this period and in each of these subdivisions, only one thana had no OMS activity. Reasons for the absence of OMS in these thanas were remoteness, lack of communication, and low prices on the regular market. In two thanas, there were no dealers who would accept OMS stocks.

The pervasiveness of OMS activity throughout the country indicates that the mechanism is in place and sales activities are operating in all but the most remote areas. Although the survey did not obtain information on the amount of OMS stock sold in each thana, the fact that OMS activities were occuring at the thana level indicates that the effects and benefits are well distributed geographically.

In the early days of OMS, there appeared to be a lack of support from Headquarters in Dhaka. This seems to have changed. Headquarters in Dhaka allocates OMS stocks to the district level, and the district makes specific allocations to each subdivision under its control. The Subdivision Controllers of Food said they had little influence on the OMS stocks alloted them. Many did not know how the allocations were determined; others stated that allocations were based on population, geographic size, and market price. In general, the Subdivision Controllers of Food were satisfied with allocation procedures. Subdivision Food Controllers reported that they had no problems in obtaining their OMS allocations promptly. Indeed, OMS allocations generally exceeded the amount sold. In all but one subdivision, the amount of wheat and rice allocated by the District Controller of Food to open market sales were greater than actual sales.

Open market sales of wheat in September were 16.2 thousand tons. This was very close to the amount allocated. Seventy percent of the subdivisions reported that wheat sales for the month were 75 percent or more of their allocation. Although total OMS wheat sales in October more than tripled from those of September, the amount allocated on paper was even higher. The official allocations were so high that sales in the subdivisions that had sold 75 percent of the allocations dropped to about one-half and then dropped to one-third in November. Total rice sales and percentage of sales to allocations were significantly lower. In September, only one-third of the subdivisions sold 75 percent or more of their allocations of rice. In October, the proportion had slipped to one-quarter and by November, only 9 percent of the subdivisions sold 75 percent or more of their allocations.

The survey data show that the amount allocated by Dhaka Headquarters and the district was more than sufficient to cover sales activity. However, it was subsequently learned that there were not always sufficient stocks in the local supply depots to accommodate the amount allocated. Apparently, in some cases the

formal allocation is considered an upper limit for official purposes, but the actual amount allocated from the local supply depot is decided by the Subdivision Controller of Food based on available stock and other commitments. The survey does not clarify whether the difference in Dhaka allocations and subdivision allocations is known and given tacit approval at Headquarters. Some Subdivision Controllers of Food said they are short of OMS stocks.

In the formal procedure for initiating actual sales of OMS stocks, the Subdivision Controller notifies the District Controller and Headquarters in Dhaka that the average price of coarse rice in the subdivision is 15 percent or more above the OMS level set by Headquarters and that sales of OMS stocks will be initiated. It is assumed that Headquarters will concur with the decision of the Subdivision Controller. As might be expected, the decision to initiate open market sales does not rest with any single person. The decision is usually made by the Subdivision Controller of Food in consultation with other subdivision officials. Factors other than price that determine the initiation of open market sales are the general level of stocks, market strength, and political considerations. Approval is nearly always automatic and in case of emergency, the subdivision has authorization to proceed with sales immediately, without official approval. In many subdivisions, the Subdivision Controller of Food approves open market sales on a thana-by-thana basis. The official prodecure for starting open market sales is based on averaging prices from all thanas in the subdivision. However, the Subdivision Controller of Food can begin open market sales earlier in some thanas than in others.

OMS prices were adjusted according to the requirements specified in Government circulars. All but two subdivisions said they made OMS price revisions as market prices changed. The Government circular price instructions were clear, and the Subdivision Controller of Food felt confident in taking the initiative in making price changes, although usually in consultation with other officials. In most subdivisions, three or more price changes were made.

The decision to begin open market sales is announced by the beat of drums, in the newspaper, and through loudspeakers and banners on the shops of the OMS dealers. This is primarily for the benefit of consumers, as dealers already know when sales will begin.

There is a high degree of decision-making autonomy at the subdivision level. The decision on when to start and to stop open market sales is one of the key elements in the process. The actual amount of OMS stock allocated from the warehouse is decided by the Subdivision Controller of Food. The dealers are selected by the Subdivision Controller of Food and other offi-

cials, and the specific sales restrictions are made at the subdivision level.

Once the decision to start open market sales has been made, the dealers who will lift stocks and carry out the retailing are selected. Dealers frequently apply through food inspectors who recommend them to the Subdivision Controller of Food. In none of the subdivisions did any of the OMS dealers cite problems in receiving approval. However, the survey indicates that the food inspectors had some problems persuading dealers to participate. In some thanas, reluctant dealers must be recruited.

In general, the criteria for selecting dealers are that they be known to the local food inspector and enjoy good rapport with the inspector. Ideal candidates are licensed dealers in good geographic locations, who are financially responsible and honest. In some subdivisions, preference was given to dealers who carry other Government offtake stocks modified rationing and Government employee ration distribution. In other subdivisions, OMS stocks are given to nongovernment dealers. About 60 percent of the dealers interviewed were modified rationing or Government employee ration distribution dealers. About the same percentage performed some milling or crushing activity. The dealers commonly sold grocery items and edible oil as well as paddy and milled rice.

The willingness of dealers to participate in open market sales is reduced by the restrictions placed on lifting stocks, sales procedures, and profit margins. Prosperous dealers usually are not dependent on Government stocks for their supply, and Government impediments to efficient selling are likely to dissuade the better dealers from participating in open market sales. Some Subdivision Food Controllers were concerned about dealers who sold OMS stocks in the black market (selling them at regular market prices, rather than those fixed by the Government) and said they limit the number of dealers to have better control of OMS retail regulations.

The March 1982 agreement stated that dealers were to lift OMS stocks in lot sizes from 10 to 200 maunds. This stipulation was not followed in any subdivision surveyed. Typical lot sizes were 50 to 100 maunds. Reducing the upper limit of lot sizes lengthened the time for distribution. It also made the dealers more vulnerable to monitoring by local officials. Raising the lower limit cut the small dealers out of the market for OMS stocks. Some of the major complaints of dealers were that lot sizes were less than optimal; per unit transportation costs would have been less if they had been allowed to lift larger lot sizes. Long lines of sometimes unruly people would form in front of shops with OMS stocks, and extra labor was required to maintain order. In some cases, a person would have to be hired to maintain the necessary records. Some of the dealers complained that

the profit margin was too low for the volume of business they could do. However, the survey found that the profit margin varied widely from subdivision to subdivision.

