

ASIAN DEVELOPMENT BANK

PPA: BAN 22217

PROGRAM PERFORMANCE AUDIT REPORT

ON THE

**FOOD CROPS DEVELOPMENT PROGRAM
(Loan 1045-BAN[SF])**

IN

BANGLADESH

December 1999

CURRENCY EQUIVALENTS

Currency Unit – Taka (Tk)

		At Appraisal (September 1990)	At Project Completion (July 1996)	At Operations Evaluation (July 1999)
Tk1.00	=	\$0.028	\$0.024	\$0.020
\$1.00	=	Tk35.24	Tk41.68	Tk50.92

ABBREVIATIONS

ADB	–	Asian Development Bank
BADC	–	Bangladesh Agricultural Development Corporation
BCIC	–	Bangladesh Chemical Industries Corporation
DOF	–	Directorate of Food
EU	–	European Union
FCDP	–	Food Crops Development Program
FPMU	–	Food Planning and Monitoring Unit
MOA	–	Ministry of Agriculture
MOF	–	Ministry of Food
MTASDP	–	Medium-Term Agriculture Sector Development Plan
NGO	–	nongovernment organization
NMIDP	–	National Minor Irrigation Development Project
OEM	–	Operations Evaluation Mission
PCC	–	program coordinating committee
PCR	–	program completion report
PPAR	–	program performance audit report
RRP	–	report and recommendation of the President
SDR	–	special drawing right
STR	–	second tranche release
STW	–	shallow tubewell
TA	–	technical assistance
TSP	–	triple superphosphate
UNDP	–	United Nations Development Programme
USAID	–	United States Agency for International Development
WB	–	World Bank

NOTES

- (i) The fiscal year (FY) of the Government ends on 30 June.
- (ii) In this report, "\$" refers to US dollars.

Operations Evaluation Office, PE-542

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BASIC DATA
Food Crops Development Program (Loan 1045-BAN[SF])

INSTITUTION BUILDING

TA No.	TA Project Name	Type	Person-Months	Amount	Approval Date
1409	Formulation of a New Tariff Structure for Agricultural Equipment Imports	AOTA	3	\$70,000	6 Nov 1990
1410	Options for the Development of Groundwater and Surface Water Irrigation	AOTA	8	\$170,000	6 Nov 1990
1411	Strengthening the Food Planning and Monitoring Unit of the Ministry of Food	AOTA	12	\$260,000	6 Nov 1990

KEY PROGRAM DATA (\$ million)	As per ADB Loan Documents	Actual
Total Program Cost	130.7	130.7
Foreign Exchange Cost	130.7	130.7
ADB Loan Amount/Utilization	130.7	130.7
Amount of Cofinancing	75.0	75.0

KEY DATES	Expected	Actual
Reconnaissance		12-20 Oct 1988
Loan Fact-Finding		6-22 Mar 1989
Appraisal		24 Mar-10 Apr 1990
Loan Negotiations		6-10 Aug 1990
Board Approval		6 Nov 1990
Loan Agreement		20 Dec 1990
Loan Effectiveness	20 Mar 1991	21 Dec 1990
First Disbursement		27 Dec 1990
Program Completion	1 Jun 1993	30 Jun 1995
Loan Closing		30 Jun 1995
Months (effectiveness to completion)	26.43	54.31

BORROWER The People's Republic of Bangladesh

EXECUTING AGENCY Bangladesh Bank (Exchange Control Department)

MISSION DATA

Type of Mission	Missions (no.)	Person-Days (no.)
Reconnaissance	1	9
Fact-Finding/Preparation	4	218
Consultations	5	58
Appraisal	2	61
Project Administration		
- Review	6	94
- Special Project Administration	1	8
- Project Completion	1	22
Operations Evaluation	1	24

— = not calculated, ADB = Asian Development Bank, AOTA = advisory and operational technical assistance, TA = technical assistance.

EXECUTIVE SUMMARY

The main objective of the Food Crops Development Program was to achieve sustained growth in food crops, focusing on expanding rice and wheat production during the winter season (mid-October to mid-April). The Program comprised policy measures involving the removal of subsidies on agricultural inputs, tariff and regulatory reform, institutional reorganization, and environmental protection.

The loan amount was SDR91.532 million (\$125 million equivalent) funded from the Special Funds resources of the Asian Development Bank (ADB), with a 40-year maturity period and a service charge of 1 percent per annum. The loan was effective in December 1990 and released in two equal tranches upon fulfilling specific loan conditions. The release of the second tranche was delayed by nearly 2.5 years, and ADB had to approve a request for amendments to the program conditions before the second tranche could be released. Proceeds from the loan were to be used to finance the foreign exchange requirements of eligible imports indicated on a positive list.

The policy reforms under the Program represent a meaningful step in furthering the reform process begun in the country. However, moves to intervene in the price-setting mechanism through a floor price were misguided and eventually abandoned. Implementation performance of the reform measures varied. Subsidies on the two specific fertilizers (triple superphosphate and muriate of potash) and minor irrigation equipment under the Program were disbanded. However, the subsidy on urea was reintroduced. Reforms involving reductions in selected tariffs were implemented. Restrictions on the siting of shallow tubewells were lifted. Private sector participation in the supply of minor irrigation equipment and in food grain import and distribution increased significantly. Institutional reorganization was focused mainly on downsizing the Bangladesh Agricultural Development Corporation (BADC) and the Directorate of Food and on strengthening staff capacity of the Food Planning and Monitoring Unit.

Contrary to the Government commitment to divest BADC from seed trading at the time of the release of the second tranche of the loan, BADC continued to engage in the retailing of seeds. While there were plans to set up an environmental monitoring system at the time of the second tranche release of the loan, the system was not established.

The administrative capacity of the Government to implement and sustain the policy reforms under the Program suffered from political constraints and inadequate coordination by the program coordination committee, despite ADB supervision. A program benefit monitoring and evaluation system mandated under the Program was not established.

Three technical assistance (TA) grants¹ were provided to assist in the implementation of the Program. They supported the formulation of a new tariff structure for agricultural equipment imports, the study of options for developing groundwater and surface water irrigation, and the strengthening of the Food Planning and Monitoring Unit. The TAs were generally effective as they led to follow-on action by the Government, although in the case of the TA on groundwater

¹ TA 1409-BAN: *Formulation of a New Tariff Structure for Agricultural Equipment Imports*, for \$70,000, approved on 6 November 1990; TA 1410-BAN: *Options for the Development of Groundwater and Surface Water Irrigation*, for \$170,000, approved on 6 November 1990; and TA 1411-BAN: *Strengthening the Food Planning and Monitoring Unit of the Ministry of Food*, for \$260,000, approved on 6 November 1990.

and surface water irrigation, the Government did not accept the recommendation on unrestricted siting of shallow tubewells.

The performance of the Program was mixed. Winter season crop production and yield (rice and wheat) improved significantly, indicating increased use of irrigation and associated inputs. Real rural household income had improved. Although the real price of rice declined significantly, indicating improved efficiencies and lower costs, food self-sufficiency was not achieved. Urea subsidies combined with the withdrawal of subsidies on other types of fertilizers led to an imbalance in fertilizer use. The fertilizer trade was heavily regulated and private sector participation in the distribution of high-yielding seeds was not fostered as envisaged under the Program. A possible unintended impact was the emergence of arsenic contamination of water in shallow tubewells. While investigations are continuing to confirm the true cause, the link with changes in the water table led to arguments for regulations to control the siting of shallow tubewells.

Sustainability of policy reforms is a cause for concern. Urea subsidies currently form the bulk of the fertilizer subsidies. But triple superphosphate and gypsum are also produced by a public sector factory that is subject to Government regulations on pricing. BADC's role in seed retailing would be reinforced with the Government's policy to maintain a seed stockpile. The imposition of regulations on the fertilizer trade, which previously was relatively unrestricted, appear to be continuing indefinitely. Given the mixed performance of the Program and the concern over sustainability of some of the policy reforms, the Program is rated as partly successful.

Key issues would revolve around the question of policy reversals, especially for fertilizer subsidy, encouragement of private sector participation in the agricultural economy, trade-offs in maintaining costly stockpiles, and the environmental monitoring of the impact of the Program, particularly with the emergence of arsenic in shallow tubewells.

Among the lessons learned from implementation of the Program are that a longer disbursement period is required for a program involving difficult reforms and that institutional reforms should be accompanied by transitional support to affected staff. As for follow-up actions, the most prominent would be for the Government to divest the roles of BADC and the Bangladesh Chemical Industries Corporation in commercial operations to promote an efficient delivery system in fertilizer and seed distribution.

I. BACKGROUND

A. Rationale

1. The declining growth in agriculture (particularly in food crops) during FY1981-FY1989 and natural calamities resulted in food shortages and increased reliance on imports and food aid in Bangladesh. In response, the Government formulated the Medium-Term Agriculture Sector Development Plan (MTASDP) to accelerate rice and wheat production based on irrigation-aided winter season cropping (mid-October to mid-April).¹ A principal objective of MTASDP was to increase annual food grain production by 4 percent during FY1991-FY1995. Agriculture was, and still is, the dominant and priority sector in the country's economy. Achieving overall development critically depended on the performance of the agriculture sector, which was undergoing policy reforms to reduce the market distortions that were impeding the sector's growth. The intervention of the Asian Development Bank (ADB) would continue the implementation of reform measures designed to increasingly emphasize efficient resource allocation by the market. At the same time, the identified needs of the sector (improved supply system for agricultural inputs, effective price incentives to farmers, and rationalization of food management policy) were urgent. A quick-disbursing loan mechanism was deemed necessary under the prevailing macroeconomic conditions brought about by the country's rapid deterioration in the balance of payments.

B. Formulation

2. The Food Crops Development Program (FCDP)² was intended to support MTASDP. MTASDP was prepared as the result of intensive policy discussions between the Government and the foreign assistance community based on an independent review sponsored by the United Nations Development Programme (UNDP). Designed to remove the longstanding barriers to food crop production and attain sustained growth, FCDP was formulated in close cooperation with the Food and Agriculture Organization of the United Nations, United States Agency for International Development (USAID), and World Bank (WB), and represented a sound strategy to develop the agriculture sector. Much of the groundwork for preparing the policy reforms had therefore been done, particularly as FCDP followed on other ADB assistance that had pursued similar policy reforms.³ The Fact-Finding Mission was fielded in March 1989, followed by the Preparation Mission in October 1989, and the Appraisal Mission in March-April 1990. The Mission assessed the Government's program for food crops development, and obtained the Government's formal commitment to policy reform measures as evidenced by the Development Policy Letter of the Government to ADB (Appendix 1). While a comprehensive sector analysis was done (as documented in the report and recommendation of the President [RRP] on FCDP), it is not apparent that a comprehensive analysis was made on the practicability of implementing some of the reform measures. That some of these measures remained unchanged or were reversed under FCDP (even though these were the measures whose reforms were pursued through earlier assistance) points to the unrealistic expectations

¹ MTASDP was incorporated in the country's Fourth Five-Year Development Plan (FY1991-FY1995).

² Loan 1045-BAN(SF): *Food Crops Development Program*, for \$125 million, approved on 6 November 1990.

³ Such as Loan 830-BAN(SF): *Agricultural Inputs Program*, for \$51.7 million, approved on 7 April 1987; and Loan 771-BAN(SF): *Fourth Crop Intensification Program*, for \$39 million, approved on 17 December 1985.

for policy changes in some areas or to inadequate Government commitment. The risk of inadequate Government commitment to implement the reform measures of FCDP was recognized in the RRP, particularly in light of the implementation experiences for earlier assistance.

