ASIAN DEVELOPMENT BANK
Post-Evaluation Office

COUNTRY SYNTHESIS OF POSTEVALUATION FINDINGS

IN

BANGLADESH

October 1997

CONTENTS

EXECUTIVE SUMMARY

The 1996 Country Synthesis of Postevaluation Findings for Bangladesh is based on the review of the findings of 43 Project Performance Audit Reports (PPARs) and 21 Project Completion Reports (PCRs).1 The Country Synthesis identifies the key factors affecting the implementation and operation of the Bank-financed projects so that these lessons learned can be used to improve design, implementation and operation of future development projects and programs.

The report covers the Bank's operations in Bangladesh as of 31 December 1996. Bank operations entailed the approval of 123 loans totaling nearly $5 billion to finance 115 projects and programs.2 Nearly all the total loan amount was from the Asian Development Fund, which made Bangladesh the second largest recipient of the Bank's concessional loans. The agriculture and natural resources sector received the largest share of Bank assistance (38 percent), followed by energy (22 percent), transport (17 percent), social infrastructure (15 percent), industry and non-fuel minerals (4 percent), finance (3 percent) and private sector (about 1 percent).

Of the 43 postevaluated projects, 35 percent were considered generally successful, 56 percent were rated partly successful, and 9 percent were assessed as unsuccessful. The success rate of 35 percent in Bangladesh is low compared with the 54 percent average for all Group A countries. It is also lower than the 37 percent reported in the 1993 Country Synthesis.

Nearly all postevaluated projects experienced implementation delays. Overall, both postevaluated and non-postevaluated projects had an average delay of just over three years. The delays were primarily attributable to slow decision-making on the part of the Government/executing agency (EA), the EA's institutional weakness in project implementation, and delays in hiring consultants.

There were cost savings in almost two thirds of the postevaluated projects due mainly to reduced project scope. Reductions in project scope resulted largely from inadequate technical analysis of project requirements and demand for project facilities, and overestimation of cost at appraisal, especially the provision for contingency allowance. Projects with cost underruns were largely in the agriculture and social infrastructure sectors, and cost underruns averaged 30 percent. Cost overruns, mainly in the transport sector, also averaged around 30 percent and were largely due to implementation delays and the resultant effects of inflation, to expansion in project scope and to unanticipated land acquisition costs.

Among the most important success factors in Bank-assisted projects are the level of institutional development, the appropriate policy environment, technical assistance for capacity building, better project preparation, and beneficiary participation. The varying degrees by which these factors are present or absent during project development and implementation generally determined the level of success achieved by the specific Bank-assisted projects that were reviewed.

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1 Analysis of projects with PCRs or PPARs completed as of 31 December 1996; number of PCRs refers to those projects completed with PCR, but not yet postevaluated.

2 Hereafter, "projects and programs " simply referred to as "projects".

Among the lessons learned across several projects and all sectors were:

(i) Realistic and rigorous assessment of institutional environment and EA capabilities to implement and maintain projects is critical.

(ii) Where institutional reforms and operational improvements are essential for project success, such improvements should be prerequisites for loan approval, not simply covenanted outcomes.

(iii) The Government's reluctance to give an EA the necessary decision-making authority for timely procurement and project implementation is a fundamental problem in Bangladesh, which cuts across all projects and sectors, and significantly weakens project performance.

(iv) Avoid complex project designs with multiple components and beneficiary groups in sectors and countries where institutional capabilities are weak.

(v) More rigorous policy and sector analysis, and consideration of project options, are necessary to ensure that both the policy environment and market will support, not hinder, project performance.

(vi) Establish mechanisms to ensure continued administrative and budgetary support for operations and maintenance of completed projects.

(vii) Stakeholder participation is important to ensure technologically appropriate designs, adequate operations and maintenance, cost recovery, and overall project sustainability.

(viii) More frequent, focused, and proactive supervisory missions in the early stages of project implementation are needed, particularly for multi-component projects and projects experiencing initial delays.

(ix) During implementation, the Bank should ensure that neither it nor the EA inadvertently deletes project components necessary for project success.

I. INTRODUCTION

1. The main objective of the Country Synthesis of Postevaluation Findings is to identify and analyze the key factors affecting the implementation and operation of the Bank-financed projects so that the lessons learned can be used to improve the design, implementation and operation of future development projects and programs. The Country Synthesis is based primarily on the review of the findings of postevaluation reports prepared by the Post-Evaluation Office (PEO), namely Project Performance Audit Reports (PPARs), Impact Evaluation Studies and Country Special Studies. It also takes into account the information and data stored in PEO's Postevaluation Information System, including the Abstracts of Postevaluation Findings. To capture important lessons learned from completed Bank-assisted projects which are not yet postevaluated, Project Completion Reports (PCRs) are also reviewed.

II. BANK OPERATIONS IN BANGLADESH

2. As of 31 December 1996, the Bank has approved 123 loans (including four private sector loans without Government guarantee) to Bangladesh for 115 projects totaling $4,942 million (see Appendix 1). Of the total loan amount, $30 million was from the ordinary capital resources and $4,912 million was from the Asian Development Fund, making Bangladesh the second largest recipient of concessional loans and third highest in terms of overall total Bank assistance. Some 38 percent of Bank assistance to Bangladesh financed agriculture and natural resources projects, primarily in the irrigation and rural development subsectors. The energy sector received 22 percent of Bank financing for the electric power and natural gas projects. The transport sector received 17 percent of Bank financing, mainly for roads, and social infrastructure followed with 15 percent, primarily for education and urban development projects. The remainder of Bank lending to Bangladesh went to industry and non-fuel minerals (4 percent), finance (3 percent), and private sector (1 percent). In addition, the Bank provided financing for 217 technical assistance grants totaling $123 million, including 118 advisory and operational TAs and 99 project preparation TAs.