The major recipients, according to dealers, were daily laborers, the poor, and the homeless. In some cases, OMS wheat and rice were being purchased for direct consumption. In other cases, recipients were either selling it or collecting it for wealthier people who paid them a commission. In some areas, the major recipients were workers in the tea gardens. In all subdivisions, dealers and Government officials said that open market sales had a significant effect on checking the upward trend of prices and helped bring them down more quickly than expected. Dealers seemed to attribute the reduction of prices to open market sales. It is difficult to know just how much of the price changes can be attributed to open market sales and how much to other factors. Nonetheless, the perception of subdivision officials and OMS dealers is that the OMS system was effective. Perhaps of greater significance than the positive comments from the Subdivision Controllers of Food and OMS dealers was the lack of negative comments. The interviewers gave the respondents full opportunity to voice complaints. The controls on lifting stocks and the restrictions on selling were greater than expected, but it is obviously more open than other public food distribution system sales.

Table F-2. Public Food Distribution System Offtake of Foodgrain by Tonnage and Percentage, FY 1978 to FY 1982 (in long tons)

| Category | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|
| Statutory Rationing | 451,010 | 417,149 | 491,404 | 342,910 | 307,511 |
| Percentage | 24.4 | 23.2 | 20.5 | 22.5 | 15.1 |
| Modified Rationing | 352,732 | 311,583 | 384,569 | 179,138 | 482,916 |
| Percentage | 19.1 | 17.3 | 16.0 | 11.8 | 23.7 |
| Essential Priorities | 121,777 | 94,952 | 84,069 | 87,651 | 100,714 |
| Percentage | 6.6 | 5.3 | 3.5 | 5.8 | 4.9 |
| Other Priorities | 327,261 | 392,622 | 538,734 | 357,193 | 375,711 |
| Percentage | 17.7 | 21.9 | 22.4 | 23.5 | 18.5 |
| Large Employers | 89,066 | 75,413 | 105,994 | 30,768 | 55,894 |
| Percentage | 4.8 | 4.2 | 4.4 | 2.0 | 2.7 |
| Flour Mills | 214,925 | 182,932 | 178,368 | 124,855 | 123,374 |
| Percentage | 11.7 | 10.2 | 7.4 | 8.2 | 6.1 |
| Marketing Operation | 5,530 | 8,932 | 10,068 | 19 | 107,957 |
| Percentage | 0.3 | 0.5 | 0.4 | 0 | 2.3 |
| Open Market Sales | - | 52,811 | 110,883 | 124 | 46,385 |
| Percentage | - | 2.9 | 4.6 | 0 | 2.3 |
| Food for Work | 254,669 | 215,892 | 440,431 | 349,305 | 365,818 |
| Percentage | 13.8 | 12.0 | 18.4 | 22.9 | 18.0 |
| Relief | 30,160 | 44,550 | 57,090 | 49,936 | 69,624 |
| Percentage | 1.6 | 2.5 | 2.4 | 3.3 | 3.4 |
| Total | 1,847,130 | 1,796,836 | 2,401,610 | 1,521,899 | 2,035,904 |
| Percentage | 100 | 100 | 100 | 100 | 100 |

Source: Bangladesh Directorate of Food.

Table F-3. Offtake of Foodgrain by Category
(FY 1982, in tons)

| Category | September | | | October | | | November | | |
|---|---|---|---|---|---|---|---|---|---|
| | Rice | Wheat | Total | Rice | Wheat | Total | Rice | Wheat | Total |
| Statutory Rationing | 6,649 | 19,116 | 25,765 | 6,128 | 18,282 | 24,410 | 7,563 | 19,895 | 27,458 |
| Modified Rationing | 34,669 | 24,881 | 59,550 | 35,499 | 34,607 | 70,106 | 16,046 | 16,514 | 32,560 |
| Essential Priorities | 5,088 | 3,458 | 8,546 | 4,344 | 3,491 | 7,835 | 4,530 | 2,505 | 7,035 |
| Other Priorities | 9,325 | 25,824 | 35,149 | 9,124 | 26,230 | 35,354 | 7,935 | 23,819 | 31,754 |
| Large Employer of Labor | 11 | 8,733 | 8,744 | 11 | 8,778 | 8,789 | 10 | 6,108 | 6,118 |
| Open Market Sales | 9,475 | 16,152 | 25,627 | 21,422 | 52,266 | 72,688 | 2,862 | 8,117 | 10,979 |
| Market Operations | - | - | - | 31 | 15 | 46 | 37 | 139 | 176 |
| Flour Mills | - | 14,413 | 14,413 | - | 13,973 | 13,973 | - | 13,339 | 13,339 |
| Subtotal | 65,217 | 112,577 | 177,794 | 786,559 | 157,642 | 234,201 | 38,983 | 90,436 | 129,419 |
| Food for Work | 38 | 8,410 | 8,448 | 61 | 35,566 | 35,627 | 9 | 30,873 | 30,882 |
| Canal Digging | - | - | - | - | 133 | 133 | - | 10 | 10 |
| Vulnerable Group | - | 4,415 | 4,415 | - | 5,238 | 5,238 | - | 5,597 | 5,597 |
| Gratuitous Relief | 1 | 2,432 | 2,433 | 1 | 1,066 | 1,067 | 1 | 2,295 | 2,296 |
| Subtotal | 39 | 15,257 | 15,296 | 62 | 42,003 | 42,065 | 10 | 38,775 | 38,785 |
| Total | 65,256 | 127,834 | 193,090 | 76,621 | 199,645 | 176,260 | 38,993 | 129,211 | 168,204 |

Source: Bangladesh Directorate of Food.

