ADB

Completion Report

Project Number: 32467
Loan Number: 1771
December 2010

Bangladesh: Chittagong Hill Tracts Rural Development Project

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit – taka (Tk)

		At Appraisal (2 October 2000)	At Project Completion (22 February 2010)
Tk1.00	=	$0.0196	$0.01
$1.00	=	Tk53.83	Tk68.52

ABBREVIATIONS

ADB	–	Asian Development Bank
CDC	–	community development committee
CHT	–	Chittagong hill tracts
CHTRC	–	Chittagong Hill Tracts Regional Council
Danida	–	Danish International Development Agency
DPP	–	development project proposal
HDC	–	hill district council
km	–	kilometer
LGED	–	Local Government Engineering Department
MOCHTA	–	Ministry of Chittagong Hill Tracts Affairs
NGO	–	nongovernment organization
NPSC	–	national project steering committee
O&M	–	operation and maintenance
PKSF	–	Palli Karma Shahayak Foundation
PMU	–	project management unit
RCC	–	regional coordination committee
RRP	–	report and recommendation of the president
TOT	–	training of trainers
UNDP	–	United Nations Development Programme

NOTES

(i) The fiscal year (FY) of the government of Bangladesh and its agencies ends on 30 June. ~~F~~FY" before a calendar year denotes the year in which the fiscal year ends, e.g. FY2009 ends on June 2009.

(ii) In this report, ~~$~~" refers to US dollars.

Vice-President	X. Zhao, Operations 1
Director General	S. H. Rahman, South Asia Department (SARD)
Country Director	T. Kandiah, Country Director, Bangladesh Resident Mission (BRM), SARD
Team leader	M. Subroto, Senior Country Specialist, BRM, SARD
Team members	Md. R. Islam, Senior Project Implementation Officer, BRM, SARD
	Md. L. A. Khan, Project Analyst, BRM, SARD

CONTENTS

.

BASIC DATA
(Loan 1771-BAN [SF])

A. Loan Identification

1.	Country	Bangladesh
2.	Loan Number	1771-BAN (SF)
3.	Project Title	Chittagong Hill Tracts Rural Development Project
4.	Borrower	People's Republic of Bangladesh
5.	Executing Agency	Ministry of Chittagong Hill Tracts Affairs
6.	Amount of Loan	SDR23,251,000 ($30 million)
7.	Project Completion Report Number	PCR: BAN-1210

B. Loan Data

1.	Appraisal	
	– Date Started	03 July 2000
	– Date Completed	14 July 2000
2.	Loan Negotiations	
	– Date Started	21–23 September 2000 (Manila)
	– Date Completed	28 September 2000 (Dhaka)
3.	Date of Board Approval	26 October 2000
4.	Date of Loan Agreement	18 December 2000
5.	Date of Loan Effectiveness	
	– In Loan Agreement	18 March 2001
	– Actual	24 October 2002
	– Number of Extensions	4
6.	Closing Date	
	– In Loan Agreement	30 September 2008
	– Actual	22 February 2010
	– Number of Extensions	1
7.	Terms of Loan	
	– Interest Rate	1% per year during the grace period and 1.5% per year during the amortization period
	– Maturity (number of years)	32
	– Grace Period (number of years)	8

8. Disbursements

a. Dates

Initial Disbursement	Final Disbursement	Time Interval
16 December 2002	21 October 2009	82 months
Effective Date	**Original Closing Date**	**Time Interval**
24 October 2002	30 September 2008	71 months

b. Amount

Category No. and Description		Unit	Original Allocation	Last Revised Allocation	Net Amount Available	Amount Disbursed	Undisbursed Balance
01A	Civil Works–Roads and Bridges	$	11,919,487.33	18,423,458.00	17,873,560.64	17,873,560.64	549,897.36
		SDR	9,238,000.00	11,800,000.00	11,758,236.35	11,758,236.35	251,366.82
01B	Civil Works–Community Development	$	6,060,384.50	5,308,454.00	5,081,450.67	5,081,450.67	227,003.33
		SDR	4,697,000.00	3,400,000.00	3,306,131.73	3,306,131.73	103,766.83
2	Vehicles and Equipment	$	1,090,275.69	1,092,917.00	961,817.43	961,817.43	131,099.57
		SDR	845,000.00	700,000.00	668,668.60	668,668.60	59,927.70
3	Training	$	2,149,584.96	796,268.10	731,157.36	731,157.36	65,110.74
		SDR	1,666,000.00	510,000.00	478785.51	478,785.51	29,763.15
4	Design and Survey	$	159,993.12	234,196.50	191,282.98	191,282.98	42,913.52
		SDR	124,000.00	150,000.00	128,371.72	128,371.72	19,616.45
5	Operating Cost	$	2,010,236.12	1,249,048.00	1,130,655.77	1,130,655.77	118,392.23
		SDR	1,558,000.00	800,000.00	759,063.36	759,063.36	54,118.97
6	Consulting Services	$	4,130,144.94	4,194,135.66	3,012,626.24	3,012,626.24	1,181,509.42
		SDR	3,201,000.00	2,686,292.70	2,005,106.22	2,005,106.22	540,086.72
7	Interest Charges	$	1,010,279.13	1,222,505.73	480,423.53	480,423.53	742,082.20
		SDR	783,000.00	783,000.00	315,012.07	315,012.07	339,217.56
8	Unallocated	$	1,237,366.13				
		SDR	959,000.00				
9	Prior TA Financing	$	232,248.08	281,035.80	226,191.47	226,191.47	54,844.33
		SDR	180,000.00	180,000.00	166,982.73	166,982.73	25,070.21
	Total	**$**	**30,000,000.00**	**32,802,018.79**	**29,689,166.09**	**29,689,166.09**	**3,112,852.70**
		SDR	**23,251,000.00**	**21,009,292.70**	**19,586,358.29**	**19,586,358.29**	**1,422,934.41**

SDR = special drawing rights, TA = technical assistance

Notes:

1. The difference between the original allocation and the revised total amount is due to the cancellation of loan proceeds and to the exchange-rate variation between the SDR and the US dollar.
2. An undisbursed loan amount of SDR 1,422,934.41 ($2,191,873.94) was canceled at the loan closing date of 22 February 2010. Another cancellation of SDR 2,241,707.30 ($3,500,000.02) was made on 12 January 2010. In total, SDR3,664,641.71 ($5,691,873.96) of the loan was canceled.

9. Local Costs (Financed)		Appraisal	Actual
-	Amount ($ million)	21.70	21.54
-	Percentage of Local Cost	44.02	64.96
-	Percentage of Total Cost	35.99	52.14

C. Project Data

1. Project Cost ($ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	11.00	8.15
Local Currency Cost	49.30	33.16
Total	**60.30**	**41.31**

2. Financing Plan ($ million)

Cost	Appraisal Estimate (Total)			Actual		
	Foreign	Local	Total	Foreign	Local	Total
Implementation Costs						
ADB-Financed	7.29	21.70	28.99	7.67	21.54	29.21
Danida[a]	2.70	12.30	15.00	0.00	0.00	0.00
PKSF[b]	0.00	3.60	3.60	0.00	2.65	2.65
Beneficiaries[b]	0.00	2.60	2.60	0.00	0.52	0.52
Government	0.00	9.10	9.10	0.00	8.45	8.45
Total	**9.99**	**49.30**	**59.29**	**7.67**	**33.16**	**40.83**
IDC Costs						
ADB-Financed	1.01	0.00	1.01	0.48	0.00	0.48
Government-Financed	0.00	0.00	0.00	0.00	0.00	0.00
Total	**11.00**	**49.30**	**60.30**	**8.15**	**33.16**	**41.31**

ADB = Asian Development Bank, Danida = Danish International Development Agency, IDC = interest during construction, PKSF = Palli Karma Shahayak Foundation

[a] Danida eventually withdrew funding.

[b] Average exchange rate of $1=Tk68.52.

3. Cost Breakdown, by Project Component ($ million)

Component	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Base Cost						
1. Upgrading of Rural Infrastructure	4.96	24.08	29.04	3.99	19.75	23.74
2. Community Development	0.78	8.05	8.83	0.73	7.06	7.79
3. Microfinance	0.00	5.20	5.20	0.00	2.65	2.65
4. Project Management	2.88	4.39	7.27	2.72	3.93	6.65
Subtotal (A)	**8.62**	**41.72**	**50.34**	**7.44**	**33.39**	**40.83**
B. Contingencies						
1. Physical	0.47	2.58	3.05			
2. Price	0.93	4.97	5.90			
Subtotal (B)	**1.40**	**7.55**	**8.95**			
C. Interest Charges	**1.01**	**0.00**	**1.01**	**0.48**	**0.00**	**0.48**
Total	**11.03**	**49.27**	**60.30**	**7.92**	**33.39**	**41.31**

4. Project Schedule

Item	Appraisal Estimate	Actual
A. Rural Infrastructure		
-Start	24 Jan 2002	28 Jul 2002
-Completion	23 Oct 2009	30 Sep 2009
B. Community Development		
-Start	24 Apr 2003	13 Oct 2005
-Completion	24 Apr 2008	30 Jun 2009
C. Microfinance Activities		
-Start	24 Oct 2003	1 Apr 2005
-Completion	23 Sep 2008	30 Jun 2009

D. Project Management

-Start	24 Oct 2002	1 Dec 2002
-Completion	23 Oct 2008	30 ep 2009

E. Other Milestones:

1. 4 Mar 2003: Project administration memorandum finalized
2. 20 Mar 2003: 18-member national project steering committee under CHTA minister formed by MOCHTA
3. 5–7 Jul 2003: Contract negotiations held with consultants (Small and Medium Enterprises Consortium)
4. 14 Sep 2003: First steering committee meeting held in MOCHTA
5. 19 Oct 2003: Second regional coordination committee meeting held in Rangamati
6. 19 Mar 2005: Fourth regional coordination committee meeting held in Rangamati
7. 10 Aug 2006: 2nd National Project Steering Committee held in the MOCHTA
8. 13 Dec 2004: Participatory workshop on micro-credit component held in Rangamati
9. 11 Feb 2007: Seventh regional coordination committee meeting held in Rangamati
10. 25 Sep 2008: National project steering committee meeting held in MOCHTA
11. 10 Jun 2009: National project steering committee meeting held in MOCHTA
12. 5 Feb 2008: Loan closing date extended by 12 months, from 30 Sep 2008 to 30 Sep 2009
13. 12 Jan 2010: Unused loan amount of SDR3,664,641.71 ($3,500,000.02) canceled and loan proceeds reallocated
14. 22 Feb 2010: Loan account closed and surplus loan amount of SDR1,422,934.41 ($2,191,873.94) canceled

MOCHTA = Ministry of Chittagong Hill Tract Affairs, SDR = special drawing rights

5. Project Performance Report Ratings

	Rating	
Implementation Period	**Development Objectives**	**Implementation Progress**
24 Oct 2002–31 Dec 2002	Satisfactory	Satisfactory
1 Jan 2003–31 Dec 2003	Satisfactory	Satisfactory
1 Jan 2004–31 Dec 2004	Satisfactory	Satisfactory
1 Jan 2005–31 Dec 2005	Satisfactory	Satisfactory
1 Jan 2006–31 Dec 2006	Satisfactory	Satisfactory
1 Jan 2007–31 Dec 2007	Satisfactory	Satisfactory
1 Jan 2008–31 Dec 2008	Satisfactory	Satisfactory
1 Jan 2009–22 Feb 2010	Satisfactory	Satisfactory

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members[a]
Project Consultation	19–30 Apr 2000	3	33	a, b, c
Appraisal	3–14 Jul 2000	5	75	a, b, c, d, e
Loan Inception	24 Feb–1 Mar 2003	3	18	a, f, g
Special Project Administration	29-30 Aug 2001 18-22 Mar 2004	2	00	d, f
Review	3–9 Jun 2004	2	14	a, f
Special Review	2–9 Dec 2004	2	16	d, f
Project Review	17–31 Jul 2005	2	18	c, f
Midterm Review	23–26 Jan 2006	5	20	b, d, f, g, h
Project Review	19–29 Mar 2007	1	11	f
Project Review	11–12 Nov 2007	2	4	b, f
Safeguard Review	10-20 Nov 2007	1	11	i

Operations Evaluation	8–14 Jul 2008	1	5	i
Project Review	17–28 Dec 2008	3	22	f, g
Project Review	11–17 May 2009	4	18	f, g, j, k
Project Completion	20 Jul–6 Aug 2010	4	25	e, f, g, j

[a] a = rural development specialist, b = social development and gender specialist, c = project implementation/management specialist, d = consulting services specialist/staff consultant, e = staff consultant, f = project implementation officer, g = project analyst, h = head portfolio management unit, i = principal evaluation specialist, j = country specialist, k = young professional

I. PROJECT DESCRIPTION

1. In October 2000, the Asian Development Bank (ADB) approved a loan for the Chittagong Hill Tracts Rural Development Project.[1] The project covered all three districts of the Chittagong Hill Tracts (CHT) region of Bangladesh—Khagrachhari, Rangamati, and Bandarban. Its primary objective was to reduce the incidence of absolute poverty among the rural population by developing basic physical infrastructure and expanding income and employment opportunities that would substantially raise the standard of living of landless and marginal farmers (para. 38, report and recommendation of the President [RRP] [footnote 1]). The updated project framework with the achievements of the project is in Appendix 1.

2. **Brief background**. ADB started preparing the project in 1999, 2 years after the CHT Peace Accord was signed, opening the way for development after more than 25 years of insurgency and instability in the CHT region. The executing agency was the new Ministry of Chittagong Hill Tracts Affairs (MOCHTA). The implementing agency was the CHT Regional Council (CHTRC) supported by the three hill district councils (HDCs); the Local Government Engineering Department (LGED) of the Ministry of Local Government, Rural Development and Cooperatives; the community development committees (CDCs) from all 111 unions in the three districts; and the Palli Karma Shahayak Foundation (PKSF). Then in February 2001, 4 months after the project was approved, expatriate engineers of the Danish International Development Agency (Danida) were kidnapped in the CHT. Although they were released 1 month later, the United Nations Development Programme (UNDP)[2] advised the development partners to suspend all activities in the region. UNDP led a security assessment mission (including ADB and the Danish Embassy) to the region in May–June 2002, and later that year declared it safe to resume development activities. However, partly because of the incident, Danida had unilaterally canceled its commitment to cofinance the rural access component in Khagrachhari district ($15 million). During project implementation, kidnapping and extortion against development workers and civil works contractors continued. Civil works, especially large contracts, slowed down as a result. In February 2010, when the project completion review mission was to be conducted, violent clashes between ethnic groups, especially in Khagrachhari, resulted in two deaths and injuries to hundreds. The United Nations Department of Safety and Security advised against development partner missions to the CHT for around 2 months after that.

3. The project had four major components (para. 39, RRP [footnote 1]): (i) rehabilitation and upgrading of feeder roads[3] and rural roads[4] (including bridges and culverts, and road safety structures); (ii) community development, to fill gaps in community-based small economic and social infrastructure and improve the socioeconomic condition of the people; (iii) microenterprise development, to build the capacity of local nongovernment organizations (NGOs) to provide efficient and cost-effective microfinance services that would generate income and saving opportunities for the poor; and (iv) project management support, to strengthen the capacity of the executing and implementing agencies with logistic facilities, including human resources and consulting services.

---

[1] ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the People's Republic of Bangladesh for the Chittagong Hill Tracts Rural Development Project*. Manila (Loan 1077-BAN [SF]).

[2] The UN Department of Safety and Security did not yet exist at that time.

[3] Connecting *upazila* (subdistrict) headquarters to growth centers, one growth center to another, or growth centers to the high road system (national highways, regional highways, and upazila roads).

[4] Connecting union headquarters to *upazila* headquarters, growth centers, or local markets, or to each other.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

4. The project was the first development initiative in the CHT since the signing of the Peace Accord in 1997. Access to remote rural areas in the region was poor because of the hilly terrain, the lack of rural communication facilities, the very slow pace of development during the prolonged insurgency, and the high incidence of poverty among the landless and marginal rural population. The project laid the foundations for confidence building and for rural and socioeconomic development in the CHT.

5. Consistent with the rural development strategy and objectives in the government's Fifth Five-Year Plan (1995–2000), the project concentrated on helping the least developed and most underserved areas like the CHT, on reducing poverty by improving rural infrastructure and income-generating opportunities, on empowering women by giving them better access to productive resources, and on involving community and local government institutions in the planning and implementation of local development projects (paras. 19–20, RRP [footnote 1]).