3. Of the 115 Bank-financed projects, 64 have been completed (PCRs prepared) and of the 64 completed, 43 have been postevaluated as of 31 December 1996. Aggregate investment in postevaluated projects totaled $2,056 million, while total investment in the 21 non-postevaluated projects[3] amounted to $1,556 million.

4. The 43 postevaluated projects reviewed were approved between 1973 and 1988 with about two-thirds completed during the second half of the 1980s. Nearly half of the postevaluated projects were in the agriculture and natural resources sector, with the remaining postevaluated projects in social infrastructure, energy, finance, transport and industry (see Appendix 2). The 21 completed, but not yet postevaluated, projects were approved between 1977 and 1991, and generally completed during the first half of the 1990s. Again, nearly half were in the agriculture and natural resources sector, with the remainder spread among the other sectors (see Appendix 3).

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3 Projects completed with PCRs, but not yet postevaluated.

III. MAJOR FINDINGS AND LESSONS LEARNED

5. This section summarizes the major findings of the PPARs and the PCRs and extracts the key lessons learned. Appendix 4 lists postevaluation results for the 43 projects postevaluated as of 31 December 1996. Appendix 5 lists major findings from the review of PCRs for the 21 projects.

A. Agriculture and Natural Resources

6. Agriculture received the largest share of Bank assistance to Bangladesh, nearly $1.9 billion or 38 percent of total lending for 53 projects, with 22 percent of loans in the irrigation subsector. Of the 53 projects, 14 projects and 6 programs have been postevaluated. Ten more projects under the sector were completed but not yet postevaluated (see Table 1).

Table 1. Postevaluated/Completed Projects in the Agriculture & Natural Resources Sector

Agriculture & Natural Resources	PPARs				PCRs				
		Performance Rating				Performance Rating			
	No.	GS	PS	US	No.	GS	PS	US	No Rating
Irrigation & Rural Development	10	3	7	-	7	1	-	-	6
Industrial Crops & Agro-Industry	1	-	1	-	1	-	-	-	1
Fisheries	2	1	-	1	-	-	-	-	-
Livestock	1	-	1	-	-	-	-	-	-
Forestry	1	1	-	-	-	-	-	-	-
Agricultural Support Services	3	2	1	-	2	-	-	-	2
Fertilizer Production	2	2	-	-	-	-	-	-	-
Total	20	9	10	1	10	1	0	0	9

7. Of the 20 projects postevaluated in the agriculture sector, nine were rated generally successful, ten partly successful, and one unsuccessful.[4] The generally successful projects in the agriculture sector typically had simple project designs involving fewer agencies. All ex-post economic internal rates of return (EIRRs) of agricultural projects were below appraisal expectations. Of the three non-postevaluated completed projects which provided for recalculated EIRRs, two posted a lower range of EIRRs than at appraisal.

8. The postevaluated operations in the agriculture sector experienced an average delay of 2.9 years, versus an average delay of only two years reported in 1993 (see Appendix 6). This trend has not improved as the completed projects which have not been postevaluated were on average delayed by 3.2 years.[5] Of 20 projects reviewed, only the agricultural inputs program loan, the second and third crop intensification programs, and the forestry project were essentially completed on schedule. Major causes of delays included land acquisition

4 Project rating in the PCR was only made mandatory in 1995; only one of 10 PCRs reviewed under the agriculture sector had a rating.

5 Based on 10 PCRs in the agriculture sector, completed between 1989 and 1993.

problems due primarily to legal matters, difficulties in interfacing between Government agencies and contractors, suppliers and consultants, and delays in appointment of qualified project managers. Most important were the shortcomings of the administrative system and procedures. Inter-agency coordination problems were magnified due to the more complex project designs which required the involvement of several executing and implementing agencies (see Appendix 7).

9. Of the 30 postevaluated and non-postevaluated projects reviewed in the sector, 22 had cost underruns averaging 34 percent, and 8 had cost overruns averaging 39 percent. The cost underruns were primarily attributed to (i) reduced project scope owing mainly to inadequate project preparation and the availability of other funding sources, and (ii) substantially lower unit costs of local materials, supplies, equipment and civil works than planned owing largely to the depreciation of local currency against the dollar. Cost overruns were generally attributed to (i) enlarged project scope, particularly related to rehabilitation works, (ii) increases in cost of civil works over appraisal estimates, (iii) increases in land acquisition and administration costs, (iv) delays in project implementation, (v) increases in wages, and (vi) foreign and local currency fluctuations.

1. Irrigation and Rural Development

10. Six programs and four projects costing $456 million, including $299 million financed by the Bank, have been postevaluated, while seven more projects involving Bank loans of $212 million have been completed but not postevaluated. Of the ten postevaluated programs and projects, three were considered successful while the remaining seven were rated partly successful. The less than successful ratings are largely attributable to complex project designs, inter-agency coordination problems, and questionable sustainability of project benefits.

11. For program loans, a key lesson is that the effectiveness of policy dialogue depends on comprehensive, detailed policy analysis and program impact monitoring being done regularly. Policy covenants should preferably be time-bound, specific, monitorable and action-oriented to guide specific policy reforms. Loan tranching should be considered as an effective means to increase the Bank's leverage in furthering policy reform.[6]

12. A major lesson drawn from the subsector’s program loans is that changes in policies under a program loan should be viewed within the overall macro-economic policy context. For example, reduction in agricultural input prices and subsidies impacts on the price of food which directly affects the poor, indicating the need for specific safeguards. Experience from the ten irrigation projects points to the importance of a thorough analysis of sector policies and any anticipated changes, together with a willingness to modify project design even after appraisal. For example, policy changes prior to and during implementation promoting privatization of tubewells and reducing irrigation subsidies, rendered projects less attractive to beneficiaries and resulted in minimal use of facilities.