3. Bangladesh Bank was the Executing Agency for FCDP, but its role was essentially confined to receiving and disbursing loan funds from ADB. The key Implementing Agencies with the relevant departments or corporations under their jurisdiction for implementing the policy measures were the Ministry of Agriculture (MOA) and Ministry of Food (MOF). A program coordinating committee (PCC), chaired by the Economic Relations Division, was established within the Ministry of Finance for coordinating the implementation of the reform measures under FCDP. PCC comprised representatives of the Bangladesh Bank; MOA; MOF; Ministry of Finance; Ministry of Planning; and Ministry of Irrigation, Water Development, and Flood Control. Given the administrative setup of the country at the time, this was an appropriate arrangement.

C. Objectives and Scope at Appraisal

4. The main objective of FCDP was to achieve sustained growth in the food crops sector.⁴ The targets adopted were those in the Fourth Five-Year Development Plan (FY1991-FY1995), which envisaged annual increases of 4 percent for rice production and 2 percent for wheat production. Attaining these goals would achieve food grain self-sufficiency by the end of the Fourth Five-Year Development Plan period. By expanding rice and wheat production during the winter season, dependence on risk-prone monsoon cropping would be lessened and productivity and output of the food crops sector improved. The policy framework supporting FCDP was designed to give farmers greater access to minor irrigation equipment and complementary inputs on a regular and competitive basis, enhance the role of the private sector, provide an effective price support to farmers, and streamline the food management policy. The reform measures were expected to result in increased production that, in turn, would reduce the import bill for food grains.

5. FCDP comprised an agenda of policy reforms grouped into the following measures.

- (i) Key reform measures: (a) removal of subsidies on fertilizers and minor irrigation equipment, (b) liberalization and deregulation of the supply of minor irrigation equipment and complementary inputs (fertilizer and seeds), (c) rationalization of food policy and food grain management, and (d) institutional reorganization.
- (ii) Complementary reform measures: (a) tariff reform and other measures to facilitate imports of agricultural inputs, (b) deregulation of siting restrictions on shallow tubewells (STWs), (c) reduction of the role of the Bangladesh Agricultural Development Corporation (BADC) in fertilizer distribution, (d) various measures to deregulate and liberalize food grain import and distribution, and (e) environmental monitoring of FCDP's impact.

⁴ As stated in the RRP (page 28, para. 67). This differs slightly from the objective as described in the Loan Agreement, which was to support the Government's efforts to restructure and develop the food crops sector.

Fuller details of the policy reforms are in Appendix 2. FCDP also included three advisory technical assistance (TA) grants totaling \$0.5 million to assist its implementation.^{5, 6, 7}

D. Financing Arrangements

6. The original loan amount was SDR91.532 million (\$125 million equivalent). The loan was funded from ADB's Special Funds resources with a 40-year maturity period (including a 10-year grace period) and a service charge of 1 percent per annum. Due to currency realignment (with the appreciation of the SDR in terms of the dollar), the actual loan disbursed was \$130.713 equivalent. The loan was released in two equal tranches. The first tranche was released upon loan effectiveness in December 1990 and the second tranche was released nearly 3.5 years later in May 1994 (as against the original scheduled period of December 1991). The second tranche was to be released upon the fulfillment of 15 loan conditions. By October 1993, three conditions relating to disposing of public stocks of STWs, the ending of public-sector seed retailing, and the availability of a plan and timetable for setting up a system for environmental impact monitoring remained unfulfilled. ADB had to approve a request for amendments to the FCDP conditions before the second tranche could be released. The loan was to be used over two years from the date of effectiveness. The closing date of the loan was 30 June 1995, after four six-month extensions.

7. Along with FDCP, the Government had also obtained cofinancing from the International Development Association for \$75 million. Foreign assistance has been a major source of financing for Bangladesh. For 1990-1996, the total assistance to the country was \$9.8 billion, including food aid and nonproject assistance (Appendix 3). Project loans accounted for about 42 percent of the total disbursed aid to the country. FCDP accounted for only about 3 percent of the disbursed loan assistance. Major sources of assistance to the country include ADB, International Monetary Fund, UNDP, USAID, WB, and bilateral sources (e.g., Canada, European Union [EU], Japan, and Saudi Arabia).

E. Coordination of Funding Sources

8. FCDP was part of the process of supporting the Government in policy reforms started with earlier assistance from the external assistance community. Policy dialogue between the Government and ADB, USAID, and WB on reforming the agriculture sector provided the opportunity for close coordination among the funding agencies. Joint missions with WB were held during the processing of FCDP, while USAID participated actively in designing and formulating the policy framework and action program of FCDP. Active collaboration and coordination with other funding agencies seem to have given rise to a perception among some government officials that the policy conditions were imposed by the external assistance community and the country had not much choice in selecting policy reforms that would be more realistic. FCDP followed several projects focusing on crop diversification and input supply

⁵ TA 1409-BAN: *Formulation of a New Tariff Structure for Agricultural Equipment Imports*, for \$70,000, approved on 6 November 1990.

⁶ TA 1410-BAN: *Options for the Development of Groundwater and Surface Water Irrigation*, for \$170,000, approved on 6 November 1990.

⁷ TA 1411-BAN: *Strengthening the Food Planning and Monitoring Unit of the Ministry of Food*, for \$260,000, approved on 6 November 1990.

assisted by other funding agencies.⁸ FCDP could therefore be seen as reinforcing the performance of such projects and some of the policy actions being pursued by other funding agencies. In turn, some subsequent projects funded by other agencies could be seen as helping to further the reforms pursued by FCDP.⁹

F. Completion

9. A program completion report (PCR), dated 27 September 1996, prepared by ADB's Agriculture and Social Sectors Department discusses the design, scope, implementation, and operational aspects of FCDP and provides detailed information on FCDP. At the time of Board approval, FCDP was estimated to require 24 months, from December 1990 to December 1992. The loan became effective on 21 December 1990 and was closed on 30 June 1995. The PCR rated FCDP as generally successful despite delays in implementation and a slackening in the growth of food production during 1994 and 1995. The PCR findings pointed to the full realization of FCDP's envisaged financial benefits but reported the unfulfilled goal of sustained growth in food production. The reform process had major positive impacts on the efficiency of the food grain sector in Bangladesh; without the reforms in the fertilizer and minor irrigation schemes, production growth from the late 1980s to the early 1990 would have been 20-32 percent lower. The sustainability of these positive impacts was unfortunately weakened by external events, opposing changes in policy, and farmer responses to relative price changes. The PCR erred in stating that one of the second tranche conditions relating to the withdrawal of public sector involvement in the retail sale of seeds had been fulfilled.

G. Operations Evaluation

10. This program performance audit report (PPAR) focuses on pertinent aspects of FCDP and presents the findings of the Operations Evaluation Mission (OEM) that visited the country on 11-22 July 1999. The PPAR also assesses FCDP's effectiveness in achieving its objectives and its sustainability.

11. The PPAR is also based on a review of the PCR, the RRP, material in ADB files, and discussions with staff members of ADB, Bangladesh Bank, Implementing Agencies, and other agencies of the Borrower, and with representatives of the funding institutions and the private sector. Copies of the draft PPAR were provided to the Borrower, Bangladesh Bank, and ADB staff concerned for review and comments. Comments received were taken into consideration in finalizing the report.

⁸ Examples were Canada's Can\$34 million Crop Diversification Program in 1988; Netherland's f16 million Crop Diversification Project in 1988; EU's \$3 million Fertilizer Loan in 1979; WB's International Development Association \$21 million Fourth Flood Control and Drainage Project in 1987 and \$80 million Second Small-Scale Flood Control and Irrigation Project in 1988; and USAID's \$32 million Fertilizer Distribution and Improvement Project in 1980.

⁹ As in the case of WB's National Minor Irrigation Development Project.

II. IMPLEMENTATION PERFORMANCE

A. Policy Reform Measures

12. Policy reform measures under FCDP were categorized into key and complementary measures (para. 5) with no clear rationale for such allocation. Fulfillment of the complementary measures seems to be less urgent compared with the key measures. For instance, the only policy condition relating to environmental concern, preparing a plan and a timetable to implement the plan for environmental monitoring of FCDP impact, was designated a complementary measure. Yet, this measure was designated as a condition for the release of the second tranche and, while it was deemed fulfilled as a condition for the release of the second tranche, it can be considered as nonfulfillment of the Schedule 5 covenant (para. 3) of the Loan Agreement to implement all policies and activities agreed. The policy conditions can also be more broadly grouped as (i) removal of subsidies, (ii) tariff and regulatory reform, (iii) institutional reorganization, and (iv) environmental protection. Appendix 2 provides details of the status of implementation of the policy reforms.

13. FCDP contained 33 conditions (of which 15 are second tranche release conditions), many of which are microlevel measures (for example, the number of pumps to be disposed of by BADC). Such microlevel measures gave clear targets of what was to be achieved. However, there were disadvantages. These microlevel measures clouded the principles involved (e.g., the public sector should not be involved in commercial activities) and created unnecessary complexity. The same results could have been achieved by subsuming a number of the conditions under higher order statements. For example, a condition for the public sector in general, and BADC in particular, to get out of the business of supplying pumps and other inputs for minor irrigation could have collapsed four conditions into one. The specific microlevel actions could have been identified as performance indicators in a logical framework.¹ By being specific, FCDP ran the risk of not achieving progress at the macrolevel. For instance, the impact of downsizing individual parts of the public sector is lessened if the overall size of the public sector is not reduced. There was evidence that some of the functions formerly carried out by BADC were simply transferred to other public sector agencies (PCR, Appendix 2, page 10). The letter of the conditions might have been met but certainly not the rationale for the conditions.

14. Taken as a package, the policy reforms represent a meaningful step in furthering the reform process begun in the country. On the input side, it is clear that public intervention in fertilizer, minor irrigation equipment, and seed supply were key constraints to increasing sector performance. FCDP was correct to focus on decreasing government participation in these areas. On the output side, the main move was to increase the role of the private sector in food grain import and storage, which was appropriate. However, moves to intervene in the price-setting mechanism were misguided and, fortunately, were abandoned as they would give conflicting signals. Insistence on implementing the price-setting mechanism would have encouraged the Government to intervene in the market process with a floor price to prevent prices from falling below a specific level. Yet the thrust of FCDP was to reduce the role of the public sector in the agriculture sector.

¹The use of a logical framework was not required at the time of project appraisal.

1. Removal of Subsidies

15. Aimed at getting a proper balance in fertilizer use, the policy conditions of FCDP required the removal of subsidies from a range of minor irrigation equipment and two imported fertilizers, triple superphosphate (TSP) and muriate of potash. The subsidies were removed, and BADC was no longer engaged in distributing minor irrigation equipment and the two fertilizers, with the private sector taking over BADC's role. By 1994, there were 215 importers, 1,398 distributors, 13,000 dealers, and 108,000 retailers of fertilizers.² Prices for imported fertilizers declined, as did real farm-level prices of food crops. Distribution costs also declined significantly. However, no stipulations were made that the Government could not reintroduce the subsidies removed during the implementation of earlier assistance. The Government subsequently introduced a subsidy on urea that had been removed in the 1980s. At the time of the OEM, urea was produced by six factories under the Bangladesh Chemical Industries Corporation (BCIC), a government corporation under the jurisdiction of the Ministry of Industries with the key management staff appointed, and the bulk of its budget financed, by the Government.³ The ex-factory selling price was controlled and had been below production costs except for 1997/98 cropping season (Appendix 4). An indirect subsidy was also incurred through subsidized gas to the BCIC urea factories from the Bangladesh Gas Authority. Additionally, the operation of the fertilizer dealer network was subject to strict government regulation in terms of the number of dealers in a district, the minimum monthly quantity of urea that each dealer has to procure from BCIC urea factories, and other requirements. A BCIC factory was also producing TSP and gypsum (though in relatively small quantities but being sold at controlled prices) while imports of single superphosphate and gypsum were banned; the first, ostensibly to prevent misrepresentation as TSP by unscrupulous dealers, and, the second, for no apparent reason other than imported gypsum may pose competition to BCIC's production of gypsum.