6. The project design was highly relevant to ADB's country operational strategy for Bangladesh[5] and the overall strategic objective of poverty reduction. These strategies sustained the project approaches—confidence building, community leadership and participation in rural infrastructure development and microenterprise lending, productivity raising among the rural poor, and access to economic and social resources for women and landless and marginal farmers. The key emphasis was on developing the countryside and helping to rectify the highly skewed income distribution by providing rural roads, small irrigation systems, and crop production and agro-business credit and microfinance facilities. The project approaches were also in step with the measures identified in ADB's country operational strategy and its partnership agreement with Bangladesh for poverty reduction.[6] The project stayed relevant during the project period.

7. The project design used the findings of the ADB evaluation study of completed projects in Bangladesh,[7] the lessons learned, and community feedback, which brought out the importance of institutional strengthening (of executing agencies, regional and district entities, and beneficiary groups and communities), the early participation of beneficiaries in design and implementation and in operation and maintenance (O&M), in-depth sector analysis, for the location of the project management team within the project area, and flexibility in project design and implementation to suit local needs.

B. Project Output

8. The overall project output, compared with the appraisal estimates, was satisfactory. A summary is given below, and details are in Appendix 2.

---

[5] ADB. 1999. *Country Operational Strategy: Bangladesh, 2000-2005*. Manila (August).
[6] ADB. 2000. *Partnership Agreement on Poverty Reduction: Bangladesh.* Manila (April).
[7] ADB. 1998. *Evaluation Study: Impact of Bank Project Preparatory Technical Assistance on the Agriculture Sector in Bangladesh*. Manila (December).

1. Component 1: Rehabilitation and Upgrading of Rural Infrastructure

9. **Improvement of feeder roads.** The project improved 55.9 kilometers (km) of feeder roads (*upazila* [subdistrict] roads)—25.5% below the originally plan,[8] and 19.2% below the revised target in the second development project proposal (DPP).[9] The 1,391 meters of bridges and culverts constructed along the feeder roads, on the other hand, exceeded the original target by 73.7% but were 7% below the revised target in the second DPP. The increase in the total length of constructed bridges and culverts beyond the original estimate was due to underestimation during project preparation for lack of information about road connectivity. Details of progress are in Appendix 2, Tables A2.1–A2.3.

10. **Improvement of rural roads**. The project also improved 196.5 km of rural roads (union roads). This total was 44.0% less than the original estimate because of the withdrawal of funding by Danida, and 1.8 % less than the revised estimate. However, the 2,982 meters of bridges and culverts constructed along the rural roads slightly exceeded the revised target in the second DPP. Details of progress are in Appendix 2, Tables A2.4–A2.5. The feeder and rural roads were selected through a participatory process of consultation led by LGED and involving the departments concerned, the three HDCs, road users, and community leaders. The selection was based on criteria such as overall plans for rural infrastructure development in the CHT, priorities, the estimated cost of rehabilitation and upgrading, and available funds.

11. **Road safety structures along feeder roads and rural roads.** In addition to bridges and culverts, road safety structures such as L-shaped side drains, retaining walls on steep sides, guideposts, and kilometer posts were also built along the feeder and rural roads to protect the roads and preserve the life and property of road users. These other road safety structures were identified after the roads to be rehabilitated or upgraded were selected through a detailed survey and the road sections were designed. The number of additional road safety structures built was considerable. There was an increase of 371.7% over the original target for L-shaped drains, and of 156.5% over the target for retaining walls. On the other hand, 40.9% fewer guideposts and 17.6% fewer kilometer posts were built, compared with the original estimates. Details are in Appendix 2, Table A2.6.

12. The reduction in the extent of feeder roads and rural roads that were rehabilitated or upgraded was due to the lack of funds, particularly after Danida withdrew its funding for rural infrastructure in Khagrachhari district, and the increase in construction costs over the long implementation period.[10] Available funds had to be reallocated to cover all three districts instead of only two districts (Rangamati and Bandarban), and the scope of rehabilitation and upgrading had to be reduced. Moreover, the rising cost of construction materials and labor had considerably increased the costs of construction.[11]

13. **Operation and maintenance of rural infrastructure.** LGED, the implementing agency for the rehabilitation and upgrading of feeder roads and rural roads (including bridges, culverts,

[8] Because of Danida's withdrawal of funding (see para. 13).
[9] After the midterm review in 2006, the government revised its DPP, especially the scope of component 1 following the withdrawal of cofinancing. This second DPP also reallocated funds for component 1 to cover the three CHT districts (see para. 13). Otherwise, no major changes were made under the second DPP.
[10] Inflation averaged 5% yearly over the 8-year period, for a cumulative inflationary effect of 55% over the period.
[11] Reflecting the global rise in civil works construction costs. According to the government's Public Works Department, an unusual hike in the prices of construction materials in Bangladesh in 2007 and 2008 forced the government to revise the cost of materials twice by an average of about 30% each time.

and road safety infrastructure), is responsible for their O&M. But, for a year after completing each structure, the contractors carried out O&M as part of their contract obligations. LGED took over the responsibility in the second year. Funds for the O&M of feeder roads and rural roads all over the country, including the roads built under the project, come from annual revenue budgets. LGED has enough budget for O&M. Its budgetary allocation for the O&M of rural infrastructure over the last 20 years is summarized in Appendix 2, Table A2.7 and Figure A2.1. The road infrastructure built under the project is in generally satisfactory condition.

14. **Environmental impact, land acquisition, and resettlement**. A review of land acquisition under the project, carried out by the project completion review mission with LGED and the project management unit (PMU), confirmed that no land was acquired under the project except for voluntary donations. The mission also confirmed that all voluntary donations were discussed and agreed on in public meetings that included the donors of the land. Official proceedings of the firm commitment of the land donors, closing the door on future claims, were documented by LGED.[12]

2. Component 2: Community Development

15. **Social mobilization**. Community development guidelines were prepared with the participation of stakeholders and distributed to everyone concerned to give them a common and full understanding of the purpose and scope of community development. The guidelines were discussed at length at various levels and finalized at the regional coordination committee meeting in July 2007. The guidelines were considered an effective tool for community development and have been used by MOCHTA, CHTRC, HDCs, the PMU, CDCs, beneficiary groups, participating NGOs, and others.

16. Six CHT-based NGOs[13] (two for each of the three project districts) were hired to assist the HDCs in implementing the community development component and to act as community facilitators. At the start, the people in the communities were not so interested in the community development activities and had to be briefed and motivated. The NGOs identified potential members, including women from different socioeconomic and ethnic groups, according to the community development guidelines. The NGOs helped the communities to form CDCs, each one with nine to 11 members, including women.[14]

17. In all, 111 CDCs—one in each of the 111 unions of the CHT—were formed (34 in Khagrachhari, 48 in Rangamati, and 29 in Bandarban). The CDCs, with the help of the NGOs, carried out social mobilization activities in the communities. They distribute information about the project and its objectives (especially the community development component, and the role of the community and its responsibility to contribute to the community investment fund), identified and selected subproject facilities, cooperated in and supervised the implementation of the selected subprojects, and formed beneficiary groups for the sustainable maintenance of the

[12] Some instances of alleged nonpayment of compensation that were noted by the midterm review mission for the project preparatory TA for the Second Chittagong Hill Tracts Rural Development Project (TA 7432-BAN) in September 2010 were referred to LGED for further investigation and resolution. The project authorities will formulate and implement an action plan with a budget and time frame to address outstanding land acquisition issues, if any, in consultation with BRM.

[13] The six partner NGOs were: Trinamul Unnayan Sangstha and Pajureco for Khagrachhari district, IMDO and Hille-hilli Development Foundation for Rangamati district, and Toymu and Eco-Development for Bandarban district.

[14] At the union level, the CDCs identified, selected, and monitored the implementation and maintenance of the subprojects, while the technical officers of the NGOs assisted in the preparation of design and cost estimates and implementation. The project engineers reviewed and improved the design and cost estimates.

facilities. The NGOs provided community development training to the beneficiaries and others involved in the community development component.

18. **Subproject implementation**. In accordance with the RRP (footnote 1), the project provided block grants of about $70,000 equivalent per union for the establishment of community-based and community-managed small community infrastructure. The infrastructure comprised economic sector infrastructure (mini-irrigation and mini-agriculture schemes, solar panels, small markets, etc.) and social sector infrastructure (village health posts, community water and sanitation schemes, literacy centers, community centers, etc.). These subprojects were implemented with equity participation (10%) from the community through participatory planning, implementation, and O&M of the infrastructure. Details of the economic and social sector infrastructure established under the project are in Appendix 2, Tables A2.8–A2.11.

19. The community development subprojects consisted of 1,242 (61%) economic sector infrastructure and 798 (39%) social sector infrastructure facilities. Beneficiaries in general gave higher priority to economic than to social sector subprojects. However, economic sector structures made up a much lower proportion of the subprojects in Bandarban (33.3%) than in Rangamati (71.7%) and Khagrachhari (67.0%), as arable land in Bandarban is limited. On the other hand, social sector structures made up a much higher share of the subprojects in Bandarban (66.7%) than in Rangamati (28.3%) and Khagrachhari (33.0%).

20. **Subproject operation and maintenance**. The subproject facilities are operated and maintained by the beneficiary groups in the communities. The CDCs are responsible for ensuring the proper O&M of the facilities, and the HDCs for monitoring O&M through the CDCs. The CDCs established maintenance funds by charging for the recurrent O&M cost of the subprojects. The O&M of the economic sector subprojects is functioning relatively better than the O&M of the social sector infrastructure, the funds for which the CDCs had difficulty setting up. In many cases, the HDCs have not been able to effectively monitor implementation and extend the necessary technical and financial assistance to the CDCs because of inadequate resources and expertise.

3. Component 3: Microenterprise Development

21. **Microenterprise loan operation**. Microfinance was intended to generate additional income for the rural poor, especially the women, through livelihood activities. This component was implemented by PKSF through three local NGOs who served as intermediary to provide microenterprise development services. The partner NGOs organized 3,100 training courses (with a total of 60,000 participants), registered 6,000 members for savings and credit organizations and groups, and disbursed 50,000 credit packages with credit funds available through PKSF. The beneficiaries were selected with the help of one national NGO (Padakhep) and two local NGOs (CIPD and ALO). The NGOs trained the microfinance beneficiaries adequately in community development and microfinance to improve their skills and capacity to operate on-farm and off-farm microenterprises. The beneficiaries had access to variable amounts of loans (which started at Tk 4,000). The loans carried 12%–12.5% interest and were payable in 45 weeks with an initial grace period of generally 2 weeks. In all, 19,792 beneficiaries received microfinance in 1,697 credit groups up to June 2009. Details of the loan portfolios and the number of beneficiaries are in Appendix 2, Tables A2.12–A2.13.

4. Component 4: Project Management Support

22. **Training of trainers.** The purpose of the training of trainers (TOT) was to develop trainers in the implementation agencies to train the target beneficiaries of the project, including poor and disadvantaged indigenous people, landless laborers, marginal farmers, and poor women. A professional training agency was expected to conduct the TOT, but because a suitable training agency could not be found in the CHT, the PMU, with the help of 20 field staff of line departments such as the Department of Agriculture and Livestock, did the training. Only 16 TOT courses (three each in Khagrachhari and Bandarban, and 10 in Rangamati) were conducted, compared with the 100 courses originally planned. The participants, after completing the TOT, joined in beneficiary training as resource persons. Details are in Appendix 2, Table A2.14.

23. **Training of beneficiaries by partner NGOs and line agencies.** Through partner NGOs, the project built the capacity of target beneficiaries to pursue income-generating activities and increase their income. In all, 3,291 beneficiary training courses (including training in 17 livelihood trades) were conducted by partner NGOs at the union level in the three districts. Field staff of line departments served as resource persons and also established links with the communities. Details are in Appendix 2, Table A2.15.

24. **Training of beneficiaries by community development NGOs.** Six community development partner NGOs (para. 17) trained 21,464 beneficiaries (39% female and 87% from indigenous groups) in 1,059 beneficiary training sessions, compared with the 1,132 sessions originally planned. The training focused on the development of skills and building of capacity to start and successfully operate small, community-based income-generating activities.[15] Details are in Appendix 2, Table 2.16.

25. **Training of beneficiaries by microfinance NGOs.** Three microfinance partner NGOs (para. 21) trained 43,705 beneficiaries (98% female and 50% from indigenous groups) in 2,232 training sessions, compared with the 46,640 beneficiaries and 3,080 sessions on microfinance activities.[16] Only 72.5% of the planned training was carried out, as the three microfinance partner NGOs could cover only 68 of the 111 unions of the CHT. The participants in the microfinance training were generally members of microfinance groups who later secured microfinance loans from the NGOs and invested in microenterprises. Details are in Appendix 2, Tables A2.17–A2.18.

B. Project Cost

26. At appraisal, the project was estimated to cost $60.30 million equivalent—$11.03 million in foreign exchange ($8.30 million from ADB and $2.70 million from Danida) and $49.27 million in local currency. The actual expenditure was $41.31 million, comprising $8.15 million in foreign exchange and $33.16 million equivalent in local currency. With Danida's withdrawal from the project, the entire foreign exchange component of $8.15 million was financed by ADB. The government contributed $8.45 million in local currency, compared with the $9.10 million

[15] Major topics covered by the training were: rearing of domestic animals, management of fruit gardening, horticulture development, women leadership and empowerment, cultivation of ginger and turmeric, management of subprojects, homestead vegetable gardening, fish production, and cultivation of high-yielding-variety rice.

[16] As reported in ADB. 2009. *Completion Report: Chittagong Hill Tracts Rural Development Project in Bangladesh.* Manila.

envisaged at appraisal. The beneficiaries contributed $0.52 million equivalent under the community development component. The cost of the project was 32% lower than planned because of several factors such as the withdrawal of Danida funding, the realization of savings from exchange-rate fluctuations[17] and from the reduced scope of work, and the economic design and lower-cost implementation of the project.

C. Disbursements

27. Loan disbursements totaled $29.69 million (SDR19.59 million) equivalent. The project established an imprest account with a ceiling of $2.00 million, and $9.05 million equivalent was disbursed through the account through the statement-of-expenditure procedure. The average turnover ratio was 3.25. The imprest account was liquidated before loan closing. The flow of funds from ADB, both through the imprest account and through direct payment, was smooth, as was the disbursal of counterpart funds from the government. However, disbursements were very much slower (by 11%) in the first 4 years (2001–2002 to 2004–2005) than in the last 4 years, and 26% of all disbursements were made in the last year of the project (2009). The breakdown of disbursements, by category, is in the Basic Data section of this report (B8), and annual disbursements are summarized in Appendix 2, Table A2.19 and Figure A2.2.

D. Project Schedule

28. The loan agreement was signed on 18 December 2000, but the loan became effective only on 24 October 2002 (instead of 18 March 2001, as in the loan agreement) because of (i) the uncertain security situation in the CHT after the kidnapping of three Danida consultants, and (ii) the withdrawal of Danida cofinancing, a condition of loan effectiveness (see also para. 2). Later, the fielding of consultants was also delayed for nearly 1.5 years by the lengthy consultant recruitment process, which required some reevaluation. Physical completion was on 30 June 2009 (in accordance with the extension most recently agreed on) and the loan closed on 22 February 2010 (instead of 30 September 2008). All components were implemented and all activities completed by the extended closing date. However, the withdrawal of Danida funding made it impossible to rehabilitate or upgrade a number of rural infrastructure facilities.

29. Some activities took longer to implement than foreseen because of unexpected delays, especially at the start of implementation. The delays were due to the late recruitment of consultants (by the newly created executing and implementing agencies; see para. 2), poor communication, seasonal factors in the CHT for civil works construction, law-and-order uncertainties, the inexperience of agencies and NGOs, and other factors. Finally (in 2007–2009), project implementation accelerated and partly made up for the initial delays so that all activities were completed by the extended closing date. The actual and appraisal implementation schedules are compared in detail in Appendix 3.

E. Implementation Arrangements

30. Implementation was too optimistically structured and scheduled at appraisal. As mentioned in para. 2, all the executing and implementing agencies of the government for the project had just been created when the project was approved, yet no major changes were made in the implementation arrangements. The CHTRC was to implement the project through a PMU in Rangamati and a liaison office in Dhaka, and with the support of the three HDCs, LGED, the

[17] $1 = Tk53.83 at appraisal and $1 = Tk68.52 at closing.

CDCs, and PKSF. The PMU was directly responsible for project administration, monitoring, fund management, recruitment of staff and consultants and participating NGOs, procurement of equipment and vehicles, and reporting. It also assisted LGED in implementing the rural infrastructure facilities, and the three HDCs and participating NGOs in implementing the community development component, including training and microfinance. In addition, O&M was a responsibility of LGED where rural infrastructure was concerned, and of the three HDCs (through the CDCs) when it came to the community development subprojects. On the other hand, sustainable microfinance lending to beneficiaries during and after the project was a responsibility of the microfinance NGOs.