13. The postevaluated projects in the irrigation and rural development subsector underscore the following:

(i) the importance of clear-cut responsibilities for each EA involved in a multi-

6 Per Office of the General Auditor "Report on an Audit of Program Lending," loan tranching may be more effective in combination with a reasonable number of specific, realistic and implementable conditions (para. 16).

component project, and the need for one central agency to be in charge of overall project supervision and coordination,

(ii) the need to reformulate the project as soon as there are indications that the components as appraised are no longer relevant or are highly unimplementable,

(iii) the need for stakeholder participation to ensure cost recovery, adequate O&M, and overall project sustainability,

(iv) the importance of matching the level of project complexity with the level of socioeconomic development and capacity of implementing agencies (i.e., projects in poorer areas should be straightforward, with simple designs and few components), and

(v) the need for more thorough project preparation to ensure the selection of the most appropriate technology given specific site conditions, financial costs to beneficiaries, and the beneficiaries' other options.

14. It was also demonstrated that in flood control ventures, implications of social, environmental, and design decisions critically affect project replicability, sustainability, and the achievement of objectives. Flood rehabilitation projects, financed through emergency funds, can be processed and implemented quickly if they involve repair rather than rehabilitation works. Long-term sustainability, however, would require that current Bank policies and guidelines addressing immediate needs for restoration after a disaster should be complemented by policies meant to meet medium and long-term requirements for rehabilitation and improvement.

2. Fisheries

15. Two projects under this subsector have been completed and postevaluated to date and together cost $9 million, including $5 million in Bank financing. The first fisheries development project was rated unsuccessful because there were major deficiencies in project formulation and appraisal. The key lesson learned was that thorough and careful assessment of assumptions relating to fisheries resources and expected increases in fish supply is essential to project success. Experience also showed the need for careful analysis of the implementing agencies' strengths and weaknesses. Appropriate institution-building components should be built into project design.

16. In contrast, the fisheries credit project was generally successful as it made use of lessons from the first project, showing that feedback from Bank experience is critically important. Still, serious implementation problems pointed to the need for a comprehensive community development approach and active participation of target beneficiaries in project implementation. Where the EA, prior to the loan, lacks the needed expertise, an effort to strengthen the EA through a technical assistance or direct association with agency specializing in fisheries is needed. Loan covenants and project coordination committees are not sufficient strengthening mechanisms.

3. Livestock

17. Only one of the two Bank-financed livestock projects has been completed and postevaluated to date. Completed at a cost of $12 million, including $9 million financed by the Bank, the Livestock Services Development and Training Project sought to reduce the incidence of animal disease and increase livestock productivity, and was rated partly successful. The lessons learned from this Project were: (i) loan covenants should not be included as conditions of the loan if the Bank is unable or unwilling to take steps to ensure timely compliance, (ii) unless executing agencies are convinced that loan conditions are in their own interest to help them identify and address problems at an early stage, non-compliance with loan covenants is likely, and (iii) any changes to project scope and design after loan approval, particularly those made to effect cost savings, should be carefully reviewed to ensure that such changes will not adversely impact project objectives.

4. Forestry

18. One forestry project has been postevaluated, costing $9 million, including $5 million in Bank financing. The Project sought to augment the critically depleted fuelwood supplies and was rated generally successful. Community activities were successful as non-government organizations participated in rural roadside planting and seedling distribution. The major lessons were: (i) the transfer of responsibility for all project components to a single agency was necessary for success, (ii) the demonstration effect of roadside tree planting was most effective as villagers could easily observe tree growth over time, (iii) formal binding agreements between the Government and beneficiaries covering obligations and profit-sharing should be secured to ensure Government commitment to a social forestry project, (v) sustainability of afforestation efforts depend on efficient management of established trees and reinvestment of revenues into continuous replanting programs, and (vi) extension services should continue beyond project implementation.

5. Industrial Crops and Agro-Industry

19. Two Bank-assisted projects costing $35 million, including $20 million in Bank loans, were reviewed. The Jute Seed Project was rated as partly successful owing to severe institutional constraints, including lack of overall research planning, overcentralization of decision-making, and inappropriate compensation systems. Significant lessons learned were that the Bank supervisory missions should focus on institutional constraints to project implementation, not only technical and operational constraints. Experience suggests that for research-oriented loans, such as the Jute Seed Project, a longer time frame for implementation should have been provided, particularly in the context of Bangladesh. With respect to project inputs, fellowships and training should contribute to in-depth knowledge and skills rather than broadening the outlook of staff.

20. The Rubber Rehabilitation Project was completed in 1989, but has not been postevaluated. Experience in the implementation of the rubber project emphasized the need to decentralize the management structure of the EA and give more authority to the individual

estate managers. Specific identification and timely transfer of lands from the Forest Department would have been useful in helping to reduce planting delays.

6. Agricultural Support Services

21. Five agricultural support projects have been completed costing $93 million, with Bank loans of $86 million. Three of the five projects have been postevaluated, the First and Second Agricultural Credit Projects and the Foodgrain Storage Project.

22. Both the First and Second Agricultural Credit Projects were delayed, but yielded high ex-post EIRRs of 24-29 percent. The two Projects were rated as generally successful, and highlighted the following: (i) the need for continuous monitoring during project implementation if benefits are to materialize to any significant extent, and (ii) the critical importance of providing a comprehensive, detailed feasibility study in order to achieve project objectives and avoid implementation delays.