Table F-4. Monthly Market, Procurement, Ration, and OMS Prices for Coarse Rice, January 1982 to June 1983 (taka per maund)

| Date | Market[a] | Procurement | Ration[b] | Initial OMS |
|---|---|---|---|---|
| 1982 | | | | |
| January | 210.1 | 190.0 | 171.0 | 200.0 |
| | | | (175.0) | 200.0 |
| February | 243.1 | 190.0 | 171.0 | 220.0 |
| March | 263.1 | 190.0 | 171.0 | 220.0 |
| April | 283.0 | 190.0 | 171.0 | 220.0 |
| May | 225.1 | 190.0 | 171.0 | 220.0 |
| June | 211.1 | 190.0 | 171.0 | 220.0 |
| July | 213.1 | 190.0 | 191.0 | 220.0 |
| | | | (195.0) | |
| August | 218.3 | 190.0 | 191.0 | 220.0 |
| September | 241.3 | 190.0 | 191.0 | 220.0 |
| October | 255.6 | 190.0 | 191.0 | 220.0 |
| November | 231.4 | 190.0/ 210.0[c] | 191.0 | 220.0/ (240.0)[d] |
| December | 220.1 | 190.0 | 191.0 | 240.0 |
| 1983 | | | | |
| January | 234.1 | 210.0 | 209.0 | 240.0 |
| | | | (215.0) | |
| February | 235.2 | 210.0 | 209.0 | 240.0 |
| March | 243.0 | 210.0 | 209.0 | 240.0 |
| April | 245.3 | 210.0 | 209.0 | 240.0 |
| May | 241.3 | 210.0 | 209.0 | 240.0 |
| June | 227.6 | 210.0 | 209.0 | 240.0 |

Note: 1 maund = about 82.28 lb. or 37.32 kg.

[a]Average minimum retail price.

[b]Former warehouse prices. Retail price in parenthesis.

[c]Change effective November 15, 1982.

[d]Change effective November 14, 1982.

Table F-5. Monthly Market, Procurement, Ration, and OMS Prices for Wheat, January 1982 to June 1983 (taka per maund)

| Date | Market[a] | Procurement | Ration[b] | Initial OMS |
|---|---|---|---|---|
| 1982 | | | | |
| January | 127.2 | 124.0 | 120.0 (124.0) | 120.0 |
| February | 160.3 | 124.0 | 120.0 | 120.0 |
| March | 153.9 | 124.0 | 120.0 | 132.0 |
| April | 155.2 | 124.0 | 120.0 | 132.0 |
| May | 152.1 | 124.0 | 120.0 | 132.0 |
| June | 143.0 | 124.0 | 120.0 | 132.0 |
| July | 149.2 | 124.0 | 130.0 (134.0) | 132.0 |
| August | 152.9 | 124.0 | 130.0 | 132.0 |
| September | 170.0 | 124.0 | 130.0 | 132.0 |
| October | 171.7 | 124.0 | 130.0 | 132.0 |
| November | 151.0 | 124.0 | 130.0 | 132.0 (144.0)[c] |
| December | 147.8 | 124.0 | 130.0 | 144.0 |
| 1983 | | | | |
| January | 162.6 | 124.0 | 139.0 (145.0) | 144.0 |
| February | 160.6 | 124.0 | 139.0 | 144.0 |
| March | 148.6 | 124.0 | 139.0 | 144.0 |
| April | 138.3 | 135.0 | 139.0 | 144.0 |
| May | 144.6 | 135.0 | 139.0 | 144.0 |
| June | 144.0 | 135.0 | 139.0 | 144.0 |

Note: 1 maund = about 82.28 lb. or 37.32 kg.

[a]Average minimum retail price in reporting subdivisions.

[b]Former warehouse prices. Retail price in parenthesis.

[c]Effective November 14, 1982.

Table F-6. OMS Offtakes, Country Average Retail Foodgrain Prices and Initial OMS Prices by Month, July 1981 - June 1983

| Date | OMS Offtakes (in tons) | | | Foodgrain Prices (taka/maund) | | Initial OMS Prices[a] | |
|---|---|---|---|---|---|---|---|
| | Rice[b] | Wheat | Total | Coarse Rice | Wheat | Rice | Wheat |
| 1981 | | | | | | | |
| July | - | - | - | 171.5 | 110.3 | 200.0 | 120.0 |
| August | - | - | - | 170.8 | 110.2 | 200.0 | 120.0 |
| September[c] | - | 2,494 | 2,494 | 171.7 | 114.2 | 200.0 | 120.0 |
| October | 1,750 | 1,448 | 3,198 | 188.6 | 118.4 | 200.0 | 120.0 |
| November | 1,581 | 561 | 2,142 | 194.8 | 118.9 | 200.0 | 120.0 |
| December[d] | 209 | 132 | 341 | 198.1 | 119.1 | 200.0 | 120.0 |
| 1982 | | | | | | | |
| January | - | 300 | 300 | 210.1 | 127.2 | 200.0 | 120.0 |
| February | - | - | - | 248.1 | 160.3 | 200.0 | 120.0 |
| March | 10,647 | 2,969 | 13,616 | 263.1 | 153.9 | 220.0 | 120.0 |
| April | 21,094 | 279 | 21,373 | 283.0 | 155.2 | 220.0 | 132.0 |
| May | 1,847 | 558 | 2,405 | 225.1 | 152.1 | 220.0 | 132.0 |
| June | 105 | 411 | 516 | 211.1 | 143.0 | 220.0 | 132.0 |
| Total FY 1982 | 37,233 | 9,152 | 46,385 | NA | NA | NA | NA |
| 1982 | | | | | | | |
| July | 102 | 901 | 1,003 | 213.1 | 149.2 | 220.0 | 132.0 |
| August | 11 | 4 | 15 | 281.3 | 151.9 | 220.0 | 132.0 |
| September | 9,475 | 16,152 | 25,627 | 241.3 | 170.0 | 220.0 | 132.0 |
| October | 21,422 | 52,266 | 73,688 | 255.6 | 171.7 | 220.0[e] | 132.0 |
| November | 2,862 | 8,117 | 10,979 | 231.4 | 151.0 | 220.0/ 240.0 | 144.0[e] |
| December | - | - | - | 220.1 | 147.8 | 240.0 | 144.0 |
| 1983 | | | | | | | |
| January | - | 91 | 91 | 234.1 | 162.6 | 240.0 | 144.0 |
| February | 43 | 1,287 | 1,331 | 235.8 | 160.6 | 240.0 | 144.0 |
| March | 887 | 529 | 1,416 | 243.0 | 148.6 | 240.0 | 144.0 |
| April | 433 | 49 | 482 | 245.3 | 138.3 | 240.0 | 144.0 |
| May | 962 | 4 | 966 | 241.3 | 144.6 | 240.0 | 144.0 |
| June | 349 | 102 | 451 | 227.6 | 144.0 | 240.0 | 144.0 |
| Total FY 1983 | 36,546 | 70,502 | 116,408 | NA | NA | NA | NA |

[a]Applicable for non-SR areas. Initial rice OMS prices in SR areas are Tk 10 above the price in non-SR areas. Wheat prices are Tk 5-6 above the prices in non-SR areas.

[b]Rice plus paddy in rice equivalent.