31. The national project steering committee (NPSC) was chaired by the minister (nominee) of the MOCHTA and had the following members: representatives from CHTRC, the Ministry of Finance, the Ministry of Local Government, Rural Development and Cooperatives, the Ministry of Agriculture, Fisheries and Livestock, the Ministry of Women's and Children's Affairs, the Planning Commission, LGED, and field-level local government (CHT circle chief), as well as the project director. The NPSC met nine times during the project. A regional coordination committee (RCC) under the CHTRC chair was also formed. Its members were made up of the three HDC chairpersons, the project director, the three circle chiefs, an LGED representative, and representatives from participating NGOs. The RCC met up to 10 times during the project. Both the NPSC and the RCC performed well and contributed to the satisfactory implementation of the project.

F. Conditions and Covenants

32. At the time of the project completion review mission, the loan covenants had mostly been fully met and complied with. However, two covenants had been dropped in accordance with the second DPP (covenant 15 regarding the establishment of a liaison office in Dhaka, and covenant 21 related to reporting to identify issues in preparation for the project review in years 2 and 4), and two had been only partially complied with (covenant 31 regarding the interest rate that NGOs were to charge sub-borrowers, and covenant 17 related to the coordination of development partners' activities in the CHT). For more details see para. 49 and the list of covenants in Appendix 4.

G. Consultant Recruitment and Procurement

33. Three international and ten national consultants were recruited to provide project implementation and management support from May 2005 to July 2009. Only 277 person-months of consulting services were used, compared with the 317 person-months originally estimated. Despite being restricted in their movements for security reasons (particularly the international consultants), the consulting team provided useful and effective services, which proved to be instrumental in the successful implementation of the project. The status of utilization of consulting services is summarized in Appendix 5.

34. The consultants were selected and hired in accordance with government procedures and ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). Procurement conformed to government rules and ADB's Procurement Guidelines (2010, as amended from time to time). The services of civil works contractors, and vehicles and office equipment, were procured through local competitive bidding. However, there were delays in the recruitment of consultants, the selection of civil works contractors, and the procurement of vehicles, as shown in the chart in Appendix 3.

H. Performance of Consultants, Contractors, and Suppliers

35. The performance of the consultants was generally *satisfactory*. Given the insufficient experience of the CHTRC and the three HDCs in project management and implementation, especially in the first few years, the consultants had an important role in assisting the PMU and other implementing agencies in successfully implementing the project. The performance of most of the civil works contractors was generally *satisfactory*. Construction works were delayed by the seasonality factor and by insurgency. Most areas in the CHT are unsuitable for civil works construction for many months in the year because of waterlogging, excessive rainfall, erosion, and inaccessibility. Civil works construction was also delayed by the insufficiency of labor, especially skilled local labor for construction. The performance of the suppliers of goods and services was generally *good*. Considering their limited experience and capacity for technical works, the partner NGOs provided generally good services, which were conducive to the successful completion of the project.

I. Performance of the Borrower and the Executing Agency

36. The performance of the borrower, the Government of Bangladesh, was *satisfactory*. The government paved the way for the development of the CHT by signing the Peace Accord and linking project implementation to its stated commitment in the Peace Accord to develop the CHT. During project preparation the government attached high priority to CHT development through supportive policy, generous counterpart funding, and monitoring and coordination of project implementation. During implementation the government disbursed counterpart funds promptly, and provided institutional support when needed. The government also deserves appreciation for supporting project efforts to build the capacity of local NGOs and contractors and create employment for local labor through the project. However, the government could have kept other donors from duplicating the project activities and affecting their sustainability, particularly with regard to the community development and microenterprise components (see para. 50).

37. The performance of MOCHTA as executing agency was generally *satisfactory*. Despite insufficient experience and resources, the newly established ministry successfully implemented the project and effectively coordinated and monitored implementation, including the activities of the consultants. The performance of CHTRC (the implementing agency), LGED, and the other participating agencies, such as the three HDCs and the NGOs, was also generally *satisfactory* and helpful in the implementation of the project by MOCHTA.

J. Performance of the Asian Development Bank

38. ADB performed its project administration duties *satisfactorily*, responding and acting promptly, particularly with respect to approvals and disbursements. ADB also effectively monitored the project from headquarters and from the Bangladesh Resident Mission (BRM).[18] During the annual review of project implementation, ADB closely coordinated and consulted with other development partners involved in rural development in Bangladesh in general and in the development of the CHT in particular. ADB and BRM faced and solved many operating problems during implementation, and fielded up to 15 missions, including review and special loan administration missions, to monitor progress and assist the government, MOCHTA, and CHTRC in project implementation. BRM received an award from ADB Management for being the most efficient in project administration shortly after project completion in late 2009.

[18] The project was delegated to the Bangladesh Resident Mission in February 2005.

III. EVALUATION OF PERFORMANCE

A. Relevance

39. The design of the project was *highly relevant* to the project objectives of poverty reduction through the development of basic infrastructure and the creation of more income and employment opportunities through skill development and microfinance. Against the backdrop of pervasive absolute poverty in the CHT, the inaccessibility of the region and its poor communication network, and the lack of development initiatives during more than two decades of insurgency, the project was a boon to the millions of rural poor people in the CHT, especially the indigenous people, who generally live in remote areas. Better access to economic resources through improved road networks reduced the incidence of poverty, and community-based skill training and microfinance opened up income and employment opportunities. Details are in Appendix 7.

40. After the midterm review in 2006, a few minor operational changes were made in the project design but not in the overall scope of the project. These changes included the redistribution among the three districts of funds allocated for the rehabilitation and upgrading of rural infrastructure due to the withdrawal of Danida funding, and the selection of feeder roads and rural roads for rehabilitation and upgrading. Neither the relevance of the project design nor the achievement of the project goals and objectives was affected by the changes.

B. Effectiveness in Achieving Outcome

41. The project design was *effective* in achieving its intended outcomes. It made health and education facilities more accessible to remote communities by rehabilitating and upgrading feeder roads and rural roads. It also established interconnectivity by building bridges and culverts. The improved all-weather roads gave the rural population access to growth-center markets and links to the urban markets and big cities. As a result, people in remote communities got fairer prices for their produce and were encouraged, by lower transport costs and easier access to markets, to grow more crops and raise more livestock. The road improvements also unclogged drainage and cleaned up the environment, and the roadside drainage, retaining walls, guideposts, and kilometer posts made road travel substantially safer for everyone.

42. The project design was effective in the social mobilization of scattered rural communities and increased their ability to identify, select, establish, and operate 2,040 need-based economic and social sector subprojects. These communities were motivated enough to make voluntary contributions to establish their subprojects.

43. The project effectively introduced a microfinance system[19] among the rural poor women, landless laborers, marginal farmers, and ethnic groups, including *jhum* (hillside shifting cultivation) cultivators. The beneficiary farmers were trained to run profitable on-farm and off-farm enterprises sustainably with the help of microfinance. The 19,792 people who were introduced to the system comprised both indigenous and nonindigenous poor and disadvantaged people who previously lacked access to livelihood funds. They used the microfinance loans for small businesses, livestock rearing, homestead gardening, ginger and turmeric cultivation, fruit gardening, and other on-farm and off-farm livelihood activities, and considerably increased their household income. Details are in Appendix 7.

[19] Micro credit and microfinance are generally less popular in the CHT than in the plain districts.

C. Efficiency in Achieving Outcome and Output

44. Project implementation was *efficient.* All activities (as revised) in all four components were completed by the extended closing date despite the withdrawal of funds by Danida and the implementation challenges posed by poor access, unfavorable seasonal conditions, and the lack of skilled technicians and local laborers for civil works construction in the CHT. MOCHTA and the related agencies were efficient in implementing all the components, including the community development subprojects, with the funds originally allocated and the savings from exchange-rate fluctuations and cost-effective design.

45. The project, as designed and implemented, was highly efficient in realizing economic returns on investment. The project investments in road infrastructure, community development, and microfinance were efficient and rewarding. A reevaluation of the economic internal rate of return (EIRR) of the project, using vehicle operating cost savings and agriculture production surpluses from the rural infrastructure and the economic sector community development subprojects, indicates high economic returns. The overall project EIRR is 16.1%, compared with the appraisal estimate of 11.9%. The economic analysis suggests high returns on investment, and therefore the long-term sustainability of the project and its output. (The economic reevaluation is in Appendix 7.) Major (revised) activities in all components were implemented only in the last 4 years of the project, after initial delays, and did not have enough time to yield optimum output and outcomes. Full development and optimum output and outcomes are expected after the gestation period, ensuring still higher economic returns on investment.

D. Preliminary Assessment of Sustainability

46. The *highly satisfactory* project output and outcomes at completion justify expectations of an average economic life of about 20 years for the subprojects, provided that they are routinely and periodically maintained. LGED is institutionally capable of ensuring the sustainable O&M of the rehabilitated and upgraded feeder roads and rural roads, including bridges and culverts and other road structures, with funding from the government. The average growth in public funds allocated for O&M is 18% per year—a much higher rate than the average increase in rural roads maintained by LGED. The flow of funds should therefore be sustainable.

47. In the community development component, the beneficiaries' initial contributions to the implementation of subproject infrastructure established ownership of the facilities, and their participation in O&M should help ensure a long life for the facilities. The CDC members have had relatively adequate training in the O&M of the subprojects. However, the subprojects are not equally well maintained, partly because of the lack of funds for O&M and the institutional weaknesses of the CDCs. Further, while most of the economic development sector subprojects have generated O&M funds for their maintenance, the O&M of subprojects in the social development sector is inadequately funded in general. The project completion review mission obtained a spoken commitment from all three HDCs to monitor the O&M of the subprojects and to provide the necessary funds and technical support for proper O&M and sustainability.

48. A multilateral agency has been implementing a similar project in the CHT since 2004. The $50-million Promotion of Development and Confidence-Building in the Chittagong Hill Tracts Project, which is assisted by several multilateral and bilateral development partners, has four components: institutional capacity building, community empowerment, service delivery (health, education, economic development), and confidence building. Interviews with beneficiaries revealed that implementing two or more major projects with similar interventions

and input but different modalities in the same area and for the same target population is confusing and counterproductive. The larger sums in the form of grants provided on easy terms by the other project diminished beneficiary interest in assistance from the ADB project. The sustainability of the community development and microfinance components of the ADB project may therefore be affected until and unless the multilateral agency stops providing grants.

49. The design and implementation of the project attached high importance to the sustainability of all components. The key to the sustainability of the infrastructure is increased ownership by stakeholders, who made contributions during implementation, and share responsibility for O&M. The project successfully involved all stakeholders in the O&M of infrastructure. While LGED is responsible for the O&M of the feeder roads and rural roads, including the bridges and culverts and other infrastructure, the CDCs and HDCs are responsible for the O&M of the community development subprojects. The participating microfinance NGOs and PKSF are responsible for microfinance operations, including recovery. Overall, the long terms sustainability of the Project is ensured due to higher EIRR re-estimated during the project completion review mission (see para. 45 and Appendix 7).

E. Impact

50. The project, by meeting its goals, purposes, and intended output, had a significant impact on poverty reduction, the economy, institutions, the environment, and social development and health (see updated project framework in Appendix 1). The rehabilitation and upgrading of feeder roads and rural roads and the construction of bridges and culverts and other structures increased employment opportunities in construction, O&M, and new enterprises. The rural poor, including disadvantaged women and the landless, received opportunities to plant and tend trees, and to be employed in road construction and maintenance. They became empowered through training in road construction and maintenance, in community development and microfinance, in the O&M of subprojects, and in the operation of small enterprises with microfinance loans, and earned income from the subprojects. Details are in Appendix 7.

51. The project contributed significantly to the improvement and growth of the local economy. Agricultural production increased as access to technology improved and entry to larger markets raised the prices of agricultural produce. The areas covered by the rehabilitated and upgraded roads thrived. New private institutions and enterprises, such as schools, clinics, agricultural and other processing enterprises, restaurants, and shops, sprang up around the roads. Employment opportunities multiplied.

52. The improved roads and attendant structures enabled year-round, all-weather transportation and connected remote areas to schools, health facilities, and markets. School attendance increased, especially among the girls. Access to hospitals, clinics, doctors, pharmacies, and ambulatory services for critically ill patients improved general health, hygiene, and life expectancy. Local farmers were able to sell their produce, at higher prices, in a wider range of markets. There was a considerable increase in the number of vehicles and passengers on the roads. Travel time and cost and vehicle operating cost, in constant prices, were substantially reduced.

53. The new drainage structures also unblocked drainage, provided passage for fish, conserved plant and animal biodiversity, and thereby improved the environment. With the guideposts and meter posts, they promoted road safety and lessened the hazards from landslides that interfere with road connectivity during the heavy monsoon.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

54. The project, which was prepared only 2 years after the signing of the Peace Accord, was *highly relevant*, *effective* in achieving its outcome, and *efficient* in achieving its outcome and output, and is *very likely to be sustainable* (except perhaps for the microenterprise component if the grant project in the same area [para. 49] is extended). The project contributed positively to the efforts of the government and development partners to reestablish an enabling environment for confidence building after the signing of the Peace Accord. Further, the project provided significant support for poverty reduction by establishing all-weather rural roads, providing training for small, community-based economic and social sector development programs, and extending microfinance loans for on-farm and off-farm income-generating enterprises. The project is therefore rated *successful*.

55. The project was implemented as conceived with respect to design, targeting, construction, and monitoring, within the project period and without major risks or difficulties. However, the withdrawal of cofinancing made it necessary to reallocate ADB funds and reduce the scope of some infrastructure components (see para. 13). A similar project (community development) but using different modalities implemented in parallel in the CHT by a multilateral development partner has also had a negative effect on the implementation and sustainability of the ADB project (see para. 49).

B. Lessons

56. The project was initiated and prepared in 1999–2000, only 2 years after the signing of the Peace Accord, ending 25 years of insurgency and instability. Many high-risk incidents during project implementation could therefore be expected. The executing and implementing agencies had just been established, and their institutional capacity to implement projects was still being developed and strengthened.

57. The unilateral withdrawal of a relatively large amount of cofinancing by Danida (around 50% of the total amount allocated for the rural access component) after project approval considerably delayed implementation and created difficulties in meeting project objectives and targets. The cofinancing was unfortunately a condition of loan effectiveness. The project was declared effective in October 2002, after the cofinancing condition was declared void. The withdrawal of cofinancing coincided with UNDP's suspension of all missions to the CHT (2001–2002) due to the kidnapping of Danida experts, and project activities could start only in early 2003.

58. The improvement of connectivity and access between rural and remote areas of the CHT, especially with the market centers, was crucial for development. The project directly and indirectly affected all aspects of rural life in the CHT. During the project completion review mission and earlier missions, villagers asked whether more livelihood projects would be provided in their area.

59. When designing and implementing rural infrastructure in remote areas with indigenous populations as potential workers and beneficiaries, there must be a careful review of local habits and customs to understand how these can accommodate the common modalities of civil contracting. The original project schedule was too optimistic and did not leave enough time for

careful review and adjustment. In such a case, a component that does not suit the needs of a specific target population could leave that population unserved or bypassed. For example, *jhum* cultivators did not benefit much from the project components except from the improvements in rural access.

60. The rural roads improved under the project generally established all-weather connectivity between remote communities and growth-center markets and other important centers with economic, health, and educational facilities. NGOs and other government service providers could also reach rural remote inhabitants more easily.

61 The sustainability of several community development subprojects owned by beneficiary groups was considered an issue during implementation. However, except for a few specific technical support requirements, the beneficiary groups assumed responsibility for activities such as the maintenance of small irrigation and power tiller schemes. Besides, several group members also gained access to micro-credit through the project. PKSF or other NGOs may further expand their microenterprise activities in the CHT after the project.

62. Before the project, microfinance was nearly absent in the rural areas of the CHT. The project introduced a relatively sustainable microfinance arrangement through local NGOs. Despite the existence of the other project providing grant assistance, the microfinance facilities under the ADB project are gradually expanding to meet demand in remote communities.

C. Recommendations

1. Project-Related

63. The executing and implementing agencies must be proactive and more involved in project identification, coordination, and implementation. They must actively coordinate with and better plan development partner interventions in same geographic area, particularly for similar rural development activities. In the near future, these agencies must monitor more closely the combined impact of all community development subprojects and microfinancing activities in the CHT. Future development projects in CHT should also improve and strengthen further the institutional capacity of the local agencies and involve them in loan and project processing from the start, to promote ownership of, and commitment to, development activities in the region.

