



Completion Report

Project Number: 36105
Loan Number: 2147
June 2014

Bangladesh: Chittagong Port Trade Facilitation Project

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Asian Development Bank

CURRENCY EQUIVALENTS

Currency unit		–	taka (Tk)
		At Appraisal	At Project Completion
		1 November 2004	23 August 2013
Tk1.00	=	\$ 0.0169	\$0.013
\$1.00	=	Tk59.30	Tk77.645

ABBREVIATIONS

ADB	–	Asian Development Bank
ASYKUDA	–	Automated System for Customs Data
BIMSTEC	–	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CCT	–	Chittagong Container Terminal
CHC	–	Custom House of Chittagong
CPA	–	Chittagong Port Authority
CTMS	–	container terminal management system
EIRR	–	economic internal rate of return
MARPOL	–	Marine Pollution and Prevention Convention
MIS	–	management information system
MOC	–	Ministry of Communication
PCR	–	project completion report
PIU	–	project implementation unit
RHD	–	Roads and Highways Department
TA	–	technical assistance
TEU	–	20-foot equivalent unit
UNCTAD	–	United Nations Conference on Trade and Development
USTDA	–	United States Trade and Development Agency

NOTES

- (i) The fiscal year (FY) of the Government of Bangladesh ends on 30 June. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2013 ends on 30 June 2013.
- (ii) In this report, “\$” refers to US dollars.

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BASIC DATA

A. Loan Identification

1.	Country	Bangladesh
2.	Loan Number	2147
3.	Project Title	Chittagong Port Trade Facilitation Project
4.	Borrower	People's Republic of Bangladesh
5.	Executing Agency	1. Chittagong Port Authority 2. Roads and Highways Department 3. Customs House of Chittagong
6.	Amount of Loan	\$30,600,000
7.	Project Completion Report Number	PCR: BAN-1453

B. Loan Data

1.	Appraisal	17 August 2004
	– Date Started	26 August 2004
	– Date Completed	
2.	Loan Negotiations	21 November 2004
	– Date Started	22 November 2004
	– Date Completed	
		20 December 2004
3.	Date of Board Approval	
		12 January 2005
4.	Date of Loan Agreement	
5.	Date of Loan Effectiveness	
	– In Loan Agreement	12 April 2005
	– Actual	23 May 2005
	– Number of Extensions	1
6.	Closing Date	
	– In Loan Agreement	1 January 2009
	– Actual	23 August 2013
	– Number of Extensions	4
7.	Terms of Loan	
	– Interest Rate	London interbank offer rate plus 0.60.% per annum
	– Commitment charges	0.75% per annum
	– Maturity (number of years)	25
	– Grace Period (number of years)	5
8.	Terms of Relending	
	– Interest Rate	6%
	– Maturity (number of years)	20
	– Grace Period (number of years)	5

9. Disbursements

a.	Dates		
	Initial Disbursement	Final Disbursement	Time Interval
	15 June 2005	16 July 2013	97 months
	Effective Date	Original Closing Date	Time Interval
	23 May 2005	1 January 2009	43.3 months

b. Amount (\$ '000)

Category or Subloan	Original Allocation	Last Revised Allocation	Amount Canceled	Net Amount Available	Amount Disbursed	Undisbursed Balance
Civil works	5,800	4,587	0	4,587	4,587	0
Equipment	16,800	9,383	7,000	9,383	9,383	0
Consulting services	2,800	2,846	0	2,846	2,846	0
Interest and commitment charges	1,800	1,315	0	1,315	1,315	0
Unallocated	3,400	0	5,469	0	0	0
Total	30,600	18,131	12,469	18,131	18,131	0

C. Project Data

1. Project Cost (\$ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	30.60	18.13
Local Currency Cost	10.70	9.71
Total	41.30	27.84

2. Financing Plan (\$ million)

Cost	Appraisal Estimate	Actual
Implementation Costs		
Borrower Financed	10.70	9.71
ADB Financed	28.80	16.82
Other External Financing		
Subtotal	39.50	26.53
IDC Costs		
Borrower Financed	0	0
ADB Financed	1.80	1.31
Other External Financing		
Total	41.30	27.84

ADB = Asian Development Bank, IDC = interest during construction.

3. Cost Breakdown by Project Component (\$ million)		
Component	Appraisal Estimate	Actual
A. Base Cost		
I. Civil Works		
a. Chittagong Port Authority	2.50	3.47
b. Roads and Highways Department	10.50	6.34
II. Equipment		
a. Chittagong Port Authority	8.00	10.08
b. Customs House	10.00	0
III. Consulting Services		
a. Chittagong Port Authority	1.50	1.98
b. Customs House	1.00	0.59
c. Roads and Highways Department	1.00	0.87
Subtotal (A)	34.50	23.33
B. Contingencies		
a. Chittagong Port Authority	1.50	1.46
b. Customs House	1.60	0
c. Roads and Highways Department	1.60	1.44
Subtotal (B)	4.70	2.90
Subtotal (A+B)	39.20	26.23
C. Interest during Construction	1.80	1.31
D. Resettlement		
(Roads and Highways Department)	0.30	0.30
Total (A+B+C+D)	41.30	27.84

4. Project Schedule		
Item	Appraisal Estimate	Actual
Date of Contract with Consultants		
Chittagong Port Authority Component:		
(i) Computerization		
Date of Contract	April 2005	July 2006
Date of Completion	March 2006	June 2012
(ii) Civil Works		
Date of Contract	March 2005	July 2006
Date of completion	September 2007	July 2011
Custom House Component (scanner):		
Date of Contract	June 2005	July 2007
Date of Completion	June 2006	December 2008
Roads and Highways Department Component:		
Date of Contract	June 2005	July 2006
Date of Completion	December 2008	December 2009
Completion of Engineering Designs		
Chittagong Port Authority	December 2005	January 2007
Roads and Highways Department	December 2005	April 2007
Civil Works Contract		

Date of Award		
Chittagong Port Authority	June 2006	July 2007
Roads and Highways Department	June 2006	March 2008
Completion of Work		
Chittagong Port Authority	September 2007	July 2011
Roads and Highways Department	December 2008	April 2011
Equipment and Supplies Dates		
First Procurement	June 2005	July 2007
Last Procurement	June 2006	March 2009
Completion of Equipment Installation	September 2007	December 2011
Start of Operations		
Completion of Tests and Commissioning	March 2006	December 2011
Beginning of Start-Up	July 2006	July 2012

5. Project Performance Report Ratings

Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From 1 May 2005 to 31 December 2005	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2006 to 31 December 2006	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2007 to 31 December 2007	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2008 to 31 March 2008	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 April 2008 to 31 December 2008	<i>Satisfactory</i>	<i>Highly Satisfactory</i>
From 1 January 2009 to 31 Mar 2009	<i>Satisfactory</i>	<i>Highly Satisfactory</i>
From 1 April 2009 to 31 December 2009	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2010 to 31 December 2010	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2011 to 31 December 2011	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2012 to 31 December 2012	<i>Satisfactory</i>	<i>Satisfactory</i>
From 1 January 2013 to 31 December 2013	<i>Satisfactory</i>	<i>Satisfactory</i>

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members ^a
Inception	18 Sep–5 Oct 2005	4	68	a, f, g, j
Review 1	26 Feb–13 Mar 2006	1	15	f
Review 2	7–17 Sep 2006	1	10	f
Review 3	10–20 Mar 2007	1	10	b
Special project review	8–10 Apr 2007	1	2	b
Review 4	2–13 Sep 2007	2	22	b, c
Midterm review	11–22 May 2008	3	33	b, c, k
Review 5	5–24 Nov 2008	3	57	c, e, k
Review 6	27 May–18 Jun 2009	1	22	e
Review 7	13–21 Dec 2009	1	8	e
Review 8	18–21 Apr 2011	2	6	h, i
Special project review	18–19 Jul 2012	3	3	d, e, i
Project completion review	19–22 Jan 2014	2	4	b, d

^a a = senior project specialist, b = senior transport specialist, c = senior project implementation officer, d = senior project officer (transport), e = transport specialist, f = project implementation specialist, g = project implementation officer, h = project officer (transport), i = project analyst, j = assistant project analyst, and k = staff consultant.

I. PROJECT DESCRIPTION

1. The Chittagong Port Trade Facilitation Project was formulated in response to the request by the Government of Bangladesh to increase the capacity and efficiency of Chittagong Port, particularly the container terminal, to meet the growing demand for improved port services. Rapid socioeconomic development has made South Asia the one of the world's most dynamic regions. Bangladesh is one of the most vibrant economies in the region, with the country's gross domestic product averaging 6% and growing steadily, and social parameters improving consistently since 2005. International trade is expanding, mainly led by a new generation of private sector entrepreneurs, particularly in the readymade garments sector. In addition, rising per capita income has contributed to increased consumption of goods and services, about 60% of which are imported. Growing international trade necessitated the expansion of the country's port capacities and services. While there are two major seaports in Bangladesh: Chittagong and Mongla, more than 90% of international trade flows through Chittagong Port, making it an integral part of the subregional transport and logistics network connecting Bhutan, the northeastern states of India, and Nepal to the rest of the world.

2. These factors have created strong demand for enhancing the efficiency of the transport system in the Dhaka–Chittagong corridor, and particularly the port of Chittagong. The project aimed to (i) provide financial and technical support for improving the capacity and efficiency of the port, (ii) develop faster access to and from the Dhaka–Chittagong transport corridor, and (iii) harmonize port activities with those of the Custom House of Chittagong (CHC), thereby ensuring increased and more efficient movement of international freight traffic.

3. The outcome of the project was to expand the capacity of the container terminal at the port of Chittagong, and enable Bangladesh to meet international port security and environmental standards. The consequent reduction in overall shipping and port handling charges was expected to facilitate international trade and foster long-term economic development. The project framework is in Appendix 1.¹

4. **Project outputs.** The project² had the following three groups of outputs:

(i) The outputs of Chittagong Port Authority (CPA) comprised (a) installation of a computerized container terminal management system (CTMS) and upgrading of the existing management information system (MIS); (b) improvement of the port environment and the environmental management capacity of the CPA by installing facilities for receiving and separating oil waste from ships, as required under the Marine Pollution and Prevention Convention (MARPOL) 1973/78; (c) reconstruction and upgrading of internal roads and the bridge between Chittagong Container Terminal (CCT) and the general cargo berths, and improvement of two access and egress gates to expedite intraport traffic flow; and (d) construction of a 0.9-kilometer port service road and a bridge to provide direct access from the yard to the port park.

¹ The project framework at appraisal has since been modified to conform to ADB's revised design and monitoring framework with no significant changes in content. There was a minor change of scope with regard to the CHC's component as the scanners were procured using government's own resources, but this did not affect the achievement of overall project outcome.

² ADB. 2004. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the People's Republic of Bangladesh for the Chittagong Port Trade Facilitation Project*. Manila (Loan 2147-BAN approved for the amount of \$30.6 million on 20 December 2004).

(ii) The outputs of the CHC included (a) activation of the manifest module of the Automated System for Customs Data (ASYCUDA) ++ software, and (b) installation of a system of container scanners; and

(iii) The output of the Roads and Highways Department (RHD) was the construction of a 1.7-kilometer access-controlled road.

5. The United States Trade and Development Agency (USTDA) provided grant funds for a detailed needs assessment, including preparation of technical specifications, and training on law enforcement and procurement of container scanners. The USTDA grant was also intended to enable the recently initiated technology-based security management measures of the CPA and the CHC to be integrated with the scanner system to maximize the utility of the CHC component.

6. The executing agencies for the project were the CPA under the Ministry of Shipping for the CPA component, the CHC under the Ministry of Finance for the CHC component, and the RHD under the Ministry of Communication (MOC) for the RHD component. ADB agreed to provide a loan not exceeding \$30.6 million from ADB's ordinary capital resources, which financed most of the cost (about 74%) of the project. The remaining \$10.7 million equivalent was to be financed by the government.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

7. The project's focus on improving the country's major port linking the regional and international maritime network, and thereby generating economic opportunities for port users and reducing the cost of international trade, proved to be satisfactory and relevant. The project was designed when ADB's Bangladesh Country Strategy and Program, 2004–2006 was in force.³ The overall strategic objective of the country strategy and program was to reduce poverty by creating better development opportunities for the poor. A focal area of ADB's country operational strategy for transport was the development of the transport subsectors to improve operational efficiency by integrating the different modes.⁴

8. The poverty reduction objective was a priority in the government's interim national poverty reduction strategy, which emphasized the role of improved infrastructure as a key instrument for poverty reduction.⁵ The poverty reduction objective was reiterated in the partnership agreement on poverty reduction between ADB and the government.⁶ The project supported the government's policy on integrated transport sector development and its program on the development of the different modes of transport. Considering that the port is an integral part of the subregional transport system linking Bangladesh, Bhutan, India, and Nepal, where various transport infrastructure has been developed with ADB assistance, the project, by increasing the port's capacity, was expected to serve as a catalyst for attracting a larger share of transit traffic to and from these countries and Chittagong.

³ ADB. 2004. *Bangladesh Country Strategy and Program*. Manila.

⁴ ADB. 1999. *Bangladesh Country Operational Strategy: Responding to the Challenge of Poverty*. Manila.