23. Two other agricultural credit projects, completed but not yet postevaluated, suffered implementation delays and poor outcomes mainly due to their respective EAs' limited institutional and management capabilities. Neither project improved the institutional capacity of the EA. Changes in policies, particularly the debt amnesties declared by the Government in 1987 and 1991, also contributed to poor outcomes. Experience suggests that suitable organizations and financing mechanisms for rural credit delivery and recovery in Bangladesh's sociocultural environment are absent.[7]

24. The Foodgrain Storage Project, which cost $9 million including $8 million financed by the Bank, was rated partly successful owing largely to poor design, sub-standard workmanship, and operational problems. The Project showed that improved management and maintenance practices cannot be achieved merely through provision of loan covenants in the absence of specific assistance to achieve improvements in management and maintenance. Moreover, if the Bank relies upon aid agencies to effect institutional improvements, the Bank should closely coordinate and monitor their progress. A project which adds physical facilities to an existing operation in need of improvements ought to comprise a large enough package of well-designed components to ensure a demonstration effect. The Bank should also ensure that project components necessary for success are not deleted during implementation.

7. Fertilizer Production

25. Two fertilizer production projects, Ashuganj Fertilizer and the Chittagong Urea Fertilizer Projects, have been postevaluated and rated generally successful. These Projects involved the construction of fertilizer production plants and had combined total project costs of $994 million, including $143 million in Bank loans. The Bank financed less than 15 percent of total project costs which were shared for the most part by the Government and a multiplicity of cofinanciers, an arrangement which prolonged decision-makers and further resulted in delays. Ashuganj was completed four years late at twice its appraised cost, which appears to have underestimated cost of construction and erection.

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7 The proposed 1997 Rural Livelihood Project, which supports the creation of district level banks to improve resource mobilization and sustainability in the rural credit sector, is intended to address this problem.

26. Major lessons were:

(i) The experience of executing agencies and the general contractor is important for successful completion of fertilizer production plants.

(ii) Constructing fertilizer plants under turnkey rather than cost-plus-fee arrangements has advantages where the EA has limited experience implementing such projects.

(iii) Early introduction of preventive maintenance and computerization of store items is critical to efficient and sustained operations of facilities.

(iv) For large industrial projects, attention to detailed project preparation and effective contracting arrangements are critical as correcting design, material and installation faults cause significant delays.

B. Energy

27. The energy sector received the second largest share of Bank lending to Bangladesh, nearly $1.07 billion or 22 percent for 16 projects. Ten projects have been completed, of which five projects in the power and natural gas subsectors have been postevaluated (see Table 2).

Table 2. Postevaluated/Completed Projects in the Energy Sector

	PPARs				PCRs				
		Performance Rating				Performance Rating			
Energy	No.	GS	PS	US	No.	GS	PS	US	No Rating
Electric Power	3	-	3	-	3	1	-	-	2
Natural Gas	2	2	-	-	2	-	-	-	2
Total	5	2	3	0	5	1	0	0	4

28. Projects in the energy sector experienced an average delay of about 3.6 years. Major causes of delays in energy sector projects were delays in procurement and consultant selection caused by the EA's slow and bureaucratic procedures, delays in rights of way acquisition, frequent staff changes at the EA, and suspension of work due to floods and civil disturbances.

29. Of the ten power and natural gas projects reviewed, half had cost underruns averaging 20 percent, while the other half reported cost overruns averaging 28 percent. The main factors contributing to cost overruns and underruns were: changes in project scope and misestimation of provisions for interest during construction, taxes, duties and contingencies.

30. In late 1990, major lenders to the energy sector including the Bank, expressed dissatisfaction with the inability of the Bangladesh Power Development Board to comply with important covenants for financial and system loss requirements. The Bank joined the other lenders in their decision not to process any new loans to the sector until the Government

implemented agreed actions. The Government undertook efforts in this direction and the Bank has resumed its assistance. Recently completed projects in the energy sector, however, still fail to comply with the major financial covenants pertaining to accounts receivable collections, self-financing capability, and system losses.

1. Electric Power

31. The three postevaluated projects in the subsector cost $136 million with Bank financing of $66 million. The electric power projects were rated partly successful because while they generally met their physical objectives, the equally important objective of establishing sound financial and management practices at the EA was not met, and there was serious deterioration in the EA's overall financial viability. Lessons from these projects were:

(i) Institutional reforms and operational improvements without which project success cannot be assured should be completed before follow-on loans are processed.

(ii) EA and Government lack of commitment to reform, continued non-compliance with covenants, and failure to implement technical assistance recommendations are "red flags" and should be taken into account when considering future loans.

(iii) For covenants to be effective, the Bank should make certain the operational conditions necessary for attainment of the targets are substantially in place.

(iv) Adequate budgetary allocations for maintenance, availability of spare parts and an ongoing maintenance program are prerequisites for project sustainability.

(v) Success of individual projects depends on proper system planning for least-cost development of power systems, and operation of generating capacity based on considerations of efficiency and forecast power demand.

(vi) Use of the sector approach requires a strong EA with the ability to make clear-cut subproject choices, stick to the decisions taken and plan sufficiently ahead.

(vii) The law suits and construction delays resulting from inadequate rights-of-way acquisition procedures could be avoided with revised laws to enable timely purchase of land prior to construction.

2. Natural Gas

32. The two postevaluated projects in the natural gas subsector, costing $52 million, including $31 million of Bank funds, were implemented with moderate cost underruns. The gas distribution project was completed earlier than expected as the EA anticipated and promptly resolved problems. Both projects were rated generally successful at postevaluation, with high EIRRs.

33. The PCRs for the two completed, non-postevaluated projects in the natural gas subsector, both follow-ons to the two postevaluated projects, indicate physical objectives were generally met, but anticipated benefits of institution-building components have not materialized.

34. Project experience in the natural gas subsector highlighted the following:

(i) Two factors contributing to project success were the use of consultants familiar with the project through either feasibility studies or previous loans, and close monitoring for the availability of local funds.

(ii) In multi-component and multi-agency projects, more intensive Bank supervision is necessary in the early years of implementation, so that appropriate and timely measures to mitigate delays can be recommended.