2. Tariff and Regulatory Reform

16. Reforms involving reductions in selected tariffs and the removal of various anomalies were implemented. Standardization requirements for agricultural equipment that would have restricted imports were also abolished. A small-scale TA (footnote 5) was provided to give recommendations regarding tariffs applied to the agriculture sector. Several regulatory reforms aimed at achieving efficiency gains in input distribution through increasing private sector participation were also implemented. However, while the public sector role in providing minor irrigation equipment and fertilizers (except for urea) was practically eliminated, that for improved seeds was not. Currently, more than 90 percent of cereal seed was being sold from farmer to farmer. The remaining niche was heavily dominated by BADC, which supplied the high-yielding variety foundation seeds.

17. Restrictions on the siting of STWs were removed and the formation of water users associations was facilitated. Another TA (footnote 6) produced recommendations and guidance on the options for developing groundwater and surface water irrigation. The recommendation to

²International Fertilizer Development Center. 1994. Fertilizer Distribution Improvement Project II (End of Project Report). Ministry of Agriculture, Bangladesh.

³There are currently eight fertilizer factories in Bangladesh, seven of which are under BCIC's management. The one factory not under BCIC management is a joint-venture plant between BCIC and the private sector producing urea and ammonia exclusively for the export market. Of the seven factories under BCIC, six are urea factories and one is a TSP factory producing TSP and single superphosphate.

lift the siting restrictions on STWs proved controversial. Among other problems, the adoption of the recommendation led to allegedly unrestrained tapping of water resources not necessarily for agricultural purposes (and therefore, not in farmers' interests). There were also concerns of farmers not using surface water irrigation, therefore affecting the cost recovery of irrigation investments as farmers would have alternative sources of water.

18. FCDP noted that the Public Food Distribution System had multiple objectives: (i) food security, (ii) consumer price stability, (iii) ensuring adequate producer prices, and (iv) poverty alleviation through targeted programs. There is potential for conflict among these objectives. At the time of FCDP preparation, food subsidies had reemerged as a significant area of government expenditure. Conditions imposed by FCDP included the establishment and operation of a producer floor price system; import and export of food grains; and rationalization of public procurement, storage, and distribution. The removal of producer disincentives, a reduction in distortions caused by public sector participation in the foodgrain market, and improvements in the efficiency of the Directorate of Food (DOF) were all relevant measures toward achieving the FCDP objective. The desirability and efficacy of a floor price mechanism were doubtful. Other reforms were designed to increase the role of the private sector in the purchase, storage, and distribution of food grains. These reforms should have had a positive effect on producer prices. The need for producer price support was apparently not demonstrated. The ADB Board waived this condition following the introduction of a more market-oriented tendering system for the second tranche release of the FCDP loan.

3. Institutional Reorganization

19. FCDP conditions included the following institutional reform measures: (i) restructuring and refocusing BADC in light of its reduced role in input supply, (ii) reorganizing DOF within MOF to enhance its efficiency, and (iii) strengthening the Food Planning and Monitoring Unit (FPMU). A UNDP-WB study provided guidance for the reform of BADC, a Food and Agriculture Organization of the United Nations study for DOF, and the ADB-funded TA for FPMU (footnote 7). The condition for reorganizing BADC required an action plan to be finalized, while that for DOF required the Government to initiate reorganization. The reform for FPMU called for an increase in staff strength to plan for food distribution based on improved information availability and analytical capability. Given the proposed short time (12 months) between the release of the first and second tranches, probably not much more could be expected during the FCDP period in terms of institutional reorganization than the limited measures implemented, primarily in adjustments of staff strength and the limited divestment of market activities of BADC.

20. The reorganization of BADC took the form of rationalizing its staff strength through voluntary separation and nonreplacement of retired staff. Current staff strength is about 11,000 compared with about 21,000 at the start of FCDP. In operational terms, BADC divested itself from distributing minor irrigation equipment and fertilizers. But BADC was continuing its role in retail seed supply to the near exclusion of the private sector in the business of multiplying high-yielding varieties of the five notified crops (as BADC was the main supplier of foundation seeds).⁴ BADC has also practically divested its role in the supply of deep tubewells, except in some remote areas where deep tubewells are required due to the terrain.

⁴The five notified crops, for which seed imports are highly controlled, are rice, wheat, jute, potato, and sugarcane. The exception to the near monopoly of BADC in seed supply was the recent appointment of the Bangladesh Rural Advancement Committee, a major nongovernment organization (NGO) as a distributor of foundation seeds. An earlier distributor, Grameen Krishi Foundation, another NGO, had apparently not been very successful.

21. The reorganization proposed for DOF envisaged an increase in staff numbers and probably a greater increase in payroll, but it was also expected to deliver “substantial benefits and savings...through improvement in the operational efficiency in DOF” (RRP, Appendix 11, page 5). This is an apparent contradiction as all monitoring for reorganizing DOF has been about downsizing. At the time of the OEM, about 5,100 staff had retired from DOF since the beginning of FCDP. On the other hand, the reorganization of FPMU called for the strengthening of its staff, which apparently had exceeded the staffing structure recommended by the TA. The support provided to FPMU was relevant in building its capability in analyzing policy, planning, advising the Government in managing the food procurement and distribution system, and providing reliable information for effective policy decision making. Lack of accurate and timely data about sector performance was perceived as a significant constraint. FCDP could have provided greater support in this area.⁵

22. While the measures to rationalize the organizational structure of the institutions represent sound management practices to streamline staffing constraints, lower costs, and improve organizational efficiency, no evidence suggests that the impact on staff incentives and work behavior has been thoroughly assessed and a remedy to minimize such an impact has been provided. It was no coincidence that while voluntary separation of staff occurred in the beginning, the Government has relied mainly on the slow process of natural attrition (where retired posts are not filled) to reduce staff strength.

4. Environmental Protection

23. As a measure to monitor and control the environmental impact, FCDP supported the establishment of an environmental impact monitoring system to monitor the impact of minor irrigation on groundwater levels and salinity, and of agrochemicals on human health and safety. A two-year work plan for the monitoring system was formally approved by the Government in early 1994 and, following a review of the plan by ADB, the Government’s approval was judged as sufficient to fulfill FCDP’s condition. An EU-financed TA subsequently supported the implementation of the system as part of the National Minor Irrigation Development Project (NMIDP). However, the TA’s activities had focused on conducting baseline ecological studies, determining priorities for long-term monitoring, and establishing the required systems and personnel under NMIDP for measuring groundwater potential, water quality, and water table changes. The various reports were completed and handed over to the administrators of NMIDP for follow-on implementation using the Government’s own funds, as the TA has been closed. At the time of the OEM, a formal system for the environmental impact monitoring system had not been set up.

B. Procurement and Disbursements

24. A positive list was used to define eligible imports for funding under the loan subject to a negative list of agricultural chemicals banned by the World Health Organization (Appendix 5). The loan amount was used to liquidate import claims for foreign exchange financing from the private sector, predominantly for importing fertilizers. Apart from fertilizers, the proceeds of the loan were also to be used to finance the foreign exchange costs of seed, agricultural

Collaboration with public research institutes is an essential element for any seed multiplication enterprise as the institutes supply breeder seeds at special rates. In a discussion with the Bangladesh Rice Research Institute, staff members indicated to the OEM that the institute was disposed to collaborate with NGOs but not with profit-making private enterprises.

⁵In fact, a follow-on TA was provided but terminated early at Government’s request because of the unsatisfactory performance of at least one of the consultants.

machinery, diesel oil, and other agricultural inputs. The restrictive eligibility of a short positive list apparently slowed the disbursements of the loan as the increase in international fertilizer prices discouraged extensive imports. A variation was subsequently approved in October 1994 under the loan's second tranche to enable the Government to finance the import of diesel and vehicles in a quantity greater than originally permitted under the positive list.

25. The loan was disbursed in two tranches upon fulfilling specific conditions. The first tranche of \$65.7 million was released on 27 December 1990 and was fully liquidated only in January 1993. Liquidations of the disbursements were delayed for reasons including the Bangladesh Bank's difficulties in compiling the necessary documents in accordance with ADB requirements. The release of the second tranche (for \$65 million) was originally planned for December 1991 but did not occur until May 1994. The delay was due to the tardy fulfillment of second tranche conditions, due partly to the effects of the change in Government and the Gulf War in 1991. However, more fundamentally many of the reforms were politically difficult and tested the Government's resolve to achieve FCDP's objectives. Furthermore, apart from the increase in international fertilizer prices, drawdown of the loan was less urgent with (i) the availability of bilateral fertilizer grants and other concessional loan funds; and (ii) the improved macroeconomic situation, which made unrestricted foreign exchange more readily available to commercial importers.

C. Organization and Management

26. The administrative capacity of the Government to implement and sustain the policy reforms supported under FCDP appeared to be constrained by political factors, and the lack of the necessary framework required before some of the policy measures could be effectively implemented. Political factors included the change of Government and the desire not to jeopardize discussions with a neighboring government on the use of the Ganges River water. In several instances, privatization of fertilizer distribution was marred by the lack of regulatory framework to ensure fertilizer quality. Dismantling of BADC's role in fertilizer distribution was seen by some as occurring too fast without first having a well-functioning private sector in place. The occurrence of fertilizer adulteration and misrepresentation and other abuses, particularly in 1994 when urea was in short supply, provided the rationale for forming the fertilizer supervisory committees at the national, district, and *thana* (subdistrict) levels. These had the objective of imposing regulatory and supervisory control on the operations of the private sector (para. 15). The supervision for implementing the policy reforms rested with each implementation agency while overall supervision was the responsibility of the PCC. However, the PCC did not meet on a regular basis. Bereft of the regular overall coordination function, especially during the early years of FCDP implementation, the capacity for implementing specific policy reforms varied with the capability and will of the implementing agencies. ADB supervision of FCDP took the form of nine review and consultation missions following ADB approval of FCDP. Under normal conditions, the number of these missions would have been adequate.

D. Effectiveness of Technical Assistance

27. The three TAs under FCDP were essentially small-scale diagnostic studies aimed at providing recommendations to the Government on specific aspects of the reform program (footnotes 5-7). These recommendations included tariff reforms on a range of agricultural inputs, regulation on the use of groundwater, and plans to strengthen FPMU. The TAs did not have any formal training components and were not aimed at capacity building, although the TA for FPMU involved preparing a plan for strengthening FPMU.

28. All three TAs provided useful contributions to FCDP. The TA on the formulation of new tariff structure (footnote 5) can be considered as effective in supporting the adoption of the policy reform measures to rationalize the tariff structure on agricultural equipment import. Recommendations on the tariff structure for the imports of agricultural equipment (primarily power tillers), spare parts, and tubewell diesel engines were well accepted by the Government. These recommendations resulted in the introduction of a new tariff structure during FY1992-1993, which equalized the taxes and exemptions received by private and public sectors on all classes of imported irrigation equipment. Recommendations from the TA on strengthening FPMU (footnote 7) were also well accepted, particularly for the organizational changes suggested. The recommendations on groundwater and surface water irrigation (footnote 6) provided useful input into the Water Management Plan in 1991. However, the Government did not agree fully with the recommendation of the consultants to allow unrestricted siting of STWs.