⁵ Government of Bangladesh. 2002. *A National Strategy for Economic Growth, Poverty Reduction and Social Development (i-PRSP)*. Dhaka.

⁶ ADB and the Government of Bangladesh. 2000. *Partnership Agreement on Poverty Reduction*. Manila.

9. The project was prepared using ADB-assisted project preparatory technical assistance (TA).⁷ The project's design was generally sound, and both the assessment and the formulation process were adequate. All major stakeholders were consulted by means acceptable to ADB during project planning, design, and implementation. The project scope was determined in consultation with the different ministries and departments, port users, interested groups, and local leaders, including the Chittagong City Corporation, Chittagong Development Authority, and the Chittagong Chamber of Commerce and Industry. The implementation arrangements devised under the TA were satisfactory. The quantifiable benefits of the project consist of (i) enhanced operational efficiency of the port through automation; (ii) improved access to and from the port, which contributed to increased container handling capacity; (iii) reduced vessel turnaround time; (iv) shorter container dwell time; and (v) lower costs of doing business in the port. There were minor changes of the scope during implementation, although these did not affect relevance of the project.

B. Project Outputs

10. The CPA and RHD components were fully completed as envisaged at appraisal. However, the scope under the CHC component was changed during implementation as the CHC decided to implement an automation program with their own financing and only partly used the ADB loan funds to avoid any duplication.

1. Chittagong Port Authority Component

11. The CPA component at appraisal comprised five principal subcomponents, including consulting services. Subcomponent 1 involved supply and installation of a computerized CTMS and upgrading of the existing MIS. The contract with the supplier of the CTMS and MIS was signed on 25 March 2009, and the system was launched on 27 December 2011 with a provision for a 4-month trial. The work was substantially completed and the system fully operational by 30 June 2012. A training program was conducted by the CPA training center to develop basic computer knowledge and skills for the port's staff, and familiarize them with the new computerized operation system. Further, 20 "super-users" (main system users) successfully completed their training with the software supplier and are deployed in the operation of the CTMS and MIS. The CTMS has revolutionized the efficiency of the port's container handling system, increasing the port's capacity and reducing its costs through automated loading, unloading, and movement of containers between port's gates and the ships. The system also helped reduce the human elements in container handling and improved governance through eliminating the old paper-based approval system, thereby curbing informal costs.

12. Subcomponents 2 and 3 involved improvement of the port environment and the environmental management capacity through the installation of facilities for receiving and separating oil waste from ships and the provision of ancillary equipment and storage facilities, as required under MARPOL 1973/78. These have been fully completed as envisaged at appraisal. As a result, the water quality at Chittagong Port's berthing and adjacent area has improved and now complies with the international standard prescribed under MARPOL 1973/78. Under subcomponent 4, the internal roads and the bridge between CCT and the general cargo berths have been reconstructed and upgraded, and the two access and egress gates have been improved, helping intraport traffic flow between the CCT yard configuration and the New Mooring Container Terminal. Under subcomponent 5, the construction of a 900-meter port

⁷ ADB. 2003. Technical Assistance to the People's Republic of Bangladesh for *Chittagong Port Trade Facilitation*. Manila (TA 4136-BAN for \$ 0.5 million, approved on 2 July 2003).

service road and a bridge to provide direct access from the yard to the port park has been completed as envisaged at appraisal. These are helping relieve congestion at the container yard.

13. The CPA handed over the CCT to a private operator in March 2007. This action, along with the project-generated benefits, markedly improved the port's capacity and performance in handling import–export cargo. Vessel turnaround time was reduced to 3.4 days in December 2013 from 12.0 days in 2005, container dwell time in the port was reduced to 4.0 days in December 2013 from 18.0 days in 2005, average transit time of container by rail improved to 20 hours in December 2013 from 30 hours in 2005,⁸ and the CCT's yard capacity improved to 36,000 20-foot equivalent units (TEUs) in December 2013 from 17,000 TEUs in 2005. The CPA's annual container handling capacity almost doubled to 1.54 million TEUs in December 2013 from 0.78 million TEUs in 2005, and its bulk cargo handling capacity improved to 37.8 million tons in 2013 from 25.9 million tons in 2005 (an increase of about 46%). As a result, during 2011–2013, the number of vehicles inside the port area declined by about 60%, and vehicle waiting time at port gates decreased by about 45%. The CPA's revenue earnings more than doubled to Tk15,739.0 million (\$201 million) in 2013 from Tk7,411.3 million (\$95 million) in 2005. The CPA has experienced a steady growth in container traffic by more than 10% per annum since 2005, and forecasts further growth to about 2.88 million TEUs by 2020 as more subregional freight traffic uses Chittagong Port in the near future.

14. The government approved the Strategic Master Plan for Chittagong Port in May 2008. This includes a recommendation to identify and implement all future port development investments by preparing an updated master plan. ADB is assisting the government with a TA grant for preparing the updated master plan.⁹

2. Custom House of Chittagong Component

15. The CHC suspended until 30 September 2008 the activities under the contract signed with the United Nations Conference on Trade and Development (UNCTAD) for the implementation of the remaining modules of ASYCUDA ++ referred to as one of the project outputs. This was done to allow the CHC to implement an updated automation program (ASYCUDA World), which was adopted by the CHC for simplicity and compatibility with the country system, and to avoid any duplication. The automation program was completed and inaugurated on 6 October 2008. Also, on 26 June 2008, the CHC, through the Economic Relations Division of the Ministry of Finance, informed ADB that it would procure the container scanners using the government's own resources. Accordingly, the CHC procured and operationalized four container scanners in June 2010 using their own funds and with technical support from the USTDA.

16. As a result of the implementation of the CHC component, during 2011–2013, the average customs clearance time was reduced by 35%, the customs inspection time was cut by 32%, and the annual number of customs declarations increased by 27%. Interface between the CTMS and CHC systems through electronic data interchange, as envisaged at appraisal, was also been established using the CHC's ASYCUDA World and the CPA's CTMS, whereby the CHC feeds the CPA with import general manifests from the shipping agents. The CHC will commence receiving and sharing the export general manifests as well by end of 2014. The

⁸ The improvement of the Dhaka–Chittagong Railway under the ongoing projects financed by ADB and the Japan International Cooperation Agency is expected to double the movement of container trains from the current 2 pairs/day to 4 pairs/day by 2015. This will help substantially reduce the average transit time of containers by rail.

⁹ ADB. 2011. *Technical Assistance to the People's Republic of Bangladesh for the Strategic Master Plan for Chittagong Port*. Manila (TA7979 approved on 14 December 2011 for \$1.0 million).

CHC's automation and container scanning system was found to be technically sound. Procuring this equipment using the CHC's own funds demonstrates the government's enhanced financial capacity and procurement skills. Of \$1,006,530.00 earmarked for consulting services under the CHC component, \$586,054.00 had been disbursed under ADB funding by 30 June 2012. The CHC used only part of the ADB loan for the cost of technical support provided by UNCTAD, which was estimated at \$590,000.

3. Roads and Highways Department Component

17. As envisaged at appraisal, the 1.7-kilometer access-controlled road (Chittagong Port access road) under the RHD component was completed and opened to port traffic on 28 March 2012. This provides a faster link between the Dhaka–Chittagong Highway and the CCT and New Mooring Container Terminal, thus contributing to speedy movement of the export and import cargo between Chittagong Port, the capital city of Dhaka, and the hinterland.

C. Project Costs

18. The total project cost at appraisal was estimated at \$41.30 million equivalent, comprising \$30.60 million (about 74%) in foreign exchange (including \$1.8 million in service charges and interest during construction) and \$10.70 million equivalent (about 26%) in local currency. ADB was to finance the entire foreign exchange cost of \$30.60 million equivalent. The local currency cost covered expenditures on civil works, local equipment and materials, incremental administrative cost, consulting services, and institutional development.

19. The actual project cost at completion was \$27.84 million equivalent (about 67% of project cost at appraisal), including \$18.13 million in foreign exchange costs and \$9.71 million equivalent in local currency costs. ADB financed the entire foreign exchange cost, while the government financed the entire local currency cost. The decrease in actual project cost is mainly attributed to the CHC's decision during implementation to use the government's own funds to carry out the refurbishment of the automation system and procure four container scanners. The exchange rate fluctuations between the taka and the dollar also contributed to a lower project cost at completion. This led to the cancellation of \$12.47 million (about 30%) of loan funds—\$7.0 million during implementation and \$5.47 million undisbursed loan balance at loan closing. Details of the allocation and/or reallocation and actual disbursement of ADB financing are in Appendix 2.

D. Disbursements

20. The actual annual disbursement of loan funds is in Appendix 3. At loan closing, \$18.13 million equivalent, including \$1.31 million equivalent for interest during construction, had been disbursed. The disbursement of ADB funds was slower than envisaged at appraisal, mainly due to problems relating to procurement of the CTMS, hike of steel material prices on the international market and consequent delay by the RHD component contractor, and delay in land acquisition (including land clearance) under the RHD component. There was one partial cancellation of surplus loan funds following the borrower's requests on 8 December 2009 amounting to \$7.0 million, reducing ADB's financing to \$23.60 million. The actual disbursement in 2008 (\$2.0 million), 2009 (\$4.87 million), 2010 (\$4.31 million), and 2013 (\$2.23 million) reflected the payment to the civil works contractors under the CPA and RHD components, and payment of the final bill to the equipment and civil works contractors, demonstrating good implementation. However, disbursements in 2005 (\$26,000), 2006 (\$0.20 million), 2007 (\$1.13 million) were low because of the initial start-up delay and reduced work during the initial period.

of civil works contracts under the CPA and RHD components and the equipment contract (CTMS and MIS) under the CPA component. For consulting services and procurement of civil works contracts, loan funds were disbursed using direct payment and reimbursement procedures in accordance with ADB's *Loan Disbursement Handbook*.

E. Project Schedule

21. ADB approved the loan on 20 December 2004. The loan agreement was signed on 12 January 2005 and became effective on 23 May 2005. The original closing date of the loan was 1 January 2009. The project experienced a total of 42 months of implementation delays, including initial start-up delays due to the protracted process of making the loan effective (5 months after approval of loan), and initial delays in recruiting loan consultants for design and in procuring equipment for waste reception and oil spill protection under the CPA component. Physical implementation started in August 2007. Implementation of the CTMS and MIS under the CPA component was delayed by 6 months mainly due to expansion of the scope of CTMS coverage and facilities, and the time taken to familiarize and educate the thousands of port users in the new system. Further, implementation of the port connector road under the RHD component was delayed by about 18 months until April 2011 due to delays in moving and/or removing utility lines that belonged to Chittagong Water Supply and Sewerage Authority, Power Development Board, Bangladesh Telecommunications Company Limited. Construction of pier 19 of the flyover, located at the center line of the existing main road, was stalled for about 9 months due to delayed clearance by the Chittagong City Corporation. Also, construction of the connector road was delayed by 5 months due to poor stabilization of the subsurface foundation soil. The lost time was partially recouped during the later parts of project implementation through the concerted efforts of the CPA, the RHD, and ADB. Nevertheless, there were four extensions of the loan closing date following requests by the borrower: on 9 February 2009 for 18 months (from 1 January 2009 to 30 June 2010), on 23 May 2010 for 1 year (from 30 June 2010 to 30 June 2011), on 14 February 2011 for 6 months (from 30 June 2011 to 31 December 2011), and on 22 February 2012 for 6 months (from 31 December 2011 to 30 June 2012). A comparison of the project schedule at appraisal and completion is in Appendix 5.

F. Implementation Arrangements

22. The CPA, the CHC, and the RHD were the executing agencies for the three components of the project (para. 3). Each agency established a project implementation unit (PIU) to administer their component. A coordination committee headed by the chair of the CPA, and comprising the commissioner of the CHC and the additional chief engineer of the RHD, was established at the outset. The coordination committee served as a channel of communication and coordination of activities among the three executing agencies. The committee generally met every 3 months, or more often if required, to review progress and resolve outstanding project issues. At the plenary level, an interministerial steering committee, chaired by the secretary of the Ministry of Shipping, was formed to periodically review implementation progress and provide guidance as required. The steering committee comprised representatives of the MOC, the National Board of Revenue, the Economic Relations Division of the Ministry of Finance, the Planning Commission, and representatives of the three executing agencies. Steering committee meetings were held generally every 6 months. The interministerial steering committee thus ensured the smooth and timely resolution of crosscutting and interfacing issues among the three executing agencies, assisting project implementation.

G. Conditions and Covenants

23. The status of compliance with loan covenants is in Appendix 7. The compliance of the government and executing agencies with the major loan covenants was generally satisfactory, except in a few cases where compliance was delayed. One delayed covenant related to the publication of a schedule of port tariffs and charges by the Port Service Improvement Committee (Schedule 6, para.7 of the loan agreement). The study of port tariffs commenced in February 2014. Also, the construction of a new customs warehouse along the Bangladesh Railway corridor adjacent to the port access road, as envisaged under the port efficiency improvement plan (Schedule 6, para. 7), was delayed as the construction work commenced in January 2014 with the government's own financing, and is expected to be completed by January 2015. The baseline data were not prepared, and data from ADB's project preparatory TA were used to monitor and evaluate project impacts as set forth in the project performance management system (Schedule 6, para. 8). The CPA prepared the final draft Anticorruption Strategy, based on ADB's comments, and submitted it to ADB in April 2008. The borrower and executing agencies also substantially met the reporting requirements stipulated by the loan covenants. The CPA and the RHD maintained separate records and accounts on transactions for goods and services financed under the loan. The accounts were audited annually by the government, and the audited accounts were generally submitted to ADB on time, thus meeting covenant requirements.¹⁰ All audit observations were settled with the auditors satisfactorily.