(iii) For projects with substantial initial delays, project concept, objectives and scope should be reviewed and appropriately modified, taking into account prevailing conditions at project start.

(iv) Giving greater autonomy to the EA once procurement skills are established is advised to speed up project implementation.

(v) The Government's requirement that project equipment and materials be shipped only on Bangladesh vessels exacerbated procurement delays.

(vi) Tariffs need to be regularly reviewed to ensure economic efficiency in the use of natural gas.

C. Social Infrastructure

35. The growing priority given by the Bank to social infrastructure aims at significantly improving the quality of life of a fast-growing population as a primary means of reducing poverty and promoting economic growth. Bank lending to this sector for 20 projects amounted to $756 million, just over 15 percent of Bank lending to the country, primarily concentrated in the education and urban development subsectors. Seven of these 20 projects have been completed, 6 of which have been postevaluated (see Table 3).

Table 3. Postevaluated/Completed Projects in the Social Infrastructure Sector

	PPARs				PCRs				
		Performance Rating				Performance Rating			
Social Infrastructure	No.	GS	PS	US	No.	GS	PS	US	No Rating
Water Supply & Sanitation	1	-	1	-	-	-	-	-	-
Education	3	-	3	-	1	1	-	-	-
Health & Population	2	-	2	-	-	-	-	-	-
Total	6	0	6	0	1	1	0	0	0

1. Education

36. Four of ten Bank-financed education projects, costing $62 million, including Bank funds of $48 million, have been completed, three of which have been postevaluated. The four projects experienced implementation delays on average of 2.3 years, and ranging as high as 123 percent or five years, due to delays in hiring consultants, substantial changes in project scope and design, land acquisition problems, and delayed decisions on the organizational status of the EA. All projects were rated only partly successful in meeting their objectives, which included providing science equipment, establishing Science Development Centers, and providing rural poor with non-formal vocational training and assisting them in securing jobs afterwards.

37. The projects shared design and implementation problems due to inadequate survey of beneficiary needs during appraisal and inadequate institutional support for ongoing administration and maintenance. Among the main lessons learned were:

(i) When key assumptions underlying the project appraisal change, for example, the assumed structure of the EA, the Bank should thoroughly reassess appropriateness of project design and implementation plans.

(ii) Underutilized and unmaintained buildings and equipment suggests that better assessment of beneficiary needs during project appraisal is required, as well as mechanisms to ensure continued administration and budgetary support for projects after completion. Accordingly, during appraisal there should be in-depth analysis of the Government's ability to absorb annual expenditures to maintain projects.

(iii) Bank review missions should be more proactive in identifying and solving problems in project implementation, particularly at project start.

(iv) High-level coordinating committees are of limited value in pursuing key project objectives unless they are provided with adequate guidelines and support.

2. Health and Population

38. Two projects in the health and population subsector totaling $48 million, including Bank financing of $40 million, have been completed and postevaluated. A program loan designed to improve free-of-charge supply of essential drugs and malaria control and a project loan to improve delivery of health care and family planning services were both rated partly successful. Both projects experienced cost underruns, and had implementation delays on average of nearly four years, more than twice the appraisal schedule. The cost underruns were attributed to reduced project scope due to availability of local drugs and to some components not financed by the Bank because procurement deviated from Bank procedures, and local currency fluctuations. Project delays were largely due to procurement problems and shortfalls in counterpart funds, reflecting weaknesses in both project design and EA arrangements.

39. Lessons learned were:

(i) Avoid complex project design in sectors with institutional weaknesses.

(ii) Establish a realistic project implementation schedule which reflects the limited capability of the EA.

(iii) Assess whether the Government will have adequate commitment and resources to fund ongoing administration and maintenance of project inputs.

(iv) Ensure that EAs have adequate autonomy to implement projects, particularly in the area of procurement.

3. Water Supply and Sanitation

40. One of the two Bank-assisted projects in this subsector, with a total cost of $21 million, including Bank funds of $13 million, has been completed and postevaluated with a partly successful rating. There was a four-year delay in project implementation, mainly due to the Government's slow appointment of engineering consultants, shortage of local funds to pay local consultants, and procedural delays involved in amending the engineering consultants' contract to provide for construction supervision. The delay could have been reduced had the appraisal adequately assessed the EA's capabilities to supervise construction and designed the Project accordingly.

Lessons learned were:

(i) Communities must be committed to the project and have participated in its initial design, particularly where the project introduces technology for which households must pay.

(ii) Since appropriate water tariffs are key to project sustainability, tariffs acceptable to potential users must be in place prior to project implementation.

(iii) Where new sanitation schemes are proposed, community education programs are vital.

4. Urban Development

41. A $600,000 advisory and operational technical assistance (TA)[8] grant on housing sector institutional strengthening has been postevaluated. The TA was rated generally successful, though it would have been strengthened if Bank had fielded more than one review mission and engaged in periodic discussions with various agencies. It succeeded in providing a comprehensive basis for developing strategies for the low-income residential housing sector in Bangladesh. The success of TAs involving a wide range of interlocking agencies is maximized when terms of reference are mutually developed by the Bank, agencies, and the consultants. Participants should fully support the objectives and have mutual ownership of the outputs. Since urban development requires a range of interrelated physical infrastructure and institutions, the

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8 Country Synthesis reports cover Technical Assistance Performance Audit Reports (TPARs) as well as PPARs. Except for this TPAR, there have been no other projects or TAs postevaluated under the urban development sector as of 31 December 1996.

Bank's integrated urban infrastructure projects can help improve coordination through emphasizing institutional aspects and drawing lines of responsibility among various participants. Project experience pointed to the need for effective financial intermediaries in addition to the availability of low-income housing finance.