E. Compliance with Loan Covenants

29. Two covenants relating to policy reforms were not complied with at the time of the second tranche release. The first covenant relating to the requirement for an increase in the Government procurement price for rice from farmers was deemed no longer relevant as it was overtaken by events when the Government resorted to an open tender system in procuring rice from farmers. In the case of the second covenant requiring public sector withdrawal from retail seed sales, the Government requested for an extension to fulfill the covenant and prevailed upon ADB to release the second tranche on the understanding that the second covenant would be complied with by the end of 1995. The second covenant has not been complied with to date as BADC is still engaged in the seed trade with 78 retail stores. BADC still has an important (although reduced) role in the seed trade, with about 6.5 percent of the retail trade in seeds. In the case of the first covenant, rice procurement is currently being done both through the open tender system and through direct procurement, in which case the covenant of requiring a higher procurement price may still be deemed relevant. Nevertheless, it may be argued whether this would have been an appropriate policy reform in the first place in the face of greater liberalization of the food grain trade supported under FCDP.

F. Monitoring

30. A program benefit monitoring and evaluation unit was to have been established in the Ministry of Finance under the jurisdiction of the PCC, but the unit was not formed. The PCC was established for the purpose of coordinating and monitoring the progress of policy reform measures to be supported under FCDP. There was no evidence that PCC met regularly to perform its functions. FCDP supported a policy measure of preparing a plan to establish a sectorwide monitoring system for the environmental impact of agricultural development activities stimulated by FCDP. Despite EU's assistance to establish the system, monitoring of the environmental impact of FCDP was not accomplished at the time of the OEM.

31. The loan was administered by ADB headquarters. ADB's Bangladesh Resident Mission provided logistical and other support for the review missions, but essentially ADB headquarter staff monitored the progress of policy reforms supported by FCDP through policy dialogues conducted in the course of the review and consultation missions.

G. Use of Counterpart Funds

32. The counterpart funds generated from the loan were meant to be supplementary to Government resources for development activities. One half of the counterpart funds were to be

allocated to development activities in the agriculture sector, especially for ADB-financed development projects in the sector. However, there was no evidence that this was done. The special account into which the counterpart funds were deposited was created. But the funds were used for general budgetary support by the Government and their specific use could not be monitored by the Bangladesh Bank.

III. PROGRAM RESULTS

A. Performance Indicators

33. No specific performance indicators by which to assess the performance of FCDP were established when the program was formulated. Achieving the stated FCDP objectives would be an important consideration. The stated primary objective of FCDP was to support the Government's medium-term development program for the food crops sector. Rice production was targeted to increase by 4 percent per year and wheat production by 2 percent per year under the program. If achieved, these growth levels would see food self-sufficiency by the end of the Fourth Five-Year Plan period (footnote 1).

34. Total rice production increased at an annual average rate of 1.14 percent from the crop years 1988/89 to 1997/98 (Appendix 6, Figure A6.1). Over the same period, wheat production grew by 10.4 percent annually. Clearly, rice production failed to meet the target while the growth in wheat production was five times the target, although from a low base.¹ However, the policy reforms promoted under FCDP were expected to have more impact on irrigated production and yield, specifically winter season crops. Over the same 10-year period, *boro*² production increased by 3.6 percent annually. The area and yield of boro and wheat have increased, indicating more use of irrigation, fertilizers and other agricultural inputs (Appendix 6, Figures A6.2 and A6.3). In particular, the area irrigated by STWs has increased dramatically. Implementation of the policy reforms under FCDP has contributed to creating the conditions necessary for this improvement in crop production. Private sector involvement in the distribution and storage of food grains is growing. In 1997/98 and 1998/99, private sector imports represented more than 60 percent of total imports of food grains (Appendix 6, Figure A6.4).

35. The target of achieving food self-sufficiency by the end of the Fourth Five-Year Development Plan period was an ambitious target that was not met, particularly in the context of the natural calamities that affected the country. The estimated food gap³ as a percentage of total food requirements had been increasing since 1990/91 and peaked in 1995/96, although it appears to have been declining since (Appendix 6, Figure A6.5). Nevertheless, the increase in winter season production helped ensure a better distribution of rice availability throughout the year and mitigated any adverse interseasonal situation for food security.

36. The performance of FCDP was mixed. The real price of rice declined at both the farm and market levels, which could indicate improved efficiencies and lower costs (Appendix 6, Figure A6.6). The increase in the use of STWs was considerable (Appendix 6, Figure A6.7). The withdrawal of BADC from the supply and maintenance of STWs encouraged private sector participation, leading to an almost 50 percent reduction in the price of STWs. By 1998, there

¹ Compared with rice production, wheat production was small. By 1997/98, wheat production was only about 9.5 percent of total rice production.

² Rice planted between January-February and harvested during May-June. The term is also used locally for nonirrigated rice which is planted during November-February in drained-out flood plains.

³ Calculated by the United Nations World Food Program based on (i) adjustments to production of seeds and losses, (ii) estimated availability of public and private food grain stocks, and (iii) projected commercial imports and food grain shipments.

were 3 importers of engines and about 2,000 dealers, with about 10,000 private-sector mechanics servicing 600,000 small irrigation pumps.⁴

37. On the other hand, continuing government restrictions on fertilizer marketing and urea subsidies appeared to adversely affect competition in the distribution of fertilizers and their balanced use. The urea shortage crisis occurring between December 1994 and March 1995, which led to violent public reaction including the deaths of 17 farmers, provided the occasion for the Government to regulate the marketing of fertilizers as the private sector was blamed for the crisis. The causes of the crisis were controversial, depending on whether the Government's view or the private sector's view is used. The causes included hoarding and poor distribution by the private sector and export of urea by BCIC factories to take advantage of high world prices of urea at the time. Among the changes were fertilizer dealers had to be appointed, allotments to dealers were based on MOA's estimates of monthly demand of urea in each district, sales by dealers were restricted to the districts of their allotment, dealers were forced to take delivery of allotments under the threat of loss of contract and forfeit of the security deposit, and retail prices of fertilizers sold by the dealers were subject to an "advised" limit. The resort to administered pricing of urea (and TSP on a smaller scale) meant subsidization through low natural gas prices to BCIC and below cost sales at the factories. The total subsidy was estimated at \$171 million in crop year 1996/97 based on direct subsidies on imports and production of \$105 million and indirect subsidies on natural gas of \$66 million.⁵ Lower urea prices coupled with more expensive TSP and muriate of potash following the abolishment of subsidies resulted in more use of urea and imbalanced fertilizer usage (Appendix 6, Figure A6.8).

B. Institutional Development

38. FCDP contributed to the rationalization of the organizational structures of BADC, DOF, and FPMU. Staff strength in the later years of FCDP was reduced by not replacing retired staff rather than through voluntary separation exercises. The staff strength of FPMU was augmented according to the recommendations of the TA on strengthening FPMU (footnote 7) granted under FCDP, given its critical role in ensuring food security at times of natural calamities through appropriate policy advice and analysis. The creation of a sectorwide environmental monitoring system to determine the impact of agricultural activities as one of the reform measures would be timely in light of the possible occurrence of subsidence and arsenic contamination. However, the operation of such a system is yet to be fully implemented. Apart from reorganizing the institutions, FCDP assisted BADC in reducing its role in distributing small irrigation equipment and fertilizers, and DOF in its food importation and distribution activities, thus paving the way for greater private sector participation in these areas. A possible deficiency of FCDP for organizational restructuring was that it apparently did not provide for adequate transitional arrangements for surplus staff arising from the reorganization of the institutions. The result was a slower process of the rationalization of the targeted institutions under FCDP.

C. Socioeconomic Impact

39. The wider availability of relatively cheaper STWs and other irrigation inputs as a result of a liberalization in their supply would improve rural income arising from greater production of food grains and might have freed many farmers from the clutches of "water lords" who control water availability. But while the use of urea, STWs, and lowlift pumps has increased, the

⁴World Bank. 1998. Agriculture Policy Notes. Memo.

⁵Food and Agriculture Organization of the United Nations. 1997. Bangladesh: Agriculture Inputs Supply Study. Main Report. Investment Center Division, Rome.

imbalance in the application of fertilizer as more urea is substituted for the high phosphatic fertilizers meant optimum production of food grain and the realization of income from such optimum production would have been affected. Nevertheless, between 1989 and 1994, real rural household income increased by an average annual rate of 3.8 percent. Crop income increased by an average rate of 1.4 percent.⁶ The extent to which such increases were due to FCDP is difficult to determine, but it is correct to state that FCDP has contributed to the increases.

40. FCDP did not contain any individual component or have an overall design feature that would impact more directly or more significantly on the poor or other vulnerable groups compared with the nonpoor, nonvulnerable groups. Other than for those involved directly in selling or using seeds and fertilizers, and having access to irrigation equipment, the effects of FCDP would be shared across the sector. Nevertheless, it could be argued that the decline in real prices of rice benefited the poor as 70 percent of rural households are net purchasers of rice. As a result of FCDP, regulations were changed to increase the role of the private sector in the import and distribution of food grains. Private sector imports have risen to more than 60 percent of total imports (including food aid). This will have created additional private sector employment. An unintended impact was that based on anecdotal cases, private sector involvement in food grain distribution mitigated the worst of the effects of the disastrous floods of 1998. However, to the extent that the reorganization of the public sector institutions involved in FCDP might have led to staff retrenchment, the impact could be in terms of the unemployment generated. Nevertheless, as much of the downsizing of the staff strength was through the nonreplacement of retired staff, this impact was not considered significant.

D. Gender and Development

41. FCDP did not have any specific component addressing gender issues. However, women in the rural communities received training on equipment operations, water usage, and crop cultivation. With greater production emerging from the better use of STWs, lowlift pumps, and fertilizers, women laborers will be in great demand for harvesting work.

E. Environmental Impact and Control

42. FCDP recognized the need to ensure proper environmental safeguards from the impact of agricultural development programs. But the conditionality for such safeguards was confined to preparing an acceptable plan and an agreed timetable to implement a plan to establish an environmental monitoring system, which had not yet been established at the time of the OEM. The absence of a monitoring system is being felt, with a possible environmental impact of FCDP reforms being arsenic contamination of tubewells. The Health and Public Health Engineering Departments, nongovernment organizations (NGOs), and the press have recorded evidence of arsenic-related diseases and deaths. A recent survey by an NGO recorded 276 STWs in 139 villages in the Barisal district to be contaminated with arsenic. No conclusions have been made on the causes of the contamination, although the occurrence has provided reason for some officials to argue that there should be some regulation over indiscriminate sinking of STWs. At the time of the OEM, not enough was known about the phenomenon to ascribe any cause and effect relationship to the increase in STWs. This problem is under intensive investigation by the Government, the outcome of which must be awaited before drawing any conclusions. It is premature to link the possibility of arsenic poisoning to the sinking of STWs.

⁶Rahman, Hossain Zillur and Hossain, Mahabub (ed). 1995. Rural Poverty in Bangladesh, 1987-1994. Bangladesh Institute of Development Studies, page18, Table 1.