H. Related Technical Assistance

24. ADB provided an associated advisory TA grant for \$700,000 for Chittagong Port Efficiency Improvement (footnote 2). The overall objective of the TA was to provide technical and administrative support to Chittagong Port and the connecting transport network. The TA had two components: the CPA component and the Ministry of Communication (MOC) component. The CPA component was to (i) assist the CPA in implementing a human resources development plan, (ii) help the Ministry of Shipping and the CPA introduce appropriate tariff and regulatory reforms related to the proposed project, and (iii) support the CPA in preparing a strategic plan for the CCT. The MOC component was to (i) conduct an assessment of the performance of the three modes of transport (roads, railways, and inland waterways) in the corridor; (ii) undertake a comparative modal analysis; and (iii) recommend institutional, operational, and infrastructural improvements and other changes to increase the efficiency and competitiveness of the three transport modes. The CPA under the Ministry of Shipping was the executing agency for the CPA component, while the MOC was the executing agency for the MOC component. The TA agreement was signed on 18 December 2005 and implemented over 32 months. The TA team comprised two international consulting firms to work on the two components. The TA team for the CPA component was fielded by 21 June 2006 and submitted its final report in April 2008, while the team for the MOC component was fielded on 3 July 2006 and submitted its final report in April 2007. The CPA consultants recommended a plan for strategic reform of the CPA and CHC, including reorganizing the CPA to become a regulator following a "landlord concept" where all operations are contracted to the private sector; preparing a master plan; improving the tariff system; and reforming the customs procedures. The MOC consultants prepared the final report recommending improvements in logistics systems and multimodal transport, as well as institutional, legal, and policy changes.

¹⁰ The Foreign Aided Projects Audit Department audited the executing agency's accounts on behalf of the government.

25. The TA is rated *partly successful*.¹¹ Despite the start-up delay of 21 months, the tasks were completed with a high level of quality. The reports prepared by the consultants provided valuable information that served as a foundation for future improvement in the efficiency of the port's operations and the transport logistics of the corridor. The overall objectives of the TA were therefore been achieved. Details of the TA and its outputs are in the TA completion report in Appendix 8.

I. Consultant Recruitment and Procurement

1. Consultant Recruitment

26. Recruitment of consultants was as planned at appraisal and complied with ADB's *Guidelines on the Use of Consultants*. Five teams of consultants were engaged: (i) two for the CPA component, including design and supervision of the civil works, and design and supervision of supply and installation of the CTMS and MIS; (ii) two for the CHC component, including supervision of procurement and installation of scanners, and implementation of ASYCUDA++ (by sole sourcing from UNCTAD, owner of the proprietary software); and (iii) a design and supervision consulting firm for the port connector road under the RHD component (see paras. 33–38 of the report and recommendation of the President). The teams were fielded at different times between July 2006 and December 2007, depending on the implementation schedule of each component and/or subcomponent. However, the recruitment and fielding of the consultants was delayed by about 33 months on average, due to the lack of advance actions by the executing agencies and the government's protracted recruitment procedures. It was envisaged at appraisal that the project would need an input of 141 person-months of international consulting services and 180 person-months of national consulting services. The actual input of consulting services at completion was 333 person-months of international consulting services and 538 person-months of national consulting services. The increase in consultant inputs was justified to supervise the extended time under the contracts for the CTMS and port connector roads.

2. Procurement

27. Procurement of all civil works, goods, and services was carried out in accordance with ADB's *Guidelines for Procurement*, as envisaged at appraisal. Procurement of civil works on the connector road, and the supply of goods for computerization, environmental protection, and container scanning equipment followed international competitive bidding procedures. Civil works contracts valued at less than \$2.0 million equivalent were procured based on local competitive bidding procedures. For the civil works contracts under the CPA and RHD components, prequalification of contractors was completed in April 2007 and award of the contracts was completed in March 2008. The first procurement under the project took place in July 2007 (facilities for environment management, and port service road and bridge across the Moheskhali River); and the last procurement was in March 2009 (supply and installation of the CTMS and MIS). In general, the procurement of goods and services under the components was delayed by about 24 months due mainly to parallel delays in the recruitment and mobilization of the consultants (para. 26). To ensure project readiness, ADB approved advance procurement action in accordance with ADB's *Guidelines for Procurement*; however, the executing agencies did not make use of it.

¹¹ Under revised ADB guidelines, a *partly successful* rating is equivalent to a *less than successful* rating.

J. Performance of Consultants, Contractors, and Suppliers

1. Consultants

28. The consultants under all five packages performed their tasks in accordance with their terms of reference, and their overall performance was generally satisfactory. The consultants managed the project well and provided adequate guidance to the civil works contractors and equipment suppliers, resulting in accelerated progress of civil works for the port connector road (under the RHD component); the port service road (under the CPA component); and works for the CTMS, and MIS, as well as for the waste reception and oil spill protection subcomponent. This helped partly compensate for the project's initial start-up delays. Also, quality assurance by the consultants was satisfactory, as demonstrated by the improved ride quality of the completed port connector road and, most notably, the technical superiority and effectiveness of the CTMS and MIS, which has revolutionized the port's efficiency and productivity in terms import–export throughputs. The consultants regularly provided the executing agencies with adequate assistance on technical and contractual matters, and produced comprehensive monthly and quarterly reports. However, the final project completion report (PCR) submitted by consultants under both the CPA and RHD components did not follow the ADB format stipulated in their terms of reference.

2. Contractors

29. Driven by the executing agencies' vigilance and continuous monitoring, most of the contractors performed satisfactorily. The executing agencies and the PCR mission concurred that the quality of the completed works compared favorably with the average international standard of similar works. All contractors strictly complied with the contract terms and conditions, resulting in smooth project implementation. No quality problems or contractual disputes occurred.

3. Suppliers

30. The performance of the suppliers in delivering, installing, and operationalizing the equipment for the CTMS and MIS, and waste reception and oil spill protection was generally satisfactory. The executing agencies and the PCR mission agreed that the cost and quality of the equipment compared satisfactorily to international standards and the market situation.

K. Performance of the Borrower and the Executing Agency

31. Despite the complexity of the project, with its multiple components and large groups of target beneficiaries, the performance of the borrower and executing agencies is rated *satisfactory*. This contributed to successful project implementation. The steering committee performed well and fulfilled most of its tasks in monitoring project implementation and providing strategic guidance, particularly on interagency and interministerial issues. The performance of the CPA is rated *satisfactory* in steering and assisting the PIU and project consultants on procurement, infrastructure development, installation and operationalization of the equipment for the CTMS, waste collection and reception, and environmental management. Similarly, the performance of the RHD is rated *satisfactory* in managing the construction the port connector road, including a flyover passing through the congested city center that necessitated timely removal of public utilities belonging to different government entities. Interfacing of works under the CPA and RHD components was managed well, minimizing implementation delays. However, the RHD was unable to provide the project data requested by the PCR mission, mainly because

their PIU had been dismantled, the project director and project staff were engaged in other assignments, and project documents were not available due to the recent relocation of RHD's head office. The government provided counterpart funds regularly, and no shortage was reported during project implementation.

L. Performance of the Asian Development Bank

32. ADB's performance is rated *satisfactory* in its timely response to the government's request for assistance and the reasonably short time taken to process the loan.¹² The design of the project incorporated lessons learned from the previous ADB-assisted transport sector development projects and port development projects in Bangladesh. Project formulation and implementation arrangements were generally satisfactory. ADB responded quickly to the issues that emerged during project implementation. The Bangladesh Resident Mission carried out close and effective coordination through regular meetings with the executing agencies and with project review missions. ADB fielded one inception mission, eight project review missions, three special project review missions, and a midterm review mission. The missions were effective in identifying and resolving implementation issues in a timely manner.

III. EVALUATION OF PERFORMANCE

A. Relevance

33. The project is rated *relevant*. The project's design and formulation were relevant to government's development objectives, and to ADB's strategy in the transport sector in general and the port and roads subsector in particular at appraisal (paras. 7–8), and remained so at completion, as defined in the government's Sixth Five-Year Plan, 2011–2015.¹³ The rationale for the project was satisfactorily justified by referring to the growing importance of the port subsector as the major mode of transport facilitating international trade and contributing to the country's economic development. The project outputs and outcomes were effectively designed to address the critical subsector issues and opportunities. However, although the project achieved the targeted outputs in spite of the CHC's decision during implementation not to use ADB finance for automation of its system and procurement of the scanners, this could have been avoided had there been enhanced consultation between ADB and the CHC during project preparation. The project was also conceived in the light of studies and research conducted by other development partners, including the World Bank.

B. Effectiveness in Achieving Outcome

34. The project is rated *highly effective* in achieving its outcome. The project completed the targeted construction of the port and connector roads infrastructure, generating a 100% increase in import–export freight traffic movement by project completion. The project experienced 10% annual growth of container throughputs on average since 2005, against the target of “above 6% in the first 6 years after project completion.”¹⁴ The port service improvement committee, established under the project, has been tasked with conducting a study and publishing a schedule of reduced rate of port tariff and charges by 2014. The project benefits helped reduce the vessel turnaround time by 28% in 2013, exceeding the target of 20% within 2 years of project completion.

¹² The loan was approved within 4 months from the date of appraisal.

¹³ Government of Bangladesh, Planning Commission, Ministry of Planning. *The Sixth Five-Year Plan, 2011–2015*. Dhaka.

¹⁴ Footnote 1, Appendix 2, para. 22, Table A2.3.

35. Further, the PCR mission noted other project impacts and outcomes that were not envisaged at appraisal. For example, about 80% of all traffic to and from the container terminal was using the port connector road built under the project, avoiding congested city roads and contributing to reduced vehicle operating costs, and shorter travel times. This helped reduce the cost of doing business at Chittagong Port and benefited more than 10,000 direct port users. The project also helped improve the environment of the port and adjacent maritime zones by reducing pollution by oil spills from vessels, resulting in a remarkable improvement of the water quality in the Karnafuli River. Further, the CPA has fully met the requirements specified under the International Shipping and Port Security Code, including those specified under the container security initiatives launched by the United States Customs in 2002, by operationalization of the four container scanners and automated tools for monitoring import and export containers to detect potential security breaches such as human and drug trafficking. A discussion of project impacts and benefits based on the PCR mission's assessment is in Appendix 9.

C. Efficiency in Achieving Outcome and Outputs

36. The reevaluation of the project shows higher incremental economic benefits and revenue at project completion compared to appraisal, particularly for the CPA and RHD components. The overall recalculated economic internal rate of return is 24.98%, which is higher than at appraisal (21.6%) and Tk4.76 billion compared with Tk3.6 billion at appraisal, which supports the better performance assumed at appraisal. This shows that the investment has been *efficient*.¹⁵ The recalculated financial internal rate of return for the revenue-generating CPA component is 16.40%. The economic reevaluation is Appendix 10 and the financial reevaluation is in Appendix 11.

D. Preliminary Assessment of Sustainability

37. Overall, the project is rated *likely sustainable*. The CPA operates as an independent legal entity and provides for autonomous management of the port and is fully regimented with the operations based on a sound commercial footing. The critical operations of the port involving cargo and container handling and management of the container yard have been outsourced to the private sector, which has improved the speed and reduced the cost of container handling at the port. The addition of four gantry cranes in 2005, improvement of the port's internal roads and bridge, construction of the 1.7 kilometer port connector road, and operationalization of the CTMS and MIS in 2011—all under the project—have enhanced port's operational efficiency and commercial profitability. The port throughput continued to grow at an average of 10% per annum, doubling during 2005–2013, which helped increase port's revenue earnings by more than 100% during the same period. All these factors indicate likely sustainability of the project. Further, the CPA is technically and financially sound, and this is expected to be sustained and improve in the years to come. This includes maintenance and updating of the CTMS as needed. The CPA has established separate facilities for CTMS and MIS within the port's zone, and engaged qualified and experienced staff to manage, operate, and monitor the system. The CPA's team is also working with the suppliers of the system under an extended technical support contract to upgrade the system as needed.

¹⁵ The guidelines of ADB's Independent Evaluation Department state that, if the estimated EIRR exceeds 18%, a project is normally rated *highly efficient*. However, considering other factors such as implementation delays, it was modestly rated as *efficient*.

38. The CPA has gained significant experience and resources through implementation of multilateral projects, financed by ADB and the World Bank. It has also undertaken several policy reform measures to reduce operational expenses, improve efficiency, and enhance revenues. These include (i) improving cargo turnaround time by removing bottlenecks at the port premises; (ii) installing an advanced computerized container management system and MIS, and complying with the conditions of the International Organization for Standardization; (iii) strengthening its planning, engineering, and operation and maintenance sections with adequate staffing and training, and (iv) working toward the target of full self-sufficiency in resources and manpower.