[c]The circular, allowing sale of paddy and rice in addition to wheat per given price chart, was not issued until September 29, 1981 although understanding in this respect was reached in the Title III amendment of June 26. So, until the end of September, wheat was the only OMS commodity. Initial OMS price of Tk 200.0/maund was in fact the trigger price.

[d]Although domestic procurement prices were raised in effect from December 7, 1981, the initial OMS price and the OMS price chart were not revised until February 25, 1982. OMS offtake from December through February was very insignificant because of confusion arising from nonrevision of OMS prices.

[e]The initial OMS prices of Tk 240.0 and Tk 144.0 per maund for rice and wheat respectively became effective November 14, 1982.

Table F-7. National Average Minimum Retail Prices, 1983
(taka per maund)

| Month | Paddy | Coarse Rice | Wheat |
|---|---|---|---|
| January | 147.2 | 234.1 | 162.6 |
| February | 149.6 | 236.8 | 160.6 |
| March | 154.6 | 243.0 | 148.6 |
| April | 155.5 | 245.3 | 138.3 |
| May | 146.9 | 241.3 | 144.6 |
| June | 139.5 | 227.6 | 144.0 |
| July | 138.6 | 227.9 | 146.1 |
| August | 136.3 | 224.6 | 148.2 |
| September | 144.0 | 238.2 | 158.8 |
| October | 150.9 | 246.5 | 163.2 |
| November | 145.4 | 235.6 | 153.7 |
| December | 148.7 | 238.2 | 150.6 |

Source: Cable from Dhaka to Agency for International Development/Washington, D.C. (DHAKA 1085), February 1984.

APPENDIX G

# THE ROLE OF THE PRIVATE SECTOR IN AGRICULTURE IN BANGLADESH

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## 1. INTRODUCTION

Agriculture in Bangladesh has traditionally been in the private sector, with large numbers of predominantly poor farmers who lacked resources and knowledge of modern agricultural practices required for raising agricultural productivity. The Government has had to come forward with resources, technology, and information to help farmers break out of traditional agriculture. This process began in the early 1960s with the introduction of modern inputs, high-yielding varieties (HYV) of seeds, and the creation of a number of institutions for agricultural and rural development.

These steps produced tangible results in increasing agricultural productivity, but the growing network of public organizations was beginning to create inefficiencies. Realizing the need for gradually handing over its role to the private sector, the Government initiated this process for fertilizer marketing in 1978. Similar measures were soon introduced in other areas of vital agricultural inputs such as pesticides and irrigation equipment.

More recently, this transfer of some functions to the private sector has gained momentum from the Government's declared policy of allowing the private sector to play a greater role in the economy. This report evaluates the performance of the Government in its efforts toward privatization of agriculture. The areas covered for the evaluation are (1) marketing of inputs, (2) storage, (3) extension, (4) maintenance and repair, (5) credit, and (6) agro-industries.

## 2. MARKETING OF INPUTS

Government involvement in agricultural input distribution started in 1960, when about 4,000 seed stores were established in unions (a local level of government in rural areas) throughout the country. A Union Agriculture Assistant was appointed in each union to handle distribution of seed, fertilizer, and other inputs. In October 1961, however, the East Pakistan Agriculture

Development Corporation (EPADC), a wholly Government-owned corporation under the Ministry of Agriculture, was established to take responsibility for distributing agricultural inputs, such as chemical fertilizer, seeds, tractors, irrigation pumps, and spare parts. This agency was renamed the Bangladesh Agricultural Development Corporation (BADC) in 1972.

## 2.1 Fertilizer

EPADC's original fertilizer marketing system involved private retailers below the thana level, while the agency retained wholesale marketing authority. This system faced several problems because of (1) inadequate Government storage facilities, (2) low dealer commissions, (3) inadequate number of dealers, and (4) restrictions on movement of inputs from one area to another.

A new marketing system for fertilizer was developed to resolve these problems and was introduced in Chittagong Division in 1978 on a 1-year trial basis. The new system was aimed at increasing fertilizer use on an equitable basis throughout Bangladesh. Its major features are the following:

1. Appointment of wholesale dealers in addition to retailers
2. Complete freedom of private sector movement of fertilizer except within a 5-mile border zone
3. Higher rates of commission to both wholesalers and retailers
4. Reduction of BADC's own selling points, including gradual closure of thana sales centers
5. Credit facilities for dealers and farmers

The system has been extended over the entire country since July 1980.

Prior to the privatization of wholesale fertilizer marketing, there were 22,000 active dealers and 6,000 part-time dealers in the country. Now, there are 4,000-5,000 wholesale dealers and 40,000-45,000 retailers working under the new system.

## 2.2 Seeds

BADC has been involved only in marketing HYV seeds; marketing traditional varieties has always been the domain of the private sector. Production of HYV seeds involves several steps, some of which require care by specialists. The first step is the production of foundation seeds out of breeder seeds, which is done at BADC's own seed multiplication farms. Next is the production of certified seeds, which is mainly done by contract growers. The certified seeds are examined, processed, preserved, and packed in seed processing centers run by BADC. The packed seeds are distributed through dealers. Some seeds also are imported to augment the local supply. The contract growers are organized into 13 zones. There are 13 seed processing centers in and around these zones. The number of contract growers has increased from 1,049 in crop year 1976/1977 to 20,920 in 1981/1982. Contract growers are gaining experience in seed production technology and have started to organize themselves into groups. Further development of the process could lead to complete privatization of HYV seed production and marketing.

## 2.3 Pesticides

Until 1974, pesticides were distributed free of charge to farmers. In May 1974, the Government withdrew its 50-percent subsidy of pesticides and its 40-percent subsidy of spray machines. These steps culminated in the total privatization of pesticide and sprayer import and distribution in 1979. The objective of this policy was to ensure greater participation of farmers and private traders. At the moment, there are about 13 private companies engaged in the import and wholesale trade of pesticides. They employ agents at the district and thana levels who sell to union-level retailers.

## 2.4 Irrigation

Two public sector agencies, the Bangladesh Water Development Board (BWDB) and the BADC, have traditionally been involved in irrigation programs. BWDB's concern is large-scale irrigation and flood control. Both agencies also implement some deep tubewell projects. BADC is engaged in all areas of small irrigation, including deep tubewells, shallow tubewells, and low-lift pumps. Shallow tubewells have always been distributed through sales. But sales of deep tubewells and low-lift pumps started only in FY 1980 and FY 1980, respectively. Before that, both were distributed on a rental basis.