F. Gestation and Sustainability

43. Some policy reforms started during FCDP will continue to be implemented, such as those relating to the reorganization of BADC, DOF, and FPMU. The benefits of some of the substantive reforms, such as the liberalization of trade in agriculture inputs and outputs, would be more fully realized in the future only if there were no policy reversals or modifications. The regulations on fertilizer trade will continue for as long as the Government perceives that a self-regulatory process in the trade (to ensure that fraudulent practices are minimized) does not exist. The timing for freeing the fertilizer trade is difficult to predict. It would be in the interest of BCIC to ensure that the fertilizer dealers are made to market a minimum quantity of its fertilizer production. The policy reforms enabling the participation of the private sector in importing and distributing food would perhaps stand the best chance of being sustained given the perceived efficient role of the private sector in mobilizing food imports and distribution during the 1998 calamity. Nevertheless, the maintenance of the rice stockpile by the Government could pose a certain amount of uncertainty on the market since the stockpile has to be turned over periodically. Some policies are in danger of not being sustained. There is no indication that the environmental monitoring system called for under FCDP will be fully set up now that the EU-financed TA has ended. BADC will continue to distribute seeds, particularly now with the felt need to maintain a seed stockpile in the event of another calamity as in 1998. The urea subsidy will continue to cause imbalance in the use of fertilizers and may lead to the reintroduction of significant subsidies on TSP. One BCIC factory is already producing TSP. The perception of the need for subsidies is apparently shared by the Government, which supports its positions by using arguments that range from Bangladesh is prone to many calamities annually to the current World Trade Organization rules which allow developing countries like Bangladesh to grant subsidies of up to 10 percent of total crop value.⁷ The setbacks indicate that the sustainability of policy reform requires the Government's firm commitment to the principles and concepts underlying the policy reforms.

⁷An allocation of Tk1 billion (\$20 million) for fertilizer subsidies in FY2000 was expressly provided in the budget for farmers affected by floods.

IV. KEY ISSUES FOR THE FUTURE

A. Policy Reversals

44. The sustainability of policy reforms remains a major issue. Fertilizer subsidies were reportedly disbanded in the 1980s only to be reintroduced in the 1990s. Public sector involvement in retail distribution of seeds was reportedly divested by April 1995, only to be reintroduced with BADC handling about 6.5 percent of the total seed sales (most sales farmer to farmer), with 99 retail and wholesale points of sale. The reversals of such policy measures inhibit the growth of an efficient market-oriented system. The Government may have good reasons for such reversals. These reasons are not necessarily in the realm of economic management but must be weighed against the affordability of the Government's fiscal system to maintain such public sector interventions in the economy.

B. Encouragement of Private Sector Participation

45. It is a Government policy to encourage greater privatization. At the same time, the Government has placed constraints that will negatively affect the costs of private sector participation, thus slowing the process of privatization. The distribution of fertilizer is supposedly in private hands, but Government regulation of dealers has increased the costs faced by the private sector in distributing fertilizer as well as reduced competition in supply. The efficiency of the private sector in resource use is therefore being compromised. The unscrupulous practices of some private entrepreneurs in fertilizer misrepresentation and hoarding cannot be denied. The challenge is to provide greater competition to remove the unscrupulous traders, promote greater self-regulation, and adopt transparent laws rather than to regulate the operations of the traders in such a way as to stifle efficient operation and provide economic rent seeking opportunities. The ban on the free imports of single superphosphate and gypsum by the private sector, together with the continuing commercial involvement of BADC in the retailing of seeds and BCIC in the production of urea and TSP with budgetary support from the Government, would give the wrong signal of the Government's commitment to privatization. The constraints facing the private sector (apart from NGOs and farmers) in obtaining breeder seeds from the research institutes and the subsidized sale of seeds from BADC mean that private entrepreneurs find it difficult to establish themselves in supplying seeds of yielding varieties on a sustainable basis.

C. Maintaining Costly Stockpiles

46. The desire of the Government to keep stockpiles of food grains and seeds is understandable given the country's exposure to natural calamities. However, apart from the costly maintenance that the country can ill-afford, stockpiling implies accelerated Government procurement and intervention in the markets for food grains and seeds, thus inhibiting possible private sector investments. A more efficient and effective system may be explored, including private sector participation.

D. Environmental Monitoring

47. The cause of arsenic poisoning has yet to be fully determined, but its association with STWs may have implications on FCDP's conditionality of unrestricted siting of STWs. Apparently some provision already exists for regulating STWs as necessary in the national water policy that was promulgated in 1999. However, hasty reactions should be avoided as the expanded use of STWs has been instrumental in increasing boro rice production. Establishing an environmental monitoring system (originally envisaged under FCDP) is all the more urgent in order to monitor the current arsenic problem as well as other impacts that arise with agricultural development projects.

V. CONCLUSIONS

A. Overall Assessment

48. FCDP has contributed to the reform process, particularly in furthering privatization and the liberalization of markets for both agricultural inputs and outputs, even though there are some limitations. There is now a vibrant private sector in the fertilizer distribution trade and in the food import and distribution business. The extensive use of STWs has contributed to the increase in irrigated rice production. Subsidies for the stated inputs under FCDP have been withdrawn and institutional reforms for rationalizing BADC, FPMU, and DOF are continuing. However, concerns exist about the sustainability of the reform process, particularly in the context of some important policy reversals, such as divestment of BADC from seed retailing (which was deemed important enough to be included as a condition for the release of the second tranche), the failure to set up the environmental monitoring and the program benefit monitoring and evaluation systems, and the continuing use of urea subsidies. The participation of private entrepreneurs in the seed trade is yet to be fully developed. In terms of the sector objectives of increasing food grain production and contributing to greater food security, the targets set have not been fully achieved. In view of such mixed achievements, FCDP is rated as partly successful. The possible unintended impact arising from arsenic poisoning is not factored into the rating of FCDP as the cause is still subject to further investigation.

B. Lessons Learned

49. In an environment where policy reforms are likely to be difficult due to varying political and other constraints, a longer disbursement period of a program would provide the forum for greater dialogue between ADB and the Government. Such an arrangement would also provide more time for the Government to implement the reforms, and to gain ownership of these policies among the various stakeholders with different interests.

50. Downsizing of the public sector as part of the institutional reform should be accompanied by a package of transitional support, both to provide a social safety net and to make the reforms more politically acceptable. Otherwise, the pace of restructuring any organization would be constrained.

51. Policy conditions should incorporate the objectives and principles of reform measures pursued and be framed in a way to secure commitment. Details of specific actions to be taken can then be formulated with time-bound indicators of progress.

52. There is a need to gain greater stakeholder understanding of and commitment to the policy reforms being proposed. This should include support (e.g., through a series of seminars or conferences) to communicate the rationale and benefits of the policy reforms. Different perceptions of the policy reforms based on ideological and cultural underpinnings among stakeholders should be resolved to arrive at a consensus on or firm commitment to the policy reforms.

C. Follow-Up Actions

53. The Government needs to produce a time-bound plan to divest BADC from its commercial involvement in seed supply and BCIC from its commercial involvement in fertilizer production activities to promote greater efficiency in the supply of seeds and fertilizers and to reduce the strain on the Government budget to support such activities. ADB should continue its dialogue process in the course of its continuing assistance to Bangladesh.

54. A review of the current regulations affecting the fertilizer distribution system should be undertaken concurrently with measures to promote greater self-regulation of the fertilizer trade. The purpose of such a review would be to promote greater competition among the dealers and greater efficiency in the fertilizer distribution, with pricing based on market supply and demand.

55. The Government needs to establish an environmental monitoring system as soon as possible. In particular, the Government should urgently determine the cause of the arsenic poisoning and adopt remedial actions to overcome the problem. ADB should undertake an independent study, either by itself or jointly with other funding agencies, to determine the extent of unrestricted siting of STWs in causing water table-related impacts for all its projects concerned with water resource management.

APPENDIXES

Number	Title	Page	Cited on (page, para.)
1	Development Policy Letter	19	1, 2.
2	Status of Policy Reforms	23	3, 5.
3	Commitment and Disbursement of Foreign Assistance to Bangladesh for FY1991-FY1996	37	3, 7.
4	Urea Production and Sale from Bangladesh Chemical Industries Corporation Factories	38	2, 15.
5	List of Eligible Imports	39	4, 24.
6	Statistical Data	41	1, 34.

STATUS OF POLICY REFORMS

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
<p>I. KEY REFORM MEASURES</p> <p>A. Removal of Subsidies on Minor Irrigation Equipment and Fertilizers</p> <p>1. Reduce subsidy on:^b</p> <p>(i) 2 cubic feet per second (cusec) deep tubewells (DTWs), from 70 percent to 45 percent;</p>	<p>This was superseded by the stronger agreement that the Bangladesh Agricultural Development Corporation (BADC) would dispose of all new 2 cusec DTWs, with subsidy if necessary, prior to the second tranche release (STR). Contracts for the last 600 DTWs were signed and down payments were made by farmer groups in late 1992, but installation and turnover of these units to the farmers were slowed by budgetary constraints. In March 1993, the Cabinet allocated Tk200 million for installation, but this amount was sufficient for only about 400 units. Contracts were canceled and refunds given for the remaining DTWs, which were earmarked for the DTW rehabilitation program under the National Minor Irrigation Development Project (NMIDP), financed by the World Bank and the European Union.</p>	<p>BADC had acquired no new DTWs since 1992. Some commissioning of the remaining DTWs was undertaken in drought-prone areas, but this was suspended during the current fiscal year.</p>	<p>No subsidies applicable. BADC stopped procuring DTW materials from 1992 onwards.</p>
<p>(ii) triple superphosphate (TSP) and muriate of potash (MP) by 30 percent (using world market prices as reference) and maintain thereafter unsubsidized prices for all chemical fertilizers; and</p>	<p>Subsidies were reduced by 30 percent.</p>	<p>Subsidies were removed with non-involvement of BADC in fertilizer distribution.</p>	<p>A TSP plant producing TSP and single superphosphate (SSP) were being operated by the Bangladesh Chemical Industries Corporation (BCIC), producing about 18,000 tons (t) in 1998/99 and selling the fertilizers at control prices below production costs. However, the bulk of the supply of TSP and MP was in the hands of the private sector.</p>

^a PCR = program completion report, PPAR = program performance audit report.

^b Second tranche conditions are in bold.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
(iii) review the wholesale price of urea and adjust, if necessary, to world market prices.	The urea subsidy was reduced in two stages beginning in March 1992. Declining world urea prices and lower than expected domestic production costs allowed the Government to reduce the ex-factory urea price by 12 percent in July 1993 as a means of compensating farmers for low rice prices. However, at the time that STR was finalized, there was neither financial or economic subsidies, nor were there any restrictions on fertilizer imports and domestic private-sector marketing.	Since late 1994, sharply higher world urea prices, together with a further 8 percent reduction in the ex-factory price, had led to the reemergence of a major economic subsidy on urea of about 50 percent. There was also a substantial financial loss because the ex-factory price set by the Government was about 18 percent below the financial costs of production. It was reported that BCIC compensated for this loss through reduced physical maintenance of its urea plants. In December 1994, the Government began to allocate urea traders through district commissioners and set a maximum retail price for urea, which disrupted both the market and the 1994/95 <i>boro</i> (winter irrigated) rice crop.	Except for the 1997/98 crop year, the ex-factory price of urea produced by BCIC was below the production cost by as much as 26 percent (crop year 1996/97). The price, at Tk3,725/t (crop year 1994/95-1996/97), was raised to Tk4,800 from 1997/98 onward. Even then, the ex-factory price was about 12 percent below production cost.
2. Further reduce subsidy on (i) 2 cusec DTWs to 30 percent (subsidy removal after second tranche release will be 15 percent by 31 December 1992, and abolition by 31 December 1993). This subsidy removal schedule after the release of the second tranche will be one of the conditions of NMIDP being financed by the International Development Association (IDA) and the European Union.	Same as 1(i) above.	Same as 1(i) above.	Same as 1(i) above.
(ii) Abolish all remaining subsidies on TSP and MP and maintain thereafter unsubsidized prices for all chemical fertilizers.	Accomplished by the Ministry of Agriculture (MOA) announcement in December 1992, which completely deregulated TSP and MP trade and domestic distribution.	Deregulation remained in effect for TSP and MP, with the result that farmers bear the much higher prices of the world market. The higher prices of TSP and MP, in combination with the subsidized urea price set by the Government since late	The private sector supplied the bulk of TSP and MP, but the policy to maintain unsubsidized prices for all chemical fertilizers was not sustained because urea and that part of TSP and SSP supplied by BCIC factories were sold at prices below