39. The port connector road constructed under the RHD component has made a major contribution to fast and economical access for more than 80% of the port-generated export–import traffic. The RHD is mandated to operate and maintain the port connector road. The maintenance cost may be met by using the toll collected from the Chittagong Port Access Road.¹⁶ Also, the PCR mission noted that the government has decided to establish the Road Maintenance Fund Board by an act approved on 22 July 2013. This will include a mechanism to mobilize the resources needed for road maintenance from user charges. It is expected that the Road Maintenance Fund Board will contribute to enhanced sustainability by mitigating the RHD’s maintenance funding constraints.

40. Further, three ongoing projects—the ADB-assisted Railway Sector Investment Program,¹⁷ the government-financed Dhaka–Chittagong Four Lane Project, and the ADB assisted Dhaka–Chittagong Expressway¹⁸—will increase the capacity and speed of the rail and road services. These are expected to provide a faster link from the Dhaka–Chittagong railway and highway to the port, creating increased demand for port services and thereby further enhancing the sustainability of the project.

E. Impact

41. **Overall impact.** The preliminary assessment of impact is substantial. As described in Appendix 1, gross domestic product growth was about 6% on average per year after project completion (2012–2013) though attribution of the project impact to overall gross domestic product is limited. Overall trade via Chittagong Port has also increased from 25,884,891 tons in 2005 to 41,928,596 tons in 2012, although it dropped to 37,805,605 tons in 2013 due to political turmoil. In addition, the improved port facilities, connector roads, environmental improvement measures, automation and use of scanners by the CHC, and introduction of the CTMS and MIS by the CPA ushered in economic, commercial, environmental, and social benefits to the target port users in particular, and to the country’s population in general. These benefits helped achieve the project goals of trade facilitation through improvement of port facilities and provision of speedier and economical transport links between Chittagong Port and the capital city and hinterland through the Dhaka–Chittagong corridor.

42. **Environmental and social impact.** The environmental and social impact of the project has been assessed as moderate. The project was categorized as “B” in accordance with ADB’s *Environmental Assessment Guidelines*. Based on the Environmental Conservation Rules, 1997,

¹⁶The 13-kilometer Chittagong Port Access Roads Project was financed under the ADB-assisted Road Maintenance and Improvement Project (Loans 1789/1790-BAN approved on 29 November 2000 for \$94 million).

¹⁷ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the People’s Republic of Bangladesh for the Railway Sector Investment Program*. Manila (Loan 2316/2317-BAN approved for the amount of \$430.0 million equivalent on 13 February 2007).

¹⁸ADB. 2012. *Technical Assistance to the People’s Republic of Bangladesh for the Dhaka–Chittagong Public–Private Partnership Design Project*. Manila (TA Loan 2856-BAN, approved on 30 March 2012 for \$10.0 million).

the road component was categorized as an “Amber A or B” project. Accordingly, an initial environmental examination of the project areas under all three components indicated that no significant adverse environmental impact was associated with the project because it is located within the existing port jurisdiction, and not in the coastal area. Project activities did not interfere with the ecosystem, as all works were of limited scale and carefully designed to avoid any adverse environmental impact. The executing agencies, with the assistance of the project consultants, submitted annual monitoring reports on the implementation of the environmental management plan throughout the implementation period, and no significant environmental issues were found as a result of this monitoring. Installation of ancillary equipment and storage facilities for receiving and separating oil waste from ships helps improve the water quality at Chittagong Port’s berthing and adjacent area.

43. All physical works were generally undertaken in areas owned by the CPA, The Chittagong City Corporation, and the Chittagong Development Authority, and therefore no significant land acquisition and resettlement was required. It was envisioned at appraisal that the construction and/or improvements of the new facilities under the project would displace some 19 households and 6 small business enterprises, all informal settlers. In all, 112 persons were expected to be affected. The impact, therefore, was expected to be limited and “insignificant.” In total, 117 persons were affected by the project, and the resettlement plan, prepared as required under ADB’s safeguard policy, was implemented successfully.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

44. Overall, the project is rated *successful*. The project achieved its principal objective of increasing the capacity of Chittagong Port’s container terminal and enabling Bangladesh to meet the international port security and environmental standards. Port users have benefited from high-capacity and streamlined port operations that reduced the time required to load and unload vessels. Port users have also benefited from the new port connector road, which bypasses the center of the congested city of Chittagong. The CTMS and MIS established under the project reduced the billing time and optimized berth allocation, yard operation, and management of facilities, thereby enhancing the productivity of the port. The project catalyzed greater private sector participation in managing the port’s day-to-day operations, and increased the role of the 21 private inland container depots around the port in handling export containers. It is also expected that the improved capacity of Chittagong Port will facilitate an influx of export–import traffic from the countries in the subregion, including Bhutan, India, and Nepal. In the longer run, the improved facilities of Chittagong Port are expected to supplement the proposed deep sea port near Chittagong by providing port services to the feeder vessels. These developments may transform the port into a hub of maritime freight traffic on the trans-Pacific and Indian Ocean routes.

B. Lessons

45. **Complex projects need an effective high-level coordinating body.** For a complex, multicomponent project, regular monitoring of the implementation progress by the government through a high-level plenary body or a steering committee is indispensable. Regular interaction among the borrower, the stakeholders, consultants, contractors and suppliers, and ADB through the executing agencies PIUs contributed greatly to the success of the project.

46. **Plan and coordinate preliminary activities well to minimize delays.** The executing agencies need to pursue a set of well-planned and concerted actions to ensure timely completion of all activities for land acquisition and resettlement, removal of utilities from rights of way, government approval of the initial environmental examination and environmental mitigation plan, and continued coordination with local government authorities. Delay in implementation of the RHD component was mostly attributed to delays in (i) procedures and decision making related to procurement, (ii) land acquisition and resettlement including removal of public utilities, and (iii) receiving clearance from Chittagong City Corporation on the construction of pier 19 of the flyover.

47. **Use advance actions.** The project experienced implementation delays of about 42 months for several reasons (paras. 21, 26, and 27). The absence of the borrower's advance action caused these start-up delays and adversely affected project implementation. ADB has emphasized this issue through its country programming review missions and tripartite project review missions, and has included in most ADB-assisted projects provisions for advance action for the selection of consultants, stakeholder consultation, and preparatory work for land acquisition and resettlement.

48. **Ensure sufficient consultation during project preparation.** The CHC's decision during implementation not to use ADB funds for their automation program indicated the need for greater consultation with the executing agencies and other stakeholders during project preparation.

C. Recommendations

1. Project Related

49. **Future monitoring.** The government should regularly monitor the accrual of benefits from the facilities built by the project. To ensure a continued stream of benefits to the port users and other stakeholders, the CPA generally monitors the project benefits using a team of its personnel with no clearly assigned responsibilities. The CPA should upgrade its monitoring mechanism by deploying a specialized team comprising experts from its planning, engineering, finance, and operations departments to routinely oversee the maintenance and to update the port infrastructure, management system, and tools with adequate allocation of funds for the team. The RHD should also ensure that adequate maintenance funds are allocated in the government's annual development program for the routine and periodic maintenance of the port connector road. The CPA and the CHC should conduct a monitoring program, create performance indicators, and develop a business plan and training programs to optimize the use of the facilities. The CPA should create an efficient marketing department for promoting port services, and develop a customer service strategy. Relevant frontline managers and staff should be trained in the principles of customer service.

50. **Covenants.** The compliance of the government and executing agencies with the major loan covenants was generally satisfactory, except a few compliance to which was delayed (para. 23). The Ministry of Shipping should oversee and provide adequate support to ensure that the CPA, through the port service improvement committee, prepares an anticorruption strategy, including publication of port tariff and charges (Schedule 6, para. 7), within 2014. Also, CPA should complete the construction of the new custom warehouse along the Bangladesh Railway corridor adjacent to the port access road, as envisaged under the port efficiency improvement plan and stipulated under covenant 6, by early 2015.

51. **Further action or follow-up.** The Chittagong Container Terminal (CCT) is currently operating at a performance level with the vessel turnaround time of 3.4 days and a container dwell time in the port of 4.0 days (para. 13). The CPA should work to sustain or improve this performance to cope up with increasing demand for port services. To this end, the CPA should follow up and coordinate with the ancillary transport and service agencies, including Bangladesh Railway, Dhaka Inland Container Depot, and the 21 private inland container depots around Chittagong Port, to ensure that the services of these entities match the improved speed and efficiency of the CPA in handling containerized import–export cargo. The CPA should take the lead in organizing and conducting regular coordination meetings with these entities to identify bottlenecks that may hinder the smooth flow of container traffic to and from Chittagong Port, and devise means to remove these.

52. The introduction of CTMS and MIS has considerably improved the operational efficiency of Chittagong Port and the CHC. The system's utility could be further enhanced by sharing the export general manifests between CHC and CPA through the electronic data interchange system already in use. This is likely to happen by the end of 2014.

53. **Additional assistance.** The project successfully developed the port's infrastructure and automation of its operations, and contributed to substantially achieving the goal of trade facilitation. Given the potential of Chittagong Port and the emerging demands for efficient port services, the CPA needs to identify core future projects through the ongoing studies under the ADB-assisted TA for the preparation of a strategic master plan for Chittagong Port (footnote 9).

54. **Timing of the project performance evaluation report.** An evaluation report on the project's performance should be prepared by 2017 to assess the medium-term sustainability and long-term impacts of the project. The borrower should continue to monitor the project benefits to ensure availability of the needed data.

2. General

55. It is recommended that the enhanced project readiness filter agreed during the 2012 country portfolio review mission should be put in place, requiring adequate advance preparatory activities to be completed before the project is considered by the ADB Board. The readiness filter includes advance action for the selection of detailed engineering design and construction supervision consultants, preparation of the detailed design, finalization of the procurement plan, and substantial completion of land acquisition and resettlement.

PROJECT FRAMEWORK

Design Summary	Appraisal Performance Indicator/Targets	Project Achievement	Key Issues and Recommendation
1. Impact			
1.1 Facilitate trade	<p>Annual percentage change in national gross domestic product after project completion</p> <p>Annual percentage change in trade after project completion</p>	<p>Gross domestic product growth was about 6% on average per year after project completion (2012–2013).</p> <p>Overall trade via Chittagong Port increased to 41,928,596 tons in 2012 from 25,884,891 tons in 2005, but decreased to 37,805,605 tons in 2013 due to political turmoil.</p>	See para. 1
2 Outcome			
2.1 Increase container terminal capacity	<p>Annual growth in container throughput sustained at above 6% in the first 6 years after project completion</p> <p>Port charges reduced by 20% within 2 years of project completion</p> <p>Vessel turnaround time and</p>	<p>The Chittagong Port Authority (CPA) experienced a steady growth of container traffic by more than 10% per annum during 2005–2012. Growth declined slightly in 2013 due to adverse political situation.</p> <p>The port service improvement committee commenced a survey in February 2014 for publication of a schedule of reduced port tariff and charges by 2014.</p> <p>The vessel</p>	<p>See para. 13</p> <p>See para. 23</p> <p>See para. 13</p>

Design Summary	Appraisal Performance Indicator/Targets	Project Achievement	Key Issues and Recommendation
	berth occupancy rate reduced by 20% within 2 years of project completion	turnaround time was reduced by 42% to 3.4 days in 2013 from 5.9 days in 2011; berth occupancy rate was reduced by 42% to 1.3 days in 2013 from 3.0 days in 2011.	
<p>3. Project Outputs</p> <p>3.1 Automated manifest system (at Custom House of Chittagong [CHC])</p> <p>3.2 Container terminal management system (at the CPA)</p> <p>3.3 Container scanning system (at the CHC)</p> <p>3.4 Improved access through connector road from Chittagong Port Access Road to New Mooring Container Terminal and Chittagong Container Terminal</p>	<p>Average customs clearance time for import containers reduced by 30% within 2 years of project completion</p> <p>Annual number of customs declarations increased by 20% 1 year after project completion</p> <p>Average container dwell time at the port reduced by at least 20% within 2 years of project completion</p> <p>Customs inspection time reduced by 30% within 1 year of project completion</p> <p>50% of all traffic to and from container terminals use the connector road within 2 years of project completion</p>	<p>Average customs clearance time for import containers was reduced by 35% during 2012–2013.</p> <p>The annual number of customs declarations increased by 27% in 2013 compared to that in 2011.</p> <p>Container dwell time in the port was reduced by 50% to 4 days in 2013 from 8 days in 2011.</p> <p>Customs inspection time was reduced by 32% in 2013 compared to that in 2011.</p> <p>About 80% of all traffic to and from the container terminal used the port connector road in 2013.</p>	<p>See para. 16</p> <p>See para. 16</p> <p>See para. 13</p> <p>See Para. 16</p> <p>See para. 39</p>