64. Because of the difficult terrain in the CHT, it was a great challenge in many places to design and construct roads and attendant structures. Allowance must be made for contract revisions. The construction of large bridges, particularly in the Kaptai Lake area, took substantially more the time than originally estimated. Project component packages should be designed separately for each target group, considering gender, poverty status, ethnicity, etc., so that all target populations are served.

65. The PMU should guide the procurement and contracting of goods and services for subprojects like the ones under the community development component, particularly the enlistment and payment of suppliers and service providers, to make sure that the goods and services are appropriate, are provided in the contracted quality and quantity, and come with after-sale support. Beneficiaries, on their own, generally find it difficult to choose and procure goods and services following stringent procurement procedures.

66. The government should pursue further programs to expand the connectivity of the completed rural infrastructure to important growth centers and communities with large populations. Further, it should provide additional assistance, especially assistance in sustainable O&M, to beneficiaries of selected community development components through the three HDCs.

67. For the planned follow-up project for the CHT, ADB looks forward to increasing rural connectivity in the region by including small and rural access roads, district roads, bridges and culverts (especially those not included in this project), and water resources utility development (see para. 13).

68. A project performance evaluation may be carried out in late 2011 when the impact and sustainability of all components can be properly assessed.

2. General

69. ADB should enter into a strict legal agreement with cofinanciers of development projects that every change in signed and approved cofinancing arrangements should be discussed and agreed on with the recipient government and other project financiers. Cofinancing should preferably not be withdrawn once a project has been approved and implementation has begun, since withdrawal would considerably delay project implementation (by forcing adjustments to compensate for the canceled funds) and heighten the risk that the main objective may not be properly achieved.

70. For areas like the CHT that have many indigenous people and other ethnic groupings with different traditions and habits, project design should be more specific and targeted to different beneficiary groups so that no target group is excluded. The three HDCs should be entrusted with more responsibility for monitoring community development and other interventions. There is also a need to strengthen the capacity of the three HDCs to develop, manage, monitor, and assist the CDCs.

71. ADB, the government, and other development partners should have more rigorous and participatory discussions with all stakeholders and potential beneficiaries about project design, including the project components and the roles and responsibilities of all implementing agencies, the implementation and monitoring framework, and performance target indicators.

UPDATED PROJECT FRAMEWORK

Design Summary	Performance Targets	Progress (June 2009)	Remarks
Sector Goals Reduced incidence of absolute poverty among the rural population of the CHT	Reduction in the number of poor people, estimated at 70% of the CHT rural population living below the food poverty line	CHT rural population living below the food poverty line reduced from 70% in 1999 to 62% in 2008	UNDP socioeconomic baseline survey of CHT (2008)
Purpose Improved incomes and employment opportunities for target beneficiaries, especially the tribal population and women	Increase in the income of a typical beneficiary by up to Tk10,000 within 5 years of entering the project	Annual income of majority of households in 1999: below Tk25,000; average annual household net income in 2008: Tk66,000 (Tk12,700 per capita) Increase in income of typical beneficiary observed from project activities: (i) Higher farm production, sold at higher price and reduced transportation cost (ii) More than one crop per year with irrigation facilities and increased cropland with farm machinery provided by CD subprojects (iii) Farmers managed microenterprises such as livestock rearing, homestead gardening	UNDP socioeconomic baseline survey of CHT (2008)
Improved effectiveness of local institutions responsible for rural development	Project implemented on schedule Increased responsiveness of local authorities to community needs Sustainability of community organizations Improved capacity of local institutions and NGOs	Project period extended to 2009 to make up for delay in the start of implementation Local authorities became more responsive to community needs during the project Beneficiary committees still carrying out their subproject O&M duties District line departments and NGOs improved their capacity through TOT and implementation of CD works and training of beneficiaries	

Project Components and Output **Upgrading and maintenance of rural roads** (i) feeder roads type B (ii) rural roads (iii) bridges and culverts required to complete route (iv) community organizations participate in priority and route setting (v) equipment procured, and rural road maintenance group established	Up to 75 km of feeder roads type B upgraded Up to 350 km of rural roads upgraded Up to 6,069 m of bridges and culverts built 426 km of roads and bridges maintained yearly by project completion Annual selection and review meetings between implementing agency and communities for each subproject	63 km of 5 feeder roads completed 193 km of 32 rural roads completed 4,428 m of bridges and culverts completed LGED maintained roads and bridges Completed	Extent of feeder and rural roads upgraded was reduced because of withdrawal of Danida and sharp escalation in prices of construction materials
Community development (i) NGOs strengthened and project selection processes established (ii) beneficiaries trained (iii) locally identified community projects operational (iv) institutional structure for O&M of project-financed facilities in place	Two NGOs in each district selected and strengthened NGOs with appropriate capacity recruited to provide community organizing services Block grants allocated per union council area Projects identified and implemented in each union council area Up to 280 training courses for up to 5,700 beneficiaries during project	Six CD NGOs—two for each district—selected and deployed Completed Block grants of $5.95 million allocated 2,040 subprojects in 111 unions completed 1,059 beneficiary training courses for more than 21,813 beneficiaries organized	Community development committees (CDCs) formed in 111 unions (48 in Rangamati, 34 in Khagrachan, 29 in Bandarban)
Expansion of income-generating activities (i) NGOs strengthened (ii) beneficiaries trained (iii) community-based MF institutions established (iv) agricultural intensification and diversification financed (v) nonfarm microenterprise development financed	Up to two NGOs in each district identified and strengthened Up to 3,080 training courses for up to 60,000 beneficiaries during project Up to 6,000 members of savings and credit organizations and credit groups Up to 50,000 credit packages disbursed	PKSF contracted three MF NGOs (Padakhep, ALO, and CIPD) 2,232 beneficiary training courses for 44,600 conducted by MF NGO in 68 unions Microcredit disbursed to 1,697 credit groups with 22,629 members of savings and credit organizations 85,745 credit packages disbursed	Padakhep and ALO for Rangamati, Padakhep and CIP for Khagrachhari and Padakhep for Bandarban Planned 3,080 training courses could not all be organized because ME activities operated in 67 unions only
Building of implementation capacity (i) capacity of local	Up to 100 training courses for trainers with up to 2,000 trainees	16 TOT courses with 307 trainees were organized	TOT courses were held for almost all competent officials of

government staff to identify and implement development interventions improved (ii) trainers trained (iii) PMU established	PMU operational by loan effectiveness date Consultants recruited within 2 months of loan effectiveness date	PMU operated Consultants mobilized in May 2004	line departments
Activities Development of physical infrastructure (i) detailed land and road use maps prepared (ii) routes and priorities prepared (a) annual participatory consultations with affected communities before the completion of work plans (b) incorporation of outcome of community discussions with mapping information to assign priorities for completion of work plans (c) presentation of and agreement on work plan with regional and district councils (iii) rural roads built (a) design finalized (b) feeder road class B (c) rural road class 1–3 (d) labor contracting societies organized (iv) bridges and culverts constructed (a) design finalized (b) labor contracting societies organized (v) maintenance: LGED to maintain all project-financed roads after the contractor's responsibility ends	Component base cost: $25.68 million 48 person-months of supervisory consulting services shared with construction activities Annual community participatory meetings	$23.40 million spent for RI component 37 person-months of supervisory consulting services shared with construction activities Completed	Five feeder roads and 32 rural roads completed
Community development (i) NGO capacity building (a) up to two NGOs in each district selected for capacity-building support (b) contracts negotiated with service providers for capacity-building training services (c) capacity building implemented, and contracts negotiated for provision of community organizing services	Block grants of about $70,000 per union area to finance local development initiatives; 111 union areas, $8.83 million base cost $0.41 million for community	Block grants of about $70,000 per union area for a total of $6.86 million for 111 union areas $0.36 million spent for community organizing services	NGO capacity-building training not provided 1,059 of planned 1,132 beneficiary training courses

(ii) NGO services: NGOs with community organizing capabilities selected and contracted to provide services to communities (iii) beneficiaries trained (a) training courses designed by project staff (b) service providers contracted (c) training program implemented (iv) union council multi-stakeholder project committees formed with assistance from contracted NGOs (v) project properties agreed on (vi) local contributions agreed on (vii) user charges set where appropriate (viii) designs prepared (ix) project constructed and maintained	organizing services $0.36 million for beneficiary training Base cost of about $70,000 per union council area over life of project	$0.29 million spent for beneficiary training About $70,000 spent per union council area	organized
Implementation of income-generating activities (i) NGO capacity building (a) up to two NGOs in each district selected for capacity-building support (b) contracts negotiated with service providers for capacity-building training services (c) capacity building implemented (d) registration with PKSF facilitated (ii) NGO services: NGOs with partner agreements with PKSF to establish MF operations in new areas where infrastructure development program is implemented (iii) on-farm sector (a) NGO funding proposal agreed on (b) communities mobilized and credit groups formed (c) training courses for beneficiaries designed and delivered (d) loans made for crop, livestock, fishery, and	$2.67 million line of credit; total component base cost of $3.51 million $0.84 million for beneficiary training $2.67 million line of credit for all enterprise types	$3.31 million line of credit; $2.67 million disbursed for MF component $0.53 million spent for 2,232 beneficiary training courses for 44,600 beneficiaries $2.67 million line of credit disbursed for all enterprise types	1,697 credit groups formed 85,745 loans for 22,629 members

forestry activities once capacity of groups is established (iv) microenterprise sector (a) NGO funding proposal agreed on with PKSF (b) communities mobilized and credit groups formed (c) loans made for craft and for other small business activities.			
Project management (i) establishment of PMU, district offices, and Dhaka liaison office (ii) appointment of project staff (iii) recruitment of consultants (iv) procurement of vehicles and equipment (v) training for executing agency staff (vi) training for PMU staff (vii) skill development for local agency staff (viii) training for local government and NGO staff (ix) project management (x) regular program of participatory workshops for key project executing and implementing agency staff in all districts (xi) reviews and studies	$7.00 million base cost 112 person-months (9.23 person-years) of international and 232 person-months (19.33 person-years) of national consulting services; $4.03 million base cost $0.03 million base cost $0.02 million base cost	$6.61 million for project management $3.08 million for 82.63 person-months of international consulting services and 193.09 person-months of national consulting services $0.02 million for training of local government and NGO staff $0.017 million for 47 participatory workshops for key project executing and implementing agency staff	Dhaka liaison office established in 2007
	Total base cost: $37.03 million Contingencies: $8.26 million Interest charges: $0.75 million Total project cost: $46.04 million	Total cost: $41.76 million Contingencies: $6.61 million Interest charges: $0.74 million	$1 = Tk69.06

CD = community development, CHT = Chittagong Hill Tracts, CDC = community development committee, Danida = Danish International Development Agency, km = kilometer, LGED = Local Government Engineering Department, m = meter, MF = microfinance, NGO = nongovernment agency, O&M = operation and maintenance, PMU = project management unit, PKSF = Palli Karma Shahayak Foundation, TOT = training of trainers, UNDP = United Nations Development Programme.

Source: Ministry of Chittagong Hill Tracts Affairs, Bangladesh. 2009. *Completion Report: Bangladesh Hill Tracts Rural Development Project.* Dhaka.

IMPLEMENTATION PERFORMANCE: PHYSICAL PROGRESS, APPRAISAL AND ACTUAL

A. PROGRESS OF REHABILITATION AND UPGRADING OF RURAL INFRASTRUCTURE

Table A2.1: Feeder (*Upazila*) Roads To Be Rehabilitated and Upgraded, Target and Actual

	Feeder Roads (km)			Bridges and Culverts along Feeder Roads (m)				
						Actual		
District	Original	Revised	Actual	Original	Revised	Total	Bridges	Culverts
Khagrachhari	20.00	12.40	12.42	153.0	397.00	274.00	190.00	84.00
Rangamati	35.00	43.00	29.11	378.00	934.00	947.00	741.00	206.00
Bandarban	20.00	13.80	14.40	270.00	169.00	170.00	94.00	76.00
Total	**75.00**	**69.20**	**55.93**	**801.00**	**1,500.00**	**1,391.00**	**1,025.00**	**366.00**

km = kilometer, m = meter
Source: Estimates by project management unit and ADB project completion review mission

Table A2.2: Feeder (Upazila) Roads Rehabilitated and Upgraded under the Project

District	Road	Length of Road (km)	Length of Structure (m)	Type of Pavement	Cost (Tk)
Rangamati	Jhagrabil–Rangamati via Baradom	18.38	796.00	BC/HBB	325,624,052
	Kawkhali HQ–Ghagra Bazar	7.73	49.85	BC	42,380,068
	Ghilachari GC–Burighat Bazar	3.00	101.15	BC	36,099,511
Khagrachhari	Khagracari–Mohalcari–Kamalchari–Betchari East Gamaridhala Datkuppya	12.42	274.00	BC	97,069,865
Bandarban	Khansamapara Begmara–Antapara–Rajosthali Border	14.40	170.00	BC	88,105,905
Total		**55.93**	**1,391.00**		**589,279,401**

BC = bitumen carpeting, HBB = herringbone bond, HQ = headquarters km = kilometer, m = meter
Source: Estimates by project management unit and ADB project completion review mission

Table A2.3: Bridges, Culverts, and Road Safety Structures Built along Feeder (*Upazila*) Roads

	Structures along Feeder Roads									House-holds along Roads
	Bridges		Culverts		Total B + C (m)	L-Drains (m)	Retaining Walls (m)	No. of Guide-posts	No. of Kilometer Posts	
District	No.	Meter	No.	Meter						
Rangamati	10	741.00	17	206.00	947.00	8,368	1,704.87	3300	34	4,273
Khagrachhari	4	190.00	20	84.00	274.00	1,166	117.00	0	0	5,600
Bandarban	4	94.00	21	76.00	170.00	6,410	394.00	0	0	1,710
Total	**18**	**1,025.00**	**58**	**366.00**	**1391.00**	**15,944**	**2,215.87**	**3,300**	**34**	**11,583**

B +C = bridges and culverts, km = kilometer, m = meter
Source: Estimates by project management unit and ADB project completion review mission

Table A2.4: Upgrading and Rehabilitation of Rural (Union) Roads, Target and Actual

	Rural Roads (km)			Bridges and Culverts along Rural Roads (m)				
						Actual		
District	Original	Revised	Actual	Original	Revised	Total	Bridges	Culverts
Khagrachhari	48.00	47.00	45.59	1,801.00	817.00	845.80	307.00	538.80
Rangamati	230.00	67.00	64.15	1,728.00	388.00	388.00	133.00	255.00
Bandarban	73.00	86.00	87.08	1,739.00	1,745.00	1,748.20	894.00	854.20
Total	**351.00**	**200.00**	**196.82**	**5,268.00**	**2,950.00**	**2,982.00**	**1,334.00**	**1,648.00**

km = kilometer, m = meter
Source: Estimates by project management unit and ADB project completion review mission

Table A2.5: Rural (Union) Roads Upgraded and Rehabilitated under the Project

Road	Length of Road (km)	Length of Structure (m)	Type of Pavement	Cost (Tk)
Rangamati District				
Bagachattar Union–Ghonomore	5.03	48.00	HBB	16,212,187
Bangalhalia R&H Road Point–Nalkachari	4.01	60.70	BC	20,814,605
Battali–Ugalcari	4.77	30.75	HBB	13,090,086
Belaichari HQ–Farua Bazar Road and Naniachar College	8.50	166.80	HBB	76,231,929
Banjogi Chara–Subholong Bazar	6.68	53.90	HBB	18,077,940
Betbunia Chayeri Bazar–Barmachari Bazar	7.98	107.75	HBB	55,729,631
Sapchari High School–Furamon Peak	7.67	307.30	HBB	31,611,915
Wagga Jr. High School–Sapchari	0.95	70.60	HBB	11,304,513
Subtotal (Rangamati)	**45.59**	**845.80**		**243,072,806**
Khagrachari District				
Jaliapara–Batnatoli	7.28	15.10	HBB	19,660,661
Manikchari Rajbari–Juiggyachola Bazar	7.72	26.70	BC	21,477,822
Puratan Bomal R&H–Choto Ramsira	6.38	49.50	BC	41,145,254
Dabalchari–Choto Pilac	5.92	47.10	HBB	32,114,201
Monghlapara–Bainayachala (D.P. Para)	11.76	125.90	BC	67,653,904
Changi (Monipur-Bonabihar R&H Road)–Tarabonchara	5.00	63.50	BC/HBB	19,488,473
Barapilac–Hatimura	7.32	18.50	HBB	30,013,228
Rasiknagar	2.40	2.00	HBB	11,201,574
R&H (Dewanpara)–Seondarpara	3.00	3.00	HBB	6,949,011
Tabalchari–Bhaggya Karbari–Dewanpara	2.19	26.80	HBB	7,135,290
Thana Bazar–Alamgirtila	5.18	9.90	BC	19,262,966
Subtotal (Khagrachari)	**64.15**	**388.00**		**276,102,384**
Bandarban District				
Amtoli	1.35	25.00	BC	7,298,395
Amtoli Rangpu–Headmanpara–Dochury	19.36	498.60	HBB	136,407,535
Balaghata–Bagmara	4.35	111.20	BC	51,268,226
Chakdala Bazar–Ashartoli BDR Camp	6.01	155.00	HBB	44,346,365
Chemidulaupara–Chemimukh	5.09	75.00	HBB	17,910,703
Hargass (Dulhazar–Sheoargara)	7.22	75.00	HBB	24,407,255
Holudia–Vagghaku	11.95	173.80	HBB	61,815,590
Kochubonia–Uttar Ghomdum	4.35	98.00	HBB	16,292,173
Lama Rupashipara	3.10	29.60	BC	10,729,859
Raicha Goalikhola	6.97	17.00	BC	19,680,606
Rowangchary-Gherao Road	7.69	170.00	HBB	67,604,776
Ruma Bandarban RH–Ruma Batali Pantala Gelanga	5.64	240.00	HBB	26,087,743
Sonaichari Jumiapara	4.00	80.00	HBB	22,951,586
Subtotal (Bandarban)	**87.08**	**1748.2.00**		**506,800,812**
Total (Project)	**196.47**	**2,982.10**		**1,025,976,002**