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
		1994, encouraged farmers to reduce the use of phosphorous and potassium relative to nitrogen, leading to concerns about nutrient imbalance in food crop cultivation.	production costs.
B. Privatization and Deregulation 1. BADC to dispose of 13,000 shallow tubewells (STWs) and low lift pumps (LLPs), (8,000 STWs out of the current stock of 11,000 units and 5,000 LLPs out of the current stock of 16,000 units) through direct sales to farmers or public auctions to private dealers. 2. BADC to dispose of the remaining STW/LLP stocks and spare parts through direct sales to farmers or auction to private dealers.	In July 1993, BADC retained about 1,584 STWs, 6,758 LLPs, and various components and spare parts, much of which had dwindled in value due to long storage periods. MOA and BADC floated unsuccessful fixed price tenders during the second half of 1993. In January and February 1994, nationwide auctions were held to dispose of the remaining equipment.	BADC at present retains no stocks of minor irrigation equipment. All STWs and remaining DTW parts were sold during the 1994 auction. A total of 1,188 LLPs not sold at the auction were subsequently transferred to the Barind Integrated Agricultural Development Project, which is being implemented by MOA. In response to the termination of import restrictions and BADC's marketing roles, private sector installation of STWs/LLPs has expanded rapidly, increasing by an average of 11 percent annually since crop year 1990/91. Many of BADC's irrigation engineers/mechanics opted for early retirement and subsequently worked in the private sector.	BADC no longer retained stocks of LLPs and STWs. All previous stock was sold by auction in 1994.
3. BADC to refrain from further procurement of 2 cusec DTWs until current stock disposed of through direct sales or auction to private dealers; BADC to base any future procurement on farmers' choice.	BADC no longer procured 2 cusec DTWs. Smaller (0.5 and 1.0 cusec) DTWs were being procured under NMIDP, which MOA demonstrated and promoted and the private sector was to sell.	No new DTWs had been procured by BADC since 1992.	BADC was no longer in charge of the project implementation unit under NMIDP. BADC no longer procured DTWs.
4. BADC to prepare and initiate implementation of an action plan to dispose of all installed DTW currently owned by (i) selling off those operational, (ii) repairing and selling those requiring rehabilitation.	Out of approximately 12,000 installed DTWs owned by BADC in late 1990, about 6,000 were disposed by February 1993.	BADC was still in control of some DTWs. Progress in disposal was slowed by political uncertainty during 1995/96.	The remaining DTW materials had been partly sold to private dealers and partly used in rehabilitation programs.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
5. Modify customs duties, development surcharge, and licensing fees payable on all classes of imported irrigation equipment, components thereof, and spare parts so that the private sector pays exactly the same amount, or receives the same exemptions, as does the public sector. ^c	The National Board of Revenue reported these policies remained in effect at the time of STR.	Policies remain in effect, but were of limited relevance because the public sector no longer imported minor irrigation equipment.	Policies remained in effect.
6. Remove restrictions on imports of fertilizers (TSP, MP, and urea when required).	Bangladesh was no longer importing urea. At the time of STR, BADC neither imported fertilizers nor were there any restrictions on private imports and marketing. A total of 215 private fertilizer importers were registered with MOA as of late 1992. MOA maintained control of public tendering until December 1992, using a procedure to shortlist registered private sector importers that was viewed as fair, although inefficient, by the International Fertilizer Development Center.	The policies have been maintained. The requirement that fertilizer importers be registered with MOA was rescinded in September 1995 with the issuance of Fertilizer Control Order 1995. The Control Order listed a total of 18 specific types of fertilizer, including all major forms of nitrogen, phosphorous, and potassium, that the private sector could import without formal approval. Approval to import other fertilizers had to be obtained from the National Fertilizer Committee. The Bangladesh Fertilizer Association had an active membership of about 2,300 private fertilizer traders and importers.	No restriction existed on the imports of TSP, MP, and urea per se. But import of urea was not lucrative given the lower controlled ex-factory price sold by BCIC's urea factories.
7. BADC to concentrate on performing only an intervention role in fertilizer marketing by maintaining a buffer stock, and ensuring fertilizer availability in areas unlikely to be served by the private sector. ^d	BADC had not maintained a 20 percent buffer stock that was envisioned at the time of Program approval. The BADC share of the domestic fertilizer trade declined significantly between 1988 and 1992, and at the time of STR was limited to minor storage and distribution functions, primarily in remote areas, such as the Chittagong Hill Tracts. The International Fertilizer Development Center reported that BADC stocks were	BADC had essentially no role in fertilizer storage and distribution. Although concerns about the need for public distribution in remote areas seemed warranted at the time the Program was formulated, the private fertilizer trade had developed rapidly and supply shortages in such areas did not appear to be a significant concern. However, in part as a result of remaining pricing controls and, since 1995, a ban on its urea exports,	BADC was no longer involved in fertilizer marketing. BCIC remained active in the production and storage of urea.

^c The note is especially applicable to the private sector imports of DTWs, where the tariff exemption for the public sector was 50 percent, while rebate applicable to the private sector was 15 percent. For a relatively large number of minor irrigation-related equipment items, the public sector received total exemption.

^d A Government study shows that the level of buffer stock should not exceed the equivalent of 20 percent of three months, moving average of marketing requirements.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
	only a small fraction of the total held, on average, by the private sector.	BCIC was playing an unnecessarily large role in fertilizer storage. There was scope to improve market efficiency and reduce public costs by transferring this storage function to the private sector.	
<p>8. Restrict BADC's marketing of seeds to wholesaling to private dealers and initiate the implementation of an action plan to modify BADC's role in the seed industry covering (i) pricing; (ii) seed testing, production, and multiplication; and (iii) market research and information.</p>	<p>This condition was partly fulfilled and an amendment was approved at the time of STR. As envisioned by the Program, the Cabinet, in December 1992, approved a new National Seed Policy aimed at reducing price subsidies and public costs, and establishing a revised regulatory role for BADC. In March 1993, the Cabinet approved an action plan prepared by the Seed Wing of MOA, based on background material provided by BADC, which involved the closure of 300 of 460 retail <i>thana</i> (subdistricts) seed centers by June 1995; 100 had been closed as of 15 May 1993, and a further 100 centers by April 1994. Seed price subsidies were reduced by about 9 percent during 1992-early 1994.</p>	<p>In April 1995, the Government had completed the action plan by closing the final 169 centers. BADC retained just 99 centers to sell seeds on a wholesale basis, and to serve regulatory as well as developmental purposes. Price increases for jute, rice, potato, and other minor crop seed since 1994 reflected further minor reductions in subsidies on BADC seed production. However, in terms of the quantity of seed produced, there had been little change in BADC's output of certified seed for "notified" (rice, wheat, jute, potato, and sugarcane) crops. The private seed trade had grown slowly compared with the fertilizer and agricultural equipment markets. The regulatory, research, and private sector support components of the National Seed Policy were to be implemented by MOA's Seed Wing, which remained chronically understaffed to perform these tasks.</p>	<p>BADC was still involved in the retailing of seeds through its seed centers. However, such retailing accounted for only about 6.5 percent of the seed trade.</p>
<p>9. Allow the private sector to:</p> <ul style="list-style-type: none"> (i) import seeds and genetic material (subject to health requirements); and (ii) have access to breeder and foundation seeds from public sources (BADC/research institutes) 	<p>The private sector could obtain foundation seed, but breeder seed was less widely available. Imports of rice and wheat seed were allowed subject to the regulations of the Bangladesh Rice Research Institute and the Bangladesh Agricultural Research Institute, while imports of genetic material were subject to quarantine requirements. Revisions of these regulations were envisioned under the new National Seed Policy approved in December 1992. In particular, the Policy proposed special restrictions to govern the registration,</p>	<p>In view of the strategic importance of the "notified" crops in Bangladesh agriculture, some phytosanitary regulations were reasonable if they are publicized, transparent, and can be complied with by the private sector in a practical, timely manner. However, seed experts believed that the remaining technical and institutional restrictions on seed production and trade, including tax policies and the availability of credit, together with remaining budgetary subsidies provided for BADC seed</p>	<p>There were no trade restrictions on the import of seeds and genetic materials in general but permits were required to import seeds for the five "notified" crops. To date, only a nongovernment organization had been approved to have access to breeder seeds from the Bangladesh Rice Research Institute. More than 90 percent of seed sales were being transacted among farmers and the near monopoly of BADC in fulfilling the remainder posed a disincentive to private companies, which have to compete with</p>

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
	import, evaluation, and release of seed for the five "notified" crops.	production, hampered innovation and growth in the private seed industry. The deregulation of the production and trade of "notified" crop seed had been recommended, as had active efforts by MOA and other agencies to promote private investments in modern seed production technologies.	BADC's subsidized operations.
<p>C. Rationalization of Food Grain Pricing</p> <ol style="list-style-type: none"> 1. Establish producer floor prices for food grains, taking into consideration the recommendations and findings of an ongoing International Food Policy Research Institute (IFPRI) study in consultation with the Asian Development Bank (ADB), IDA, and the United States Agency for International Development. 2. Procure quantities of food grains of average quality necessary to support these floor prices. 3. Announce floor prices prior to the planting seasons for rice and wheat. 	<p>Policy developments overtook the actions required by the Program and this condition was waived at the time of STR. Floor price recommendations of the Ministry of Food (MOF) were being made in consultation with IFPRI advisors. However, timely announcement of floor prices to guide planting decisions was not possible because of delays in the analysis of production cost data and often lengthy Cabinet debates. Moreover, a floor price mechanism was contradictory to the new open tender system (OTS) of rice procurement. Procurement quantity decisions were intended primarily to meet obligations of the Public Food Distribution System (PFDS) rather than to support farmer prices, which were being increasingly determined by world markets. The IFPRI team produced numerous studies, reports, and policy briefs that provided analytical support for the policy reforms relating to food grain management and pricing that were implemented by MOF.</p>	<p>The OTS had not been used since 1994/95, and MOF's present strategy would rely entirely on the floor price mechanism for domestic procurement to more directly support producer incomes. MOF reports that constraints in the availability of short-term credit for trader working capital, in combination with MOF's requirement for minimum OTS delivery lots of 50 t, contributed to the unsatisfactory performance of the OTS. In the future, MOF intended to advance the announcement of floor prices by 1-2 months, but this would still not be sufficiently early in a cropping season to guide farmers' planting decisions.</p>	<p>Government procurement was made by a combination of OTS and direct purchase system. The OTS was used for the 1997/98 and 1998/99 crop years but was supplemented by a direct purchase system when delivery of adequate quantity of grains could not be met by the successful tenderers. Procurement prices were announced at the beginning of the planting seasons.</p>
<p>D. Institutional Reorganization</p> <ol style="list-style-type: none"> 1. Finalize an action plan for reform of BADC's revised role, in keeping with its primary function as an 	<p>Due to reforms undertaken between 1990 and the present, BADC roles in the marketing of fertilizer, tubewells, and seed</p>	<p>A task force report on implementing the retrenchment plan was prepared in late 1994. As of June 1996, approximately</p>	<p>The optional retirement program was continuing. To date, 9,800 employees had retired under the optional retirement</p>