Presently, three agencies are involved in selling shallow tubewells. BADC, the Bangladesh Krishi (Agriculture) Bank, and the Bangladesh Bank. Their total sales in FY 1981 were 17,586 units. The number increased to 26,445 in FY 1982, but then fell to 16,309 in FY 1983. The main reasons identified for the reduced sales in FY 1983 are (1) lack of popular brands of pumps, (2) delays in sanctioning bank loans, (3) delays in fixing prices for electrically operated shallow tubewells, and (4) organizational problems such as shortage of sales staff.

It is reported that about 6,000 applications for purchase of tubewells are pending with BADC alone. Cumulative sales through FY 1981 were about 85,000.

The shallow tubewell is a small pump capable of irrigating about 11 acres. A rich farmer can buy such a unit and sell water to neighboring farmers. On average, farmers irrigate 5 acres of their own land and 6 acres of others' land.

Deep tubewells and low-lift pumps are larger pumps and can irrigate a much larger area. A 2-cubic-feet-per-second deep tubewell can irrigate over 60 acres of land, and a 1-cubic-foot-per-second low-lift pump can irrigate about 30 acres of land. Typically, farmers form groups to buy these machines. The Government provides a high subsidy to reduce their prices. A deep tubewell that costs about Tk 350,000 is sold at Tk 90,000, and a low-lift pump that costs about Tk 30,000 is sold at about Tk 18,000.

Sales of both systems are increasing. In FY 1981, a total of 573 deep tubewells and 2,206 low-lift pumps were sold. The corresponding numbers in FY 1982 were 2,088 and 5,366, respectively. Additionally, 2,022 old rental low-lift pumps were sold to their users in FY 1982. Sales of deep tubewells increased to 2,300 in FY 1983. The target for low-lift pumps for 1984 is 5,906 units. It is expected that by the end of that year, the cumulative number of deep tubewells sold will be 4,961 compared with 11,376 on rental, and the cumulative sales for low-lift pumps will be about 15,500 units compared with 30,000 on rental.

## 3. STORAGE

The private sector always has been involved in commercial storage of agricultural produce, which forms a part of the marketing system. The Government's participation in this area started with the food rationing system, but the role increased and diversified as BADC became involved. At present, the Government owns and operates local supply depots and central storage depots for foodgrain. The BADC also has its own network of fertilizer warehouses. However, private sector storage fa-

cilities continue to thrive; in 1979 BADC hired 827 private warehouses with a total capacity of 205,442 tons, compared with the BADC's own storage capacity of 154,000 tons in 308 warehouses. The private storage capacity will increase as privatization of fertilizer, seed, and pesticide marketing progresses.

Another area of growing importance in the private sector is cold storage. The total cold storage capacity in the country is 400,000 tons, all privately owned. Cold storage is used mainly for potatoes, which yield some 1.1 million tons annually.

## 4. EXTENSION

Agriculture extension work was initiated in this country by the Government. The Government has a large Agriculture Extension and Management Department with staff in every union of the country. There are also extension training institutes under this Department. Only two nongovernment groups work outside this Government system: pesticide manufacturers and private voluntary agencies (PVOs).

The 13 pesticide manufacturers in the country have marketing networks up to the union level. The companies arrange training of dealers who, in turn, spread the knowledge to the farmers. Media advertisement is also used regularly. The Government's Plant Protection Department also trains pesticide dealers.

The PVOs play a very extensive role in disseminating knowledge about modern agricultural practices and various appropriate rural technologies. There are over 100 PVOs in the country; about 56 of them are organized in a coordinating body called the Agriculture Development Agencies of Bangladesh. A quick survey of the PVOs reveals that their extension activities include agriculture, horticulture, poultry farming, sericulture, apiculture, sanitation, cooperative formation, and family planning.

## 5. MAINTENANCE AND REPAIR

Agriculture and other rural activities are still not very mechanized. Only in irrigation has machine power been introduced in a substantial degree. However, semi-mechanized, hand-operated equipment for sowing, weeding, pesticide spraying, and the like is being used increasingly as agriculture is being modernized. Previously, when BADC supplied irrigation pumps mainly on a rental basis, it also provided maintenance and repair services. Now the private sector is being encouraged to set up repair workshops in every thana. Institutionalized credit is being extended for this purpose. About 100 such workshops have been given loans by the Bangladesh Krishi Bank alone.

## 6. CREDIT

The total amount of institutional credit made available in Bangladesh was Tk 5,488.8 crore (a unit of Tk 10 million) in FY 1981 and Tk 6,465.14 crore in FY 1982. Of this, the private sector received Tk 1,902.64 crore in FY 1981 and Tk 2,311.25 crore in FY 1982. The amount disbursed to the agriculture sector (all in the private sector) was Tk 352.28 crore and Tk 412.81 crore in FY 1981 and FY 1982, respectively.

Table G-1 shows the trend in agricultural credit expansion in Bangladesh.

Table G-1. Trends in Agricultural Credit, FY 1974 to FY 1982 (in crore taka)

| Fiscal Year | Disbursements |
|---|---|
| 1974 | 34.18 |
| 1976 | 46.29 |
| 1978 | 160.80 |
| 1981 | 352.28 |
| 1982 | 412.81 |

Table G-2 shows the summary of agricultural credit for FY 1981 and FY 1982.

Table G-2. Summary of Agricultural Credit, FY 1981 and FY 1982 (in crore taka)

| Item | 1981 | 1982 |
|---|---|---|
| Loan Target | 548.31 | 653.74 |
| Disbursement | 352.28 | 412.81 |
| Recovery | 225.75 | 254.19 |
| Outstanding | 653.22 | 799.77 |

The following banks and institutions are engaged in the distribution of institutionalized agricultural credit: Bangladesh Krishi Bank (BKB), Bangladesh Samabaya Bank Ltd. (BSBL), cooperative land mortgage banks, central cooperative banks, nationalized commercial banks, Rural Development Board and its affiliated organizations, the Thana Central Cooperative Associations, and Krishak Samabaya Samity.

The Rural Development Board and its affiliated cooperative organizations do not disburse credit themselves, but they facilitate the credit programs of banking institutions.

Two credit program tracks are now underway: the Normal Program (NP) and the Special Agriculture Credit Program (SACP).

The Normal Program is the major program of institutionalized credit. It is available to numerous agro-oriented projects except crop production, which is financed under the Special Agriculture Credit Program. The major beneficiaries of the credit program are projects in pond fiseries, livestock, poultry, fruit plantations, irrigation, food processing such as rice/wheat mills, and storage. Special projects such as integrated rural development programs of the Rural Development Board also are financed by agricultural credit. Disbursement of credit by institution and program in FY 1981 and 1982 is presented in Table G-3.