Design Summary	Appraisal Performance Indicator/Targets	Project Achievement	Key Issues and Recommendation
3.5 Improved terminal traffic circulation and gate house system	Number of vehicles inside the port at any given time reduced by 50% within 2 years of project completion	Number of vehicles inside the port area generally was reduced by 60% in 2013 compared to that in 2011.	See para. 13
	Vehicle waiting time to enter and exit the port reduced by 30% within 2 years of project completion	Vehicle waiting time at port gates was reduced by 32% in 2013 compared to that in 2011.	See para. 13
3.6 Oil waste reception and treatment facility and spill management system implemented	Reduced oil content in water at sample stations in Karnaphuli River within 2 years of project completion	Oil content at sample stations was reduced and water quality was substantially improved.	See para. 12
3.7 Port Service Improvement Committee established	Anticorruption strategy submitted to ADB	Port Service Improvement Committee was established and the final draft of the anticorruption strategy was submitted to ADB in 2008.	See para. 23
4. Activities/Inputs:			
4.1 Procurement of consulting services for all three components	Consultants mobilized by mid-June 2005	The consultant teams were fielded at different times between July 2006 and December 2007, depending on the implementation schedule of each component.	See para. 26
4.2 Evaluation of civil works contractors and bids for the CPA and Roads and	Prequalification of contractors by the end of November 2005	Prequalification of civil works contractors was completed in April 2007.	See para. 27

Design Summary	Appraisal Performance Indicator/Targets	Project Achievement	Key Issues and Recommendation
Highways Department (RDH) components			
4.3 Procurement of civil works for the CPA and RHD components	Contracts awarded by 1 April 2006	Civil works contracts were awarded in March 2008.	See para. 27
4.4 Procurement of goods	Computer systems at the CHC and the CPA installed by 1 July 2006	Computer systems were installed at the CHC in October 2008 and at the CPA in December 2011.	See paras. 11,16
	Container scanners installed by 1 July 2006	Container scanners were installed in June 2010.	See para. 16
4.5 Provision of training	Number of persons trained	Apart from induction and familiarization training sessions conducted by the CPA, 20 super-users successfully completed their training with the software supplier.	See para. 11
4.6 System evaluation	Computer system operational evaluations completed by 1 December 2006	The computer system was substantially completed and evaluated, and was made fully operational by June 2012.	See para. 11
4.7 Monitoring and evaluation of the project	Finalize project performance management system (PPMS) before 1 March 2005	The PPMS was finalized in October 2006 after mobilization of consultants.	See para. 23
	Complete baseline data collection by 1 June 2005	Baseline data were not prepared, and	See para. 23

Design Summary	Appraisal Performance Indicator/Targets	Project Achievement	Key Issues and Recommendation
	Performance reports submitted quarterly	<p>ADB project preparatory technical assistance data were used.</p> <p>The executing agencies substantially met reporting requirements as stipulated by the loan covenants.</p> <p>Completion of all works was certified by the end of 2012.</p> <p>No major defect was identified during the liability period. All minor defects were duly reported.</p>	See para. 23
4.8 Environment management	<p>Environmental management plan approved by the CPA board before 1 June 2005</p> <p>Environment unit operational by 1 June 2005</p> <p>Laboratory testing of water samples begins by 1 January 2007</p>	<p>The CPA approved the environmental management plan in April 2006.</p> <p>The CPA's environment unit was operational by March 2005.</p> <p>Laboratory testing of water samples started in March 2009.</p>	
4.9 Recruitment of advisory technical assistance consultants	Consultants mobilized by 1 January 2006	Consultants were mobilized by August 2006.	See para. 26

APPRAISAL AND ACTUAL PROJECT COSTS
(\$ million)

Component	Category	Appraisal Estimate			Actual		
		Foreign	Local	Total	Foreign	Local	Total
A. Base Cost							
i. Civil Works							
a. Chittagong Port Authority	01A	1.1	1.4	2.5	1.63	1.84	3.47
b. Roads and Highways Department	01B	4.7	5.8	10.5	2.96	3.38	6.34
ii. Equipment							
a. Chittagong Port Authority	02A	7.3	0.7	8.0	9.38	0.7	10.08
b. Customs House	02B	9.5	0.5	10.0	0	0	0
c. Roads and Highways Department							
iii. Consulting Services							
a. Chittagong Port Authority	03A	1.2	0.3	1.5	1.71	0.27	1.98
b. Customs House	03C	0.9	0.1	1.0	0.59	0	0.59
c. Roads and Highways Department	03B	0.7	0.3	1.0	0.55	0.32	0.87
Subtotal - A. Base Cost		25.40	9.10	34.50	16.81	6.51	23.33
B. Contingencies							
i. Contingencies							
a. Chittagong Port Authority		1.2	0.3	1.5	0	1.46	1.46
b. Customs House		1.6	0	1.6	0	0	0
c. Roads and Highways Department		0.6	1.0	1.6	0	1.44	1.44
Subtotal - B. Contingencies		3.40	1.30	4.70	00	2.90	2.90
C. Interest during construction							
a. Chittagong Port Authority		0.8		0.8			
b. Customs House		0.6		0.6			
c. Roads and Highways Department		0.4		0.4			
Subtotal - C. Interest during construction	04	1.80		1.80	1.31		1.31
D. Resettlement – Roads and Highways Department			0.30	0.30		0.30	0.30
Total		30.6	10.70	41.30	18.13	9.71	27.84

ANNUAL DISBURSEMENTS

Year	Amount (\$)
2005	26,139.90
2006	203,580.17
2007	1,132,213.57
2008	2,014,098.66
2009	4,871,884.19
2010	4,310,097.96
2011	2,490,556.56
2012	848,302.56
2013	2,233,869.81
Total	18,130,743.38

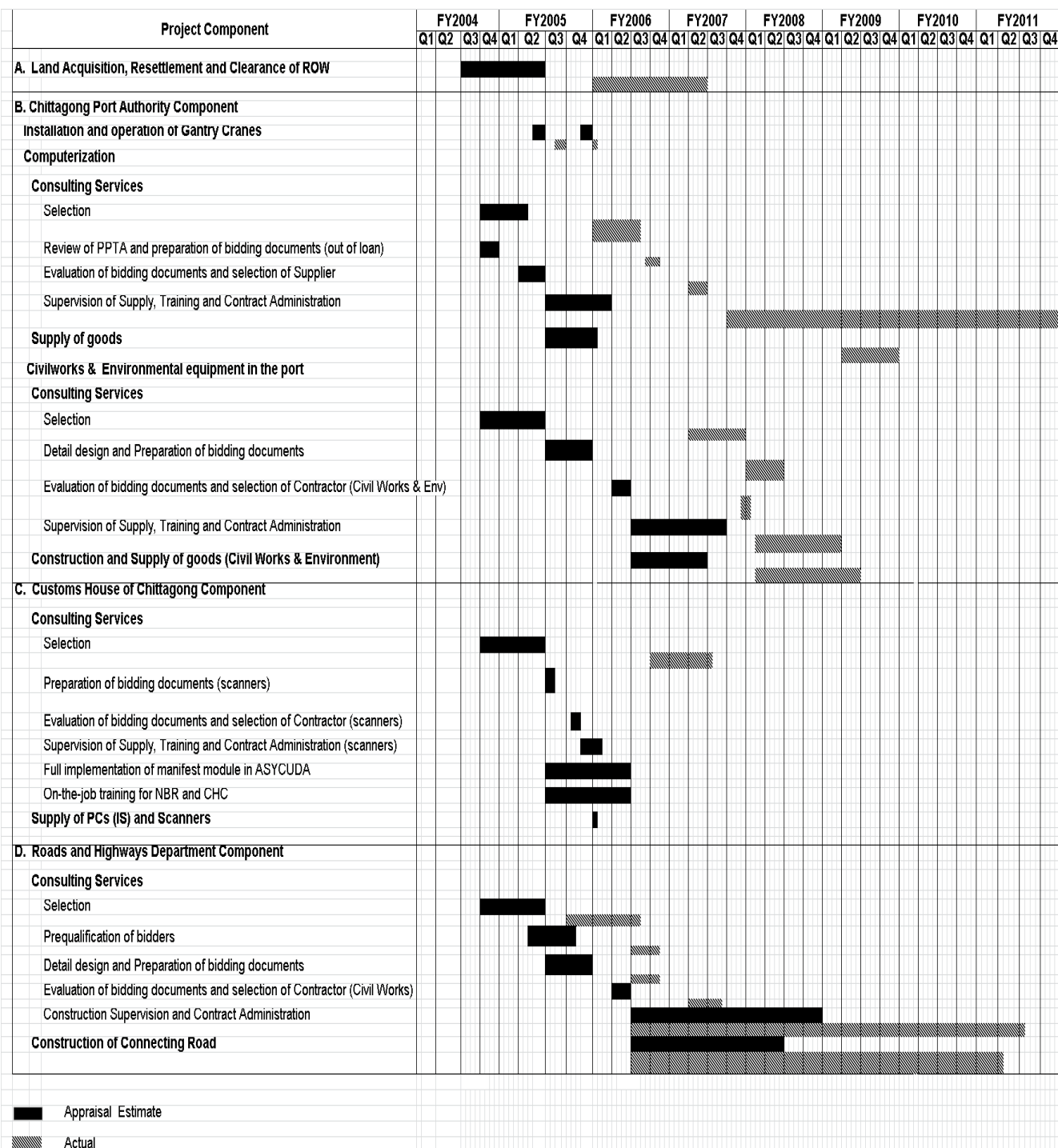
Source: Asian Development Bank.

IMPORT AND EXPORT CARGO HANDLED BY CHITTAGONG PORT AUTHORITY

Sl No.	Description	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
1.	Cargo handling (tons)	25,884,891	27,025,653	27,629,235	28,197,569	34,844,574	41,182,795	43,140,042	41,928,596	37,805,605
2.	Container handling (TEU)	783,353	876,186	958,020	1,069,999	1,161,470	1,343,448	1,392,104	1,406,456	1,296,403
3.	Container handling (tons)	7,695,431	8,515,582	9,606,032	11,046,407	12,127,321	14,370,217	14,762,762	14,048,521	1,291,677
4.	Container handling /ICD, Dhaka (TEU)	78,660	77,567	80,714	82,458	63,780	64,369	69,723	67,010	48,948
5.	Container handling /ICD, Dhaka (tons)	326,120	325,305	331,216	4,344,628	366,965	354,301	417,335	488,481	363,747
6.	Vessel handling (number)	1,892	1,957	1,945	2,099	2,167	2,249	2,248	2,076	1,832
7.	Cargo handled (number)/ inland and ICD (tons)	29,568,425	30,139,657	30,799,388	31,315,677	38,169,124	45,396,663	49,273,937	48,738,776	4,322,162

FY = fiscal year, ICD = inland container depot, TEU = 20-foot equivalent unit.

PROJECT IMPLEMENTATION SCHEDULE



INCOME AND EXPENDITURE OF CHITTAGONG PORT AUTHORITY

Financial Year	Income (Tk million)	Expenditure (Tk million)
2006	7,411.30	3,761.10
2007	8,300.20	4,512.60
2008	105,700.40	4,471.60
2009	11,337.20	4,575.10
2010	11,553.50	6,247.80
2011	14,531.50	6,341.30
2012	15,299.20	6,526.20
2013	15,739.00	8,024.50

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Schedule	Para No.	Description	Remarks/ Issues	Types
Section 4.01 (a)		The Borrower shall carry out, and cause each of CPA, CHC, and RHD to carry out, the project with due diligence and efficiency and in conformity with sound administrative, financial, engineering, environmental and technical practices.	Complied with.	Others
Section 4.01 (b)		In the carrying out of the project and operation of the project facilities, the Borrower shall perform or cause to be performed all obligations set forth in Schedule 6 to the Loan Agreement.	Complied with.	
Section 4.02		The Borrower shall make available to each of CPA, CHC and RHD, promptly as needed and on terms and conditions acceptable to ADB, the funds, facilities, services, land and other resources which are required, in addition to the proceeds of the Loan, for the carrying out of the project.	Complied with.	
Section 4.03 (a)		In the carrying out of the project, the Borrower shall cause competent and qualified consultants and contractors, acceptable to ADB, to be employed to an extent and upon terms and conditions satisfactory to the Borrowers and the ADB.	Complied with.	
Section 4.03 (b)		The Borrower shall cause the project to be carried out in accordance with plans, design standards, specifications, work schedules and construction methods acceptable to ADB. The Borrower shall furnish, or cause to be furnished, to ADB, promptly after their preparation, such plans, design standards, specifications and work schedules, and any material modifications subsequently made therein, in such detail as ADB shall reasonably request.	Complied with.	
Section 4.04		The Borrower shall ensure that the activities of its departments and agencies with respect to the carrying out of the project and operation of the project facilities are conducted and coordinated in accordance with sound administrative policies and procedures.	Complied with.	