D. Industry and Non-Fuel Minerals

42. Bank lending to the industry and non-fuel minerals sector for four projects totaled $212 million or just over 4 percent of Bank lending to Bangladesh. All four projects in the sector have been completed, and three have been postevaluated (see Table 4).

Table 4. Postevaluated/Completed Projects in the Industry & Non-Fuel Minerals Sector

	PPARs				PCRs				
		Performance Rating				Performance Rating			
Industry & Non-Fuel Minerals	No.	GS	PS	US	No.	GS	PS	US	No Rating
Industry (Non-Agriculture)	2	1	1	-	1	-	-	-	1
Non-Fuel Minerals	1	1	-	-	-	-	-	-	-
Total	3	2	1	0	1	0	0	0	1

1. Industry

43. Three industry subsector projects totaled $100 million with Bank financing of $75 million. The Industrial Program Loan was rated partly successful in meeting its broad objective of supporting policy reforms in the manufacturing sector. The Padma Textile Mills Project, the Bank's first loan to the private sector without government guarantee and first equity investment in Bangladesh, was rated generally successful in contributing to the modernization of the spinning sector. Both Projects were implemented on schedule and were only slightly over/under budget. The PCR for the Chhatak Cement Expansion Project did not rate the Project, but reported it generally achieved its objective of increasing cement production and foreign exchange savings, though its completion was delayed by nearly four years.

44. Experience in the industry subsector indicates:

(i) Program loans should have distinct, unambiguous objectives, a solid policy base, and adequate monitoring provisions.

(ii) Program loans with a trade reform intent need to have targets defined in real rather than nominal terms, while loan tranching offers enhanced Bank leverage and more scope for policy dialogue.

(iii) As Bangladesh may present a difficult and high-risk environment for program operations, enhanced standards of preparation are needed using adequate staff input and intensive country and sector economic analysis at all program stages.

(iv) Good marketing prospects are essential for project sustainability.

(v) To ensure sustainability of benefits, the Bank should identify the project's budgetary and long-term staffing requirements at appraisal and ensure that the Government has both the willingness and the resources to meet these ongoing needs.

2. Non-Fuel Minerals

45. The only project in the non-fuel minerals subsector cost $14 million and provided geoscientific and technical support to exploration for mineral resources. Although the Project experienced a 23-percent cost overrun and took almost twice as long to implement, it was rated generally successful in achieving its objectives and strengthening institutional development. The lessons learned were (i) in-depth sector analysis is required before project appraisal, and (ii) budgetary and staffing implications of a project for the EA should be identified at appraisal to ensure sustainability.

E. Transport and Communications

46. The transport and communications sector received the third largest share of Bank loans to Bangladesh, $855 million or just over 17 percent, for 12 projects. Seven projects have been completed out of which four have been postevaluated (see Table 5). These projects had an average delay of 3.3 years and an average cost overrun of 20 percent. Overall, implementation delays of the seven postevaluated and completed/non-postevaluated projects were largely attributed to (i) delays in hiring consultants, (ii) cumbersome Government procedures for procurement, and (iii) construction delays due to changes in final design and adverse weather. Cost overruns were primarily due to enlarged project scope and inflation-related cost increases.

Table 5. Postevaluated/Completed Projects in the Transport & Communications Sector

	PPARs				PCRs				
		Performance Rating				Performance Rating			
Transport & Communications	No.	GS	PS	US	No.	GS	PS	US	No Rating
Roads & Road Transport	2	1	-	1	2	2	-	-	-
Ports & Shipping	1	1	-	-	-	-	-	-	-
Railways	1	-	1	-	1	-	-	1	-
Total	4	2	1	1	3	2	0	1	0

1. Roads and Road Transport

47. Four roads projects have been completed costing $260 million, including $186 million in Bank financing. The postevaluated Khulna-Mongla Road Project provided a new road linking Mongla Port to the city of Khulna as the national road network was seen at appraisal as a

necessary complement to new port facilities. The Project, however, failed to achieve its objective of conveying about half of the port's throughput as river barge transport remained more cost-effective. The Project demonstrated that comprehensive transport analysis should have been done at appraisal, including consideration of freight rates, costs perceived by users and alternative improvements. Road links should be analyzed within the context of the entire transport system and due consideration given to institutional and socioeconomic factors within the system that reinforce the use of barge transport.

48. The postevaluated Flood Damage Restoration Project was rated generally successful in achieving its objective of assisting the Government in reconstructing selected roads and railway infrastructure damaged by the 1987 floods. The PCR for the recently completed Second Flood Damage Restoration Project, which provided similar assistance after the 1988 floods, also considered the Project successful. Among lessons learned were:

(i) The Bank should review its policies regarding emergency lending with the aim of minimizing administrative procedures and providing timely funding for restoration of vital roads and railway operations.

(ii) Given the Bank's increasing role in emergency lending, Bank procedures relating to funds disbursement and liquidation of imprest accounts should be streamlined.

49. The completed Feeder Roads Improvement Project was considered generally successful in the PCR although at the time of the PCR preparation it was not yet possible to assess fully whether the Project is performing its intended role in intensifying commercial, social and agricultural activities in the project areas. Experience with the significant project delays demonstrated:

(i) Greater authority should be delegated to the project manager to facilitate decision-making; as the EA was hindered by Government procedures requiring multiple levels of approval for all major decisions, a common problem in Bangladesh projects.

(ii) With respect to delays due to land acquisition, preproject involvement of land owners to ensure their cooperation and selection of communities where land arrangements can be concluded ahead of project implementation, is advised.

(iii) A basis for ongoing benefits monitoring is needed; regular traffic counts should be undertaken to better assess project benefits and growth due to improved communications.