Table G-3. Credit Disbursement by Institution, FY 1981 and FY 1982 (In crore taka)

| Institution | 1981 | | | 1982 | | |
|---|---|---|---|---|---|---|
| | NP | SACP | Total | NP | SACP | Total |
| BSBL | 25.70 | - | 25.70 | 18.58 | - | 18.58 |
| BKB | 185.32 | 24.42 | 209.74 | 251.22 | 19.78 | 271.00 |
| NCBS | 65.58 | 48.26 | 116.84 | 81.63 | 41.60 | 123.23 |

Institutionalized agricultural credit is highly concessionary. The rate of interest is only 6 percent, although the current bank rate is 10.5 percent.

Some PVOs also are extending credit to the rural poor for agriculture and cottage industries. Their credits often are given to groups of people rather than to individuals. The total amount of such credit is small compared with that available from

the banking system. However, because of close supervision and guidance, these credits are reported to be highly effective.

## 7. SPECIFIC INDUSTRIES

Important agro-related industries in Bangladesh are jute, handlooms, rice mills, edible-oil mills, sugar mills, and tanneries. Except for the jute and sugar mills that were nationalized in 1972, all other mills are in the private sector. Both jute and sugar mills are large enterprises. Some of the nationalized jute mills are being returned to their former owners.

It is difficult to estimate the number of small private factories in various industries. Their number is on the increase as indicated by the increased rate of bank lending, electricity hookups, and other indicators. In FY 1981, the Bangladesh Krishi Bank extended loans totaling Tk 34.79 crore for agro-related industries like flour mills, fish-freezing units, oil mills, rice mills, and cold storage. The figure for FY 1982 is reported to be higher.

APPENDIX H

# THE GOVERNMENT OF BANGLADESH: STRUCTURE AND FUNCTION

by Daniel H. Erickson

## 1. NATIONAL GOVERNMENT[1]

Bangladesh has a unitary form of government. Under the martial-law regime (declared in March 1982), the head of state is a civilian president whose position is largely ceremonial, with real power in the hands of the Chief Martial Law Administrator (CMLA) and an informal council of senior military leaders. Two Deputy MLAs (the chiefs of the Navy and Air Force) and five Zonal MLAs (military officers commanding the five military zones within Bangladesh) assist the CMLA in governing the country. The CMLA's cabinet is composed of active and retired military officers, with a few senior civilian ministers holding key portfolios.

The judiciary is nominally independent, but its power is circumscribed by the CMLA's authority to appoint and remove judges and by martial-law tribunals that may adjudicate a wide range of civil and criminal matters without appeal to the civilian courts.

The thrust of the MLA's domestic reform program is the decentralization of basic administrative functions to the thana (roughly, county) level, a process that began in November 1982. This program is designed to bring administrative decision-making closer to the people and to make the Government more responsive to local needs.

The martial-law regime has promised a return to representative democracy in the future, but no specific date for elections has been announced.

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[1]Adapted from Bangladesh: A Country Profile, originally prepared by Evaluation Technologies, Inc., Arlington, Virginia under contract AID-otr-C-1553 and extensively revised and updated by George G. Wood, Assistant Food for Peace Officer, USAID/ Bangladesh.

## 2. LOCAL GOVERNMENT[2]

The majority of Government services provided are delivered by the national Government's civil service administrators and technicians. Outside Dhaka, personnel of the functional (nation-building) ministries, such as agriculture, health, and education, are stationed at some or all of the four administrative levels: divisions, districts, subdivisions, and thanas. At each level of administration, the technical staff of the various nation-building ministries is managed by a chief administrator for that level under the general supervision and guidance of the technical staff from the respective ministry at the next higher level of administration. Thanas are supervised by a subdivision, subdivisions are supervised by a district, and districts are supervised by divisions.

The public food distribution system is centrally administered by the Food Directorate, a unit within the Food Division of the Ministry of Food. The Food Directorate administers the food distribution system through subordinate officials whose responsibilities encompass successively lower echelon administrative units within the country. Reporting to or through the chain of command to the Director of Supply, Distribution, and Rationing (DSDR) are 4 Divisional Controllers of Food with responsibility for internal procurement and movement of the commodities to warehouses at central storage depots and local supply depots, 22 District Controllers of Food, and 72 Subdivisional Controllers of Food. The Subdivision Controllers supervise thana inspectors.

In addition to the national Government staff, the national Government has authorized the operation of four types of local self-government and quasi-self-government to carry out specific services. Local self-governments are established at the district level (zilla parishad), the union level (union parishad), the village level (gram sarkar), and in incorporated urban areas (pourashava). The first three are concerned with government in the rural areas, and the last is the municipal government unit. The quasi-self-government, the thana parishad, is a coordinating body that joins elected local government officials from the union parishads with the national bureaucracy stationed at the thana level. Presently, most officials of the union parishads, gram sarkars, and pourashavas are elected. Elections for the zilla parishads have not yet occurred, and this local government is now managed by the District Commissioner--the chief administrator of the national Government's district administration.

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[2]Adapted from Agency for International Development, Project Paper, "Bangladesh Zilla Roads Maintenance and Improvement," 388-0056, p. 35; and USAID/Dhaka, The Functioning of Local Government in Rural Bangladesh.

Local governments are assigned a wide variety of functions. However, because of the financial limitations and the parallel activities of the central ministries, their main concerns are roads, irrigation, community centers, organization of self-help and Food for Work activities, and the settlement of minor village-or union-level disputes. One of the most important functions assigned solely to local governments is responsibility for construction and maintenance of the farm-to-market and village-to-farm access road network. Zilla parishads are not significantly involved in the other functions mentioned because these are carried out by thanas, unions, and gram sarkars.

Zilla and union parishads have taxation and revenue authority and finance more than 50 percent of their expenditures from local sources. The balance of revenue spent by these local bodies and all funds for the thana parishads are provided by a number of grants-in-aid from the central Government. Local governments are guided and supervised by the Ministry of Local Government, Rural Development, and Cooperatives, which has authority to set the rules and regulations related to policies, responsibilities, and procedures of local governments.