Schedule	Para No.	Description	Remarks/ Issues	Types
Section 4.05 (a)		(a) The Borrower shall (i) maintain, or cause to be maintained, separate accounts with respect to Component B and Component C of the Project; (ii) have such accounts and related financial statements audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB; (iii) furnish to ADB, as soon as available but in any event not later than 9 months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditor's opinion on the use of the Loan proceeds and compliance with the covenants of this Loan Agreement, all in the English Language; and (iv) furnish to ADB such other information concerning such accounts and financial statements and the audit thereof as ADB shall from time to time reasonably request.	(i) complied with; (ii) has been done by private sector firm in addition to FAPAD; (iii) No expenditures during FY 2005/06. Submission for FY 2006/07, 07/08, 08/09 and 09/10 done by CPA and RHD; (iv) complied when required	Financial
Section 4.05 (b)		(b) The Borrower shall enable ADB, upon ADB's request, to discuss the Borrower's financial statements for the Project and its financial affairs related to the Project from time to time with the Borrower's auditors, and shall authorize and require any representative of such auditors to participate in any such discussions requested by ADB, provided that any such discussion shall be conducted only in the presence of an authorized officer of the Borrower unless the Borrower shall otherwise agree.	Complied with.	
Section 4.06		The Borrower shall enable ADB's representatives to inspect the project, the goods financed out of the proceeds of the Loan, and any relevant records and documents.	Complied with.	
Section 4.07		The Borrower shall take all action which shall be necessary on its part to enable each of CPA, CHC and RHD to perform their obligations under this Loan Agreement and, with respect to Component A of the project, enable CPA to perform its obligations under the project agreement as well, and shall not	Complied with.	

Schedule	Para No.	Description	Remarks/ Issues	Types
Section 4.08 (a)		take or permit any action which would interfere with the performance of such obligations. The Borrower shall exercise the rights under the Subsidiary Loan Agreement with CPA in such a manner as to protect the interests of the Borrower and ADB and to accomplish the purposes of the Loan.	Complied with.	
Section 4.08 (b)		No rights or obligations under the Subsidiary Loan Agreement with CPA shall be assigned, amended, abrogated or waived with the prior concurrence of ADB.	Complied with.	
Section 4.09		The Borrower shall ensure that the project facilities are operated, maintained and repaired in accordance with sound administrative, financial, engineering, environmental, technical and operations and maintenance practices.	Complied with.	
3	7	Conditions of Withdrawal from Loan Amount. Notwithstanding any provision of this Loan Agreement, no withdrawals shall be made from the Loan Account for Component A of the Project until PSIC has been duly established and a schedule of meetings is announced and a notification to this effect is supplied by ADB.	Complied with. PSIC established on 19 Sep 2005. CPA issued schedule of meeting as per PSIC, and have submitted Minutes from meetings to ADB.	Financial
3	8	Conditions of Withdrawal from Loan Amount (continued). Following the first withdrawal from the Loan Amount for Counterpart A of the Project, no subsequent withdrawals from the Loan Account for Component A shall be permitted until after an anticorruption strategy acceptable to ADB as set forth in paragraph 17 of Schedule 6 hereto shall have been delivered to ADB, unless otherwise agreed with ADB.	Complied with. Final Draft Anticorruption Strategy prepared based on ADB's comments and submitted to ADB on 21 April 2008.	Financial

Schedule	Para No.	Description	Remarks/ Issues	Types
3	9	Conditions of Withdrawal from Loan Amount (continued). No withdrawal shall be made from the Loan Account for Component C of the Project until all requirements under paragraph 13 of Schedule 6 here to relating to payment of compensation under the resettlement plan shall have been fully complied with and evidence to that effect is provided to ADB as well as an independent committee is established as contemplated in paragraph 14 of Schedule 6 hereto and due notification of the formation of the committee is made through the public media.	Complied with. All resettlement activities were completed in November 2009.	Financial
6	2	Project Implementation Unit (PIU). Each of CPA, CHC, and RHD shall establish a project implementation unit to administer the component of the Project that will be responsible for implementation. The PIU shall be headed by a project director and staffed by other technical personnel needed to manage the Project. Each of CPA, CHC, and RHD shall consult ADB prior to the appointment (any changes thereto) of project directors.	Complied with. PIU formed	Others
6	3	Project Coordination Committee (PCC). A PCC, chaired by the Chairman of CPA and comprising Commissioner of CHC and the Additional a Chief Engineer of RHD, shall be established. The PCC shall serve as the primary channel of communications among each of CPA, CHC, and RHD with respect to the Project. The PCC shall meet at least once every three months and may meet more frequently if so necessary, to review progress and resolve outstanding issues pertaining to the Project.	Complied with. PCC formed	Others
6	4	Project Steering Committee. At the central level, a Project Steering Committee chaired by the Secretary, Ministry of Shipping shall review progress of Project implementation, and as necessary, provide guidance on implementation. The Project Steering Committee shall be comprised of representatives of the Ministry of Communications, National Board of Revenue, Planning Commission and Implementation -Monitoring and Evaluation Division of the Ministry of Planning, Economic Relations Division and Evaluation Division and Finance	Complied with. PSC formally established on 23 October 2005. Meetings are held every 6 months.	Others

Schedule	Para No.	Description	Remarks/ Issues	Types
		Division of the Ministry of Finance, and the three Project Executing Agencies. The Project Steering Committee shall meet at least once every six months, or more frequently if necessary.		
6	5	The project shall be implemented over four years from 2005 to 2008.	Not complied with. The project was implemented during 2005 to 2013 due to reasons stated in para. 20	Others
6	6	Counterpart Funding. To ensure successful implementation of the Project, the Borrower shall provide, in a timely manner, all counterpart funds under the financing plan as well as any additional funds that may be required to complete the Project.	Complied with. Counterpart funding provided in ADP of all EAs, and partly also in the revenue budget for CPA. Shortfall for RHD component was met from other components.	Financial
6	7	Port Efficiency Improvement Plan. The Borrower shall ensure that each of CPA and CHC shall take all actions necessary to increase container yard capacity, revise port tariffs, improve port performance, develop human resources, and improve environmental quality in accordance with the schedule agreed with ADB and as set forth in the RRP.	Generally complied with. The Chittagong Container Terminal (CCT) was handed over to the private sector for operation on 8 March 2007. This and other actions by CPA helped improve CPA's overall performance including reduced vessel turnaround time, reduced dwell time for containers in the port, reduced cost of container handling, and increased revenue of CPA. The study for revising port tariff has started since February 2014.	Sector
6	8	Monitoring and Evaluation and PPMS. The Borrower shall cause each of CPA, CHC, and RHD collect relevant baseline data required to monitor and evaluate impacts set forth in the PPMS. The Borrower shall cause of CPA, CHC, and RHD, with the assistance of construction supervision consultants, to continue to monitor project impacts prior to the start of the project and throughout the implementation period of the project.	Complied with. The baseline data was not prepared and data from ADB's project preparatory TA were used to monitor and evaluate project impacts as set forth in the PPMS. The EAs, with the assistance of	Others

Schedule	Para No.	Description	Remarks/ Issues	Types
		During the period of implementation, each of CPA, CHC and RHD shall submit biquarterly monitoring and evaluation reports to ADB.	consultants, regularly submitted biquarterly monitoring and evaluation reports.	
6	9	Environment. The Borrower shall cause each of CPA and RHD to ensure that environmental mitigation measures described in the IEE reports are implemented throughout the Project implementation and operation period, and in compliance with the Bangladesh Governmental Conservation Act, 1995, as amended, and any environmental policy adopted by the Borrower as well as ADB's Environmental Policy (2002)	Complied with. Environmental mitigation measures were Implemented as part of civil work s contracts.	Safeguard s
6	10	Environment (continued). The Borrower shall further ensure that RHD obtains all required site and operational clearances from Department of Environment of the Borrower (DOE) prior to implementation of any civil works activities. CPA shall also obtain all required clearances from DOE prior to launching operations of the oil waste separation plant contemplated under the Project. To obtain these environmental clearances, CPA and RHD shall submit the requirements as described in the Environmental Conservation Act (ECA), 1995, and the Environmental Conservation Rule (ECR), 1997, in each case, as amended.	Complied with. ADB on 24 September 2007 approved the environmental report for RHD component.	Safeguard s
6	11	Project Management. The Borrower, in order to ensure integrity, continuity, transparency, efficiency, and good management, shall cause each of CPA, CHC, and RHD to consult with ADB on matters relating to management of the Project. To support such consultation, a consultation meeting shall be held every 6 months from the Effective Date and a memorandum signed between the parties reviewing such issues and summarizing agreements on future actions, if any. In particular, the Borrower shall cause each of CPA, CHC, and RHD to establish a Project Implementation Unit headed by a project director and staffed by other technical personnel	Complied with. Consultation meetings between ADB and RHD were held regularly every 6 months or more often.	Others

Schedule	Para No.	Description	Remarks/ Issues	Types
		needed to manage the Project, and each of CPA, CHC and RHD shall consult with ADB prior to the appointment (and any changes thereto) of all project directors.		
6	12	Health Risk. The Borrower shall ensure that the civil works contracts include a requirement to conduct an information and education campaign on communicable diseases, including and not limited to sexually transmitted diseases and HIV/AIDS for construction workers as part of the health and safety program at campsites during the construction period. The Borrower shall also ensure that the civil works contracts include provisions on health, safety and security, sanitation and appropriate working conditions, including accommodation, accidental death, dismemberment and disability benefits, and clean drinking water for construction workers at campsites at standards acceptable to ADB during the construction period. The Borrower shall also require each of CPA and RHD to provide to ADB a detailed report on how each of the provision herein is implemented by the civil works contractors	Complied with. All civil works contracts included the requirements for dissemination of information and conducting campaign on communicable diseases, health, safety, and sanitation and safe water for the workers. The contractors, with consultants' supervision, performed on these requirements, and regularly reported the status in their monthly reports.	Others
6	13	Resettlement. The Borrower shall ensure that RHD implement resettlement activities in accordance with all applicable laws and regulations of the Borrower and in accordance with ADB's Policy on Involuntary Resettlement (1995) and the resettlement framework as agreed between ADB and the Borrower, including that (i) compensation shall be provided at replacement cost together with any entitlements as stipulated in the short resettlement plan, with ADB's policy to prevail in the case of any difference with the Borrower's laws and regulations; (ii) counterpart funds and disbursements shall be provided promptly to affected people, with agreed compensation provided to them before any land is taken or civil works contracts are awarded, and the Project shall not use any emergency provisions that allow land to be taken in advance of payment; (iii) RHD shall meet any unforeseen obligations in excess of budget estimates; (v) RHD shall implement the	Complied with. A short Resettlement Plan (RP) was uploaded on ADB's Resettlement Website in February 2005. RHD engaged an NGO to support and verify early implementation of Resettlement. (i) complied; (ii) complied; (iii) not required; (iv) NGO and consultant to monitor; (v) agreed and complied; (vi) complied; (vii) agreed and audited; (viii) complied; (ix) agreed; (x) not applicable; and (xi) reported	Safeguards

Schedule	Para No.	Description	Remarks/ Issues	Types
		Project with adequate supervision, monitoring, and reporting; (vi) the resettlement specialist within the Project construction supervision consulting team shall be charged with external monitoring and evaluation of the resettlement; (vii) resettlement fund disbursements and expenditures shall be audited annually by an independent auditor; (viii) adequate information dissemination and consultation with affected people shall be carried out; (ix) consultations and grievances related to the Project shall be documented; (x) resettlement plans shall be updated if the scope of the Project is changed; and (xi) progress shall be regularly reported to ADB.		
6	14	Grievance and Redress Mechanism. The Borrower shall cause RHD to form within 3 months of the Effective Date an independent committee consisting of individuals unrelated to the Project to hear any grievances or other complaints relating to resettlement arising out of the implementation of the Project. Such Committee shall include at least two members who are women and a member who is an NGO representative; one of the women members may be the NGO representative. RHD shall ensure that local media are invited to participate as observers and ask questions during meetings of the Committee. The formation of the Committee shall be announced through the public media such as daily Bengali newspapers published out of Chittagong. The Committee shall inform the public of its findings and recommendations through press releases for the local media within 3 months of filing of any complaints. In the event a press release is not published in the local media within two weeks of its release, the Committee shall publish the press release in the two largest daily Bengal newspapers published out of Chittagong.	Complied with.	Others
6	15	Labor Laws. The Borrower shall cause each of RHD and CPA to ensure that the civil works contractors comply with all applicable labor laws and regulations and do not employ child labor in the construction activities. The Borrower shall cause each of CPA and RHD to set	Complied with. The stipulated requirements on labor laws, prohibition on child labor, maintaining gender equality and	Others

Schedule	Para No.	Description	Remarks/ Issues	Types
		employment targets acceptable to ADB for women for road construction activities and shall monitor progress and cause its contractors to adhere to such targets. The Borrower shall ensure that each of CPA and RHD provides equal opportunity for women for road construction activities, as well as require contractors not to differentiate wages between men and women for work of equal value. The Borrower through CPA or RHD, as the case maybe, shall ensure that a specific clause to the effect is included in all relevant bidding documents, and compliance is strictly monitored and document enduring Project implementation.	nondiscriminatory wage rates for women employees were included in the civil works contracts, which were monitored during implementation.	
6	16	Anticorruption. The Borrower acknowledges that ADB, consistent with a commitment to good governance, accountability and transparency, reserves the right to undertake directly, or through its agents, investigation of any possible financial or management impropriety in the conduct of the Project. The Borrower shall fully cooperate and shall ensure that each of CPA, CHC, and RHD fully cooperate with any such investigation and extend all necessary assistance, including access to all relevant books and records as well as engagement by any of CPA, CHC, or RHD of independent experts, that may be needed for satisfactory completion of such investigations. The Borrower further acknowledges that all costs related to such investigations shall be borne by the Project.	Complied with.	Others