2. Ports and Shipping

50. One ports project, costing $17 million, including Bank loan of $2 million, has been completed and postevaluated. The Chittagong Port Project was rated generally successful against its limited objectives of relieving port congestion and increasing cargo handling capacity. Although no detailed feasibility study was prepared, the Project was well conceived as its components served obvious needs in rehabilitating existing facilities at the port. Handling efficiency, however, did not improve much even though port capacity was augmented, largely because the operational efficiency of the port was not given sufficient attention during appraisal

and implementation. Operational efficiency would have improved with adequate follow-up on institutional development and maintenance and back-up facilities, issues which affected operations after project completion.

3. Railways

51. Two railway projects costing $152 million, including $73 million in Bank funds, have been completed. They experienced average delays of over four years, more than twice the appraisal estimate, owing to delays in consultant hiring and procurement. Average cost overruns of 20 percent. The first project aimed at mainline rehabilitation and institution building and was judged partly successful as physical assets deteriorated and operating performance declined over the prolonged project implementation period. The second recently completed project aimed at institutional reform at the Bangladesh Railway and was rated unsuccessful in the PCR.

52. More than a decade of experience under these two projects has shown that fundamental reform of Bangladesh Railways, which suffers from political interventions, unclear objectives, restrictive labor practices and lack of commercial orientation, will not take place until the Government has established a commitment to such reform. Such reforms are currently pursued under the Railway Recovery Program loan. Other lessons were:

(i) The extent of a sector's difficulties should not be underestimated at appraisal-adequate policy changes should be proposed and project scope and design should be commensurate with the magnitude of the problems to be solved.

(ii) It is important to ensure that sufficient prerequisites are met to enable project appraisal plans to be implemented, particularly where the EA changes in form, from a ministerial department to a commercially-oriented railway authority.

(iii) Securing materials and equipment in a smaller number of medium- or large-sized procurement packages can reduce administrative complexity, inefficiency and delays.

F. Finance

53. Bank lending to the finance sector for six projects amounted to $138 million, or 3 percent of Bank lending to the country, primarily to two public sector development finance institutions (DFIs). All six projects have been completed, and five of these loans have been postevaluated (see Table 6).

Table 6. Postevaluation/Completed Projects in the Finance Sector

	PPARs				PCRs				
		Performance Rating				Performance Rating			
Finance	No.	GS	PS	US	No.	GS	PS	US	No Rating

DFIs	5	-	3	2	1	1	-	-	-
Total	5	0	3	2	1	1	0	0	0

1. Public Development Finance Institutions

54. The projects involved lines of credit amounting to a total of $82 million for two DFIs, and were implemented with delays ranging from one to four years. The first three were reported to have partly achieved their objectives, while the latter two were unsuccessful as portfolio quality and operational performance of the DFIs significantly deteriorated. While expansion of the entrepreneurial base is a worthwhile objective, it should not be pursued without developing the DFIs' institutional capability to make sound credit decisions.

55. The major lessons learned were:

(i) A stable economic framework and efficient legal systems to facilitate loan recovery are prerequisites for effective credit allocation, and Bank appraisals should have given greater attention to this weak operating environment.

(ii) In particular, the effectiveness of Bank review missions is diminished by their multiple objectives; missions fielded exclusively to review the project and greater involvement by Bangladesh Resident Office should have been considered.

(iii) The Bank appraisals were inadequate in that they worked with incomplete information and did not adequately assess the DFIs' institutional and management weaknesses, particularly with regard to credit judgment.

(iv) Frequent and focused supervisory missions would have been an opportunity to address weaknesses in DFI subproject evaluation and loan supervision.

(v) Technical assistance given in combination with a loan should only be considered as a supportive, not a rehabilitative, measure.

(vi) Stability in DFI top management is a prerequisite for organizational effectiveness and pursuit of long-term reform objectives.

2. Private Development Finance Institutions

56. The Bank's first private sector loan and equity investment to Bangladesh's financial sector was considered generally successful in the PCR. Bank provided $3 million to support the establishment of a leasing company. The Bank's objective of enlarging the role of the private sector in the financial system has been substantially met. Leased assets of two existing leasing companies have more than tripled, there has been continuous and steady growth in their profitability, and there is growing number of applications for new leasing companies awaiting Central Bank approval. After five years of operations, the leasing company is firmly established and is publicly listed on the Dhaka Stock Exchange.

57. The experience demonstrated that the leasing industry is an acceptable channel through which the Bank can provide financial assistance to small- and medium-scale enterprises. The Project also showed that involvement of resident mission staff can contribute significantly to effective and systematic project monitoring.

IV. CONCLUSIONS

A. Overall Assessment

58. The Bank's assistance to Bangladesh has helped expand and improve basic infrastructure facilities and services, notably agriculture and natural resources, energy, and road transport. These expansions and improvements are considered essential elements for stimulating growth and improving living standards. Agriculture loans provided mainly for inputs essential for modern irrigated cropping and, to a lesser extent, for the rehabilitation of flood damaged farm and transport facilities. Credit lines were used to support both private and public enterprises. Bank assistance also helped expand, improve and restore the quality of transport and communications facilities as well as social infrastructure through loans for improved secondary science education and community schools.

59. The cross-cutting concerns identified by the Bank's 1997-1999 Country Programming Mission in Bangladesh include (i) poverty reduction, (ii) gender issues, (iii) human development, (iv) environmental concerns, and (v) governance and public sector reforms, which are centered on creating an environment conducive to increased private sector investment and more efficient delivery of public services, with a bias to the poor and disadvantaged segments of the population. These concerns are very appropriate.

60. Overall, 35 percent of the 43 postevaluated projects were considered generally successful, 56 percent were rated partly successful, and 9 percent were assessed as unsuccessful. More than 80 percent of these projects were postevaluated since the mid-1980s. Since 1990, projects postevaluated have shown improved performance over those postevaluated in the 1980s. The success rate of 35 percent in Bangladesh is low compared with the 54 percent average for all Group A countries, 59 percent for Group B countries and 78 percent for Group C countries. It is also lower than the 37 percent reported in the 1993 Country Synthesis. In terms of loan amounts disbursed, the generally successful rate is 32 percent, unchanged from the average rate reported in 1993 (see Appendix 8).