Traditionally in South Asia, the district has been a key administrative unit. Government at this level has been important in routine public administration, maintenance of law and order, and administration of justice. Briefly, the operation of district administration is built firmly on methods originated by the Moghuls and refined by the British in the 18th and 19th centuries. The aim of administration is seen as caretaking--with maximum emphasis on budgetary accountability and little concern for speed in executing activities. Although, since liberation, more formal emphasis has been placed on development activity and officers charged with these responsibilities have been posted in the districts, there still has been no change in the system itself. Manuals of procedure dating from the days of the British Raj remain in use at district offices. These patterns of operation are taken for granted in district administration, despite increasing awareness on the part of Bangladeshi officers that they are inappropriate to modern needs.

A second related aspect of district administration has been aptly described as "political bilingualism." That is, two separate idioms of social behavior, with their associated cultural traditions, operate in administrative contexts in Bangladesh. First, there is the "modern" idiom with its impressive vocabulary of concepts (such as plan, policy, implementation), its roots in the Western progressive cultural tradition, its reinforcement in modern technical education, and its emphasis on impersonal, task-oriented, career-directed activities.

Against this idiom is counterposed another traditional one. The administrative culture of South Asia has a history dating back several thousand years. The more recent development of Moghul and British forms has built directly on this tradition. Relationships are hierarchic, direct, and personalized; functions are not specifically defined; responsibility is not delegated to subordinates; and personal loyalties and antagonisms are expected to guide administrative operations. There is less emphasis on output and more on maintenance of relationships and improvement of one's position in relation to others within the organization. Organizations are neither functionally defined nor functionally autonomous but are linked closely to higher levels and to parallel organizations such as political parties. The effect of this traditional pattern of administrative organization is to create a host of bureaucratic entities that seethe with rivalry and factionalism, while erecting a multitude of red tape checks and balances, which inhibit activity. The interplay of the two "idioms," manifested in differing balances in various organizations, gives a characteristic tone to the operation of South Asian bureaucracies. At the district level in Bangladesh, the "traditional" tends to be uppermost at present. Creating a hospitable environment for economic development would seem to call for tilting the balance in the direction of more effective, developmentally oriented operations.

# BIBLIOGRAPHY

## Books, Reports, and Journal Articles


Ahmad, Kamaluddin. "Economic and Nutritional Effects of Food for Relief Work Projects." University of Dhaka. Institute of Nutrition and Food Science, March 1978.

Ahmed, Raisuddin. Agricultural Price Policies Under Complex Socioeconomic and Natural Constraints: The Case of Bangladesh. Research Report No. 27. Washington, D.C.: International Food Policy Research Institute, October 1981.

Ahmed, Raisuddin. Foodgrain Supply, Distribution, and Consumption Policies within a Dual Pricing Mechanism: A Case Study of Bangladesh. Research Report No. 8. Washington, D.C.: International Food Policy Research Institute, May 1979.

Alim, A. Land Reform in Bangladesh, Social Change, Agricultural Development and the Eradication of Poverty. Dhaka, Bangladesh: Samina Publication, 1979.

Castro, Alfonso Peter, N. Thomas Hakansson, and David Brokensha. "Indicators of Rural Inequality." World Development 9, 5 (1981):401-427.

Chowdury, A.K., M. Alauddin, and G.T. Curlin. Recent Trends in Fertility and Mortality in Bangladesh 1966-75. Working Paper No. 3. Dhaka, Bangladesh: Cholera Research Laboratory, January 1978.

Clay, Edward J. "Employment Effects of the HYV Strategy in Bangladesh: A Rejoinder." Dhaka, Bangladesh: Agricultural Development Council, Inc., March 1978.

Faaland, Just, and J.R. Parkinson. Bangladesh: The Test Case of Development. Boulder, Colorado: Westview Press. 1976. Also C. Hurst & Co., London, England.

Food and Agriculture Organization of the United Nations. The State of Food and Agriculture 1979. FAO Agriculture Series No. 10. n.d.

Franda, Marcus. Bangladesh: The First Decade. n.p. n.d.

Franda, Marcus. "The Very Poor in Bangladesh: Food Policy and Politics." First draft, n.d.

Government of Bangladesh, Bangladesh Bureau of Statistics, Statistics Division, Ministry of Planning. Government of

the People's Republic of Bangladesh 1980 Statistical Yearbook of Bangladesh. Dhaka, Bangladesh, June 3, 1981 and September 27, 1982.

Government of Bangladesh, Planning Commission. Bangladesh Medium-Term Foodgrain Production Plan. Overview, Vol. I. Dhaka, Bangladesh, February 1981.

Government of Bangladesh. Second Five Year Development Plan. Dhaka, Bangladesh.

Institute of Nutrition and Food Science, Food for Work: An Evaluation of the Primary and Secondary Effects. Dhaka, Bangladesh: University of Dhaka, September 1981.

Institute of Nutrition and Food Science. Nutrition Survey of Rural Bangladesh 1975-1976. Dhaka, Bangladesh: University of Dhaka, December 1977.

Integrated Rural Development in Bangladesh. Report of a seminar sponsored by the Commonwealth Foundation and the Government of Bangladesh. n.p. November 1980.

International Fertilizer Development Center (IFDC). Bangladesh Policy Options for the Development of the Fertilizer Sector. Muscle Shoals, Alabama: IFDC, May 28, 1982.

International Fertilizer Development Center. Second Evaluation of the Bangladesh New Marketing System. July 1980.

Isenman, Paul and Hans Singer. "Food Aid: Disincentive Effects and Their Policy Implications." Economic Development and Change 25, 2 (1977):205-237.

Islam, M.S. Infant Mortality in Rural Bangladesh: An Analysis of Causes During Neonatal and Postneonatal Period. ICDDRB Scientific Report No. 44. April 1981.

Jahangir, B.I. Differentiation, Polarization and Confrontation in Bangladesh. Dhaka, Bangladesh: Dhaka Center for Social Studies. 1979.

Khan, Akhter Hameed. "A History of the Food Problem." Paper presented at the XVI Conference of the Pakistan Economic Association, at Islamabad University February 18-20, 1973.

Khan, Azizur Rahman, Rizwanul Islam, and Mahfuzul Huq. Employment, Income and the Mobilization of Local Resources: A Study of Two Bangladesh Villages. Bangkok, Thailand. Asian Employment Programme. 1980.

McCord, C.W., S.A. Chowdhury, A.H. Kahn, and A. Ashraf. Death Rates, Land and the Price of Rice. CCDB Report No. 04. Dhaka, Bangladesh: CCDB, 1980.

McHenry, D.F., and Kai Bir. "Food Bungle in Bangladesh," Foreign Policy. 27 (Summer 1977):72-88.