BC = bitumen carpeting, HBB = herringbone bond, BDR = Bangladesh Rifles, HQ=headquarters, km = kilometer, m = meter, R&H = roads and highways

Source: Estimates by project management unit and ADB project completion review mission

Table A2.6: Bridges, Culverts, and Road Safety Structures Built along Rural (Union) Roads

District	Structures along Union Roads									House-holds along Roads
	Bridges		Culverts		Total B + C (m)	L-Drains (m)	Retaining Walls (m)	No. of Guide-posts	No. of Kilo-meter Posts	
	No.	Length (m)	No.	Length (m)						
Rangamati	1	42.00	1	6.00	48.00	210	42	0	0	5,500
	0	0	23	60.70	60.70	1,070	30	0	0	2,190
	0	0	17	30.75	30.75	788	0	0	0	2,220
	1	130.00	1	36.80	166.80	2,902	298	300	9	736
	0	0	8	53.90	53.90	1,600	68	0-	0	1,585
	3	60.00	21	47.75	107.75	2,500	520	1,000	9	955
	1	30.00	3	277.30	307.30	3,060	401	0	0	468
	1	45.00	13	25.60	70.60	336	40	0	0	570
Subtotal	**7**	**307.00**	**87**	**538.8**	**845.80**	**12,466**	**1,399**	**1,300**	**18**	**14,224**
Khagrachhari	0	0	11	15.10	15.10	2,763	300	0	0	1,950
	1	20.10	4	6.60	26.70	1,473	135	0	0	2,050
	0	0	20	49.50	49.50	2,510	299	0	3	1,800
	0	0	16	47.10	47.10	3,560	20	0	3	860
	2	68.20	31	57.70	125.90	3,295	250	0	0	1,720
	1	45.10	9	18.40	63.50	1,041		0	0	1,068
	0	0	11	18.50	18.50	2,130	694	650	4	1,060
	0	0	1	2.00	2.00	837	103	0	0	922
	0	0	3	3.00	3.00	997	0	0	0	700
	0	0	6	26.80	26.80	833	0	0	0	1,700
	0	0	8	9.90	9.90	2,820	0	0	0	880
Subtotal	**4**	**133.40**	**120**	**254.60**	**388.00**	**22,259**	**1,801**	**650**	**10**	**14,710**
Bandarban	1	20.00	4	5.00	25.00	513	114	0	0	122
	7	320.00	35	178.60	498.60	7,200	625	0	0	5,400
	5	100.00	8	11.20	111.20	1,800	190	0	0	306
	5	120.00	9	35.00	155.00	1,850	170	0	0	1,100
	1	33.00	14	42.00	75.00	922	60	0	0	510
	0	0	15	75.00	75.00	2,332	207	0	0	260
	3	110.00	52	63.80	173.80	3,125	20	0	0	1,157
	2	57.00	15	41.00	98.00	415	14	0	0	2,200
	0	0	15	29.60	29.60	316		0	0	3,171
	0	0	12	17.00	17.00	620	255	0	0	967
	0	0	60	170.00	170.00	4,305	384	0	0	1,550
	3	98.00	9	142.00	240.00	1,739	107	0	0	110
	1	36.00	14	44.00	80.00	793	140	0	0	286
Subtotal	**28**	**894.00**	**262**	**854.20**	**1748.20**	**25,930**	**2,286**	0	0	**17,139**
Total	**39**	**1,334.40**	**469**	**1,647.60**	**2,982.00**	**60,655**	**5,486**	**1,950**	**28**	**46,073**

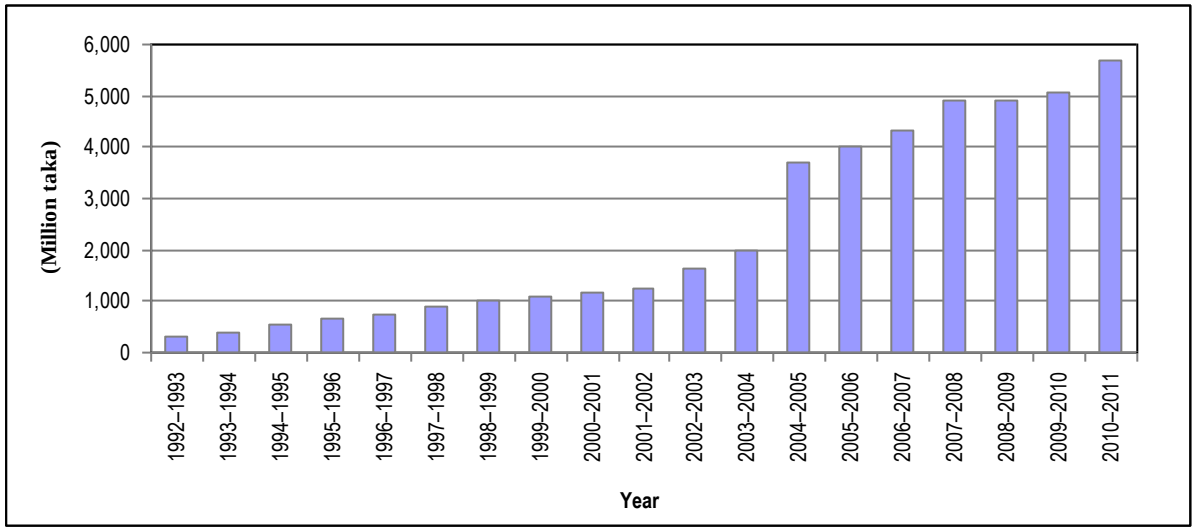
B+C = bridges and culverts, m = meter
Source: Estimates by project management unit and ADB project completion review mission

Table A2.7: Annual Government Allocation for Rural Road Maintenance, 1992–2011

Fiscal Year	Annual Allocation (Tk million)	Annual Increase	
		Amount of Increase (Tk million)	Percentage Increase
1992–1993	300		
1993–1994	400	100	30.00
1994–1995	550	150	40.00
1995–1996	650	100	20.00
1996–1997	750	100	20.00
1997–1998	900	150	20.00
1998–1999	1,020	120	10.00
1999–2000	1,100	80	10.00
2000–2001	1,180	80	8.00
2001–2002	1,250	70	6.00
2002–2003	1,640	390	32.00
2003–2004	2,000	360	22.00
2004–2005	3,700	1,700	85.00
2005–2006	4,000	300	9.00
2006–2007	4,310	290	8.00
2007–2008	4,900	590	14.00
2008–2009	4,900	0	0.00
2009–2010	5,080	180	4.00
2010–2011	5,700	620	13.00

Source: LGED

Figure A2.1: Growth in Annual Government Allocation for Rural Road Maintenance, 1992–2011



Source: LGED

B. PROGRESS OF IMPLEMENTATION OF COMMUNITY DEVELOPMENT FACILITIES, TARGET AND ACTUAL

Table A2.8: Summary of Community-Based Economic and Social Infrastructure Facilities

Sector Type	Subproject Type	No. of Subprojects Established			
		Khagrachari	Rangamati	Bandarban	Total
Economic infrastructure	Irrigation/Agriculture	452	629	161	1,242
Social infrastructure	Drinking water	186	113	117	416
	Education	23	65	88	176
	Road communication	6	46	89	141
	Others	8	25	32	65
Total		**675**	**878**	**487**	**2,040**

Source: Estimates by project management unit and ADB project completion review mission

Table A2.9: Number of Community Development Subprojects Established

District	*Upazila*	Economic Sectors	Social Sectors				Total
		Agriculture/ Irrigation	Drinking Water	Education	Road Communication	Social Infrastructure	
Rangamati	Rangamati	46	19	13	10	3	91
	Naniarchar	64	3	1	6	2	76
	Kaptai	59	15	10	5	3	92
	Barkal	76	2	8	6	4	96
	Belaichari	53	2	1	0	0	56
	Baghaichari	84	27	24	2	6	143
	Rajasthali	20	11	3	7	1	42
	Kawkhali	50	15	1	0	1	67
	Juraichari	61	5	4	3	3	76
	Longadu	116	14	0	7	2	139
Subtotal (Rangamati)		**629**	**113**	**65**	**46**	**25**	**878**
Khagrachari	Khagrachhari	52	33	1	1	1	88
	Panchari	43	24	6	2	0	75
	Dighinala	53	31	2	0	1	87
	Mahalchari	59	27	1	2	0	89
	Manikchari	29	21	0	0	0	50
	Laxmichar	53	2	13	1	4	73
	Matiranga	113	31	0	0	1	145
	Ramgar	50	17	0	0	1	68
Subtotal (Khagrachhari)		**452**	**186**	**23**	**6**	**8**	**675**
Bandarban	Bandarban	34	19	8	15	11	87
	Ruma	12	8	18	4	4	46
	Thanchi	6	6	18	7	3	40
	Rowangchari	23	10	7	13	5	58
	Naikhyongchari	16	36	7	27	6	92
	Lama	28	12	23	18	3	84
	Alikadam	42	26	7	5	0	80
Subtotal (Bandarban)		**161**	**117**	**88**	**89**	**32**	**487**
Total (Project)		**1,242**	**416**	**176**	**141**	**65**	**2,040**

Source: Estimates by project management unit and ADB project completion review mission

Table A2.10: Subproject Facilities Established and Beneficiary Households

Subproject Type	Facility	No. of Subprojects				No. of Beneficiary Households			
		Rangamati	Khagrachari	Bandarban	Total	Rangamati	Khagrachari	Bandarban	Total
Irrigation	Cross dam	92	182	88	362	2,181	10,133	2,825	15,139
	Irrigation drain	27	196	6	229	628	9,525	404	10,557
	Electric motor pump	3	7	2	12	57	341	46	444
	Pond	1	2	20	23	22	121	1,093	1,236
	Pump machine	1,412	203	40	1,652	17,068	3,481	833	21,382
Agriculture	Power tiller	684	193	32	912	7,445	4,461	833	12,739
	Paddy thresher	44	2	17	63	384	36	875	1,295
	Tarmac thresher	4	0	0	4	86	0	0	86
	Sprayer	238	6	20	266	1,021	116	147	1,284
	Subtotal	**2,505**	**794**	**222**	**30,521**	**28,892**	**28,214**	**7,056**	**64,162**
Drinking water	Ring well	73	1	67	141	1,248	80	1,619	2,947
	DSP tube well	72	31	6	109	346	367	88	801
	Shallow tube well	339	3,468	257	4,064	3,093	18,760	2,117	23,970
	GFS	9	0	25	34	92	0	596	688
	Subtotal	**493**	**3,500**	**355**	**4,348**	**4,779**	**19,207**	**4,420**	**28,406**
Education	School	70	23	63	156	2,186	11,204	3,183	16,573
	Hostel	8	1	20	29	542	0	1,256	1,798
	Library	0	1	0	1	0	80	0	80
	Subtotal	**78**	**25**	**83**	**186**	**2,728**	**11,284**	**4,439**	**18,451**
Roads/ Communi-cation	Footbridge	8	4	27	39	350	626	1,570	2,546
	RCC stair	6	1	14	21	440	45	498	983
	Katcha road	3	0	5	8	40	0	89	129
	HBB/BFS road	4	1	28	28	44	60	1,839	1,943
	U-culvert	0	0	10	10	0	0	239	239
	Retaining wall	6	0	5	11	143	0	68	211
	Engine boat	19	0	0	19	405	0	0	405
	Subtotal	**46**	**6**	**89**	**136**	**1,422**	**731**	**4,303**	**6,456**
Social infra-structure	Health center	7	0	45	52	291	0	2,770	3,061
	Community center	0	0	5	5	0	0	223	223
	Cyclone center	0	0	1	1	0	0	0	0
	Sewing machine	309	106	20	435	1,400	355	100	1,855
	Furniture	0	1	2	3	0	0	31	31
	Solar panel	0	0	3	3	32	0	81	113
	Small market	0	0	3	3	0	0	38	38
	Latrine	0	0	2	2	0	0	0	0
	Subtotal	**316**	**107**	**81**	**504**	**1,723**	**355**	**3,243**	**5,321**
Project Total		**3,438**	**4,432**	**830**	**8,695**	**39,544**	**59,791**	**23,461**	**122,796**

Source: Estimates by project management unit and ADB project completion review mission

Table A2.11: Number of Beneficiary Households Involved and Participants of Different Subprojects

Subproject Group	Rangamati			Khagrachhari			Bandarban			Total		
	Sub-projects	Households	Beneficiaries	Sub-projects	Households	Beneficiaries	Sub-projects	Households	Beneficiaries	Sub-projects	Households	Beneficiaries
Agriculture/ Irrigation	629	28,892	150,238	452	28,214	146,713	161	7,056	36,691	1242	64,162	333,642
Drinking water	113	4,779	24,891	186	19,207	99,876	117	4,420	22,984	416	28,406	147,711
Education	65	2,728	14,186	23	11,284	58,677	88	4,439	23,083	716	18,451	95,945
Roads/ Communi-cation	46	1,422	7,394	6	731	3,801	89	4,303	22,376	141	6,456	33,531
Social infra-structure	25	1,723	8,960	8	355	1,846	32	3,243	16,864	65	5,321	27,669
Total	**878**	**39,544**	**205,629**	**675**	**59,791**	**310,913**	**487**	**23,461**	**121,997**	**2,040**	**122,796**	**638,539**

Source: Estimates by project management unit and ADB project completion review mission

Table A2.12: Status of Microfinance Operations

Item	Rangamati	Khagrachhari	Bandarban	Total
Total credit groups (nos.)	687	669	341	1,697
Total borrowers (nos.)	6,855	8,849	4,088	19,792
Indigenous borrowers (nos.)	4,191	5,470	2,450	12,111
Non-indigenous borrowers (nos.)	2,664	3,379	1,638	7,681
Total loan for all livelihood portfolios (nos.)	33,079	35,634	17,032	85,745
Loans for livestock rearing	6,363	7,270	3,403	17,036
Loans for small business	14,748	15,242	7,663	37,653
Loans for homestead gardening	4,656	5,377	2,548	12,581
Loans for fruit gardening	1,707	2,078	878	4,663
Loans for ginger and turmeric production	3,090	3,517	1,696	8,303
Loans for other activities	2,565	2,150	844	5,559
Cumulative disbursement (Tk million)	250.31	269.99	119.35	639.65

Source: Estimates by project management unit and ADB project completion review mission

Table A2.13: Beneficiary Groups Served with Microenterprise Loans

District	No. of Upazilas	No. of Unions	No. of Loan Recipients		
			Male	Female	Total
Khagrachari	7	26	484	8,365	8,849
Rangamati	8	24	480	6,375	6,855
Bandarban	6	18	368	3,720	4,088
Total	**21**	**68**	**1,332**	**18,460**	**19,792**

Source: Estimates by project management unit and ADB project completion review mission