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
<p>institution to encourage development, and initiate its implementation.</p>	<p>had either ended or been substantially reduced. In March 1993, the Cabinet approved a plan for early retirement of 3,500 BADC personnel; almost 1,200 had been formally separated from service as of April 1993, while most of the remainder had been retired as of February 1994. In June 1993, a committee completed a report proposing further restructuring in light of BADC's reduced role in input marketing, and its envisioned roles in future agricultural development led by the private sector: (i) sector monitoring, (ii) technology demonstration, and (iii) handling emergency situations. In October 1993, the Cabinet approved a plan to retrench more than half of BADC's staff. An interministerial task force was considering steps to implement this plan at the time of STR.</p>	<p>9,700 staff, or about 46 percent of the total, had applied for BADC's early retirement program. Of these, 6,600 employees had been formally retired from service at a cost of approximately Tk1,280 million. A further Tk800 million was required to settle the remaining 3,100 retirement cases, at which point BADC's staffing would have been reduced from 21,000 in the late 1980s to approximately 11,300.</p>	<p>program. Staff strength stood at about 11,000 and the target was to reduce the strength to 6,000. However, while the optional retirement program was still in effect, greater reduction was expected to be made through nonreplacement of retired staff.</p>
<p>2. Initiate reorganization of the Directorate of Food (DOF) in line with recommendations of the Food and Agriculture Organization study to improve DOF management and financial efficiency.</p>	<p>DOF's operational efficiency was improved by reductions in its foodgrain procurement and distribution roles. MOF plans in early 1994 centered on downsizing DOF and retiring staff in light of these changes. At the time of STR, MOF had retired about 1,600 DOF staff and planned a total retrenchment of 3,000.</p>	<p>Since early 1994, an additional 3,260 staff had been retired and the DOF payroll had been reduced by approximately 36 percent as compared with the crop year 1991/92 level.</p>	<p>Downsizing of DOF was continuing. To date, about 5,100 had retired from DOF. However, further downsizing appeared difficult given the increased food procurement and distribution of DOF activities brought about the 1998 calamity.</p>
<p>3. Strengthening the Food Planning and Monitoring Unit (FPMU) to improve food policy and foodgrain procurement activities.</p>	<p>All the major recommendations of ADB's TA 1411-BAN,^e were accepted by the Government during the tripartite meeting held in July 1992. Actions within FPMU's capacity to implement were taken to upgrade the status of the Unit and develop workplans for professional staff. The IFPRI also assisted FPMU with training, computer hardware, and field</p>	<p>Due to budgetary constraints, FPMU had not yet reached the full level of professional staffing recommended under TA 1411-BAN. The IFPRI project was completed in June 1994, and was followed in October 1994 by the commencement of TA 2052-BAN.^f If there were an assured, ongoing commitment of resources from the Government to sustain</p>	<p>Staffing strength of FPMU had expanded beyond the recommendation made by TA 1411-BAN.</p>

^e TA 1411-BAN: *Strengthening the Food Planning and Monitoring Unit within the Ministry of Food*, for \$260,000, approved on 6 November 1990.

^f TA 2052-BAN: *Food Grain Management Operations*, for \$840,000, approved on 3 January 1994.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
	budgets.	FPMU, additional technical assistance could be considered to further strengthen FPMU's data processing and analysis capacity.	
<p>II. COMPLEMENTARY REFORM MEASURES</p> <p>A. Introduction of New Tariff Structure</p> <p>1. Limit custom duties payable on imported engines of up to 20 horsepower and power tillers to the lowest band until new tariff structure is introduced.</p> <p>2. Design and introduce new tariff structure for minor irrigation equipment and power tillers consistent with the Government's macroeconomic framework and the sector's requirement for inexpensive minor irrigation equipment.</p>	<p>Policy complied with.</p> <p>Accomplished with an agreement to adopt recommendations of TA 1409-BAN on diesel engine duties and general agreement on duties for agricultural machinery (primary power tillers) and spare parts.</p>	<p>This policy remained in effect until, as a condition for STR, The National Board of Revenue adopted a revised tariff structure in FY1992/93 in line with the recommendations of TA 1409-BAN.⁹</p> <p>As part of the Government's broader efforts in trade regulation, the tariff structure for some important agricultural equipment was further liberalized under the Government's Import Policy Order (IPO) of 1995-1997. Customs duties on 3-45 horsepower tubewell engines and power tillers were reduced from 7.5-15.0 percent to 0. However, tariffs for spare parts have remained in effect.</p>	<p>Recommendations of TA 1409-BAN had been accepted and implemented.</p>
<p>B. Deregulation of Minor Irrigation Equipment and Fertilizer Marketing and Distribution</p> <p>1. Abolish all standardization requirements that restrict the importation of a range of minor irrigation equipment and power tillers.</p>	<p>Abolition remained in effect at the time of STR.</p>	<p>Policy remained in effect.</p>	<p>Policy remained in effect.</p>
<p>2. In nonsurface irrigation areas, abolish restrictions on siting of all wells (STWs and DTWs).</p>	<p>Abolition was in effect at the time of STR. An MOA order in January 1992 reimposed minimum distance siting restrictions between tubewells. This was canceled by</p>	<p>Policy remained in effect.</p>	<p>The National Water Policy, promulgated in January 1999, allowed for control over the indiscriminate siting of STWs. Policy on nonrestricted siting and use of STWs was</p>

⁹ TA 1409-BAN: *Formulation of a New Tariff Structure for Agricultural Equipment Imports*, for \$70,000, approved on 6 November 1990.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
	order of the President in an August 1992 notification that instructed the order to be published in the Government Gazette.		likely to be reviewed in consideration of reported arsenic contamination in STWs.
<p>3. In surface irrigation areas, carry out a study to</p> <p>(i) assess options for development of ground and surface irrigation within existing surface irrigation schemes of the Bangladesh Water Development Board (BWDB),</p> <p>(ii) based on the study, prepare specific proposals for the effective use of existing surface irrigation schemes and for complementing investments in groundwater development; and</p> <p>(iii) implement recommendations in consultation with ADB and IDA.</p>	A study was conducted under TA 1410-BAN, ^h but the key TA recommendations were not accepted at the final tripartite meeting in July 1992. In April 1993, a committee chaired by the Ministry of Irrigation, Water Development, and Flood Control examined effective command areas in 16 of 18 BWDB schemes and recommended that prohibitions on STW installations be formally removed in areas that physically cannot be served by these schemes. At the time of STR, these installations were informally permitted in BWDB schemes, although such development was not legally sanctioned. No additional actions were needed to complete the Program.	Although the informal acceptance of private tubewells continued, no formal revocation on such equipment in BWDB schemes had occurred, or appeared likely in the near future. BWDB personnel argued that unrestricted use of tubewells could have adverse water table impacts and would reduce farmer incentives to use and pay for existing surface water irrigation. At the same time, the Government had taken positive steps to enhance beneficiary roles and choices in irrigation development, beginning with the adoption in June 1994 of the guidelines for people's participation in water development projects. Under the Command Area Development Project, ⁱ water management organizations were being established to allow direct involvement of project beneficiaries in investments to ensure effective use of existing surface irrigation schemes. The legal framework for water users to organize themselves into self-sustaining organizations was being strengthened with ADB assistance under the Small-Scale Water Resources Development Sector Project ^j and TA 2012-BAN. ^k	The National Water Policy provided an integrated approach to the management of water resources (including surface water irrigation). Greater attention was being given to more use of surface irrigation, given the impact on the water table caused by STWs and the costly use and maintenance of DTWs.
4. Restrict siting of subsidized 2 cusec DTWs to areas not suitable for STWs and LLPs, in accordance with the	The restriction remained in effect. BADC staff reported that the National Water Plan guidelines were being followed.	Policy remained in effect. At present, 2 cusec DTWs were only being installed in Bangladesh on a limited basis by MOA in	Policy remained in effect.

^h TA 1410-BAN: *Review of Options for Ground and Surface Water Development*, for \$170,000, approved on 6 November 1990.

ⁱ Loan 1399-BAN(SF): *Command Area Development Project*, for \$30 million, approved on 7 November 1995.

^j Loan 1381-BAN(SF): *Small-Scale Water Resources Development Sector Project*, for \$32 million, approved on 26 September 1995.

^k TA 2012-BAN: *Khulna-Jessore Drainage Rehabilitation*, for \$920,000, approved on 14 December 1993.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
existing National Water Plan guidelines.		the Barind Integrated Agricultural Development Project.	
5. Broaden base for formulating water users groups by allowing establishment of command areas based on water users associations under the Societies Registration Act of 1960.	The Act was in force, but further efforts were needed to support water users associations.	The formation and support of water users associations in the irrigation schemes of BWDB was being strengthened under the Command Area Development Project (footnote i).	Efforts were continuing to form and support water users associations.
6. Allow the private sector to participate in the importation of externally-funded minor irrigation equipment and fertilizers, and require the distribution of such commodities at full market prices through private and public sector on equal terms.	Policies remained in effect and had been enhanced since the time of Program approval. The private sector was participating fully in all fertilizer importation. Stronger private sector capacity to market and maintain minor irrigation equipment was a key goal of the World Bank-financed National Minor Irrigation Development Project and Shallow Tubewell and Low Lift Pump Irrigation Project.	Policies remained in effect, but were of reduced relevance because the public sector was importing little or no fertilizer and minor irrigation equipment. Subject to greatly reduced tariffs and technical restrictions, the private sector was operating freely in the importation of fertilizers and agricultural equipment and machinery.	Private sector importation of minor irrigation equipment was unrestricted. Private importation of SSP was restricted due to misrepresentation of SSP as TSP by traders and due to the Government's policy to encourage the use of TSP in place of SSP. No trade restriction exists for importation of other fertilizers.
7. Rationalize TSP fertilizer distribution arrangements to enable the private sector to directly procure TSP fertilizer at the factory gate at BADC selling price.	Policy remained in effect and had been enhanced since the time of program approval. The private sector had effectively replaced BADC in almost all fertilizer distribution activities.	Policy remained in effect. With the benefit of hindsight, this policy should also have applied to urea. Collusion at the gates of BCIC urea plants was reported to significantly raise the price of urea paid by traders procuring from the factory.	Policy remained in effect.
8. Privatize BADC's fertilizer distribution facilities: (i) close 2 of the 6 existing transport discount points; and (ii) privatize 10 of the 60 existing BADC-operated primary distribution points (PDPs).	Accomplished prior to program approval. The facilities were leased, transferred to other agencies (MOF and the Bangladesh Rural Development Board), or closed.	Privatization or closure of transport discount points and PDPs was successfully undertaken and no further action was necessary.	BADC was no longer involved in fertilizer distribution.
9. Dispose of an additional 20 PDPs and rationalize the use of the remaining 20 PDPs consistent with BADC's intervention role in fertilizer marketing.	Accomplished in the third quarter of 1992. A total of 21 PDPs were either rented, closed, or transferred to other public agencies, most commonly for MOF grain storage. BADC faced difficulties in privatizing these storage facilities. There	Privatization or transfer of PDPs was successfully undertaken and no further action was necessary.	