Nelson, Gordon O. "The Impact of Food Aid on the Bangladesh Economy." Draft Dissertation, Stanford University, 1982.

Newberg, Richard. "Evaluation Report of the Bangladesh Title III Program." Review draft. U.S. Department of Agriculture, n.d.

Nyrop, Richard F. et al. Area Handbook for Bangladesh. Area Studies of the American University. Washington, D.C.: GPO, 1975.

Pecht, Dorothy A., ed. Living in Dhaka. Fourth edition revised. Dhaka, Bangladesh: Bangladesh Co-operative Book Society (Press Section) Ltd., 1975.

Ray, Edward John. "The Role of Finance in Rural Development." Paper presented at a Colloquim on Rural Finance. Economic Development Institute, World Bank. Background Paper No. 5. Washington, D.C., September 1-3, 1981.

Stepanek, Joseph F. Bangladesh--Equitable Growth? New York: Pergamon Press Inc., 1978.

Thomas, Vined. "Bangladesh: Some Aspects of Food Price Policy." June 1979.

Wennergren, E. Boyd. An Assessment of the Agricultural Sector in Bangladesh. Logan, Utah: Utah State University, March 1983.

Wood, G.D. The Socialization of Minor Irrigation in Bangladesh. Dhaka, Bangladesh: PROSHIKA. October 1982.

World Food Programme/Bangladesh. "Bangladesh Foodgrain Forecast." Various issues. 1982.

## AID and USAID/Bangladesh Publications

AID. "Bangladesh: Annual Budget Submission, FY 1984." June 1982.

AID. "Bangladesh: Country Development Strategy Statement, FY 1983." February 1981.

AID. "Bangladesh: Country Development Strategy Statement, FY 1984." January 1982.

AID. "Bangladesh: Country Development Strategy Statement, FY 1985." Draft. January 1983.

AID. Bangladesh: Title III: Food for Development Program, FY 1983 Evaluation. September 1983. (By V. Molldrem and P. Wenger).

AID. Bangladesh Country Profile. 1982-1983 edition. Office of Disaster Relief.

AID. Development Assistance Program FY 1975. Department of State. December 1974.

AID/Development Coordination Committee. Development Issues: U.S. Actions Affecting the Development of Developing Countries. Washington, D.C.: Development Coordination Committee, 1982.

AID. Food Aid and Development: The Impact and Effectiveness of Bilateral PL 480 Title I-Type Assistance. AID Program Evaluation Discussion Paper No. 15. December 1982. (By Edward J. Clay and Hans W. Singer).

AID. Food and Agricultural Development. AID Policy Paper. May 1982.

AID and U.S. Department of Agriculture. "FY 1982 Evaluation of the Bangladesh Title III Food for Development Program." September 14-28, 1982." Unpublished. November 1982. (By David E. Kunkel and Peter Thormann).

AID. "A Summary of Cross-Cutting Issues From AID Project Evaluation Reports." Draft. August 1980. (By K. Toh.)

USAID/Bangladesh. Annual Budget Submission FY 1984. June 1982.

USAID/Bangladesh. "Bangladesh: Policy Reform Grant." No. 388-0059. Dhaka: May 21, 1982.

USAID/Bangladesh. Costs of Production and Returns of Representative Rice and Wheat Farmers in Bangladesh. January 4, 1978. (By Richmond Allen).

USAID/Bangladesh. Employment Effects of the HYV Strategy. January 23, 1978. (By Richmond Allen).

USAID/Bangladesh. Evaluation of the PL 480 Title III Agreement in Bangladesh. December 10, 1980.

USAID/Bangladesh. Impact Evaluation of Shallow Tubewell Irrigation. December 1982. (By Akhter Uddin Ahmed, Charles H. Antholt, and E. Boyd Wennergren).

USAID/Bangladesh. Irrigation Development Options and Investment Strategies for the 1980's. Water Management Synthesis (WMS) Project. WMS Report No. 3. May 1981.

USAID/Bangladesh. Mid-Term Evaluation of USAID Family Planning Services Project in Bangladesh. 1983. (By D.H. Minkler, Jalaluddin Ahmed, Hashmet Ali, and Dallas Voran).

USAID/Bangladesh. PL 480 Title III Bangladesh U.S. FY 1981 Evaluation Benchmark Analysis. November 20, 1981.

USAID/Bangladesh. The PL 480 Title III Program in Bangladesh: An Evaluation of the First 16 Months August 1978-November 1979. December 13, 1979.

USAID/Bangladesh. A Profile of the Countryside. (By F.T. Januzzi and J.T. Peach). 1979.

USAID/Bangladesh. Report on the Hierarchy of Interests in Land in Bangladesh. (By F.T. Januzzi and J.T. Peach). 1979.

USAID/Bangladesh. The Title III Open Market Sales Program in Bangladesh: A First Evaluation. June 13, 1979.

USAID/Bangladesh. U.S. Bilateral Economic Assistance to Bangladesh, All Years Summary. 1953-September 30, 1982. Octobe 1982.

USAID/Bangladesh. Women at Work in Bangladesh. 1982. (By M.E. Marum).

World Bank Publications

World Bank. Bangladesh: Current Trends and Development Issues. Report No. 2245-BD. December 15, 1978.

World Bank. Bangladesh: Eleventh Imports Program Credit. Report No. P-3397-BD. October 27, 1982.

World Bank. Bangladesh: Food Policy Issues. Report No. 2761-BD. December 19, 1979.

World Bank. Bangladesh: Foodgrain Self-Sufficiency and Crop Diversification. Report No. 3953-BD. August 3, 1982.

World Bank. Bangladesh: Issues and Prospects for Industrial Development. Volumes I and II. Report No. 2191-BD. December 5, 1978.

World Bank. Bangladesh: Tenth Imports Program Credit. Report No. P-3162-BD. November 23, 1981.

World Bank. Bangladesh: Recent Economic Developments and Selected Development Issues. Report No. 3768-BD. March 3, 1982.

World Bank. Bangladesh: Recent Economic Developments and Selected Development Issues--Summary and Conclusions. Report No. 3768-BD. March 18, 1982.

World Bank. Recent Economic Trends and Medium-Term Development Issues. Report No. 4277-BD. March 4, 1983.

World Bank. The Role of Subsidized Consumption in Reducing Population Growth: The Case of Sri Lanka, Kerala and Bangladesh. World Bank Report No. 2761-BD. December 1978. (By J. Levinson).