Table A2.14: Training of Trainers

District	Course	No. of Batches	No. of Days of Training per Batch	Total No. of Participants
Rangamati	Planning and project management	1	3	20
	Management and implementation of subprojects	1	3	15
	Horticulture development	1	4	21
	Slopping Agricultural Land Technology (SALT)	1	3	19
	Women leadership and empowerment	1	3	15
	Fish aquaculture	1	3	19
	Livestock development	1	3	20
	Crop production	1	3	20
	Crop production	1	3	20
	Livestock development	1	3	20
Khagrachari	Crop production	1	3	20
	Livestock development	1	3	20
	Crop production	1	3	20
Bandarban	Crop production	1	3	20
	Livestock development	1	3	18
	Livestock development	1	3	20
Total		**16**		**307**

Source: Estimates by project management unit and ADB project completion review mission

Table A2.15: Beneficiaries Trained Jointly by Project and Community Development NGOs

Course	Rangamati	Khagrachhari	Bandarban	Total
Cultivation of ginger and turmeric	116	97	81	294
Fruit garden management	108	109	81	298
Rearing of domestic animals	320	282	226	828
Cultivation of HYV rice	97	63	13	173
Women leadership and empowerment	60	19	40	119
Fish production	45	38	39	122
Horticulture development	105	74	59	238
Homestead vegetable gardening	136	158	98	392
Project management	41	31	22	94
Small business	171	150	155	506
Crop production	10	29	9	48
Fertilizer use and water management	25	49	18	92
Saving	1	29	2	32
Project design and costing	4	0	0	4
Home crafts	5	0	2	7
Power tiller operation	14	0	0	14
Mushroom cultivation	9	21	0	30
Total	**1,267**	**1,179**	**845**	**3,291**

HYV = high-yielding variety, NGO = nongovernment organization
Source: Estimates by project management unit and ADB project completion review mission

Table A2.16: Beneficiaries Trained in Community Development by Community Development NGOs, by Ethnicity and Gender

Ethnic Group	Rangamati	Khagrachhari	Bandarban	Total
Chakma	6,464	3,237	100	9,801
Marma	1,435	1,026	2,583	5,044
Tripura	51	932	975	1,958
Tangchangya	618	0	294	912
Pankhua	19	0	35	54
Bawm	0	0	310	310
Mro	0	0	429	429
Khyang	5	0	37	42
Chak	0	0	162	162
Bangali	751	955	1,014	2,720
Others	7	4	21	32
Total	**9,350**	**6,154**	**5,960**	**21,464**
Male	6,044	3,612	3,446	13,102
Female	3,306	2,542	2,514	8,362
% Female	35	41	42	39

Source: Estimates by project management unit and ADB project completion review mission

Table A2.17: Beneficiary Groups Trained by Microfinance NGOs in Microenterprise Activities

3. Course	Rangamati	Khagrachhari	Bandarban	Total
Cultivation of ginger and turmeric	58	73	60	191
Fruit garden management	58	83	25	166
Rearing of domestic animals	255	247	190	692
Cultivation of HYV rice	42	38	13	93
Women leadership and empowerment	10	0	0	10
Fish production	30	8	3	41
Horticulture development	47	48	28	123
Homestead vegetable gardening	95	125	75	295
Project management	0	0	0	0
Small business	157	176	150	483
Cultivation of spice crops	6	9	7	22
Fertilizer use and water management	25	18	8	51
Saving	1	29	0	30
Project design and costing	0	0	0	0
Home crafts	5	0	0	5
Power tiller operation	0	0	0	0
Mushroom cultivation	9	21	0	30
Total	**798**	**875**	**559**	**2,232**

Note: HYV=high yielding variety
Source: Estimates by project management unit and ADB project completion review mission

Table A2.18: Beneficiaries Trained in Microenterprises by Microfinance NGOs, by Ethnicity and Gender

Ethnic Group	Rangamati	Khagrachhari	Bandarban	Total
Chakma	6,357	5,836	44	12,237
Marma	1,250	1,516	3,961	6,717
Tripura	28	1,159	7	1,194
Tangchangya	650	0	539	1,189
Pankhua	0	0	0	0
Bawm	0	0	162	162
Mro	0	0	0	0
Khyang	0	0	373	373
Chak	0	0	27	27
Bangali	6,191	8,836	6,302	21,329
Others	242	158	77	477
Total	**14,708**	**17,505**	**11,492**	**43,705**
Male	495	0	156	651
Female	14,213	17,505	11,336	43,054
% Female	97	100	99	98

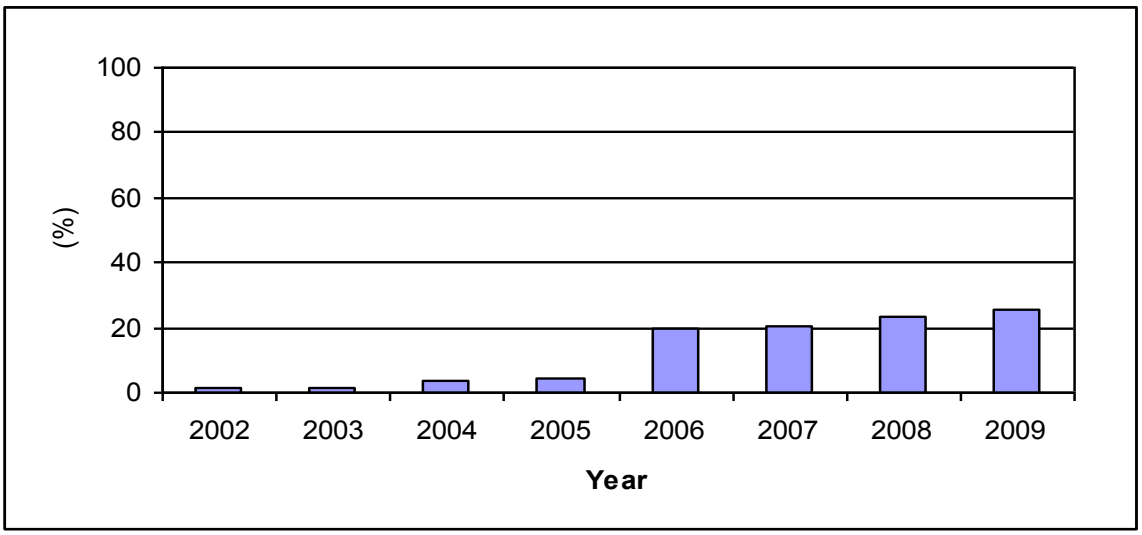
Source: Estimates by project management unit and ADB project completion review mission

Table A2.19: Annual Disbursements

Year	Amount		% Disbursement
	SDR	$	
2002	372,717.11	500,000.00	1.68
2003	309,604.18	431,393.16	1.46
2004	723,804.02	1,085,193.19	3.66
2005	862,440.88	1,277,014.14	4.30
2006	3,915,475.89	5,758,213.59	19.39
2007	3,939,833.26	6,032,449.35	20.32
2008	4,480,728.53	7,010,245.88	23.61
2009	4,981,754.42	7,594,657.58	25.58
Total	**19,586,358.29**	**29,689,166.89**	**100.00**

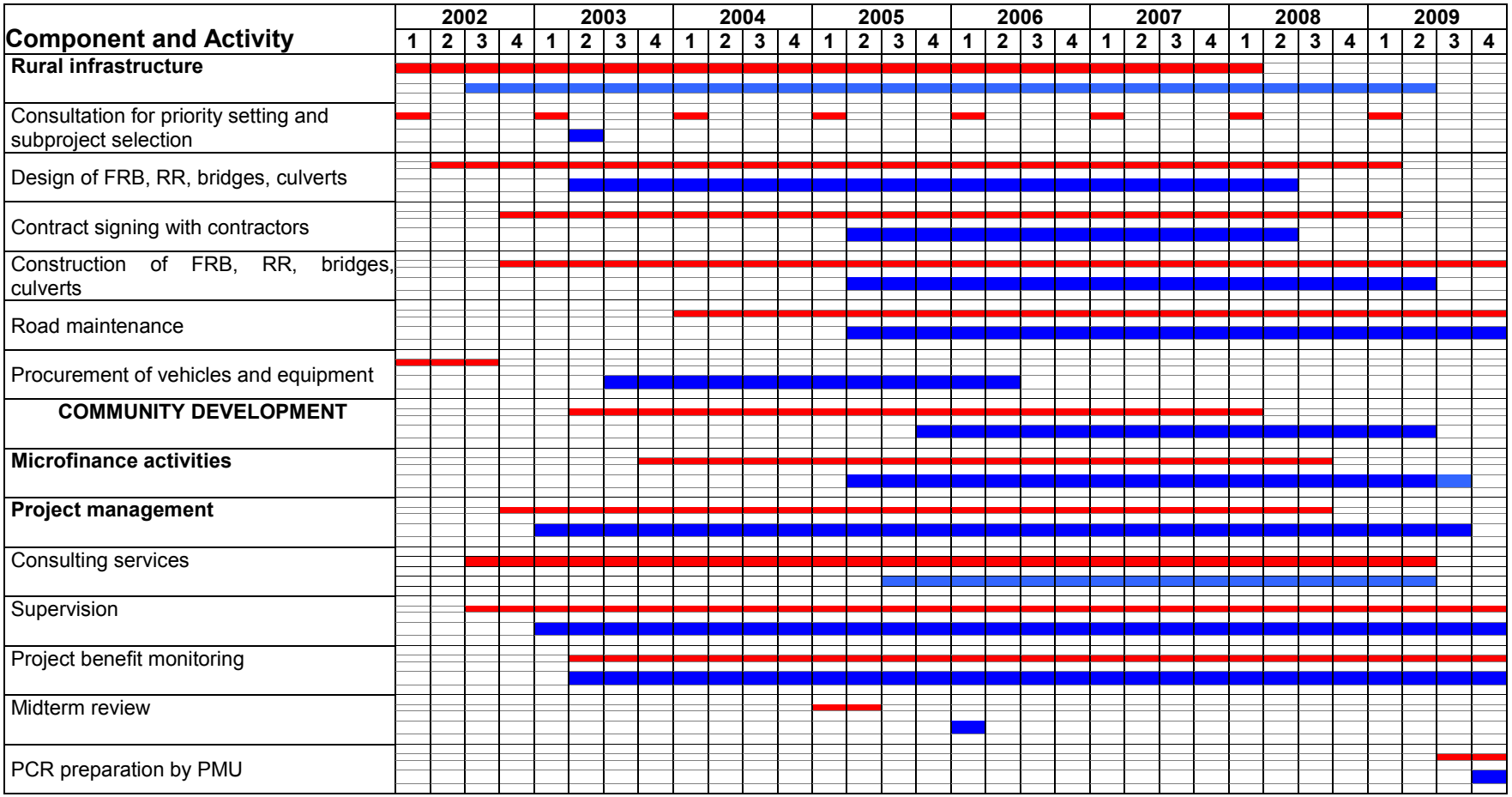
Source: Project PCR

Figure A2.2: Annual Disbursements (%)



Source: Project PCR

COMPARISON OF IMPLEMENTATION SCHEDULES, APPRAISAL AND ACTUAL



FRB = feeder road type B, PCR = project completion report, PMU = project management unit, RR = rural road (see footnote 4)

Source: Local Government Engineering Department, project management unit, and ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the People's Republic of Bangladesh for the Chittagong Hill Tracts Rural Development Project*. Manila (Loan 1077-BAN [SF])

STATUS OF COMPLIANCE WITH MAJOR LOAN COVENANTS

Covenants	Reference	Action(s) Taken
Loan Agreement		
1. The Borrower to carry out the Project with due diligence and efficiency and in conformity with sound administrative, financial, engineering, environmental and rural development practices.	Section 4.01	Complied with.
2. The Borrower to make available to the PMU on a timely basis the funds, facilities, services, land and other resources required to carry out the Project and to operate and maintain project facilities.	Section 4.02	Complied with.
3. The Borrower to (i) maintain separate accounts for the Project, (ii) have such accounts and related financial statements audited by independent auditors whose qualifications and terms of reference are acceptable to the Asian Development Bank (ADB), and (iii) furnish to the ADB not later than 6 months after the related fiscal year certified copies of the audited accounts and the report of the auditors thereto (including the auditors' opinion of the use of loan proceeds, compliance with the covenants of the LA, and the use of the procedures for imprest accounts and statement of expenditures), all in the English language, and other information concerning the accounts and the audit there of as the ADB shall reasonably request.	Section 4.06(b)	Complied with.
4. The Borrower to furnish to the ADB quarterly reports on the carrying out of the Project and on the operation and maintenance of Project facilities.	Section 4.07(b)	Complied with.
5. The Borrower to prepare and furnish the ADB with a Project Completion Report not later than 3 months after the Project's completion.	Section 4.07(c)	Compiled with. PCR submitted to ADB.
6. The Borrower to establish immediately after loan effectiveness an imprest account at Bangladesh Bank.	Schedule 3, para. 8(a)	Complied with.
7. The Borrower to establish not later than 3 months after loan effectiveness a second-generation imprest account in the name of the PMU at a commercial bank in Rangamati acceptable to the ADB.	Schedule 3, para. 8(b)	Complied with.
8. As the Executing Agency, the Ministry of Chittagong Hill Tracts Affairs (MOCHTA) to be responsible for overall coordination and management of the Project at the national level, ensuring timely budget allocations to the PMU, and ensuring necessary national level approvals are timely obtained for carrying out the Project.	Schedule 6, para 1	Complied with.
9. As the Lead Implementing Agency, the Regional Council to be responsible for the overall coordination and supervision of day-to-day project implementation, including overall supervision of activities carried out by the Local Government Engineering Department (LGED), Hill District Councils (HDCs), participating nongovernment organizations (NGOs), and the PMU.	Schedule 6, para. 2	Complied with.
10. As Implementing Agencies, LGED to be responsible for implementing Part I of the Project; the HDCs for Part 2; and the PMU for Part 3 (in coordination with the Palli Karma Shahayak Foundation (PKSF) and participating NGOs) and Part 4 of the Project.	Schedule 6, para. 3	Complied with.

Covenants	Reference	Action(s) Taken
11. MOCHTA to establish a National Project Steering Committee (NPSC), which shall meet at least twice yearly or as required, and ensure that minutes of each NPSC meeting are submitted to the ADB within 2 weeks of the meeting.	Schedule 6, para. 4	Complied with.
12. The Regional Council to establish a Regional Coordinating Committee (RCC), which shall meet bimonthly during the Project's first year and quarterly thereafter, and ensure that minutes of each RCC meeting are submitted to the ADB within 2 weeks of the meeting.	Schedule 6, para. 5	Complied with.
13. The Borrower to recruit a suitably qualified Project Director, acceptable to the ADB, within 3 months of loan effectivity. The Project Director shall head the PMU.	Schedule 6, para. 6, 7	Complied with.
14. The PMU and HDCs to establish and fully equip District Project Management Units (DPMUs) in Rangamati, Bandarban and Khagrachari Districts within 6 months of loan effectivity. A deputy project director shall head each DPMU, and shall report to the Project Director and the respective district council chair person.	Schedule 6, para. 9	Complied with.
15. The PMU to establish and equip, within 9 months of loan effectivity, a project liaison office in Dhaka; and recruit an assistant project director.	Schedule 6, para. 10	The provision of a liaison office was dropped. Only a staff member was recruited as decided by the NPSC of the project.
16. The Borrower to ensure that all key project staff are not transferred during the Project period unless absolutely necessary. In the event, MOCHTA and the Regional Council must be consulted, and MOCHTA must have concurred with the transfer.	Schedule 6, para. 11	Complied with.
17. The Borrower, MOCHTA, the Regional Council, and the HDCs to ensure that any future development projects in the Chittagong Hill Tracts to be carried out by donor agencies, the HDCs, or the Chittagong Hill Tracts Development Board do not duplicate the activities of the Project.	Schedule 6, para. 12	Currently UNDP is implementing CHTDF, which has a number of components similar to those of the Project, but same target beneficiary..
18. The Borrower, the Regional Council and the HDCs to ensure that the PMU and DPMUs maintain separate ledgers, records and accounts of expenditures and loan disbursements under the Project.	Schedule 6, para. 13	Complied with. .
19. MOCHTA to ensure timely releases of annual budget allocations to the Regional Council and the HDCs.	Schedule 6, para. 14	Complied with.
20. The Borrower to ensure timely provision of adequate counterpart funds for the Project.	Schedule 6, para. 15	Complied with.
21. The Borrower and the Regional Council to ensure that the PMU prepares a comprehensive report identifying issues in preparation for the project reviews in Years 2 and 4.	Schedule 6, para. 17	Project reviews could not be done on time because of the delayed start of project activities. Moreover, other major reviews were dropped in the second DPP.