Schedule	Para No.	Description	Remarks/ Issues	Types
6	17	Anticorruption (continued). The Borrower shall ensure that within 6 months of the Effective Date, CPA shall establish the PSIC, chaired by Chairman CPA, to serve as a forum for discussing issues such as port tariffs, service quality, and development plans. PSIC shall comprise representatives of port users such as shipping agents and owners, freight forwarders, and clearing agents, and chambers of commerce. The PSIC shall meet every three months, and CPA shall within six months from the date of formation of PSIC provide minutes of all meetings to ADB within two weeks of conclusion/adjournment of every meeting. All government-accredited members of the media shall have access to the proceedings of PSIC meetings and the finalized minutes from each meeting. PSIC shall establish a procedure for receiving complaints and suggestions from port users and the general public. Each complaint received shall be recorded and a summary provided to all members of PSIC for discussion and follow-up action. Upon establishment of PSIC, PSIC's function of receiving complaints and suggestions and taking follow-up action on complaints shall be advertised through the two Bengali daily newspapers published out of Chittagong. CPA shall also, in consultation with representation of CHC and the PSIC, prepare an anticorruption strategy acceptable to ADB, which will be implemented during the remaining Project implementation period.	Generally complied with. CPA established PSIC on 16 Sep 2005. Final Draft Anticorruption Strategy prepared based on ADB's comments in 2008.	Others
6	18	Indigenous People. The Borrower shall ensure that no person shall be adversely affected in terms of ADB's Policy on Indigenous People (1998).	Not applicable. No indigenous people in project area.	Safeguards
6	19	The Borrower shall cause an annual performance audit for each of the components of the project to be completed pursuant to the terms of references to be developed by ADB in consultation with PCC. All costs incurred in connection with such performance audit shall be paid out of the project funds.	Complied with.	Financial

TECHNICAL ASSISTANCE COMPLETION REPORT

Division: BRM

TA No., Country and Name TA 4506-BAN: Chittagong Port Efficiency Improvement			Amount Approved: \$700,000	
			Revised Amount: \$700,000	
Executing Agency: Chittagong Port Authority		Source of Funding: Japan special Fund	Amount Undisbursed: \$124,919.07	Amount Utilized: \$575,080.93
Date			TA Completion Date	
Approval 20 December 2004	Signing 18 December 2005	Fielding of First Consultant(s): 21 June 2006	Original: 30 June 2006	Actual: 28 February 2009
			Account Closing Date	
			Original: 30 June 2006	Actual: 30 June 2009
<p>Description</p> <p>The Chittagong Port, which handles around 90% of the country's international trade, has experienced substantial growth in the past 15 years and its container traffic is expected to reach one million TEUs by 2013. Unfortunately, the rapid increase in container traffic volume has created considerable congestion and the Port's operational space has become insufficient. There are many factors that contribute to the congestion in the Port, including the long dwell times of loaded containers, storage of empty containers, and excess number of vehicles in the working area, among others. As a result, some port shipping agents started to impose a congestion surcharge on cargo arriving in Chittagong. Apart from problems related to congestion, internal problems due to discrepancies in the regulations of the Chittagong Port Authority (CPA) and Customs House of Chittagong (CHC) and lack of resources and capacity of the CHC to handle shipments transferred from the CPA also pose serious operational constraints. The operational efficiency of the CPA and CHC thus needed to be improved to cope with Bangladesh's rapidly growing external trade. In addition, it was necessary for the efficiency of the Dhaka-Chittagong Corridor be enhanced so that it could match improvements in the Port's capacity. Being aware of the problem, the Government therefore requested for advisory TA, which was approved in December 2004.</p> <p>Based on its complex nature, the TA was divided into two components, the Chittagong Port Authority (CPA) component and Ministry of Communications (MOC) component. The scope of work for the CPA component was to (i) assist the CPA in the implementation of a Human Resources Development Plan, (ii) assist the Ministry of Shipping and CPA to introduce appropriate tariff and regulatory reforms related to the proposed project, (iii) assist the CPA in preparing a strategic plan for the Chittagong Container Terminal (CCT), and (iv) assist the CPA to comply with the milestones of the planned actions. For the MOC component, the scope of work was to (i) conduct an assessment of the performance of the three modes of transport (roads, railways and inland waterways) in the Corridor, (ii) conduct a comparative modal analysis of roads, railways and inland waterways, and (iii) recommend institutional, operational and infrastructural improvements and other changes to increase efficiency and competitiveness of the modes.</p> <p>Expected Impact, Outcome and Outputs</p> <p>The TA aimed to create positive impacts on the level of efficiency in future operations of the Port and of the logistics and transport of the Corridor through (i) reorganization of the CPA, (ii) development of the Port's Master Plan, (iii) introduction of institutional policy reforms to customs procedures, and (iv) development of a multimodal transport network for the Corridor. The anticipated outputs of the TA were complete plans for strategic reform of the CPA and CHC and improved efficiency of the Corridor.</p> <p>Delivery of Inputs and Conduct of Activities</p> <p>After a start-up delay of 21 months due to delays in Government's approval of the Technical Project Proposal, two international consulting firms, Kellogg Brown & Root Pty Ltd. (the CPA consultant) and Nathan Associates Inc. (the MOC consultant), were engaged to carry out the CPA and MOC components of the TA, respectively. The CPA consultant signed its contract on 8 June 2006 and mobilized on 21 June 2006, and the MOC consultant did the same on 20 June and 3 July 2006, respectively. The executing agencies provided the necessary documents and information, counterpart staff, and required logistical support to undertake the TA. ADB provided close supervision through regular review missions and correspondence. The consultants had the appropriate technical skills to carry out their assignments.</p>				

The Inception Report for the CPA component was submitted in July 2006. Two six-monthly reports were submitted in December 2006 and June 2007 before the final report was submitted in April 2008. The MOC consultant submitted its Inception Report in July 2006. Due to the short duration of the assignment, no mid-term report was prepared by the MOC consultant. The final report for the MOC component was submitted in April 2007.

Evaluation of Outputs and Achievement of Outcome

The consultants submitted the inception, mid-term and final reports as required. The CPA consultant worked with the CPA and port users in making assessments of the current situation and gave recommendations, which have resulted in major improvements in the CPA and CHC operations such as more efficient container berth management, labor management and payments, CHC procedures, port/berth security, removal of containers from the port area, and elimination of the Dock Workers Management Board. In its final report, the CPA consultant proposed a plan for strategic reform of the CPA and CHC that recommended reorganization of the CPA to become a regulator so all operations are contracted to the private sector, preparation of a Master Plan, improving the tariff system, and reform of the customs procedures. However, it was emphasized that the reform activities would be dependent upon the successful completion of the CPA's ongoing development project, the Chittagong Port Trade Facilitation Project (CPTFP). The MOC consultant prepared the final report based on field assessments, demand and traffic forecasts, analysis of shipper consignee requirements, and an assessment of freight forwarders and other logistics service providers. Various aspects of improvements in logistical systems, multimodal transport, and institutional, legal and policy were recommended in the report. Nevertheless, it should be noted that part of the outputs of the two consultants are overlapping, due to redundancy in some parts of the Terms of Reference (TOR). The planning departments of the CPA and MOC are aware of the overlaps in the recommendations and are sorting out respective institutional responsibilities.

Overall Assessment and Rating

The TA is rated partly successful. Even with the startup delay of 21 months and a revision of TORs for the CPA component requested by Government following the state of emergency in January 2007, the tasks were carried out to their completion with a high level of quality. The reports prepared by the consultants provide valuable information that provides a foundation for future improvement in efficiency of the Port's operation and transport logistics of the Corridor. In view of the above considerations, the overall objectives of the TA have been achieved despite the lengthy start up delays.

Major Lessons

Late signing of the TA, delayed submission of invoices, and revision of TORs requested by Government resulted in four extensions of the closing date. However, the CPA and its consultant took advantage of the strong support of the caretaker Government and managed to successfully complete several internal reform-related tasks such as improved container management, yard management and vessel management, as indicated by dramatic improvement in efficiency of the Port's operation in these areas. The TA thus illustrates a useful lesson that major progress can be achieved despite significant obstacles and start up delays if there is a strong political will to address institutional deficiencies and move forward with reforms. Further, to ensure that the progress achieved is sustained, close follow up of the performance of the CPA and CHC are needed as well as close monitoring of the progress of the CPTFP.

Recommendations and Follow-Up Actions

The "landlord concept" should be adopted for future management systems of the Port for which individual contractors operate the berths on a lease agreement while the CPA still owns the land. Reorganization of the CPA, which includes legal reform, personnel reviews and staff resizing as well as improving accounting and audit systems, is essential for it to become a landlord/regulatory institution. Preparation of the Master Plan for the next 15-20 years should take place immediately. The Port's tariff regime needs to be reviewed and improved within the new Master Plan. The customs procedures also need to be reformed to be consistent with the Port's new and more efficient operational processes. An inter-ministerial working group should be set up to provide coordination between various competing interests arising from the new organization.

A comprehensive transport network of three transport modes (roads, railways, and inland waterways) is necessary for the Corridor. Improvement and expansion of connector roads and railways to the Port, inland container depots in the Dhaka area, and inland waterway berths at the New Mooring Container Terminal are urgently needed. In the long term, Government needs to complete the existing four-lane Dhaka Chittagong Highway, Dhaka Bypass Road, Dhaka-Chittagong Expressway, and double tracking of the remaining single rail sections in the Corridor.

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In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

ASSESSMENT OF PROJECT IMPACTS AND BENEFITS

1. The principal objective of the project was to increase the capacity of Chittagong Port's container terminal, and enable Bangladesh to meet the international port security and environmental standards. The objective has been fully achieved. At appraisal it was estimated that the container traffic would grow at 6.4% on average per annum, and would reach about 1.04 million 20-foot equivalent units (TEUs) by 2013.¹ At actual, the container throughputs continued to grow at 10% on average per annum and reached 1.54 million TEUs in 2013. The yard capacity of Chittagong Container Port improved to 36,000 TEUs in December 2013 from 17,000 TEUs in 2005. In addition, the Chittagong Port Authority's (CPA's) annual bulk cargo handling capacity improved by about 46% to 37,805,605 tons in 2013 from 25,884,891 tons in 2005. Reduced vessel turnaround time and container dwell time in port, and improved average transit time of containers by rail substantially enhanced Chittagong Port's performance and capacity to handle international freight traffic. Based on the observed actual cargo throughput at Chittagong Port in 2013, the CPA expects container throughputs to grow to about 2.8 million TEUs by 2020, which is higher than the high-growth scenario of the container traffic projections made at appraisal. The details of the cargo throughput are in Appendix 4.

2. Greater private sector participation in the management of the port's day-to-day operations is an indicator of improved CPA performance. The handing over of the Chittagong Container Terminal's operations to a private sector entity in 2007, the increasing role of the 21 private inland container depots around the port in handling export containers, and the possible selection and engagement of a private sector operator to manage the New Mooring Container Terminal in the near future all indicate increased privatization of port operations.

3. Port users have benefited from the increased capacity and streamlined port operations that reduced the time required to load and unload vessels. The benefits mainly include time savings on the port side (for container ship owners) and quayside (for freight owners) as a result of the enhanced productivity of Chittagong Port. Port users have also benefited from a new port connector road, built under the Roads and Highways Department component of the project, which enables vehicles to bypass the center of congested Chittagong City.

4. One of the benefits of the container terminal management system and management information system is that billing time has been reduced by about 10 days from 22 days to 12 days. The management information system has also improved the operational efficiency of the CPA in a number of other areas, including berth allocation, yard operation, and facilities management. The CPA is now able to process important operational and financial information and make commercially oriented decisions based on the actual needs of users.

5. In the regional and subregional context, the improved capacity of Chittagong Port will catalyze an influx of export–import traffic from countries in the subregion—Bhutan, India, and Nepal—which have expressed interest in using the port. In the longer run, the improved port will supplement the proposed deep sea port, planned for construction at Kutubdia near Chittagong, by providing port services to the feeder vessels. This development may transform Chittagong into a hub for maritime freight traffic on the trans-Pacific and Indian Ocean routes. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) recognizes

¹ ADB. 2004. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant for the Chittagong Port Trade Facilitation Project*. Manila (Appendix 2, para. 22, Table A 2.3).

trade and investment as one of the priority sectors led by Bangladesh.² The initiative is expected to promote regional trade among the seven member countries and generate maritime international trade. The port of Chittagong, with its efficiency enhanced under the project, is expected to be well placed to cater to the increased demand for port services generated under BIMSTEC.

² BIMSTEC is an international organization involving a group of countries in South and Southeast Asia. These are: Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand. ADB has been BIMSTEC's development partner since 2005 to help promote and improve transport infrastructure and logistics among its members.

Economic Reevaluation

A General

1. Economic reevaluation was conducted for the with and without project cases using the data collected during the project completion report mission and reviewing the data used in appraisal. The capital cost of the project was adjusted to actual project capital costs at completion, and considered the assumed operation and maintenance cost at appraisal. The benefits were recalculated using the actual throughput between 2005 and 2011 and forecast throughput for future years. All parameters of the benefits were recalculated, checked, and updated. The evaluation was done assuming a 15-years economic life for the project facilities. The economic internal rate of return (EIRR), which was calculated using adjusted updated cost and benefit data, was 24.98%—higher than that at appraisal. The higher EIRR is caused by the overall reduction in capital cost, the higher growth of container traffic than that envisaged at appraisal, and enhanced efficiency of the port for container handling.