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR^a (July 1996)	Status at PPAR^a (July 1999)
	are technical problems in turning PDPs into other uses because fertilizer storage must be airtight, whereas grain storage requires good ventilation. In addition, some PDPs had been built on land owned by the state railroad and other public agencies, so sale to the private sector was reported to be impossible.		
10. In the case of public sector imports of fertilizers, allow the private sector to lift TSP, MP, and urea directly from ports.	This policy remained in effect and had been enhanced since the time of program approval. MOA completely deregulated TSP and MP imports in December 1992.	Policy remained in effect, although no urea had been imported since the time of program approval. With the benefit of hindsight, this conditionality should have referred to urea access at the factory gate on a "first come, first served basis," which had been curtailed since late 1994, leading to collusion and rent seeking behavior.	Policy remained in effect. However, importation of urea was not profitable given the local supply of urea at subsidized and controlled price.
C. Rationalization of Food Grain Management 1. Remove all obstacles to private sector food grain storage, including restrictions on credit for storage purposes, and remove anti-hoarding and grain-holding laws from the books.	The Bengal Rice Millers Act of 1943, the Anti-Hoarding Act, and the Control of Goods Act, all of which limit the accumulation and storage of food grains, had been suspended since 1988. The suspension remained in effect at the time of STR, but formal revocation would have been preferable, since suspended laws can be reinvoked. However, such an action appeared unlikely in view of market development during the past few years.	The status of the acts was a source of perceived risk, both for banks and traders who might wish to pursue commercial grain trade. Although suspension of the acts continued, they should be formally revoked. Positive action (i.e., publicized revocation of the acts together with training of commercial bank staff in the credit needs of the grain trade) would promote growth of the private sector. As noted, the scarcity of trader working capital constrained the scale of operations in the private grain trade.	All restrictions to private grain trade had apparently been removed. Imports of grain by the private sector apparently played a major role in overcoming the food shortage caused by national calamities in 1998.
2. The Food Policy and Monitoring Committee to clear all Government commercial food grain imports beyond the usual market requirement and related food aid; place	Policies remained in effect. Public tender notices for wheat imports were published in news dailies, together with procedures for competitive bidding.	Policies remained in effect.	Policies remained in effect.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
commercial food grain imports under open international tendering.			
3. Remove food grains from the list of restricted imports.	Policy remained in effect. The Ministries of Food and Commerce retained some discretionary authority over imports of rice, but rice was removed from the negative list of imports in the IPO of 1993-1995, as had wheat in the IPO of 1991-1993. Duties on food grain imports were eliminated in 1992.	Policy remained in effect. In addition, there were no duties on grain imports, including rice, wheat, and corn. The response of the private sector was dramatic. Starting with no import role in crop year 1991/92, the private sector had taken responsibility for the major share of commercial rice imports and a significant share of wheat imports.	Food grains were removed from restricted list. To encourage a greater private sector role, rice imports were exempted from the 2.5 percent development surcharge imposed on imports.
4. Remove barriers to exports of food grains to encourage the production of high quality rice and other cereals for exports.	Export application procedures and quantity restrictions were streamlined to facilitate small rice exports in late 1992. At that time, letters of credit still required approval by three ministries (Finance, MOF, and MOA), but these ministries agreed in October 1992 that this approval mechanism should be ended. In July 1993, rice was officially removed from the negative list of export commodities in the Government's official Export Policy 1993-1995.	Policy remained in place. The requirement that letters of credit of rice exports be approved by three different ministries had been removed.	Barriers to food grain exports had been removed.
5. Formulate an action plan taking into consideration the recommendation of the IFPRI study and, in consultation with ADB, IDA, and the United States Agency for International Development, initiate the plan's implementation to (i) rationalize food grain stock requirements for food security and operational purposes, and program domestic food grain procurement on a priority basis and imports as a residual; and	In line with recommendations of the ongoing IFPRI study, MOF at the time of STR was committed to a reduced role for food imports and much greater reliance on domestic procurement to achieve food security objectives. Increasing from 25 percent in crop year 1987/88, all commercial procurement was done domestically in crop year 1993/94, when there were no commercial imports by PFDS. Streamlining of PFDS in 1992 and 1993 involved (i) ending the rural rationing and statutory rationing schemes; (ii) adjusting targets for procurement during the <i>aman</i> and boro seasons in accord with the reduced PFDS	From 1987/88 to 1993/94, annual PFDS procurement dropped from 3.3 to 0.8 million t, while distribution declined from a peak of 2.9 million t in 1988/89 to 1.1 million t in 1992/93. The annual subsidy on PFDS operations declined from Tk7.1 billion in 1990/91 to Tk3.7 billion in 1994/95. Although no commercial PFDS imports occurred in 1993/94, imports (commercial plus food aid) and local procurement grew thereafter, raising public procurement to 1.9 million t annually in 1994/95 and 1995/96. Commercial procurement by PFDS, both domestic and international, was determined as a residual based on food	The Government had decided to maintain a food grain stockpile of one million to maintain food security. Emphasis was being placed on domestic procurement for the stockpile given the long time lag needed for emergency supply from external food aid or commercial imports. The share of food grains distributed by PFDS was about 4 percent of the total food grain supply and efforts to streamline the PFDS included the downsizing of DOF staff strength.

Policy Actions	Status at Second Tranche Release (May 1994)	Status at PCR ^a (July 1996)	Status at PPAR ^a (July 1999)
(ii) streamline PFDS operations.	obligations; (iii) setting up the OTS; (iv) adopting a more efficient pricing strategy for food grains distributed by PFDS; and (v) initiating an early retirement plan for MOF staff.	aid pledges and private sector imports an stocks. The share of commercial PFDS food grain procurement from domestic sources declined from 100 percent in 1993/94 to about 30 percent thereafter as a result of poor crops and higher market prices. MOF approved a draft National Food Policy in mid-1995, but no further action was possible to secure its approval by the Cabinet because of the political uncertainty of 1995.	
D. Environment 1. Prepare a plan to establish a sectorwide monitoring system for the environmental impact of agricultural development programs. 2. In consultation with ADB and IDA, agree on a timetable to implement the plan.	Establishment of the monitoring system is being guided by a TA within MOA's Irrigation Development Support Unit financed by the European Union under NMIDP. The arrival of the TA's chief technical advisor was delayed until June 1993. In February 1994, MOA formally approved a comprehensive plan and timetable to establish a system to monitor the environmental impacts of minor irrigation technology and agrochemicals.	The past two years (1994 and 1995) of the TA's activities focused on baseline ecological studies, determining priorities for long-term monitoring, and establishing the required systems and personnel under NMIDP for measuring groundwater potential, water quality, and water table changes. World Bank staff supervising NMIDP were generally satisfied with the TA's progress. Discussions with MOA during a World Bank supervision mission in late 1996 focused on the steps necessary to institutionalize the monitoring system permanently within MOA by the end of 1997.	The sectorwide monitoring system was not in place. The TA had been completed, and the output of the studies undertaken had been transferred to NMIDP, which was implementing the system with Government funds as funding from the World Bank had ceased.

COMMITMENT AND DISBURSEMENT OF FOREIGN ASSISTANCE TO BANGLADESH
FOR FY1995–FY1996
(in \$ million)

Item	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	Total
COMMITMENT							
A. By Type of Assistance							
1. Food Aid	184	226	178	83	132	133	936
2. Nonproject Aid	296	576	336	365	354	163	2,090
3. Project Aid	890	1,114	761	1,961	1,126	983	6,835
Total	1,370	1,916	1,275	2,409	1,612	1,279	9,861
B. By Type of Payment							
1. Grants							
Food Aid	184	226	178	83	132	133	936
Nonproject Aid	105	185	232	117	269	160	1,068
Project Aid	197	730	325	263	460	571	2,546
Total	486	1,141	735	463	861	864	4,550
2. Loans							
Food Aid	—	—	—	—	—	—	—
Nonproject Aid	191	391	104	248	85	3	1,022
Project Aid	693	384	436	1,698	666	412	4,289
Total	884	775	540	1,946	751	415	5,311
DISBURSEMENT							
A. By Type of Assistance							
1. Food Aid	268	241	121	118	137	138	1,023
2. Nonproject Aid	408	386	372	451	333	229	2,179
3. Project Aid	1,056	984	1,182	990	1,269	1,076	6,557
Total	1,732	1,611	1,675	1,559	1,739	1,443	9,759
B. By Type of Payment							
1. Grants							
Food Aid	268	241	121	118	137	138	1,023
Nonproject Aid	246	192	208	184	227	182	1,239
Project Aid	317	383	490	408	526	357	2,481
Total	831	816	819	710	890	677	4,743
2. Loans							
Food Aid	—	—	—	—	—	—	—
Nonproject Aid	162	194	164	267	106	47	940
Project Aid	739	601	692	582	743	719	4,076
Total	901	795	856	849	849	766	5,016

— = not applicable, FY = fiscal year.

Source: External Resources Division, Ministry of Finance.

**UREA PRODUCTION AND SALE FROM
BANGLADESH CHEMICAL INDUSTRIES CORPORATION FACTORIES**

Item	Unit	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999
Total Production	million tons	1.98	2.13	1.63	1.87	1.61
Average Cost of Production	Tk/million tons	4,467.00	4,494.00	5,011.00	4,685.00	5,465.00
Ex-Factory Price	Tk/million tons	3,725.00	3,725.00	3,725.00	4,800.00	4,800.00
Total Sales	Tk million	7,380.00	7,950.00	6,080.00	8,976.00	7,728.00
Subsidy	Tk million	1,470.00	1,640.00	2,100.00	—	1,070.00

— = not applicable.

Source: Bangladesh Chemical Industries Corporation.

LIST OF ELIGIBLE IMPORTS

1. The proceeds of the Food Crops Development Program loan were used to cover expenditures subject to a negative list of ineligible items (Table A5.1).

Table A5.1: Eligible Items

Section	Chapter Heading	Items	Disbursement Limit Per Tranche
1. Vegetable Products	1005.10	Cereal seeds	No limit
	1201.00	Miscellaneous seeds	
2. Mineral Product	2710.00	Petroleum products Diesel oil	\$10 million
3. Products of the Chemical and Allied Industries	31	Fertilizers	
	31.01.00	Animal or vegetable fertilizers	No limit
	31.02.00	Mineral or chemical fertilizers (nitrogenous)	No limit
	31.03.00	Mineral or chemical fertilizers (phosphatic)	No limit
	31.04.00	Mineral or chemical fertilizers (potassic)	No limit
	38.08.00	Pesticides (except those shown in the ineligible import list below)	No limit
4. Base Metal Items	73	Iron and steel items	\$10 million
	73.03.00	Items used in agriculture	
5. Machinery and Mechanical Appliances	84.08.00	Diesel and semi- diesel engines, components and spare parts	No limit
	84.19.31	Heat treatment machinery	No limit
	84.32.00	Agricultural, horticultural/forest machinery (power tillers)	No limit

Table A5.1: Eligible Items (continued)

Section	Chapter Heading	Items	Disbursement Limit Per Tranche
	84.33.0	Harvesting/threshing machinery, etc.	No limit
	84.37.00	Seed cleaning machinery	No limit
	85.01.00	Electric motors, pumps and other equipment used in agriculture	No limit
6. Vehicles	87.00.00	Vehicles (soil testing laboratory vans)	\$10 million

Source: Report and Recommendation of the President.

2. The proceeds of the loan were not made available to cover expenditures incurred on the items listed in Table A5.2.

Table A5.2: Ineligible Items

Trade/Common Name	Toxicity/Oral LD ₅₀ (mg/kg)
A. Insecticides	
Aldrin	98
Carbofuran	8
Demeton	2.5-6
Phosphamidon	7
Parathion-methyl	14
Metasystox	64
Monocrotophos	14
Dichlorvos	56
Parathion	13
Phenamiphos	—
Phorate	2
Tafethion	96
Temik 3G	0.9
Endosulfan	80
Triazophos	80
Zinc Phosphide	45
Endrin	7
Leptophos	50
B. Fungicides	
DBCP	170
Dithane Z-78/Zineb	Chronic effect
Thiride/Thiram	Chronic effect

kg = kilogram, mg = milligram.

Source: Report and Recommendation of the President.