Covenants	Reference	Action(s) Taken
22. The PMU and DPMUs to produce annual work plans; the implementing agencies to provide the PMU with brief quarterly progress reports; and the PMU through the Regional Council, to furnish MOCHTA, Ministry of Finance, and the ADB with consolidated quarterly progress reports, a comprehensive year end annual report including progress of benefit monitoring and evaluation (BME).	Schedule 6, para. 18	Complied with.
23. The Borrower to ensure that LGED establishes construction priorities under Part I of the Project through a consultative process with the involved communities, and that the tribal population and women are included in the process.	Schedule 6, para. 19	Complied with.
24. Within 3 months of loan effectivity, LGED to hold consultation discussions in each upazila to establish local priority needs for Part 1, which shall form the basis for developing Year 1 targets. Reports of workshops and/or other planning processes shall be submitted by LGED to the ADB.	Schedule 6, para. 21	Complied with.
25. The Borrower and LGED to ensure that proposals for small structures under Part 1 shall meet the following criteria: (i) investment to be limited to spanning of gaps or replacement of badly damaged structures; (ii) investment to increase the connectivity of the rural road network by making lengths of road which connect rural areas into a higher level of network, or to an important place, continuously passable by wheeled vehicles.	Schedule 6, para. 22	Complied with.
26. The Borrower and LGED to ensure that, under Part 1, (a) the selection criteria for facilities to be upgraded are applied, and (b) local tribal contractors are given preference for carrying out civil works.	Schedule 6, para. 23	Complied with.
27. The Regional Council and the HDCs to ensure that (a) community organizations contribute at least 10 percent of the subproject cost under Part 2, and (b) the community investment fund is used only to finance demand-driven community-based investments in small-scale civil works or other socioeconomic infrastructure.	Schedule 6, para. 24	Complied with.
28. The HDCs and the PMU to ensure (a) establishment of community development committees for each union council, and (b) training and engaging of community facilitators to assist in implementing Part 2 of the Project.	Schedule 6, para. 25	Complied with.
29. Prior to carrying out civil works under Part 2, (a) the Regional Council to agree with the site for the concerned civil works, and (b) the Borrower to confirm that such site is on undisputed land.	Schedule 6, para 26	Complied with.
30. The Regional Council and HDCs to ensure that an interactive process with beneficiaries is used in designing annual work plans under Part II of the Project.	Schedule 6, para. 27	Complied with.
31. The Borrower, Regional Council and the HDCs to ensure that interest rate charged to sub-borrowers by participating NGOs shall be as agreed with the ADB.	Schedule 6, para. 28	Partially complied with. This issue was discussed several times in both NPSC and RCC meetings on the project. But no rate of interest to be charged to sub-borrowers by the participating NGOs was agreed

Covenants	Reference	Action(s) Taken
		on.
32. The Borrower to ensure that national and local NGOs are permitted to participate as financial intermediaries in the project area to deliver microfinance services to beneficiaries	Schedule 6, para. 29	Complied with. In addition, it was agreed that all financial intermediaries for the project would register with PKSF to ensure the quality and sustainability of the services.
33. The PMU to monitor and implement the Indigenous Peoples Development Plan on a timely basis, and as designed and agreed with the ADB.	Schedule 6, para. 30	Complied with.
34. The Regional Council, HDCs, PMU, DPMUs, LGED, and other participating agencies or organizations to ensure participation of the local tribal population in planning for and implementing project activities. Tribal women should be appropriately represented in social mobilization and training programs, and should be given preference in providing microfinance.	Schedule 6, para 31	Complied with.
35. The Regional Council, HDCs and PMU to ensure that at least 70 percent of the sub-borrowers under Part 3 are women.	Schedule 6, para. 32	Complied with. More than 95% of sub-borrowers were women.
36. The Regional Council and HDCs to ensure that the union councils and local communities properly maintain facilities improved/constructed under Part 2.	Schedule 6, para. 34	Complied with.
37. The Borrower to ensure that financial support is provided to community organizations responsible for the operation and maintenance of facilities to be constructed under Part 2.	Schedule 6, para. 35	Complied with.
38. The Borrower and LGED to ensure that adverse environmental impact resulting from the civil works under Part I will be mitigated and appropriate environmental safeguard adopted.	Schedule 6, para. 36	Complied with.
Project Implementation Agreement		
39. The Regional Council to furnish to the ADB quarterly reports on the execution of the Project.	Section 2.08(b)	Complied with.
40. The Regional Council to prepare and furnish to the ADB not later that 3 months after project completion a Project Completion Report.	Section 2.08(b)	PCR submitted on time.
41. The Regional Council and the HDCs to ensure that the PMU and DPMUs maintain separate accounts for the Project, have such accounts audited annually, and furnish to the ADB not later than 6 months certified copies of the audited accounts and the auditor's report thereto.	Section 2.09(a)	Complied with.
42. The Regional Council and the HDCs to ensure that the PMU and DPMUs apply the ADB loan proceeds to financing eligible project expenditures in accordance with the Loan and Project implementation Agreements.	Section 2.13	Complied with.

ADB = Asian Development Bank, BME = benefit monitoring and evaluation, DPMU = district project management unit, DPP = development project proposal, HDC = hill district council, LGED = Local Government Engineering Department, MOCHTA = Ministry of Chittagong Hill Tracts Affairs, NGO = nongovernment organization, NPSC = national project steering committee, PKSF = Palli Karma Shahayak Foundation, PMU = project management unit, RCC = regional coordination committee

Source: Project management unit and ADB project completion review mission

STATUS OF PROCUREMENT OF GOODS AND SERVICES

Table A5.1: Status of Implementation of Consulting Services

Position	Consultant Input (person-months)			
	Original	Revised	Actual	Surplus/Shortage
International consultants	**86.00**	**84.36**	**83.9**	**(2.10)**
Rural development specialist/TL	39.00	44.46	44.00	5.00
Engineering quality control specialist/TL	37.00	36.33	36.33	(0.67)
Institutional development specialist	10.00	3.57	3.57	(6.43)
National consultants	**231.00**	**193.09**	**193.09**	**(37.91)**
Training specialist	42.00	32.37	32.37	(9.63)
Gender specialist	19.00	16.73	16.73	(2.27)
Communication development specialist	4.00	0.00	0.00	(4.00)
Community development specialist 1	33.00	33.00	33.00	0.00
Community development specialist 2	33.00	32.70	32.70	(0.30)
Community development specialist 3	33.00	27.73	27.73	(5.27)
Legal contracts specialist	7.00	0.00	0.00	(7.00)
BME specialist	24.00	19.43	19.43	(4.57)
Legal literacy adviser	12.00	12.00	12.00	0.00
Project management adviser	24.00	19.13	19.13	(4.87)

BME = benefit monitoring and evaluation, TL = team leader
Source: PMU and PCR Mission Estimates

Table A5.2: Procurement of Vehicles and Equipment, Estimated and Actual

Items	Revised Estimate			Actual		
	PMU	LGED	Total	PMU	LGED	Total
Vehicle(s)						
4WD jeep	7	4	11	7	4	11
Pickup		2	2		2	2
Motorcycle	4	13	17	4	13	17
Speedboat		1	1		1	1
Construction equipment						
Roller bulldozer		2	2		2	2
Static vibratory roller		2	2		2	2
Twin-drum vibratory roller		2	2		2	2
Water tank track		2	2		2	2
Survey equipment		1 set	1 set		1 set	1 set
Office and other equipment						
Computer and spare parts	11	6	17	10	6	16
Computer software		LS	LS		LS	LS
Camera and accessories	3		3	3		3
Radio equipment	1 set		1 set	1 set		1 set
Other equipment	LS		LS	LS		LS
Office furniture	LS	LS	LS	LS	LS	LS

4WD = four-wheel drive, LGED = Local Government Engineering Department, LS = lump sum, PMU = project management unit

Source: Estimates by project management unit and ADB project completion review mission

ASSESSMENT OF PROJECT BENEFITS AND INITIAL IMPACT

A. Introduction

1. The project completion review mission assessed the benefits and tentative impact of the Chittagong Hill Tracts Rural Development Project on rural communication, the income and living conditions of the people in the region, poverty reduction, and confidence building after the signing of the Peace Accord in 1997. The mission used secondary data on the project and primary data collected through a sample survey to validate the secondary data and to fill the data gaps. Data on road use, the operation of economic and social sector subprojects, and the use of microfinance were collected.

B. Findings of Survey of Rehabilitated and Upgraded Rural Infrastructure

2. **Road use and cost saving.** The project data suggest that there are about 57,655 households along the five feeder roads and 39 rural roads, for an average of 228 households along each road rehabilitated and upgraded under the project. The households along the roads are the primary road users. The secondary users are people from neighboring areas and people from other areas who use the roads to go to the commercial centers. The project data suggest a considerable increase in vehicular traffic after the project. (Details are in Table A6.1.) Traffic volume, especially for mechanized vehicles, is several times larger on the rehabilitated and upgraded roads.

3. The transportation of commodities has considerably increased since the road rehabilitation and upgrading, reducing the drudgery of work and the cost of transportation. Details are in Table A6.2.

Table A6.1: Impact on Daily Traffic Volume

Status	Type of Vehicle						
	Bicycle	Rickshaw	Motorcycle	Jeep/Car	Pickup	Truck	Total
Before the project	116	118	53	69	27	23	172
After the project	286	387	286	358	128	180	952
% Change	**146**	**228**	**440**	**419**	**374**	**683**	**454**

Source: Project completion review mission survey (2010)

Table A6.2: Change in Mode of Transport and Cost of Transportation

Status	Head Load		Rickshaw/Van		Pickup/Jeep		Truck	
	Vol. of Cargo (ton)	Cost per Ton (Tk)	Vol. of Cargo (ton)	Cost per Ton (Tk)	Vol. of Cargo (ton)	Cost per Ton (Tk)	Vol. of Cargo (ton)	Cost per Ton (Tk)
Before the project	1,829	70	144	110	1,695	290	2,640	490
After the project	367	60	1,330	85	4,525	220	9,428	390
% Change	**(399)**	**(15)**	**824**	**(23)**	**167**	**(25)**	**257**	**(20)**

Source: Project completion review mission survey (2010)

4. **Cultivation system and cropping pattern.** The results of the mission survey and discussions with beneficiary framers indicate that the provision of irrigation facilities has slightly increased cropping intensity. More land is now cultivated and two crops are grown per year compared with a single crop before the project. However, cultivation practices do

not seem to have undergone a major change. *Jhum* cultivation has not transformed into modern cultivation for higher productivity. Paddy cultivation also remains unchanged, but the cultivation of vegetables and other rabbi crops has increased slightly with the availability of irrigation facilities, training, and input support. Details are in Table A6.3.

Table A6.3: Impact on Cropping Intensity and Cultivation

Item	Change due to Project	
	Before the Project	After the Project
Cropping intensity (acre)		
Average land area under one crop, per household	1.31	1.12
Average land area under two crops, per household	1.24	2.46
Cultivation pattern (% of households)		
Jhum cultivation	25.0	26.7
Paddy	78.3	78.3
Vegetables	41.7	45.0
Rabbi crops	3.3	6.7

Source: Project completion review mission survey (2010)

5. **Marketing of farm produce.** The marketing of agricultural and other produce has started to become more organized. Wholesalers collect produce from the farm-gate and take it to city markets. Selling in village markets and growth centers has not increased but has rather been on a downward trend. The trend is positive, and farmers get higher prices for their commodities. Details are in Table A6.4.

Table A6.4: Marketing of Farm Produce

Item	Households			
	Before the Project		After the Project	
	No.	%	No.	%
Produce sold at farm-gate	14	23.4	15	25.0
Produce sold in village markets	24	40.0	21	35.0
Produce sold in growth-center markets	11	18.3	7	11.7
Produce sold in city markets	11	18.3	17	28.3
Higher prices obtained for produce			50	83.3

Source: Project completion review mission survey (2010)

6. **Occupations.** There have been some changes in livelihood patterns. Beneficiaries have been moving more toward agriculture, small business, and services than to other occupations. This is a positive change that will fetch higher returns on investment because of increased opportunities for improved agriculture, business, and services. Day labor, driving, and other livelihood activities that offer low returns have been reduced. Details are in Table A6.5.

Table A6.5: Occupational Changes

Main Occupation of Beneficiaries	Households Involved			
	Before the Project		After the Project	
	No.	%	No.	%
Agriculture	45	75.0	48	80.0
Business	22	36.7	26	43.3
Services	11	18.3	13	21.7
Day labor	12	20.0	9	15.0
Driver of mechanized transport	0	0.0	3	5.0
Driver of manual transport	0	0.0	0	0.0
Miscellaneous livelihood activities	8	13.3	4	6.7
Total	**98**	**163.3**	**103**	**171.7**

Source: Project completion review mission survey (2010)

7. **Household income and expenditure, and savings.** Average monthly income and expenditures have increased at constant prices. However, the ratio of savings to income has been reduced by inflationary effects over time. Details are in Table A6.6.

Table A6.6: Income and Expenditure and Savings of Beneficiary Households

Item	**Amount** (Tk, at current prices)	
	Before the Project	**After the Project**
Average monthly income	10,241	13,407
Average monthly expenditure	5,856	8,328
Average monthly gross surplus	4,385	5,079
Savings as % of income	42.8	37.9

Source: Project completion review mission survey (2010)

8. **Perceptions of road users.** The mission survey captured the perceptions of road users, especially people living around the improved roads, about the project's advantages and benefits and negative impact. The respondents generally expressed satisfaction and said that they were benefiting in many respects. The impact on communication, drainage, access to markets and fair prices, mitigation of damage from flash floods, access to treatment facilities, and employment has been positive. Details are in Table A6.7.

Table A6.7: Road User Perceptions of Project Benefits and Impact

Indicator	Responses	
	No.	**%**
Easier and less expensive communication for everyone, including students	60	100
Better access to medical facilities and transportation for critically ill patients	60	100
Removal or mitigation of drainage congestion	60	100
Reduced incidence of flash floods and loss of crops	24	40
New educational institutions and markets along the improved roads	60	100
More employment opportunities	60	100
Higher prices for produce due to access to markets	60	100
Increased availability of agricultural input	50	84
New pharmacies and drugstores and doctors' clinics	32	54
Reduced incidence of accidents due to improved and safer infrastructure	45	94

Source: Project completion review mission survey (2010)

C. Survey Findings on Economic Sector Subprojects: Irrigation and Agriculture

9. Twelve irrigation and agriculture subprojects were surveyed, data were collected, and beneficiaries were interviewed. Before the project, the subproject areas produced only one crop for lack of irrigation facilities. All the subprojects rely on the contributions of the beneficiaries, which are also the only source of operation and maintenance (O&M) funds. The beneficiaries said that in 84% of the subprojects the beneficiary groups are able to collect the funds needed for O&M, but the remaining 16% project face difficulties affecting cultivation and yield.

10. The irrigation and agriculture subprojects started in 2004–2005. Irrigation coverage was low at the start but gradually increased over the years. On average, the irrigated portion of each subproject covers 20 acres. Details are in Table A6.8.

Table A6.8: Average Irrigation Coverage

Fiscal Year	**Area Covered** (acre)
2001–2002	0.0
2002–2003	0.0
2003–2004	0.0
2004–2005	12.0
2005–2006	14.0
2006–2007	14.0
2007–2008	30.0
2008–2009	30.0
Average	20.0

Source: Project completion review mission survey (2010)

11. Yield per acre in the irrigated agricultural subprojects has increased since the project. Before the project, only one crop could be grown and yield was low. Details are in Table A6.9.

Table A6.9: Yield of Major Crops of Irrigation/Agriculture Subprojects

Major Irrigated Crops	**Yield per Acre** (ton)	
	Before the Project	**After the Project**
Paddy	0.783	3.337
Rabbi crops	0.186	0.420
Vegetables	0.344	0.522
Other crops	0.233	0.320

Source: Project completion review mission survey (2010)

12. The beneficiaries have faced a number of difficulties with the establishment and O&M of the irrigation and agriculture subprojects. Major difficulties and suggested measures are in Table 6.10.

Table A6.10: Major Needs and Suggested Measures

Needs and Suggested Measures	**Responses**	
	No.	**%**
Provide:		
Good-quality equipment	12	100.0
Equipment with after-sales service and spare parts	12	100.0
Extensive O&M training for farmers	12	100.0
Funds and technical support for good drainage	8	67.0
Good input such as seed, fertilizers, and pesticides	9	75.0
Agricultural loans on easy terms	9	75.0
Good marketing network and fair prices	6	50.0
Motivate farmers to pay contributions on time	6	50.0
Strengthen CDC as an effective agency (to be done under the project or by HDC)	6	50.0

CDC = community development committee, HDC = hill district council, O&M = operation and maintenance
Source: Project completion review mission survey (2010)

D. Survey Findings on Social Sector Subprojects

13. The project supported the establishment of social sector subprojects such as construction of water points, school hostels, small culverts, and short approach roads. The mission surveyed selected water points and school hostels. The major findings are summarized in the following paragraphs.