B Project Cost

2. The project cost consisted of three components: Chittagong Port Authority (CPA) components, Custom House of Chittagong (CHC) components, and Roads and Highways Department (RHD) components. The total cost of CPA components was estimated at Tk830.1 million (\$14.3 million equivalent), the total cost of the CHC components was Tk767.3 million (\$13.2 million equivalent), and total cost of the RHD components was Tk803.0 million (\$13.8 million equivalent). Thus, project cost was estimated Tk2400.4 million including foreign exchange components equivalent to \$41.3 million at appraisal (of which about 74% was foreign exchange and 26% was local currency cost). ADB was supposed to finance entire foreign currency part (\$30.6 million) of the project cost.

3. The actual project cost at completion was \$34.23 million equivalent, including a foreign currency cost of \$18.12 million and a local currency cost of \$16.11 million equivalent including the CHC component of procuring container scanners. The actual financial cost was 18% lower than envisaged. The procurement of four container scanners using the government's own funds of Tk420 million (\$6.4 million equivalent) may be considered as equity. The exchange rate fluctuation in favor of taka also contributed to lower the project cost at completion. The economic investment cost was calculated using a standard conversion factor.¹

C Operation and Maintenance Cost

4. The operation and maintenance cost of the project was estimated for fixed and variable operating costs based on estimates of annual accounting records and information provided by the CPA. The project maintenance cost included fixed costs for maintenance and repair of assets assuming 3% of capital cost for the first 5 years, 4% for the next 5 years, and 5% for the final 5 years. Fixed administrative and overhead charges were assumed at Tk300 million per annum excluding depreciation and 5% price escalation. Variable costs for container operation included labor and utilities, which were estimated at Tk3,480 per 20-foot equivalent unit (TEU) by the CPA.² All operation and maintenance costs were adjusted to economic costs by applying a conversion factor.

¹ The standard conversion factor was calculated based on Economic Relations Division Technical Note no. 11, 2004 ADB (TN11).

² The calculation was based on the assumption of Supplementary Appendix-I of the project preparatory TA study.

D Project Benefits

5. The project created two principal economic benefits: (i) a significant reduction in vessel turnaround time (this benefit accrued to vessels owners through savings from reduced vessel waiting times); and (ii) a significant reduction in the capital cost of cargo owners, shippers, and consignees due to the need to maintain less inventory and the quicker disposal of containers to shipping agencies. Benefits to vessel owners are accrued in two categories: benefits from normal traffic, and benefits from incremental traffic. 100% benefits from savings of waiting time of normal traffic and 50% benefits from savings of waiting time of incremental traffic are estimated as consumer surplus for vessel owners.

6. The benefits accruing from reduced container dwell time are computed for two main categories of cargo: readymade garments (textile items) and other general cargo (non-textile items). In case of garment items, the average value of cargo per TEU of container was assumed \$80,000 according to CPA statistics, while the average value of other cargo per TEU container was \$50,000. Assuming an opportunity cost of capital of 12%, a reduction of dwell time per day represents a benefit of \$26.30 for opportunity cost of working capital for exporters. All financial benefits were converted to economic benefits applying a standard conversion factor.

E Results of Economic Reevaluation

7. The recalculated EIRR was 24.98%, which is higher than the appraisal rate of 21.6% (Table A10). The net present value of the project at a discount rate of 12% was Tk4.76 billion compared with Tk3.6 billion at appraisal. Following appraisal, no separate evaluation was carried out for the individual components of the project. Instead, the entire project was reevaluated, considering the total impacts on two main items of benefits: vessel turnaround time saved and container dwell time saved.

F Risk and Sensitivity Analysis

8. The EIRR was subject to a sensitivity analysis to test the effects of possible unfavorable scenarios related to changes in key parameters. The analysis indicated that the project will continue to be economically viable under changed scenarios of increased capital cost and reduced container traffic. According to the analysis, a 10% increase in capital or other operating costs results in an EIRR of 18.24% and a net present value of Tk2.42 billion, while a 10% reduction of benefits yields an EIRR of 17.52% and a net present value of Tk1.93 billion. Therefore, it is reasonable to conclude that the economic risk of the project is zero.

Table A10. Project Resource Statement (mill. Tk.) including CHC Scanners

Year	Costs				benefits to vessels			benefits to cargo owners			Total Benefits	Net Economic benefits
	initial investment	Recurring Fixed Cost	Recurring variable cost	Total Cost	Normal Traffic	Incremental Traffic	Total benefits to vessel	Normal Traffic	incremental Traffic	Total benefit to cargo owners		
2006												
2007	421.7	130.7	1000	1552.4	420.99	54.11	475.10				475.095737	-1077.3
2008	261.22	66.6	1500	1827.8	574.76	58.29	633.06				633.055998	-1194.8
2009	695.2	348.7	2659.8	3703.7	592.12	70.65	662.77	1204.9	272.5	1477.4	2140.16977	-1563.5
2010	510.91	363.7	2830.1	3704.7	610.00	85.63	695.63	2134.9	392.1	2527	3222.63179	-482.1
2011	131.6	379.4	3011.2	3522.2	569.21	98.32	667.53	2508.5	540.2	3048.7	3716.23368	194.1
2012		396.0	3203.9	3599.9	586.40	119.17	705.57	3151.3	677.1	3828.4	4533.97182	934.1
2013		413.3	3409.0	3822.3	666.14	137.21	803.35	3546.2	850.9	4397.1	5200.45043	1378.2
2014		447.6	3627.1	4074.7	686.26	166.30	852.55	3954.0	1037.5	4991.5	5844.05409	1769.4
2015		466.7	3859.1	4325.8	706.98	201.55	873.28	4931.5	1178.4	6109.9	6983.17908	2657.4
2016		486.8	4106.3	4593.1	728.33	244.28	929.88	5376.1	1383	6759.1	7688.98476	3095.9
2017		507.9	4369.1	4877.0	750.33	296.07	994.61	5469.0	1602.5	7071.5	8066.10926	3189.1
2018		530.1	4648.7	5178.8	772.99	343.88	1069.06	5857.2	1838.8	7696.0	8765.05653	3586.3
2019		569.4	4946.2	5515.6	796.33	399.42	1140.22	5960.4	2090.1	8050.5	9190.71565	3675.1
2020		593.8	5262.8	5856.6	820.38	463.93	1219.80	6066.4	2360.3	8426.7	9646.50188	3789.9
2021		619.5	5599.6	6219.1	845.16	538.85	1309.08	6484.0	2649.8	9133.8	10442.8836	4223.8
2020.6	6320.2	54032.9	62373.7	10126.4	2738.8	13031.5	56644.4	16873.2	73517.6	86549.1	24175.4	
									NPV=	4,769.57		
									EIRR=	24.98%		
									BCR=	1.22		

BCR = benefit–cost ratio, CHC = Custom House of Chittagong, EIRR = economic internal rate of return, NPV = net present value, Tk = taka.

Financial Reevaluation

A. Financial Management, Accounting, and Audit

1. The Chittagong Port Authority (CPA) was established under Ordinance no. LII of 1976 by taking over the assets, liabilities, and operation of then Chittagong Port Trust. According to the provision, the CPA is a body incorporated as perpetual ongoing concern. The authority is a self-financing organization administered by the Ministry of Shipping. The functions of the CPA are to provide the port services, and to regulate and control berthing and movements of vessels and navigation within the port area.

2. The CPA has considerable independence under the ordinance in day-to-day operation, but the overall planning and financial control is exercised by the government through budgetary controls. Major capital expenditures and their financing must be approved by the government. Recruitment of staff and employees also requires government clearance. Tariffs and port dues are revised and set by the CPA, subject to government approval.

3. The CPA maintains its accounts as prescribed by the government, in accordance with Generally Accepted Accounting Principles, Bangladesh Accounting Standard, the CPA Ordinance 1976, and other applicable laws and regulations. Financial statements are prepared annually and submitted to the government. The accounts are audited by external auditors.

B. Financial Performance

4. The financial performance of the CPA is extremely good. The turnover on fixed assets has increased and the return on fixed assets has improved over the years because net fixed assets have not increased much. As a result, a huge amount of internally generated surplus funds have accumulated. As on 30 June 2012, the net surplus available for appropriation was Tk7.21 billion.

5. Operating revenue has grown more than 12% a year during 2006-2013. This high growth symbolizes increased overseas trade of imports and exports through Chittagong. The growth in operating expenses was estimated 6%–7% a year during 2006-2013. Consequently, operating ratios have decreased to 32% in 2012 from 47% in 2007. Returns on total assets remain in the 16%–19% range, which is satisfactory. The high profitability of the CPA is attributed to high interest income from bank deposit, as mentioned in the project appraisal documents. More than 40% of the operating income in 2012 came from interest on fixed deposits.

6. As on 30 June, 2012, 63% of the total assets of the CPA were bank deposits. Because of the large surplus and low level of external debt, the debt service ratio is very high, as shown in the Supplementary Appendix I of the project appraisal documents. No critical issue in financial performance was identified by the auditors.

C. Financial Forecast

7. The financial forecast was made by the consultants during project preparation in 2004 based on port performance, estimated capital and operating expenses, forecast growth in traffic, and the projected level of fixed assets investment. At project completion, most of the assumptions hold true, and in some cases actual performance surpasses the projected figure.

For example, operating revenue was forecast to be Tk8.34 billion in 2008, but actual performance was Tk10.27 billion—33% higher than predicted.

8. The operating revenue increased by more than 12% during 2006-2013 and is expected to continue to rise after project completion. But the appraisal assumption of 10% was retained in the recalculation. The fixed assets replacement assumed at appraisal found relevant to CPA's investment plan.

9. Debt service obligation will not be a problem for the project as the CPA is so financially solvent that it has huge accumulated savings in bank deposits. Moreover, the projected containerized traffic has already reached end year traffic and revenue stream is growing more than expenditures.

D. Project Financial Performance

10. The financial reevaluation of the project considered the following factors (i) past performance in CPA (Supplementary Appendix I of the appraisal documents) where actual performance up to 2003 was presented, (ii) actual capital expenditure incurred including government investment in the CHC procuring four scanners and estimated operating expenses, (iii) forecast growth of container tariffs, (iv) projections for incremental revenue streams for the project based on forecast incremental traffic using the equipment and computer system, (v) current rates of traffic reviewed, (vi) analysis made for 15 years of economic life, and (vii) a residual value of 10% was considered with a 2-year delay in project implementation.

11. The financial internal rate of return was 16.4%, which is less than the appraisal estimate of 18.0% (Table A11). This is due to delays in project implementation. The financial net present value is Tk880.59 million, while the benefit–cost ratio is 1.08. The project demonstrates financial viability and the generation of sufficient cash flow internally to support incremental operation costs.

Table A11. Finanacial Analysis (mill. Tk.)										
Year	Costs				Revenue from vessels			Revenue Income from container cargos	Total Benefits	Net Financial benefits
	initial invest ment	Recurrin g Fixed Cost	Recurring varibale cost	Total Cost	Normal Traffic	Increment al Traffic	Total benefits to vessel	Incremental Traffic		
2007										
2008	762.0	348.7	1000	2321.8	110.10	9.67	119.76	0.00	0.00	-2321.8
2009	1208.3	363.7	1500	3379.2	112.30	11.60	123.90	0.00	0.00	-3379.2
2010	611.0	379.4	2659.8	4015.2	114.54	13.92	128.47	5079.77	5208.23	1193.0
2011	395.0	396	2830.1	3983.2	116.83	16.71	133.54	5207.67	5341.21	1358.0
2012		413.3	3011.2	3767.0	119.17	20.05	139.22	5330.19	5469.40	1702.5
2013		447.6	3203.9	4016.7	121.55	24.06	145.61	5447.10	5592.71	1576.1
2014		466.7	3409.0	4263.3	123.98	28.87	152.85	5551.13	5703.98	1440.7
2015		486.8	3627.1	4525.3	126.46	34.64	161.11	5641.86	5802.97	1277.7
2016		507.9	3859.1	4803.7	128.99	41.57	170.57	5733.29	5903.86	1100.2
2017		530.1	4106.3	5100.0	131.57	49.89	181.46	5832.71	6014.16	914.1
2018		569.4	4369.1	5432.4	134.21	59.86	194.07	5931.89	6125.95	693.6
2019		593.8	4648.7	5766.8	136.89	68.84	205.73	6032.96	6238.69	471.9
2020		619.5	4946.2	6122.3	139.63	79.17	218.80	6141.24	6360.04	237.8
2021		568.44	5262.8	6414.4	142.42	91.04	233.46	6244.04	6477.51	63.1
2022	213.66	568.44	5599.6	7019.9	145.27	104.70	249.97	6354.15	6604.12	-415.8
	3190.0	7259.8	54032.9	70930.9	1903.9	654.6	2558.5	74528.0	76842.8	880.6
									NPV=	880.59
									IRR=	16.40%
									BCR=	1.08

BCR = benefit–cost ratio, IRR = internal rate of return, NPV = net present value, Tk = taka.