61. By sector, the highest percentage of generally successful projects was in the industry and non-fuel sector (67 percent), followed by transport (50 percent). The agriculture sector had relatively the same percentage of generally successful (45 percent) and partly successful (50 percent) projects. All six social infrastructure projects were rated partly successful, as were the majority of energy projects (60 percent). The four unsuccessful projects included two of the three DFI loans, and one each in the agriculture and transport sectors. The majority of the non-postevaluated completed projects were not rated in their PCRs, since such rating was only made mandatory in 1995.

62. Although few ratings were provided, a review of PCRs for projects which have not been postevaluated suggests relative success in natural gas, power, and flood rehabilitation projects, and in the first private sector project in the finance sector. Less than successful results were yielded by recently completed projects in the irrigation and rural development, agricultural support services, and railway subsectors, with agricultural support projects experiencing the most problems.

63. The successful performance of the projects, both those postevaluated and those completed with PCRs, is attributed to the limited number of EAs involved and generally one-line-of-activity projects. Other factors include beneficiary participation, adequate project preparation and technical assistance, the EA's strong institutional capability, technical competence and relative autonomy, and a supportive policy environment.

64. In contrast, projects with partly successful and unsuccessful performance were primarily affected by complex project designs and implementation arrangements, particularly in the agriculture sector; lack of beneficiary participation which led to flaws in project design and inadequate operations and maintenance; inadequate attention to policy constraints and sector issues; and a myriad of institutional weaknesses including lack of Government commitment to the fundamental reforms necessary for project success, and the EA's insufficient management and technical skills and frequent staff turnover.

65. Nearly all postevaluated projects experienced implementation delays, averaging about three years or 89 percent (see Appendix 7). Nearly all subsectors included projects with average delays of more than twice their original completion period. The subsectors with the least delays were industry, finance, and forestry owing largely to less complex project design with fewer implementing agencies. For the completed projects without PPARs, the energy and transport sectors reported the highest average delays of 131 percent and 102 percent, respectively. Project delays were primarily attributable to slow decision-making on the part of the Government and EA, including multiple levels of approval necessary for procurement, and the EA's institutional weakness in project implementation, protracted Government processes and delays in hiring consultants, and shortages of counterpart funding. Changes in project design and difficulties acquiring land also contributed to delays across several sectors, though based upon the past experiences in Bangladesh, most projects suffered from overoptimistic appraisal schedules.

66. The cost variation analysis indicated that almost two thirds of the postevaluated projects and 70 percent of the completed projects experienced cost underruns, at an average of about 31 percent and about 22 percent, respectively (see Appendix 9). The major causes of underruns were local currency depreciation, reduced project scope due to inadequate project preparation and availability of other funding sources, and overestimation of cost at appraisal, particularly the contingency allowance. The remaining third of the postevaluated projects and 30 percent of the completed projects posted cost overruns on average of 32 percent and 17 percent, respectively. The cost overruns were primarily attributed to increased component costs due to implementation delays and resulting inflation, changes in project design, and currency fluctuation.

B. Major Lessons Learned

67. The major lessons learned from project implementation experience provide valuable tested inputs, more effective planning, preparation and implementation of future projects in Bangladesh. The best practices and lessons learned are discussed below for further emphasis.

68. The importance of institution-building for sustained development in most sectors of the Bangladesh economy underscores the need for long-range, sector-oriented plans and continuing support to executing agencies. In many cases, candid assessment of the EA's capabilities was lacking at appraisal. Realistic and rigorous assessment of institutional environment and EA capabilities to implement and maintain project is critical. The Government's reluctance to give an EA the necessary decision-making authority for timely procurement and project implementation is a fundamental problem in Bangladesh, which cuts across all projects and sectors, and significantly weakens project performance. For sectors with institutional and administrative weaknesses, overly complex project designs and implementation arrangements should be avoided. In the same circumstances, the sector approach was also proven ineffective. Where institutional reforms and operational improvements at the EA are critical to project implementation and ongoing operation, technical assistance should precede loan processing.

69. Emphasis on community or beneficiary participation enhanced project performance in the forestry sector, and its absence in irrigation, rural development and education subsectors led to problems in project design and weak provisions for ongoing project operation and maintenance.

70. Experience shows that covenants are ineffective tools to secure improvements in management and operations unless the conditions necessary for compliance are in place. Such improvements can be achieved only through well-designed integrated assistance to the EA for capacity-building. Covenants should be specific, time-bound, monitorable, and should only be set if the Bank is willing and able to follow up for compliance. The Bank needs to educate Executing Agencies and Borrowers that properly designed covenants can be useful means to self-monitor project performance and are integral to the broader benefits monitoring process.

71. More frequent, focused, and proactive supervisory missions in the early stages of project implementation are needed, particularly for multi-component projects and projects experiencing initial delays. During implementation, the Bank should ensure that neither it nor the EA inadvertently deletes project components necessary for project success.

72. More emphasis needs to be placed on adequate country and sector analysis, preparation of master plans and proper project preparation prior to appraisal. Program loans need to be designed in ways that enable their performance to be monitored and evaluated with reliability throughout implementation.

73. Policy environment influences project performance. This was evident in the irrigation and rural development, agricultural support services, fertilizer, natural gas and health subsectors, particularly with regard to pricing and tariff levels, taxation and subsidization, and debt amnesties. More rigorous policy and sector analysis, as well as analysis of project options, are necessary to ensure that both the policy environment and market will support, not hinder, project performance.

APPENDIXES