14. **Water points.** The survey data on 30 randomly selected water points indicate that 40% of beneficiaries have no access to safe water points and 57% cannot use the water points because they are out of order. Ninety-four percent of beneficiaries have free access to the water points. The selection of the sites for the water points considered accessibility to 84% of beneficiaries. On the day of the mission survey, 84% of the water points were functional and 16% were out of order for various reasons.

15. The O&M cost is shared by all users in 33% of the water points, and paid by one influential person in another 33%. In the remaining 34% of the water points, O&M suffers from fund constraints and management problems. The survey data indicate that 50% of the water points are at a safe distance from potential sources of pollution but the other 50% are within a short distance to such sources. According to the beneficiaries, the water points have not been tested for arsenic contamination, and whether or not the water is free of arsenic or other pollutants is not known.

16. On average, 24 households share one water point. Fifty-nine percent of the user households are among the poorest households, 29% are poor households, 10% are considered middle class, and 2% are considered rich. But all households within the catchment area of each water point have access to the water points irrespective of social status and ability to pay the contributions.

17. Year-round access to safe water for critical purposes is a serious problem in the CHT. Seventy-seven percent of the households use safe water for drinking throughout the year because of heightened awareness, built over the years. But access to safe water for other critical household uses is quite difficult. Details are in Table A6.11.

Table A6.11: Year-Round Access to Safe Water for Critical Uses

Use	Responses	
	No.	%
Drinking	23	76.7
Fruits and vegetable cleaning	12	40.0
Cooking	20	66.7
Bathing	7	23.3
Latrine cleaning	5	16.7

Source: Project completion review mission survey (2010)

18. The survey also gathered information about the level of awareness of safe water and hygiene among heads of households. Only 70% of water points provide adequate safe water all year round. But awareness of the maintenance and management of safe water is quite high, thanks to the motivational efforts of nongovernment organizations in community development and other programs in the private and public sectors. Details are in Table A6.12.

Table A6.12: Level of Awareness of Safe Water Management

Indicator	Responses	
	No.	%
Water points provide safe water all year round	21	70.0
Households keep water containers covered	22	73.0
Households always clean containers before filling them with water	24	80.0
Households always clean glasses before filling them with drinking water	24	80.0

Source: Project completion review mission survey (2010)

19. **Community services in schools.** The project provided community development assistance to schools for the construction of hostels, the extension of classrooms, the purchase of furniture, and the establishment of libraries and clubs, water points, and sanitary latrines. School performance has improved, especially with respect to student enrollment and attendance and success rate in public examinations. Details are in Table A6.13.

Table A6.13: School Performance (Student Attendance)

Indicator	Before the Project	After the Project	
Average number of boys enrolled per school	84	100	
Average number of boys present per school	73	78	
Average number of girls enrolled per school	75	83	
Average number of girls present per school	70	75	
Passing percentage of boys in annual examinations	44	66	
Passing percentage of girls in annual examinations	44	63	

Source: Project completion review mission survey (2010)

20. Community development assistance for facilities like hostels, classroom extensions, safe water, sanitary latrines, approach roads, libraries, and club recreational facilities, school performance has also improved school performance, as manifested by a 19% increase in effective workdays per year among the schools. Details are in Table A6.14.

Table A6.14: School Performance (Facilities and Workdays)

Indicator	School Performance	
	Before the Project	After the Project
Average number of water points per school	1.5	2.0
Average number of sanitary latrines per school	2.5	3.0
Average annual effective workdays per school	215	256

Source: Project completion review mission survey (2010)

21. **Perceptions of students, teachers, and parents.** The mission survey captured the perceptions of students, teachers, and parents about the benefits of the project and its impact on school and student performance. Before the project, many students, especially girls, dropped out early from school. Students could not get seats in classes. There was no library for reference reading and advancement of knowledge. The improvements in roads and the increased availability of hostel facilities have led to an increase in student attendance and effective school days, and eventually also in the student success rate.

E. Survey Findings on Microfinance Development

22. The mission survey team interviewed 150 microfinance beneficiaries of the project and collected important data on benefits and impact. The findings are summarized in the following paragraphs.

23. Microfinance on-lending to beneficiaries started in 2004–2005. The average loan amount started at Tk10,462 and gradually increased to Tk19,057 in 2008–2009. Loan recovery was 100% at the start but later decreased because of default. The drop in loan recovery is due to the availability of grant funds and funds at soft terms from other sources, misinformation spread by vested groups against microfinance in the CHT, and low returns to microfinance activities, among other factors. Details of the microfinance loan operations are in Table A6.15.

Table A6.15: Microfinance Loan Operations

Fiscal Year	Sample Beneficiary Loan Operations				
	First Loan Received		Average Loan Size (Tk)	Average Recovery	
	No.	%		Amount (Tk)	%
2001–2002	0	0	0	0	
2002–2003	0	0	0	0	
2003–2004	0	0	0	0	
2004–2005	29	19	10,462	10,462	100.0%
2005–2006	24	16	10,511	10,490	99.9%
2006–2007	63	42	11,596	11,298	97.4%
2007–2009	22	15	14,208	13,850	97.5%
2008–2009	12	8	19,057	17525	92.0%
Total	**150**	**100**			

Source: Project completion review mission survey (2010)

24. The microfinance beneficiaries are mostly middle class (60%). The other beneficiaries are classed among the poor (29.3%), the poorest (8.0%), and the rich (2.7%). Because of the limited access of the poor, the microfinance component may not have contributed to poverty reduction as much as expected. According to the survey data, 75.3% of beneficiaries consider the loan amount adequate for their needs, and 84.7% believe that the loan is disbursed when it is needed. Only 25.3% of beneficiaries reported difficulty repaying the loans. Details are in Table A2.16.

Table A6.16: Beneficiary Classification and Terms of Loan

Item	Responses	
	No.	%
Classification of beneficiaries		
Very poor beneficiary	12	8.0
Poor beneficiary	44	29.3
Middle-class beneficiary	90	60.0
Rich beneficiary	4	2.7
Opinions about the loan		
Loan amount was adequate to the need	113	75.3
Loan was disbursed on time	127	84.7
Repayment was difficult	38	25.3

Source: Project completion review mission survey (2010)

25. It is estimated that, through each microfinance beneficiary, 1.36 more jobs have been created within the family, on average, and 1.09 more jobs outside the family. On average, therefore, each microfinance loan has created jobs for 3.45 persons, and the 19,792 microfinance loan recipients have created jobs for an estimated 68,216 persons. Details are in Table A6.17.

Table A6.17: Employment Creation through Microfinance Development

Indicator	No.
Additional jobs created among 150 beneficiary families, at an average of 1.36 jobs per family	204
Additional jobs created outside the family by 150 beneficiary families, at an average of 1.09 jobs per family	163
Total jobs created under each microfinance loan	517
Total jobs created for 19,792 loan recipients	68,216

Note: Number of beneficiaries interviewed = 150.
Source: Project completion review mission survey (2010)

26. Data on income from microfinance as a percentage of the total household income of beneficiaries provide an estimate of the level of dependency of beneficiary households on microfinance and the extent of supplemental income provided by the loan. For 55.3% of microfinance beneficiaries, the loan constitutes up to 30% of total household income. Therefore, microfinance activities are supplementary income sources and not the mainstay of the households. Details are in Table A6.18.

Table A6.18: Income from Microfinance Loan

% of Household Income	Microfinance Beneficiaries	
	No.	%
10%	29	19.3
20%	35	23.3
30%	19	12.7
40%	7	4.7
50%	9	6.0
60%	24	16.0
70%	11	7.3
80%	13	8.7
90%	3	2.0
100%	0	0.0
Total	**150**	**100.0**

Source: Project completion review mission survey (2010)

27. Not all the microfinance beneficiaries could be trained in microfinance development and management. Only one of every two beneficiaries was trained. Moreover, 55.3% beneficiaries think that there is need for further training, 30.7% of beneficiaries who were trained consider the training inadequate. For successful microfinance development, beneficiaries must be carefully selected and provided with proper and extensive training, followed by counseling and retraining. Details are in Table A6.19.

Table A6.19: Adequacy of Training for Microfinance Development

Level of Training Adequacy	Beneficiaries	
	Number	%
Good training in microfinance operations was provided	88	58.7
Further training is needed	83	55.3
Beneficiaries found microfinance training inadequate	46	30.7

Source: Project completion review mission survey (2010)

28. The microfinance beneficiaries offered a long list of risks to successful microfinance development in general, especially in the CHT region. The listed risks were:

(i) Natural calamities such as excessive rains, drought, fire, rodents, and flash floods
(ii) Livestock epidemics, crop diseases, unfavorable weather, stock losses due to theft, attacks of wild animals, etc.
(iii) Fluctuations in demand and price, high production cost, high labor cost, fall in prices due to surplus production and dumping, marginal profits due to market competitiveness, high prices of local raw materials, etc.
(iv) Blocking of capital due to credit sales, stockpiling because of lack of demand, stockpiling of raw materials because of lack of demand and slow production, marketing problems, etc.

Lack of necessary training and skill, late disbursement of loans, hard loan conditions, insufficient capital resources, mechanical troubles, lack of electricity, scarcity of fish and lack of necessary fishing gear, etc.

ASSESSMENT OF LONG-TERM SUSTAINABILITY: ECONOMIC AND FINANCIAL REEVALUATION

A. Introduction

1. The project completion review mission re-estimated the economic internal rate of return (EIRR) of the Chittagong Hill Tracts Rural Development Project using current data at project closing and compared the result with the appraisal estimate to assess the long-term sustainability of the project.

B. Methodology

2. The mission collected primary and secondary information on all the feeder road and rural road subprojects and the major community development subprojects in the economic sector. The measurable benefits from the feeder roads and rural roads were deemed to be the agricultural production gains and the savings in vehicle operating costs and in the travel costs of users. The measurable benefits from the community development subprojects (irrigation and agriculture) in the economic sector were the net surplus from the subprojects. The small community development subprojects in the social sector, on the other hand, had benefits that were difficult to quantify and were therefore not considered for economic reevaluation. The measurable benefit from microfinance development was considered to be the net surplus from the total loans disbursed at the beneficiary level.

3. A project benefit stream, at bottom, refers to the net incremental benefits from a project at completion compared with the without-project situation. The mission considered estimated agricultural production surplus, vehicle operating cost savings, savings in travel time and travel cost (in the area of influence), net surplus from the economic sector subprojects, and net surplus from microfinance disbursed at the beneficiary level. Shadow pricing of financial values was employed to reflect real resource value using standard conversion factors. All costs were converted to 2000 constant prices using the average rate of inflation during the project as deflator to allow comparison with the returns at constant prices at appraisal.

C. Assumptions and Parameters

1. Traffic Volume

4. Traffic volume estimates from the project were revalidated through random checking during the mission survey. The reevaluation used the net increase in traffic volume between the with-project and without-project situations.

2. Vehicle Operating Costs

5. The mission assessed vehicle operating cost savings using secondary and primary data on vehicle operation with and without the project, obtained from owners, drivers, and passengers. Average vehicle operating cost per kilometer (km) was estimated using the estimated traffic volume with and without the project.

3. Structures along Roads

6. Bridges and culverts on feeder roads and rural roads ensure connectivity and further increase the benefits of the road connectivity. Therefore, the benefits provided by the bridges and culverts are considered an integral part of the rural road improvements.

4. Shadow Prices

7. Financial values were converted to economic values by using shadow pricing and applying standard conversion factors to adjust non-traded domestic components to world prices. Shadow price factors were calculated for major project-related materials and components. Shadow wage rates were calculated for both unskilled and skilled labor. The shadow price factor was also used to adjust the financial value of project-related agricultural production to economic values.

5. Distribution of Transport Benefits

8. The savings generated from reduced vehicle operating costs have been passed along in the form of lower charges for consumer goods, higher prices for producer output, and time savings for passengers.

D. Economic Benefits

1. Traffic Benefits

9. Savings in road use were measured in terms of time spent in traveling and resources consumed in operating different types of vehicles. Road improvements are directly related to the operating cost of vehicles, travel time for passengers and commodities, and pedestrian convenience. The economic analysis considered these factors and used data for the with-project and without-project scenarios.

2. Agricultural Benefits

10. Agricultural production induced by the road improvements benefited the households on both sides of the roads. The analysis used the production of major crops such as paddy and vegetables for the with-project and without-project scenarios. The financial value of incremental agricultural production at constant prices for the reference year (2000) was converted to economic values using shadow-price standard conversion factors.

E. Economic Costs

11. The project cost in the economic analysis included initial investment and the operation and maintenance (O&M) of roads and economic sector subprojects, and excluded taxes, duties, and price contingencies. The economic analysis included project benefits accrued during the 20-year estimated economic life of structures and the 15-year economic life of economic sector subprojects, measured in terms of net incremental agricultural production surplus and vehicle operating cost savings and net surplus from the microfinance livelihood activities. O&M cost was estimated using the Local Government Engineering Department's present practice of setting aside Tk50,000 per km per year for routine maintenance and Tk300,000 per km for major repairs every third year. Project implementation took 8 years.

F. Economic Viability

12. The long-term sustainability of a project is measured as its economic viability and is assessed in terms of its overall EIRR considering project cost (excluding taxes and value-added tax), recurrent O&M cost, operating cost, and revenues. The project EIRR was estimated at 16.10% (Table A7.1), compared with 11.9% estimated at appraisal. The overall project EIRR suggests that the project is economically viable.

Table A7.1: Overall Project Economic Cash Flow
($; constant 2009 prices)

	Costs		Returns			
Year	Investment	O&M	VOCS	APS-ES	APS-CD	Net Cash Flow
2003	1,000,000	0	0	0	0	(1,000,000)
2004	2,000,000	0	0	0	0	(2,000,000)
2005	2,000,000	0	0	2,014,400	0	14,400
2006	7,000,000	0	(999,500)	2,014,400	0	(5,985,100)
2007	7,000,000	0	(999,500)	4,028,809	0	(3,970,691)
2008	8,000,000	299,980	(1,999,000)	4,028,809	4,221,626	(2,048,545)
2009	14,000,000	299,980	(1,999,000)	4,028,809	4,221,626	(8,048,545)
2010		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2011		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2012		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2013		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2014		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2015		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2016		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2017		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2018		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2019		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2020		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2021		299,980	(1,999,000)	4,028,809	4,221,626	5,951,455
2022		299,980	(1,999,000)	4,028,809	4,221,626	6,901,877
					EIRR	**16.10%**

APS-CD = agriculture production surplus associated with economic sector community development subprojects on agriculture/irrigation, APS-ES = agriculture production surplus associated with road infrastructure, EIRR = economic internal rate of return, O&M = operation and maintenance of road infrastructure, VOCS = vehicle operating cost savings
Source: Estimate by ADB project completion review mission

G. Sensitivity Analysis

13. The sensitivity of the project was tested by increasing its cost by 20%, reducing the benefits by 20%, combining a 20% increase in cost with a 20% reduction in benefits, and combining a 10% increase in cost with a 10% reduction in benefits. The sensitivity analysis suggested that the project is sensitive to both an overrun in costs and reduction in benefits. The sensitivity analysis is summarized in Table A7.2.

Table A7.2: Summary of Sensitivity Analysis

Base cost		**EIRR (%)**
Overall project		16.10
Alternative cases	**Change from base**	**EIRR (%)**
Costs	+20%	15.89
Benefits	-20%	10.74
Combinations	**Change from base**	**EIRR (%)**
Costs increased by 20% and benefits reduced by 20%		10.52
Costs increased by 10% and benefits reduced by 10%		13.44

H. Conclusions

14. The project is sustainable in the long term given its EIRR of more than 12% and its sensitivity to both cost overruns and benefits. If there had been no initial implementation delays, the components might have fully developed and operated at higher capacity by project closing, ensuring higher sustainability. For example, traffic volume and road use, and the capacity utilization of economic sector social development components, are quite low. Once the project is fully developed, by late 2011, the return on investment may considerably increase as road use and the capacity utilization of the economic sector social development components increase.

15. The project has several risks. The rehabilitated and upgraded roads must be properly maintained and connected further to nearby commercially important centers, and an effective marketing network must be established. The community development subprojects in the economic sector need proper maintenance for a longer life, uninterrupted operation, and full capacity utilization. Increasing crop yield from the present low level and reducing operating costs will ensure economy of agricultural production.